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SAMENA TRENDS

EXCLUSIVELY FOR SAMENA TELECOMMUNICATIONS COUNCIL'S MEMBERS

BUILDING DIGITAL ECONOMIES

A SAMENA Telecommunications Council Newsletter



Exclusive Interview

Muna Al Hashemi

Acting CEO

Batelco Bahrain

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Editor-in-Chief
Bocar A. BA

Contributing Editors
Awais Amjad
Javaid Akhtar Malik
Zakir Syed

Contributing Member
Analysys Mason
Orange
Strategy&
Sudatel
Vodafone Qatar

Publisher
SAMENA Telecommunications Council

Subscriptions
subscriptions@samencouncil.org

Advertising
ads@samencouncil.org

Legal Issues or Concerns
legal@samencouncil.org

SAMENA TRENDS
trends@samencouncil.org
Tel: +971.4.364.2700



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Beyond Connectivity 2015
11th May 2015
The Telecom Leaders' Summit 2015
2nd June 2015

Emerging trends in regulatory and investment landscape in the regional markets



The convergence of telecoms and IT has opened the door for significant value added services (VAS) activity in the ICT industry. Understanding the investment landscape in the regional markets and the trends that shape them will help telcos take full advantage of the market share and revenue opportunities.

Markets in the SAMENA region are making a strong push towards higher broadband penetration and the young population will be the one of the main drivers of growth as they grow up with Internet use. In addition, liberalization and increased competition are producing a greater variety of services and mediums. Qatar, Bahrain and the UAE all have high household broadband penetration rates, particularly among nationals. Saudi Arabia, the largest country in the Middle East, has low broadband penetration but it is increasing at a considerable rate.

From the emerging VAS trends, it appears they in SAMENA region VAS industry will receptively rise up in the years to come driving the operators to think more innovatively or they will be pushed down by the growing competition. It appears that the regional telecom industry will be largely driven through next generation wireless technologies in the region. In the meantime a number of value added services are expected to add to the growing revenue of next generation service providers. Industry analysts agree that operators will come with new strategies to offer more "smart services". Studying the existing market and its trend is the key towards ensuring regional performance and growth. We are witnessing a rapid deployment of

mobile broadband technologies in these countries – with many of the key players in the region having already launched their mobile broadband services.

Regulatory policies and operators strategies need to highlight the overall development of the sector and to elicit development. However, regulatory bodies also have to take into account the transitioning trends in the convergent world and ensure a competitive business environment among operators and internet players. Despite so much ongoing focus, new investments, adoption of transmission and access technologies, the overall broadband penetration is still below the global average.

The question that regulators across the region have to reconsider is that, whether emerging trends in the regulatory and investment landscape in the regional markets will help ensure high speed connectivity to the end-user or not?

Yours truly,



Bocar A. BA
Chief Executive Officer
SAMENA Telecommunications Council



Muna Al Hashemi
Acting CEO
Batelco Bahrain



Muna Al Hashemi was appointed as A/Chief Executive for Batelco's Bahrain operations in December 2014. Previously, Muna had been heading Batelco's Consumer Division since 2008 having joined the Company in 1994. With a Master's degree in Telecommunications and a BSc in Electronic Engineering, Muna began her career in the Engineering Department and gained valuable experience as she progressed through a number of divisions, including Customer Services, Accounts, Product Marketing, Product Development and Customer Marketing. The depth of knowledge of various functional units and processes that Muna gained in her diverse roles including the experience gained over seven years as General Manager of the busy Consumer Division provides her with the necessary skills for the challenging task of leading Batelco's Bahrain operations.

Q. After your recent appointment as Batelco Acting CEO, what major challenges have you faced so far and how did you manage to maintain the high standards?

A. The main challenges continue to be from the intense competitive nature of the Bahrain telecommunications market and also the ongoing evolution of technology. However, Batelco maintains its high standards and meets these challenges in a number of ways. Firstly we emphasise our focus on our customers by placing them at the centre of everything we do. Customer demand varies incredibly from sector to sector and across age groups and nationalities. However, we believe we are successful in

meeting all expectations as we have an amazing and diverse line up of offerings. Not only do we provide end-to-end services and solutions for customers but we also ensure any follow up needs are met via our state-of-the-art Customer Call Centre which operates 24/7 every day of the year. Additionally, our network of Retail Shops is extensive and country-wide giving customers no matter where they reside the chance to meet face to face with our front line staff.

Key additional support for business customers ensures we meet the needs of this vital sector. A list of benefits which

includes a team of fully qualified support specialists and a dedicated account manager for each business gives Batelco the edge and helps us maintain our high standards.

Q. Batelco has recently announced the deployment of the first commercial 4G radio dot system in the Middle East. What impact it is going to have on your customer-base?

A. We were very pleased to be the first communications provider in Bahrain to offer the 4G Radio Dot solution in the Middle East. The Radio Dot solution ensures consistent delivery of high performance in-building voice and data services which will meet the needs of customers who experience issues with mobile coverage particularly in larger buildings. It will have a very positive and beneficial effect for these customers.

Q. Batelco has recently won the Best Customer Experience Management Brand Award at CEM in Telecoms Annual Middle East Summit. What are the significant factors behind this success?

A. The prestigious Best CEM Brand award was presented to Batelco for demonstrating the best record of progress and delivery for their customers, while showcasing Customer Experience Management at the heart of their organisational strategy. Batelco has been focused on its customer experience strategy by following intense analysis of its support programmes for customers by targeting a number of areas for improvement. Batelco's implementation of enhanced mechanisms and systems continue to raise customer satisfaction levels. Notably, one of the biggest achievements considered for the award was Batelco's introduction of the first telecom drive thru shop in the GCC designed to serve customers on the go.

Q. Please tell us about partnership between Batelco and the Bahrain Labour Market Regulatory Authority (LMRA)? What are the vital aspects behind this pact?

A. In January of this year, Batelco entered into a partnership with Bahrain Labour Market Regulatory Authority (LMRA) to support the LMRA's efforts in regard to foreign workers employed in the Kingdom of Bahrain. We continue to work with the LMRA and are looking at a number of ways that we can work together to support foreign workers coming to the Kingdom.

Q. What is your vision and plans by investing in new and enhanced networks?

A. As a fully integrated solutions provider, our plans remains focussed on the provisioning of end-to-end services and solutions to meet the changing needs of the consumer and enterprise markets. Accordingly, we continue to invest millions of dinars to ensure that our products, services and solutions are relevant and world class.

As part of our plans we are in the process of a major networks upgrade to improve the quality of our mobile and fixed services and we are confident that the result will make a big different to our customers' communication experience.

Q. Batelco and Budget Rent-a-Car has signed MoU to provide WiFi solution On-the-Go for Budget Cars. How will it be beneficial for your customers?

A. The arrangement will facilitate WiFi solutions for Budget's Chauffeur Driven and daily rental fleet based in Bahrain and ensure that passengers can be connected and stay in touch while on the go, with the latest 4G LTE internet solution. These days, there is much demand to be in touch anytime and anywhere, and both Budget and Batelco believe that the service will be a big enhancement for customers.

Q. Batelco has won the BCI Middle East Award-Best Continuity and Resilience Team 2015? What are your accomplishments behind this success?

A. Over recent years we have been developing our Business Continuity programme as we see it as being a vital part of our strategy. Our management and teams have really put in tremendous efforts and winning the award validates the hard work of everyone involved. The Judging Panel at the event evaluated Batelco, among other shortlisted companies, for their achievements in Business Continuity leadership, team operation across all disciplines, major challenges faced by the team and their handling of such challenges. The implementation of Business Continuity and improving organizational resilience, including the team profile, credentials, experience and performance in continuing to raise customer satisfaction levels were also part of the comprehensive evaluation.

The BCI (Business Continuity Institute) is known as a world leading institute for Business Continuity, and we feel very proud to have received their recognition.

Q. 7. How do you look at the role of the SAMENA Council, as the unified voice of the telecom operators and service providers, in dealing with the industry's key challenges and in fostering its growth?

A. The Samena Council has grown to become undoubtedly the leading platform providing a unified voice for the leading operators in the Samena region. It offers an invaluable scope for knowledge sharing between key personnel from the many communication companies involved, leading to the development of effective solutions to meet any challenges while benefitting the member organisations and ultimately their customers.



“ The remarkable history of ITU exemplifies its stellar role in connecting the world to the most advanced and innovative means of communication, from the days of the telegraph to the telephone, television, Internet and mobile broadband, which now allows us to be in touch anytime, anywhere with friends, family, colleagues and even things. ITU has reaffirmed its reputation worldwide as one of the most resilient and relevant organizations and continues its work as the specialized agency of the United Nations, and its oldest member, dealing with state-of-the-art telecommunications and information and communication technologies. Along with ITU’s diverse membership, we look forward to addressing the challenges and opportunities future innovations will bring to this technology and to ITU. ”

Mr Houlin Zhao
Secretary General
ITU

15  1865
2015

15  1865
2015

ITU'S 150TH ANNIVERSARY

Overview of ITU's History

For a century and a half since 1865, the International Telecommunication Union (ITU) has been at the centre of advances in communications -- from telegraphy through to the modern world of satellites, mobile phones and the Internet.

The story of ITU is one of international cooperation, among governments, private companies and other stakeholders. The continuing mission is to achieve the best practical solutions for integrating new technologies as they develop, and to spread their benefits to all.

From telegraph to telephone

For thousands of years, the quickest method of sending complex messages over long distances was with a courier on horseback. At the end of the 18th century, Claude Chappe inaugurated a network of visual semaphore stations across France. Then came the electrical revolution. Experiments were conducted in sending electric signals along wires, and in 1839, the world's first commercial telegraph service opened in London with a system created by Charles Wheatstone. In the United States, Samuel Morse used the new Morse code to send his first telegraph message in 1844. Already in 1843, a precursor of the fax machine for transmitting images had been patented in the United Kingdom by Alexander Bain.

Telegraph wires soon linked major towns in many countries. A submarine telegraph wire (coated in protective gutta percha) was laid between Britain and France in 1850, and a regular service inaugurated the following year. In 1858, the first transatlantic telegraph cable was laid. But there was a problem. Where lines crossed national borders, messages had to be stopped and translated into the particular system of the next jurisdiction. To simplify matters, regional agreements began to be forged, and in Europe, representatives of 20 States gathered in Paris at an International Telegraph Conference to find ways to overcome barriers and make services more efficient. They would create a framework to standardize telegraphy equipment, set

uniform operating instructions, and lay down common international tariff and accounting rules.

On 17 May 1865, the first International Telegraph Convention was signed in Paris by its twenty founding members, and the International Telegraph Union (the first incarnation of ITU) was established to supervise subsequent amendments to the agreement. That significant date – 17 May – eventually became World Telecommunication and Information Society Day.

Only a decade later, the next leap forward in communications occurred with the patenting of the telephone in 1876. At the International Telegraph Conference held in Berlin in 1885, ITU began to draw up international legislation governing telephony. An article added to the Telegraph Regulations specified five minutes as a unit of charge, and the length of a call was limited to ten minutes if there were other requests to use the telephone line.

Telephones meant you could actually speak to another person over long distances, as well as sending Morse code telegraphs. But what if a wire could not reach them, for instance, on a ship? In 1880 at the Royal Society in London, David Edward Hughes demonstrated what was later to be recognized as wireless signaling. Practical experiments began to be made in the 1890s by such inventors as Nikola Tesla, Jagadish Chandra Bose, Alexander Stepanovich

Popov and Guglielmo Marconi. Radio, known as "wireless telegraphy," was born.

ITU based in Switzerland

The 1868 International Telegraph Conference, in Vienna, decided that ITU would operate from its own bureau in Berne, Switzerland. It began with just three members of staff. In 1948, the headquarters of ITU were moved from Berne to Geneva.

Radio

Gradually, the range of radio signaling increased, and Marconi made a one-way transatlantic transmission in 1901. The first experimental transmission of the human voice was achieved in 1900 by Aubrey Fessenden, who also made the world's first broadcast of voice and music in 1906.

However, problems occurred with international connections, as they had done in early telegraphy. The issue was highlighted in 1902, when Prince Henry of Prussia, returning across the Atlantic from a visit to the United States, attempted to send a courtesy message from his ship to US President Theodore Roosevelt. The message was refused by the US shore station because the ship's radio equipment was of a different type and nationality from that onshore. As a result of the incident, the German Government called a Preliminary Radio Conference in Berlin in 1903 with the aim of establishing international regulations for radiotelegraph communications.

This preparatory event was followed in Berlin in 1906 by the first International Radiotelegraph Conference, attended by representatives of 29 nations. It decided that the Bureau of ITU would act as the conference's central administrator, and the Radiotelegraph Section of the Bureau began operation on 1 May 1907. The 1906 conference produced the International Radiotelegraph Convention with an annex containing the first regulations in this field. These were expanded and revised by numerous subsequent conferences, and became known as the Radio Regulations. Today, given the multitude of wireless services, the regulations include more than 1000 pages of information on how the limited resource of radio-frequency spectrum – as well as satellite orbits -- must be shared and used internationally.

The conference also established "SOS" as the international maritime distress call – one of the first steps in the vital field of emergency communications. But the sinking of the ocean liner Titanic in 1912 showed the need for further improvements. Just a few months after the tragedy, the 1912 International Radiotelegraph Conference, held in London, agreed on a common wavelength for ships' radio distress signals. Also, every ship was instructed to maintain radio silence at regular intervals, when operators should listen for distress calls.

ITU continued its technical work throughout World War I, but no international meetings took place until the 1925 International Telegraph Conference in Paris. It officially incorporated into ITU the International

Long-distance Telephone Consultative Committee (CCIF), and created the International Telegraph Consultative Committee (CCIT). Two years later, the Radiotelegraph Conference, held in Washington in 1927, established the International Radio Consultative Committee (CCIR). Together, the three committees were made responsible for coordinating technical studies and drawing up international standards in all these fields of telecommunications. The CCIF and CCIT were merged in 1956 to form the International Telephone and Telegraph Consultative Committee (CCITT).

Through the 1920s the use of radio grew rapidly, including for popular broadcasting. To improve the efficiency and quality of operation, the 1927 Washington conference allocated frequency bands to the various radio services (fixed, maritime and aeronautical mobile, broadcasting, amateur, and experimental).

Television

John Logie Baird gave the first public demonstration of television, in London in 1925. A decade later, his mechanical device was superseded by the electronic television systems of Vladimir Zworykin and Philo T. Farnsworth, developed in the United States using cathode ray tubes originally created by Karl Ferdinand Braun some 40 years earlier.

Regular, low-resolution, television broadcasts began in the late 1920s, with improvements in the early 1930s. But it was after World War II that the new medium began to take off. ITU's first technical standards for television were released in 1949. In the following decades, more than 150 technical standards were published to make it possible for high-quality images to be delivered across the world. ITU standards now cover all kinds of sound and vision broadcasting, including today's multimedia and data transmissions to a plethora of devices.

ITU's important role in setting the foundations for international broadcasting was recognized by the US National Academy of Television Arts & Sciences (NATAS) in 1983 and 2012, which gave Emmy Awards to the Union. In 2008, ITU received a Primetime Emmy

New name for ITU

New name for ITU In 1932 at a conference in Madrid, it was decided that a new name would be adopted to reflect the full range of ITU's responsibilities: International Telecommunication Union. The new name came into effect on 1 January 1934.

At the same time, the International Telegraph Convention of 1865 was combined with the International Radiotelegraph Convention of 1906 to form the International Telecommunication Convention

Award from the Academy of Television Arts & Sciences (ATAS).

Space and satellites

The Space Age began on 4 October 1957 with the launch by the Soviet Union of the world's first artificial satellite, Sputnik-1. Not long after, satellites became used for telecommunications. The passive Echo-1 was launched in 1960 by the United States, followed in 1962 by Telstar-1 (a joint French-UKUS project), the first active, direct relay communications satellite. On 23 July that year it enabled people on both sides of the Atlantic to watch a live television programme at the same time.

The motion of these satellites had to be tracked as they crossed the sky; a more efficient and economical idea was that of the geostationary communications satellite, first proposed by writer Arthur C. Clarke in 1945. In 1964, following experiments with geosynchronous satellites, the first geostationary satellite (Syncom-3) was launched.

Like radio-frequency spectrum, the geostationary orbit around Earth is a limited natural resource; both need to be shared fairly and in a way that avoids interference. In 1963, ITU held an Extraordinary Administrative Conference for space communications, which allocated frequencies to the various services. Later conferences made further allocations and put in place regulations governing satellites' use of orbital slots.

As well as linking broadcasting and wired telephone systems, and providing navigation services, satellites are also used in mobile communications. Satellite phones, for example, can be vital in emergencies, or for areas without access to alternative networks. And in 1992, ITU made spectrum allocations for the first time to serve the needs of Global Mobile Personal Communications by Satellite (GMPCS).

ITU also looks to the needs of radio-astronomers and other space scientists, who conduct such important work as weather prediction and monitoring the Earth's environment and climate. Climate change is a major theme of ITU's work, as are emergency communications such as satellite-based disaster warning systems.

The Internet

Devices to help people calculate – such as the abacus – have existed for thousands of years. The history of computers as we know them today stretches back to the early 19th century, when Charles Babbage in London designed a "Difference Engine" in 1822 and later an "Analytical Engine." Modern computing can trace its origins to the theoretical and practical work of figures such as Alan Turing in the United Kingdom before and during World War II, along with developments in Germany, the United States and elsewhere. Another

vital advance was the development of the transistor in the 1940s. But it was when computers were linked together that the Internet revolution began to truly change our world.

It started in 1969 with a packet-switched network of computers – ARPANET – in the US Defense Department. This carried the first email, sent in 1971. Then, in 1989, an important advance was made at the European Organization for Nuclear Research (or CERN), close to Geneva. British scientist Tim Berners-Lee, working with Belgian Robert Cailliau, proposed a distributed hypertext system that became known as the World Wide Web. The necessary software was developed in 1990, and crucially, the system was used not only within CERN, but also made freely available to all.

The Internet that carries the World Wide Web comprises many types of equipment and telecommunication infrastructure, which must operate together seamlessly. The worldwide expansion of the Internet owes much to technical standards from ITU, from the early days of modems through to today's broadband. Hardly anyone would be able to use this powerful resource without ITU -brokered and approved global standards for the critical transport layers and access technologies. And the future is continually under consideration, including such issues as the transition to IPv6 to overcome the urgent need for Internet Protocol addresses, especially given the burgeoning "Internet of Things."

The Internet is now used by more than a third of the global population. Its huge social and economic importance means that debate must also take place on matters of policy. ITU has a long history as a venue for discussing how best to ensure that the Internet works for all. The World Summit on the Information Society gave ITU the mandate to spearhead this effort, bringing all interested parties together. In addition, the Union's membership has mandated ITU's work on such topics as cybersecurity; protection of children online; promoting multilingualism on the Internet; protecting consumer rights and privacy; international Internet connectivity, and fostering investment in the necessary infrastructure.

Mobile connectivity

Arguably, the technology that has done most to connect people in modern times is the mobile phone – and ITU has been at the heart of its spectacular progress. In 1973, Martin Cooper, of Motorola in the United States, made the first demonstration call with a handheld cell phone. Commercial networks were opened in Japan in 1979 and in Nordic countries in 1981. These early systems used analogue technology. They were superseded with the launch in Finland of digital second-generation (2G) mobile services in 1991, then third-generation (3G) in Japan in 2001.

ITU agreed radio-frequency spectrum allocations for 2G mobile telephony at the World Radiocommunication Conference in 1993. But as technologies progressed, various mobile phone systems existed in a fragmented market. After more than ten years of work under the leadership of ITU, an historic decision was taken at the conference held in 2000: the unanimous approval of technical specifications for third-generation systems under the name IMT-2000. For the first time, full interoperability of mobile systems could be achieved, and the foundation was laid for new, high-speed wireless devices capable of handling voice, data and connection to the Internet. In 2012, the ITU Radiocommunication Assembly agreed specifications for IMT-Advanced – a global platform on which to build the next generation of interactive mobile services.

According to ITU figures, there were 6.8 billion mobile phone subscriptions in 2013 – almost the same number as the world

population. And more and more, people are choosing smartphones and other mobile devices that link them to the Internet.

ITU Statistics

The collection and dissemination of information on the growth of information and communication technologies (ICT) has been part of ITU's mission from the start.

It now collects statistics covering 200 economies and over 100 indicators

Development to bridge the digital divide

Mobile phones and Internet access are powerful tools in supporting advances in developing countries. But ITU statistics put into sharp focus the digital divide that continues between countries, and within national borders among various social groups.

The need to support the expansion of telecommunications has long been recognized. In 1952, ITU became an official participating organization in the UN Expanded Programme of Technical Assistance. The aim was to recruit and send experts to developing countries to help in various technological fields, as well as to support the training of local personnel. In 1959, ITU took over the management of its technical assistance schemes for telecommunications, with a department for that purpose created the following year.

The UN Expanded Programme of Technical Assistance was merged with the UN Special Fund, forming today's United Nations Development Programme, or UNDP, which began operation in 1966. ITU's collaboration with UNDP increased markedly from that period. Alongside the objectives of improving technical,

administrative and human resources in developing countries, the goal was to promote the expansion of networks in Africa, Asia and Latin America (as well as regional networks there and in the Asia-Pacific and the Middle East). From the 1970s, projects such as the Pan-African Telecommunications Network (PANAFTEL) and the Middle East and Mediterranean telecommunication master plan (MEDARABTEL) were implemented.

An important step forward was taken in 1982, when the ITU Plenipotentiary Conference held in Nairobi set up the Independent Commission for World-Wide Telecommunications Development. It began work in 1983 under the chairmanship of Donald Maitland and submitted its report in 1985. Officially titled The Missing Link, and also known as the Maitland Report, the report showed how access to telecommunications correlates with economic growth – but also drew international attention to the huge imbalance in such access between developed and developing countries.

In response to the ground-breaking report, ITU held its first World Telecommunication Development Conference in 1985, in Arusha, Tanzania. In 1989, the ITU Plenipotentiary Conference in Nice recognized the importance of placing technical assistance to developing countries on the same footing as its traditional activities of standardization and spectrum management. To this end, it established the Centre for Telecommunication Development (later incorporated into ITU's Telecommunication Development Bureau in 1991).

Bridging the digital divide was confirmed as a priority for ITU at the Marrakesh Plenipotentiary Conference in 2002, which also authorized ITU to take a leading role in the preparations and follow-up of the World Summit on the Information Society (WSIS).

WSIS was the first ever gathering of global leaders to address how best to create a safe and truly inclusive information society. The summit was held in two phases: in 2003 in Geneva and in 2005 in Tunis. Participants came

from 175 countries, including some 50 Heads of State and Government and vice-presidents. Its outcome documents, including the Geneva Plan of Action and the Tunis Agenda for the Information Society, address such issues as the use of information technologies for development; cybersecurity; affordable access to communications; infrastructure; capacity building, and cultural diversity.

The summit also resulted in the multi-stakeholder WSIS Forum, held annually since 2009 to review progress in achieving

New ITU Structure

Against a background of increasing globalization and the liberalization of telecommunication markets, the 1989 Plenipotentiary Conference, held in Nice, decided that ITU's structure and working methods needed to be reviewed.

As a result, an Additional Plenipotentiary Conference, in Geneva in 1992, streamlined ITU into three Sectors: Telecommunication Standardization (ITU-T), Radiocommunication (ITU-R), and Telecommunication Development (ITU-D).

the summit's goals. As another follow-up to WSIS, the Connect the World series of regional conferences was launched by ITU to mobilize technical, financial and human resources for telecommunication development. The first event was the Connect Africa Summit, hosted by Rwanda in 2007.

ITU holds regular seminars and training events, and since 2000 it has organized the annual Global Symposium for Regulators. This provides a unique meeting place for regulators and policy-makers from both developed and developing countries. Efforts to encourage greater participation by developing countries in creating and adopting technical standards are focused on ITU's Bridging the Standardization Gap programme, established in 2008.

Global meeting place

In addition to its regular conferences, ITU hosts events where stakeholders in the public and private sectors discuss not only technical matters, but also wider issues. As an industry showcase and high-level forum, ITU Telecom World began in 1971 in Geneva. Since then it has been held regularly, at venues around the world, bringing together the most influential representatives of government and industry to network, share knowledge and seek solutions to global challenges.

In 1994, the Kyoto Plenipotentiary Conference established the World Telecommunication Policy Forum (WTPF), a high-level meeting which encourages the free exchange of ideas and information on emerging policy issues arising from the changing telecommunication environment. The first WTPF was held in Geneva in 1996 on the theme of global mobile personal communications by satellite. Later forums took place in 1998, 2001, 2009 and 2013. The fifth WTPF took place in Geneva in 2013 and considered international Internet-related public policy matters.

Serving the modern world

Vast changes have taken place in the world of telecommunications and information technologies – not only since the foundation of ITU, but increasingly over recent decades. In 1988, the separate International Telegraph

Regulations and Telephone Regulations were revised and combined to form the International Telecommunication Regulations (ITRs). By the 21st century, however, these were no longer in keeping with modern developments, so in 2012, ITU convened in Dubai a World Conference on International Telecommunications (WCIT-12) with the goal of revising the ITRs to suit the new age.

The ITRs are an international treaty, and much detailed – sometimes difficult – debate took place at the conference. After two intensive weeks of negotiations, a majority of delegates from around the globe agreed on revised ITRs that will help pave the way to the hyper-connected world of the future.

That future is being built on broadband. In 2010, ITU, together with UNESCO, formed the Broadband Commission for Digital Development, in response to UN Secretary-General Ban Ki-Moon's call to step up efforts to meet the Millennium Development Goals. The Commission believes that expanding broadband access to the Internet is key to accelerating economic and social progress everywhere, and it defines practical ways in which countries — at all stages of development — can achieve this, in cooperation with the private sector.

ITU has continued to reach out to all who share its goal of connecting the world. Young people are a key audience. Events are organized to encourage their participation in deciding the future for telecommunications, such as the BYND 2015 Global Youth Summit. Held in Costa Rica in 2013, this focused on using these technologies to help further the development agenda "beyond 2015," the target date for the Millennium Development Goals.

Improving opportunities for women and girls is another area of action for ITU. In 2010, it established "Girls in ICT Day" (celebrated every year on the fourth Thursday in April) with an associated web portal launched in 2012. The aim is to inspire girls to consider a future in technology, helping not only themselves, but also their communities.

ITU is also active in promoting better accessibility to the information society for people with disabilities. This need is promoted in the development of standards, for instance, so that technologies can be easily used by everyone. In 2013, at the UN High Level Meeting on Disability and Development, ITU was among the expert organizations launching a global consultation report on the beneficial impact of ICT in this field.

Looking forward

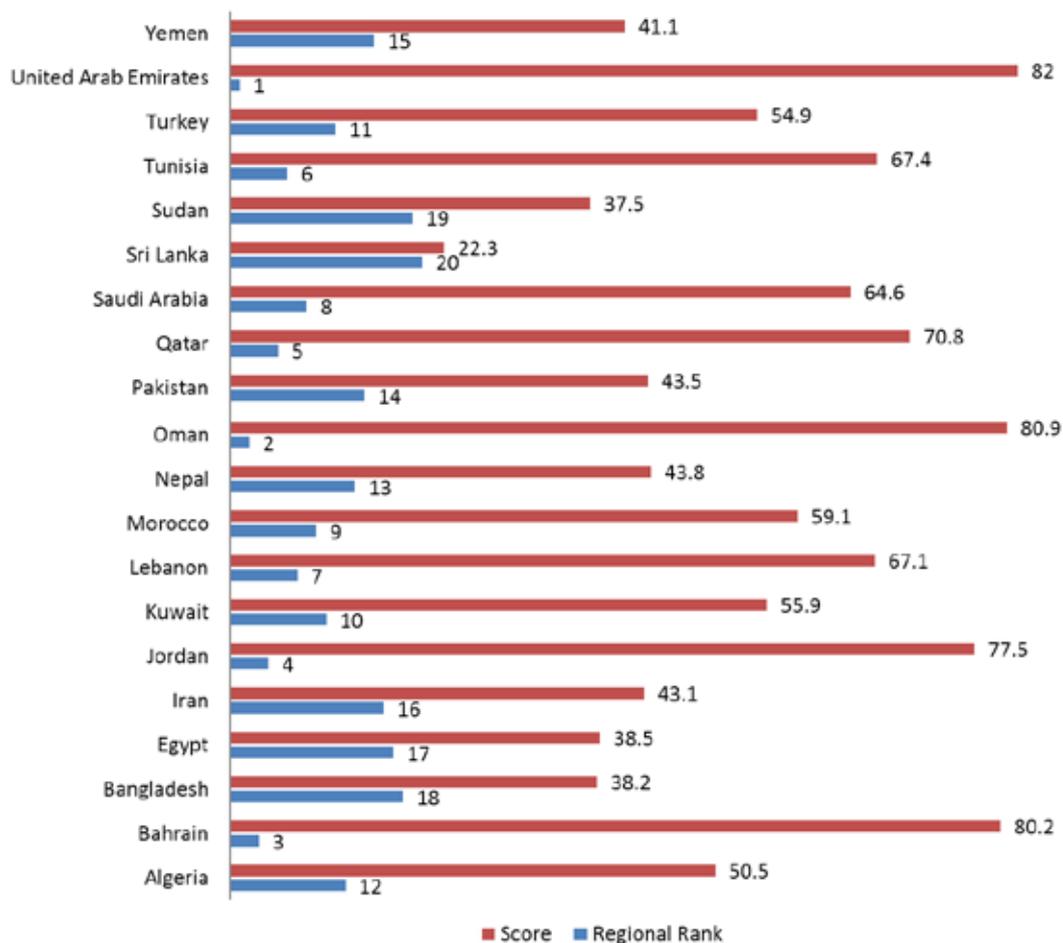
The ITU membership includes hundreds of private-sector organizations, as well as 193 States. In 2011, a new category of Academia was introduced for membership by research institutions. Beyond this, many other individuals and organizations are welcomed to contribute their views at events such as the WSIS Forum. And everyone can learn more about ITU's history and its work by visiting the interactive exhibition ICT Discovery, which opened to the public at the Union's headquarters in Geneva in 2012.

The world is becoming ever more reliant on telecommunication technologies, in every aspect of our lives. ITU's role in supporting the smooth integration, expansion and sharing of each advance is more vital than ever before. ITU will continue to match its priorities and working methods to respond to the rapid changes in the global environment, as it has done for a century and a half.



REGULATORY ENVIRONMENT RANKING

SAMENA Region



Research Note: Data related to regulatory environment has been taken from The Global Innovation Index 2014 published by INSEAD. Score of the regional countries was extracted and analyzed. 'As described by the GII, 'Regulatory Environment' draws on two indices aimed at capturing perceptions on the ability of the government to formulate and implement cohesive policies that promote the development of the private sector and at evaluating the extent to which the rule of law prevails (in aspects such as contract enforcement, property rights, the police, and the courts).

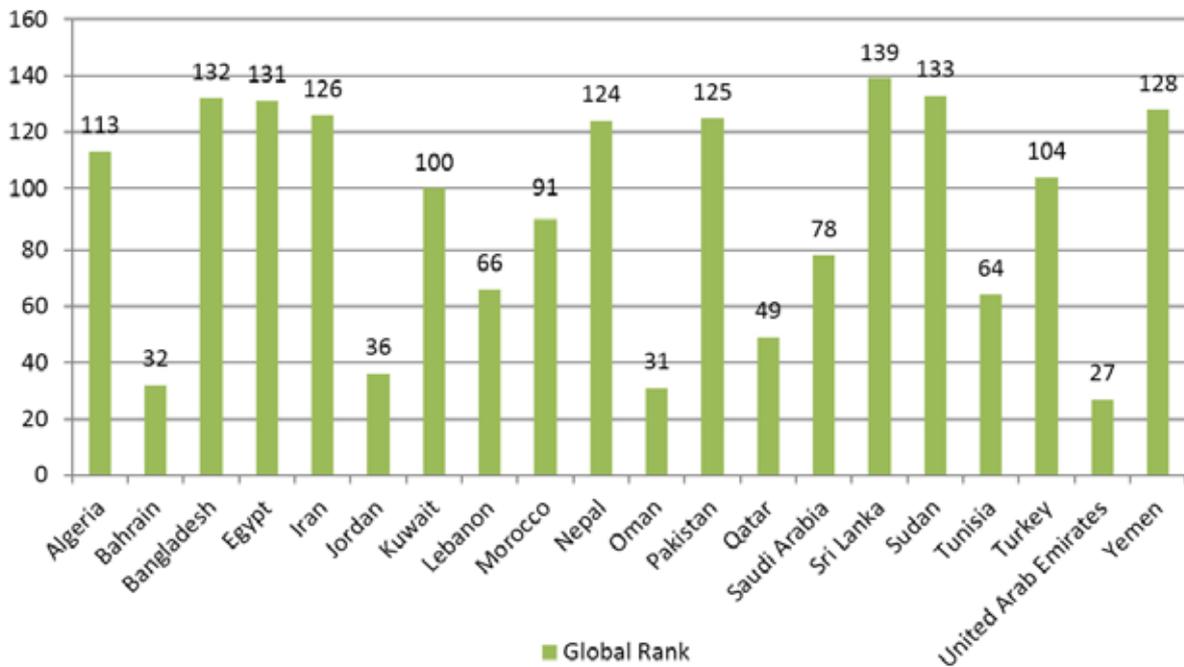
The top five ranked countries in the SAMENA region are from the Middle East, namely UAE, Oman, Bahrain. Analyzing this data we find that UAE, Oman, and Bahrain, Jordan and Qatar. Sri Lanka, Sudan and Bangladesh are at the bottom of the list.

Analysis & Graph: SAMENA Telecommunications Council
Data Source: The Global Innovation Index 2014 by INSEAD



REGULATORY ENVIRONMENT RANKING

Global Rank of SAMENA (Regional) Countries



Analysis & Graph: SAMENA Telecommunications Council
Data Source: The Global Innovation Index 2014 by INSEAD



MEMBERS NEWS

MEMBERS UPDATES

Huawei supports Ghana's ICT modernization

Global technology giant Huawei has been supporting efforts by the government of Ghana to modernize the use of Information and Communications Technology (ICT) and maximize its benefits to the country. The ICT firm is leading the country's efforts to replace its existing data center with the construction of a new state-of-the-art facility. The first phase of the new data center financed by China EXIM Bank at 20 million U.S. dollars is almost complete and will enable businesses, store their data, host websites, protect data and perform active directory and other data related activities in a safe and advanced environment. Senah Ocloo-Sewor, a data center engineer with the National Information Technology Agency (NITA), a state institution which runs the data center, told journalists visiting the center that the old data center lacks the capacity to take the country where it wants to reach and can reach. The center has already established four modules with 44 racks each into which clients can install their equipment. But this capacity will be expanded by creating more space for more models, more racks: more space for people to come and install their servers, their storage equipment and their network equipment. The center has also been fitted with network security to enable businesses concentrate on their core activities while hosting or keeping

their data at the center. The network room has actual equipment providing the core network; the core switches, the core routers, core security equipment on the network level as well, the firewalls with an intrusion prevention equipment, which also have enough back-ups. "Currently the main contractor that we have working for us is Huawei Technology. They are providing the installation for the entire infrastructure and the support infrastructure. So the data center module, what we call the IDS 2000 is a Huawei Data Center solution," the data center engineer stated. With all these, Huawei has also built a back-up station using IDS 1000 equipment for the West African country in Kumasi, 270 km north of the capital.

Google launches Sidewalk Labs to fix cities

Google, famous for its ambitious projects to build self-driving cars and high-altitude balloons that beam the Internet to earth, is now taking aim at fixing another major problem: city life. The new initiative called Sidewalk Labs will use technology and innovation to improve urban life at a time when the U.S. population is gravitating to cities, according to Google Chief Executive Larry Page. Based in New York, it will be run by Dan Doctoroff, a former deputy mayor of New York City who will combine his experience in managing cities with funding from

Google. "Sidewalk will focus on improving city life for everyone by developing and incubating urban technologies to address issues like cost of living, efficient transportation and energy usage," Page said in a Google+ post. "Many cities around the world have already made a lot of progress in some of these areas — for instance, developing dashboards to measure and visualize traffic patterns, and building tools that let residents instantly evaluate and provide feedback on city services. But a lot of urban challenges are interrelated — for example, availability of transportation affects where people choose to live, which affects housing prices, which affects quality of life," Page wrote. "So it helps to start from first principles and get a big-picture view of the many factors that affect city life. Then, you can develop the technologies and partnerships you need to make a difference." Page described Google's investment as "relatively modest." He did not disclose the amount, but compared Sidewalk Labs to Google X, Google's research lab, and Calico, a Google-funded company that is researching health and aging. "Making long-term, 10X bets like this is hard for most companies to do, but (Google co-founder) Sergey (Brin) and I have always believed that it's important," Page wrote. In a statement, Doctoroff said: "We are at the beginning of a historic transformation in cities. At a time when the concerns about urban equity, costs, health and the environment are intensifying, unprecedented technological change is going to enable cities to be more efficient, responsive, flexible and resilient."

Cisco expands Intercloud alliance

Cisco hopes its growing alliance of vendor partners will compete better with Amazon Web Services. Cisco is trying to aggregate a bigger cloud presence by beefing up its proposed Intercloud network of partner-run clouds each running Cisco's version of OpenStack and, it hopes, other Cisco hardware and software. To that end the company has updated the Cisco CSCO 1.49% Intercloud Fabric with better security and said 35 new software vendor partners including Basho, Chef, Hortonworks, and MongoDB will run natively on Intercloud. There may be some fuzzy arithmetic here, however, since an executive with one

of the vendors listed by Cisco, said his company has not agreed to integrate with Intercloud. Since Intercloud is basically OpenStack and most of the software vendors listed already support OpenStack, it's unclear how big a differentiator Cisco's proposed system really is. Some 350 data centers worldwide now run Cisco's Intercloud software, although total capacity in terms of total virtual machines was not known. The news comes out of the Cisco Live event in San Diego. Basically, Cisco's idea is to enlist a raft of data center partners to run the same set of software and services on their infrastructure. With identical technology stacks running at many sites, moving data and applications from one to another becomes easier. Several legacy IT players are banking on this idea of multiple-yet-similar clouds to give them capacity enough to compete with public cloud giant Amazon AMZN 1.24% Web Services. And Cisco vowed that users could use one screen to manage jobs running in all those clouds. Cisco's strategy here sounds a lot like that which rival Hewlett-Packard HPQ 1.01% proposes with its OpenStack-based Helion product, a contention that Cisco Senior Vice President Nick Earle acknowledged while adding that HP tried to get into the public infrastructure race to compete with Amazon Web Services, before pulling back. HP, he said, also lacks the partner ecosystem to make a true federation of independent clouds successful. (HP would likely beg to differ there.) Cynics often point out that legacy hardware vendors view their clouds as a captive market to sell more of their hardware. In this case, Intercloud partners run the Cisco flavor of OpenStack—either on Cisco hardware or some other X86-based server. "Clearly we're in the business to make money, so when partners adopt Intercloud we damn well want to sell more stuff, but we also solve a fundamental problem for our customers who want the same level of security, policy, control, and management across all these clouds," Earle said. "That can only be good for Cisco partners and customers."

Fujitsu Achieves Four-User Concurrent Access And 12 Gbps Transmissions By Multiplexing

Millimeter-Wave Beams As Step Toward 5G

Fujitsu Laboratories Ltd. recently announced that, in preparation for the next-generation mobile communications 5G system, it has achieved multiple access by multiplexing millimeter-wave beams. This technology will enable simultaneous high-capacity communications for multiple users while minimizing reductions in communications speeds. In the past, when large numbers of users communicated at the same time, because their emitted radio waves would interfere with each other, there was a need to partition time and frequencies, which resulted in the problem of slower communications speeds. Now, in the 60 GHz millimeter-wave band, Fujitsu developed a technology that reduces radio waves that were generated outside of the targeted direction during beam formation using array antennas that consisted of multiple aligned antenna elements, to one fifth the conventional amount. With the developed technology, by multiplexing narrow radio-wave beams, many users are able to communicate without interfering with each other, and reductions in speed during times of high-capacity communications are minimized. In internal experimentation, by forming four millimeter-wave beams, Fujitsu was able to achieve 12 Gbps communications speeds, the world's highest level. Details on the technology will be released at the meeting of the Technical Committee on Short Range Wireless Communications of the Institute of Electronics, Information and Communication Engineers to be held on Monday, June 15, at Fujitsu's Kawasaki facility.

Accenture puts cloud in transit & collects fare

Accenture launched its Fare Management Solution as it expands its fare collection service. The service, which will be implemented through Microsoft's Azure cloud, will provide real-time payments that can be integrated into existing infrastructure without additional hardware. The service which will be available in America comes on the back of a surge in smart payment and contactless payment applications such as Apple Pay and Google Wallet. This solution from Accenture can accept contactless bank card,

smartcards and smartphone payment applications, as well as non-financial contactless media such as building access cards. This kind of solution could be the next step for contactless payments in the UK with Oyster cards already popular and contactless card payments growing. Alden Cuddihy, global lead, Accenture Transit & Tolling Services, said: "These upgrades to the Accenture Fare Management Solution enable a new generation of digital payment capabilities to help large and mid-size transit agencies provide a wide range of payment options to consumers, while keeping total cost of ownership down." "This cloud-based, as-a-service model is flexible and can be scaled to integrate current payment options such as Apple Pay and Google Wallet. The open architecture also helps to provide flexibility to integrate future payment technologies. This offers more efficiency and convenience for travelers as well as cost-efficient processes for transit agencies." The solution uses open architecture and leverages the cloud management capabilities of the Accenture Cloud Platform with solutions of Avanade. The integration of cloud in the solution allows for greater and faster scalability.

VIVA, BT launch global IP exchange voice

VIVA Bahrain, the Kingdom's leading telecommunications services provider and BT, one of the world's leading providers of communications services and solutions, have announced the launch of Bahrain's Global IP Exchange (GIPX) interoperability hub. With the launch of the GIPX hub, VIVA Bahrain delivers hosting and connectivity, while providing a new route to market for BT's Global IP Exchange Voice and interoperability services in the region. The new hub is expected to be of particular interest to mobile and fixed service in Bahrain, Qatar, UAE, Jordan, Oman, Saudi Arabia and Egypt who need to terminate international voice traffic to other countries.

Yahoo adds view ability measurement to digital properties

Vodafone addressed the audience Yahoo has added independent viewability and fraud measurement for display and video advertising on its properties, as well as media purchased across its programmatic buying platform. In the complex world of digital advertising, there is

growing demand from marketers to have greater transparency into ad viewability and traffic fraud. They also want control over how it is measured to allow them to better compare performance across publishers and ensure appropriate return on advertising spend, brand safety and ad effectiveness. It has created an open environment where advertisers can choose from accredited, third-party measurement solutions from comScore, DoubleVerify, Integral Ad Science and Moat, among others, to independently validate for viewability and fraud across display and video across the campaign lifecycle. "This is a significant milestone for the digital advertising industry, as no other large premium digital publisher provides open, third-party measurement across its platform. We're excited to bring these capabilities to market," said Dennis Buchheim, VP product management at Yahoo.

Etisalat highlights need for business transformation in the Digital Revolution era

Etisalat's participation at the recently concluded Gartner Symposium ITxpo was marked with discussions around making organizations future ready through digital transformation. During his presentation at the event, Etisalat's Senior Vice President of Digital Solutions – Francisco Salcedo, re-emphasized Gartner's message on the gradual shift of IT spending moving out of CIO's control and going towards digital business. He highlighted the changing role of CIOs to CDOs and the need for IT and business alignment. He also stressed upon the importance of businesses evolving digitally in order to meet the rapidly changing and highly customized needs of the digital consumer. Salcedo said, "It is becoming particularly important for businesses to join the digital revolution to provide timely, valuable, radically customized and simple services to consumers wherever they are, and to move to real time operations with Internet of Things (IoT) solutions." With the "Internet of Me" and "Internet of Things", it is becoming imperative for CIOs to be ready to provide IT as a Service (ITaaS) within the organization as opposed to traditional methods. It is therefore important for CIOs to leverage on flexible, scalable, reliable

and secure Cloud services", he added. "Through trusted partnerships, CIOs can continue to focus on adding value to their businesses, while leveraging on the expertise of a trusted partner like Etisalat which has undergone the Digital Revolution journey", concluded Francisco. Etisalat provides a comprehensive and integrated enterprise oriented portfolio of digital solutions including cloud platforms (private, public or hybrid), storage and backup, disaster recovery, mobility (Mobile Device Management and Mobile Enterprise Applications Platform), M2M/IOT and security solutions that can be subscribed from a one-stop-shop. The Gartner Symposium/ITxpo 2015 is the world's most important gathering of CIOs and senior IT executives, providing a strategic view on the trends that shape IT and business. The event in Dubai had more than 500 CIOs and IT leaders in attendance.

WSO2 and SLA Mobile Partner to Provide Mobile Operators With Digital Services, Leveraging WSO2 Open Source Middleware

WSO2 and SLA Mobile announced a strategic partnership to deliver digital services, leveraging WSO2 open source middleware, to mobile operators in Europe, Middle East, Africa and Asia. WSO2 delivers the industry's most comprehensive open source platform for building, integrating, managing, securing and analyzing companies' APIs, applications, and Web services—on-premises, in the cloud, on mobile devices, and across the Internet of Things. SLA Mobile is a global mobile solutions company that provides mobile operators and merchants with managed digital service solutions, allowing them to engage with their customers and create new revenue streams. The partnership was announced in conjunction with WSO2's news at WSO2Con Europe 2015 today that the company has achieved a 155% growth in partner-driven revenue in Q1 2015 over Q1 2014, and increased its number of partners by 140% in the same period. As a WSO2 Preferred Partner, SLA Mobile has supported the WSO2Con Europe 2015 by participating as a Silver Sponsor and hosting a speaking

engagement delivered by their SLA Mobile Chief Technology Officer Stephen Carl. Stephen discussed the importance for mobile operators to create digital services like mobile identity to ensure they remain competitive. He also explained how the GSMA Mobile Connect solution is becoming the de facto standard within the mobile industry. Under terms of the agreement, SLA Mobile will use WSO2's open source middleware to provide mobile operators with innovative digital service solutions. Additionally, WSO2 will provide SLA Mobile with technical, sales and marketing support to promote adoption and help customers achieve the high availability, high performance, and flexibility they require for IT and business agility. "SLA Mobile's alliance with WSO2 further extends our leadership in the mobile industry with regards to digital service solutions. It enables us to provide innovative mobile solutions leveraging the capabilities of WSO2 open source middleware," said SLA Mobile Head of Sales and Marketing Amelia Power. "Our partnership with SLA Mobile is a win-win situation for our mobile industry customers," said WSO2 Vice President of Channel Sales Lindsey Anderson. "SLA Mobile, as a partner of choice for many mobile operators and merchants for its managed digital service solutions across EMEA and Asia, provides a strong complement to our comprehensive WSO2 platform. Together, we are empowering these businesses with the modern, flexible and secure solutions they require."

PCCW Global expands its unified communications offering

PCCW Global, the international operating division of HKT, Hong Kong's premier telecommunications service provider, has acquired Syntelligence, the group holding company which owns Voxclever, a UK hosted Unified Communications-as-a-Service (UCaaS) provider, and Weavesys, the software development business that has developed advanced service orchestration platform for unified communications. Syntelligence's service platform delivers integrated voice, video and collaboration solutions using the flexibility and agility of the cloud, allowing customers to avoid the need for capex-intensive investments. The platform provides service providers with the ability to

plug in, orchestrate, and manage best of breed unified communications components, integrating each element of the service life cycle, from creation and provisioning, through to reporting and billing. The platform provides full automation of all elements from "lead to cash", affording service providers and their enterprise customers complete transparency and control over their communications services via an intuitive multi-tenant customer portal. Mr. Marc Halbinger, Chief Executive Officer of PCCW Global, said, "As businesses migrate to the cloud, demand has increased for integrated products which are delivered with a greater degree of self-service capability. The acquisition of the Syntelligence companies provides PCCW Global with the ability to accelerate the development of our global unified communications offering and deliver an easy to use, flexible self-service model for our customers." Hosted PBX services are increasingly being integrated into UCaaS offerings as users demand flexible solutions that incorporate voice, video, and mobility features. Rising mobility and Bring Your Own Device (BYOD) behavior, coupled with demand for a pay-per-use model with low cost of ownership, is driving worldwide demand for both hosted and on-premise deployed unified communications solutions. Mr. Scott Goodwin, founder of Syntelligence, said, "The Syntelligence team is very pleased to join the PCCW Global family and are excited by the unique opportunity to integrate and extend our platform and services across PCCW Global's extensive global footprint. This is a great opportunity for us to be part of a truly global company and to address the expanding demand for unified communications in some of the most exciting growth markets around the world." The transaction value is de minimus and does not constitute a notifiable transaction of HKT Trust and HKT Limited under Chapter 14 of the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange.

Mobily organized a trip for FIRNAS winners to CES-Asia 2015

Mobily has organized a trip for a group of innovation enthusiasts to CES-Asia 2015 exhibition, the first and largest consumer electronics exhibition in Asia, as part of the Mobily's corporate

entrepreneurial responsibility program known as FIRNAS. The exhibition has taken place in Shanghai-China, one of the most amazing cities in the world, since the exhibition had witnessed remarkable attendance from the interested entrepreneur. The participants enjoyed smart home, 3D printing, and smart wearable's sections. Then, they enjoyed automotive, medical technology, drones, augmented reality and gaming sections. Participants have also interact with innovators and entrepreneurs from all over the world during their visit to the exhibition to exchange knowledge and know all about developing and futuristic products, which is one of the main objectives of this trip increasing the local innovators knowledge level and interaction with more advanced environments in terms of innovation. Innovation represents a crucial value for Mobily that support the company to introduce the latest and best technologies and services, which fits the Saudi market.

Frost & Sullivan applauds PCCW Global for addressing the connectivity demands of Sub-Saharan Africa with its IP exchange network

PCCW Global, the international operating division of HKT, Hong Kong's premier telecommunications service provider, has been recognized by Frost & Sullivan with the 2015 Sub-Saharan African (SSA) Connectivity Solutions Customer Value Leadership Award. This prestigious recognition follows Frost & Sullivan's recent analysis of the connectivity solutions market. PCCW Global delivers various layers of critical infrastructure to SSA, including fiber and satellite transmission, Internet transit services, MPLS and Ethernet connectivity, and also aggressively facilitates meshed IPX networks which have enabled the use of voice over IPX (VoIPX). This is a significant move in the region, as this service ensures improved service quality for its customers. "PCCW Global is a leader in the provision of robust fiber connectivity through its partial ownership in the undersea cables connecting Africa to the rest of the world," said Frost & Sullivan Research Analyst Ms. Vivienne Mutembwa. "It has created a fiber ring around Africa by connecting the East Coast

and the West Coast undersea cables through the Teraco Data Centres in South Africa, thereby establishing an integrated first-in-class VoIPX network." Mr. Marc Halbfinger, Chief Executive Officer of PCCW Global, said, "We are delighted to receive this award which recognizes our long-term commitment to delivering customer value in Sub-Saharan Africa, one of the most diverse and dynamic markets of the world. We have been providing connectivity services to this region for more than 20 years, and we remain committed to expanding and evolving our network, to delivering reliable high-quality communications, and to providing access to the latest technological innovations which in turn allow us to better serve the changing needs of our customers." PCCW Global manages numerous satellite transponders over Africa and it maintains access to multiple cable landing stations facilitating world-class local connectivity. Today, PCCW Global provides fiber connectivity to 40 African countries, including 11 landlocked countries. PCCW Global's cross-border optimal connectivity includes countries such as Malawi, Tanzania, Mozambique, Kenya, Zambia, Zimbabwe, Botswana and Namibia. "The company boasts one of the world's leading peered IP networks, which lets it deliver reliable and extremely diverse international capability to Internet service providers (ISPs) and mobile network operators (MNOs)," Ms. Mutembwa said. "This helps the ISPs and MNOs meet customer demand for international voice, data, mobile roaming, signalling, and messaging services, without making any infrastructural investments or signing multiple relationship agreements." PCCW Global's multiple cable landing points not only reduce overall service costs, as there is no cost involved in network transferring, but also support uninterrupted service in the event of a connection failure in one of the cables. This is a highly relevant feature, as countries like Mozambique are prone to floods, which can damage the infrastructure. Through constant consultation with ISPs and MNOs on the network management process, PCCW Global has also overcome the challenge of a lack of electricity in certain countries, ensuring minimal service disruption. PCCW Global's agile network structure ensures that customers' traffic does not have to transit networks, but travels directly from source to destination. Its resilient MPLS/IPX network covers more than

3,000 cities in over 140 countries worldwide and connects to hundreds of service providers around the globe. The company resolves security issues with its integrated Threat Management Service, a cloud-based security system that identifies both known and unknown threats and notifies the end user about the time and type of attack. PCCW Global then blocks the attack at the source and mitigates the impact to the customer. PCCW Global is a pioneer in bringing this cloud-based network intelligence solution to the SSA market.

Orange Jordan announces the full-scale rollout of its 4G network

Orange Jordan announced the full-scale launch of its 4G network, which will take place in the form of a gradual rollout that will ultimately deliver cutting-edge 4G services to Jordanians around the Kingdom. The announcement was made during a press conference held on Tuesday, May 26 2015 at the Sheraton Hotel in Amman, under the patronage of the Minister of ICT, Majd Shweikeh, and headed by the operator's CEO, Jean Francois Thomas. Orange was the first operator in the Kingdom to introduce 4G as part of a "discovery" phase that first launched in October 2014, allowing customers to experience the technology in a number of popular locations in Amman. This full-scale commercial launch will expand the service through a wide variety of special offers and bundles designed to cater to different consumer segments, giving Jordanians the opportunity to enjoy high-speed mobile and wireless broadband at its highest potential. The launch also constitutes the first major milestone in Orange Jordan's strategic vision for the coming five years, which the operator announced earlier this month under the heading "Essentials 2020." The highly efficient rollout process will initially bring 4G coverage to most urban areas in Amman, delivering mobile and wireless broadband connectivity at unprecedented speeds reaching up to 70Mbps. The rollout will quickly expand to deliver full nationwide coverage by Q3 2015. The operator also intends to make 4G connectivity accessible to all consumer segments by implementing careful pricing and quality control strategies that fall in line with its long-term strategic vision,

through which the operator seeks to deliver an unparalleled customer experience.

LG Uplus Launches VoLTE Roaming Over Syniverse IPX Network

Syniverse today announced that it is enabling South Korea's LG Uplus to launch the world's first commercial VoLTE (voice over LTE) roaming service, featuring HD voice. Made possible by Syniverse's IPX network, the service allows LG Uplus subscribers to roam onto the KDDI network in Japan and will allow LG Uplus to expand coverage and services in additional markets. Syniverse's IPX interconnects the world's networks to make LTE roaming possible. With nearly 800 LTE roaming routes, Syniverse's IPX reaches more than 200 operators in 44 countries. This reach includes 104 direct connections that enable Syniverse to launch VoLTE trials and deployments around the globe. As a result, Syniverse recently enabled the world's first transoceanic VoLTE roaming call and has direct LTE connections with 14 of the 16 operators that have launched VoLTE. "Because LTE roaming is the prerequisite to launch VoLTE, Syniverse's reach to nearly every operator that has launched LTE roaming enables us to achieve the critical reach and coverage our subscribers will demand," said Hong Jun Choi, General Manager, LG Uplus. With the Syniverse IPX, operators have the flexibility to implement VoLTE through S8 home routing, local breakout or VoLTE interconnect, which are three key emerging VoLTE implementation models. LG Uplus is launching VoLTE over IPX through Syniverse's S8 home-routed LTE data roaming platform, which allows operators to rapidly deploy VoLTE by leveraging their existing LTE data roaming connections. Additionally, the Syniverse IPX is prepared to offer other IP-based multimedia service features such as video over LTE (ViLTE) and rich communication services (RCS). "The transition to VoLTE involves a number of challenges. As new equipment is installed and mobile devices are made with the necessary hardware, it's essential to provide operators with solutions to enable a variety of approaches to meet their specific needs," said MK Chang, Vice President, Advanced Signal and Network Interoperability, Mobile Transaction Services, Syniverse.

"Having provided the critical LTE building blocks of IPX and Diameter Signaling for these operators, we were perfectly positioned to support the breakthrough VoLTE implementation."

Zain Group Joins SAMENA Telecommunications Council as Member

Zain Group, a leading telecommunications operator in the Middle East and Africa, has become the newest member of SAMENA Telecommunications Council, joining the ranks of top-tier telecom operators and service providers from the South Asia, Middle East, and North Africa region. "Zain Group joins the Council at a time when strengthened collaboration among industry stakeholders has become imperative to overcoming regulatory hurdles and reaping the full benefit of the digital revolution," said Bocar BA - Chief Executive Officer, SAMENA Council. "As one of the most successful regional telecom operators, Zain brings a strong track record in driving innovation and growth, and their expertise and insights will add tremendous value to the Council's efforts to implement our digital agenda. We welcome Zain to the SAMENA family and we look forward to working with Zain's leadership and team to protect and advance our industry's collective interests." Mr. Scott Gegenheimer, CEO, Zain Group said, "SAMENA Council provides a credible and truly advocacy-driven platform for telecommunications stakeholders in our region to meaningfully interact with each other and address issues of common interest. We are pleased to join this exclusive regional alliance of leading telecom industry players. As we continue to expand our footprint in the region and vigorously pursue our strategic ambitions, we recognize the unique visibility that comes in being a SAMENA Council's member and endless business possibilities that can be created together. Our forward-thinking team values these aspects of this industry association between Zain and SAMENA Council, as we take our business to the next level." With a commercial presence in 8 countries - including Kuwait, Bahrain, Iraq, Jordan, Saudi Arabia, Morocco, Lebanon, and Sudan - Zain provides a comprehensive range of mobile voice and data services to over 46.1 million active customers in the Middle

East and Africa region. As a member of SAMENA Council, Zain will be able to leverage the Council's regional and international reach as well as advocacy support programs, which are designed to promote digitization in the region, encourage investment in broadband infrastructure, approach regulatory and industry governance matters from transparent and consensus-driven perspectives, and to enable close communication among all the stakeholders.

PTCL introduces double Internet volume for EVO customers

Pakistan Telecommunication Company Limited (PTCL) has introduced EVO Double-Volume Double Fun Offer for its valued customers. The new offer by the company enables both existing and new subscribers of 3G EVO Wingle 9.3 and CharJi EVO LTE to enjoy twice the volume for the same monthly charges on all packages for the whole year. Subscribers can avail this offer by visiting any PTCL One Stop Shop and retail outlets. The offer enables PTCL EVO customers to experience more flexibility for enjoying seamless internet connectivity, downloading multimedia content, stream HD videos and access to a large database of online games and applications to meet their daily data & communication needs.

RCN (Regional Cable Network), a consortium between Etisalat UAE, Zain Jordan, Turkcell Superonline Turkey, Mobily Saudi Arabia

RCN (Regional Cable Network), a consortium between Etisalat UAE, Zain Jordan, Turkcell Superonline Turkey, Mobily Saudi Arabia, Orange Jordan and Syrian Telecom Syria announced the commercial launch of a high-capacity terrestrial fiber network that will run from Fujairah to Riyadh and then to Amman during the initial phase. The RCN consortium was established in December 2010 to terrestrially link the United Arab Emirates, Saudi Arabia, Jordan, Syria and Turkey with the installation of Add/Drop Terminal Stations at Fujairah and Istanbul, and Add/Drop Intermediate Stations in Riyadh, Amman and Tartous. In its first phase, to maintain a high level

of stability and resilience and due to the prevailing security conditions in Syria, the RCN cable system extending from Fujairah to Amman has been rolled out and is ready for commercial service. The length of the activated RCN today is currently 5,000km and can offer up to 1.2 Tbps in multiples of 10G Ethernet. The consortium will extend the RCN to Turkey in the future as the socio-political climate in Syria stabilizes. Commenting on the commercial launch of the first phase of the RCN network, Ali Amiri, Chairman of the consortium and Executive Vice President Carrier & Wholesale at Etisalat UAE, "The development and launch of this fiber-optic cable is of great significance to the region as it avails additional network capacity to the region. It supports the highest levels of redundancy and availability and helping support the incredible rise in demand for data access across the region", Amiri added. "The RCN consortium also sets a fantastic example of multi-country and multi-operator cooperation, which I believe will become more necessary in the future as telcos look to maintain their relevance and appeal in a rapidly evolving sector." Furthermore, Amiri congratulated the consortium members for delivering on the promise of greater high grade capacity and network reliability for the region "I look forward to seeing the initiative grow from strength to strength" he stated. The project will guarantee that every site along the cable path is always accessible even if a network's service is intermittent or interrupted. Further developmental plans for the fiber-optic cable is for it to be extended from Istanbul to Europe, where multiple access points located along the Bulgarian and Greek borders with Turkey are already available. The original agreement charted out a 7,750km round trip fiber optic cable line comprised of two redundant fiber pairs with initial equipped capacity of 1.2Tbps and design capacity of 6.4Tbps fully redundant routes.

DE-CIX opens new Internet Exchange in Istanbul, Turkey

DE-CIX, the world's leading Internet exchange operator, announces today that the company will open an Internet exchange in Istanbul, Turkey, to provide a neutral interconnection and peering point for Internet service providers

from Turkey, Iran, the Caucasus region and the Middle East. DE-CIX Istanbul will start out with one location and expand over time to multiple data centers across the metropolitan area. The exchange will be an essential part of the Internet ecosystem in the region. With the World Bank recording Turkey's 2013 Gross Domestic Product (GDP) at more than US\$ 800 billion, the country's economy has been growing rapidly from the early 2000s. Turkey itself has a large domestic Internet market, including over 470 Internet providers. More than 46 percent of the Turkish population are Internet users themselves, according to the International Telecommunication Union (ITU), and they generate large volumes of content with national and regional importance. Internet user numbers in-country are growing by 25 percent each year, with consumption via mobile devices leading the way. Across the region, existing systems like MedNautilus and new terrestrial cable builds such as AMEER (Alternative Middle East European Route), GBI North, JADI (Jeddah-Amman-Damascus-Istanbul) and RCN (Regional Cable Network), are all designed to provide connectivity to Middle Eastern markets and have landing points in Istanbul. While some of those systems suffer from outages due to political instability in the region, they are designed to provide connectivity to and from the Middle East that is diverse to the traditional subsea cable infrastructure routes crossing the Red Sea and Suez Canal. "Istanbul is already a hub for finance, logistics and transport. Like we've experienced in Frankfurt, Internet infrastructure follows these developments," confirms Harald A. Summa, DE-CIX CEO. "The need has grown tremendously to interconnect the critical traffic streams that travel from other regions through Istanbul and bring them closer to their destinations. Content, cloud, gaming and other providers will meet the eyeball networks halfway at this new exchange." As global Internet traffic volumes continue to increase, the role of interconnection and peering becomes more important. Peering at an Internet exchange allows for more direct paths, with traffic delivered with lower latency and cost. DE-CIX recently announced new Internet exchanges in Palermo, Italy, and Marseille, France; Istanbul will be its third exchange along the border of the Mediterranean Sea. All three new exchanges are expected to open in Q3 2015.

Truecaller becomes member of SAMENA Council

SAMENA Telecommunications Council today announced Truecaller as the newest addition to its membership. A tri-regional, non-profit industry association, the SAMENA Council represents leading telecom service providers and operators, and works very closely with technology providers, specialized firms, consulting companies, and rising digital application development companies within and beyond South Asia, the Middle East, and North Africa. Welcoming Truecaller into the telecommunications alliance, Bocar BA, CEO of SAMENA Council, said, "Truecaller is a pioneering mobile application development company that sees the digital future in a unique way. Truecaller's decision to join SAMENA Council is mutually important as it brings an important dimension of the digital business to SAMENA Council's membership while providing Truecaller visibility and inclusion on industry dialogue and policy-making. At SAMENA Council, we are constantly seeking to explore possibilities for collaboration with key industry stakeholders, and Truecaller's growing global reputation and proven expertise in mobile application development will further help highlight the importance of digital application development and adoption." Husain Mishergahi, VP Growth & Partnership MENA, Truecaller, said, "Together, the SAMENA region constitutes the largest market for Truecaller, and we believe the unparalleled advocacy support and networking opportunities that the Council provides its members will be very helpful in enhancing our understanding of the market and leveraging the influential membership base for strategic partnerships. We are very pleased to join the SAMENA Council and we look forward to working closely with fellow members to promote our common interests." Since its creation, SAMENA Council's membership platform has generated new approaches for better dealing with policy and regulatory challenges facing the telecom industry as well as for fulfilling growing customer needs in the market. Truecaller is a leading search technology company that is transforming the phonebook with a set of intelligent and useful services. Headquartered in Stockholm, Sweden,

Truecaller was founded in 2009 by Alan Mamedi and Nami Zarringhalam, and is available on all Internet-enabled devices and on the web. To date, Truecaller has more than 100 million users worldwide.

Qualcomm president discusses telecom industry trends

As president, Qualcomm Middle East, Africa and Southeast Asia, Jay Srage has a keen interest in all opportunities in the region. He recently spoke with Telecom Review about how important Dubai is to Qualcomm and where the industry is heading. Dubai is an important regional headquarters for most multinational companies, as the UAE has established itself as the largest ICT hub in the MENA region and the gateway to Africa, the Middle East and Central Asia. Qualcomm's decision to have its operations based in Dubai came quite naturally as setting up procedures were relatively easy and rather encouraging. Additionally, a recent step in its regional plan is that Qualcomm has made Dubai the regional headquarters for its operations across the Middle East and Africa (MEA) and Southeast Asia. Dubai was an automatic choice for Qualcomm as a result of its favorable location in between the two regions, as well as its multicultural population that is able to adapt to the demands and dynamics of two regions. We believe that the UAE is the ideal hub without which we would need to replicate a lot of our operations across multiple markets, which would prove expensive and inefficient. Admittedly, smaller businesses and startups still face some challenges to establish their operations here, likely due to high setup and operational costs as well as longer administrative processes, but I see this gradually improving. From Qualcomm's perspective, the business environment in the UAE is incredibly favorable. As we continue to support local businesses and entrepreneurs, we are keen to see further efforts to create an environment where fresh ideas and startups can flourish with funding and regulatory support from the larger business community and ultimately, the government. Another opportunity for Dubai and the UAE to set itself apart is to continue to foster IP build up and a framework for stronger IP protection. This will allow companies to invest in building technology

solutions, R&D and IP in-country. This effectively relates to and supports the new innovation-based economy initiative that His Highness Sheikh Mohammed launched on November 17th. Also with its visionary leadership, strong regulatory framework and commitment to IP protection, there is another key advantage that Dubai has over other locations. Dubai has long attracted multinational corporations, especially in the technology space, to setup operations and investments here. In turn, this has positioned Dubai and its robust ecosystem as the hub of business collaboration where key relationships are established, decisions are made and deals are closed - impacting the full MEA region. As we are now a company that employs more than 30,000 people, mostly engineers developing the next generation of mobile communications, we continue to work collaboratively with nearly the entire wireless industry. Our patents allow us to keep introducing transformative technologies in ways that promote competition among handset makers and lower prices for consumers. Moreover, with our dedication to mobile innovation and invention, we are eager to continue to work with the UAE government to continuously improve the IP laws and framework to allow us to go from the sales and marketing phase into the development phase. Qualcomm has a strong background and history in the IP space, and can contribute significantly.

DE-CIX Frankfurt Surpasses New Record Traffic Peak of 4 Terabits per Second

DE-CIX, the world's leading exchange operator, announces that it has exceeded a new traffic milestone of 4 Terabit/s at its flagship Frankfurt exchange. For the past week, new record traffic peaks have inched up daily toward this incredible number, and the 4 Terabit/s level was finally surpassed on Tuesday evening, April 28. When talking about data transmissions speeds, a terabit is technically one trillion bits of information or 1,000,000,000,000 (10¹²). In terms of everyday technology, the 4 Terabit/s speed is the equivalent of sending 4 billion emails through the Frankfurt exchange every single second. "The development that the Internet has experienced over the

last 20 years is truly unbelievable," states Harald A. Summa, DE-CIX CEO. "When we started DE-CIX in 1995, we served three Internet Service Providers and offered a total capacity of 10 Megabits. In contrast, today we have a total capacity of 48 Terabits and hundreds of global customers. In 2005, our peak speed reached 22 Gigabit/s, and now today we're clicking along at rates above 4 Terabit/s. HD videos, the growing number of mobile end-user devices and Cloud Computing are driving Internet data growth rapidly along. The end is nowhere in sight." Indeed, the 2014 Global Internet Report from the Internet Society confirms this growth. The Internet first hit 1 billion global users in 2005, and 2 billion users in late 2010. Now, in early 2015, we are fast approaching 3 billion worldwide users. Smartphones represented 50 percent of all mobile phones in early 2014, with the capacity to upload and download information from the palm of the hand. Yet, despite these wildly impressive numbers, the majority of the world's population is still not online, representing continued growth potential that service providers around the world are working diligently to tap. To handle these new "normal" data quantities, a growing number of DE-CIX customers are upgrading their connections at DE-CIX exchanges to 100 Gigabit Ethernet (100 GE). And DE-CIX, now in its 20th year, has continued to expand to new locations around the world where the peering environment is fractured or has not existed in the past. DE-CIX now operates Internet exchanges in Frankfurt, Hamburg, Munich, New York and at UAE-IX in Dubai, United Arab Emirates. DE-CIX also recently announced that it will bring new Internet exchanges online in Q3 2015 in Marseille, France, and Palermo, Italy.

STC Major Sponsor in the International Telecom Week (ITW)

STC participated as sponsor in the works of the Annual International Telecom Week "ITW" ,which started its activities on May 10, 2015 and extend to May 13, 2015 in Chicago - United States of America, with participation and presence of more than 5000 delegations representing thousands of companies specialized in Telecommunications and information technology from more than 150 countries worldwide, the ITW meeting

is considered as meeting point of world telecommunications community and is the largest kind in the world for experience exchange and transferring of advanced experience in the world of advanced telecommunications.

Batelco Bahrain sponsors ITW in Chicago

Batelco, the leading business communication solutions provider, has announced its Prime Sponsorship of International Telecoms Week (ITW) 2015, which is taking place in Chicago, USA, from May 10th to the 13th. As a leader among global telecommunication providers, Batelco stresses the importance of participating in prestigious events around the world. Earlier in the year, Batelco sponsored Capacity Middle East 2015 in Dubai, and has now also announced it will be sponsoring ITW which is an annual meeting point for the global telecommunications community and offers various networking opportunities. The event comprises a series of meetings, receptions, and conference sessions and it is anticipated that the event will attract over 6000 delegates from 2000 companies, across 148 countries. High level attendees will represent Batelco to meet with strategic partners to enhance and discuss key alliances. The attendees will also ensure they display Batelco's global footprint and capabilities. The conference comes at a time when Batelco is undergoing major plans to expand its global presence to keep in line with its futuristic vision for the Company. "We are glad to support an event as beneficial to our industry as ITW," said Batelco Business Division General Manager Adel Al-Daylami. "The event gives us an excellent platform to discuss our future plans with our partners, and to seek more partnership opportunities. We will also be reaffirming our global position and introducing the Batelco brand to new international audiences and potential partners," he concluded. As sponsors, Batelco will reaffirm its commitment to delivering global data solutions. It has an established presence in all major areas including the Middle East, Europe, the US, Asia, and Africa. Batelco's 25 active Point-of-Presence (PoPs), and the company's strategic partnerships and Joint Ventures (JVs) have enabled them to secure a multitude of projects connecting multi-national organizations in disparate locations across the globe.

Ooredoo Enhances 4G Roaming Experience with Syniverse IPX Solution

Syniverse announced that it has signed an agreement with Ooredoo Qatar for Syniverse's IPX Network Solution to enhance Ooredoo's 4G roaming service for customers. The agreement builds on Syniverse's 20-plus-year relationship with Ooredoo Qatar, making mobile work with the critical data clearing and financial clearing necessary to ensure efficient, reliable roaming processes. "Ooredoo continues to invest in new solutions that enhance the customer experience and build our position as a market leader in data services. The increased bandwidth supported by the IPX Network will enable customers to enjoy the incredible speeds of our bigger, faster network even when they travel outside of Qatar," said Yousuf Al Kubaisi, Chief Executive Officer of Ooredoo Global Services (OGS). Syniverse's IPX Network Solution provides a carrier-grade connection to the company's all-IP network that currently serves nearly 800 LTE roaming routes, with LTE reach across more than 200 operators in 44 countries. This reach includes over 100 direct connections that offer access to Syniverse's full suite of mobile solutions. As a core component of the company's LTE solution portfolio, the Syniverse IPX Network Solution provides a one-connection-to-multiple-services approach that aims to lower costs and boost operational efficiencies by reducing the number of network connections a mobile service provider must manage. "With exceptional scale and direct reach around the globe, the Syniverse IPX enhances Ooredoo Qatar's ability to deliver the flawless, uninterrupted service that its inbound and outbound roamers expect," said Nour Al Atassi, Regional Vice President and Managing Director, Middle East and Africa, Syniverse. "Providing flawless service not only benefits Ooredoo Qatar, but also ensures brand protection for roamers' home operators whose users expect to make calls, browse the Web, check social media and download videos as if they were at home."

du SIRT recognized as leader in telecommunications security

du Security Incident Response Team (du SIRT), responsible for managing cyber-attacks and security incidents, has become a member of the Forum of Incident Response and Security Teams (FIRST) community. By becoming a member of a global security community, we are ensured greater visibility to the latest threats, ways in which to combat them, and remain abreast of global trends. FIRST is the premier organization and recognized global leader in incident response. du SIRT joins a variety of computer security incident response teams from government, commercial, and educational organizations, to more effectively respond to security incidents, both reactively and proactively. FIRST aims to foster cooperation and coordination in incident prevention, to stimulate rapid reaction to incidents, and to promote information sharing among members and the community at large. Ibrahim Al Mallouhi, Vice President, Security Operations, du , said, "This is a great achievement for our team at du . Becoming a member of the FIRST community brings incredible value to our business. Furthermore, it reestablishes our commitment to always providing our customers with the best-of-breed security services giving them peace of mind in our services, products and our response to their security concerns." With the objective of creating more awareness about online security, du also launched a new awareness initiative under the umbrella of its Be Safe campaign last year. The initiative' was launched on du 's website and through its social media channels, www.facebook.com/du, @dutweets and Instagram, targeting children, parents, educational institutions and corporations to teach them various topics related to internet safety.

BlackBerry Ltd Targets SME Segment, Partners With Samsung

BlackBerry Ltd (NASDAQ:BBRY) (TSE:BB) is now focusing on small- and medium-sized enterprises in India after making a mark in the country's enterprise market with its security and mobile device management solutions, Sunil Lalvani, BlackBerry, Operation Head in India, told the Economic Times. In India, the company is now targeting the seven million small and medium enterprises with

its BES12 Cloud service. Lalvani said the company has entered into an agreement with Samsung Electronics Co., Ltd. (LON:BC94) (KRX:005930) to push revenues from the software and service segment in the country. BlackBerry and Samsung are on the verge of finalizing a deal to integrate the marketing teams of the Korean company's KNOX device security system with Black-Berry's sales force. Lalvani said that wherever Samsung needs security for positioning its device, BlackBerry will help out. Lalvani said the Canadian company holds a 40% share of India's enterprise segment, which includes 7,000 large enterprises. He noted that BlackBerry's market share has been driven by its latest cross-platform BES12 solution with the Android platform being the top contributor. The strategy adopted by the Canadian smartphone maker to focus on enterprises seems to be working in favor of the company around the globe, including in India. According to Lalvani, customers will benefit from having zero capital expenditures. Additionally, other features such as BBM Meeting and BBM Protected are also seeing higher demand in the country. The Waterloo, Ontario-based company is seeing an increase in the carrier billing model, in which the charges are clubbed with the operator's bill and advanced SIM-based licensing that allow corporate users to sign for its service for a fixed monthly fee, says the report. BlackBerry is working in collaboration with Vodafone Group Plc and Idea Cellular and is looking to work with two more operators in the next few months. With the help of the carrier billing model, the company can access more mid-market and SMEs in India. BlackBerry India garnered high double-digit growth in the software and services revenue in the three months that ended on Feb. 28, compared to 20% around the world globally. For the company, software amounted to 58% of revenue, while hardware made up the remaining. BlackBerry posted a net profit of \$28 million in the previous quarter, compared to a \$148 million loss in the year-ago period.



▼ REGIONAL NEWS

REGIONAL UPDATES

Qatar's R&D allocation hits QR3.25 billion

Qatar's gross domestic expenditure on the country's research and development (R&D) sector hit QR3.25bn, according to data released by the Ministry of Development Planning and statistics (MDPS). The expenditure on R&D amounted to 0.47 percent of Qatar's GDP. The MDPS data shows that gross domestic expenditure on R&D by sector is accounted for 25.8 percent in business sector, 32.3 percent in government sector and 41.9 percent in higher education sector, of the total expenditure on R&D. This R&D Survey 2012, conducted by the MDPS in cooperation with Qatar Foundation, shows that the gross domestic expenditure on R&D by type of research amounted to 27 percent in basic research, 50 percent in applied research and 23 percent in experimental development. The survey results also show that the gross domestic expenditure on R&D by type of research amounted to 27 percent in basic research, 50 percent in applied research and 23 percent in experimental development. As for gross domestic expenditure by type of expenditure, the percentage of expenditure on capital (cars and factories + land and buildings) was 22 percent, while the workforce cost was 37 percent, and expenditure on other current costs was 41 percent of total expenditure. The results further show that gross domestic expenditure on R&D by field of science

(FOS) amounted to 20 percent for natural science and 21 percent for engineering technology, while for medical and health science 27 percent and for social sciences and humanities 30 percent of total expenditure. The lesser proportion of expenditure was on agricultural science with two percent only. There are 3,038 R&D personnel in Qatar, out of which 1,725 researchers are in various fields of science, accounting for 56.8 percent of R&D personnel, whereas the number of support employees amounts to 718 employees, which accounts for 23.6 percent of R&D personnel. With regard to R&D, the State of Qatar is endeavoring great efforts in the higher education, health and industry sectors, notably; Qatar Science and Technology Park, Qatar Foundation, Qatar National Research Fund and University of Qatar, where these institutions represent the pounding heart of such efforts. In terms of per capita GDP, population size and type of industries, Qatar can be compared to Luxembourg, Kuwait, Norway, Oman and Singapore. With the exception of population size, Qatar can be favorably compared to Saudi Arabia and Chinese Taipei. In terms of per capita GDP, Qatar fits into the 'top tier country list' that include Luxembourg and Singapore. In terms of gross domestic expenditure on R&D (GERD), Qatar ranked fourth in the table above with expenditure percentage of 0.47 percent of GDP.

Liberal telecom policies attract US\$1.81 billion FDI

The liberalized investment policies of the government have attracted \$1.81 billion Foreign Direct Investment (FDI) in telecom sector during year 2013-14. The cellular mobile sector was a major contributor in FDI during the period with \$1.79 billion worth auction of spectrum for 3G and 4G services and deployment of next generation cellular networks while \$14.2 million investment was made in Local Loop (LL) sector, \$10 million in Wireless Local Loop (WLL) and \$1.8 million FDI was attracted in area of Long Distance International (LDI). An official data compiled by the Pakistan Telecommunication Authority (PTA) on Thursday revealed that owing to continuous and outstanding subscriber's response to launch 3G and 4G services in the country, cellular mobile operators are continuously expanding their next generation networks. These expansions also brought an investment of \$356.3 million in cellular mobile sector during July-December 2014. It was further revealed that during year 2011-12, the telecom sector attracted \$240.3 million, 2012-13 attracted \$600.3 million and during first two quarters of this fiscal year, the sector managed to bring in \$367.29 million FDI in the country. Another encouraging sign in the industry was that FDI in telecom sector remained \$114 million during July-December, 2014 as compared to net negative telecom FDI inflows in the corresponding period last year. The impetus of expanding 3G and 4G networks would continue the pace of investment in the telecom sector in coming months. By end of March 2015, the total number of mobile subscriptions in Pakistan reached 134.9 million with net decline of 3.5 million subscribers. Biometric SIM verification was a massive exercise recently undertaken across Pakistan. On one hand, it is a dire necessity of present times but on the other hand, it would also have a major impact on telecommunication statistics. After the commercial launch of 3G and 4G services, the number of 3G and 4G subscribers has been growing at a commendable pace and their subscribers have sharply increased during the last 11 months. The 3G and 4G subscribers constitute 8.9% of the total cellular subscriber base as of March-2015.

Viva Kuwait launches VoLTE services

Kuwait's telecoms operator Viva has commercially launched what it claims to be the first voice-over-Long Term Evolution (VoLTE) service in the country. Viva disclosed that following the upgrade, its customers will experience seamless HD quality voice and video calls, while simultaneously using LTE broadband services.

3G, 4G Services Boost Telecom Revenues to Rs. 299 Billion; Pakistan Observer

As predicted by ITU World Telecommunications Database Statistics and Economic studies indicated that for every 1% increase in a country's broadband Internet penetration, GDP per capita increases by roughly 10% (USD), and a 1% in mobile penetration results in a



GDP per capita increase of roughly 5% (USD). The recent launch of 3G & 4G has no doubt brought many opportunities for common man of Pakistan and government as well; as revenues from telecom sector reached an estimated Rs. 299 billion during first two quarters of 2014-15. Pakistan is on its way to adopt new technologies and better internet services. Due to these improvements, smartphone penetration is also increasing as many local brands are now in market that are providing as low smartphones as ranging from 6,000-10,000. As per official figures, this has resulted in the increase of revenues of cellular mobile industry, which has reached to Rs. 37.3 billion during July-December, 2014 as compared to Rs. 22.1 billion of July-December, 2013, indicating an increase of 69%. Telecom revenues are expected to further increase in the coming years as more subscribers will add into the 3G and 4G fraternity. With regard to telecom contribution to

national exchequer, the data revealed that during the first two quarters of 2014-15, this sector contributed Rs. 73.22 billion to national fund in terms of taxes, regulatory fees, initial and annual license fees, activation tax, and other charges. Hence, it is proved that countries adopting 3G have experienced higher levels of GDP per capita and job creation in the telecommunications sector. Moreover 3G expands a country's opportunities in the business sector, contributing to increased competitiveness and promoting innovative new wireless enabled businesses and services.

UAE, Qatar the Mideast's top internet economies

The UAE and Qatar lead the Middle East when it comes to advanced and productive internet economies, according to a 2015 Boston Consulting Group (BCG) e-Friction Index. Globally, Qatar is ranked 23rd, with the UAE in 24th place — ranking ahead of a number of strong emerging economies. In a new study, the BCG e-Friction Index ranks 65 economies according to four types of e-friction — infrastructure-related friction that limits basic access; industry and individual friction, both which affect the ability of companies and consumers to engage in online transactions; and information friction, which involves the availability of, and access to, online content. The study, titled 'Which Wheels to Grease? Reducing Friction in the Internet Economy', shows that high e-friction economies are in danger of missing out on a high-impact propellant of growth and job creation. Those that address their sources of e-friction have the potential to add significant value to their economies. "The internet has created an unprecedented environment for businesses to grow and flourish, thanks to its 'permission-less' innovation, which makes it possible for everyone to explore the untapped opportunities of today's digital economy," said Baher Esmat, vice-president of Stakeholder Engagement in the Middle East at the Internet Corporation for Assigned Names and Numbers (ICANN), which commissioned the 2014 report and the update. He said that Middle East countries have the potential to grow their digital economy, adding that the report demonstrates how the UAE and Qatar are tapping into this potential and leading the way for growth. The research also found that, globally, the difference between countries with large digital economies

and those with low economic activity amounts to about 2.5 per cent of GDP — a material figure for any nation. Hermann Riedl, partner and managing director at BCG Middle East, said consumers and business in the UAE and Qatar faced less e-friction, that is, few frictions or constraints on digital activity. “The nations that are still lagging behind, however, both in the GCC and in the rest of the world, need to imminently address their sources of e-friction,” Riedl said. “After all, doing so could have a strong impact on national competitiveness as well as on social and economic development.” Based on the study, Riedl said that the broad causes of e-friction include wealth, population density, the urban-rural population mix, literacy and English-language skills. And, while some of these can be influenced by policy initiatives, others require more creative approaches. Among high-income economies, “all-rounders” and “well-oiled nations” — such as the UAE — have generally low e-friction scores, although the well-oiled set performs less consistently across the 55 indicators than all-rounders do. “Even economies in the well-oiled categories, such as the UAE, should not rest on their laurels,” Riedl said. “They also have sources of friction to address, such as those related to outdated regulation, excessive bureaucracy, and impediments to investment. These economies need to focus their interventions with care,” he said.

Batelco, Ericsson claim ‘first commercial 4G Radio Dot System in region’

Bahrain’s Batelco has announced a partnership with Swedish vendor Ericsson, aimed at improving its mobile 4G network coverage via the deployment of the latter’s Radio Dot System. The small cell solution is designed to be quick to install and uses an antenna element to increase coverage in medium-to-large indoor locations, such as hotels, shopping malls and offices. ‘The Radio Dot solution ensures consistent delivery of high performance in-building voice and data services and will meet the needs of customers

who experience issues with mobile coverage particularly in larger buildings,’ commented Batelco’s acting CEO Muna Al Hashemi. Batelco has already kick-started its commercial deployment of the system, and commenced rolling out the solution to its major customers. The telco claims to be the first operator in the Middle East to implement the Radio Dot System specifically for enhancing 4G coverage. “We emphasise that the step to reduce roaming prices will have a significant role in the promotion of tourism at the GCC level, in general, and will have a significant impact in furthering the UAE’s presence from a regional tourism point of view, be it business or leisure,” Al Mansouri said. He said that the Telecommunications Regulatory Authority (TRA) under the guidance of the Board of Directors has made great efforts in cooperating with licensed service providers, to study all aspects of roaming prices at the national level in the UAE. The recent decisions come in support of government policies in this framework. The Qatar meeting also discussed the joint preparations by the GCC team in charge of participation in the World Radiocommunication Conference 2015 that will be held in Geneva in November. The team will conduct a meeting at the ITU headquarters in July, followed by participation in the meetings of the Arab Spectrum Management Group, which will be held in Morocco in August. These meetings will discuss all the details and the adoption of working papers by GCC countries and the Arab Countries Group in this global conference.

Dubai Internet City announces second edition of ‘Decode Dubai’

Following the success of Dubai Internet City’s (DIC) first hackathon, Decode Dubai, which welcomed 140 participants from across the region for a 12-hour coding competition, DIC has announced the second edition of Decode. The competition will be held from June 11 to 13 at in5, DIC’s innovation centre, bringing together developers, coders and technopreneurs to build mobile apps around five ‘Smart’ themes. These themes include solutions tailored for energy and emissions, enhancing citizens’ participation in communal issues, more efficient and effective urban mobility, enabling a social dimension for retail, and

culture and tourism. During the 48-hour competition, each team will develop an app based on one of the ‘Smart’ themes, prior to pitching their solutions to a judging panel. The winning teams will go through to the Smart City App Hack (SMAH) finals, to be held in Dubai in October in partnership with Smart Dubai. The teams will work closely with mentors for the three months prior to this competition in order to fine-tune their applications and pitching skills; the winner of the SMAH Dubai finals will represent the Emirate in an all-expenses-paid trip to the Barcelona Smart City Expo 2015 this November. Details about the Smart City App Hack were announced last month, and DIC is the official partner for the initiative in Dubai. The Smart City App Hack’s participants will be shortlisted through a series of initiatives over the next few months, of which Decode is the first. Commenting, Majed Al Suwaidi, Managing Director of Dubai Internet



City and Dubai Outsource Zone, said: “The first Decode Dubai was a great success, testament to the UAE’s vibrant entrepreneurial landscape, during which we witnessed the creation of a number of innovative applications. The second edition is part of our continued efforts to empower entrepreneurs and facilitate innovation. Decode Dubai will strengthen the skills of developers, launch ideas for new digital products, and provide significant opportunities to drive Smart Dubai, in addition to offering the potential to participate in Barcelona later this year, “ICT and technology are key enablers of the Smart City model and we continue to look at how we can promote innovation within this sector, as well as enhance knowledge about coding among entrepreneurs and start-ups.”

Government doubles sales tax on handsets, introduces internet tax

The government of Pakistan is set to double the sales tax on mobile phones in its new budget for the 2015/2016

fiscal year, Pro Pakistani reports. Under the new policy, the levy will double to PKR300 (USD2.94), PKR500 or PKR1,000 from PKR150, PKR250 or PKR500 respectively, depending on the features of the device. While the tax is a comparatively small fee, the price increase is expected to have an impact on low income users, which make up the lion's share of Pakistan's more than 135 million mobile subscribers, potentially stymieing growth in the nascent 3G and 4G sectors. Indeed, more than the tax itself, industry commentators have suggested that the move represents a worrying shift in the government's approach to the telecoms sector, in light of the recent introduction by the Punjab government of a controversial 19.5% tax on internet services providing a download speed of 2Mbps or more, or that cost upwards of PKR1,500 per month. In a similar vein, Pakistan's finance minister, Ishaq Dar, was criticized for wrongly claiming that financing for several broadband and ICT projects had come from the state budget, rather than the Universal Service Fund (USF), which is funded by a 1.5% tax on the annual revenues of telecoms firms. Mr Dar indicated that USF programs including the construction of tele-centers, the extension of fibre-optic cable networks and deployments in rural and remote areas had been paid for by the federal government.

Mideast mobile data traffic to 'jump 14 times by 2020'

Mobile data traffic in the Middle East and East Africa is expected to expand more than 14 times between 2014 and 2020, nine times higher than growth of global data, according to Ericsson Mobility Report. The report revealed that, despite the market being extremely varied with regards to Information and Communications Technology (ICT) adoption and mobile penetration, the proliferation of mobile technologies continue at a rapid pace. The region as a whole had around 680mn mobile subscriptions at the end of 2014. Between 2014 and 2020 it is forecast that mobile subscriptions will grow at a compound annual growth rate (CAGR) of 6%, amounting to 970mn. The

Ericsson Mobility Report showed that by 2020 the growth of technology coupled with the mobile subscriptions will create never-before-seen levels of connectivity in the region. "The ICT transformation has been phenomenal across the region. Such transformation is far beyond simple technological innovation, it calls us to reshape existing business models and infrastructure environments. In the future, it will address completely new needs arising from technological and consumer behavioral changes," Rafiah Ibrahim, president, Ericsson, Middle East and East Africa, said. The long term evolution (LTE)/4G subscriptions are on the rise and are expected to triple in 2015 alone, and surpass 210mn by 2020, which is around 20% of all mobile subscriptions. Highlighting that 17% or 125mn mobile subscriptions were attributed to smartphones at the end of 2014, the report said, however, as inexpensive smartphones become abundant and mobile broadband rollouts accelerate, smartphone subscriptions will increase across all the markets. Of the 970mn mobile subscriptions predicted at the end of 2020, 40% will come from smartphones, it said. By 2020, the amount of data used monthly by each active smartphone will increase "substantially" from an average of 0.8GB in 2014 to approximately 5GB. Data intensive utility, communication and entertainment services are commonly used by smartphone owners. Mobile video traffic will continue to grow, driven by video streaming services and increasing prevalence of video in social media. The report claimed that today, 40% of the world's mobile traffic is carried over Ericsson networks, allowing it to facilitate better business for the telecommunications and other industries.

Ooredoo LTE-A network now live in Kuwait

Ooredoo Kuwait has upgraded its 4G Long Term Evolution (LTE) network to the LTE-Advanced (LTE-A) standard. The '4G+ SPEED' branded network aggregates frequencies in the 800MHz and 1800MHz bands, and is capable of delivering download speeds of up to 150Mbps. The cellco has stated that there will be no extra charge for customers to use the new network. According to TeleGeography's CommsUpdate, Ooredoo switched on its LTE network in July 2013, using the 1800MHz band.

Paltel selects NetBoss Technologies for OSS transformation project

NetBoss Technologies has been selected by Paltel, the incumbent telecoms provider in the Palestinian Territory, to begin a phased deployment of its operation support system (OSS) transformation project. With the vendor confirming in a press release that it had been chosen as the partner for this strategic project following a competitive bidding process, it has said that, building around its core NetBoss XT platform, it will deliver a fully integrated solution including correlated fault, performance, trouble, change, inventory, service level agreements (SLA) and environmental management systems. NetBoss XT will automatically discover and model the network, and through interfaces with Paltel's Customer Relationship Management (CRM) system, will ensure affected services and customers are instantly highlighted when network issues are encountered. Supported by the supplied trouble ticketing system, the project will also reportedly enable Paltel's staff to rapidly respond to events with network restoration and proactive customer interaction activities. Maen Melhem, Paltel's general manager, commented on the deal: 'This project is all about providing the very best service quality to our growing customer base ... Data services are growing exponentially, and we understand how dependent our enterprise and residential customers are on these services. We are making this investment in the OSS transformation project and NetBoss to ensure our customers are fully satisfied with the services we provide.'

Vodafone Qatar revenue up 16%; twelve-month net loss reduced by 12%

UK-Qatari mobile and broadband joint venture Vodafone Qatar has announced a 16% rise in its twelve-month revenues to QAR2.31 billion (USD634 million) in its financial year ended 31 March 2015. The operator's annual net loss was reduced by 12% from QAR246 million in the previous year to QAR216 million, while Vodafone maintained a stable EBITDA margin of 25% 'in challenging market conditions', the company added. Mobile customers grew 9% year-on-year to 1.44 million at end-March 2015. Vodafone Qatar, which ended state-controlled Ooredoo Qatar's

domestic monopoly in 2009, made a net loss of QAR66 million in the three months to 31 March 2015, according to Reuters calculations based on company statements, which widened compared to a quarterly net loss of QAR33 million in January-March 2014.

Middle East's Internet of Things revenue to reach US\$2 billion in '15

As the Middle East's Internet of Things (IoT) revenue will reach nearly \$2 billion in 2015, the Kingdom's organizations need to innovate with the power of Big Data, SAP announced. With the Middle East's IoT market growth outpacing the global average, the region's IoT hardware and services revenues will reach nearly \$2 billion in 2015, according to Deloitte. As the GCC diversifies its economy, the non-oil sector will grow by 6 percent in 2015, the International Monetary Fund said. In this emerging Digital Economy, as more objects and devices are connected together, they are creating vast amounts of data that Middle East businesses are looking to leverage for actionable insights into their supply chain, research and product development, customer preferences, and location-based services and offers. As Deloitte predicts that global IoT analytics revenues will grow by 500 percent over the next four years, SAP is seeing strong take-up in the Middle East for the recently-released SAP Business Suite on SAP HANA (SAP S/4 HANA), which connects people, devices, and business networks in real time. "The Internet of Things will be the Middle East's biggest game-changer, and enterprises need to develop comprehensive strategies to reimagine their businesses in the digital economy," said Frank Forndron, SAP Head of Customer Office, SAP MENA , and Head of Quality Management for SAP MENA and EMEA Emerging Markets. "We're seeing strong demand for our SAP S/4 HANA real-time in-memory business suite, which reduces complexity and cost, and delivers customer value and boosts the region's economy." The advancing inter-connected Internet of Things (IoT) era will connect at least 50 billion

devices and generate \$14.4 trillion in value by 2020, according to a report by Stephenson Strategies and SAP . Already SAP counts more than 370 SAP S/4 HANA customers worldwide, with key enterprises in the Middle East embracing the platform's in-memory and real-time capabilities to support economic growth. SAP is now introducing the cloud edition of SAP S/4 HANA to help customers drive their digital business transformation with the simplicity of the cloud. With hybrid on-premise and cloud solutions for IT flexibility and accelerated business innovation, customers can run their entire enterprise in the Cloud. "Data is growing at an unprecedented rate, driven by an explosion in the amount of mobile devices, cloud deployments, business transactions, digitization, and collaboration on social platforms," said Dhiraj Daryani of research firm IDC. "The amount of information created and replicated is doubling in size every two years, and will reach 44 zettabytes, or 44 trillion gigabytes by 2020. Pioneering organizations in the Gulf States are investing in cutting-edge technologies to extract value from this rapidly growing data, which is available to them both from within their organization and from external data sources such as social media feeds." Demonstrating the strong demand for SAP solutions in the Kingdom, SAP Saudi Arabia recently received the "Software Vendor of the Year" at the Channel KSA Awards, thanks to delivering a wide range of the latest and innovative technology solutions to marquee customers in the Kingdom.

Etisalat completes CAT-9 LTE-A trial

Etisalat of the United Arab Emirates (UAE) has completed live testing of CAT-9 Long Term Evolution Advanced (LTE-A) technology on its network, paving the way for the introduction of downlink speeds of up to 450Mbps. Last year Etisalat successfully trialed and launched CAT-6 LTE-A on its networks, allowing peak theoretical download speeds of up to 300Mbps.



The firm is currently deploying 150Mbps LTE technology to cover 88% of the populated areas of the UAE, while the launch of improved download speeds will come once handsets are available to support the new technology.

Vodafone Egypt hits EGP4 bn in revenues by March-end

Vodafone's Egyptian arm has achieved 4 billion Egyptian pounds (US\$524 million) in revenues during the fourth quarter of fiscal year 2014-15 ended in March 2015. According to the firm's financial indicators, the annual growth rate in Vodafone Egypt's revenues hit 3.4%, compared to the same period of 2014. The parent company in UK stated that the net profit has declined to £5.76 billion during the fiscal year-ended in March 2015- in comparison with £5.93 billion in the same period of 2014. Vodafone Egypt announced investing 4.5 billion Egyptian pounds in upgrading the network through the past 15 months ended in March 2015. It also revealed that it pumped 420 million pounds to provide alternatives for the electricity cuts, adding that the company now provides 99% accessibility all over Egypt. Moreover, Ministry of Communication and Information Technology index revealed a declination in the market share that Vodafone Egypt possesses estimated at 40.000 users to make Vodafone now own 41.5% of the market share with total 39.5 million subscribers.

Saudi Arabia committed to increase cyber security measures

Over the last several years, it has become clear that the short list of the world's principal challenges includes cybersecurity and the threat of cyber-crime to governments and private organizations and citizens alike. The Kingdom of Saudi Arabia, as both the world's largest oil producer and with the most Internet users in the Arab world, is investing significant resources towards advancing its cybersecurity capabilities. As more government services, processes and sensitive information migrate to the digital landscape, everything from individual citizens' personal data to more far-reaching information involving entire countries or businesses becomes more vulnerable. A recent Raytheon study on overarching global trends in cybersecurity over the next three

years illustrates some of the concerns and potential solutions that digital security experts have identified. It is clear that leaders across the spectrum express are turning more of their focus to cybersecurity. The Kingdom has embraced digital technology in a way that is nearly unparalleled around the world. A recent World Bank report noted that high speed Internet subscription fees typically cost less than 5 percent of the average monthly income in Gulf Cooperation Council (GCC) states. Saudi leaders have led the development of eGovernment services for nearly a decade and have established a single portal for this purpose. As government expands the spectrum of services that will allow citizens and residents to more efficiently complete the administrative aspects of life - from obtaining civil status and travel documents to accessing medical records and mobile e-services - the vulnerabilities multiply. Throughout the Kingdom - and the wider region - the amount of citizen data governments digitally store grows exponentially as data is transferred from hard copy to cloud-based systems. The same goes for the private sector. With the creation of new digital platforms that are increasingly becoming a part of everyday life, companies, such as those in the telecommunications sector, are handling more and more information about millions of customers.

2.5 million mobile phones shipped to Jordan annually

Some 2.5 million mobiles are shipped to Jordan annually, with demand expected to surge in the next five years, according to China-based international technology company Lenovo. The number is growing year on year, Sharay Shams, head of smartphone business for the Middle East at Lenovo, told The Jordan Times this week at an event to launch several types of smartphones in the local market. "We expect a huge surge in demand on smartphones, especially with the launch of 4G [fourth generation] services in Jordan," he said. Zain Jordan has already launched 4G services in the Kingdom and Orange Jordan, which has obtained the license, is

planning to launch the service before the end of June. "4G will drive mobile data usage, which will eventually increase adoption of smartphones," Shams added. Long-term evolution (LTE)/4G technology features higher data transfer speeds and capacities, providing up to 150 megabits per second in Internet speed. According to the Arab Advisers Group, smartphone penetration in Jordan currently stands at more than 50 per cent. "Smartphone ownership will boom as prices are becoming very affordable," Shams said. Describing competition in the smartphone market as tough, he said there are plenty of affordable 4G-enabled devices at present in Jordan. Several ICT experts have stressed in remarks to The Jordan Times that the availability of affordable smartphones is key to boosting usage of 4G services, as some 7 per cent of phones currently used by mobile holders are 4G-enabled. Telecommunications Regulatory Commission figures indicate that there are more than 11.1 million active mobile subscriptions in Jordan.

TRA sponsors the UAE Forum on ICTRF 2015

The General Authority for Regulating the Telecommunications Sector (TRA) announced that it was the official sponsor of the UAE Forum on Information and Communication Technology Research (ICTRF 2015), which took place in Dusit Thani Hotel, Abu Dhabi on May 17 - 19, 2015. The Forum, under the general theme of "Towards a Smarter City", has been sponsored by the TRA since its inception in 2006. The forum included session topics covering 'Smarter City, the goals and targets'; 'Smarter City, the technology challenges and solutions'; 'Smarter City, sustainable impact on citizens' lives and culture'. The session topics were presented by prominent international experts, invited to speak at the forum. The sessions were followed by a panel discussion for all attendees to join the conversation. Our support for this event stems from the TRA's awareness of the importance of the ICT sector as a main driving force of human and economic development. It is an essential element in the process of implementing the UAE Vision 2021 and the National Agenda. The support also reflects our commitment to partner with various stakeholders, led by the academic sector and represented by Khalifa University, which is a crucial scientific organization in the UAE,"

said Hamad Obaid Al Mansouri, TRA Director General. "The TRA is delighted to uphold its strategic partnership with Khalifa University and continue to support through sponsoring the UAE ICTRF for the ninth year in a row. We are great believers of the Forum, which is built on the notion of enhancing the UAE's reputation as a true industry leader and innovator in the field of ICT research. Through the TRA Corporate Social Responsibility program, our sponsorship encourages the Forum's focus on collaboration and knowledge sharing among ICT researchers and practitioners in the UAE and throughout the region," added Al Mansouri. The UAE ICTRF 2015 is organized by Khalifa University, and co-organized by the ETISALAT-BT Innovation Centre (EBTIC) and the Emirates Advanced Network for Research and Education (ANKABUT). The Forum attracted academics, researchers, and industry professionals from the fast growing UAE and regional ICT sectors. The UAE Forum on Information Communication Technology Research was held in conjunction with the International Conference on Information and Communication Technology Research (ICTRC 2015) on 18 - 19, May 2015. The ICTRC 2015 aims to be the world's forum for scientists, academics, engineers, and industry professionals to present their latest research results, ideas, developments, and applications in all areas of Information and Communication Technology. As part of the conference, EBTIC is organizing a Workshop on Smart City with a theme on "Towards a Smarter City; in the Local Context".

Etisalat completes voice-over-WiFi trial

Etisalat of the United Arab Emirates (UAE) has announced the completion of trials of voice-over-WiFi (VoWiFi), a technology which the telco says will help it boost the indoor coverage of its mobile network. The system, which was trialed in conjunction with Chinese vendor Huawei, enables users to make voice calls using their home WiFi network or a public hotspot, thereby improving coverage in some indoor areas. The telco has made no announcement on when it expects VoWiFi to go live on its network.

STC, Etisalat sign partnership agreement

Saudi Telecom Company (STC) has signed a bilateral partnership agreement with UAE-based Etisalat Group for multiprotocol label switching (MPLS) network interconnection. The two companies will provide their regional and global business sector clients with advanced communications services. The agreement is 'considered as an extension of mutual cooperation', and was signed at the International Telecom Week (ITW) in Chicago (US).

du deploys evolutionary 4G+ technology in the UAE as it evaluates the future of 5G with its vendors

du the Middle East's fastest growing telecommunications company, is one of the few operators in the world to have begun deployments supporting LTE Advanced (LTE-A), also known as 4G+, CAT 6 with carrier aggregation across its network. Current CAT 6 supported smartphone owners can now benefit from this advanced technology. The introduction of 4G+ will almost double the throughput and speed of broadband services, thus decreasing latency and time to content, which ensures that the end-user will benefit from faster streaming, downloading and loading times, establishing a more versatile connection. 4G+ is currently available in several areas with high footfall traffic, and du aims on furthering the network coverage expansion in line with the increase in demand and the rapid development in mobile devices technology. Saleem AlBlooshi, Executive Vice President, Network Development and Operations, du, said, "The rollout of the 4G+ network is an important step on the road to 5G evolution. While we follow the technological evolution, concurrently we are evaluating the possible 5G features and technologies with our vendors, in line with the tentative timeline imposed by global standardization bodies that 5G technology should

be rolled out in 2020." "While there are not many CAT 6 supported devices on the market today, we anticipate both a market and user increase of these devices, hence the rollout of 4G+ is an important business strategy placing du as one of the region's pioneers with regards to its network capabilities," Al Balooshi continued. In August 2014, du announced that VoLTE technology had successfully been installed and tested over its commercial LTE network. Additionally, du demonstrated VoLTE calls during GITEX 2014; the commercial launch is expected this year. The leading operator successfully demonstrated LTE Advanced with 900 Mbps over its LTE network at GITEX 2014, combining 3 carriers with MIMO 4x4. du further tested LTE-Advanced with carrier aggregation over its commercial network with 300 Mbps peak throughput by combining band 20 (800 MHz) and band 3 (1800 MHz) spectrum in July 2014 and commercially launched LTE-Advanced (4G+) service on March 1, 2015 for Cat 6 terminals.

Expenditure on IT Services in Egypt surge to EGP20 billion

In Egypt, associations' total expenditure on the information technology industry surged to around 20 billion Egyptian pounds (US\$2.6 billion), vice president of ITIDA said Monday. According to Hossam Osman, Vice President of Egypt's Information Technology Industry Development Agency (ITIDA), the hardware services in the country capture 85% or 17 billion pounds of the total expenditure. Meanwhile, the technical and software services seize 15% or 3 billion pounds approximately, he noted during a business forum on programming industry that ITIDA holds on Monday. Moreover, he noted that ITIDA seeks-through its strategy- to develop the programming industry services and double it production volume in the upcoming volume.

Ooredoo 3.5G footprint reaches 90% of Omanis

Ooredoo Oman (formerly known as Nawras) has revealed that it has successfully modernized and upgraded 70% of its network across the Sultanate, as part of its extensive 'turbocharging' program that was launched three years ago. In mid-2012 coverage of the Qatari-owned operator's 3.5G network stood at

53% of the population, but this had increased to 90% as of the end of March 2015. Ooredoo now delivers 3.5G technology through five different carriers, while 4G data services are also expanding rapidly and now cover many areas across Muscat, Salalah, Sohar and Dqum. It adds that the turbocharging program will continue in a number of cities during 2015, including Manah, Al Hamra, Izki, Adam, Bahla and Nizwa, Al Mudaybi, Dima Wattayeen, Bidiyah, Ibra, Al Qabil, Jaalan Bani Bu Ali, Khasab, Bukha, Qurayyat, Masirah, Hayma, Hallaniyat, Al Jazir and Thumrait. 'By challenging ourselves, we have boosted our customer experience by introducing state-of-the-art mobile and fixed LTE technologies to the Sultanate,' commented Hassan Al Lawati, Director of Capability Management at Ooredoo, adding: 'Our customers will now also be able to enjoy LTE-Advanced, the next generation of 4G technology, in hotspots around Muscat. Work to cover these locations has already started. Having completed testing back in 2014, we demonstrated this new technology in COMEX this year, showcasing download speeds of far more than 200Mbps. This is very exciting for our customers as it opens up a whole new online experience.'

Zain, Vodafone extend Partner Market agreement to include M2M

Kuwait-based Zain Group and UK telecoms giant Vodafone Group have extended their existing Partner Market agreement to include machine-to-machine (M2M) services across the Middle East. Under the agreement, Zain will use Vodafone's Global M2M Platform to offer enhanced services to businesses looking to implement M2M solutions. Zain will start rolling out M2M services on its nationwide 4G Long Term Evolution (LTE) network in Kuwait in the second half of 2015; going forward, the company will deploy the solution to other countries within its footprint. Scott Gegenheimer, CEO of Zain Group commented: 'The rollout of M2M services to our enterprise and individual customers is an important part of our strategic direction in creating a smarter world. Zain is transforming to become a digital services provider, and the development of M2M services forms a key building block within this conversion. Our planned entry into the provision of smart city solutions

and enterprise services will help us achieve our revenue growth projections, with many of these activities falling under our Zain Digital Frontier and Innovation initiative.'

Lebanon launches 'tech hub' to boost startups

I seem to have mislaid my speech, is there anyone in the tech hub who can help me with this?" What seemed like a genuine hiccup was revealed as a tech gimmick, as a small drone flew from the back of the audience with a package for British Ambassador to Lebanon Tom Fletcher. The diplomat

would "play a major role in the future of the country. It will be as important in the future as the financial sector, and maybe one day, the gas and oil sector." "All these sectors are going to give leverage to the traditional sector. They are going to allow us to be more competitive and create a sector that is not subject to ... political risks and also the security risks." Salameh added that the Capital Markets Authority was preparing a proposal for an electronic stock market linking banks, brokerages and other financial institutions, as well as external exchanges. The CMA would then grant an operating license to the private sector. "This is important for the knowledge economy, for the startups who are seeking an exit and do not want to be sold to another entity," he said, adding it was hoping

had good timing. While Cinemoz is based in Beirut, "it's not a Lebanese product; it caters to Arabic-speaking viewers," Safieddine said, adding it was most realistic to achieve critical mass in Saudi Arabia and Egypt. ServMe strategy executive Sarah Hawilo believes "it would be more motivating for startups [if there were] more initiatives in the ecosystem." She cited Lebanon's notoriously poor Internet as a challenge, though the predictive dining software, which began its operations six months ago, manages to evade it with the better connection at its Beirut Digital District office. Internet aside, the funding process is "very strenuous ... banks don't have a basic understanding of what startups need," she said, calling for greater collaboration between banks and the Central Bank to speed up the funding process. "You want to scale up quickly and sometimes finding the right talent in Lebanon is hard," she added, given its smaller, less experienced pool of UX/UI developers and graphic designers. The tech hub will be based at new premises in the Beirut Digital District downtown, with a funky, narrow three-floor space with glass walls, blue neon-lit walls, and industrial staircases. Aside from the International Accelerator, the hub will run a capacity-building program offering workshops and master classes. It also plans to offer a signposting service to direct Lebanese tech companies to international contacts, workshops and other opportunities. An outreach program will work with schools in Lebanon to identify curriculum gaps, while a communications and marketing arm will promote Lebanese entrepreneurs internationally.



encouraged the country to embark on a revolution "not made with guns, but with innovation" at the official launch of the UK Lebanon Tech Hub, a two-year program backed by the Central Bank and the British government to boost the startup scene in Lebanon. Under its flagship International Accelerator program, global entrepreneurs and other experts will help 45 applicants develop growth plans with an aim to internationalize their operations. The 15 deemed most ready to compete globally will go on to attend a 10-month program in London, with opportunities to network, find talent, and develop overseas partnerships. The tech hub falls under the Central Bank's Circular 331 initiative to boost local startups. Central Bank Governor Riad Salameh told the audience he believed the knowledge sector

to set up the market by the year's end. Some local startups have taken a more regional perspective while Lebanon gears up. "[Lebanon] is a small country so I'm not expecting a huge ecosystem," said David El Achkar, who founded Bitcoin payment network Yellow Pay in January 2014. While he said funding was "not critical right now," thanks to U.S. angel investors, he would welcome regional investment in the second round. Right now, "it's important to get exposure as Bitcoin is this new technology," Achkar said, also acknowledging the difficulty of buying Bitcoins in Lebanon in the first place. He has staff in Jordan, Dubai and Egypt, working to get merchants and consumers to adopt the platform. Karim Safieddine, who founded video-on-demand website Cinemoz in 2011, believes "the ecosystem is at a turning point: We're now in the early stages of an actual industry in Lebanon," he said, adding the hub's launch



▼ REGULATORY NEWS

REGULATORY UPDATES

Eight EU Nations Urge Caution on Internet Regulation

Eight European Union nations including Britain, Ireland and Poland on Tuesday urged caution with regulating the Internet, as Brussels prepares a sweeping review of the behavior of web giants that could see them subjected to new rules. In a letter to European Council President Donald Tusk, who will this week chair a meeting of the EU's 28 heads of state, the leaders of Britain, Ireland, Sweden, Estonia, Poland, Finland, Czech Republic and the Netherlands, said the EU should only regulate "where there is clear evidence to do so." In May the bloc's executive, the European Commission, unveiled its Digital Single Market Strategy, a broad range of policy proposals aimed at dismantling barriers to cross-border online shopping, updating copyright rules and ending blocks on watching online videos abroad. Central to European Commission President Jean-Claude Juncker's strategy to create jobs in the EU, the plan also includes a review of the business practices of online platforms - such as Google, Amazon and Facebook - which could lead to regulation. France and Germany have been among those pushing strongly for platform regulation to enable smaller European upstarts to compete with American tech giants, prompting U.S. President Barack Obama

earlier this year to accuse Europe of taking a protectionist turn. But in the letter, seen by Reuters, the eight leaders called for a prudent approach to regulation while urging strong political endorsement of the digital single market strategy. "There is no greater opportunity at our disposal to make a real difference for investment, growth and jobs, and deliver a vital boost to Europe's future global competitiveness," the heads of state wrote in the letter. "This also means getting the regulatory balance right...It is very clear that a successful Digital Single Market will not be one that stifles innovation, investment and entrepreneurship." European Commission Vice-President Andrus Ansip, a former prime minister of Estonia, has strenuously denied an anti-American bias in his strategy, particularly in the area of online platforms. A senior Google executive said on Tuesday that regulating the Internet would hurt Web companies and telecom operators alike. "If Europe goes down the route of regulating the Internet more, that would make them (investors) less likely to invest more in European ISPs (Internet service providers)," said Theo Bertram, Public Policy Manager at Google, at a conference in Brussels.

AT&T faces potential \$100 million U.S. fine over 'throttling' disclosures

The U.S. Federal Communications Commission on Wednesday proposed a \$100 million fine for AT&T Inc (T.N), accusing the No. 2 wireless carrier of misleading customers who paid for unlimited data plans about possible slowing of download speeds. The FCC, in announcing the largest such fine proposal, said the company inadequately informed customers about notable reduction in speeds they may experience if they exceed a particular amount of data in a billing cycle, a practice known as "throttling." "Unlimited means unlimited," FCC Enforcement Bureau Chief Travis LeBlanc said in a statement. "The Commission is committed to holding accountable those broadband providers who fail to be fully transparent about data limits." AT&T has 30 days to respond to the charges, which will then be reviewed by the five-member commission. The proposed maximum fine was approved on a 3-2 party line vote by a Democratic majority. "We will vigorously dispute the FCC's assertions," an AT&T spokesman said in a statement. The company says the FCC has previously deemed the practice as a legitimate and reasonable way to manage its network and that it has been "fully transparent with our customers, providing notice in multiple ways and going well beyond the FCC's disclosure requirements." AT&T says it had disclosed its slowdown practices to consumers over bill statement notifications, text messages and other means. A senior FCC official, however, said such disclosures were inadequate as they did not inform consumers about when speed reductions would take place, what maximum Internet speeds they would receive and the impact of those slowdowns on video-chat applications such as FaceTime. That, the FCC says, made for misleading and inadequate disclosures that violated the agency's transparency requirements of the 2010 Open Internet order, also known as "net neutrality" regulations, which have remained in place despite a legal dispute over the rules. AT&T and several cable and wireless industry groups are challenging the FCC's 2015 net neutrality regulations in court. AT&T is also fighting a lawsuit by the Federal Trade Commission on its unlimited data practices.

Singapore to shutter 2G networks by April 2017

Spectrum to be reallocated for 3G and 4G services; operators urge remaining 2G customers to upgrade. Singapore's mobile operators announced they will stop offering 2G services from April 1, 2017. In a joint statement, Singtel, StarHub and M1 said the spectrum will be refarmed for 3G and 4G services in order to cater to increasing demand for mobile broadband. "Today, the majority of mobile customers are on 3G and 4G networks; only an extremely small percentage of customers remain on 2G-only mobile devices," the operators said. At the end of March, Singapore had 8.1 million mobile connections, according to the Infocomm Development Authority of Singapore. Of that total, some 287,000 – or 2.5% – were 2G subscriptions. The majority of mobile users – 4.3 million – are on a 3G price plan, but 4G is catching up fast, with 3.1 million connections. In the run-up to the closure, Singtel, StarHub and M1 will contact affected customers via SMS and calls, and will also advertise the shutdown at their retail outlets. "A wide range of 3G and 4G handsets is also available at different price points to enable customers to migrate to newer networks more conveniently," the operators said. "Customers on 2G-only handsets will need only to place their SIM cards into a 3G or 4G device to enjoy 3G/4G service immediately."

Title II opponents pledge to fight on as US net neutrality rules come into force

Opponents of the U.S. Federal Communications Commission's (FCC's) new net neutrality rules have vowed to keep fighting, after an appeals court denied a petition to block them. The U.S. Court of Appeals for the District of Columbia on Thursday said the petitioners had not satisfied its "stringent requirements" for taking action. The decision means the FCC's new Open Internet Order will come into force on Friday. "This is just one battle," said Scott Belcher, CEO of the Telecommunications Industry Association (TIA), in a statement. "There is no good reason to now have the Internet governed under antiquated and onerous regulations that will harm investment and create uncertainty for the communications industry and economy. For this

reason, we will continue to challenge the FCC's regulatory regime." The TIA is part of a large group of lobbyists and telcos trying to overturn the new rules. While they have no problem with the aim of the Open Internet Order, they staunchly oppose the method, namely to reclassify broadband as a utility under Title II of the Communications Act, subjecting operators to close scrutiny over how they manage traffic on their networks. A group of opponents comprised of USTelecom, AT&T, the National Cable and Telecommunications Association (NCTA), CTIA, the Wireless Internet Service Providers Association (WISPA), and the American Cable Association (ACA), petitioned the FCC to stop the new rules coming into force. They claim that Title II reclassification is arbitrary, capricious, and an abuse of discretion by the FCC. When the FCC rejected the complaint, the group turned to the Court of Appeals, petitioning it to block the rules and expedite its case against them. On Thursday, the court denied the motion to block the rules; however, it did agree to expedite the case. "The parties are directed to file a proposed briefing format and schedule within 14 days of the date of this order," said the court, in its ruling statement. The TIA said its next step will be to file documents with the court that support the case against Title II. "We continue to believe the court will ultimately invalidate these rules," Belcher said.

Airtel Africa CEO demands regulatory restrictions for OTT providers

The CEO of Airtel Africa has called for greater regulation of OTT providers that provide for-profit services over mobile operators' infrastructure. Speaking at the 2015 ITU Global Symposium for regulators in Gabon, Airtel Africa chief Christian de Faria called for regulators to create fairer frameworks that treated all providers equally. His comments were at times harshly worded, including the claim that OTT players cannibalize mobile revenue by "riding on operator infrastructure and investment". The CEO added that OTT players "are not subject to the same taxes and regulation regimes as operators. We expect the regulators to help." He then expressed the view that spectrum, licensing, revenues and security should all be under consideration regarding potential future OTT regulation. He did however make the point that

telecom operators should adapt to the presence of OTT players in the market, adding that they helped operators to reach more subscribers. "We don't want to block them, but regulators need to ensure a level playing field for all," he said. "Ultimately, mobile network operators are seeking a win-win solution in which customers can benefit socio-economically from mobile connectivity." In response, regulators noted that a unified global approach would be required to establish tariffs, noting that "no single country or regulatory entity can solve the issue on its own".

European Union's 5-year roadmap for IT needs open source

After months of preparation, the European Commission (EC) released its broad 5-year roadmap in early May for information and communications technology (ICT) policy, the Digital Single Market Strategy, or DSM. The plan is structured around three main pillars or goals, which include:

- better access for consumers and businesses to online goods and services (seeking to remove the differences between the online and offline worlds, as well as cross-border harmonization of commercial rules)
- creating the right conditions for digital networks and services to flourish (seeking the right regulatory environment to encourage the build-out of infrastructure and the right legal environment to assure online trust and security)
- Maximizing the growth potential of the European digital economy (encouraging the "free flow of data" within Europe, more effective "e-government," and the expansion of digital skills, among other goals).

These three pillars are supported by 16 actions that range from policy investigations to legislative proposals. Some of the actions—including "measures in the area of parcel delivery" and "proposals to reduce the administrative burden on businesses arising from different VAT (tax) regimes"—are tied to ICT only in that they facilitate e-commerce. Much, if not most, of the press attention that the DSM has generated so far has gravitated toward portions of the strategy that are controversial or have the potential to be so, including

copyright reform, and an "analysis of the role of (online) platforms" in the economy. The latter item is being viewed in some quarters as an attempt by the EC to rein in the growing strength of global online leaders such as Google, Amazon, and Facebook. On copyright, the Commission will be seeking to bring greater harmonization to the current patchwork of country-by-country copyright regimes. The EC's objectives include ensuring cross-border access (within Europe) to legally acquired content and services, and the harmonization of exceptions for a narrow set of purposes such as research, education, and text and data mining. The Commission has indicated no interest in revisiting the software copyright directive or reverse engineering exceptions as part of this. However, a proposed change to duty of care for Internet providers to monitor and remove third-party content for alleged copyright infringement raises a red flag and will require vigilant monitoring and engagement. Somewhat overlooked at this point, however, are other parts of the DSM, including work on standards and interoperability. For example, under the heading of "Building a data economy," the strategy pledges that the Commission will, in 2016, propose: "a European 'Free flow of data' initiative that tackles restrictions on the free movement of data for reasons other than the protection of personal data within the EU and unjustified restrictions on the location of data for storage or processing purposes. It will address the emerging issues of ownership, interoperability, usability and access to data in situations such as business-to-business, business to consumer, machine generated and machine-to-machine data. It will encourage access to public data to help drive innovation..." While the DSM does not explicitly state it, to achieve a lot of these objectives, open standards will be essential. While many parts of the strategy are explicit in their proposed actions, this section has been written in broad strokes. For this reason, open source/open standards proponents must stay engaged both to help steer the DSM toward a positive outcome and for fear that the DSM may instead seek to secure the "free flow of data" via mandating contractual requirements and cumbersome and problematic data ownership definitions. More to the point is the section of the DSM titled "Boosting competitiveness through interoperability and standardization."

Commendably, the DSM calls for the European Interoperability Framework to be "updated and extended." The EIF is a set of recommendations which specify how public administrations and the general public can better communicate within the EU and across European member state borders. This would present a great opportunity to further promote the uptake of open standards. This section goes on, however, to voice concern that "industry stakeholders decide 'bottom-up' in which areas to develop standards and this is increasingly taking place outside of Europe, undermining long-term competitiveness." As this section, likewise, is written in broad strokes, it is not clear how the Commission intends to act on this. It will be important to emphasize the view that it would be best to maintain an industry-led, international approach—with strong European participation—as the ideal way to ensure that the necessary and relevant standards are developed and implemented. A final section regarding "E-government" calls for, among other things, "making the interconnection of business registers (from EU member state to member state) a reality by 2017," and "extending and integrating European and national portals to work towards a 'Single Digital Gateway' to create a user friendly information system for citizens and businesses (across the EU)." These recommendations will require greater interoperability, which, again, is facilitated by the use of open standards. The European Commission is to be commended for introducing this ambitious plan, which recognizes not only the value of the ICT sector to the economy, but the importance of promoting the effective application of ICT to all other sectors. There are a lot of moving parts to the DSM and much of it has yet to be defined, even as some of the more controversial parts of the strategy are generating a great deal of heat at present. This is all the more reason for us to maintain our attention and begin steering it toward policies and outcomes that will facilitate openness.

Southern African nations team with Ericsson to develop broadband policies

The Communications and Regulators Association of Southern Africa

(CRASA) is teaming up with Ericsson to encourage countries in the region to adopt national broadband policies and lay the groundwork for the growth of Internet services. CRASA serves nations in the Southern African Development Community (SADC), which are generally considered to lack the necessary expertise to formulate policies that could foster the growth of broadband services. In addition to accelerating the deployment of Internet services, CRASA's initiative, if successful, could curb the high cost of broadband in the region, said Edith Mwale, a telecom analyst at Africa Center for ICT Development. "Broadband services in the SADC region have remained high mainly because there are no broadband policies to provide guidance and even for countries that have them, the policies are vague," Mwale said. "We expect CRASA's initiative to change this situation so that people can begin to enjoy the benefits of broadband services." Ericsson will provide training geared toward helping SADC nations plan, develop or revise national broadband policies. Information was not immediately available on the monetary value of the deal for Ericsson. CRASA is a consultative body that was set up by SADC telecommunication regulators to coordinate regulations for the ICT sector in the region. Executive secretary of CRASA Antony Chigaazira said last week that there has been slow adoption of national broadband policies in the SADC region and that governments have a duty to create an enabling environment for the adoption of broadband.

Minister tells telecommunication regulators to set reliable standards

The Telecom Regulatory Authority Dr. Edward Omani Boamah, Minister of Communications, charged sub-region telecommunication regulators to set reliable stands that might reflect requirements and the needs of the sub- region and the countries where they operate. He said customers have become very sophisticated and more interested in the kind of experience they receive upon using a service and not the network performance or functionality which might affect their experience. Hence, as operators and regulators of the industry, the goal should be how to achieve quality of

experience. The Minister said this in a speech read on his behalf at the opening of a five-day Mobile Number Portability (MNP) and Quality of Service Workshop, organized by West Africa Telecommunications Regulators Assembly (WATRA) in collaboration with National Communications Authority (NCA) for members. The workshop is to understudy Ghana's Mobile Number Portability operations and also to tap into Ghana's knowledge and experience of quality of service in telecommunications. Ghana, Togo, Dakar, Niger, Mali, Burkina Faso, Benin, Guinea, Liberia and Cote d'Ivoire, and representatives of telecoms are attending the workshop. Dr. Boamah said to achieve quality of service; excellent standards with clear baseline targets should be set in consultation with service providers with stringent enforcement measures in order to meet the demands of consumers for the projected development of the telecommunications industry. "The standards may be effective when drawn to include all key performance indicators that are clearly linked to the performance of the Network," he added. He noted that service providers need to monitor the network to ensure that their consumers are enjoying very high quality service as guarantee by the terms of their contract. They also need to include quality of service aspects of complaint handling and customer care mechanisms as part of their own internal monitoring measurements, he said.

TRA holds workshop on Regulatory Drafting

Telecommunications Regulatory Authority (TRA) of The Kingdom of Bahrain held a workshop on Wednesday the 3rd of June at their headquarters on the topic of "Regulatory Drafting". The workshop agenda covered various interactive activities on the elements of contract and legal drafting as well as Issues to consider when drafting decisions, the Importance of legal background to any decisions, the structure and purpose of a decision, wider policy issues, Fining and the risk of appeal. The Workshop was hosted by Charles Russell Speechlys, A top international legal firm with expertise in telecommunications law. Among the speakers were Mr. Paul Stone, a Partner and member of the Competition & Regulation Group at Charles Russell, advising on all aspects of EU and UK competition law; Mr.

Gareth Mills, a Senior Associate at Charles Russell Bahrain who advises on commercial dispute resolution and international arbitrations; and Mr. Malcolm Dowden, a Consultant and an environmental and regulatory lawyer, specializing in the clean technology and telecommunications sectors.

Spark to use 700MHz LTE for rural broadband

Spark (formerly Telecom New Zealand) has announced plans to launch a wireless broadband service for people in rural areas of the country using 700MHz 4G Long Term Evolution (LTE) technology. The new service will be marketed as a fixed broadband alternative for home and business use rather than a true mobile product, and the telco says it will provide speeds up to ten times faster than those available via the government-backed Rural Broadband Initiative (RBI) which uses 3G technology to reach outlying areas. Spark is already testing the new wireless broadband product in the homes of employees and will launch public trials next week. A commercial launch date has not yet been announced. The telco paid NZD158 million (USD113 million) to secure 40MHz of spectrum in the 700MHz band in government auctions in late 2013/early 2014. It recently announced the launch of its 150th 700MHz LTE base station.

SA government wants net neutrality

The department of posts and telecommunications has come out in strong support for the principle of net neutrality. Net neutrality is the concept of treating all web traffic equally. Debates around net neutrality are raging in places such as the US where some telecom operators and internet service providers are proposing that online content providers should pay more to have



priority treatment of their offerings, such as faster download times of their websites. Opponents of this, though, say this would violate net neutrality and risks preventing smaller internet startups from competing with bigger established players. And South Africa appears to be siding with supporters of net neutrality. "Everything has to be done at a policy level to ensure that a new digital divide is not created. The digital divide could be around the question of those who have fast lane – meaning that they have access to faster services – and as a result, better services," Joe Mjwara, policy review head in the department told the Parliamentary Portfolio Committee on Telecommunications and Postal Services. The call for net neutrality comes as government is trying to put together a comprehensive information and communications technology (ICT) policy which is expected to deal with issues such as expanding internet access in the country. Internationally, some companies have lobbied to be allowed to charge premium rates for high speed data services such as online video. In the US, the Federal Communications Commission (FCC) has been involved in lawsuits as companies dispute its authority to impose net neutrality rules. Closer to home, Mjwara insisted that a key recommendation to government was that consumers should be protected from practices that disadvantaged them. "There is an unfair power balance between big corporations who dish out their services and individuals who subscribe to those services. Public interest demands that there should be this protection of the end user so that the end user can recognize their rights which are enshrined here." He added that the department was more concerned about how the policy review could impact on the way South Africans accessed the internet and related services. "We needed to remind ourselves that quite up front that the object of this exercise was the realization of socio-economic rights of people as they are outlined in the Constitution."

TRA subsidiary holds event on cyber bullying

The General Authority for Regulating the Telecommunications Sector, TRA, represented by its subsidiary, the UAE Computer Emergency Response Team, aeCERT, is organizing a special training program for social care workers and

specialists at the Ministry of Education under the theme of "The Social Responsibility of Social Workers" to raise awareness of the cyber bullying phenomenon. The first phase of the program was held at Regional Centre for Educational Planning at the University of Sharjah on May 25 - 26, and targeted around 110 specialists working at schools in Dubai and the Northern Emirates. The program aims to reinforce and enhance the role of social workers in building a complete and coherent system of values on belonging and national identity for students through workshops, and the guiding role in preparing students to meet the needs of sustainable development. The program included an introduction to cyber bullying, behavior in internet usage that may lead to this phenomenon, how it happens, its most dangerous results and threats to both children and adolescents, in addition to discussing the steps that will help prevent other internet threats, and creating a proper policy against cyber bullying at school, home and in the community.

German government proposes telecom data retention law

German telecom and Internet operators could once again be forced to store customer traffic and location metadata for police investigation purposes, five years after a previous data retention law was declared unconstitutional. The

said. The measure is meant to help law enforcement agencies in their fight against terrorism and serious crime. According to the government, it strikes the right balance between freedom and security in the digital world. However, plans to retain metadata for these purposes are controversial in Germany and the draft law was immediately heavily criticized. Germany hasn't had a data retention law since 2010, when the German Federal Constitutional Court ruled the previous law unconstitutional. The earlier law was based on the European Union's Data Retention Directive, which was itself overturned a year ago by the Court of Justice of the European Union (CJEU), because it violated fundamental privacy rights. The government's new data retention proposal still violates the European right to privacy and the right to personal data, said Volker Tripp, advocacy manager at the German digital rights group Digitale Gesellschaft, who added that the government has failed to prove data retention is needed to fight serious crime and terrorism. According to Federal Minister of Justice and Consumer Protection Heiko Maas, though, things are different this time. The current draft law cannot be compared to the old law, which obliged providers to store data for six months, he said. Privacy will be protected under the current proposal as the retained data has to be deleted immediately, he said. What's more, content will not be retained and the



draft data retention law unveiled would oblige providers to store call and Internet traffic metadata for a maximum of 10 weeks while location data would have to be stored for four weeks, the German government

right to have private conversations will remain, while it is not allowed to build motion profiles and retention periods are far shorter than before, he added. Not everyone's data will have to be retained. The proposed law has

a provision that excludes people and organizations that have to keep secrets by profession from the retention requirement. This includes social institutions and churches, according to the draft. Data will be retained though from people in other professions who under German law are allowed to keep professional secrets including lawyers, doctors, pharmacists, members of parliament and journalists. However, authorities are not allowed to use that data. "So they are saving it to not use it later. Does that make sense? No it doesn't," said Tripp, who added that this part of the proposal also goes against the German legal principle of non-discrimination. Despite the criticism, it is likely that the law will pass through the Bundestag quickly, as the government coalition has about an 80 percent majority, said Tripp. "The government is obviously trying to push the law through parliament," he said. It only took a couple of months to prepare this draft while a normal legislative process takes several months or maybe years, he said, adding that the law could be approved before the parliament's summer recess starts at the end of June. By fast-tracking the legislation process, the government is trying to avoid a public debate, Tripp said. A spokeswoman for the Ministry of Justice and Consumer Protection declined to comment on timing and said the process is now in the hands of the Bundestag. Germany is not the only country struggling with data retention. In the Netherlands, where the national data retention law was scrapped by a court because it was found to violate fundamental privacy rights, the government is looking to introduce a new one as soon as possible. The Swedish government meanwhile maintains that its data retention law can still be applied, while in the U.K. a new data retention law was rushed through by the U.K. government after the CJEU ruling. That law will be reviewed by the country's High Court to determine if it violates human rights.

TRA sponsors Technology, Media & Marketing Success Conference

As part of the important role played by the Telecommunications Regulatory Authority in supporting telecommunication and technology

conferences, TRA sponsored the two-day day "Technology, Media & Marketing Success" conference as a Gold Sponsor which began yesterday under the patronage of Sh. Mohammed bin Essa Al Khalifa, Chairman of Tamkeen. The conference aims to encourage the use of social data to enhance a brand's equity, enable the implementation of brand strategy on social media platforms, enable marketing and sales team to get business deals through social media, benefit from the experience of the leading companies in various sectors and empower the companies to handle the technology boom. Six experts specialized in marketing and social media within and outside the Kingdom of Bahrain delivered the lectures.

Colombia plans 700 MHz spectrum auction

The Colombian agencies for spectrum and communications regulation, the ANE and CRC, have posted a draft for spectrum auction in the 900 MHz, 1.9 GHz, 2.5 GHz and 700 MHz bands. The agencies will accept comments on the draft until June 12. The document can be found here. Small cells in Brazil: TIM Brasil has partnered with the state power company Copel for a small cell project. The telecom operator will install 3G and 4G small cells on Copel's lamp posts across Curitiba, the capital of the state Paraná in southern Brazil. TIM said the goal is to use the nearly 3 million Copel posts in Parana to reinforce coverage and improve data traffic. TIM and Copel have negotiated for almost a year to close this deal. Copel will be responsible for for the attachment, data transmission and power supply of the cells. Huawei was chosen as the small cell provider. In Parana, TIM has 8.5 million customers and a 55.8% market share. Connected car tech in LatAm: Latin American transit users will soon see some use cases of connected car technology with the goal of improving urban transportation systems and enhancing mobility. Volvo Bus Latin America and Ericsson have signed an agreement for localization and customization of Volvo's ITS4Mobility intelligent transport system. The solution will be offered commercially by both companies in Latin America. As part of the project, bus operators will be able to track their fleet in real time, and passengers will have access to real-time information about bus

arrival times. LatAM plays big role in Telefónica's 1Q15: Brazil and Telefónica Hispanoamerica generated 56% of Telefónica's total revenue of 11,54 million euros (\$12.86 million) in the first quarter 2015. The company's total revenue was 12.6% higher than the same period last year. At the end of March, Brazil alone accounted for 24% of total revenue, while Spain represented 25% and Germany, 16%. Telefónica ended the 1Q15 with 40% of the revenue from mobile services consisting of mobile data revenue, which increased by 30.9% year-on-year. In Brazil, mobile data acceleration led to year-over-year (YoY) growth in average revenue per user. Data traffic was booming (+50% YoY), driven by higher LTE usage. As for Telefónica Hispanoamerica, smartphone accesses increased, with a net addition of 3.1 million smartphones, even though there is still limited smartphone penetration (29% total; 21% prepay).

Government may block zero rating plans in net neutrality policy

The government could disallow controversial 'zero rating' plans floated by companies in its final policy on net neutrality but could make an exemption for delivery of essential government services such as education and health on a preferential basis. "Zero rating plans that involve commercial arrangements at the back-end violate the idea of net neutrality as they seem to provide discriminatory access to certain apps," a senior telecom department official told ET. The telecom department has set up an six-member committee headed by Member Technology AK Bhargava, which has to submit a report on net neutrality by the end of the month. The committee is yet to submit its final recommendation but an official aware of its thinking told ET that the members broadly concur on the definition of net neutrality in the Indian context. The committee's current thinking is that any definition of net neutrality must maintain core principles, which is not to allow blocking, prioritization and throttling of content providers on a network. "However, it is of the view that the definition (of net neutrality) should not be at cross-purposes with the government's policy," another official told ET. The upshot is that essential services such as e-governance, as

envisaged in the 'Digital India' plan, should be delivered on a preferential basis to end-users. "The policy will allow for positive discrimination," the person added. The telecom commission will examine the report along with recommendations of the Telecom Regulatory Authority of India (Trai) on the subject before it finalizes its stand. The final policy will then be vetted by the telecom minister Ravi Shankar Prasad. According to sources, the DoT committee, set up in January this year, has met over 45 organizations including Facebook, Google, Flipkart, Amazon, Cleartrip, Paytm, Viber and Skype, apart from telecom service providers and various public interest groups in the last few months. "A few members of the committee have so far made a presentation to the telecom minister explaining rules on net neutrality worldwide," the person added.

CCI to Wait for Net Neutrality Regulations before Probing Telcos' Plans

With debate continuing to rage on net neutrality, the Competition Commission will wait for regulations to be in place before taking a call on whether actions of telecom and Internet firms amount to unfair ways. The Competition Commission of India started looking into whether telecom operators and Internet service providers are indulging in unfair business ways by extending preferential treatment to select mobile applications and websites. However, the watchdog has now decided to wait for more clarity on regulations for ensuring net neutrality before moving further. "With regard to the issue of net neutrality, there are no clear regulations in place so far. The authorities are working on it and once the regulations are clear, then we can look at the issue," a senior CCI official told PTI. Telecom watchdog TRAI recently floated a discussion paper seeking comments on regulatory framework for net neutrality, and the opinion is divided on the issue. The government has said meanwhile that it stands for ensuring non-discriminatory access to the Internet for all. The principle of net neutrality implies equal treatment to be accorded to all Internet traffic, without discrimination or priority for

any person, entity or company. CCI, which keeps a tab on unfair business practices across sectors, orders a detailed probe into a matter only if there is prima-facie evidence of anti-competitive ways. The net neutrality debate was sparked off recently after some telecom operators and Internet companies came up with plans that offer preferential treatment in using the Internet. Bharti Airtel has launched 'Airtel Zero', an open marketing platform that allows customers to access a variety of mobile applications for free, with the data charges being paid by start-ups and large companies. Besides, Reliance Communications and Uninor have tied up with players like Facebook, WhatsApp and Wikipedia to offer free usage to consumers. The Telecom Regulatory Authority of India said it does not intend to police the Internet but there are three unexceptional principles including 'no blocking' which are not debatable. TRAI recently floated a consultation paper for regulatory framework on over-the-top (OTT) service like Internet-based calling and messaging services and net neutrality.

TalkTalk asks regulators for 'level playing field'

Broadband provider TalkTalk wants more competition and a "level playing field" in the UK's internet services industry, says its chief executive. Dido Harding said: "We are looking to various competition authorities reviewing the BT/ EE merger, the Three/O2 merger and the whole industry. "I do think there need to be more players on the market." TalkTalk reported a 3.2% rise in pre-tax profit to £32m for the year to the end of March. Speaking to the BBC, Ms. Harding added: "I've been very public in saying that Openreach should be separated out of BT Group." "I think that would drive better investment, a more level playing field... I do think there need to be more players on the market and the regulators need to make sure that's the case." TalkTalk's annual revenue rose 3.9% to nearly £1.8bn, leading the company to raise its revenue growth target for 2017 to 5%. Tax credits associated with losses from the previous year pushed its post-tax profit to £72m. However, the company also said data downloading on its network had doubled in the last year, raising its costs. Ms. Harding said: "People are downloading 40%

to 50% more data on our network than they were a year ago, so from time to time we do need to put our prices up." The company is testing new high-speed internet cables in York, said Ms. Harding. "I want to live in a country where in a decade's time, we all have unlimited broadband coming into our homes - where broadband becomes like electricity." Responding to the company's bad reputation in customer services, Ms. Harding said: "Ofcom published nine months worth of customer services results where for the first time ever, TalkTalk was not the most complained about in any of the products we sell. "It's not the end of the journey and there are lots more we can do, but we're getting there."

Regulator rejects CAT-DTAC 1800MHz spectrum return plan

Thailand's National Broadcasting and Telecommunications Commission (NBTC) has rejected outright the proposed settlement reached by state-owned CAT Telecom and mobile operator DTAC on returning unused 1800MHz frequencies for open auction, citing the reason that it wants to 'ensure smooth fourth-generation (4G) spectrum auctions', the Bangkok Post reports. NBTC secretary-general Takorn Tantasith explained that the rejection of the proposal is aimed at 'avoiding any potential risks that could expose the 4G auctions to further delays as the process of returning spectrum would take time', arguing that: 'We want the auctions of the 1800MHz and 900MHz spectra for 4G service to take place in November and December as scheduled.' Mr. Takorn also claimed the regulator had never received any official statement on the settlement from either party, stating: 'What we've known for a considerable time was simply an informal agreement ... We don't want to take a risk.' Thailand's ICT ministry had announced that CAT had formally agreed to allow DTAC to return a 2x5MHz tranche of unused 1800MHz bandwidth for re-auction in the 4G auctions. The move would increase the 1800MHz spectrum block available in the auction to 2x30MHz, allowing licensed 15MHz block sizes, rather than the regulator's planned block size of 12.5MHz which industry participants have labeled as inefficient.



▼ A SNAPSHOT OF REGULATORY ACTIVITIES IN SAMENA REGION

REGULATORY UPDATES

Algeria



President: Mr. Toufik Bessai
[Regulatory Authority for
Post & Telecommunication
(ARPT)]

To promote competition in the telecommunications market and to foster the development of Internet access services, particularly those using radio access systems including short-range radio local area networks (WLAN), the Regulatory Authority has called for comments on the technical and economic conditions of establishment and operation of wireless networks outside of buildings (outdoor) and the decisions to be taken to implement the means that might accompany the evolution of the deployment this technology and its uses in the context of benefiting the consumer. This public consultation aims to gather and analyze the opinion of the operators and the different market participants on issues of the generalization of this technology and on different possible control schemes taking into account the current deployment of 3G and 4G networks; norms and existing standards or being defined, facilities the existing legal and regulatory framework for data security and respect for private life as well as the necessary public information on the subject. To this end, the Regulatory

Authority invites interested parties to submit their views and suggestions on the subject as well as any reflection they deem necessary in this regard. Responses to this call for comments should be sent to the Regulatory Authority at the latest June 3, 2015. (May 19 2015) arpt.dz

Bahrain



Chairman: Dr. Mohammed Al Amer
[Telecommunication
Regulatory Authority (TRA)]

The Telecommunications Regulatory Authority of the Kingdom of Bahrain (TRA) has issued a consultation paper on its updated National Numbering Plan (NNP). TRA's Technical & Operations Director Eng. Mohammed Alnoaimi said, "managing a scarce national resource such as numbering is a key function of any telecom regulatory body. With the newly proposed NNP, we are aiming to be even more efficient and effective in allocating numbers to licensed services providers." Eng. Alnoaimi further added that "the current National Numbering Plan was developed in 2008 and since then the technological changes that have been taking place in telecommunications industry have triggered the need to review the way in which numbers are used and allocated. The proposed numbering

plan would be technologically neutral thereby allowing the licensed service providers to offer services without being bound to a specific technology." The proposed NNP will introduce new 5-digit short codes for premium on-net messaging (SMS) with a preset cap tariff of BD 3. These SMS short codes would include ranges starting with digits 81, 85, 88, 91, 95 and 98. The use of SMS short codes by service providers will be governed through the proposed NNP to ensure that the consumers' interests are protected and to minimize disruption and inconveniences caused due to promotional SMS' activities. Furthermore, TRA proposes additional remedies related to Numbering to ensure national security measures for consumer benefits are in place as well as to help the Authority to achieve a milestone of implementing a National Numbering Directory for the Kingdom of Bahrain. The consultation paper on the proposed NNP can be viewed on TRA's website at www.tra.org.bh. and TRA invites all concerned parties to review and provide their comments to the Authority by no later than July 2, 2015. (June 23, 2015) tra.org.bh

Bangladesh



Chairman: Sunil Kanti Bose
[Bangladesh Telecommunication Regulatory Commission (BTRC)]

Bangladesh Telecommunication Regulatory Commission gears up for releasing 700MHz spectrum band for 4G or long-term evolution auction as the government wants to introduce the latest technology to the mobile industry in 2016. As part of its plan, the regulatory body cancelled 700MHz spectrum allocation to AlwaysOn Network Bangladesh Limited, an internet service provider (ISP). At different programs over the last few months, Sajeeb Wazed Joy, the ICT adviser to the prime minister, hinted at the introduction of 4G by 2016. "The International Telecommunications Union defines 700MHz as a mobile band. We want to earn money as this band is precious for 4G or long-term evolution," a BTRC official said, requesting anonymity. The band will facilitate faster mobile internet, offering a better, less costly and more expanded mobile broadband services by mobile operators than now, he said. AlwaysOn Network was partially utilizing its allocated spectrum of 700MHz for a long time, he said, adding that the spectrum of the state is limited and valuable. The BTRC has served several notices to AlwaysOn for replacing its allocated 700MHz with another band spectrum – 5.4MHz or 3.5MHz – and finally it issued a final notice on December 14 last year. However, AlwaysOn continued its operation at 700MHz which annoyed the telecom watchdog.

(May 25, 2015) dhakatribune.com

Egypt



Executive President: Eng. Hesham El Alaily
[National Telecommunication Regulatory Authority (NTRA)]

Executive President of Egypt's National Telecommunications Regulatory Authority (NTRA) has reportedly been assigned to negotiate with those operators in the country providing fixed broadband services over the introduction of low-cost tariffs for connections offering downlink speeds of 1Mbps and 2Mbps. Last month Egypt's Minister of Communications

and Information Technology Khaled Negm met with members of Internet Revolution Egypt (IRE), a cyber-protest group which is seeking to improve the quality of internet services in the country. With the group having set out a number of 'demands', these were said to have included reducing prices, increasing speeds to start with a minimum 1Mbps, up from the current entry-level 512kbps connections, and the reconsideration of the fair usage policy. Meanwhile, in separate but related news, the NTRA is reportedly examining whether it should provide privately-owned operators with compensation for damages incurred as a result of state-owned Telecom Egypt's replacement of copper cables with fiber across the country. Daily News Egypt claims that the NTRA has requested that internet service providers (ISPs) provide documentation proving the damages incurred as a result of the copper cable replacement process in order to examine the means of possible compensation. Due to technical problems in the line replacement process, it is understood that customers' landlines were changed and broadband services cut off as a result, whereby only Telecom Egypt subsidiary TE Data was willing to reconnect customers, meaning subscriber losses for private players in the sector. Khaled Hegazy, head of foreign relations at Vodafone Egypt, was cited as saying that his company lost numerous customers due to the line replacement process; though he stopped short of disclosing the exact number of users lost. LinkDSL however confirmed it had shed some 40,000 broadband subscribers as a direct result of Telecom Egypt's copper cable replacement program, with the former claiming many customers had opted to move to the incumbent after their existing internet service was disconnected.

(May 21, 2015) Daily News Egypt

Egypt's Ministry of Defense (MoD) has reportedly given itself a majority stake in the new entity which will be tasked with developing and controlling the national telecommunications infrastructure, according to Al Bawaba. Under a new legislative amendment submitted by the MoD, the role of the country's major telecoms operators in the venture will now be limited, both in terms of the stake they hold in the company and their participation in the network development. As per the revised plans, the MoD will now take a 60% stake in the national telecoms entity, while other government ministries will hold a combined 20% stake, leaving just 20% for Egypt's existing telecoms companies, down from the originally planned figure of 40%. Meanwhile, the updated guidelines also include a proposal that telecom companies will play no part in extending or installing communication cables, with existing operator limited to renting cables from the company managed by the MoD. By comparison, under the original plans announced in late-December 2014, the government had said it would establish the national entity for telecommunications, with state bodies – comprising the MoD, the Ministry of Communications & Information Technology (MCIT), the Ministry of Transportation, the Ministry of Finance and the Ministry of Electricity – set to take a combined 60% stake. Meanwhile, the initial plan envisaged the country's three mobile network operators – Vodafone Egypt, MobiNil and Etisalat Misr – each acquiring a 11.5% stake in the joint venture, while fixed line incumbent Telecom Egypt would have taken the remaining 5.5% shareholding. (May 12, 2015) Daily Al Borsa

Iraq



CEO: Dr. Buhan Shawi
[Communication & Media Commission (CMC)]

Iraqi telecoms watchdog the Communication and Media Commission (CMC) has dropped a US\$100 million fines imposed on Kuwaiti-based cellco Zain Iraq regarding the sale of SIM cards without permission, Gulf Base writes citing a statement from the operator. Zain had been issued the fine in January 2011 for allegedly releasing five million SIM cards into the local market without regulatory permission, although the cellco denied any wrongdoing. On top of the penalty, the cellco was also charged a further USD162 million as the government's share of the revenue from the mobile accounts in question, although the CMC dropped this demand in April this year. The CMC's recent decision is final and ends more than four years of litigation between Zain and the regulator. (June 16, 2015) telegeography.com

The owners of Zain Iraq, the country's biggest mobile phone operator by subscribers, aim to sell 25 percent of the company's shares after it joins Baghdad's bourse, parent firm Zain said on Tuesday. Iraq's three mobile firms were required to float a quarter of their shares and join the Iraq Stock Exchange (ISX) by August 2011 as part of their 15-year licenses awarded in 2007. So far only Ooredoo unit Asiacell has floated, joining the ISX in February 2013. Daily fines for not doing so are being levied against the other operators: Zain Iraq and Korek, the smallest of the three. Alkhatem -- a local joint-stock company formed to hold 100 percent of Zain Iraq's shares -- on April 28 received regulatory approval to list on the ISX and must do so within two months of that date, a Zain spokesman said in an emailed response to questions from Reuters. A quarter of Alkhatem's shares "will be offered for sale soon after finishing the listing process", the spokesman said. "We are committed to continue offering 25 percent of the shares until totally sold. Zain owns 76 percent of Alkhatem, according to the Kuwaiti firm's annual report. Zain Iraq made a first-quarter net profit of \$34 million on revenue of \$304 million, down 15 and 4 percent respectively from the year-earlier period. The company's performance "was severely hampered by the escalation of political and social instability," parent firm Zain's earnings statement said this month, adding the unit had suffered "frequent temporary network shutdowns and associated higher network operational costs", plus intense competition and currency fluctuations. (May 20, 2015) zawya.com

Jordan



**Chairman of the Board of Commissioners/
CEO: H.E. Eng. Ghazi Al-Jobor**
[Telecommunication Regulatory Commission (TRC)]

The number of Internet users in Jordan reached almost 6 million by the end of the first quarter of this year and is expected to grow significantly with the launch of Fourth Generation (4G) services. By the end of March this year, Internet penetration stood at 76 per cent, with some 5.9 million users, compared to 75 per cent at the end of 2014, according to a report by the Telecommunications Regulatory Commission (TRC). The report showed that there were 1.9 million Internet subscribers in Jordan by

the end of March — an Internet subscription penetration rate of about 25 per cent. Of the total Internet subscribers, some 1.5 million were mobile broadband subscribers, followed by ADSL (218,459 subscribers) and WiMax (121,754 subscribers), the TRC report said. "The introduction of 4G services will increase competition and drive more data consumption. Demand on the Internet is also rising due to the increased adoption of smart devices," Jawad Abbassi, founder and general manager of the Arab Advisers Group, told The Jordan Times over the phone. Zain Jordan and Orange Jordan have already launched 4G services, while Umniah, the Kingdom's third telecom operator, has recently acquired the license to provide the service and is expected to do so before the end of this year. "Jordanian users are tech savvy and now Internet is being used everywhere at home, work, school. With the Internet of Things, we will see more usage as well," Abbassi noted. The TRC report indicated that mobile penetration reached 147 per cent at the end of March with 11.5 million active mobile subscriptions, 10.6 million of them prepaid. According to the TRC there were 376,400 land-line subscribers in Jordan by the end of March — a 5 per cent penetration rate.

(June 22, 2015) ammannewsdaily.com

The telecom sector witnessed a significant drop in gross production and added value to the economy in 2013 compared to 2012, the Department of Statistics (DoS) said. The sector's gross production dropped by 17.3 per cent, standing at JD1.039 billion in 2013 compared to JD1.255 billion in 2012, DoS said in a statement released on the occasion of the 150th anniversary of the International Telecommunication Union. Moreover, the sector's added value dropped 22.4 per cent, standing at JD657.8 million in 2013 compared to JD847.4 million in 2012, according to the statement. The number of mobile phone subscriptions increased by 85 per cent between the years 2009 and 2014, reaching 11.1 million, compared to 6 million subscriptions in 2009. In addition, the number of Internet users increased by 627 per cent between 2009 and 2014 -- from 245,000 to 1.78 million. Surveys on the use of ICT services in houses conducted by DoS in 2013 revealed that 98.5 per cent of families have mobile phone subscriptions, 14 per cent have landlines, and 56 per cent own PCs, according to the statement. The ratio of computer users among people aged five and above stood at 52.2 per cent.

(May 19 2015) zawya.com

Kuwait



Chairman and CEO: Mr. Salim Alozainah
[Communication and Information Technology
Regulatory Authority (CITRA)]

Kuwait-based telecoms giant Zain Group has published its consolidated financial results for the first quarter of the year (ended 31 March 2015), reporting a 10.3% annual decrease in revenues to KWD279 million (USD925 million), down from the KWD311 million reported in the corresponding period of 2014. In the three months under review, EBITDA reached KWD396 million, while the company booked a net profit of KWD41 million in Q1 2015, down 26.7% from the KWD55.9 million reported in the previous year. The company disclosed that the continued political instability in Iraq and heightened levels of competition in the market severely impacted

its operations and the group's overall key financial indicators. In operational terms, Zain Group reported a 4.5% increase in its consolidated customer base, which reached 46.1 million at 31 March 2015. In Kuwait subscribers increased by 14% y-o-y, to 2.9 million, while Bahrain saw its customer base reach 785,000, mainly as a result of a USD100 million investment in a 'total revamp and upgrade to 4G Long Term Evolution (LTE) technology.' Zain Saudi Arabia's subscriber base increased by 27% to 10.6 million in Q1 2015, while Zain Jordan signed up a total of 3.8 million users, a marginal decrease on the 3.9 million figure reported in 1Q 2014. Meanwhile, Iraq saw its customer base decrease by 15.6% to 13.5 million, due to the escalation of political instability, coupled with frequent temporary network interruptions and associated higher operational costs. Zain Group CEO, Scott Gegenheimer noted: 'The quarter reflected mixed results in what were quite challenging conditions in several of our key markets, especially Iraq where the security situation and intense competition is significantly impacting the performance there and subsequently the group's overall financials. Nevertheless we witnessed many positive signs of net income and customer growth during the first quarter of 2015 when compared to the final quarter of 2014 ... All operations witnessed robust growth in data related revenues, and we will continue to develop this area of the business to take advantage of the explosion of data usage by our customers. We are continually upgrading and rolling out 4G enabled networks in Kuwait, Saudi Arabia, Jordan and Bahrain, and we expect the rollout of 3G services in Iraq to substantially improve performance there, anticipating that the security issues stabilize soon.'

(May 13, 2015) telegeography.com

Lebanon



Chairman & CEO: Dr. Imad Hoballah
[Telecommunication Regulatory Authority
(TRA)]

Lebanon's telecoms ministry has launched an open international tender for two three-year contracts to manage the country's state-owned mobile networks, Touch Lebanon and Alfa, currently managed by Kuwait's Zain Group and Egypt's Orascom Telecom, respectively. Previous indications had been that a two-year term might be offered to all-comers, and the news that three-year contracts are up for grabs may be seen as an extra factor in attracting major international bidders. The contracts will replace the temporary rolling renewable contracts currently in place (with the existing extension running out at the end of December). Lebanese newspaper The Daily Star reports that the telecoms ministry has told interested parties to submit their initial bids by June 30, while the results of the tender are scheduled to be announced on September 8. Qualified bidders must have offered telecoms service for at least five years and have at least 10 million active subscribers, while having at least ten years of operational, technical and development experience in owning and/or managing mobile networks (with networks worth at least US\$5 billion in value). (June 22, 2015) telegeography.com

Telecom Minister Boutros Harb will launch on July 1 a five-year national telecommunications strategy in a bid to boost the performance of the sector in Lebanon. "It will

take five years to complete the strategy but citizens will see a positive difference in the performance of the sector within the first three months of the project's initiation," he said. Harb explained that the new strategy includes a plan to provide Lebanon with a fiber-optic network and 4G services to cover the whole Lebanese territory. He explained that a fiber-optic network already exists in Lebanon but only connects centers together for the time being. "What we will be doing next is connecting fiber-optic cables to the home," he said. "Fiber to the home" is the delivery of a communications signal over optical fiber cables from the operator's switching equipment all the way to a home or business, thereby replacing existing copper infrastructure such as telephone wires and coaxial cables. FTTH is a relatively new and fast growing method of providing much higher bandwidth to consumers and businesses, thereby enabling more robust video, Internet and voice services. Fiber-optic Internet can go up to 100 Mbs, compared to copper, which is 8 Mbs at best. "The project will be fully financed from the Telecommunications Ministry budget," he said. Harb explained that around 75 percent of problems facing citizens when it comes to Internet connectivity is due to malfunction in the copper cables linking their computers to the buildings they live in. "For this purpose, we will be appointing around 30 technicians dedicated to receiving complaints from citizens to solve their Internet problems within 24 hours," he said. "We will also launch an awareness campaign to draw the attention of citizens to the real causes behind their connection problems in order to stop blaming the ministry." Harb also said the ministry would soon launch a new mobile operator tender as part of a plan to revamp the telecoms sector. The Cabinet extended until the end of 2015 the existing management contracts for the country's two state-owned mobile networks, currently managed under short-term renewable contracts by Kuwait's Zain Group (under the touch brand) and Egypt's Orascom Telecom Media and Technology Holding (OTMT, under the Alfa brand). "We will be giving a chance for new companies to enter the tender and we will grant the new companies a contract for three years until privatization takes place. We need new companies to come and provide better services to citizens," he added. (May 19, 2015) zawya.com

Morocco



Director General: M. Azdine El Moutassir Billah
[Agence Nationale de Reglementation des
Telecommunications (ANRT)]

Telecom regulator National Agency of Telecommunications Regulation [ANRT] has extended the deadline for submitting bids for three new concessions – for the establishment and operation of trunked radio networks (3RP), provision of satellite telecommunications services using GMPCS technologies and the provision of telecommunications satellite services using VSAT technology – from May 7, 2015 to June 16. The regulator launched the bidding process on 16 March. (May 1, 2015) telegeography.com

Nepal



Chairman: Mr. Digambar Jha
[Nepal Telecommunication Authority
(NTR)]

Nepalese fixed-wireless and limited mobility CDMA operator United Telecommunications Limited (UTL) is poised to collect its new unified license and launch full-blown cellular services in the country. The operator finally paid its license fee and the first installment of the attached renewal fees, just two days ahead of today's deadline to take the license, The Himalayan Times reports. Industry regulator the Nepal Telecommunications Authority (NTA) confirmed on Wednesday that UTL had applied to take its license, paying the outstanding NPR252 million (USD2.5 million) license fee and an additional NPR50 million – the first installment of license renewal fee. An NTA board meeting is set to take place today and will likely rule in favor of UTL's bid to operate GSM mobile services in the mountain nation. In February the NTA ordered UTL to pay for the unified license within 30 days or risk losing its wireless spectrum. However, after failing to take its license within the government's original directed deadline (i.e. March 2015), UTL approached NTA again asking for a two months' reprieve – which is expiring on Friday. UTL is 80%-owned by three Indian companies – Mahanagar Telephone Nigam Limited (MTNL), Telecommunications Consultants India and Tata Communications – with 20% held by a domestic firm called Nepal Ventures. A unified license would enable UTL to utilize its frequencies for a full mobile network launch. (May 22, 2015) telegeography.com

Oman



Executive President: Dr. Hamed Al-Rawahi
[Telecommunication Regulatory Authority
(TRA)]

Subscribers of the fixed phone service in the Sultanate stood at more than 391,000 in April, 2015. The latest statistics issued by the National Centre for Statistics and Information (NCSI) show that subscriber of fixed phone service in the Sultanate stood at 391.783 at the end of April against 385.714 subscribers in March, registering a rise of 4.4 per cent. Subscribers of pre-paid fixed phone service (Sahl) stood at 38.779 against 35.768 at the end of March, comprising a rise by 17.3 per cent. The billed fixed phone lines stood at 298.316 in April compared with 295.433 in March, 2015. The number of public phones all over the Sultanate stood at 6,801. The number of integrated services digital networks (ISDN) witnessed a slight increase compared to the number of fixed wireless lines which witnessed a slight decline. Subscribers of billed GSM service stood at 6,282.196 by the end of April against 6,240.320 during March, comprising a rise by 1.4 per cent. (May 25, 2015) einnews.com

Standard & Poor's Ratings Services has revised its outlook on Oman's largest telecom operator, Omantel to positive from stable. S&P said that the outlook revision follows their reassessment of Omantel's financial policy and appetite for mergers and acquisitions. They no longer consider a large debt-financed acquisition to be likely, although smaller acquisitions in information communications technology may still occur. As a result, S&P said that they may remove the notch of negative adjustment that constrains the long-term rating due to

their negative assessment of Omantel's financial policy. That said, S&P added that the company's operating performance remains robust, with subscriber growth offsetting reductions in the average revenue per user. Omantel's business risk profile is supported by its strong competitive position in Oman's fixed-line and mobile telephony markets, solid operating performance, and high profitability. Omantel is the leader in the domestic two-player mobile market, which in our view supports its above-average profitability. The company also dominates the country's fixed-line market. However, S&P expects fixed-line broadband business to be as competitive as mobile telephony in the near to medium term. Offsetting these strengths are Omantel's fairly small scale in the global market, the evolving competitive and regulatory landscape for telecom operators in Oman, and Omantel's exposure to country risk. Omantel's financial risk profile is supported by the company's net cash position, and our expectation that its credit metrics will remain robust, despite relatively high capital expenditure and a possible increase in royalty fees to 12% from 7% of revenue. The financial risk profile is constrained by Omantel's historically large dividend distributions and minimal discretionary cash flow. That said, even if Omantel decided to increase debt to fund expansion, the ratings agency assumes that it would maintain a ratio of Standard & Poor's-adjusted debt to EBITDA lower than 2x, in line with its historically conservative financial policy. An adjusted debt-to-EBITDA ratio sustainably lower than 1.5x would support an upgrade to 'BBB+'. S&P assesses the company's overall credit profile as somewhat weaker than that of peers with similar business and financial risk profile assessments, primarily based on Omantel's smaller scale, lower level of diversity, and higher country risk. Moreover, they see a "moderately high" likelihood of extraordinary government support for Omantel, which S&P considers to be a government-related entity. The positive outlook on Omantel reflects the possibility of an upgrade if, as they expect, the company maintains robust credit metrics. (May 18, 2015) cellular-news.com

Pakistan



Chairman: Dr. Syed Ismail Shah
[Pakistan Telecommunication Authority (PTA)]

The proposed telecom policy prepared by the Information Technology Ministry has envisaged Rs 800 billion increase in telecom revenue in next five years. The revenues from telecom sector had reached an estimated Rs 299 billion during the first two quarters of 2014-15. According to official statistics, the commercial launch of 3G and 4G services has opened new opportunities for revenue generation for the mobile operators. The availability of 3G and 4G services has enabled development of new applications and database services and people of Pakistan are quickly adopting these new technologies and services. This has resulted in surge in data revenues of cellular mobile industry, reaching Rs 37.3 billion during July-December, 2014 compared to Rs 22.1 billion in July-December 2013, showing an increase of 69 percent. Revenues are expected to further increase in the coming years as more subscribers are added into the 3G and 4G fraternity, generating more data revenues of telecom industry. As per government's vision, telecom services will contribute up to 1.4 percent of GDP by 2025 while active export of telecom sector will be enhanced from \$1.4 billion to \$4 billion by

2020. Moreover, National Technology Group of Saudi Arabia want to invest around \$200 million in the sector. Similarly, Pakistan Telecommunication Authority (PTA), a regulator of the sector has been entrusted with the responsibility to govern the development of telecom sector in Pakistan, keeping in view the consumer interest while providing a level playing field for all the market players. During the year 2014-15, telecom sector of Pakistan achieved new heights of success after the launch of next generation mobile services (NGMS). PTA sustains on research in regulation, technical shrewdness, harmonizing competition and discharging its social responsibility with the patronage of the government. The authority strives to maintain a balance between smooth provision of latest telecom technologies, protecting telecom consumer interests and facilitating fair business concerns of the investors. PTA has also taken several measures to streamline the SIM sale process and implemented biometric verification system at sales channels of cellular mobile operators (CMOs), which is a landmark achievement in this regard. Working hand in hand with the telecom industry and under the patronage of the government, the telecom sector continued to perform well above expectations during the first two quarters of Year 2014-15.

(June 10, 2015) daillytimes.com.pk

The Ministry of Information Technology and Telecommunications (MoITT) has intended to take contributions of telecom services up to 1.4% of the Gross Domestic Product (GDP) by 2025. Also the Ministry wants to increase exports of telecom sector from \$1.4 billion to \$4 billion by 2020. Official sources from the Ministry also informed that the proposed Telecom Policy of Vision 2025 will be proved helpful in increasing the national economy of Pakistan while generating Rs. 800 billion in coming years. The sources further added that after the launch of Next Generation Mobile Services (NGMS) in Pakistan in 2014, our country has witnessed new heights of success in many fields. Significant impact on national economy is expected through proposed telecom policy-Vision 2025. Pakistan Telecommunication Authority (PTA), while highlighting the performance of cellular operators said that: "A regulator is striving to maintain a balance between smooth provision of latest telecom technologies, protecting telecom consumer interests and facilitating fair business concerns of the investors. PTA informed the press about the recent achievements that are together accomplished by IT Ministry, PTA and CMOs; which include:

- Biometric Verification System (BVS)
- Launch of 3G/4G
- Increase in cellular subscribers (131 million as per PTA)

After the launch of 3G/4G in Pakistan we have seen an increase in the number of mobile broadband users. All the CMOs are now updating their subscriber states on monthly basis. Most importantly, the coverage area of 3G and 4G LTE services is also expanding to the major cities of Pakistan which will also result in increased subscriptions. (May 17, 2015) phoneworld.com.pk/

The USF Board of Directors in its 38th meeting approved two Rural Telephony and e-Services projects at Shangla and Zhob. The decision was taken in the meeting, convened on Thursday, at the Ministry of Information Technology and Telecom, under chair of State Minister Anusha Rehman. As per decision Rs 1,950 million would be spent at Shangla and it would benefit an un-served population of about 810,685, covering 154 unserved Mauzas and an unserved area of 6,344 sq kms. In Zhob, around Rs. 3,780 million would be spent, benefiting an

un-served population of about 415,691, covering 330 unserved Mauzas and an unserved area of 21,979 sq kms. USF is a private company and is run by the contribution of telcos, and its objective is to spend on development of telecom sector in the country. The meeting also discussed the main efforts and development of telecommunication services in un-served and under-served areas throughout the length and breadth of the country. Other Board members including the Member Telecom; Mudassar Hussain, Chairman PTA; Dr Syed Ismail Shah, CEO and President PTCL, Walid Irshaid, Representative of Consumer Association of Pakistan, Kaukab Iqbal also attended the conference.

(May 19 2015) nation.com.pk

Palestine



Minister of Communications & Information Technology: Dr. Allam Moussa
[Ministry of Communications and Information Technology]

Palestinian officials have complained that Israel is depriving them of using 3G mobile phones, claiming that the decision is causing substantial losses for local mobile network operators, and their customers. Ammar al-Ikker, executive director of the Palestinian telecommunication group, told the Chinese state news agency, Xinhua that Israel is about to start implementing 4G technology, while his people are stuck with GSM phones. "Because we are not using developed frequencies in telecommunications, our losses rose to USD100 million every year and they could increase in the future," he said as Palestinians Sunday marked the World Telecommunication and Information Society Day (WTISD). Allam Musa, Palestinian minister of telecommunications, told Xinhua that Israeli telecommunication and mobile companies are profiting from Palestinian markets by taking advantage of advanced technology without paying taxes to the Palestinian National Authority (PNA). He added that using older communication technology imposes high costs on local consumers, mainly as they surf and browse the Internet and use social media websites on their mobiles. Sabri Seidam, technology adviser to Palestinian President Mahmoud Abbas, said "Politically, Israel deals with the issue of Palestinian telecommunications in the same manner it deals with issues of expanding settlements and obstructing possibilities of establishing an independent Palestinian state." According to the Palestinian Central Statistic Bureau, the number of mobile phone users in the West Bank and the Gaza Strip has reached 3.1 million. (May 18, 2015) cellular-news.com

Qatar



President: Mr. Mohammed bin Ali Al Mannai
[Communications Regulatory Authority (CRA)]

Telecom services market in Qatar is set to generate \$2.8 billion in service revenue by 2020 against a forecast of \$2.3 billion in 2015 with an annual compound growth rate of 3.6 percent — driven by operators' investment in next generation networks, said Pyramid Research. The mobile penetration rate in Qatar is set to increase to 191 percent by year-end 2020, one of the highest rates in the world. Average per capita spending on telecommunications services now stands at over US\$1,000 per year. "Alongside similar markets such as the UAE and Saudi Arabia, Qatar is on its way to becoming a digital society supported by

smart city initiatives,” said Houda Bostanji, senior analyst at Pyramid Research. Telecom operators Ooredoo and Vodafone have invested to offer the highest speeds and the best quality of service to mobile subscribers. LTE-A deployments through carrier aggregation have yielded downlink speeds of 150-225Mbps. Telecom operators will improve their efficiency by upgrading OSS and BSS with new cloud solutions offered by major vendors including Huawei, Alcatel-Lucent and Ericsson. Enterprises will explore IT solutions such as cloud computing, hosting solutions, M2M and big data analytics. (June 24, 2015) telecomlead.com

Saudi Arabia



Acting Governor: Eng. Habeeb K. Alshankiti
[Communication & Information Technology
Commission (CITC)]

Following the Communications and IT Commission's (CITC's) decision to reduce Saudi Arabia's wholesale mobile termination rates (MTRs) by 40% to SAR0.15 (US\$0.04) in February 2015, cellco Zain Saudi Arabia has introduced a new unified flat calling rate of SAR0.19 per minute to all networks in the country. The 'Khateer' plan is available to new and existing subscribers and represents 45% reduction on Zain's previous off-net calling rate of ZAR0.35 per minute. On September 29, 2014 the CITC published its 'Regulation of Wholesale Local Voice Call Termination Rates on Mobile Networks (MTR)' for public consultation, following a benchmark analysis with several countries at regional and international level. The regulator highlighted that as the wholesale price of SAR0.25 for local voice call termination in Saudi Arabia was well above the world's average of SAR0.08, it had decided to start regulating MTRs in order to promote competition, protect the interest of end-users and encourage the provision of reliable telecoms services. (May 26, 2015) Zawya.com

Following a brief suspension of trading of Saudi Arabian telecoms operator Etihad Etisalat's (Mobily's) shares in order to 'give the company time to announce a clarification related to one of its businesses', the Capital Market Authority (CMA) has referred a case of suspected insider trading at the telco to public prosecutors. In November 2014 the CMA launched an investigation into Mobily after the company restated its earnings for an 18 month period due to 'accounting error'. In March 2015 the CMA assigned a specialized team to review Mobily's newly restated financial statements and all other related documents, following an investigation to determine any violations by the company towards the bourse rules. The market regulator revealed that it suspects Mobily of breaching Articles (49) and (50) of the Capital Market Law (CML) and section C of Article (42) of the Listing Rules. Article 49 of the CML prohibits several activities, including: creating 'a false or misleading impression' relating to the price or value of a stock, trading securities that do not involve a true transfer of ownership, trading a stock to induce third parties to do likewise and buying or selling a stock to stabilize its price, while the second clause prohibits trading on inside information not publicly available and that which the insider knows 'would have a material effect on the price or value of such a security'. Section C of Article

(42) meanwhile states that once a company's directors approve its financial results, these must not be revealed to shareholders or third parties prior to official release. In related news, Mobily has announced that it is currently studying the possibility of selling its mobile towers. The company however highlighted that 'it has not entered into any agreement in that regard, nor determined the financial impact thereof'. In February 2015 Mobily was said to have issued a tender for advisory services to look at strategic options for the operator's towers portfolio, according to unnamed people familiar with the matter, with bids understood to have been submitted that month. (May 14, 2015) telegeography.com

Sudan



Director General: Dr. Azzedine
[National Telecommunications Corporation
(NTC)]

Sudan's mobile networks will launch 4G services within the next three months, the country's Minister of Science and Telecommunications Tahani Abdullah has announced. However, apart from that declaration, she offered no details to the Sudan Tribune of which networks would launch the service, or what the coverage would be like. "The entire Sudan will be covered by the Internet and computer services through e-government and other services. The telecommunications sector will contribute to the national income by 10%," Abdullah said. Zain Telecom's managing director El-Fatih Erwa revealed that Zain wanted to roll out 4G service on a trial basis but that the government prevented them from doing so. The Minister also called for customers to make "responsible and positive use" of mobile apps, implying that the government may want to clamp down on apps which encourage sharing of information critical of the autocratic regime. (May 18, 2015) cellular-news.com

Sri Lanka



Director General: Mr. P.B. Abeykoon
[Telecommunication Regulatory Commission
(TRC)]

Permanent Representative of Sri Lanka to the UN in Geneva, Ambassador Ravinatha Aryasinha said Sri Lanka had taken a lead in multi-lingual Internet initiatives, by putting in place technical conditions to facilitate the presence of its local languages on the Internet and encouraging the development of relevant Sinhala and Tamil content, thus ensured cultural and linguistic diversity and identity. Ambassador Aryasinha made this observations when he addressed the High Level segment of the World Summit on the Information Society (WSIS+10) Forum 2015 on May 26, 2015 in Geneva. Ambassador Aryasinha said the recently released Global Information Technology Report (GTR 2015) of the World Economic Forum placed Sri Lanka in 65th position of the Networked Readiness Index, among 143 economies, which is a noteworthy jump of 11 places and added that Sri Lanka continues to maintain its position as the foremost among South Asian nations. He further said that the internationally acclaimed "e-Sri Lanka Development initiative", supported by the World Bank has enabled deployment of Information &

Communications Technologies (ICT)s for technological and institutional transformation of key sectors of the economy of Sri Lanka. Ambassador Aryasinha noted that Sri Lanka is presently directing its efforts at leveraging ICTs to help women entrepreneurs and up-skill women employed in foreign countries. He also noted that in the Post 2015 era, the Country will build further on the gains it has already made by improving citizen access to Government through the Program 'Connected Citizen 2018' making it possible for citizens to engage with the Government through electronic means which would include the mobile. (June 2, 2015) asiantribune.com

Sri Lanka's total internet connections grew 68.4 per cent during 2014 largely supported by growth in mobile internet usage, a Central Bank report said. "Total internet connections grew by 68.4 per cent during 2014 raising internet penetration (connections per 100 persons) to 16.4," a recent Central Bank annual report said. "This was largely supported by the accelerated growth of 85.8 per cent in mobile internet connections." "Active usage of Information and Communication Technology (ICT) services in economic activities such as e-banking, mobile banking, e-bus ticketing, and mobile points of sale (POS) has also increased." In 2013, internet connections grew by 47 per cent, increasing internet penetration (connections per 100 persons) to 9.8 per cent. The report states that access to internet may be even higher, as these connections do not reflect ad hoc data users on general connections, while common access points are considered as single connections, in spite of multiple user access. The number of mobile telephone connections increased by 8.9 per cent while fixed wireline telephone connections recorded a 5.7 per cent growth in 2014. However, fixed wireless connections continued its declining trend recording a drop of 5.4 per cent in 2014, thereby causing a reduction in the total fixed telephone connections by 1.0 per cent. By end 2014, the fixed telephone penetration (connections per 100 persons) and the mobile telephone penetration stood at 13.0 and 107.0, respectively. Sri Lanka's explosive mobile sector growth began in 1992, when Celltel, a unit of Millicom International Cellular – now Etisalat Sri Lanka – launched South Asia's first mobile service, ending a state monopoly in telecoms. Mobile subscribers grew, despite high tariffs, with waiting lists of more than 10 years at the state run incumbent. In 2010 Sri Lanka's telephone density rose to 100.8 lines per 100 persons showing that fixed and mobile connections had overtaken the population, in a telling demonstration of the results of ending a state monopoly. Telephone density rose from 86.6 in 2009 in a country with a population of 20.6 million, according to data published by Sri Lanka's central bank. Two decades ago in 1995 Sri Lanka's teledensity was one line per 100 persons. Meanwhile, Sri Lanka's mobile phone sales reached one million unities in the third quarter of 2014 while smart phone shipment up by 100 percent which accounts for 20 percent of the total sales, a recent market research report said. In the overall Sri Lanka mobile handsets market, Nokia retained leadership position with a 22 percent share, followed by Micromax at second position with 19 per cent and E-Tel at third position with 12 percent, in terms of sales (unit shipments) during third quarter of 2014. In the smartphone market segment, Samsung leads with

a 20.6 market share followed by E-Tel with 17.7 percent market share, the report said. (May 11, 2015) customstoday.com.pk

Tunisia



President: Mr. Hassoumi Zitoune
[National Telecommunication Commission (INTT)]

Tunisia and Côte d'Ivoire have signed four agreements relating to the postal sector, digital knowledge transfer and Information and Communication Technology last week. The Tunisian El Ghazala technology pole also signed an agreement with the Information Technology and Biotechnology Village in Côte d'Ivoire (VITIB) for the reciprocal promotion and protection of investments. The four partnership agreements were signed on the sidelines of a B to B meeting held last week in the northern suburbs of Tunis. Nabagné Bruno Koné, the Ivorian Minister of Post and ICT, head of the Ivorian delegation, welcomed the agreements as "the link between the economic operators of the two countries will surely create a framework for cooperation that will bear fruits in the future". For Noomène Fheri, the Tunisian Minister of ICT, this collaboration between the two African States reflects "the pan-African vision which must be materialized through ICT." Noomène Fheri announced on the occasion that his country will provide 30 scholarships to Ivorian students pursuing studies in the field of ICT in Tunisia. (June 10, 2015) medafricatimes.com

Turkey



Acting Chairman: Dr. Omer Fatih Sayan
[Information & Communication Technologies Authority (BTK)]

The Turkish Ministry of Transport, Maritime Affairs and Communications has announced that the country's auction of 4G spectrum – originally scheduled to take place on May 26, 2015 – has been postponed until August 26, claiming that the would-be bidders need additional time to complete financial and technical preparations. The decision follows a statement from Turkey's President Recep Tayyip Erdogan, in which he stated: 'It is not necessary to waste time with 4G,' before advising that the country's mobile sector should move to 5G technology 'within the next two years.' It is not clear as to whether Erdogan's words impacted on the watchdog's decision to delay the auction. The auction is mooted to offer 20 spectrum lots across the 800MHz, 900MHz, 1800MHz, 2100MHz and 2600MHz bands, with a total bandwidth of 390.4MHz going under the hammer. Meanwhile, a block of 2600MHz spectrum is reserved for a new market entrant, although the newcomer will not be obliged to launch GSM services. The combined floor price for the licenses on offer has been set at EUR2.298 billion (US\$2.433 billion). (May 18, 2015) telegeography.com

United Arab Emirates



Director General: Hamad Obaid Al Mansoori

[Telecommunication Regulatory Authority (TRA)

United Arab Emirates (UAE) telco Etisalat is to allow foreign share ownership for the first time, with overseas investors and foreign and domestic institutions able to hold up to 20% of the company. Etisalat is 60%-owned by the UAE government via the Emirates Investment Authority (EIA), while the remainder is held by local individual investors. No date has been given for when the change will take effect. Etisalat is the dominant fixed and mobile operator in the UAE, while it has operations in 18 other countries across the Middle East, Africa and Asia. (June 23, 2015) teleogeography.com

The Telecommunications Regulatory Authority (TRA) hosts the International Telecommunication Union (ITU) Forum on Smart Sustainable Cities in Abu Dhabi attended by ITU study groups and experts within the field of smart and sustainable cities. The two day Forum will discuss a range of issues and topics divided into key focus areas and sessions including the national experience in developing Smart Sustainable Cities, the use of ICT in transforming into Smart and Sustainable Cities, the infrastructure and key performance indicators of Smart and Sustainable Cities, and the different roles of private sector and stakeholders in this field. "The UAE leadership under Sheikh Khalifa bin Zayed Al Nahyan's presidency has developed strategies and plans directed towards developing a sustainable environment with an overall advanced and integrated infrastructure. The UAE has pioneered in the adoption of sustainable development strategies in the region. The government has launched the UAE Green Growth strategy making UAE one of the leading countries in the field of green economy," said Hamad Obaid Al Mansouri, TRA Director General. In 2010, Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, launched "The UAE Vision 2021" which aims to reinforce the UAE's position among the world's best countries by the Golden Jubilee of the Union. In order to translate the Vision into reality, its pillars have been mapped into six national priorities including "Sustainable Environment and Overall Infrastructure. "The TRA is committed to work in line with the strategies and plans set by the government to attain a sustainable environment. The TRA also contributes effectively in deploying smart applications and services that meet the requirements of the UAE cities to transform into smart cities," H.E. added. The TRA hosts this forum in collaboration with the International Telecommunication Union (ITU), and this step falls within the framework of an integrated action plan aimed at introducing the leading initiatives and the diligent efforts of the UAE and the ITU in the field of clean and renewable energy and building smart and sustainable cities. The Forum represents another testament on the depth of the relation between the UAE and the ITU and also reflects the important role of the ITU in driving sustainable development efforts and preserving the World's environment. Engineer Nasser Saleh Al Marzouqi, representative of the UAE at ITU said: "During this forum, we will focus on a range of important

issues and highlight many initiatives and activities initiated by the UAE in the field of smart cities at both local and international levels. This includes focusing on the initiative launched by Sheikh Mohammed bin Rashid Al Maktoum, to fully transform Dubai into a Smart City, in addition to highlighting Masdar City and its pioneering role in the area of clean energy." The Forum will also approve the roadmap of the Smart Sustainable Cities transformation for the Arab region which is based on the guidelines adopted by the International Telecommunication Union. The representative of the UAE at the ITU applauded the remarkable participation of government entities and Telecom Operators, academic institutions, and concerned companies and organizations as well as experts from all over the world.

(May 13, 2015) samematoday.com



REGULATORY ACTIVITIES BEYOND THE SAMENA REGION

REGULATORY UPDATES

Albania



Telecoms regulator the Authority of Electronic and Postal Communications (AKEP) has issued a decision that will permit operators to refarm spectrum in the 900MHz and 1800MHz bands for the provision of 4G Long Term Evolution (LTE) services from September 1, 2015. Decision No.300 was approved by AKEP's council, amending Law No.9918 'On Electronic Communications in the Republic of Albania,' paving the way for any of the nation's cellular providers to launch 4G services. (June 5, 2015) telegeography.com

Argentina



Argentina has allocated the 700-MHz spectrum it auctioned off late last year and has also awarded 3G and 4G frequencies to broadband provider Arlink. The Secretaría de Comunicaciones (SeCom) announced late last week that it has handed airwaves in the 700 MHz band to Telefonica's Movistar, Telecom Personal, and America Movil's Claro. The frequencies in question formed part of an auction that raised US\$2.23 billion in November. Arlink also took part in the process and it has now received spectrum in the 1800/1900 MHz band for 3G services, as well as 700-MHz, 1700-MHz and 2.1-GHz spectrum for 4G. The telcos have 10 working days to pay for their

licenses, SeCom said. Once payment has been received, they will be permitted to start using the spectrum. SeCom remains the overseer of Argentina's telecoms market but its days are numbered. The country is working on the creation of the Autoridad Federal de las Tecnologías de la Información y las Comunicaciones (AFTIC), which will take on SeCom's responsibilities and those of the National Communications Commission (CNC). The presidential decree that established AFTIC as the new regulator was published in Argentina's official gazette on 29 April, but the body has yet to take charge.

(June 15, 2015) totaltele.com

Australia



The Australian Communications and Media Authority (ACMA) will sell a 2x60MHz block of 1800MHz spectrum in regional Australia at an auction in November 2015. Current users of the spectrum will need to vacate the frequency band by June 2017, but winning bidders will be able to deploy services earlier than that in areas where the spectrum is already vacant. If some users cannot vacate the spectrum by June 2017, the ACMA has said it could issue temporary apparatus licenses to those users until they can vacate the spectrum. Meanwhile, the government has decided to set a cap on the total

amount of spectrum any single operator can acquire, with telcos allowed to bid for a maximum of 2x25MHz of spectrum. The limitation is in line with suggestions put forward by mining corporation Rio Tinto and telcos Optus and Vodafone in April 2015, with both operators voicing their concerns that incumbent telco Telstra could possibly increase its regional advantage, as it is currently the only cellco with 1800MHz spectrum in regional areas. However, Vodafone's general manager of policy Matthew Lobb has expressed his dissatisfaction with the proposed cap by pointing out: 'It is difficult to understand the rationale for setting competition limits that could allow Telstra to corner 2x40MHz of spectrum in this band since the limit ignores their existing holdings. No other prospective auction participant can come close to this outcome, meaning that one player is effectively insulated from competition.' (June 1, 2015) ZDNet

Belgium



Institute for Post and Telecommunications (BIPT) is proposing a 34% cut in charges for wholesale access to the cable networks of Telenet, Numericable/Coditel and Brutele.

Under the draft proposal, the basic cost will drop from EUR29.90 (US\$32.55) to EUR19.70 a month. The cut has been welcomed by cellular operator Mobistar which is looking to combine its wireless services with a cable offering to provide a quad-play package of fixed and mobile voice, data and TV services to its customers. The draft changes are still subject to a public consultation, plus scrutiny by Belgium's media regulators and the European Commission (EC). Local press reports suggest that Telenet is unhappy with the proposals and plans to challenge the draft decision. (May 28, 2015) telegeography.com

Bermuda



Digicel Group's move to acquire Bermuda Telephone Company (BTC) has been granted approval by the island's regulatory watchdog. The decision by the

Regulatory Authority of Bermuda (RAB) effectively paves the way for the takeover to progress on the proviso that all parties involved adhere to a number of conditions attached to the deal – details of which are yet to be made public. The paper cites RAB chief executive Robert Watson as saying that whilst it is aware of some people's concerns at the potential emergence of two 'joint dominant players' in the domestic telecoms market, particularly where it relates to pricing, the watchdog is clear that it will monitor developments to ensure competition is not compromised. 'We will keep a close eye on it to see there is no predatory pricing,' he told the paper, adding that the RAB will also undertake a full market review in due course. Mr. Watson added that the regulator had weighed up what he termed 'the energy and experience of Digicel' when coming to its decision, and decided that the Caribbean group's experience and track record will help to ensure Bermudians receive the best services and prices going forward. He also attempted to reassure concerns that smaller players would not be squeezed out of the picture as a result of the tie-up, saying: 'Any market goes through phases where there is consolidation, but there is always room for smaller players with individual products and services that are viable.' In January this year the RAB sought public comment on Digicel Group's planned takeover of BTC, launching a consultation on a deal that under local telecoms law it confirmed fell 'within the meaning of a concentration', and as such required RAB approval if it was to close. A lengthy period of deliberation began on 20 February 2015, when the RAB received formal notification of the proposed deal in which Digicel

Group agreed to acquire BTC – just six months after it was taken over by Canadian group Barrie OpCo. In July 2014 Barrie OpCo, a recently incorporated Bermuda company owned by an independent investor group with experience in telecommunications, purchased 100% of BTC from local telecoms firm KeyTech for BMD30 million (US\$30 million). No details on the terms of the Digicel deal or indeed its value have been disclosed. (May 11, 2015)

The Royal Gazette

Brazil



Joao Rezende, the President of Brazil's Agencia Nacional de Telecomunicacoes (ANATEL), has confirmed that the government's auction of unsold spectrum in the 2.5GHz band – originally scheduled for October – will be delayed until November or December. The auction will see frequencies sold in around 4,600 municipalities. Previously, in June 2012 Brazilian pay-TV providers Sunrise Telecomunicacoes (now ON Telecom) and Sky Brasil Servicos (Sky Brazil) secured 2.5GHz spectrum for Time Division-Long Term Evolution (TD-LTE) use, although the bulk of the nationwide frequencies went unsold as the aforementioned companies concentrated on buying licenses within their franchise areas. In related news, AT&T Inc – which is close to assuming a 93% stake in Sky Brazil, via its pending takeover of international satellite TV group DirecTV – is sending a pair of senior executives to Brazil this month, as the company ramps up its Latin American ambitions. Sources with knowledge of the matter say the visit is in connection to Sky Brazil's desire to expand its 2.5GHz networks into Rio de Janeiro, Recife and Sao Paulo. Chief strategy officer John Stankey will join CEO Randall Stephenson on his trip to South America, the source confirmed. AT&T is said to have also approached Mexican telecoms regulator Instituto Federal de Telecomunicaciones (Ifetel) with a request for a 50MHz block of frequencies in the 2.5GHz band. AT&T has a presence in Mexico via its newly acquired Iusacell and Nextel mobile units, and also stands to gain a 41.3% stake in pay-TV operator Sky Mexico via the aforementioned DirecTV merger. Outside of Brazil and Mexico, the satellite TV company's current management team has launched TD-LTE fixed-wireless technology via DirecTV Argentina and DirecTV Colombia, with plans afoot to initiate similar deployments in Venezuela and Peru. (June 3, 2015) TeleTime

Canada



Canada's Industry Minister James Moore announced that the government plans to auction more wireless spectrum this summer. The auction, featuring unallocated spectrum licenses from the recent 700 MHz and AWS 3 auctions, will be held this August. This auction will be the third spectrum auction of 2015. Less than one year ago, nearly 90 percent of spectrum was held by Canada's largest wireless companies. As a result of the recent AWS-3 spectrum auction and the ongoing 2500 MHz auction, by summer 2015 new wireless companies are expected to hold approximately 25 percent of the total wireless spectrum available. The Government of Canada proposes using a sealed-bid format for this auction, which was the same format used for the AWS-3 auction. The spectrum cap put in place for the original 700 MHz auction would remain for the unallocated licenses in that band. One license, serving Yukon, the Northwest Territories and Nunavut, was unallocated after the 700 MHz auction in January 2014, while three licenses, serving the northern territories, Manitoba and Saskatchewan, were unallocated after the AWS-3 auction in March 2015. To give more providers

the opportunity to obtain this valuable spectrum, the government proposes to divide the northern licenses into smaller areas. In addition, the unallocated AWS-3 licenses would have the set-aside provisions removed, meaning the AWS-3 licenses would be open to bidding by all interested companies. The available 30 MHz AWS-3 blocks in each region would also be split into three 10 MHz blocks. Spectrum licenses acquired through this auction would be subject to strict deployment requirements. "Spectrum is an essential public resource, and it is our job as a government to ensure it is allocated in such a way that encourages robust competition and choice in our wireless market. This auction, like all of our previous auctions, is designed with the interests of Canadian consumers first. We look forward to seeing consumers benefit." James Moore, Minister of Industry.

(May 18, 2015) cellular-news.com

Chile



Chile's antitrust watchdog the Court of Defence of Free Competition (TDLC, Tribunal de Defensa de la Libre Competencia) is in favour of the creation

of a secondary market for spectrum, but claims that the matter should be decided by parliament. The competition authority had been asked by the National Economic Prosecutor (FNE, Fiscalía Nacional Económica) to draw up a set of recommendations to develop a legal framework for a secondary spectrum market in June 2014, but shortly afterwards the Ministry of Transport and Telecommunications (MTT) referred a bill to parliament which would allow sale of underutilized or unwanted spectrum from one operator to another, but maintaining the obligations of the original concession. As such, TDLC says it has now 'lost its opportunity' to act on the matter, as: 'the executive has identified the competition problems that would justify a reform and has exercised its legal initiative to incorporate such changes into the General Telecommunications Law'. The issue of selling spectrum was brought to a head by full service provider VTR's decision to move from a mobile network operator (MNO) model to a mobile virtual network operator (MVNO) model in December 2013. Whilst VTR ceased using its spectrum holdings, it subsequently emerged that the telecom regulator lacked the necessary powers to force the provider to relinquish the unused spectrum, nor were there rules in place to allow VTR to sell its frequencies to other providers. More recently, in April 2015 wireless provider Nextel began lobbying for permission to exchange some of its AWS-band frequencies (i.e. 1700MHz/2100MHz) for unused spectrum in the 700MHz band, currently reserved by the regulator for an emergency network.

(June 15, 2015) Diario Financiero

Telecoms regulator SUBTEL has confirmed that the Senate's Committee on Transport and Telecommunications is in the final stages of revising a draft amendment to the Telecommunications Act that will establish a minimum speed for guaranteed access to the internet. One committee member noted that the speeds provided by a company were not consistent with the plan, noting that a user might pay for an 80Mbps connection that could drop to as low as 2Mbps at certain times of the day. The committee has proposed an innovative system of ongoing evaluation, where users will be able to check an internet service provider's (ISP's) level of compliance regarding advertised and received connection speeds. (May 22, 2015) telegeography.com

China



The Chinese government has agreed to establish a broadband universal service fund (USF) for the deployment of broadband networks as part of efforts to meet policy targets for internet penetration, speeds and prices. The relevant ministries are currently drawing up measures to manage the fund, but it was not specified how the USF would be financed. 'If the government wants to make [an] investment, it has to be in the rural areas,' the source explained, noting that the nation's trio of telcos lacked incentives to roll out networks in more remote areas, where it may take more than ten years to recoup investment costs. The sentiment was echoed by the director of China Telecom's Technology Commission, Wei Leping, adding that it would be difficult to achieve the national goals based solely on the efforts of the three major operators. Collaborative projects and support from government policy was needed, the official explained. (May 19, 2015) C114

China plans to extend 4G coverage to a further 200 million households by the end of 2015. It is just one of many ambitious targets set out late last week by the Ministry of Industry and Information Technology (MIIT) as part of its Broadband China program. To help it achieve its goal, China aims to build a further 600,000 4G base stations by the end of the year. Even without these targets, the country's largest operator by subscribers, China Mobile, has already reached some impressive 4G milestones. By the end of 2014 the company had deployed 720,000 4G base stations, covering a population of approximately 1 billion. By the end of March the company had 143.1 million 4G customers. Meanwhile, the MIIT also plans to roll out fibre-to-the-premises (FTTP) to 40 million households, and to extend fixed Internet connectivity to a further 14,000 villages, by the end of the year. The aim is to provide a minimum connection speed of 8 Mbps to 55% of broadband customers. The 2015 targets fall under the Broadband China program, which will see the government spend a massive \$327 billion to provide nationwide broadband coverage by 2020.

(May 11, 2015) totaltele.com

Colombia



Telecoms regulator the MinTIC has published a draft document relating to its proposed public consultation on the bidding rules for its planned multi-band spectrum auction. Spectrum bands going under the hammer include the 900MHz, 1900MHz and 2500MHz bands, as well as frequencies in the 700MHz 'Digital Dividend' (technically 698MHz-806MHz) band. The document was drawn up by the MinTIC in conjunction with the Agencia Nacional del Espectro (ANE) and the Comisión de Regulación de Comunicaciones (CRC). According to the draft document, the government is looking to offer 20MHz in each of the 700MHz and 900MHz bands, plus a 5MHz block in the 1900MHz band and a 30MHz block in the 2500MHz band. The last named block could be auctioned as a single allocation; meaning, two blocks of 15MHz, or three blocks of 10MHz. A 10MHz block in the 700MHz band is likely to be reserved for public security use. Comments are open until 12 June and the auction is expected to be completed in 2016. (May 19 2015) telegeography.com

Croatia



The Croatian Regulatory Authority for Network Industries (HAKOM) has issued a decision on the terms for IP interconnection, making it one of the few European Union (EU) countries to be regulating IP interconnection between operators. The move will ensure interoperability for the country's IP-based services providers. The decision names incumbent operator T-Hrvatski Telekom (T-HT) plus 18 other telcos and internet service providers (ISPs). Separately, HAKOM has announced that it is recommending the deregulation of the markets for retail broadband internet and IPTV services. The regulator has sent its draft decision to the European Commission (EC), suggesting that the current retail regulation on T-HT – including its internet subsidiary Iskon and Optima, which is currently under management control of T-HT until 2018 – should be lifted. Meanwhile, T-HT has unveiled a HRK1 million (US\$147,000) project to upgrade the local access network in the areas of Velika and Mala Ostrna. The work is part of the government-backed Digital Agenda program, which aims to have a 30Mbps internet connection available to the entire population by 2020. (June 8, 2015) [telegeography.com](#)

Cuba



The number of Cuban mobile telephony users exceeded the three million mark in April, according to figures provided to local newspaper Juventud Rebelde by the island's state-owned monopoly operator Empresa de Telecomunicaciones de Cuba (ETECSA). Recent subscriber growth has been driven by the launch of the company's mobile e-mail service in March 2014, as well as the extension of the recharge validity period for pre-paid mobile lines to 330 days. In addition, Cubans have been able to own up to three pre-paid mobile telephony lines since February 5, 2015, in a further move aimed at relaxing the conditions for using telecoms services in the country. ETECSA, which aims to sign up 800,000 new customers in each year up to 2018, has steadily increased the number of base stations across the island from 350 in 2010 to just over 600 today, and will continue to invest in expanding coverage and improving service quality. ETECSA also revealed that the number of locations where Cuban citizens can access the internet, so-called 'salas de navegacion', has increased to 261 in 144 municipalities. (May 18, 2015) [telegeography.com](#)

Dominica



Dominica is planning a 'major broadband upgrade'. The minister says the broadband drive is being undertaken to ensure that reliable telephone access is available throughout the islands, noting that patchy broadband access is an ongoing concern to the administration. 'In Dominica, we still have our challenges. You will travel from Roseau to Portsmouth and if you're using your phone, you realize that at several points, the call will drop. Why is that happening? Why is there no service?' he said. Details of the upgrade are sketchy at this point, with minister only able to say that once completed, consumers will have access to a 'readily-available broadband service from which they can benefit'. As part of the strategy plan, the Dominican government has approached ECTEL, the regional regulator for Dominica, Grenada, St Kitts & Nevis, Saint Lucia and St Vincent & the Grenadines, to discuss how best to establish a level playing field for costs across the board – whether roaming charges or inter-carrier rates.

(June 3, 2015) [Caribbean Journal](#)

European Union



The European Commission (EC) has approved Sweden's rural broadband program for the period 2014-2020, which sets out government plans to invest SEK3.25 billion (US\$393 million) in subsidizing high speed internet expansion across regions of the country considered commercially unviable. The funding pot comprises SEK1.93 billion in Swedish government grants and SEK1.32 billion in European Union (EU) funds, representing a doubling in overall funding compared to the previous national rural broadband program. Sweden's Broadband Forum (Bredbandsforum) announced that national regulation/legislation should enter force by October 2015 to support new regional broadband rollout proposals, with the first batch of new rural projects expected to be approved by county administrative boards by that date. Separately, the PTS reported on its website that specific funding for broadband deployment in northern Sweden has been secured, totaling SEK600 million sourced from the EU's regional fund. A maximum of 50% of a project's costs may be claimed from the regional fund by companies and organizations building interurban networks in the three northernmost zones, meaning the total value of northern subsidized projects under the EU regional program could reach SEK1.2 billion. The next call for proposals will open on 1 July. In a related development, Bredbandsforum also reported that the Swedish government has adopted a national secretariat to support the country's regional broadband coordinators, to be established by the Post and Telecom Agency (PTS) and Bredbandsforum's existing secretariat. For 2015 the government has granted each of Sweden's 21 counties SEK600,000 to pay for broadband project coordination alongside an approximate SEK2 million allocation for the PTS to maintain a national support function. Another new report on the Bredbandsforum website says that only 15%-20% of detached homes in Sweden currently have access to fiber broadband, compared with roughly 80% of households in apartment buildings. A specific committee under the Forum – the Villa Group (Villagrupen) – is in the process of exploring various strategies to address this issue.

(June 11, 2015) [telegeography.com](#)

The European Commission (EC) published the results of a public consultation; Lamy report concerning the Ultra High Frequency (UHF) band across the European Union (EU). According to an EC press release, the results of the consultation suggest that an EU coordinated approach, a common roadmap as well as a cost-efficient transition are needed for a successful release of the 700MHz band (the upper part of the UHF band) for wireless broadband. 356 contributors – citizens and organizations – expressed their views on the Lamy Report and the future use of the 700MHz Broadcasting Band. The respondents gave their suggestions on how to use the 700MHz band (694-790MHz), on the regulatory certainty for current users of spectrum, the flexibility and harmonization of use of sub-700MHz (470-694MHz) frequencies for TV, as well as the European approach at the 2015 World Radio communication Conference (WRC-15). Out of 96 organizations responding to the consultation, 61 (63.5%) saw merits in an EU coordinated approach to clear the 700MHz band for wireless broadband usage. A vast majority of the respondents were in favor of establishing a common deadline to clear the 700MHz band and support the Lamy Report proposal of 2020 (+/- two years). Stakeholders are generally in favor of a common EU deadline for conducting a review for broadcasting and wireless broadband services market developments shortly after, possibly around 2025. 66.7% of responding

organizations support a common EU position at the WRC-15. For further details of the consultation see the link below. Regarding its next steps, the EC has launched a study to gather further quantitative data related to the costs and benefits of transition in the EU (SMART 2015/0010: 'Economic and social impact of repurposing the 700MHz band for wireless broadband services in the European Union'), while the Commission is engaging with the Member States in Council to ensure a coordinated position for WRC-15. Based on the Digital Single Market Strategy for Europe, the EC will make specific proposals regarding the coordinated release of the 700MHz band.

(June 11, 2015) telegeography.com

The European Commission has decided to open up the 1452-1492 MHz frequency band for wireless broadband under harmonized technical conditions. The Commission said that the decision contributes to achieving the Union spectrum target of at least 1200MHz for wireless broadband by 2015, which is laid down in the Radio Spectrum Policy Program. It adds another 40 MHz of harmonized spectrum for wireless broadband electronic communications services on top of the currently available 990 MHz, while ensuring the protection of existing use within this band for terrestrial digital audio broadcasting (T-DAB). According to the Decision Member States shall make the spectrum available within 6 months of its entry into force. The Decision introduces technical conditions for wireless broadband use as downlink-only (i.e. unidirectional transmission from the network base stations to mobile terminals) to enable supplemental downlinks (SDL) - a novel feature of 3G and 4G mobile broadband technology and part of LTE standard. SDL in the 1452-1492 MHz band can be used in conjunction with the aggregation of several frequency bands for their simultaneous use by operators. The Commission Report on the spectrum inventory last year highlighted that the 1452-1492 MHz frequency band is currently not efficiently used in the Union and the Member States represented in the Radio Spectrum Policy Group (RSPG) recommended its harmonization for wireless broadband. Since 2002 part of the 1452-1492 MHz frequency band (1452-1479.5 MHz) has been harmonized for T-DAB in all EU Member States. However, T-DAB has not been taken up in this band except for a few existing T-DAB spectrum users in the EU, which will be protected in line with the legal provisions of the Decision. The technical conditions laid down in the Commission Decision are based on a technical report by CEPT (CEPT Report 54), which was delivered in response to a Commission Mandate to CEPT. Industry sources predict that global mobile data traffic is increasing by approximately 50% annually, and the growth of 4G smartphone connections in Europe is expected to reach about 80% in 2020.

(May 22, 2015) cellular-news.com/

France



French regulator ARCEP has submitted draft decisions on the assignment and allocation of 700MHz frequencies to the Electronic Communications Advisory Committee (CCCE). 2x30MHz of 700MHz spectrum will be freed up between April 2016 and June 2019 thanks to improvements in digital terrestrial TV (DTT) compression standards, the so-called 'second digital dividend'. ARCEP hopes to adopt the finalized proposals in early July this year, with calls for applications to be sent out later that month. The watchdog has set a base price of EUR416 million (US\$473.2 million) per 2x5MHz block and no buyer is allowed to purchase more than three blocks (2x15M Hz). Further, bidders will not be allowed to exceed a cap of 2x30MHz of combined spectrum in the

700MHz, 800MHz and 900MHz bands. Arcep is aiming to hold the auction in Q4 2015, with the licenses to be allocated by the end of the year. (May 18, 2015) telegeography.com

Germany



Germany's spectrum auction came to a close after more than three weeks and 181 rounds of bidding, raising €5.08 billion for government coffers. Vodafone emerged as the biggest spender in the contest, committing €2.09 billion for spectrum in all four of the available bands, regulatory body Bundesnetzagentur announced. The operator raised the stakes earlier this week by making hefty bids on the 700 MHz frequencies. At the end of round 172 on Thursday Vodafone was the top bidder for all six lots of 700-MHz spectrum. Its rivals responded and by the end of the day the 700 MHz band had attracted over €1 billion in bids - having been stagnant at just over €450 million for most of the contest - pushing the overall auction total above the €5 billion mark. Vodafone won 10 MHz each of paired 700-MHz and 900-MHz spectrum, 2 x 25 MHz of 1800-MHz spectrum, and 20 MHz of unpaired airwaves in the 1500 MHz band. Incumbent Deutsche Telekom pledged €1.79 billion to secure similar spectrum to Vodafone. It matched Vodafone's holdings in the 700 MHz and 1500 MHz bands, but picked up 2 x 15 MHz of both 900-MHz and 1800-MHz spectrum. The third participant, Telefonica, elected not to bid for 1500-MHz spectrum. It agreed to pay €1.2 billion for 2 x 10 MHz each of 700-MHz, 900-MHz and 1800-MHz frequencies. "We are satisfied with the outcome of the auction," said Niek Jan van Damme, managing director of Deutsche Telekom's German business, in a statement. The operator said it will use its 900-MHz airwaves to boost its GSM network, while the 1500 MHz and 1800 MHz bands will enable it to increase broadband coverage in urban areas. The 700-MHz spectrum will enable it to improve rural coverage. "With the award of the 700 MHz band, Germany takes a leading role in Europe and is a pioneer in the development of mobile broadband," Deutsche Telekom said. Germany is the first market in Western Europe to auction off the 700 MHz band, that is currently being used by TV broadcasters. Deutsche Telekom said it expects its 700-MHz spectrum to be fully usable for mobile from 2019. (May 19, 2015) totaltele.com

Bidding in Germany's ongoing auction of mobile spectrum reached €2.11 billion with airwaves in the 900 MHz band continuing to attract the biggest offers. The highest bid in six of the seven available 900 MHz lots exceeded the €100 million mark, regulatory body Bundesnetzagentur reported, sharing figures from round 42 of the contest that has been running since Wednesday. Incumbent Deutsche Telekom is currently the highest bidder for three 900 MHz blocks, having pledged a total of €312.7 million. Deutsche Telekom is also the highest bidder overall, having submitted offers totaling €833.2 million for spectrum in the 700 MHz, 900 MHz, 1.8 GHz and unpaired 1.5 GHz bands. Vodafone is close behind with bids of €775.2 million in all four bands, while Telefonica, which is not competing in the 1.5 GHz band, has pledged €503.4 million. (June 1, 2015) totaltele.com

GSMA



GSMA big cheese Anne Bouverot this week urged the European Commission not to hang about with coordinating the release of 700-MHz spectrum. The director general of the industry group has also called for Brussels to bring forward its review of sub-700-MHz spectrum and to support its call for the ITU to allocate the UHF band for both broadcast and mobile

use at November's WRC-15. At present the sub-700 MHz band is not harmonized for mobile use. With co-primary allocation, "national governments will retain the option of reallocating more spectrum to mobile if required," said Bouverot on Thursday. "This flexible solution will protect consumer interests by empowering people in Europe to choose how they want to access content," she continued. "It also supplies long-term guarantees for the future of digital terrestrial TV in European countries that rely on terrestrial broadcast services, ensuring a robust future for both industries." Bouverot's comments were made following Wednesday's publication of the Lamy Report, the European Commission's public consultation on the UHF band. Out of 96 organizations that responded to the consultation, 61 supported the idea of an EU-coordinated approach to clearing the 700 MHz band – also known as the second digital dividend – to make way for mobile broadband use. "The respondents argue that EU coordination reduces fragmentation on the internal market and contributes to the harmonization of the network coverage obligations and establishment of the common standards for receivers," the EU said. The EU is keen to avoid a repeat of the slow and, in some cases, still incomplete release of the first digital dividend – the 800 MHz band – and has therefore proposed coordinating the release of 700-MHz frequencies under its Digital Single Market (DSM) plan. The Lamy Report suggested clearing the 700 MHz band by 2020, give or take a couple of years, a timeline that found favor with "a vast majority" of respondents. Bouverot is slightly less patient though, and has called on the EU to support member states' requests to release the spectrum between 2018 and 2020, or even earlier for countries in a position to release it sooner. Indeed, Europe's first 700-MHz auction has been underway in Germany since late May, and while the process has not yet ended, the picture so far is somewhat underwhelming. Germany is selling off frequencies in four bands: 1800 MHz, 900 MHz the aforementioned 700 MHz, and 1500 MHz. While overall the auction has raked in an impressive €3 billion and counting, the 700-MHz spectrum – the first globally-harmonized LTE band; ideal for rural coverage; that will unite the world in a borderless utopia filled with readily-accessible Internet memes – accounts for just €450 million. The lion's share of the cash has so far been splurged on the 1800-MHz and 900-MHz spectrum. Incumbent Deutsche Telekom leads the way so far, with bids spread across all four frequency bands that came to €1.22 billion, as of Wednesday afternoon. Meanwhile, broadcasters have started to get nervous in the last year or so, concerned that their requirements will be overlooked when it comes to securing airwaves. "There is no benefit to be achieved from an arbitrage between the quality of wireless broadband services and the quality of TV services," said Broadcast Networks Europe (BNE), in a submission to the Lamy Report in April. The lobby group said the Lamy Report's job is to "establish a win-win proposal for Europe, not one where the improvement of quality of some services would be traded against the degradation of other services." According to the European Commission, the Lamy Report found that representatives from the creative industries are nonetheless keen to put the EU in charge in the hope that it will ensure that digital terrestrial TV (DTT) services find a safe home in frequencies below 700 MHz. Again, Bouverot has other ideas. She called on the EU to accelerate plans to review the sub-700 MHz band for the purposes of potentially refarming it for mobile broadband. "Allowing for flexible use of the UHF band will also mean the EC will be one step closer to achieving its Digital Agenda objectives of providing high-quality mobile broadband to European citizens," she said. This

has the potential to set the mobile industry on course for a clash of probably-not-biblical proportions with the broadcast industry. "It is important to challenge the notion that wireless broadband is an alternative to terrestrial broadcast delivery of content when on the contrary terrestrial broadcasting remains a robust means of audio-visual content delivery," is the BNE's position. "The two technologies are complimentary and utilized by the consumer on that basis." (June 12, 2015) totaltele.com

Hungary

Hungarian regulator the National Media and Infocommunications Authority (NMHH) has levied a fine of HUF250 million (US\$913,075) against Norwegian-backed Telenor Hungary after finding that the provider had amended individual subscriber agreements 'without the appropriate legal basis'. Telenor increased the service fees applied to its end-users on 25 July 2014, justifying the action by citing 'changes in circumstance' – namely increases in operational expenses due to inflation and changes in exchange rate. According to a statement from the NMHH: 'Telenor's unilateral contractual amendment violates consumer interests ... The service provider may only amend the agreement bilaterally, on the basis of a consensus established with the subscriber.' Additionally, a second HUF500,000 fine has been imposed on the operator's CEO, Christopher Laska, for the 'repeated violation of the prevailing rules applicable to electronic communications and of the general contractual terms.' The NMHH claims it has found Telenor Hungary's approach towards contractual amendments 'unlawful on multiple occasions since 2010.' (May 20, 2015) telegeography.com

India



India's crowded mobile market is unlikely to consolidate any time soon, the Telecom Regulatory Authority of India (TRAI) said this week, due to restrictions governing spectrum. Indian mobile operators are currently limited to accumulating no more than 25% of available spectrum nationwide, and 50% in any one telecom circle, explained Arvind Kumar, an advisor at the TRAI, at CommunicAsia. India is home to no fewer than 12 mobile operators and with fierce competition putting the squeeze on margins, there is pressure to consolidate. In May, a Bloomberg report claimed Reliance Communications, India's fourth-largest mobile operator, has held merger talks with smaller rival Sistema. Earlier that same month, local news outlets claimed that Telenor's Indian unit, Uninor, is in talks to acquire smaller rival Videocon Telecom, a move that would push the former's market share above 5% from 4.7% at the end of March. "It is quite possible that consolidation in the traditional sense cannot happen in [India's] telecom sector," Kumar said. India has allocated only 40% of available spectrum for mobile use, Kumar said, "which is the primary reason why [operators] can't provide a decent mobile broadband experience. "We want more spectrum to be allocated" to mobile. In the meantime, India is on the verge of coming to a decision on whether to allow operators to share and trade spectrum. According to local media, the Department of Telecommunications is expected to finalize its spectrum trading and sharing policy by the end of June. Operators, as well as the TRAI, are firmly in favor of allowing operators to share and trade spectrum because it will enable service providers to make better use of this scarce resource. (June 4, 2015) totaltele.com

As net neutrality debate rages on, TRAI said it does not intend to police the Internet but there are three unexceptional principles including 'no blocking' which are not debatable. "Anybody in right frame of mind

would not try to regulate or police the Internet. They would find a way around. But we need to understand that there are certain issues that need to be addressed," TRAI Chairman Rahul Khullar said while speaking at an event organized by O P Jindal University. He, however, added that there cannot be any debate on three unexceptional principles. "No blocking, transparency and no throttling or degrading adware. There can't be simply any debate on this." TRAI has recently floated a consultation paper for regulatory framework on over-the-top (OTT) service like Internet-based calling and messaging services and net neutrality. The regulator has received over 10 lakh response on its paper favoring net neutrality which means that no artificial barrier like slowing down of Internet speed or differentiating between services available on Internet, especially on payment basis. Khullar said TRAI did not issue paper on the matter with intention to regulate Internet. "People have confused this idea. I have been in civil services for 40 years and have some sense how public policy is made. We tend to form opinion in advance of facts...which in my view is extremely dangerous," Khullar said. He said that if telecom companies are going to do traffic management then it should be disclosed to public that they are not abusing authority. An intense debate is going on on net neutrality in the country after telecom major Airtel in December decided to charge separately for VoIP or Internet-based calls. The debate was triggered after Airtel announced a zero rating platform in April which allows its subscribers freely access applications on its Airtel Zero platform but applications are required to pay certain fee for joining its platform. The government wants broadband for all and inclusive growth for which investment in infrastructure is required, Khullar said. "Who will shell it out? Either government do it or private companies. Suppose if there are 100 million people on Internet and 900 million more join it without change in infrastructure then what will happen? Since this has confronted us question becomes how do we solve it. We cannot turn a blind eye to it," he said. There have been strong arguments from both telecom operators and OTT players but a balanced need to be created and if there are no resources then how will services be delivered. Khullar said that in countries like US there is landline in almost every home compared to India which has only 28 million landline connections. "How will we take fiber to the home. Government is building NOFN for Rs 20,100 crore. God knows how much it will cost when they complete it. Even if they do it believe me it is not going to bring broadband as fiber will not go to home. For last mile spectrum will be required," Khullar said. Government National Optical Fiber Network Project aims to connect all 2.5 lakh panchayats in the country by 2016 that will deliver broadband with minimum speed of 100 mbps. There is plan to provide access of this network to telecom operators who will then provide services to end consumers. He said that a carte blanche also cannot be given to telecom operators because they will take customers for a ride. "Do not get into micro management of this issue, if you do so you will die. The quicker we get a solution, quicker with the investment for delivering broadband. It has been my regulatory business in last three years. What I have learnt is that the more regulation you write, more micro management you do, the worse you make problem," Khullar said. He said that there should be certain laid down rules agreed by everybody on which no compromise should be made to handle issues. (May 19 2015) gadgets.ndtv.com

ITU



The ITU has chosen IMT-2020 as its official designation of what will one day be standardized as 5G. ITU-R Working Party 5D of the UN's telco arm finalized its 5G vision and rubber-stamped it as IMT-2020 at a meeting in San Diego, California last week. In a statement on Friday, the ITU said the next step is to establish detailed technical performance requirements for the radio systems to support 5G, taking into account a wide portfolio of future scenarios and use cases. It will then set out its evaluation criteria for how it will assess candidate radio interface technologies. "The buzz in the industry on future steps in mobile technology – 5G – has seen a sharp increase, with attention now focused on enabling a seamlessly connected society in the 2020 timeframe and beyond that brings together people along with things, data, applications, transport systems and cities in a smart networked communications environment," said ITU secretary general Houlin Zhao. It is probably premature to claim that 5G hype has reached fever pitch, which if nothing else, means there is plenty more hype to come. Japan stole a march on the industry when it declared that it would have 5G networks up and running in time for the 2020 Tokyo Olympics. This was before the industry had only the vaguest idea of what 5G might possibly look like. Since then, telco players have drawn up a wish-list of 5G capabilities, but the industry is still some way off working out exactly how they will be achieved. This has not stopped the hype machine though, and South Korea has pledged to launch 'pre-standard' 5G in time for the PyeongChang Winter Olympics in 2018 – two years before the ITU is due to finalise the 5G standard. (June 22, 2015) totaltele.com

The International Telecommunication Union (ITU) has set up a study group to look into the challenges of setting standards and interoperability for the use of Internet of Things (IoT) devices in smart cities. The ITU-T Study Group 20 will look at building and supporting international standards and boosting the use and development of IoT software and solutions as this becomes a major focus for the future of urban environments. The UK has a number of smart cities, including Milton Keynes. "Building smart sustainable cities will require efficient collaboration between the public and private sectors," said ITU secretary general Houlin Zhao. "This new ITU-T Study Group will bring together a diverse selection of stakeholders, placing ITU's technical expertise at the service of other industry sectors as well as the national and metropolitan administrations responsible for urban development." The group will aim for the "standardization of end-to-end architectures" and interoperability with a range of systems, vendors and providers. There are expected to be some 50 billion IoT devices in use within five years, and they will touch on every part of daily life, according to the ITU. "The coming five years will be crucial in ensuring that IoT technologies meet their potential," said Chaesub Lee, director of the ITU Telecommunication Standardization Bureau. "ITU-T is very active in IoT standardization, and we aim to assist cities around the world in creating the conditions necessary for IoT technologies to prove their worth in addressing urban development challenges." There will be a predicted 50 million IoT devices in use by 2020, and growth in IoT spending is expected to rise from \$565bn this year to £1.7tn in the same period. IDC's Worldwide Internet of Things Forecast 2015-2020 found that most of the spending will be by enterprises and the public sector. "While wearable devices are the consumer face of the IoT, and where recognition of IoT appears

to begin, the real opportunity remains in the enterprise and public sector markets," said Vernon Turner, IDC's senior vice president and research fellow for IoT in the enterprise. (June 11, 2015) v3.co.uk

ITU celebrated its 150th anniversary on May 17, marking a long and illustrious history at the cutting edge of communication technologies. "ITU has earned its global reputation for resilience and relevance," said United Nations Secretary-General Ban Ki-moon, applauding the agency's many contributions as the oldest member in the United Nations system. "Telecommunications – as well as information and communications technology – drive innovation. The digital revolution has transformed our world. New information and communication technologies can help boost the economy and protect the environment." "The remarkable history of ITU exemplifies its stellar role in connecting the world to the most advanced and innovative means of communication, from the days of the telegraph to the Internet and mobile broadband, which now allows us to be in touch anytime, anywhere with friends, family, colleagues and even things," said ITU Secretary-General Houlin Zhao. "Throughout our 150-year history, we have promoted international cooperation, working to achieve practical solutions to integrate new communications technologies as they develop, spreading their benefits to all." ITU was established on May 17, 1865 with the signing of the first International Telegraph Convention in Paris to facilitate the transmission of telegraphy across international borders. ITU was initially headquartered in Berne and moved to Geneva in 1948, soon after it became a specialized agency of the United Nations in 1947. Ms Doris Leuthard, Minister of Environment, Transport, Energy and Communications of Switzerland, delivered the keynote address on behalf of the host country. The ITU 150th anniversary was marked by celebrations in some 50 countries around the world. A special ceremony was held in Paris to mark the signing of the First International Telegraph Convention on 17 May 1865. A ceremony was also held in Madrid, attended by King Felipe VI of Spain, to commemorate the re-naming of the International Telegraph Union as the International Telecommunication Union in 1932. Looking towards the future as the leading UN specialized agency for telecommunications and ICT, ITU is focused on driving innovation together with the Union's 193 Member States and membership of over 700 private sector entities and academic institutions. A panel discussion focusing on ICTs as drivers of a sustainable future was anchored by BBC correspondent Imogen Foulkes, brought in key thinkers and doers: Philip Walton, COO, BRCK; Luis Von Ahn, CEO & founder, DuoLingo; Gabriela Styf Sjöman, CTO, Telecom Italia Group; Jian Wang, CTO, Alibaba; and Ulf Ewaldsson, CTO, Ericsson.

ITU 150th anniversary Awards

ITU accorded recognition to the Founding Member States that signed the convention in 1865. With the re-drawing of national borders over the years, the original twenty are now represented by sixteen countries: Austria, Belgium, Denmark, France, Germany, Greece, Hungary, Italy, Netherlands, Norway, Portugal, Russian Federation, Spain, Sweden, Switzerland and Turkey. Long-standing industry members were also recognized, including Telecom Italia (hailing back to 1925), Exelis and Telefónica (since 1929); and Sirti (1931). The ITU 150 Awards were presented to eminent laureates who have contributed to ITU's work: Martin Cooper, Robert E. Kahn, Mark I. Krivocheev, Ken Sakamura, and Thomas Wiegand. Bill Gates was given special recognition for his contributions and his ongoing work with the

Bill & Melinda Gates Foundation. Martin Cooper is a pioneer in wireless communications and referred to as the 'father' of portable cellular telephony. He is an inventor, entrepreneur and futurist who conceived the first portable cellular phone in 1973. Cooper knew then that people needed the freedom that comes from anywhere, anytime telephony. Robert E. Kahn played a pioneering role in the development of the Internet. Kahn has developed the concept of digital object architecture to provide a framework for interoperability of heterogeneous information systems and is the co-inventor of Knowbot programmes – mobile software agents in the network environment. Mark Krivocheev is best known for his pioneering work in forging a world television digital standard and for HDTV standards, which have made it possible for us to receive high quality sound and picture in our homes. Ken Sakamura designed the TRON open computer system architecture, which will be useful for ubiquitous computing of the future, and helped produce a series of Recommendations, including ITU-T H.642 "Multimedia information access triggered by tag-based identification", which is a critical element as we move to the age of the Internet of Things and Big Data. Thomas Wiegand has contributed significantly towards the standardization for multimedia and co-chaired for the development of the ITU-T H.264/MPEG-AVC video coding standard, which facilitates video streaming on mobile devices and was recognized with a Primetime Emmy Award from the Los Angeles-based Academy of Television Arts & Sciences. Bill Gates, co-founder of Microsoft, led the company that became the worldwide leader in business and personal software, services, and solutions. As co-chair of the Bill & Melinda Gates Foundation, he shapes and approves grant-making strategies, advocates for the foundation's issues, and helps set the overall direction of the organization.

(May 18, 2015) samenatoday.com

Italy



The Italian government is seeking approval from the European Commission (EC) for its proposed EUR7 billion (US\$7.9 billion) rollout of fiber-optic infrastructure, Il Sole 24 Ore reports. The government's plan includes offering vouchers to users migrating to new high speed networks, plus the use of other utility networks such as gas and electric to help speed up the deployment of new fiber technology. State-owned electricity firm Enel has already said it would be open to laying fiber alongside its own networks. Italy wants to surpass the European Digital Agenda target which requires having a 100Mbps connection available to half of all households by 2020 by achieving 85% coverage by that date, with the remaining homes able to access a 30Mbps connection.

(June 10, 2015) telegeography.com

The telecoms regulator AGCOM has approved the use of L-Band frequencies between 1452MHz and 1492MHz for wireless broadband services. The spectrum is currently designated for digital radio broadcasts in Italy but is largely unused. The European Union is pushing for the L-Band to be harmonized for mobile broadband use. A sale of frequencies could raise up to EUR600 million (US\$653 million) reports suggest.

(May 28, 2015) telegeography.com

Macedonia



Magyar Telekom (MTel) has announced that the shareholders' assembly at its subsidiary Makedonski Telekom (MakTel) has approved the telco's proposed merger with its 100% owned subsidiary T-Mobile Macedonia.

MTel notes that both MakTel and T-Mobile Macedonia have been in the process of merging their operations into a single entity for a number of years. The effective date of the merger is July 1, 2015. MakTel is the primary fixed line service provider in Macedonia, holding market leadership positions in the fixed voice, fixed broadband and pay-TV markets. Meanwhile, T-Mobile Macedonia is the country's leading mobile operator by subscribers. MTel owns 51% of MakTel's shares through Stonebridge AD, which is a 100% owned subsidiary of the Hungarian incumbent. (May 19, 2015) telegeography.com

Maldives



The Communications Authority of Maldives (CAM) plans to issue an additional internet service provider (ISP) license, and to that end has invited interested parties to apply for the concession. A request for proposal (RFP) document is available at the CAM's website: www.cam.gov.mv. Would-be applicants must submit their proposals no later than June 30, 2015.

(May 1, 2015) telegeography.com

Mauritania



Telecoms regulator, the Autorite de Regulation (ARE), has renewed the 2G mobile license of Mattel (Mauritano-Tunisienne de Telecommunication) for a further five years from June 4. Mattel, a 51% subsidiary of Tunisie Telecom (TT), has seen a number of restrictions on its concession tightened, including commitments over the provision of services, network coverage, quality of service, information reporting for consumer protection and the optimization of numbering and frequency resources. Mattel is the smallest of Mauritania's three mobile providers in subscriber terms, with around 19.4% of the overall market at the end of March 2015.

(June 8, 2015) telegeography.com

Mexico



Mexico's Ministry of Communications and Transport (SCT) is planning to launch auction for 700 MHz nationwide shared broadband network on October 29, 2015.

In this regard, the SCT will publish the preliminary bidding conditions on Jul 17. The winners of the auction are likely to receive licenses in the first quarter of 2016. In 2014, the government had undertaken this massive project to instil competition in the highly monopolistic telecom industry. Small-scale telecom operators can use this state-owned network for their wireless coverage instead of installing their own network, which is highly capital intensive. In Mar 2015, the ministry of communications of Mexico had opened tender to take part in this project. Last month, the government of Mexico slashed its planned expenditure from \$10 billion to \$7 billion for the proposed deployment of nationwide wholesale mobile network over the next 10 years. The primary reason for the cut in planned expenditure is that the government now believes that 12,000 mobile towers will be sufficient for installing this network instead of 20,000 cell towers as estimated earlier. In the meantime, various leading telecom infrastructure equipment developers, with global operational experience are offering bids for the upcoming state-owned mobile network project in Mexico. Notable among them are Ericsson AB (ERIC - Analyst Report), Alcatel-Lucent (ALU - Analyst Report), Nokia Corp. (NOK - Analyst Report), Cisco Systems Inc. (CSCO - Analyst Report), Motorola Solutions Inc. (MSI - Analyst Report), Alestra, and Huawei Technologies Co. Ltd. Mexico is the largest economy in Latin America with

a growing middle class population eager to spend more on high-speed wireless networks for facilitating the use of smartphones and tablets. Also the wireless penetration rate is relatively lower in this country. Thus, weighing such positives, an investment in the nation may bode well for telecom network equipment manufacturers.

(June 23, 2015) zacks.com

Moldova



Telecoms regulator, the National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI), and its Macedonian counterpart – the Agency for Electronic Communications (AEC) – have signed a memorandum of understanding (MoU) in relation to electronic communications regulation. According to a joint press release, the main objective of the agreement is to establish a sustainable partnership for cooperation in the regulation and supervision of telecoms activities, in accordance with European Union (EU) legislation, and the respective national legislations of the two countries. ANRCETI has signed similar agreements with four other Eastern European telecoms authorities, namely: the Communications Regulation Commission (CRC) of Bulgaria, Romania's National Authority for Management & Regulations (ANCOM), the Communications Regulatory Authority (Rysiu Reguliavimo Tarnyba – RRT) of Lithuania and the Czech Telecommunication Office (CTU). (May 11, 2015) telegeography.com

Myanmar



Myanmar is working on a new spectrum allocation policy that will enable it to make more sub-1 GHz frequencies available to mobile operators, the country's deputy communications minister said this week. The news will doubtless be welcome to Myanmar's mobile operators, who are seeing SIM cards fly from the shelves and experiencing strong demand for smartphones, despite the immaturity of the market. "We are not using UHF television, so [the] 700 MHz frequency is available at this moment in time," U Thaug Tin, deputy minister at the Ministry of Communications and Information Technology, revealed on Tuesday. There is also scope for new spectrum allocations in the 850 MHz and 900 MHz bands, he said, adding that the ministry is drafting a policy document on the subject that will be available "soon". Myanmar's mobile market was effectively created with the award of operating licenses to two international telcos – Telenor and Ooredoo – in mid-2013. The pair launched services a year later and operate alongside state-owned Myanma Posts and Telecommunications (MPT), which has partnered with Japan's KDDI. The three are struggling to keep up with the huge demand for mobile services in Myanmar. "Whatever SIM cards they distribute are selling like hot cakes," U Thaug Tin said. As of the first quarter of this year, mobile penetration in Myanmar stood at 25.4%, up from 18.7% at the end of last year and 11.7% three months earlier than that. 50% of people buying a mobile phone in the country specifically ask for data, while a staggering 70% of all the phones sold are smartphones. "The prices of 3G handsets are coming down very rapidly," the deputy minister said. Soon the country will have a fourth operator, in the form of ISP Yatanarpon Teleport (YTP), which will help with meeting demand. But there is still a lot of work to be done to bring Myanmar's infrastructure up to scratch. The country has close to 30 Gbps of international bandwidth provided by the incumbent, rising to around 40 Gbps including the infrastructure

being built by Telenor and Ooredoo. This will increase to 120 Gbps in the next two to three years, but that will still not be enough. "We need to have 200 Gbps bandwidth," U Thaug Tin said. There are currently 3,000 mobile towers, but the country needs 15,000-20,000, and fiber rollout has reached 5,000 km but needs to grow to over 30,000 km. "We also need to have institutional reform," U Thaug Tin said. "An independent regulator has to be set up before October this year," he explained.

(June 3, 2015) totaltele.com

Namibia



Minister of Information & Communication Technology (ICT) Tjekero Tweya on Thursday urged the board of state-owned Namibia Post & Telecommunication Holdings (NPTH) to fast track the delayed implementation of a Cabinet decision to dismantle the company, some ten months after the government resolved to dissolve NPTH and redistribute its properties and liabilities in July 2014. The then-ICT Minister Joel Kaapanda publicly confirmed on October 1 that the government had finalized the decision to sever the state ownership links between incumbent telco/mobile operator Telecom Namibia and dominant cellco Mobile Telecommunications (MTC), via the dissolution of the two companies' mutual shareholder NPTH. The 66% stake in MTC currently held by NPTH will be transferred to the Ministry of ICT, while MTC must buy back its headquarters from NPTH. NPTH also holds the government's stake in Namibia Post. Minister Tweya was quoted as directing the board members to 'unbundle the NPTH professionally and peacefully without endangering the company's activities. Do not wait for two years, do it as fast as you can. Bathe the baby and throw away the dirty water, but do not throw away the baby with the dirty water.' (May 11, 2015) StarAfrica

New Zealand



New Zealand's Commerce Commission has released its latest annual monitoring report, covering the twelve months to June 30, 2014, showing that the retail broadband sector saw subscriptions rise 5.3% year-on-year to 1.39 million, while the average data use per connection climbed from 26GB to 32GB. Although fixed line minutes dropped from 8.98 billion minutes in 2012/13 to 8.26 billion a year later, mobile usage rose from 4.77 billion minutes to a record 5.3 billion over the same period. Meanwhile, total revenue from retail telecoms services dropped to NZD5.17 billion (US\$3.66 billion) in 2013/14, from NZD5.21 billion the year before. The average fixed broadband speed rose to 7.3Mbps, from 5.3Mbps a year earlier. Separately, Vodafone New Zealand has announced plans to expand its 4G Long Term Evolution (LTE) mobile network to a further 20 rural markets this year as part of the government-backed Rural Broadband Initiative. Vodafone has until now been concentrating on expanding rural coverage using 3G wireless technology, but now plans to use 700MHz LTE equipment to provide connectivity at up to 30Mbps for users in certain communities. (June 11, 2015) telegeography.com

Nigeria



Outgoing President Goodluck Jonathan has allegedly awarded mobile spectrum freed up by the migration from analogue to digital television services to Mike Adenuga, owner of Globacom, and Jim Ovia, founder of Visafone Communication. 700MHz frequencies were handed to second national operator (SNO) Globacom, while CDMA network operator Visafone secured 800MHz spectrum. However, Leadership Nigeria writes that the

licensing process allegedly did follow the due bidding procedure, preventing the Nigerian Communications Commission (NCC) from advertising and supervising a public auction. The report adds that the incoming administration, headed by Muhammadu Buhari, is planning to investigate the process through which the spectrum was awarded. (May 29, 2015) Technology Times

The Nigerian Communications Commission (NCC) says the number of internet users on the country's telecom networks increased to 83,362,814 as at February 2015. The regulatory body disclosed this in its Monthly Internet Subscriber Data. The data revealed that there was an increase of 1,316,176 internet users on both the Global System for Mobile communications (GSM) and the Code Division Multiple Access (CDMA) networks in February. According to the data, 82,046,638 users were recorded on the networks as at January 2015. It showed that of the 83,362,814 internet users as at February, 83,209,380 were on GSM networks, while 153,434 users were on the CDMA networks. Also, of the 83,209,380 internet users recorded on the GSM networks in February, MTN Nigeria had 39,278,019 customers browsing the internet on its network. It stated that MTN had an increase of 104,896 internet subscribers in February, after it recorded 39,173,123 users in the month of January 2015. According to the data, Globacom had 18,184,587 subscribers surfing the net with its network in February, up from 17,671,405 users in January. It said that Globacom gained a total of 513,182 additional internet users on its network. Airtel Nigeria, it said, had 15,894,061 internet users in February, as against 14,969,924 customers recorded in January. The data showed that internet users on the Airtel Nigeria network increased by 924,137 in February. It indicated that Etisalat had 9,852,713 of its customers browsing the internet in February, against the 10,078,388 users in January. The data showed that those browsing the net on Etisalat's network decreased by 225,615 in February. The NCC data also revealed that the CDMA operators (Multi-Links and Visafone), had a joint total of 153,434 internet users on their networks in February. It showed that the only surviving two CDMA networks in the country listed a loss of 364 internet subscribers in the month under review, from the 153,798 users they recorded in January. According to the data, Visafone recorded a decrease of 274 customers surfing the internet in February, reducing to 152,785 compared to the 153,059 users in the month of January. It showed that Multi-Links had 649 internet users in February, losing 90 customers from the January record of 739 users. (May 11, 2015) nrguardiannews.com

Norway



Telecom regulator opened a consultation into its planned sale of 900-MHz spectrum that is currently in the hands of Telenor and TeliaSonera. The Norwegian Communications Authority (Nkom) has outlined a draft framework for the sale, which is planned for mid-2016. The telco's licenses expire at the end of 2017. It proposes auctioning the 20 MHz of 900-MHz spectrum at a minimum price of 140 million kroner (€16 million) per 5-MHz block. The watchdog has suggested a cap of 20 MHz per operator, which includes existing holdings. "Nkom is also of the opinion that it is important to ensure that all license holders in the band are allocated contiguous spectrum," the regulator said. Interested parties have until 10 August to respond to the consultation. Nkom said it will make a final decision on the auction framework on conclusion of the consultation and will publish its plans in mid-October. It expects to launch a further consultation on the auction rules next

year with a view to kicking off auction proceedings before the end of the first half. (June 10, 2015) totaltele.com

Papua New Guinea



Government has partnered with the International Telecommunication Union (ITU) for a satellite communication connectivity project. According to the local news source, the deal to undertake the project was signed by Communication and Information Minister Jimmy Miringtoro, with Secretary of the Department of Communication and Information (DCI) Paulias Kornu presenting it to the ITU's regional office for Asia and the Pacific program coordinator Ashish Narayan. Commenting on the development, Kornu said the satellite project was an important tool for economic activity and development, noting: 'This is an important step PNG is taking in terms of ICT ... Apart from the government's policy director aimed at stimulating competition and expansion of infrastructure and services roll out, we (the DCI) are embarking on a rural communication program in partnership with the private sector to bridge the digital gap.' Meanwhile, Kornu was also said to have announced two other important projects for the country; the first being the Papua New Guinea internet exchange point (PNGIXP), which is expected to launch on September 16, 2015. 'This particular project came about as a direct response to our call for more affordable internet rates, rates being the highest in the Pacific region' Kornu said of the exchange point plan. In addition, the country is to embark on a universal access and service (UAS) internet connectivity project for schools. (May 29, 2015) The National

Peru



The government has signed contracts to finance regional broadband development projects in four areas, namely Apurimac, Ayacucho, Huancavelica and Lambayeque. In total, the four programs cover the deployment of fiber-optic infrastructure to 1,344 villages, connecting 1,607 schools, 812 health centers, 97 police stations and 93 other public entities and benefiting around 750,000 Peruvians. Contracts for deployments in Apurimac, Ayacucho and Huancavelica were handed to the Gilat consortium, providing funding of US\$82.66 million, US\$97.27 million and US\$106.41 million respectively, whilst Spanish-backed Telefonica del Peru – which operates under the Movistar brand – won the US\$59.24 million contract for the development in Lambayeque. (May 28, 2015) telegeography.com

Romania



Telecoms regulator ANCOM has issued for public consultation the documents for implementing a competitive selection procedure for nationwide wireless broadband licenses in the 3410-3600MHz and 3600-3800MHz bands. The four current license holders in the 3410-3600MHz band are Orange, Vodafone, UPC and 2K Telecom (Idilis), whilst the sole 3600-3800MHz license holder is Radiocom (National Radiocommunications Company, SNR). Rights to use the radio spectrum will come into force on January 1, 2016 for a period of ten years. Comments and proposals on the documentation must be submitted by June 4, 2015. Authorized by Presidential decision 390/2015, ANCOM plans to hold a single selection procedure for both bands, and depending on the level of demand for each band, ANCOM will hold primary rounds and one round of bidding to determine the allocation of frequency blocks. 16 2x5MHz blocks are available in the 3.4GHz-3.6GHz range, plus 36 unpaired 5MHz blocks in the 3.6GHz-

3.8GHz band. Concession winners will be required to deploy at least 25 base stations within a year of license activation, 50 base stations after two years and 100 base stations in four years. (May 18, 2015) telegeography.com

Russia



The Russian government's planned auction of regional 1800MHz frequencies is expected to commence on September 29, noting that the final approval order is likely to be signed off on July 3. The window for applications will be open between July 27 and August 19, and if everything goes to plan, the results will be published on 9 October, with a run-off auction penciled in for October 19, if required. Licenses could then be handed over to the winning bidders on October 28. The government will auction frequencies in the 1710MHz-1785MHz and 1805MHz-1880MHz ('1800MHz') spectrum range in the following nine regions: Amur Oblast, Orenburg Oblast, Samara Oblast, the Republic of Buryatia, the Republic of Dagestan, the Republic of North Ossetia-Alania, Perm Krai and Stavropol Krai and the Karachay-Cherkessia Republic. The reserve prices will vary from region to region, starting at just RUB500,000 (US\$10,105) and rising to RUB240.4 million for more sought-after spectrum blocks. Auction winners will be permitted to use the frequencies for GSM or Long Term Evolution (LTE) technology, for a period of ten years. (June 4, 2015) Com News

Minister of Communications and Mass Media, has issued the final approval for the country's planned tender for radio frequencies in the 1710MHz-1785MHz and 1805MHz-1880MHz ('1800MHz') spectrum range. As previously revealed, the watchdog will auction frequencies in the following nine regions: Amur Oblast, Orenburg Oblast, Samara Oblast, the Republic of Buryatia, the Republic of Dagestan, the Republic of North Ossetia-Alania, Perm Krai and Stavropol Krai and the Karachay-Cherkessia Republic. According to a press release from MinSvyaz, the reserve prices will vary from region to region, starting at just RUB500,000 (US\$10,105) and rising to RUB240.4 million for more sought-after spectrum blocks. Auction winners will be permitted to use the frequencies for GSM or Long Term Evolution (LTE) technology, for a period of ten years. MinSvyaz claims that the 'protocol on auction results' will be signed no later than September 30, 2015, suggesting that the bidding process will conclude earlier that month. (May 18, 2015) telegeography.com

Senegal



The President of Senegal has signed a decree that will give the country's telecoms industry regulator, L'Autorite de Regulation des Telecoms et des Postes (ARTP), full powers to order domestic telcos to divulge accurate information on topics such as communication traffic volumes. In the past, ARTP has accused Sonatel, Tigo and Expresso of at best heel-dragging or worse, flagrantly disobeying the rules where it concerns providing timely data on their operations. Under the new decree, however, the ARTP will 'install and operate monitoring equipment for measuring the volume and quality of telephone communications exchanged on the networks of domestic operators, whatever their origin (national or international). Operators will also be required to host at their expense control equipment and support consumption of electricity and air conditioning, and high availability of the equipment [...] this system of supervision and control allows in particular to get on a daily basis the amount collected by operators for

prepaid reloads and have a reconciliation and an audit of the average monthly turnover by an operator with a subscriber.' (June 10, 2015) Agence Ecofin

Singapore



Three incumbent mobile network operators (MNOs), Singtel, StarHub and M1, intend to stop offering 2G GSM services in the country from 1 April 2017, they confirmed today in a joint statement. The three cellcos say that the decision will apply to all 2G voice, messaging and data services and add that the move to shutter older cellular services in the city-state will free up precious mobile spectrum, allowing them to deliver even faster 3G and 4G services. The MNOs note that currently the vast majority of mobile users in Singapore have already migrated to more advanced mobile platforms, but will continue to reach out to 2G users through various retail/advertising channels to encourage them to switch in the run-up to the closure of 2G services. Customers still on 2G networks will need to place their SIM cards into a new 3G or 4G handset to receive the more advanced services. According to the latest data from the Infocomm Development Authority of Singapore (IDA), there were just 286,600 2G mobile subscriptions in Singapore at end-March 2015, of which 83,100 were post-paid users and 203,500 were pre-paid, a 2G penetration rate of around 3.5%. (June 15, 2015) telegeography.com

Slovenia



The government has once again put off making a decision on the future of its 72.75% stake in national fixed and mobile operator Telekom Slovenije. UK-based private equity firm Cinven has offered EUR110 (US\$123) per share for the state's majority holding, while further payments could take the final purchase price up to EUR130 per share, though this is dependent on future performance and the outcome of ongoing litigation involving Telekom. Cinven had set June 10 as the deadline for a decision, but this has now been pushed back to midnight on June 12. A report suggests that the government is set to accept Cinven's offer and the delay is purely because the parties are working out the finer details of the agreement, in particular concerning Telekom Slovenije's wholly owned subsidiary in Macedonia, ONE, which is to be merged with Telekom Austria's local unit Vip Operator. Separately in a report it is suggesting that Telekom is being sold for around half its true value. While the current Cinven offer values the government's interest at between EUR715 million and EUR845 million, a report commissioned by an unknown party which was considering lodging a bid for the telco found that the operator is actually worth up to EUR2 billion. (June 11, 2015) The Finance

South Africa



The Independent Communications Authority of South Africa (ICASA) has given its conditional approval to Vodacom's ZAR7 billion (US\$561.6 million) acquisition of domestic operator Neotel, Bloomberg reports. ICASA chairman Stephen Mncube was cited as saying: 'The takeover will be subject to compliance with a local ownership law and adherence to terms regarding the rollout of broadband infrastructure and services.' However, the deal is still open for public comments as part of the Competition Commission (CompCom) approval process. If the antitrust authority decides to approve the acquisition, it is highly likely that

it would also impose a range of conditions on the deal. In May 2014 Vodacom agreed to acquire the smaller operator from its majority-owner Tata Communications of India. Neotel has 15,000km of fiber-optic cable, including 8,000km of metro fiber in Johannesburg, Cape Town and Durban and is authorized to use 2x12MHz in the 1800MHz band and 2x28MHz in the 3.5GHz band. The SNO is the sole operator authorized to use spectrum in the 'digital dividend' band for telecoms services, with 2x5MHz in the 800MHz band. In the January 2015 public hearings on the planned takeover, rivals MTN and Cell C vehemently opposed a Vodacom/Neotel merger. MTN called on ICASA to block the proposed takeover, saying it would give market leader Vodacom an unfair advantage, while Cell C's representative argued that the merger would further skew the playing field, eliminate a competitor, reduce Vodacom's incentive to compete and inhibit Cell C's ability to compete. In May 2015 Cell C's CEO Jose Dos Santos said that his company will do whatever it takes to block the deal, adding: 'We will keep them in court for as long as the legal system allows it, which is two years.' (June 16, 2015) telegeography.com

South Korea



The government said it would select a fourth telecom carrier within the year to spur competition in the saturated market that is currently dominated by three players — SK Telecom, KT and LG Uplus. The Ministry of Science, ICT and Future Planning announced the plan as part of its reform bill on the nation's mobile network services. In Korea, three companies have occupied the mobile network market over the past decade, with SK Telecom, the largest, taking up almost half the share. The government predicted a fourth player in the market would renew competition and ultimately lower service prices. In order to lower the entry barriers such as huge initial investments and limited frequencies, the government plans to offer the new player priority in frequency allocation and allow it to build up a nationwide network in phases, not all at once. "A fourth player may not lower consumer prices immediately. Creating a new competitive environment is more meaningful," said an industry source. "In the long run, we could expect prices to fall as well." Potential candidates are expected to undergo a tough selection process as their failure to ensure a soft landing in the market could lead to huge social costs, including consumer damages. In order to encourage competition, the government also plans to elevate the market share of low-price service plans from the current 10 per cent to 12 per cent next year by offering incentives for service providers. Another key revision is the abolishment of the 25-year-old approval system of new service plans. Under the new bill, companies will be allowed to launch their new plans without approval so that they can respond to consumer demands immediately. The launch process that usually takes one or two months will be reduced to 15 days, during which the government reviews possible consumer harm or antitrust issues. The ministry plans to collect public opinions in the coming weeks and will announce the final plan in June.

(May 29, 2015) business.asiaone.com

Spain



The Securities Commission, or CNMV, has given the green light to Orange's planned takeover of Jazztel. The French telco will pay €3.4 billion for Jazztel if all shareholders take it up on its €13-per-share voluntary cash offer that will open on Thursday and run until 24

June. The OK from the CNMV comes a week after the European Commission gave the go-ahead, subject to certain conditions designed to protect competition in Spain, where there is some overlap between the telcos' operations. The conditions will facilitate the entry of a new player into the market, European competition commissioner Margrethe Vestager said. Orange has agreed to divest a fiber-to-the-home (FTTH) network covering 700,000-800,000 premises in major cities. The buyer will be granted wholesale access to Jazztel's ADSL network for up to eight years for an unlimited number of subscribers, allowing it to compete for customers in 78% of Spain's territory. Furthermore, Orange has also committed to grant the buyer of the FTTH network wholesale access to its mobile network, including 4G, unless said buyer already has access to mobile infrastructure. Orange is already the second largest provider of fixed broadband services in Spain with 15% of the country's broadband connections at the end of last year, according to the latest figures from telecom regulator the Comisión Nacional de los Mercados y la Competencia (CNMC). The merged Orange/Jazztel would have had a 27% market share, putting it closer to leader Telefonica, which claimed 45% at year-end. In the mobile market, where Jazztel operates as an MVNO only, Orange had a 23% share of Spain's subscribers at the same date, again putting it second behind Telefonica, whose Movistar unit claimed 32%. (May 27, 2015) totaltele.com

Sweden



The Swedish Post and Telecom Agency (PTS) approved new regulations aimed at ensuring operators' networks and services achieve a basic level of reliability, in response to recent service failures and network outages. The regulations include general requirements for risk analysis and incident response, plus specific requirements such as guaranteed backup power during power outages, and requirements for redundancy of important network/service elements. Goran Marby, PTS director general, stated: 'Recent [network/service] failures and interruptions shows that we need sharper requirements,' adding that the new regulation 'clarifies which measures providers must take for the business to meet a basic level of reliability.' (June 11, 2015) telegeography.com

Switzerland



Swiss telecoms regulator the Federal Communications Commission (ComCom) has announced that it is reducing the time allowed for the porting of numbers between operators to a maximum of one working day for mobile numbers from the current five working days and to two working days for fixed numbers. The change takes effect from 1 November 2015 and is intended to increase competition between service providers and improve consumer rights. (May 12, 2015) telegeography.com

Taiwan



Taiwan's National Communications Commission (NCC) has revealed that it could act as an arbitrator should Taiwan Star Telecom and Taiwan Mobile fail to reach a 4G roaming agreement. NCC spokesperson Yu Hsiao-cheng confirmed that Taiwan Star has approached the regulator with regards to its efforts to sign a roaming deal with Taiwan Mobile. After Taiwan Mobile had inked a roaming agreement with Asia Pacific Telecom (APT), it is understood that Taiwan Star sought to reach a similar deal on the grounds that the Telecommunications Act

stipulates that operators may not discriminate against rival telcos or users without justification. However, Yu noted that while the regulations do specify that 3G service operators are obligated to offer roaming service, there is no article requiring 4G operators to do the same. Disputes related to the 4G roaming pact struck between Taiwan Mobile and APT first emerged after the duo were found to be sharing the former's core network instead of building their own infrastructure and using the roaming agreement to ensure continuous communication in out-of-service areas. Such a setup was criticized by the likes of Taiwan Star, Chunghwa Telecom and Far EastOne Telecommunications, all of which jointly urged the NCC to prohibit what they claimed was an illegal practice. Taiwan Star's request to form a roaming partnership with Taiwan Mobile has meanwhile been widely viewed as a move designed to highlight the illegality of the latter's deal with APT, which it has been argued could lead to unfair competition in Taiwan's 4G sector.

(May 28, 2015) Taipei Times

Tanzania



The Tanzania Communications Regulatory Authority (TCRA) could introduce rules governing infrastructure sharing, in an effort to improve the quality and reliability of telecoms services, as well as helping to reduce end costs for consumers. Local news site The Citizen writes that the move would also enhance coverage in underserved areas, noting the 'huge cost' for operators when establishing new infrastructure, and in turn, the high fees charged for mobile services. The system is expected to come into force from 2016 after a 'thorough consultation' between the TCRA and all major providers.

(June 3, 2015) telegeography.com

Thailand



The Thai government is re-considering the reserve prices it has set for this year's auction of spectrum suitable for 4G services after it secured additional frequencies to include in the sale, it emerged this week. The National Broadcasting and Telecommunication Commission (NBTC) will receive an extra 5 MHz of spectrum from state-owned CAT Telecom next month, Reuters reported on Thursday. The newswire did not state what type of frequencies CAT Telecom will hand over. However, it is safe to assume that the spectrum in question is in the 1800 MHz band, since it quoted NBTC secretary general Takorn Tantasith saying that the starting prices in that band will be reviewed. New reserve prices for the 1800 MHz band will be set by the end of the month, ahead of a public consultation on the forthcoming auction, which will take place on July 17, Takorn said. Thailand in March confirmed that it plans to auction two 1800-MHz licenses in November and two 900-MHz licenses in December. Documents released by the NBTC at the time suggest that the country aims to raise upwards of 61 billion baht (€1.7 billion) from the process. Takorn this week said there is no reason to believe the auction will be delayed. (June 15, 2015) totaltele.com

National Broadcasting and Telecommunications Commission (NBTC) has urged the country's mobile network operators and resellers to speed up their pre-paid user registration process, The Nation reports. The NBTC previously set July 31, 2015 as a deadline for registering all pre-paid SIM cards, with unregistered users to be blocked from making calls beyond this date, but the report indicates that less than 40% of pre-paid SIMs have so far been registered. (June 4, 2015) telegeography.com

Ukraine



Having completed the long-delayed 3G UMTS licensing in February this year, Ukraine's National Commission for the State Regulation of Communications and Informatization (NCCIR or NKRZI) plans to issue 4G LTE mobile licenses in 2017. NCCIR head Alexander Zhivotovskiy said that the regulator will announce a road map for LTE licensing soon, which will involve necessary frequency band revisions. (May 29, 2015) BizLigaNet

Ukraine's National Commission for the State Regulation of Communications and Informatization (NCCIR or NKRZI) approved a draft Order of Service for mobile number portability (MNP), as a result of public consultation incorporating suggestions and comments from market participants. The NCCIR said that it had reached 'optimal solutions' for MNP that 'ensure a balance of interests of all parties', i.e. consumers, operators and the state, whilst the document contains detailed mechanisms for the implementation of MNP services in Ukraine, drawing on experiences of market leaders in Europe and worldwide. The regulator added that the document is fully consistent with the existing legal framework, in particular the Resolution of the Cabinet of Ministers to amend telecoms services regulations, adopted by the government in late April 2015. After missing the July 2014 deadline for launching MNP, the Ukrainian watchdog went back to the drawing board to hammer out an acceptable implementation plan with operators.

(May 11, 2015) ITExpert

United Kingdom



Telecoms regulator OFCOM has proposed controlling the prices BT can charge for some of its high-speed business lines, following up on a review which recognized the former state monopoly's "significant" market power. OFCOM said it was opening a consultation on what price controls would apply to some of BT's wholesale leased line prices, which could result in price cuts for customers in the 2 billion pound (\$3.10 billion) market. Business customers using the leased lines include consumer mobile and broadband operators as well as companies, schools, universities and libraries. "OFCom is proposing a form of charge control that aims to bring prices down to costs over a three-year period," the regulator said in a statement on Friday. "This type of control, which is linked to inflation based on the consumer price index, provides an incentive for BT to make efficiency gains." BT said it believed there should be less regulation in the market and it would be presenting its views on the proposals to the regulator. "Businesses already have a diverse and growing choice amongst a large number of providers. More regulation could discourage future investment in the UK's telecoms infrastructure," BT said in an emailed statement. OFCOM said its consultation would close at the end of July and it expected to publish a decision in the first quarter of next year. The consultation is also considering how to price the opening up of BT's leased line business network to other operators, a move which it hopes will improve competition in the high-speed data link market. Broadband companies TalkTalk, Sky, business telecoms providers COLT and GTC, and mobile operators Vodafone, 3 and EE, said last year they wanted the business lines opened up. (June 12, 2015) reuters.com

Telecoms regulator OFCOM has announced the launch of a monitoring and enforcement program in which it will look to assess the cancellation and termination

arrangements of communications providers (CPs). In doing so, the watchdog also aims to examine the impact these arrangements have on consumers' ability to exit communications service contracts 'quickly, conveniently and without error'. With OFCOM having said that it receives a large number of complaints about the difficulties experienced by consumers when trying to cancel or switch their services, it has claimed that such issues suggest that CPs are 'systematically making it difficult for customers to exit their contract'. In announcing the launch of its monitoring program, the regulator has said that it considers the matter 'extremely serious', adding that the opening of the six-month monitoring and enforcement program was 'an appropriate response to [its] concerns'. The regulator will initially focus on the following areas: customer service concerns, for example long call centre waiting times while trying to cancel a service; difficulties in securing mobile Porting Authorization Codes ('PACs'); billing continuing after a contract has ended; and problems unlocking handsets post-contract.

(June 11, 2015) telegeography.com

Telecoms regulator OFCOM has published an update on plans to release spectrum which it says could be used to meet the growing demand for mobile broadband services, claiming that the decisions it has announced will help it 'set the groundwork for the spectrum award, including how these frequencies will be licensed and the mechanics of the auction'. The document itself sets out OFCOM's decisions on a number of issues connected with the award of frequencies in the 2.3GHz and 3.4GHz bands, including: the auction design and process; the coexistence of new and existing uses of the frequencies to be awarded; and the license conditions to be attached to the spectrum. While no specific uses for this spectrum have yet been prescribed, the regulator notes that it is likely to interest the mobile industry, saying that both the aforementioned bands will be released for civil use and 'could be suitable for providing very high data capacity'. Meanwhile, OFCOM is also seeking stakeholder views on options for proceeding with the spectrum award in light of anticipated changes to the make-up of the British mobile market. In a press release the watchdog noted that since its last consultation on the proposed spectrum sale, fixed line incumbent BT had announced plans to acquire EE, the country's largest cellco by subscribers, while Hong Kong-based Hutchison Whampoa, owner of Three UK, had reached an agreement to buy O2 UK from Spain's Telefonica. OFCOM notes that if the latter merger proceeds then it would reduce the UK wholesale mobile market from four major operators to three. Ultimately, OFCOM has said its objective is to award the frequencies in a way that 'will allow consumers to enjoy greater access to high-capacity mobile internet without undue delay'. To that end, would-be bidders for spectrum have been invited to comment on a proposed option under which the regulator would award most of the newly available spectrum later this year, or early in 2016, with the remaining frequencies held back for award at a later date. According to OFCOM, such an approach could be preferable to the alternatives of either awarding the entire spectrum, or delaying the award – although it noted that both those options remain open. As per the latest announced decisions, meanwhile, licenses for the 2.3GHz and 3.4 GHz frequency bands would be issued for an indefinite period, but with an initial term of 20 years after which license fees may be payable. Moreover, there will be no coverage obligations placed on this spectrum, with OFCOM saying this is because the frequencies in question are better suited for high capacity and faster speeds, rather than achieving wide

geographical coverage. With the closing date for the consultation set as 26 June 2015, a decision regarding the best approach for making the spectrum available is expected later this year, following stakeholder responses.

(May 27, 2015) telegeography.com

BT has challenged Sharon White, the new chief executive of OFCOM, to a court showdown over the communications watchdog's decision to introduce restrictions on the wholesale price of superfast broadband. It has lodged an appeal with the Competition Appeals Tribunal against OFCOM's new "margin squeeze" test, which is designed to ensure that rivals Sky and TalkTalk, who rely on the BT network to serve their customers, are able to make reasonable profits on superfast broadband. The appeal marks BT's first direct challenge to Ms White, who took the reins of the industry regulator at the end of March. The operator is attempting to overturn an OFCOM decision at a sensitive time, as it is also seeking approval for its £12.5bn takeover of EE and battling calls from Sky and TalkTalk for it to be stripped of control of its fixed-line network to protect competition. BT claimed on Tuesday night that the margin squeeze test would restrict its ability to challenge Sky in the pay-TV market. OFCOM designed the test, which measure the difference between wholesale and retail prices for superfast broadband, to take account of BT's multibillion-pound spending on sports rights. It argued that because BT broadband subscribers get free access to the BT Sport channels, the costs should be included. It meant that any extra spending on sports rights could force BT to lower its wholesale prices for superfast broadband to ensure it passed the margin squeeze test. A BT spokesman said: "As we said in March, we are not opposed to the principle of a margin squeeze test – and in fact OFCOM has confirmed that we currently pass the test - but the proposed test is flawed. "OFCOM has not adequately addressed the concerns of the European Commission, who said BT should be allowed more flexibility to recover its sports costs over a longer period. "The effect is to provide unwarranted regulatory protection to the likes of TalkTalk and Sky in supplying their superfast broadband services, while at the same time making BT's entry into sports broadcasting even more challenging." The company called the regulation it faces "worryingly lopsided", arguing that "there has been little action to address Sky's continuing dominance of the pay-TV market". The appeal is likely to take at least a year, and in the mean ime the margin squeeze test will still apply. It is likely to frustrate OFCOM officials, however, who have for years complained that their decisions are too easily bogged down in legal action. (May 20, 2015) telegeography.com

Latest figures from OFCOM reveal there were 23.73 million residential and small business broadband connections in the UK at the end of 2014. This represented a rise of 319,000 on the third quarter of the year, and 923,000 compared to Q4 2013, pointing to continued adoption of broadband services. The rate of connection growth increased between October and December last year compared to July and September. Just 192,000 new lines were added during Q3 2014, 127,000 fewer than during Q4 2014. Copper-based ADSL lines (15.538 million) continued to account for the majority of broadband connections, although this was down by 19,000 on the previous quarter. The number of cable subscribers rose by from 4.484 million in Q3 2014 to 4.541 million in the final quarter of last year, an increase of 57,000. But once again, the biggest growth area was fiber broadband. OFCOM reported an increase in fibre-optic connections from 3.370 million to 3.651 million - up by 281,000 during

the last three months of 2014. The continued progress of Broadband Delivery UK rollouts in rural areas, alongside commercial deployments in the major towns and cities, meant more homes and small businesses were able to sign up for super-fast broadband deals.

(May 6, 2015) uswitch.com

United States



The Federal Communications Commission will vote this month on a plan to provide federal subsidies for high-speed internet access. The proposal from FCC chairman Tom Wheeler would expand the Lifeline program that was created under President Reagan's administration in 1985, a program that provides monthly subsidies for low-income Americans to help them obtain home telephone service. Lifeline was expanded to include mobile phones under President George W. Bush in 2008, and the new plan would allow households who qualify to apply for a \$9.25 monthly subsidy to help cover the cost of either wired or wireless broadband. Ball State University Director of Emerging Technologies Jonathan Huer says it's only logical to extend the program to cover internet fees. "Whether it is applying for a job or applying for school, all of those basic things that used to be done on paper or in person are largely done online," says Huer. The expansion will likely be opposed by Congressional Republicans, who complain about previous fraud associated with Lifeline-- there have been some cases where recipients got more than one monthly subsidy for mobile service. The FCC says fraud has been reduced since a database was created in 2012. Others argue that those without high-speed web access at home are already accessing the internet through public schools or have access at public libraries. The FCC is scheduled to vote on the proposal June 18. (June 10, 2015) wbaa.org

The group of U.S. telcos challenging the Federal Communications Commission's (FCC's) net neutrality rules hit their first bump in the road late last week after the regulator denied their petitions to block the legislation. The watchdog's revised Open Internet Order was published to the Federal Register on 13 April, prompting a raft of legal challenges from telcos and lobby groups seeking to delay its enactment. AT&T, the National Cable and Telecommunications Association (NCTA), CTIA, USTelecom, the Wireless Internet Service Providers Association (WISPA), the American Cable Association (ACA), and CenturyLink allege that the net neutrality rules are arbitrary, capricious, and an abuse of discretion on the part of the FCC. "The stay requests are contrary to the public interest," said the FCC, in a document published on Friday. The opponents did not challenge the so-called 'bright-line' rules contained within the new law, which prevent fixed and mobile broadband providers from blocking access to legal content, applications and services, and from establishing commercial agreements with online service providers to prioritize their traffic. Rather they dispute the legal framework adopted by the FCC, namely Title II of the Communications Act, which reclassifies broadband as a utility rather than an information service, subjecting it to closer scrutiny over how traffic is managed by network operators. This reclassification, the group claims, could stifle future investment in the sector. However, the FCC pointed out that broadband providers were already subject to a broadly similar set of rules under its previous Open Internet Order, which was struck down by an appeals court in January 2014. "Using [the] petitioners' logic, the simple act of being made subject to such general conduct standards would have irreparably

harmed their business' investment, innovation, and customers. It did not," the FCC said, reiterating that it has refrained from adopting some of the more onerous sections of the Communications Act, which would have given it the power to impose tariff regulation. "The [Open Internet] Order is both essential to protect consumers and innovators from harms arising from a lack of openness and best serves the public interest," the FCC said. (May 11, 2015) totaltele.com

Vietnam



Vietnam's government has approved plans to permit 4G based services in the country, but it is still wary about spare capacity on the 3G networks not being used. The mobile networks were granted licenses to test LTE services four years ago, but since then the government hasn't made any more moves to issuing commercial licenses. Alongside the issue of there still being surplus capacity on the 3G network; there have been concerns that 4G services might prove too expensive for consumers. This is belied by the fact that most countries have ended up with 4G services being offered at the same price as 3G services. A Viettel executive told Vietnam News, "Vietnamese people's incomes are not enough for them to buy equipment that support 4G." Besides, investment in 3G was massive but its capacity had not been fully exploited yet, he said. "Most customers now opt for the cheapest 3G packages, and if 4G technology is developed, the situation will be like building more highways when there are few vehicles." Despite those misgivings, the Deputy Minister of Information and Communications Le Nam Thang said the ministry would begin to issue licenses for 4G networks next year. "2017-2018 will be the time to launch 4G because at that time the number of 3G subscribers will be 50-60 per cent, a good level for shifting to 4G."

(May 11, 2015) cellular-news.com

Zambia



CEC Liquid Telecom has announced the acquisition of Realtime Technology Alliance (Realtime), Zambia's second largest internet service provider (ISP). In a press release confirming the development, CEC Liquid Telecom said that Realtime will now provide communications services to residential and business subscribers across Zambia using the former's satellite and fiber networks, as well as Realtime's existing WiMAX network. Further, it has also been noted that Realtime will become one of the first resellers for CEC Liquid Telecom's 'Fibroniks' branded fiber-to-the-home (FTTH) service, which was launched in February this year. With regards to this fiber-based service, CEC Liquid Telecom confirmed that around 15,600 premises in Lusaka now have access to the 100Mbps downlink speeds offered by the FTTH infrastructure – up from the 8,000 reported at launch – with the covered areas named as: Rhodes Park, Northmead, Long Acres, Sunningdale and Kabulonga. Looking ahead, the company has said it expects the FTTH network to reach a total of 20,000 premises in the capital by end-2015, while an extension of services to Copperbelt towns is also said to be on the cards by that date. Commenting on the acquisition, meanwhile, Andrew Kapula, managing director at CEC Liquid Telecom, was cited as saying: 'This is another major milestone for both our company and the Zambian telecoms market. We will continue to invest in Zambia so that we can provide operators, ISPs, homes and businesses of all sizes with the fastest and most reliable

broadband available in Zambia. (May 15, 2015) telegeography.com

Zimbabwe



The Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) has invited expressions of interest for the provision of a new standalone Telecommunications Traffic Monitoring Assurance System. The system will be used to monitor traffic and revenues at the country's telcos, including their mobile money transactions, and will also incorporate fraud detection facilities to detect illegal re-routing of international calls designed to avoid payment of termination fees. At present, POTRAZ relies on data supplied by the operator's themselves to monitor the market. (June 2, 2015) telegeography.com

Javaid Akhtar Malik
Regulatory Affairs

SAMENA Telecommunications Council

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WHOLESALE UPDATES

EU commissioner to 'ban roaming fees by 2017'

Mobile roaming fees are likely to be abolished within the European Union by 2017, it emerged on Monday, a move immediately welcomed by Spanish consumer associations. "From the second quarter of 2017, roaming fees in the EU will probably fall away," said European Digital Economy Commissioner Günther Oettinger. "The European Commission, the governments of the 28 member states and the European Parliament (EP) will probably agree on it very soon," the former minister-president of Baden-Württemberg told journalists in Bonn. Oettinger's announcement comes just over a month after the European Commission dropped plans to abolish roaming charges from 2016 after objections from telecoms companies in smaller member states. But a new agreement will need to be struck amid pressure from consumers' organizations and the EP. "If the end of roaming comes in 2017, companies will have a year longer compared with the old plans to conform to the new rules," Oettinger said. Oettinger believes that the EU must consolidate its telecoms market – pointing to the 280 telecoms companies across Europe compared with just four in the US. "To become more competitive and consolidate their networks, many more companies will merge in the coming years," he predicted. "That should lead to the European telecoms

industry playing a bigger role on the global stage. But competition has to be assured." Spain's FACUA consumer lobby group had been outspoken in its criticism over the dropped plans. "The reasons were totally absurd, and they just tried to protect the telecom companies' interest at the expense of the common good," a spokesman told The Local. "Since 2007 the FACUA has been criticizing the high cost of addition fees which bring billionaire benefits for operators," the spokesman added. "They cannot be abolished soon enough."

BICS Sees Explosion of LTE Roaming Traffic

BICS, a global wholesale carrier for voice, mobile data and capacity services, today announced a rapid increase in LTE roaming traffic over its market-leading IPX network. Last year, kicked off by the European holiday season of 2014, the company experienced a 25% month-on-month growth in traffic which continued throughout 2014 and into the first quarter of 2015. BICS' LTE roaming services are supported by its IPX transit capabilities, which also enjoyed a huge increase in adoption rates and traffic levels over the last year. During 2014, capacity usage on the BICS GRX network grew 45% while in the same period IPX transport – comprising of next generation data traffic – grew by 400%. Focused on enabling operators to leverage the

latest available technologies, BICS has been at the centre of the evolution of IPX and introduction of LTE roaming services. During the last year, BICS enabled launches across EMEA, APAC, LATAM and North America, in countries such as France, Rwanda, South Africa, Russia, Poland, UAE and Saudi Arabia. Access to domestic LTE now covers 90% of consumers in developed markets, according to the GSMA's Mobile Economy 2015 report. With such widespread domestic availability, subscribers now expect the same data speeds when they are travelling. In order to meet these new demands, operators need to replace their existing SS7 signaling network with a new IP signaling infrastructure built on an IPX network, a change that requires a whole set of commercial agreements and technical interconnections.

Data Select partners with FooConnect to cut roaming charges

Data Select has announced a partnership with FooConnect, selling its Global MiFi device to tackle data roaming charges. The distributor, which is part of the BrandPath Group, explained that FooConnect's MiFi device will combat roaming charges for consumers and businesses by enabling the user to purchase a data bundle via the FooConnect portal. The device will allow up to 10 devices to be connected at one time, with FooConnect claiming that 'when data runs out, simply top-up again, there are no bundle charges to worry about'. FooConnect, part of Ghost Telecom Group, currently provides 3G connectivity in 96 countries and claims it is looking to use its partnership with Data Select to cut roaming charges in Europe. Kate Hamilton, CMO at Ghost Telecom, said: 'Our partnership with Data Select will enable many more people to say goodbye to expensive data roaming charges in Europe, the USA and worldwide. FooConnect solves a long standing problem for travelers, and with Data Select's reach and expertise, together we're going to help customers avoid unnecessary mobile bill shocks this summer.'

Gulf governments agree on gradual reduction of telecom roaming fees

Governments of the six Gulf Cooperation Council countries have agreed to gradually reduce roaming charges when making calls, sending

text messages and using data within the six-nation bloc, according to a statement carried by state media. Cuts to fees on calls and text messages would be introduced from April 1, 2016, and would take place over three years, while data charges would be trimmed from the same date but over a five-year period. The decision was announced following the GCC Ministerial Committee for Post, Telecommunications and Information Technology meeting in Doha and was aimed at promoting tourism in the region, according to the United Arab Emirates' WAM news agency. The statement did not disclose by how much the charge would be reduced. The GCC consists of Bahrain, Kuwait, Qatar, Oman, Saudi Arabia and the UAE. A number of telecom firms operate across multiple GCC geographies. Saudi Telecom, the region's largest firm by market value, has stakes in businesses in Bahrain and Kuwait, with Kuwait's Zain also operating across the same three countries. Qatar's Ooredoo has operations in Kuwait and Oman.

Cellcos begin to follow Idea's lead with data price increases

India's cellcos are looking into following in the footsteps of Idea Cellular, the nation's third largest by subscribers, after the operator made the decision last week to increase the price of pre-paid 2G and 3G data packs in Delhi by up to 100%, the Economic Times reports. Echoing the decision, market leader Bharti Airtel has begun to move away from the price cuts introduced in late 2014 and removed discounts on mobile data packs bought online, whilst second-placed Vodafone is currently 'evaluating its response' to the shift in strategy of its two closest rivals. A senior Reliance Communications (RCOM) official indicated that it, too, may seek to make similar changes, noting that: 'Pricing power is back with telecom companies, who are focusing on profitable minutes and bytes, since the days when operators could give away concessional minutes and bytes are clearly gone.' As previously noted by CommsUpdate, Idea's move prompted speculation that the cellco was simply the first of the nation's providers to cave under the financial pressure of the recent spectrum auctions. Industry stakeholders had warned in the lead-up to the auction that the high reserve prices set by the government – against the recommendation of the Telecom Regulatory Authority of India (TRAI) –

would lead to tariff increases and lower levels of investment in infrastructure. Some analysts have suggested that price changes are only a temporary measure, however, claiming that the incumbent operators are trying to maximize their returns before the arrival of 4G start up Reliance Jio Infocomm (RJIL) and the accompanying price war that is anticipated to follow in the wake of the disruptive player's launch.

Azercell offers discounted mobile Internet for subscribers in roaming

Azercell Telecom Mobile Operator continues to offer beneficial innovations and discounts for its subscribers in roaming. According to the Operator, during the whole summer Azercell pre-paid (SimSim) subscribers can benefit from discounted Internet under roaming service in Turkey. Now Simsim Subscribers will pay only AZN 0.55 for 1 MB Internet while being in Turkey. Recently Azercell presented 10 free SMS in roaming for all SimSim subscribers. The company regularly implements discount campaigns for those who use roaming service. This year postpaid and prepaid subscribers are not charged for the first 5 minutes of call made to Call Centre. The Company also offers free 15 minutes call for only AZN 10 to subscribers who travel to 20 different European Countries. In addition, Azercell recalled the deposit required for roaming service activation. As a result, all Azercell subscribers are now able to easily activate the roaming line before they visit any country. To activate roaming service, you only need to dial *135*1#YES. Azercell will continue to present interesting innovations for subscribers using roaming service.

Europe split on abolition of mobile roaming charges

The European Union's ambition to end mobile roaming charges for citizens travelling across the continent is being stymied by member states backing their national operators, officials say. The European Commission, the EU executive, proposed an ambitious overhaul of the continent's telecoms market in 2013 which set out a roadmap for abolishing roaming charges. Brussels, eager to boost its image by showing it can deliver tangible, positive results for citizens, has made ending roaming charges a banner

issue. But almost two years later the date originally envisaged for the end of roaming charges, December 2015, is off the table. Instead, member states in the European Council have pushed the date back to mid-December 2018 and are seeking to find a compromise with lawmakers in the European Parliament who want roaming charges to be abolished by the end of next year. A third round of negotiations, which took place on Tuesday evening, ended without a deal, two EU sources said. Expectations had been low because of the gap between the two positions. The delay to ending roaming charges has angered the Commission, the Parliament and consumer rights organizations who say some member states are defending the interests of their national operators. "Now it is up to the member states if they want to be the lawyer for the citizens and consumers or for the telecom companies," said European Commission President Jean-Claude Juncker in an interview with German newspaper Sueddeutsche Zeitung. However, the interests of the telecoms operators in the 28-member bloc are not aligned. Eastern European countries - where domestic rates are cheap - are worried that their operators will be forced to hike prices at home if roaming charges are removed prematurely, since companies pay wholesale charges to another operator when their customers travel abroad. On the other hand, countries with a lot of incoming traffic from tourists, such as Spain and Greece, have an incentive to keep wholesale charges high. Albeit for different reasons, the result is the same. "Yes there are related problems such as wholesale costs between operators, however neither this nor Southern European countries' interests in the tourists who come to their shores excuse inaction," said Ursula Pachtl, deputy director general for European consumer organization BEUC. The Parliament and member states agree on the need for a review of wholesale charges, but the former wants the review to be followed more quickly by an end to retail roaming charges. France is among the countries blocking an earlier end date for roaming charges, an EU source said. Other countries include Spain, Cyprus, Greece, Croatia, Poland, Lithuania and Bulgaria.

Cheaper roaming announced in region starting June 30
Serbian Minister of Telecommunications

Rasim Ljajic told this to Tanjug. Ljajic said that the goal is to equal the roaming prices in the region with the ones in the EU. "What lies ahead are the talks with mobile network operators on the manners in which the prices may be reduced because we need to align with the EU directive on the roaming charges given that our prices of the Internet, SMS messages and calls are a few times higher than the ones in the EU countries," the minister said. "Anyhow, the roaming prices will be lower in these four countries as of June 30," he added. Ljajic also announced that the analogue TV signal will be switched off in the entire territory of Serbia as of June 7. As many as 97.8 percent of Serbian citizens will receive the digital signal, which is more than the envisaged 95 percent, Ljajic underlined, noting that the whole process will be finished before June 17, which is the deadline set by the international community.

Telus announces new international roaming plans

ROAMING charges could soon be a thing of the past... as a 'super-app' has been launched to stop holidaymakers from forking out on



their travels. Combining the best features from existing phone apps WhatsApp, Skype, Viber and Facebook a UK based technology company has come up with the answer. The app, SkipRoaming, is available as a free download on the Apple store as well as on Android devices. Telus announced new international roaming passes for Canadians that find they traveling in East Asia, India, Australia and New Zealand. The company's basic offering, called the Text Pass 30, costs \$30 and affords one 250 texts while overseas. There's an average rate of 50 cents per text if one goes over the 250 message limit. Following the basic plan, there

are three combo passes that include talk, text and data. There's the Combo Pass 50, priced at \$50, which includes 50 minutes of talk time, 75 texts and 150 megabytes of data usage while traveling; the Combo Pass 85 that includes 75 minutes of talk time, 150 texts and 350 megabytes of data; finally, the Combo Pass 150 plan includes 150 minutes of talk time, 300 texts and 700 megabytes of data. If you haven't guessed already, the latter two plans cost \$85 and \$150, respectively. Each plan includes unlimited incoming texts. As with the first plan, it costs 50 cents per text to send a message after going over the initial limit. Additionally, going over the call time and data limits will set someone back 50 cents per additional minute or megabyte used. Pricing of the company's various European travel passes were also updated today. Useable in countries such as Austria, Belgium, Czech Republic, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, Switzerland, Turkey and the United Kingdom, Telus's European Text Pass and Combo Passes now follow the same overage pricing scheme as its international travel passes. The company has also decided to be slightly more generous with these plans. The European Text Pass includes 350 texts instead of 250 texts; the Combo Pass 85 includes an additional 25 text messages and 50 megabytes over its international counterpart; and the Combo Pass 150 includes 100 megabytes of additional data—as well as unlimited text outgoing text messages—compared to the equivalent European offering. For the sake of comparison, Rogers, with its Roam Like Home package, offers anyone with a Share Everything plan unlimited talk, text and access to their home data plan while in 35 European countries for \$10 per day.

Kenyans now enjoying lowest call tariffs to East African countries

Call rates to East African countries from Kenya have dropped to the lowest level as telecoms fight for the market, with roaming charges dropping or being done away with. Kenyans making calls to their kin in

Uganda, Rwanda, Tanzania and South Sudan are now paying as low as 0.09 U.S. dollars per minute, down from a high of 0.63 dollars. It is a big gain for the region as the countries slowly implement "One Area Network" to make it affordable for their citizens to talk and do business. Of the countries in East Africa, Kenya offers the best call tariffs as it dropped taxes on cross-border calls. The country has been pushing for the implementation of a common termination tariff. Even as this happens at the policy level, stiff rivalry among telecoms in the East African nation, namely Safaricom, Orange Telkom and Airtel, is making life easier for subscribers as the firms bring down the call rates. Safaricom, Kenya's biggest telecom and most profitable firm, is charging subscribers 0.11 dollars per minute to call across the region. The company has been bringing down the cost as talks for one network between East Africa governments go on. Its latest addition to nations where Kenyans call for 0.11 dollars per minute is South Sudan. The company's subscribers will also not pay a fee it was charging customers for receiving calls while on roaming. Roaming charges were as high as 0.21 dollars per minute before.

Sprint: 16 of 30 rural LTE roaming partners have now launched LTE service

A little more than half of Sprint's rural LTE roaming partners have launched LTE service, according to a Sprint spokeswoman, though it is unclear exactly which ones have done so. Sprint spokeswoman Adrienne Norton told FierceWireless that as of today "16 carriers are operating 4G LTE service" but that because of confidentiality agreements Sprint cannot disclose which ones. "Our partners use a variety of LTE bands, including bands 4, 5, 12 and 25," she said, in giving a status update on the program. "We're continuing to work with our device OEMs to enable additional LTE bands to expand coverage for our domestic and international roamers." In the U.S., LTE Band 4 is the 1700 MHz AWS-1 band; Band 5 is the 850 MHz band; Band 12 is the 700 MHz A Block, which is used by T-Mobile US, U.S. Cellular and several smaller carriers; and Band 25 is the 1900 MHz PCS G Block, which is one of Sprint's primary LTE bands. Sprint is using its Rural Roaming Preferred Provider program to expand its LTE footprint, which lags those of Verizon Wireless and AT&T

Mobility. Verizon and AT&T each say they cover 308 million POPs with LTE. Sprint's LTE footprint currently covers 280 million POPs. Sprint's rural LTE program includes reciprocal roaming agreements, letting Sprint customers roam onto the rural carriers' networks and vice versa. In September 2014, Sprint added 15 new partners to its roaming program. With those additions the program expanded to 27 carriers, and extended coverage over 565,000 square miles in 27 states, covering a population of more than 38 million people. However, until today, Sprint had not disclosed how many carriers had actually launched service under the program. Sprint has not said how many people or how much territory is covered by live LTE networks launched via the program. Since those 27 were announced in September 2014, Sprint has added three additional carriers, including United Wireless. The other two did not give Sprint permission to identify them, according to Norton. For the smaller carriers, the program offers access to a larger LTE network footprint, Sprint's LTE device portfolio and in some cases the ability to lease Sprint's spectrum. Norton did not immediately respond to a request for comment on how many carriers in the program had leased spectrum from Sprint. Sprint is also working with its rural partners to get them access to network infrastructure for the 2.5 GHz band, a key element of Sprint's tri-band LTE Spark service. Sprint has said that sometime this year it will make devices more compatible with regional carriers' networks by adding support for additional spectrum bands, including the AWS and lower 700 MHz spectrum (presumably Band 12) that are used by Competitive Carriers Association member carriers. Sprint will also support device changes that will allow regional carriers to provision manage and brand devices independently through CCA's Device Hub. The confirmed members of Sprint's rural LTE program include SouthernLINC Wireless; nTelos Wireless; C Spire Wireless; Nex-Tech Wireless; Flat Wireless; SI Wireless (MobileNation); Inland Cellular; Illinois Valley Cellular; Carolina West Wireless; James Valley Telecommunications; VTel Wireless; Phoenix Wireless; Bluegrass Cellular; Blue Wireless; Pine Belt Wireless; Pioneer Cellular; Public Service Wireless; Syringa Wireless; and United Wireless. The program also includes the Rural Independent Network Alliance (RINA) members and their partners: STRATA Networks;

Silver Star Wireless; All West Wireless Inc.; NNTC; Snake River Personal Communications Service; CTC Telecom Inc.; South Central Communications Inc.; Custer Telephone Wireless; and Breakaway Wireless. Some companies, including Telos and VTel, have been public about their support of Sprint's program and their LTE launches, but many have flown below the radar. Verizon's similar LTE in Rural America (LRA) program, which was inaugurated five years ago, includes 21 rural and smaller carriers. Of those, 19 have launched LTE networks. Verizon recently noted that there are 224,000 square miles covered under LRA agreements and 100,000 square miles with live LTE networks. Fully 2.9 million people are covered by the leases and there are more than 900 LTE cell sites live in LRA territory. T-Mobile disclosed last week that it has leased its spectrum to other carriers in an effort to expand its LTE network. However, T-Mobile declined to comment on how many carriers it has leased spectrum to, what spectrum bands were leased, or how much territory those leases cover.

Ciena Waveserver Targets Data Center Interconnect

Ciena is introducing a new data center interconnect (DCI) platform that allows cloud, Internet content providers and data center providers to quickly scale bandwidth and support high-speed data transfer, virtual machine migration and disaster recovery/backup between data centers. With an extremely compact design that helps reduce real estate costs, Ciena's new Waveserver™ stackable interconnect platform also provides 60 percent more capacity per rack unit and nearly 20 terabits per fiber versus competing available platforms, to support surging bandwidth demands of web-scale data centers. Leveraging Ciena's experience with deployments for some of the world's largest Internet content players and leading data center providers, such as Equinix, Continuum, Digital Realty and Forsythe Data Center, the new platform is powered by Ciena's WaveLogic technology and built with open software principles to enable automation and simplify management. Additionally, with Ciena's new Emulation Cloud, an open, rapid prototyping environment, network providers, data center operators and developers can test and refine applications before they are added to the network.

Key Facts:

- According to Ovum, overall global DCI revenue in 2014 grew more than 16 percent, reaching \$2.5 billion. Nearly one-half of all DCI spending in 2014 was from communications service providers (CSPs), while the Internet content provider (ICP) segment grew 64 percent year over year. Ovum expects overall global revenue to hit \$4.2 billion by 2019.

- Purpose built for web-scale metro DCI applications, Waveserver is a highly-compact, stackable interconnect system that provides a reliable, high-capacity link to interconnect multiple data centers within a metro area. With Ciena's OPn architecture approach and a set of open APIs, network providers can program Waveserver manually or remotely to quickly establish a connection via any smart device. Waveserver acts as a "bandwidth server" to provide "server like" deployment and provisioning.

- Waveserver provides significantly lower cost per transported bit, lower cost per bit per rack, and lower power consumption versus available competing products. It provides a total of 800G of input and output made up of 400G Ethernet clients plus 400G of line capacity in just one rack unit. It also frees network owners from having to upgrade their hardware as they increase their client rates by supporting an arbitrary mix of 10, 40, and 100GbE clients.

- Emulation Cloud is a new, open application development environment designed to allow data center operators, application developers and other third-party developers to create, test and fine-tune customized web-scale applications tailored to their specific needs. Hosted in the cloud, Ciena's Emulation Cloud helps accelerate DevOps and ease the integration with IT systems.

Belgian cablecos must offer wholesale access

Belgium's Court of Appeal has upheld a ruling by the regulator which will force regional cable TV, telephony and broadband operators Numericable, Tecteo and Brutele to open their networks to rivals such as cellular operator Mobistar. Mobistar is keen to compete on a more even footing with the quad-play offers of Proximus, while further quad-play competition is on the horizon, with mobile rival BASE recently agreeing to a merger with cable operator Telenet. In November 2014 the appeal court ruled that Telenet should open its own infrastructure on

a wholesale basis. The latest ruling has been welcomed by Mobistar, which controls around 36% of Belgium's wireless market, behind Proximus but ahead of third-placed BASE.

SK Telecom revolutionizes voice and data tariff plans

SK Telecom will unveil new price plans to its mobile subscribers. The telecom service provider is offering Band Data plans in eight different tiers depending on the amount of data and additional services for customer needs. Band Data users – ranging from KRW 29,900/month to KRW 100,000/month – can make unlimited voice calls on both LTE and 3G smartphone users. SK Telecom is the first mobile carrier in Korea to offer unlimited mobile-to-mobile calls and unlimited mobile-to-landline calls. Band Data 36, 42, 47, 51 come with 1.2GB, 2.2GB, 3.5GB and 6.5GB of data, respectively, which is the largest amount of data allowance in Korea, said SK Telecom. The company will offer unlimited data for customers who sign up for Band Data plans priced KRW 61,000 or higher. Users of Band Data 61, 80 and 100 will get 11GB, 20GB, 35GB of data per month, respectively. Once they exceed their monthly data cap, they will get 2GB of data every day. Data usage exceeding this limit will be offered at a speed of 3Mbps. The telecom service provider will offer free live video streaming of B TV Mobile to all Band Data users. SK Telecom will offer eight different types of contents (TV, cartoon, game, sports, etc.) of T Freemium Plus to Band Data 51 or higher priced plans. Band Data 80 and 100 come with a VIP membership, T Freemium Plus, free mobile phone insurance, and up to 15,000 OK Cashbag points. SK Telecom will provide a special data sharing program for its Band Data plan subscribers who own more than one smartphone. The company will offer up to 2GB of data that can be shared across up to four different smartphones under his/her name. Among SK Telecom's 1.7 million smartphone subscribers, 2 million own a second smartphone.

Sprint Free Data Roaming Expands To Six Additional Countries, Speeds Still Capped At 64Kbps

Sprint's free International Value Roaming service that was introduced last month is expanding to six new

territories, bringing the total number of countries to 22. As the plan dictates, when a Sprint customer is in one of those nearly two dozen countries, he or she can roam with up to 2G speeds and catch up on emails and surf the web at no additional cost. They can also send text messages from the 22 included countries for no extra charge, and if they want to make phone calls, the rate is 20 cents per minute. All a qualified customer has to do is add International Value Roaming to any Sprint domestic phone plan -- they can do this online by going here or by visiting a local Sprint store.

Telecom panel to prompt reduction in mobile charges with cellular price cap

The Telecom Committee will replace the rule setting the maximum mobile call rate at 99 satang per minute with a price cap rule, which will force cellular operators to lower their voice and data service charges to reflect their actual costs. The new rule will also apply to broadband Internet service, Korkij Danchaivichit, deputy secretary-general of the National Broadcasting and Telecommunications Commission (NBTC), said last week. The NBTC will also engage a consultant to study telecom market factors for its plan to further cut the annual regulatory fee to enable telecom license holders to cut service fees for consumers. The NBTC collects about Bt5 billion of regulatory fee income per year. The Telecom Committee will tomorrow consider the draft price cap rule before quickly fleshing it out for submission to the NBTC in the future. If the NBTC approves, the committee will soon hold a public hearing on the rule. Under the price cap proposal, the Telecom Committee will work out the appropriate voice and data tariffs based on several variables, including actual operating costs. Then it will require the providers to lower voice and data service rates every year until they meet its rates; those failing to do so will face a fine. The committee aims to enact the rule this year, which will see the mobile phone operators starting to lower tariffs next year. This new rule would make the mobile service providers try to adjust their charges in line with their actual costs. For example, if NBTC's calculation finds that the operators should cut service prices by 5 per cent, the operators will have to manage their costs so that they can do that. The operators would

also benefit from this new measure, as they could woo more customers through lower prices. This price cap is suitable for a regulated market, while the ceiling price like the present one is for a monopoly market, he added.

Canadian Regulator to Cap Wholesale Roaming Rates

The Canadian Radio television and Telecommunications Commission (CRTC) is to start regulating certain wholesale rates that the three largest mobile networks charge to their smaller rivals. The CRTC said that it has found that there is an insufficient level of competition among the national wireless companies -- Bell, Rogers and Telus -- in the provision of wholesale roaming services. It added that these companies can maintain rates and impose terms and conditions that would not prevail in a competitive market. As such, the CRTC will regulate the rates that Bell, Rogers and Telus charge other companies for wholesale wireless roaming services. The CRTC has set interim rates for these services effective today, and is requiring the three companies to file final proposed rates by November 4, 2015. In June 2014, Parliament amended the Telecommunications Act to cap wholesale wireless roaming rates in Canada, while the CRTC conducted its public consultation. In light of today's decision, the CRTC recommends that Governor in Council repeal this section of the legislation to allow the return to market forces for the provision of all other wholesale roaming services as soon as possible. The CRTC is also taking action to reduce barriers, such as removing certain restrictions in wholesale roaming agreements, faced by mobile virtual network operators to give them more flexibility in their commercial negotiations with wireless companies. These operators can play a role in increasing choice and value for Canadians in the marketplace. Finally, the CRTC will use its current processes to deal with issues related to the tower and site-sharing arrangements between wireless carriers. Tower and site-sharing agreements enable wireless companies to install their own equipment on another carrier's tower or site and deploy their networks in a cost-effective and efficient manner. These agreements also minimize the number of towers in Canadian communities. The decision follows a public consultation, which included a public hearing that was held from September 29 to October 3, 2014.

Plans to limit roaming charges in Eurasian Economic Union in 2016-2018

There are plans to limit roaming charges in the Eurasian Economic Union in 2016-2018, BelTA learned from Alexander Kurilchik, Deputy Director of the Antimonopoly Regulation Department of the Eurasian Economic Commission, at the expanded participation session of the Industry, Fuel and Energy Complex, Transport and Communications Commission of the House of Representatives of the National Assembly of Belarus and the Economic Policy Commission, on May 12. "A draft resolution will be prepared to set the maximum price for roaming services for the Eurasian Economic Union member states. We have already set up the working group to take care of the matter," noted Alexander Kurilchik. The official stressed that the draft resolution will set top prices for international roaming charges in 2016-2018 with their consequent nullification in the Eurasian Economic Union member states. Alexander Kurilchik also spoke about the costs of passenger transportation by air and by rail. In his words, the Commission is also looking into the problem. "At present it is more expensive to travel from Moscow to Minsk by rail than by air. It is abnormal. If we talk about the air transportation market, prices are low if competition is high and prices are high if competition is virtually non-existent. For instance, one carrier services Minsk-Frankfurt flights and three carriers offer flights between Moscow and Frankfurt. And prices for those flights are four to ten times lower. We have created a working group to promote competition on the market of air and railway transportation and carried out some research in 2014. We are now actively taking care of the matter and will work to suppress similar violations," he stressed.

APAC Wholesale Operator Picks Allot Service Protector to Deliver DDoS Mitigation Services to CSPs

Intelligent broadband solutions provider, Allot Communications, this week announced that an APAC wholesale telecommunications and cloud services provider has selected Allot Service Protector to secure its managed network services. The Allot

Service Protector which provides first line of defense against Distributed Denial of Service (DDoS) enables the operator to become a Managed Security Service Provider (MSSP) capable of protecting its telecom service suppliers from cyber-attacks. According to Allot, the security solution boosts identification and in-line mitigation of large scale attacks scaling up to two Terabits per second, with granular visibility into attackers and their network targets. It also features advanced Network Behavior Anomaly Detection (NBAD) including multi-attack vectors detection.

EU 'racing to catch up' with Digital Single Market plan

The European Commission has announced its long-awaited strategy for a Digital Single Market, with issues ranging from consumer rights in online retail, copyright and data protection to network expansion and the use of modern techniques for industry. The Commission presented its plans for the creation of a Digital Single Market. The plan, a priority for the EU executive over the next few years, is intended to ensure Europe does not fall behind internationally in the internet age. The strategy encompasses 16 central measures to be implemented by the end of 2016. It is meant to help citizens save €11.7 billion annually and is built on three pillars. "The strategy is just the start, not the target," explained the Vice-President for the Digital Single Market Andrus Ansip, urging Europeans to quicken the pace. "The initiatives are interconnected and reinforce one another. They must be rapidly implemented to more strongly promote the creation of jobs and growth." According to the Commission, a Digital Single Market could "contribute €415 billion annually to our economic performance and create hundreds of thousands of new jobs". EU Digital Commissioner Günther Oettinger indicated that Europe is in a race to catch up with US companies in particular. The "prevention of unjustified geo-blocking" is one of the digital strategy's main points. "95% of Europeans have been prevented from visiting a website from another EU country or (have) been redirected to a different site with higher prices," Ansip said. "We know this is a problem and we must find a solution for this," he pointed out. Instead of doing away with the discriminatory practice of geo-blocking, the Commission's plans are only equivalent to "roaming for

Netflix”, said Julia Reda, an MEP from the Pirate Party. “Often, when people come across an error message on the internet saying, ‘this video is not available in your country’, it concerns works that are financed by advertising or public funds,” she explained. But because the concrete measures in the strategy paper only apply to paid content, geo-blocking will remain an everyday nuisance for Europeans, Reda said. Ansip had previously spoken in favor of quickly eliminating geo-blocking, but his words were met with opposition from Oettinger. In March, Ansip declared that he hated geo-blocking, upon which Oettinger responded, “I hate my alarm clock at five in the morning”. At presentation of the strategy Oettinger referred to the “outstandingly internally structured” and “largely friction free” cooperation within the Commission. By the end of 2015, the Commission hopes to submit legislative proposals for a “modern European copyright law”. The goal is “to reduce the differences between the national copyright systems and provide comprehensive online access to protected works for users across the EU”. According to Oettinger, the Commission is seeking a “balance” between the interests of users and those of creators such as composers, filmmakers, journalists or video game developers. Changes are also planned for requirements in the telecommunication sector to create EU criteria for the distribution of frequencies at a national level, and equal starting conditions for all market participants. Providers such as Deutsche Telekom are choking new modes of communication, such as WhatsApp or Skype. In its aim for a single EU digital market, the Commission is also examining the market power of US online platforms like Facebook and Google. Above and beyond competition law, a lack of transparency in search results, the price policy or the use of data is expected to be investigated. As it announced in March, the Commission also began an antitrust investigation of cross-border online trade by corporations like the US company Amazon. A separate procedure is currently underway against Google which could end in a fine in the billions for the US internet giant. The project team for the Digital Single Market hopes to provide the results of the individual measures by the end of 2016. With support from the European Parliament and the Council, the Digital Single Market is supposed to be completed as soon as possible, and will be on the agenda for

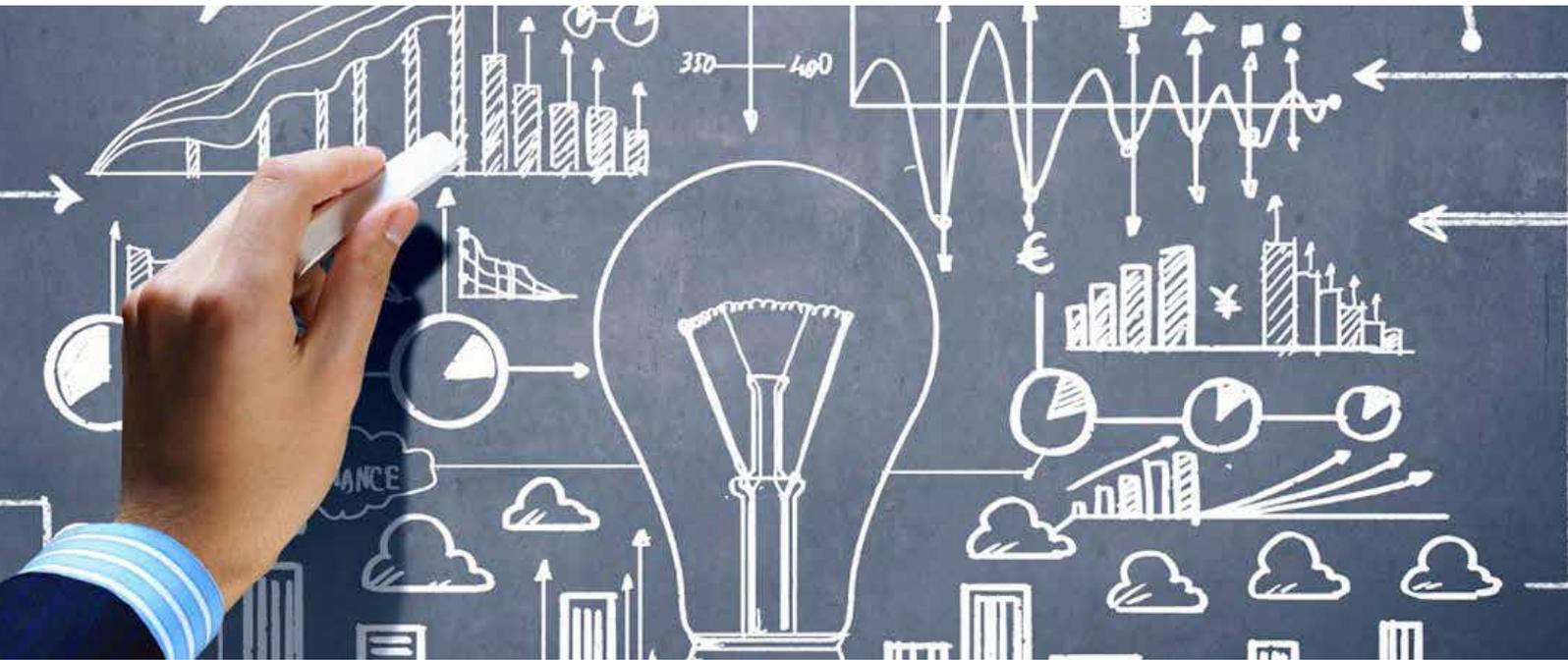
the meeting of the European Council on 25/26 June.

New rules could impact wireless roaming rates

Canada’s telecom regulator will issue a decision today that could affect the fees charged to consumers when they roam with their wireless devices outside of their home network areas. The ruling from the Canadian Radio-television and Telecommunications Commission comes seven months after hearings were launched into the health of the country’s wholesale wireless market, considered the backbone of Canada’s mobile services sector. Budget measures adopted by the Harper government last year set a cap on wholesale roaming costs – the rates that mobile carriers charge their competitors to use their wireless infrastructure – at no more than what carriers charge their retail customers. The government-imposed cap was intended as a temporary measure that the CRTC could choose to keep, kill or amend. But CRTC chairman Jean-Pierre Blais has noted that the government did not take regional differences into account in its legislation. The CRTC heard that the wholesale rate caps were actually hurting smaller players, and thereby stifling competition, particularly where the major service providers had no firm foothold. Regional carriers asked the CRTC to “fine tune” wholesale rates to ensure they aren’t forced to offer Telus Corp. (TSX:T), Rogers Communications Inc. (TSX:RCI.B), and BCE Inc. (TSX:BCE) use of their networks at a discount. The Competition Bureau also called for new wholesale roaming regulations, arguing that rate caps alone will not foster greater competition. The bureau predicted during the fall hearings that expanded mobile wireless penetration in Canada could drive down retail wireless prices by about two per cent. But Rogers, BCE and Telus maintained that further regulation would hinder their ability to invest in improvements to their own wireless networks. Montreal-based Cogeco Cable Inc. (TSX:CCA), which is hoping to offer wireless services without building its own cell tower network, asked the CRTC to adopt new rules to allow for the creation of what are known as mobile virtual networks (MVNOs), which would effectively give smaller carriers access to large players’ spectrum and cell towers. Cogeco warned that, without regulations, the big players will continue to muscle smaller competitors out of existence.

Belgium and Luxembourg Deal Effectively Scraps Roaming Costs

The Belgian and Luxembourg telecoms regulators BIPT and ILR (Institut Luxembourgeois de Régulation) have concluded an agreement that makes it possible to link a Belgian mobile number to a Luxembourg network. This way, a Luxembourg operator will soon commercialize mobile calling, texting and surfing in Belgium at the same rate on both sides of the border. An agreement concluded between BIPT and the ILR makes it possible to link a Luxembourg IMSI 1 (unique number linked to any mobile phone and connecting the user to his operator’s network) to a Belgian mobile number, while these are in principle nationally segmented. A Luxembourg operator will thus provide services directly to Belgian users based on its existing roaming agreements concluded in Luxembourg. Also, a Ministerial Order is adopted in order to make extraterritorial use of IMSIs possible according to the ITU prescriptions and based on reciprocity. This means that, conversely, Belgian operators also get the same rights in Luxembourg. BIPT and the ILR said that they hope that this initiative of the Luxembourg operator can have positive effects on the Belgian and Luxembourg markets, i.e. a broadening of the market offer and lower prices. The first operator to make use of the regulatory opportunity is the Luxembourg company JOIN Experience. JOIN Experience is a joint venture between JOIN Wireless and POST Luxembourg Group. The company holds a 4G license in Luxembourg and in Belgium, JOIN has set up a cooperation to use the BASE network. Paul Schuh, Director of the ILR states: “The ILR (Institut Luxembourgeois de Régulation) wishes to emphasize the good cooperation between both regulators within the context of this agreement. Indeed, the agreement offers a certain flexibility to operators of both countries to get a better idea of consumer demand and to make them offers that meet their needs at prices that are certainly more interesting.”



How Telecom Companies can Grow their Profitability

Average profitability has slumped in the global telecom industry over the last decade, as market saturation and increasing competition have taken their toll. To make matters worse, trying to satisfy customers' seemingly insatiable appetite for data has driven up capital expenditure. Many companies are now trapped between declining profitability and rising capital expenditure, a trend that calls into question the long-term

viability of the telecom business. To offset the necessary increase in capital expenditure, companies need to generate higher gross earnings, so-called EBITDA, earnings before interest, taxes, depreciation and amortization.

Past efforts to increase profitability have often focused on reducing the main categories of business costs. However, this turns out not to be a sustainable



Chady Smayra
Partner
Strategy&



Lancelot Sursock
Principal
Strategy&



Antoun Halabi
Principal
Strategy&

method of solving the underlying problem. Slashing costs without close attention to a company's strengths and long-term objectives can lead to diminishing returns and stifle its growth potential. Equally, aggressive, but ill-considered pricing strategies replete with device subsidies (such as smartphones, routers etc.), constant promotions, and larger data allowances have negligible impact on revenue growth, and damage profitability.

Companies should instead adopt an entirely different approach. They should first examine and then restructure their product portfolio. Only then should they rationalize market-facing and back-end operations, and infrastructure projects. This process ensures that spending and investment are closely aligned with a company's growth strategy, rather than being treated as separate items detached from the overall business.

The ultimate aim of this portfolio revamp is to devote more attention to profitable products and those with the most growth potential, improve the less profitable ones, and eliminate those that are destined to make a loss.

So to understand where the real potential lies, companies first need to analyse their offerings in great depth. Companies can use a toolkit that estimates direct and indirect costs for each product. It also allows companies to understand how much investment each product absorbs by first calculating the long-run incremental capital expenditure required for each asset, and then attributing an appropriate share of these asset items to each product. In this way, depreciation and amortization can be accurately allocated.

The resulting product profitability report enables companies to determine how individual products contribute to company performance, and to predict how various cost elements will evolve in the future.

What emerges from this thorough analysis can often surprise managers. Products assumed to be stars can turn out to be losing money. Mobile broadband and some more expensive post-paid packages and add-ons often prove unprofitable, while less glamorous products (which are often neglected) perform well.

The analysis can clear the fog and provide a course of action. For example, it can become evident that certain products should not receive investment across a whole country. One Middle East telecom company, which was investing in fiber to the home, discovered that it was deploying infrastructure in regions that delivered a low rate of return. These investments resulted in just one quarter of relevant capacity being utilized, but absorbed around 60% of total capital expenditure.

Before making a decision on overhauling the product portfolio, companies should perform a segmental and competitive analysis. These reveal all the potential revenue implications of a portfolio revamp, and reduce the risk that valuable customers will be lost in the fallout.

By estimating how various customer segments will react and the resulting impact on revenue, companies can also modify the detail of various products, prices and promotions. For example, if the data usage of one customer segment is growing faster than the associated revenue, a tiered pricing model could be more effective for this segment. Likewise, if voice usage and the associated revenue from another segment are dropping, then flat-rate pricing and pre-bundled minutes could be the answer.

The competitive analysis then takes individual customer spending and type of usage into account, before highlighting any weaknesses in the portfolio or scope for targeted initiatives where there is a potential gap in the marketplace.

At the end of this process, companies can greatly simplify their offerings, a boon for those management teams currently overburdened by complexity. One European telecom company was plagued by inefficiency because of highly convoluted service offerings. In one single market, the company was selling more than 200 different mobile tariffs containing more than 63,000 specific offer elements, and was running more than 150 monthly promotions. The portfolio analysis led to the company eliminating more than half its products and three quarters of its promotions, leading to an increase in gross earnings of over \$100 million within one year.

The current telecom industry business model will prove unsustainable if gross earnings do not show such improvements. Only by evaluating and then revamping their product portfolio, and then in turn making the necessary changes to operations and infrastructure, can telecom companies ensure their own long term viability.



▼ TECHNOLOGY NEWS

TECHNOLOGY UPDATES

IBM launches emergency services network for safer cities

Our cities are getting smarter, and the knowledge they provide are allowing new methods of interacting with the environment around us. An important advantage to the rise of the smart city will be its ability to improve emergency services; which is what IBM is hoping to deliver with the launch of new cloud-based software. IBM has announced 'Intelligent Operations Center for Emergency Management' which takes into account a range of sources to predict disasters and how they could affect people and city infrastructure in certain areas. Weather data, for example, is provided by IBM to analyze how fast storms are moving and where they will hit. In addition to analyzing data, IBM's software can also simulate the impact such occurrences will have on the city to ensure the relevant emergency services are prepared and able to plan for the least disruption and danger to the public. Huge storms have wrecked havoc and made headlines several times in recent years. In 2005, Hurricane Katrina obliterated New Orleans in Louisiana. In 2012, Hurricane Sandy took out whole parts of New York and New Jersey. Whilst these big storms caused the most destruction; even relatively minor conditions have the ability to cause severe damage. According to Munich Re, a large reinsurer, damages from natural disasters

worldwide cost \$110 billion dollars. IBM's software will hope to minimize such huge losses in the coming years through smarter analysis and planning. In another shift to the cloud, IBM is updating its 20-year old police database Coplink. The company hopes that through making it more accessible it will encourage smaller police forces to make use of it and ensure the 1.1 billion documents it currently shares across 6,000 police agencies in 22 states remain updated about things such as; suspect movements, criminal offences, and accounts of a police officer's behavior. The announcements form part of IBM's Safer Planet initiative through which the company offers a suite of software and services which help in making a difference to quality of life around the world through powerful digital tools.

5G Network to have Speed Limit up to 20Gbps Characterized by ITU

5G Network to Have Speed Limit up to 20Gbps Characterized by ITU!! At a conference in San Diego, International Telecommunication Union (ITU) has agreed that 5G Network to have speed limit up to 20Gbps. The conference was held from June 10th to 18th, where a 12 member delegation sat to draw up the specifications for the speed of 5G Network. ITU is the United Nations specialized agency for information and communication technologies – ICTs. ITU

is committed to connecting the entire world's people. ITU was founded in Paris in 1865 as the International Telegraph Union. It took its present name in 1934, and in 1947 became a specialized agency of the United Nations. It has 193 Member States; ITU membership includes ICT regulators, many leading academic institutions and some 700 tech companies. Regarding data speeds, union has decided to define 5G as a network which is capable of transmitting data at up to 20 gigabits-per-second, which is 20 times faster than the 1Gbps specification for 4G. This implies for actual client speeds, clients ought to get speeds between 100 to 1000 Mbps, depending upon various elements. This means with such amazing speed, users can download one ultra-superior quality high-definition movie in 10 seconds. With such high speed 5G network will have the capacity to cater Internet of Things. It will provide more than 100 megabits-per-second average data transmission to over one million Internet of Things devices within 1 square kilometer. The ITU has decided the name of the 5G Network as IMT-2020, after the IMT-2000 for the third-generation 3G network and the IMT-Advanced for the fourth-generation 4G Network. The official name will be at last endorsed at the ITU's Radio Assembly in Geneva in October. The union additionally chose to target commercializing the 5G Network worldwide by 2020.

Alcatel-Lucent and Sequans to Power IoT Prototyping Platform for Orange

Alcatel Lucent and Sequans Communications are to collaborate on enabling key technologies for the 'Internet of Things' by providing the '4G Kit for IoT', a principal building block in the new Internet of Things prototyping platform launched by Orange last week. The 4G Kit for IoT, announced by Orange at the Futur-en-Seine event in Paris, will be powered by Sequans' LTE chipset and technical implementation by Bell Labs, the industrial research arm of Alcatel-Lucent. A limited series of 200 kits will be tested. Initiated as an internal project by Bell Labs, the 4G kit for IoT is the result of a year of prototyping and experiments supervised by Bell Labs in which fabrication laboratories and start-ups were invited to test their ideas on Orange's 4G network and Alcatel-Lucent's test platforms.

The feedback allowed the Bell Labs team to design a new platform. As a result, the 4G Kit for IoT consists of Sequans' LTE chipset incorporated into a three-band M.2 module for LTE bands 3, 7 and 20, supporting Orange's LTE network. The module connects to a small form factor Olimex development board and includes plug-in antennas. Commenting on the project, Jean-Luc Beylat, President of Bell Labs France, said: "Bringing together operators, infrastructure and device manufacturers, start-ups and 'tinkerers', this project has illustrated Alcatel-Lucent's engagement in Open Innovation, which will lead the acceleration of IoT devices using 4G technology. By making LTE technology accessible to innovation communities, we can trigger a change in the way services are designed. With unprecedented access to cloud services, connected objects can create a new ecosystem of distributed advanced services that will shape the future cloud and 5G".

How tech will transform the Middle East

All eyes are on Jordan this month as leaders from government, business and civil society come together at the World Economic Forum on the Middle East And North Africa (MENA) with the common goal of creating peace and prosperity in the region. This comes at a critical time, when increased geopolitical tensions are creating a sense of urgency. As the world's leaders meet to discuss an actionable framework to solve the region's challenges, strategic investments in technology will be crucial for creating jobs and mapping out a new path for the future. In Jordan, the government is laying the foundation for a digital transformation with the National Broadband Network project, which will provide high-speed connectivity between public facilities, hospitals, schools and agencies. With this infrastructure in place, the country will be able to realize the economic and social benefits that come with harnessing the power of the Internet. I believe this next phase, called the "Internet of Everything" — which is the connection of people, process, data and things — will usher in a new era of growth. "The Internet of Everything" and digitization are key to solving the country's employment and economic difficulties and will also serve as a model for the entire region. In many ways, Jordan has already become a technology hub. The

country is home to 1,500 information and communication technology (ICT)-related companies, employing more than 19,000 people and this is just the beginning. Major investments are being made to fuel tech startups in Jordan, with companies, including my own, committing to invest millions into bringing about sustainable job creation and economic development. This will create opportunities for young entrepreneurs to compete on the global stage and help solve one of the region's top challenges: youth unemployment. The MENA region has one of the highest youth unemployment rates in the world — at over 27 percent, it's more than double the global average. While job creation will help lower this rate, it is not enough to solve the problem. There's also a gap between ICT job openings and qualified candidates to fill them. For young unemployed people to find work, the public and private sectors need to come together and create programs that develop foundation skills. In Jordan, programs like the International Labour Organization's Auto Technology Academy and Cisco's Networking Academy have been very successful in providing training to thousands of students in areas such as maintaining and building computer networks and monitoring cars using electronic devices. The programs help place the students in related jobs. But with one in four young people still out of work, more needs to be done. To solve the problem, the education system and the private sector must join together to bridge the gap between what's learned in the classroom and what is needed on the job. Healthcare delivery is equally important to economic development. People in remote and rural areas often can't get the healthcare they need; the distance may be too far, the travel cost too high or the coordination too complicated. "Telehealth" technology can help fix this problem by enabling rural patients to have face-to-face video consultations with specialists and have their treatment plans monitored from a distance. Cloud-based platforms also enable access to picture archiving and communication systems and collaboration software "as a service" to help improve the quality of care for patients by having radiology examination read remotely by qualified radiologists. Through the Jordan Healthcare Initiative, a partnership between the Jordanian government and Cisco to improve access to quality healthcare services, Jordan has already shown how technology can bridge treatment gaps

for underserved communities. To date, over 110,000 patients have benefited from telehealth video consultations or cloud-enabled radiology services. For patients with severe heart conditions or cancer, access to cardiologists and radiologists has been life changing. Projects like these are commendable and exemplify what must be done to drive economic growth and prosperity across the region. However, to fully realize the socio-economic benefits of digitization, countries must first build a national broadband infrastructure. The countries that prioritize network readiness, as Jordan is doing with the National Broadband Network project, will be the ones to drive society-changing innovations.

As the MENA region charts the course for its economic transformation, the public and private sectors must now come together to lay the digital foundation for long-term economic development. I believe that the future of the region lies in the ability of its leaders to set a bold technological agenda and take the initiative to bring about meaningful change. The time to act is now.

Nokia Networks, StarHub Showcase LTE-Advanced at 600Mbps Using 4X4 MIMO Technology

Singapore's second largest mobile operator, StarHub, has successfully demonstrated 600Mbps peak download speeds using Nokia Networks' 4X4 MIMO technology with LTE Advanced Carrier Aggregation in a technical trial conducted at its headquarters. Future mobile networks will need to use massive MIMO technologies to address hundreds of thousands of data applications sharing the same network, each with its own requirements. The 600Mbps data transmission speeds were achieved through combined 4x4 MIMO technology, along with Carrier Aggregation, to reach LTE-Advanced data speeds. In addition, StarHub and Nokia Networks have successfully tested 3-band carrier aggregation using a commercial mobile device. The successful trials of 4x4 MIMO and multiband carrier aggregation pave the way towards even faster mobile broadband in future. Ray Owen, Head of Singapore, Philippines, Australia and New Zealand, Nokia Networks, said: "The demand for data continues to peak, even as operators evolve their networks to address the

related opportunities and challenges. With this trial, we have proven that our technology is suitably equipped to help StarHub in coping with the forthcoming data deluge, a scenario wherein networks have to be ready to deal with download demands of gigabytes per person per day."

5G Pilot Launched to Make Swedish Mines Safer and More Productive

Ericsson is to launch a pilot project that will use 5G technology for communication and remote control operations. Collaboration between several Swedish companies, the project is set to improve productivity and safety in the Swedish mining industry. In the initial phase of the project, a 5G development system consisting of new and existing technologies will be utilized to remotely control a Volvo truck used for transporting ore in a mine operated by Boliden. Called the Pilot for Industrial Mobile Communication in Mining, the project is being undertaken as part of the 5G for Sweden program. Launched by Ericsson in March this year, 5G for Sweden has quickly gained momentum. It gathers major industrial players, universities and research institutes with the aim of developing ICT solutions based on 5G standards. The mining industry pilot is a joint cooperation between Ericsson, ABB, Boliden, SICS Swedish ICT and Volvo Construction Equipment. Its aim is to find solutions that can be applied in an industry that has traditionally been seen as having a hazardous and challenging operational environment. By harnessing 5G technology, which can accommodate the industry's very high requirements on latency and reliability, productivity can be increased, while improving safety for those working in the mines. Mikael Walter, System Technology Manager, Boliden, says: "We are constantly seeking to refine and develop our work practices and processes, and we can clearly see the benefit of digital technology in the mining industry. I really look forward to seeing the results." The 5G for Sweden program is designed to drive digitalization. It should strengthen the competitiveness of Swedish industry through the effective development and integration of ICT solutions into products and services based on 5G. The program will initiate research that can be applied across industries and can help

to create new projects at universities and research institutes, as well as several industry pilots of possible 5G solutions.

Recovering a Rare Metal from LCDs to Avoid Depleting Key Resource

Life without bright screens on our smart phones and TVs is hard to imagine. But in 20 years, one of the essential components of the liquid crystal displays, or LCDs, that make many of our gadgets possible could disappear. To address the potential shortage of this component -- the element indium -- scientists report in the journal ACS Sustainable Chemistry & Engineering a new way to recover the valuable metal so it could be recycled. Many consumer electronics from laptops to tablets contain thin films of indium tin-oxide that act as transparent conductive coatings in the displays. Currently, the rare-earth metal is not being adequately recycled. And in China alone, experts estimate that consumers will throw out 100 million TVs, computers and laptops between 2014 and 2020. This rapid turnover explains in part why the limited global reserves of indium are in danger of running out. So Jinhui Li and colleagues set out to devise a new method to get the metal back from discarded products. The researchers



performed 18 experiments to find the optimal conditions for coaxing indium from LCDs. The most effective technique involved crushing and grinding LCD glass into particles less than 75 micrometers, or 0.003 inches, in size and bathing them in a sulfuric acid solution at 122 degrees Fahrenheit. These and other key parameters, the scientists say, could contribute to a closed-loop process of indium recovery that could allow the display industry to get indium from discarded electronics rather than using dwindling reserves.

Ericsson Garage to Open in Budapest

Ericsson has announced the opening of the Ericsson Garage at its research and development facility in Budapest, Hungary, a technology incubation lab, working with innovations connected to cloud computing, virtualization, 5G, IoT and analytics. As a first step the Garage will focus on cloud computing and virtualization. Chris Mattheisen, CEO of Magyar Telekom, says: "The Ericsson Garage is a great initiative. I believe it will be a good space for all players to team up, collaborate and bring innovative services to the market across industries." The Garage will provide opportunities to cooperate in the evolution of technology in areas like cloud and virtualization, 5G, data analytics, IoT, SDN. It will include the possibility for closer cooperation via support or integration activities, joint innovation and prototyping as well as demos to operators and enterprises. Valter D'Avino, head of Region Western and Central Europe, says: "I believe the new Ericsson Garage will strengthen our foundation for creating sustainable business for Ericsson and its customers in a Networked Society. For example, we can look at one area that the Garage will showcase: cloud and virtualization technologies at the first step. We believe this area will transform the economics of delivering new services to market." One initial activity - to support the Ericsson Garage - is to organize an innovation event, bringing start-up companies and operators together and strengthening the university cooperation in the area of cloud and virtualization. In the heart of Europe, Budapest has a historical reputation of strong links to engineering, and Ericsson have had its operations in the city for more than a century. With its more than 1200 engineers, the Ericsson R&D center in Budapest is involved in the research and development of key products.

New 5G Innovations Boost Mobile Data Speeds

Today, your LTE smartphone receives transmissions from one cell at a time, and many different techniques are used to ensure that you stay connected as you move between cells. But, with smartphone subscriptions set to more than double, suggesting an eightfold increase in traffic by the end of 2020, today's mobile technology alone won't be sufficient to maintain high

quality connections as traffic grows, while satisfying new challenging demands. This is exacerbated by a growing number of connected things, the so called Internet of Things or IoT, jockeying for mobile network links. The next generation of mobile networking, known as 5G, is expected to be commercially available around 2020, but Ericsson already has live indoor and outdoor 5G test networks in Sweden and the US. Ericsson's latest 5G technology initiative provides a way to deliver drop-free, higher capacity mobile connections for both people and things. Mischa Dohler, Chair Professor of Wireless Communications and Head of the Centre for Telecommunications Research (CTR), King's College London, says: "High-speed, highly reliable mobile networks are foundational to the tactile internet and the internet of skills that it will enable. The results that are being achieved in Ericsson's live 5G test networks -- much faster data rates, more resilient connections-- are critical to unleashing the new use cases that will drive 5G." Ericsson's latest 5G initiative sounds deceptively simple; a 5G mobile device connects to several 5G cells at the same time, this is known as multipoint connectivity. It provides the resiliency to ensure that the device maintains a high-quality connection with the 5G network as it moves between cells. It also enables the transmission of several different sets of data signals (Multiple Input Multiple Output, or MIMO, streams) to the mobile device over the same radio frequency channel. This is called distributed MIMO, and it can increase downlink throughput by 100%. The combined technical capability is called Multipoint Connectivity with Distributed MIMO. Dr. Håkan Andersson, 5G Strategic Product Manager, Business Unit Radio, Ericsson, says: "To be ready for commercial networks in 2020, 5G research and development now has to come out of the labs and into live test networks. Multipoint Connectivity with Distributed MIMO, supported on Ericsson's 5G air interface, is just the latest example of 5G initiatives moving into live test network implementation." Multipoint Connectivity with Distributed MIMO involves very sophisticated signaling methods, which are not part of today's LTE standards, to control the mobile device's interaction with the network. So, while LTE technology is evolving to become an integral part of tomorrow's 5G networks, 5G will also include innovative new air interfaces (including signaling,

modulation schemes and other software-driven innovations) between the device and the network. Ericsson's 5G air interface initiative, labeled "NX", includes this new Multipoint Connectivity with Distributed MIMO capability. 5G will involve the entire future communication eco-system, from devices to mobile access, IP core and into the cloud. Ericsson's latest 5G test network initiatives focus on the interactions between mobile devices and the radio access network, in both indoor and outdoor circumstances. Ericsson's 5G test networks, including both 5G mobile devices and 5G radio base stations, are running live at the company's premises in Plano Texas and in Stockholm. The company welcomes mobile operators, eco-system partners, members of academia, tech media and analysts to visit these sites to witness and interact with Ericsson 5G innovations.

Almost half of world's population will be online by December

A report by the International Telecommunication Union (ITU) has revealed 3.2 billion people will be online by the end of this year, with two billion of those in the developing world. However, four billion of the world's population will still be offline, which represents two thirds of the people living in those areas. The news is not positive for the least developed countries either. Only 89 million out of a total 940 million users are predicted to be online by the end of this year, representing a 9.5 per cent penetration rate. The least developed countries include much of Africa plus Nepal, Afghanistan and Bangladesh, according to the UN. The report also looked into the types of internet connections around the world and revealed that by the end of this year, there will be seven billion mobile devices being used to access online services. Although 78 per cent of people in the US and Europe have access to a mobile device, Africa lags way behind with just 17.4 per cent of the continent's population having access to mobile broadband. 3G coverage is now available in 69 per cent of the world, although those in rural areas are lagging behind with only 29 per cent being able to access such services, while fixed line connections are growing at a much slower pace. By December 2015, the ITU predicts that 80 per cent of people in developing countries will have access to the internet in some form, although those

in the least developed countries will be impacted by rising connection costs. Brahim Sanou, director of the ITU telecommunication development bureau said: "Over the past 15 years the ICT revolution has driven global development in an unprecedented way. "ICTs will play an even more significant role in the post 2015 development agenda and in achieving future sustainable development goals as the world moves faster and faster towards a digital society."

Industrial Internet of Things will reach 43.5m devices

As more machine-to-machine (M2M) applications are being created, Internet connectivity will become essential to numerous heavy industries around the globe. The installed base of wireless Internet of Things (IoT) devices in industrial automation reached 10.3 million in 2014, according to the latest worldwide market study by Berg Insight. The number of wireless IoT devices in



automation networks is now forecast to grow at a compound annual growth rate (CAGR) of 27.2 percent to reach 43.5 million by 2020. There is a wide range of wireless technologies used in industrial automation with different characteristics and use cases. As an example, 802.15.4 based standards such as WirelessHART and ISA100.11a are major contenders at the field level in process automation networks. Wi-Fi and Bluetooth are the most widespread technologies in factory automation while cellular connectivity typically is used for remote monitoring and backhaul communication between plants. The increasing popularity of Ethernet based networks in factory automation is one of the key drivers for the popularity of Wi-Fi in such applications. Increased usage of standard devices such as tablets and

smartphones in for example mobile HMI solutions is also an important driver for the adoption of Wi-Fi as well as Bluetooth in automation equipment. "Companies are now deepening the integration between industrial automation systems and enterprise applications and the promise of IoT is getting more tangible by the day," said Johan Svanberg, senior analyst at Berg Insight.

Industrial Internet of Things Marketplace

The wireless IoT device market is served by a multitude of players from various backgrounds including global automation solution providers, automation equipment and solution vendors, industrial communication specialists and IoT communication specialists. Emerson, Honeywell, GE and Yokogawa are leading vendors of 802.15.4 devices in industrial automation. Siemens, Cisco, Belden, Moxa, Schneider Electric and Eaton are major vendors of Wi-Fi devices while Eaton, GE and Sierra Wireless are important vendors of cellular devices for industrial automation applications. Large multinational corporations are beginning to systematically develop and adopt best practices to maximize the benefits of IoT technology in every part of their organizations. IT/OT convergence, smart factories, Industry 4.0 and the Industrial Internet of Things are all concepts which are part of the ongoing evolution of industrial automation. According to Berg's assessment, innovation in sensor technology, wireless connectivity, energy harvesting, 3D printing, big data and cloud solutions -- along with seamless exchange of information between devices, systems and people -- paves the way for improved performance, flexibility

and responsiveness throughout the enterprise value chain.

The rise of the semi-connected consumer

The nearly ubiquitous Wi-Fi availability increase in the western world has had a huge impact on the success of OTT service providers, many of whom have been instrumental in shaping the digital needs and expectations of customers. Wi-Fi calling and messaging services have now become a feasible alternative to the lengthy and often expensive data-heavy contracts that are available from traditional mobile operators. This has given rise to the 'semi connected consumer' - consumers who often either opt out of data plans, or use data sparingly in return for subsidies on the price of their smartphone or very cheap contracts. While budget friendly, the semi connected movement is not without its downsides. Being limited to Wi-Fi only areas of coverage means jumping between hotspots is often a cumbersome process at best, leading to frequent call disconnections; this is especially true in many developing countries such as Africa, where the level of connectivity is particularly limited. Nevertheless, the repercussions of this growing consumer trend will have a significant impact on the CSPs' current business model - as with the already steady decline in traditional voice and text packages, operators have looked to data packages to secure additional revenues. However, with Wi-Fi becoming more and more prevalent, securing revenues from data packages looks set to present a challenge for CSPs too now. Operators will need to find creative ways to encourage mobile data usage and find alternative sources of revenue from the OTT ecosystem. Craig Moffett of telecommunications



expert firm, MoffettNathanson, recently wrote in the Wall Street Journal, that one day Wi-Fi will be the primary network and cellular data will serve as the fall-back when Wi-Fi is not around. There's evidence from our customer base to suggest that in many markets, this is already the case. For example, WhatsApp, the popular cross-platform mobile messaging app, has recently introduced a new Wi-Fi only calling feature, and Google's recently launched MVNO "Project Fi" which will use both Wi-Fi and cellular networks in order to provide stable connections and a stronger service is set to further reduce reliance on traditional operators. Not only this, but in the US, Google has managed to negotiate MVNO arrangements with multiple operators, allowing the client to automatically cherry pick the best connectivity across a wide range of options for any given situation. At the moment, it is unclear how such arrangements would work outside the US regulatory environment, Project Fi is certain to act as a wake up call to many mobile operators, signaling the beginning of an era where traditional metrics for customer loyalty will no longer make sense. In response to these growing trends and to reclaim some of their lost market share, operators such as EE, Virgin and Sprint are introducing Wi-Fi plans and Wi-Fi only call packages, however, usage will count against a customer's monthly allocation of minutes and text messages. In Africa and Latin America, many CSPs already utilise Wi-Fi offload to balance network capacity and offer additional coverage, but mostly in a mobile-centric setup. It does not, however, take a huge leap of imagination to reverse the setting and start offering a Wi-Fi first offering in the style of Google. Time is therefore of the essence for operators that wish to capture new revenue opportunities and meet the needs of their customers; with the rise of OTT ecosystems such as Google, Viber, WhatsApp, Facebook messenger and Skype, creating platforms for consumers to maximize Wi-Fi usage, it is critical that operators look to use their existing assets to provide additional value and differentiation, not only in delivering exciting services but also in basic connectivity. While some CSPs will undoubtedly turn to regulators for help in blocking these new entrants from their markets, we are perhaps facing a 'back-to-basics' moment in many ways for the industry as a whole.

ITU to Study the Network Standardization Requirements for 5G Networks

The ITU has established a new Focus Group to identify the network standardization requirements for the '5G' development of International Mobile Telecommunications (IMT) for 2020 and beyond. These "IMT-2020" systems will enable wireless communication to match the speed and reliability achieved by fiber-optic infrastructure. The potential application fields of IMT-2020 systems, in addition to voice and video, span from healthcare to industrial automation, virtual reality, automated driving, and robotic systems controlled with an imperceptible time lag. One-millisecond end-to-end latency is necessary for technical systems to replicate natural human interaction with our environment; a goal that experts say should be within reach of future networks. In 2012, ITU established a program on International Mobile Telecommunications (IMT) for 2020 and beyond, which provides the framework for IMT-2020 research and development worldwide. ITU's Radiocommunication Sector (ITU-R) is coordinating the international standardization of IMT-2020 systems. ITU-T is expected to play a similar convening role for the technologies and architectures of wireline networks. ITU Secretary-General Houlin Zhao: "Air interfaces and radio access networks are progressing rapidly, but there is a need to devote more attention to the networking aspects of IMT-2020. Wireline communications will transform significantly in support of IMT-2020, and the coordination of ITU's standardization and radiocommunication arms will ensure that the wireline and wireless elements of future networks develop in unison." Director of the ITU Radiocommunications Bureau, François Rancy: "Following on from the successful development of IMT-2000 and IMT-Advanced, the standards for all of today's 3G and 4G mobile systems, the work to be carried out by ITU-T on the network aspects will be an important complement to the activities undertaken by ITU-R in developing the radio interface standards for IMT-2020." Director of the ITU Telecommunication Standardization Bureau, Chaesub Lee: "Today's network architectures cannot support the envisaged capabilities

of IMT-2020 systems. Innovation in standardization is essential across core networks, access networks, virtualized data clusters and masses of smart networked units. Moving beyond convergence, the concepts underlying networking must evolve to support the development of integrated fixed-mobile hybrid networks." Head of 5G Research and Development at Huawei, Wen Tong: "5G will power a wide range of new user experiences, but the bottleneck remains the speed of the network. Everyone in the ICT ecosystem needs to work together. This is the most important condition for us to realize 5G, and this is the reason Huawei is contributing to ITU's efforts to consider what the road to 5G demands of all parts of the ecosystem." The new Focus Group, which is open to participation by any interested party, will provide the launching point for ITU-T's contribution to IMT-2020 standardization. The group will follow an intensive work plan to complete its study prior to the December meeting of ITU's standardization expert group responsible for future networks, cloud computing and network aspects of mobile communications, ITU-T Study Group 13. IMT-2020 research and development is underway in a wide range of industry and public sector bodies. The Focus Group's scope of activity will be concentrated in identifying the standardization needs of the wireline elements of 5G networks, building on an analysis of IMT-2020 studies being undertaken by other entities. ITU-T standardization activity based on the findings of the Focus Group will prioritize the alignment of its IMT-2020 deliverables with those of ITU-R, ensuring that standardization work on the network aspects of IMT-2020 supports the further evolution of IMT.

Nayatel Deploys DNS L-Root Server in Pakistan in Partnership with ICANN

The first instance of L-Root has been installed in Pakistan. The launch of the server node is a joint operation between Internet Corporation for Assigned Names and Numbers (ICANN) and Pakistan's first Fiber to the home (FTTH) operator Nayatel (Pvt) Ltd. Nayatel supplied the equipment necessary for the installation of the L-Root node, along with Data Center hosting and Internet transit. This cooperation between both

organizations is an effort to provide security, stability and resilience to Pakistan's Internet users and reduce the response time they experience when making Domain Name System (DNS) queries. "Nayatel, with its commitment towards highest standard of service quality and positive contribution towards society, has partnered with ICANN and has offered its Data Center, Internet Transit, and Server Hardware to host the first L-Root DNS server instance in Pakistan. This DNS Root server, being a critical part of the Internet infrastructure will contribute towards the stability and better speed for the growing Internet community of Pakistan." said Wahaj-us-Siraj, CEO Nayatel (Pvt) Ltd. There are 13 "root," or fully authoritative, DNS servers, identified by alphabetic letters A through M — the "L" root being one. Computers locate one another on a network by using numeric addresses, while humans find it easier to use and remember names (for instance, users typically remember the domain name "www.nayatel.com" more easily than the Internet Protocol address, 203.82.48.5). DNS servers are a critical part of the Internet infrastructure because they are the first step in translating (resolving) human readable host names into IP addresses that are used in internet communication.

Ericsson and Telstra debut Ciena low-latency optical technology

Networking giant Ericsson and Aussie operator Telstra have unveiled a new optical network that uses Ciena's WaveLogic 3 technology to raise the bar for non-regenerated optical transmission. The new network runs between Melbourne, Sydney and Perth, which is a round trip of over 10,000 km, and the lack of any regeneration nodes allows lower latency and higher capacity. Apparently it even qualifies for a Guinness World Record for the 'longest un-regenerated terrestrial fiber optic link.' "This new optical technology enables Telstra to provide Australia's lowest latency link between Sydney and Perth – key access points critical for trans-Australian and international telecommunications," said David Robertson, Director of Transport and Routing Engineering at Telstra. "This high-performance link provides Telstra's customers differentiation for applications which require high-speed and low latency, such as financial trading or cloud based offerings." "By not having intermediary optical and

data regeneration, cost and latency performance is optimized," said Arne Sjule, Head of IP Routing at Ericsson. "It's like an airline passenger having a non-stop long distance flight – time is not wasted without any additional cost. Un-regenerated transmission of over 10,000 km provides improved resiliency options. Traffic can now be re-routed over extremely long distances when needed, for example in unforeseen natural disaster scenarios." This news comes the day after it was announced that Telstra had also partnered with Ericsson over video delivery by taking on its Media Delivery Network managed CDN service – the first operator to do so. "We will work collaboratively with Telstra to effectively leverage both the Media Delivery Network solution and their core network functionality to develop strategic content delivery and optimization services, supporting the growth of Telstra's media business," said Ove Anebygd, Head of Solution Area Media at Ericsson. Lastly Telstra announced today that it has extended its new global SDN platform into the optical layer, enabling up to 100G bandwidth and automated fault restoration across its global Points of Presence. "Extending our global PEN platform into the optical layer is the natural next step in our SDN strategy and by providing this infrastructure on demand, we're able to significantly shorten the provisioning cycle times and better meet our customers' growing high-bandwidth needs," said Jim Clarke, Telstra's Director of Marketing, Product and Pricing.

Aitech Releases Rugged 48-Port Managed Gigabit Ethernet Switch

Aitech Defense Systems has released a new standalone, fully managed layer 2/3 IPv6 48-port gigabit Ethernet switch, the A661, for interconnecting several subsystems to pass data across a rugged broadband network. The radiation tested and qualified device is robust enough for use in several military, aerospace and Low Earth Orbit (LEO) environments, requires no additional user code, and functions and operates as a stand-alone unit. The A661's compact 2x24 GbE switch unit is comprised of two of Aitech's series-400 conduction-cooled C660 24-port Ethernet switches encased in a durable, lightweight, cold plate-cooled enclosure. It is Electromagnetic Interference (EMI)/Radio-Frequency Interference (RFI)-protected and

housed in a chassis designed to withstand severe shock and vibration as well as exposure to environmental elements, such as altitude, humidity and temperature extremes. The managed switch can provide control and data pathways to LEO platforms including the International Space Station (ISS). System power and I/O connections are provided through rugged, military-grade MIL-STD-38999 connectors on the front panel.

Eircom showcases 1Gbps FTTH technology; prepares for August launch in 19 towns

Fixed broadband provider Eircom has successfully trialed 1Gbps fiber-to-the-home (FTTH) technology in the rural community of Belcarra in County Mayo, ahead of its planned commercial launch of FTTH services in 19 locations across Ireland in August 2015. The move comes at a time when Eircom is competing to win the government's upcoming National Broadband Plan tender, which seeks to deliver broadband access throughout the country and provide speeds of at least 30Mbps to rural areas, with Eircom claiming that, if successful, it will invest 'hundreds of millions of euros', alongside the government. Eircom CEO Richard Moat commented: 'The rollout of high speed fiber broadband to rural Ireland is the modern equivalent to the electrification program. As a country, we have a one-off opportunity to build a future-proofed high speed broadband network ... with the potential to revolutionize many aspects of rural life.' Eircom commenced work on the FTTH rollout in November last year, and ultimately plans to provide fiber connectivity to 66 communities, via the deployment of more than 90,000km of optical fiber.

Tracking Exploding Lithium-ion Batteries in Real-time

Understanding how Li ion batteries fail and potentially cause a dangerous chain reaction of events is important for improving their design to make them safer to use and transport, say the scientists behind the study. Hundreds of millions of these rechargeable batteries are manufactured and transported each year as they are integral to modern living, powering

mobile phones, laptops, cars and planes. Although battery failure is rare, earlier this year, three airlines announced they will no longer carry bulk shipments of lithium-ion batteries in their cargo planes after the US Federal Aviation Administration tests found overheating batteries could cause major fires. The study by UCL, ESRF the European Synchrotron, Imperial College London and the National Physical Laboratory, published in Nature Communications today, shows for the first time how internal structural damage to batteries evolves in real-time, and provides an indication of how this can spread to neighboring batteries. First author, UCL PhD student Donal Finegan (UCL Chemical Engineering), said: "We combined high energy synchrotron X-rays and thermal imaging to map changes to the internal structure and external temperature of two types of Li-ion batteries as we exposed them to extreme levels of heat. We needed exceptionally high speed imaging to capture 'thermal runaway' - where the battery overheats and can ignite. This was achieved at the ESRF beam line ID15A where 3D images can be captured in fractions of a second thanks to the very high photon flux and high speed imaging detector." Previously, X-ray computed tomography (CT) had only been used to analyze battery failure mechanisms post-mortem with static images and to monitor changes to batteries under normal operating conditions. The team looked at the effects of gas pockets forming, venting and increasing temperatures on the layers inside two distinct commercial Li-ion batteries as they exposed the battery shells to temperatures in excess of 250 degrees C. The battery with an internal support remained largely intact up until the initiation of thermal runaway, at which point the copper material inside the cell melted indicating temperatures up to ~1000 degrees C. This heat spread from the inside to the outside of the battery causing thermal runaway. In contrast, the battery without an internal support exploded causing the entire cap of the battery to detach and its contents to eject. Prior to thermal runaway, the tightly packed core collapsed, increasing the risk of severe internal short circuits and damage to neighboring objects. Corresponding author, Dr Paul Shearing (UCL Chemical Engineering), said: "Although we only studied two commercial batteries, our results show how useful our method is in tracking battery damage in 3D and in real-time. The destruction we

saw is very unlikely to happen under normal conditions as we pushed the batteries a long way to make them fail by exposing them to conditions well outside the recommended safe operating window. This was crucial for us to better understand how battery failure initiates and spreads. Hopefully from using our method, the design of safety features of batteries can be evaluated and improved." The team now plans to study what happens with a larger sample size of batteries and in particular, they will investigate what changes at a microscopic level cause widespread battery failure. This study was funded by the Royal Academy of Engineering, Engineering and Physical Sciences Research Council (EPSRC) and National Physical Laboratory. The 'beam time' to conduct these experiments was provided by the ESRF.

Why operators are looking at 450MHz for LTE

The 450MHz spectrum is used around the world for CDMA technology, which is looking to be replaced now we're moving towards LTE. So what is the future of 450MHz, and how can it help the 115 operators in over 60 countries to meet demand whilst cutting cost? Due to 450MHz being a low frequency, it can travel much further than the higher bands. This has the economic benefit to the operator of being able to deploy less base stations and still reach a large, dispersed population such as in rural

locations. Smart operators have already begun to take advantage of 450MHz spectrum which is being left redundant as CDMA is phased-out, such as Ukko Mobile in Finland. Ukko launched its LTE 450MHz network in late-2014 using infrastructure provided by Huawei, and was able to reach 99.9% coverage of the country. Their network isn't typically used for consumer usage, and is instead focused on the enterprise, government, and transport sectors. This trend is expected to continue in global deployments of 450MHz spectrum, and it could be utilized for M2M connections to offload traffic from other bands to ensure it doesn't affect speed and stability. One of the biggest problems operators will face is the legacy of (mostly) enterprise customers who are still using the 450MHz frequency. These are lucrative customers, who any operator would be a fool to risk losing or providing a sub-par service. The best solution to this is a gradual roll-out of LTE using a split arrangement for the time being whereby a CDMA network is also offered, and over time customers can be migrated over to the newer LTE technology. This will preserve existing investments, whilst also reducing costs and improving network performance. There are many benefits to use of the 450MHz spectrum - particularly for M2M deployments - so it will be interesting to follow how many operators seek to switch their existing CDMA networks to LTE in the coming years.





For IoT, CSPs may need multiple Networks, each optimised for a different use case

CSPs are assessing alternative options for new Low-Power Wide-Area (LPWA) networks, since the connectivity revenues alone from these networks are exceedingly low: typically USD2–3 per device per year, but often as little as USD1. With such low revenues on offer, CSPs are asking themselves whether they should invest in LPWA networks. We believe that LPWA networks are worth pursuing – but only if CSPs adjust their way of viewing the market and connectivity: rather than developing a network to address the needs of a single key aim (i.e. providing ever greater data speeds for smartphones), CSPs will need multiple networks, each optimised for a different use case. The incremental cost of building each network will be low (LPWA networks, for example, can largely reuse existing infrastructure), and CSPs can then generate greater revenues by offering a full portfolio of connectivity solutions and by offering more than connectivity.

CSPs and network equipment vendors have been building faster and more powerful networks, a progression from the first analogue networks of the 1980s to LTE today. LPWA challenges this. With IoT, customers may no longer need a 'one-size-fits-all' network; instead operators could, potentially, have:

- **An LPWA network for very simple devices (e.g. using SIGFOX, LoRa, Neul/Clean Slate):** These networks would support devices with a very long battery life, offer low data rates (<10kbit/s) and would be ideal for simple applications (e.g. gas or water meters). The cost of LPWA devices will need to be extremely low: the lower the price, the larger the potential market (e.g. LPWA networks could be used to connect multiple devices in the home). If the unit cost is reduced dramatically (e.g. to USD1), modules could even become disposable, like RFID tags today.



Tom Rebbeck
Head of Custom Research
Analysys Mason

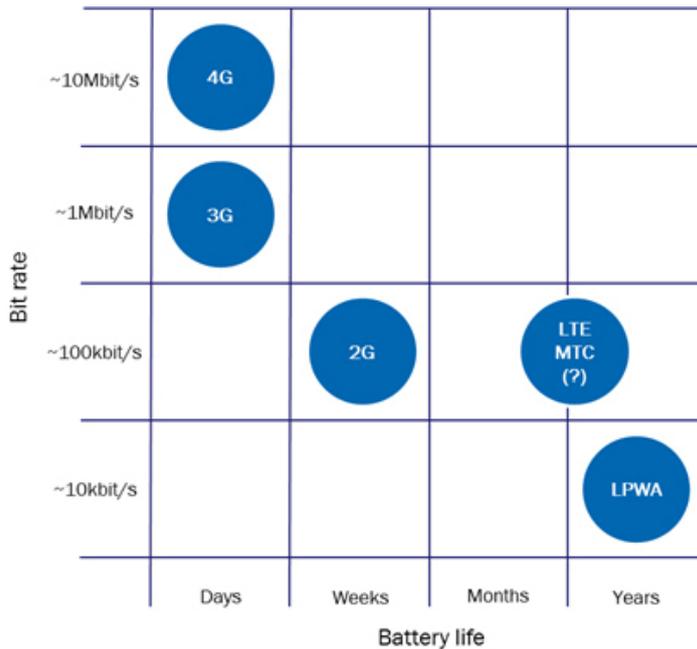
1. See table 2 in Nokia M2M LTE: Optimizing LTE for the Internet of Things (Finland, 2014). Available at: http://networks.nokia.com/system/files/document/nokia_lte_m2m_white_paper_1.pdf.

- **LTE MTC connectivity for slightly more powerful applications:** LTE for Machine-Type Communications is likely to offer faster speeds than the basic LPWA networks (i.e. ~200bit/s rather than <10kbit/s), module costs may be higher (~USD10) and battery life shorter (see Figure 1 below). This type of connectivity could be ideal for devices like smart watches which need more bandwidth than can be provided by LPWA, but for which

connectivity; a farmer is unlikely to want to have three providers of connectivity and so will go to whoever can offer (or aggregate) all three options.

- **The interest for CSPs in the IoT market is not just about connectivity revenues.** Even with billions of connections, by 2023 the revenues from all LPWA connections in the world will only be around half the current size of the French mobile market. The main interest for mobile

- **The market for non-standard wide-area connectivity is likely to be in the billions.** In terms of numbers of connections, the market for low-cost wide-area connections is probably larger than the market for legacy cellular M2M connections, and may rise to over 3 billion devices¹ by 2023. CSPs could willfully exclude themselves from this market if they do not act.



The telecoms market has reached a level of maturity in developed markets, and the focus has come to be on cost saving and consolidation rather than expansion. As part of this maturity, CSPs may need to look beyond networks that chase ever higher speeds, to networks that fill in the blanks of market need.

Analysys Mason has supported operator clients on more than 20 M2M and IoT projects in the past year, and publishes research in its IoT and M2M Solutions programme. Recent projects performed by Analysys Mason include

- an assessment of alternative LPWA network options
- a review of the value chain for M2M services to identify where CSPs could provide services beyond basic connectivity.

For further details, contact Tom Rebbeck at tom.rebbeck@analysismason.com or +44 (0)7990 784 752.

the battery life of standard LTE modules would be insufficient.

- **LTE/LTE-A and 5G:** ‘Standard’ high-speed connectivity for smartphones, tablets, real-time and interactive IoT applications and (probably) connected cars.

Rather than operate a single, standard type of network, CSPs may need to adapt to offering multiple types, each targeted at a different opportunity. We believe CSPs should do this for several reasons:

- **A CSP that does not offer low-value connections may risk losing high-value connections.** Even if connectivity revenues from one service (e.g. LPWA) is low, a client may need a range of connectivity options. For example, a solution for the agricultural sector might comprise LPWA, LTE MTC and standard cellular

operators will be in selling other services (e.g. applications and devices), providing a complete connectivity portfolio and defending against competitors – all for a relatively limited network investment. While some CSPs understand the need to provide a portfolio of connectivity, few have explored the broader revenue opportunities and innovative business models that these new networks could enable. As we have argued previously, telecoms operators have more strengths than just the connectivity layer (e.g. customer support, billing, even identity management and data hosting). Smart CSPs are seeing how they can leverage these assets for customers.

2. See our report and forecast on LPWA here: <http://www.analysismason.com/Research/Content/Reports/Low-powered-wireless-solutions-have-the-potential-to-increase-the-M2M-market-by-over-3-billion-connections/#03%20September%202014>

3. See our article at <http://www.analysismason.com/About-Us/News/Newsletter/IoT-M2M-operator-strengths-Jan2015/#05%20January%202015>



of every five fisherman were venturing to different markets to sell their catch. Waste was eliminated.

Moreover, profits rose significantly for the fisherman while prices fell drastically for the consumer. The introduction of relatively basic information, through telecommunications, was not merely helpful; it was transformative – boosting wealth and welfare for all people in the community. In business or in the life, such a decisive win-win of this magnitude is a rare thing. The then Harvard economist Robert Jensen, who captured this phenomenal story in his landmark study on the impact of information on markets and welfare, dubbed this the Digital Provide.

In this story, fisherman were using a relatively small packet of data on a device that doesn't even scratch the surface of smart phone functionality today.

The potential social impact and value of information today is additionally compounded by the availability of cheaper smart phones which can pretty much do the same thing as their more expensive counterparts. In the five years Vodafone has been in Qatar, tariffs on international calls for low-income workers calling home have fallen by around 200 per cent.

I can't help but think what the next evolution of Jensen's Digital Provide may bring, especially as the economic centre of gravity shifts to the Middle East and Asia. A digitally-native, data-hungry population in a region where the difference between spectacular economic growth and skyrocketing youth unemployment can be just a few hundred kilometres, the potential for the next Digital Provide – in education, health care or business – is enormous.

World Telecommunication and Information Society Day, which we celebrate on 17 May each year, is upon us. To our customers, this may signal special offers or deals on new phones. For telecom operators, it's a reminder that doing good needn't just be a by-product of CSR; it's what we do. To me, it's a day to stop and appreciate the value of information – not only in financial terms – but in human ones. Happy World Telecommunication and Information Society Day.



Pondering the next Digital Provide

In 1997, mobile phone service was gradually introduced in Kerala – a southern state on India's picturesque Malabar Coast where 70 per cent of adults eat fish at least once a day. This makes fishing for Sardines – a small, cheap and widely available fish in the Herring family – a rather large and important industry.

At fifteen different beach markets in the early morning of January 14, 1997, prices for Sardines varied wildly in Kerala. Eleven fisherman came to the Kozhikode district's Badagara market and, finding no buyers, dumped their catch back into the sea. Not far away at the Chombala market, fifteen fish retailers decided to buy no fish at all because prices were too high or the supply inadequate. In economic terms, there were excess buyers, excess sellers and lots of trading friction. In practical terms, things weren't working.

Fast forward to 2000, when the proliferation of mobile phones in Kerala meant fisherman were calling the markets while at sea to see who was offering the most rupees per kilogram. In 1997, no fisherman were leaving their home market. Just three years later, nearly two



Simone Eliantonio
Head of Strategic Projects and
Innovation
Vodafone Qatar



INNOVATION TOWARDS BUILDING A BETTER CONNECTED WORLD

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Embracing the Future

Orange Jordan returns to the essentials with a far-reaching strategic vision

Jordan's ICT landscape has evolved considerably over the past few years. As a nation whose sustainable development is dependent on foreign investments, its progressive policies have allowed telecommunications to become the fulcrum of its socioeconomic development, to the extent that its ICT infrastructure is today one of the key attractors of large-scale investment opportunities.

When it comes to internet penetration, Jordan continues to be in the lead on a regional scale, with 63% of citizens enjoying Internet access as of 2014. This falls in line with the continued efforts of His Majesty King Abdullah II to establish an environment that is conducive to a knowledge-based economy — a vision that has facilitated the creation of a solid telecoms infrastructure capable of propelling the nation's development.

This unbridled progress is also being met with a rapid evolution in market dynamics as more people embrace the Internet as a converged communications platform. Over-the-top services, cloud storage and high definition video streaming are being adopted by larger demographics nationwide, which has caused a dramatic shift in consumer expectations as well. Today, more than any other time in the nation's history, customers expect more value for their money, in addition to more personalized and customizable services.

This is precisely why Orange Jordan sought to launch its Essentials 2020 strategy, which, as the name suggests, calls upon us to return to the basics; to create a comprehensive understanding of people's needs and provide them with an unparalleled customer experience. The strategy defines specific (and highly ambitious) targets for the coming



Jean-Francois Thomas
CEO
Orange Jordan



years, including delivering the best network in Jordan by year-end 2015. To achieve this, we intend to leverage on five key drivers: offering richer connectivity options; re-inventing customer relationships, building a people-oriented and digital employer business model; accompanying the transformation of enterprise customers; and diversifying our operations by effectively capitalizing on our assets. All of this will be achieved within a business model that is efficient, responsible and digitally proficient.

Essentials 2020 delivers more than just a promise, with a carefully crafted timeline and a sizable financial investment, including more than JD 300 million earmarked exclusively for the development of our network and core operations. Two thirds of this investment is being allocated for the development of our fixed and mobile network infrastructure as well as the full-scale launch of our 4G network, which is one of the major milestones of our long-term strategy.

More importantly, as Jordan's sole integrated operator, we will maintain our focus on the enterprise segment, pouring considerable investments into research and development programs that cover critical areas such as cloud computing and security solutions. Over the past decade, our dedicated R&D lab, the Orange Jordan Technocenter, has carved for itself a unique position in the regional ICT landscape, delivering a wide variety of enterprise-focused solutions that tackle a variety of critical areas like data management, enterprise resource planning and security. This will continue to be one of our top priorities for the coming years as we reinforce our efforts to support the development of our enterprise clientele.

Naturally, leading the charge in the adoption of a digitally-proficient business model means implementing a similar model on an internal level. In that respect, Orange Jordan intends to fully leverage on its longstanding expertise in the field, utilizing e-learning as a potent and cost-effective tool in the development of its human resources. With more than 2,000 employees handling our operations nationwide, this will be an essential long-term investment that will allow us to cultivate the necessary expertise to achieve the lofty targets of our new strategic vision.

driver of Jordan's socioeconomic growth, and we intend to leverage on our global network and expertise to support the realization of our national objectives.



The primary drivers outlined in our new strategy amply reflect the responsibility we are placing on our shoulders, not only as the sole providers of Jordan's ICT infrastructure but also as a responsible organization with an unwavering commitment to Jordan's future. We firmly believe that a robust, adaptable and future-proofed ICT environment is the most essential





Sudatel Turns The Corner Posting Strong 2014 Earnings

Results announced ahead of the 22nd GA meeting in Khartoum

- Net profits of USD 50 million, a 67% increase from the Group's 2013 earnings
- Earnings per share increased from 0.150 cent in 2013 to 0.424 cent in 2014
- Owner's equity increased from USD 418 million to USD 535 million in 2014
- Assets value increased from USD 1.188 billion in 2013 to USD 1.24 billion in 2014



Magdi Mekki Al Mardi
Director, Corporate Communication
& CSR Department
Sudatel

SUDATEL Telecom Group Limited, one of the leading telecom companies serving the needs of customers in Sudan and Africa, reported its strongest earnings in five years announcing net profits of USD 50 million, a 67% increase from the Group's 2013 earnings. The Group posted robust financial results with the earnings per share increasing from 0.150 cent in 2013 to 0.424 cent in 2014, the owner's equity increasing by 28% from USD 418 million to USD 535 million in 2014 and the assets value jumping from USD 1.188 billion in 2013 to USD 1.24 billion in 2014.

Commenting on the results, Eng. Tarig Hamza Zain El Abdein, Chief Executive Officer of SUDATEL Group said: "Our figures reflect the excellent performance of the Group in 2014 and show potential for a promising future in the region that we already started witnessing in other areas of operations. In addition

to the strong financial profits, SUDATEL managed to tap the potential in other African countries, leading negotiations with vendors for its network expansion in Sudan and Senegal and concluding expansion agreements in Mauritania and Guinea Conakry while securing the finance required for all expansions."

"Sudatel has been one of the strongest trading stocks on the Abu Dhabi Stock market over the past 10 years. With today's announcement, we are certain it will bolster the confidence of local potential investors in Sudatel and will demonstrate the growth possibilities of investing in and trading with Sudatel," added Zain El Abdein.

Key activities during 2014 and 2Q:

- Ongoing negotiations with the vendors for the network expansion across all SUDATEL's operators.
- The Group assets re-evaluation has been conducted by Sudan National Audit Chamber and an international firm.
- Selection of SUDATEL's training body (SUDACAD) by the ITU as one of the 6 centers of excellence in the Arab World.
- Inauguration of the Data Center, one of its kind in Sudan and one of the top in Africa. With the cost of 45 M \$, the specifications of this Data Center are designed of the highest standards "Tier IV". Secure and reliable, this Data Center will be able to provide corporate turn-key solutions, to enable Corporate to focus on main business, to reduce TCO CaPex. Cooperates, in a one stop shop will be able to rent their IT needs via Data Center, connect their sites and plug into the internet. Our customers in Africa can also benefit from Data Center services.
- H.E. the President of Sudan inaugurated this year SUDATEL Submarine cables premises, located in Port-Sudan in the Red Sea. The building is serving as a hub for the Submarines' cables that link Sudan with Saudi Arabia and the rest of the world. The building includes the largest internet station in East Africa and is considered as one of the leading telecommunication facilities in Sudan.

With its diverse portfolio of subsidiaries ranging from Data Centres to Submarine Cable companies to Local Telecom Operators in Sudan and four West African Markets, including Mauritania, Senegal, Ghana and Guinea Conakry, Sudatel seems destined for a bright future.



Operators in the Middle East can monetise 'smart city' projects by enabling digital ecosystems

'Smart city' programmes play a central role in the development strategies of a number of countries in the Gulf region. The countries in this region plan to make their cities 'smarter' by improving the efficiency of city management and enhancing citizens' quality of life. In addition, new technology-led initiatives for a number of greenfield city developments are planned. The definition of a smart city differs between stakeholders, and although most of these projects have been initiated by governments and city councils, operators have been called in as connectivity and solutions providers. However, we argue that telecoms operators can play an even greater role in the development of smart cities by becoming open, digital platform providers that serve the needs of various stakeholders in the value chain.

Analysys Mason attended the TMT MENA conference, held in Dubai, the UAE, on 22 April 2015, where this key message was discussed in further detail. In this comment, we examine the status of smart city projects in the Middle East,

and assess the opportunity for operators to support and enable cities' various service ecosystems.

Most state-owned telecoms operators in the Gulf are involved in smart city projects as solution and connectivity providers

Connectivity underpins many features of smart city projects and operators can play an important role in their development. In addition to connectivity, smart cities use ICT-enabled applications in various domains, such as energy management and public safety, to increase efficiencies, enhance the quality of life and to help meet sustainability objectives.

Most smart city projects planned in the Middle East are supported by political commitment and financial resources. These projects form an important part of national economic strategies that aim to demonstrate a country's ambition to be



KARIM YAICI
Senior Analyst
Analysys Mason

at the forefront of innovation-driven development. High-profile projects focus mainly on brownfield cities, such as Dubai and Doha, which are aiming to become 'smarter'. However, the region also has a number of greenfield initiatives such as King Abdullah Economic City in Saudi Arabia, Lusail in Qatar and Musdar City in the UAE, which have all been created using intelligent solutions for efficiency and sustainability (see Figure 1).

Telecoms operators can be the prime platform providers to enable smart city services beyond connectivity

Operators are actively engaged in providing the necessary technical infrastructure for smart cities, as well as implementing specific services. However, the range of potential applications for smart city initiatives will be too wide for any single entity to develop and as a result, will require the involvement of various ICT players. During the conference, Simon Torrance from Analysys Mason argued that telecoms operators should create new digital platforms and enable ecosystems in order to remain relevant and generate additional revenue. However, this digital transformation requires a significant change to how telecoms operators function: new skills, methods and tools will be required, which they can access through partnerships with specialised solutions providers. In Torrance's view, operators will need to evolve from infrastructure providers to platform providers (see Figure 2). The main steps required to achieve this are:

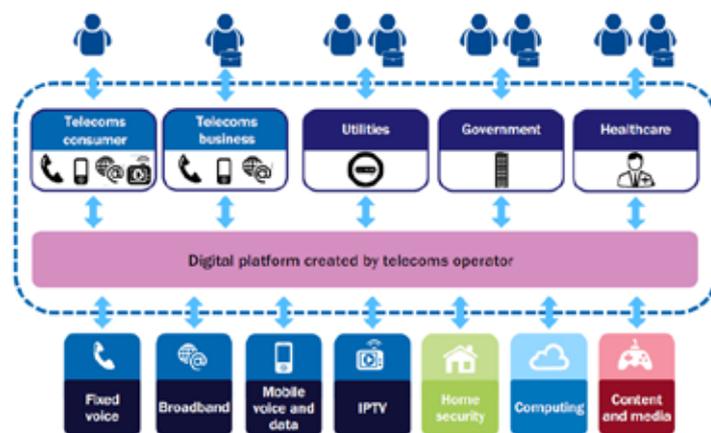
- developing a cost effective and future-proof digital platform
- introducing new digital services that harness the platform, such as home automation services and security
- hosting multiple third-party providers (such as utility companies, government services and healthcare providers) on the platform to enable them to access core services (for example,

Figure 1: Examples of smart city projects and associated operators in the Gulf region

City	Country	Project description	Operator and role
Doha and Lusail	Qatar	Efficient and sustainable services delivered to residents and businesses. These smart city plans are aligned with the development of the 'Qatar National Vision 2030'. ¹	Ooredoo is committed to being a leading provider of smart city solutions in Qatar. It has demonstrated a range of smart technologies, including control centre solutions.
Dubai	UAE	Dubai's smart city plan includes 100 initiatives on transport, communications, infrastructure, electricity, economic services and urban planning.	EITC (du) and Etisalat are contributing to this project through the provision of municipal Wi-Fi, as well as supporting data sharing initiatives.
King Abdullah Economic City	Saudi Arabia	One of most important economic projects run by the private sector in the region and the largest among the four planned economic cities in Saudi Arabia.	MOBILY was selected in July 2013 to develop and operate the telecommunications network in the city. The operator has also provided a data centre and smart city services for residential and business users, which we understand became operational in November 2014.

- connectivity and voice) and non-core services (such as ordering and billing) provided by the telecoms operators
- opening up the platform to third party providers to deliver their own services.

Figure 2: Smart city services enabled by telecoms operators' digital platforms



The development of such a platform represents a horizontal opportunity for operators to deploy many of the services that they already offer – for example connectivity, voice, M2M and smart home services. In addition, new partners can deliver their services directly to end users using a telecoms operator's secure digital platform. This will help operators to continue to drive demand (and revenue) for, and from, its core services, as well as create traction for new, value-added services.

For operators, the commercial success of smart city projects will ultimately be measured by the willingness of individuals, institutions and businesses to pay for smart city services. For that, operators will need to demonstrate that these services (channelled through their platform) can introduce tangible enhancements to customers' lifestyles, achieve cost savings, as well as help to meet sustainability goals – the primary goal for most smart city projects. Operators will need to be patient for a return on their investments in smart city projects. Adoption is likely to be slow at the beginning of a project while end users progressively integrate the new services into their lives and businesses, and begin to recognise their value.

2. General Secretariat For Development Planning (Doha, Qatar, 2008), Qatar National Vision 2030. Available at http://www.qdb.qa/English/Documents/QNV2030_English.pdf



Smartwatches: Passing Fad, or the Future of Mobile Tech?

They don't seem to do everything that smartphones do, and what they can do, they generally don't seem to do quite as well... Little wonder that, apart from gadget geeks and fitness fanatics, consumers have hardly rushed to embrace smartwatches and other wearable technology.

It's worth remembering that we all felt the same way about the iPad, and indeed almost every other major tech achievement of the last half century. But one of the great things about a truly innovative product is the moment of collective realisation that comes later, when the thing has, almost unnoticed, become an indispensable part of your life: How did I ever cope without it?

Smartwatches could become as essential for participation in the modern economy as smartphones are, but for that to happen, the industry needs to pitch them carefully to consumers, and that means being honest about what smartwatches currently can and can't do.

Firstly, it's important for consumers to understand that the first wave of smartwatches aren't intended to completely replace smartphones (indeed, they depend on them). However sophisticated the technology becomes, there are certain inherent limitations on functionality: No one is going to write a really long email on a screen that measures just a few square centimetres, or take an important conference call by holding their wrist up to their mouth for three hours.

Instead, smartwatches are likely to become an incredibly powerful accessory; and, understood and priced as such, their strengths become abundantly clear. Most obviously, no other form of mobile tech features constant physical contact with the user, enabling the collection of highly accurate personal data on everything from health, fitness and sleeping patterns to the use of payment, travel and location services. The remarkable success of fitness bands is testament to the value



George Galica
Head of Managed Services
Vodafone Qatar

consumers place on this data, if it is presented in a way that informs and supports their working and lifestyle choices.

There are little things, too. It might not seem like more effort to take your phone out of your pocket, but those seconds do add up over the course of a working lifetime, and of course there is always the fear of dropping it. Smartwatches are also more sociable: you can check them in meetings

flick format of a smartwatch. The challenge for smartwatch and app developers alike is therefore to become sleeker and smarter than ever before: balancing functionality and simple aesthetics with relevant and highly customisable content.

That doesn't necessarily mean greater simplicity. Having gotten used to their smartphones, consumers will be just as demanding when it comes to smartwatches. The trailblazing Pebble

of smartwatches therefore lies not only in their future commercial value to our business, but their possible contributions to building a smarter society and a stronger nation. In time, and with appropriate privacy considerations, the data gathered by smartwatches could feed into Doha's emergence as a smart city, helping to improve everything from our healthcare systems to the operation of our traffic lights.



without provoking your boss, or in friendly conversation without seeming rude. That can only be good news for productivity.

But developers need to be careful here. The fact that smartwatches are constantly attached to the user means that a combination of easy access and constant monitoring can begin to feel intrusive. Early feedback on the Apple Watch in particular points to 'notification overload': a stream of irrelevant information that, while tolerable on an iPhone, becomes irksome in the concentrated, quick-

has failed to establish itself because it simply didn't offer enough. The launch of Apple Watch is, unsurprisingly, likely to prove a turning point, with experts predicting that 101 million units will be shipped annually by 2020. From the other side of the fray, established horologists such as Tag Heuer are partnering with developers to produce their own luxury models.

At Vodafone Qatar, we're proud to be leading the telecoms market in a rapidly developing country with one of the most enthusiastically connected populations in the world. The potential

And that's just smartwatches. From the rugged success of GoPro cameras to experimental cocktail dresses that sparkle LEDs when you receive a call, wearable technology in all shapes and sizes is coming to a wardrobe near you soon. Who says it can't be both the latest fashion trend and the future of telecommunications?

1. <http://www.forbes.com/sites/paullamkin/2015/05/11/101-million-smartwatch-shipments-by-2020-with-apple-and-google-leading-the-way/>



▼ SATELLITE NEWS

SATELLITE UPDATES

AsiaSat Confident in Asian Market Despite Increased Competition

With a new shareholder, two fresh satellites in orbit, and a near-metamorphic rebranding, to call AsiaSat busy would be an understatement. Over the past year, the Hong Kong-based satellite operator has been adding capacity, sizing up new markets, and laying the groundwork for the rise of Ultra-HD. Speaking to Via Satellite, AsiaSat President and CEO William Wade said the company's rebranding went deeper than just a new logo and website. "We have changed our philosophy, our internal culture and ultimately our way of doing things," he said. Additionally, AsiaSat's new shareholder, Carlyle Asia Partners 4, recently replaced General Electric. Carlyle Asia Partners 4 joins the company at a dynamic time. Asia has become the focus of many satellite operators as a top growth market and emerging national players are looking to add satellites of their own. This shift makes Asia a much more competitive environment. "The developing Asian markets have become the focus of many satellite operators. In addition, capacity from new national operators has increased supply in some Asian regions. Coupled with continued technology advances in modulation and compression and the increased competition from fiber, we see excessive

supply in the satellite market. However, on the longer term, there are still a lot of opportunities for growth in Asia, particularly in some emerging markets where communications infrastructure still lags behind much of the developed world," said Wade.

Arianespace Vega Lofts Sentinel 2A Satellite

Arianespace orbited the Copernicus Earth observation program's Sentinel 2A satellite June 22 from French Guiana aboard a Vega light-lift launch vehicle. From a Sun-synchronous orbit at an altitude of 780 km, the 1,140-kg satellite will join the Sentinel 1A radar satellite launched April last year. Built by Airbus Defence and Space, Sentinel 2A has high-resolution and multispectral capabilities across a 290-kilometer-wide coverage path. Sentinel 2A has a design life of seven years and three months, and can leverage the European Data Relay System (EDRS) laser communication network. The Sentinel 2A mission is the second Vega launch of 2015, following the February Intermediate Experimental Vehicle (IXV) mission, and fifth overall as Arianespace ramps up the program. The next Vega mission is the LISA Pathfinder — a European spacecraft to validate the concept of low-frequency gravitational wave detection. Arianespace anticipates launching the LISA Pathfinder before

the end of the year. The company's next launch is a July 8 Ariane 5 mission to orbit Eumetsat's MSG 4 meteorological platform and the Star One C4 telecommunications satellite for Embratel Star One.

KVH Adds Global MPLS Network to Aggregate Satellite Customer Traffic

KVH Industries has recently implemented a global private Multi-Protocol Label Switching (MPLS) network to connect all of the teleports and satellite beams within its mini-VSAT Broadband network. The MPLS network is designed to aggregate all customer satellite traffic and provides Internet egress at KVH's Point-of-Presence "MegaPOPs" access points located in North America, Europe, and Asia. According to KVH, the MPLS network boosts security, quality of service, network reliability and uptime for users with both commercial and recreational vessels. The MPLS network also enables the KVH mini-VSAT Broadband network to provide firewalls and high-speed Internet connections at each MegaPOP to ensure security and reliability of all customer traffic. Additionally, MPLS allows KVH to supply its mini-VSAT Broadband customers with a Global Static IP service, where customers can be assigned a unique public IP address for use globally. The mini-VSAT Broadband network provides connectivity to commercial vessels and recreational yachts around the world.

Littering LEO: ESA Looks to Regulation, Technology to Clean Up Space Debris

While recycling and sustainability efforts have taken hold on the earth's surface, few of us stop to think about the pollution taking place outside of our atmosphere. With nearly 60 years of satellite launches behind us, left over debris is piling up in orbit faster than we would like to think and posing real and current dangers to operating satellites from every county and in every orbit. "Scientific studies have shown that there's a total of around 500,000 pieces of space debris in orbit that is between 1 and 10 cm in size, but too small to track regularly," Brian Weeden, technical advisor at the Secure World Foundation told Via Satellite. "You can make the case that all of the human-generated space debris

was created by satellites, because it's all there as a result of launching and operating satellites." Weeden estimates that global organizations are tracking 22,000 human-generated objects in orbit around the Earth larger than 10 cm (roughly 4 inches), of which only about 1,500 are functional satellites. The rest of these remains represent dead satellites, spent rocket stages and other fragments, each of which could strike an operational satellite with the force of a hand grenade. "Space debris bigger than several centimeters can completely destroy a satellite if they collide," said Weeden. "Space debris between one and several centimeters can severely damage a satellite, perhaps rendering it inoperative or taking out key systems." While space platforms such as the International Space Station (ISS) are usually armored to protect against smaller pieces of space debris, and the larger satellites have the ability to maneuver around sizeable pieces of debris, it is possible that soon the area surrounding Earth could become so polluted that collision scenarios could be unavoidable. Because of this, the European Space Agency (ESA) alongside several other organizations and industry partners are stepping up efforts to cut down space debris through modernizing satellite design and fielding efforts to remove current debris from the most congested regions of space. These highly polluted areas mainly include Low Earth Orbit (LEO) or those regions up to 2,000 km, which are widely used for Earth observation and some telecom satellites.

Telenor's Thor 7 Satellite Reaches Designated Orbital Location

Telenor Satellite Broadcasting's newest satellite, Thor 7, has completed in-orbit testing as well as its journey from Geostationary Transfer Orbit (GTO) to its 1 degree west orbital slot. Thor 7, built by SSL, launched April 26, 2015 aboard an Ariane 5 rocket. Telenor's satellite control center took over the satellite on June 16. Thor 7's Ku-band payload, which consists of 11 transponders for DTH broadcasting in Europe, is now ready for commercial operation. The satellite's high-throughput Ka-band payload will now undergo a further testing phase of its ground infrastructure with test customers. Service from the multi-gigabit HTS payload, which targets the maritime industry, is expected to be

fully operational in the fourth quarter of 2015.

Pakistan to participate in SAARC satellite project meeting

The SAARC countries, including Pakistan, will participate in the ambitious SAARC satellite project conceived by Prime Minister Narendra Modi, top official said on Tuesday. When asked if Pakistan was giving a cold shoulder to the project, the Chairman of Indian Space Research Organization (ISRO) A S Kiran Kumar said, "That is not strictly correct. We have on 22nd (June) a meeting in Delhi, where all these seven SAARC countries will participate." "There is a one day program of familiarizing them with what are the things that are possible and how to go forward. This discussion is on and we are told that all of them are participating," Mr. Kiran Kumar said. After the successful launch of PSLV C—23 last year, Mr. Modi had called for a greater collaboration among the SAARC countries and launch of a common satellite for the region. It was also seen as a move to counter China in South Asia, as its space agency has been involved in launching satellites of several other countries. Following Mr. Modi's call, formal proposals were sent to all the SAARC countries. There were reports that Pakistan was not much enthusiastic about the project.

SSL to Build New Satellite for B-SAT

Japanese satellite operator Broadcasting Satellite System Corporation (B-SAT) has selected Space Systems/Loral (SSL) to build a new satellite for Direct-to-Home (DTH) television services. The new BSAT 4a satellite will use the SSL 1300 satellite platform, supporting 24 Ku-band transponders for a range of television services including High Definition (HD), 4K and 8K Ultra-HD. The design life of the satellite is 15 years or more. BSAT 4a is SSL's fourth satellite award in Japan in the past two years. B-SAT operates its broadcasting satellites in 12GHz Broadcast Satellite Services (BSS) band in Japan. Established in April 1993, the company currently owns and manages three satellites, BSAT 3a, BSAT 3b and BSAT 3c. The number of BSS digital broadcasting receivers in Japan is now more than 140 million.

Five European Countries Sign Space Surveillance and Tracking Agreement

Space agencies and technology centers from France, Germany, Italy, Spain and the United Kingdom have all signed a Space Surveillance and Tracking (SST) consortium agreement to provide a European Union (EU)-wide SST framework. The consortium will exploit existing national infrastructures and sensors to provide a service to monitor and track space objects and debris; support and help spacecraft operators and users by providing a service for collision avoidance; create surveys for fragmentation detection; and monitor uncontrolled re-entry of space objects into Earth's atmosphere. The European-led initiative is expected to provide more autonomy for the EU, which relies extensively on information provided by the U.S. The five EU member states will cooperate with the European Union Satellite Center (SATCEN) to implement the provision of the SST services. Inside the member states, the national space agencies will collaborate closely with their ministries of defense since both have a vested interest in monitoring the space environment. The European Commission has foreseen some budget in the period 2015-2020 for space surveillance and tracking services, upgrading of the existing European infrastructure and sensors, as well as the development of new assets.

BlackSky Global Details Plans for 60 Satellite Earth Observation Constellations

BlackSky Global, a rising Seattle-based satellite imagery startup founded in 2013, plans to launch a constellation of 60 Earth observation satellites to enable revisit times of a few hours or less. The company has already raised capital to fully fund its first six spacecraft, which are planned for launch in 2016 and will pave the way for the rest of the fleet. The first two satellites, Pathfinder 1 and Pathfinder 2, are in the process of final testing and checkout. They will precede the rest of the constellation as experimental satellites. After the first two satellites, BlackSky Global plans to launch the four additional funded satellites, which would start generating revenue by the end of 2016. By 2019, BlackSky Global

aims to have its full constellation in orbit, providing 1-meter resolution color imagery of the planet to a myriad of different customers. The satellites would be able to provide video as well at a speed of one frame per second, and the company is also planning to offer premium services. BlackSky Global has satellite imagery providers and data analytics companies as customers today, and uses a pay-per-picture business model for service from its satellites.

Inmarsat and Honeywell Hit Milestone for Global Broadband IFC

Honeywell Aerospace and Inmarsat have completed the first phase of hardware and satellite network flight tests for GX Aviation broadband services, which they promise can deliver in-flight wireless connectivity similar to what is available at home or in the office. The JetWave-branded hardware enables airplanes to connect to Inmarsat's Global Xpress satellite constellation for GX Aviation global Ka-band in-flight Wi-Fi services. The tests, which included streaming YouTube videos and live radio, online conference calls, downloading files and more, were conducted in the United Kingdom this month to validate GX Aviation's ability to deliver high-speed Wi-Fi connectivity while over land and water. The tests demonstrated a successful connection between the JetWave hardware and Inmarsat's first Global Xpress satellite, I-5 F1, which powers GX Aviation services for Europe, the Middle East, Africa and Asia. This follows the ground-based high-speed and performance tests completed in March 2015. "These flight tests are an exciting step toward the launch of GX Aviation and bringing a true broadband experience to the market. With GX Aviation, airlines and their passengers can finally experience a connectivity service equivalent to what they are used to on the ground," said Inmarsat Aviation President Leo Mondale. "Just having Wi-Fi on board is no longer a differentiator — in the future it will be about the quality of the service."

Es'hailSat to Launch Al Araby TV SD Channel on Es'hail 1

Qatari satellite company Es'hailSat has launched a new exclusive SD channel for Al Araby Television Network from

the Es'hail 1 satellite. The new channel follows a January 2015 agreement where Al Araby Television Network chose to broadcast its HD channel on Es'hail 1. Located at the 25.5 degrees east hotspot covering the Middle East and North Africa (MENA) region, viewers can receive the Al Araby TV channel broadcasting in both SD and HD from Es'hail 1. Al Araby Television Network broadcasts in Arabic from its headquarters in London, U.K. The channel aims to be a platform for Arab youth, talent, energy and aspirations by offering viewers a broad range of content, varying from news to entertainment

Satellite Operators Weigh Aviation Needs in Future Satellite Designs

The aviation industry's need for greater connectivity is having a more prominent impact on satellite operators' decision-making process as they evaluate designs for future spacecraft. Speaking June 9 at the Global Connected Aircraft Summit, several satellite operators expressed a willingness to ramp up the amount of capacity in orbit should aeronautical demand continue to climb. "What we're doing at ViaSat is trying to keep pace with those expectations," said Meherwan Polad, senior director of business development for mobile broadband systems at ViaSat. "We know that usage in five years time is going to be many times the usage today, so you need satellites with many times the hundreds of gigabits that we have today." ViaSat provides connectivity to aeronautical customers predominantly in North America, but the company has reached over to Europe through a partnership with Eutelsat. The operator's next satellite, ViaSat 2, is expected to cover seven times the geographic area of ViaSat 1 after launching in 2016, providing improved bandwidth economics over North America, Central America, and the Caribbean basin as well as a bridge of coverage across the North Atlantic to the U.K. and Europe. ViaSat 2 is the company's fourth satellite, and others are planned to follow. "We do very much have global intentions," Polad added. "We do plan to have global coverage at the end of the decade." Likewise, Ben Griffin, regional director of aviation at Inmarsat, said the decision to build out Global Xpress (GX) as a Ka-band network leaves ample spectrum to further beef up the

constellation as needed.

Inmarsat-4 F2 Satellite Relocating to Cover Middle East and Asia

Inmarsat is relocating the Inmarsat-4 F2 (I-4 F2) communications satellite to a new orbital position above the Indian Ocean. From this position, the satellite will provide L-band services to customers in the Middle East and Asia region, with commercial services scheduled to begin by the end of the year. The move follows the successful transition of Inmarsat's L-band voice and broadband data services for the Europe, Middle East and Asia (EMEA) region from I-4 F2 to Alphasat. Once over the Indian Ocean, I-4 F2 will create a fourth region for L-band service over Inmarsat's fastest growing market for L band.

Intelsat Introduces IntelsatOne Flex for Commercial Air Transport Market

Intelsat has introduced IntelsatOne Flex for distribution partners serving the commercial air transport market. IntelsatOne Flex aggregates Intelsat's current satellites, the upcoming EpicNG High Throughput Satellite (HTS) fleet and the IntelsatOne terrestrial network into a simplified ecosystem that enables Intelsat's distribution partners to scale their service delivery capability to meet emerging In-Flight Connectivity (IFC) demands. IntelsatOne Flex allows Intelsat's distribution partners and their aeronautical customers to access bandwidth when and where it is needed the most without the complexity of managing multiple beams and satellites. In addition, it provides tiered Committed Information Rate (CIR) plans that mean Intelsat distribution partners can offer tailored services to the air transport sector. IntelsatOne Flex uses iDirect Velocity, a ground infrastructure platform designed for large-scale global HTS networks, which has been fully optimized for Intelsat EpicNG to provide scalability, performance and higher throughput. Leveraging iDirect Velocity, IntelsatOne Flex incorporates features that have been optimized to the Intelsat EpicNG environment including next-generation remote and hub processing capabilities that enable significantly higher throughput rates

and global bandwidth management ensuring seamless connectivity across multiple spot-beams, and very fast beam switching features. IntelsatOne Flex is fully integrated with Velocity's companion network management system, Pulse, enabling Intelsat distribution partners to develop differentiated service offerings, create customized applications and system integration through open APIs and provide visibility for real-time monitoring, tracking and adjustment of vessel service levels.

Inmarsat Extends Globecomm VAR Relationship to Maritime Market

Inmarsat has expanded its relationship with Globecomm, a Value Added Reseller (VAR) for Global Xpress satellite services in enterprise and global government to include global maritime. Inmarsat's Global Xpress Ka-band broadband satellite network is integrated with the company's current L-band network. Globecomm specializes in the design and integration of satellite communication systems and has an extensive global network. The company designs, installs and supports communications solutions for maritime along with other markets, and has expertise in cellular networks, satellite networks, mobile satellite communications and content delivery systems.

Inmarsat Approves Hughes 9450-C11 Terminal for Mobile BGAN M2M

Inmarsat has approved Hughes' 9450-C11 terminal, making it the first mobile Broadband Global Area Network (BGAN) Machine-to-Machine (M2M)-enabled terminal, according to the company. Building upon the BGAN M2M 9502 fixed product line, the 9450-C11 enables the same BGAN M2M service benefits. The terminal can be used for satellite-only applications or as backup to terrestrial 3G/4G in least-cost-routing scenarios, and allows fleet managers to move larger amounts of customer data to and from their assets over the optimum available network. "The Hughes 9450-C11 terminal and Inmarsat's BGAN M2M service extend data connectivity for mobile assets to regions not covered by terrestrial networks," said Graham Avis, VP and

general manager of Hughes Network Systems. "The mobile BGAN M2M service by Inmarsat enables cost-effective fleet management and fills the substantial gaps in wireless coverage pertaining to overall driver safety."

SSL to Build New Satellite for B-SAT

Japanese satellite operator Broadcasting Satellite System Corporation (B-SAT) has selected Space Systems/Loral (SSL) to build a new satellite for Direct-to-Home (DTH) television services. The new BSAT 4a satellite will use the SSL 1300 satellite platform, supporting 24 Ku-band transponders for a range of television services including High Definition (HD), 4K and 8K Ultra-HD. The design life of the satellite is 15 years or more. BSAT 4a is SSL's fourth satellite award in Japan in the past two years. B-SAT operates its broadcasting satellites in 12GHz Broadcast Satellite Services (BSS) band in Japan. Established in April 1993, the company currently owns and manages three satellites, BSAT 3a, BSAT 3b and BSAT 3c. The number of BSS digital broadcasting receivers in Japan is now more than 140 million.

UAE Mars mission will share new findings

The UAE is working to establish a data centre as part of the Hope Probe Mars mission which will share its findings with academic institutions and space agencies across the world, a senior official said. "The data centre will be based in the UAE. Omran Sharaf, Project Manager of Emirates Mars Mission at the Mohammad Bin Rashid Space Centre (MBRSC) said the data centre will be ready before the launch of the Hope Probe. The UAE aims adding value and not just doing what others have done, specifically from the science point of view. Space exploration will lead to giving back to society and serving humanity, he added. The mission will help science and technology and knowledge-based economies. Although there are many other sectors generating revenue and jobs such as financial services, real estate and tourism, etc, the government has given priority to science and technology to support sustainable development, Sharaf said. This will create opportunities not only for Emirati engineers but scientists in all disciplines such as

physics, chemistry and maths. "You don't need to be engineers to derive benefits from the Mars mission. You can focus on your own area of interest," Sharaf said in response to an Emirati student's inquiry on the prospects for youngsters. The Hope probe will help global water mapping and understanding climate dynamics, said Hessa Al Matroushi, Instrument Science Lead, UAE Mars Mission, MBRSC. Dr. Mylawami Annadurai, director of the satellite centre at the Indian Space Research Organisation (Isro), said: "India wants to go to Mars with the UAE." At a panel discussion, Sarah Amiri, Emirates Mars Mission Science Team Lead at MBRSC, said India shocked the world last year by landing on Mars. Annadurai said that India's Mars Mission was a logical extension of the Chandrayan mission that detected water on the moon. Dr. Benton C. Clarke, Chief Scientist, Chief Exploration Systems, Lockheed Martin Space Systems, said the UAE mission may shed light on the river systems on Mars. There is speculation that once there was an ocean on Mars, he said.

Dubai and UK satellites to work together

Satellites of Dubai and the UK will work together soon to support many Dubai projects, including Smart Government, UK officials told Gulf News. DubaiSat-2, the satellite launched by Dubai, and Deimos, the satellite of Deimos Space UK Ltd, will work together to feed information to the [Dubai] government, Philip Davies, managing director of Deimos, said in an interview. Both satellites can take high-resolution images of Dubai periodically to monitor the changes in buildings and roads [and new constructions], agricultural areas, vegetation, water in reservoirs, etc, he said. "For example, to build a new road, you have to update the digital map of the country. [This project will help such updates]," Davies said. The satellite data will be fed to the government periodically. That information will help the government in its projects, including Smart Government, the executive said. The one-year project is expected to start on June 1. An agreement on the project will be signed in Abu Dhabi on Wednesday, Davies said. A spokesperson for Mohammad Bin Rashid Space Centre (MBRSC) told Gulf News that the UK Space Agency will sign the agreement with Deimos Space UK Ltd. MBRSC is the UK Space Agency's International

Partnership Space Program (IPSP) Partner and will collaborate on the project, the spokesperson said. Dr. David Parker, Chief Executive of UK Space Agency, told Gulf News that the joint project is under the umbrella of cooperation between UK Space Agency and the UAE Space Agency. "We expect more such cooperation in future," he said. They spoke to Gulf News on the sidelines of the first day of the fifth Global Space and Satellite Forum (GSSF 2015) hosted by the UAE Space Agency in Abu Dhabi. Dr. Mohammad Al Ahababi, Director-General of UAE Space Agency, said in his opening remarks that when the UAE started building satellites a few years ago, their range was limited to the UAE and the Gulf region but now the UAE's satellites cover even America. He said one of the most exciting parts of industry [in general] is the ideas, initially designed for use in space, that have prompted another technology revolution on the ground. Global positioning system (GPS), the cell phone, and new more powerful radios are examples, Al Ahababi said. "We have space research to thank for modern biomedical techniques, imaging technology, digital systems, robotics, information and communication technology, meteorological applications, environmental monitoring, remote sensing imagery, and more. We look forward to the contributions of Emirati scientists will make to modern technology." A US scientist said the UAE's Mars Mission [the Hope Probe] will attract excitement across the globe. The National Aeronautics and Space Administration (Nasa of the US) got more than 1.6 billion hits from across the globe on its website during its Mars mission and the UAE can also expect the same excitement, Dr Charles Elachi, Director of Jet Propulsion Laboratory at Nasa, said. Fifty million people in the US followed the Nasa's Curiosity Rover that landed on Mars as space exploration always creates a lot of excitement, he said. Elachi said when he visited Abu Dhabi four years ago, he never imagined that the UAE would take up an ambitious project like the Hope Probe. Speaking to Gulf News, he said: "Space exploration always excites the youth and the UAE's Mars Mission will inspire the youngsters in the Arab world and developing countries. "Inspiring means not necessarily to be scientists and technocrats but to innovate in their areas of interest like business and all other fields."

Latin America: Top Region for New Satellite Capacity

Latin America is and will continue to be the top region for the addition of new satellite capacity until 2017, according to the latest research from Euroconsult. While the firm pegs the Calculated Annual Growth Rate (CAGR) for satellite capacity usage globally at roughly 5 percent over the past five years, Latin America stood out. This region, along with South East Asia and the Middle East and Africa, achieved annual growth rates surpassing 8 percent. Looking to the future, Euroconsult forecasts total leased capacity in Latin America will grow at a 10 percent CAGR over the next decade, with a massive increase in capacity coming online. "Latin America will be the number one region in terms of capacity additions over 2014 to 2017. Total regular supply will increase with around 400 TPEs [36MHz Transponder Equivalents] over the period, which corresponds to 25 percent of total net additions in global supply," Nathan de Ruiter, senior consultant at Euroconsult and editor of the "Satellite Communications & Broadcasting in Latin America" report, told Via Satellite. This surge in capacity is even more evident with the addition of multiple High Throughput Satellites (HTS). While Hispasat led the charge with the Amazonas 3 payload in 2013, Euroconsult projects Latin America will soon become the second-largest region in terms of HTS capacity supply, trailing only North America. De Ruiter noted that global players such as Eutelsat, Intelsat, and Inmarsat; regional players Star One and Hispasat; and new entrants such as Visiona, Yahsat, and O3b Networks are all planning HTS payloads for the region in coming years. Brazil and Mexico are Latin America's two top markets for satellite capacity, according to Euroconsult. Both contain the majority of the regional population, with Brazil accounting for 202 million as of 2014 and Mexico standing at 123.8 million, according to the United Nations Population Fund. Euroconsult projects these two countries will account for greater than half of the total capacity demand by 2024. The major growth drivers have some nuances between them, but are largely similar, de Ruiter said. With this influx of new capacity, oversupply is also a very serious concern. Euroconsult expects regular capacity fill rates to drop from

80 percent in 2014 to 70 percent in 2017, with Ku-band experiencing a drop in utilization levels from 86 percent in 2010 to 64 percent by 2017. New services should absorb satellite capacity over time, such as 4K broadcasting and the potentially economically feasible backhauling of 3G and 4G data over HTS satellites. Euroconsult projects that the first commercial 4K channels will kick off during the 2016 summer Olympics in Brazil, with the number of channels climbing to 120 by 2024. HTS, de Ruyter said, should have a greater impact by facilitating new service applications rather than just capturing traffic flowing over traditional satellites.

Kacific Signs Largest Capacity Deal Yet with Indonesia's BigNet

Kacific Broadband Satellites has reached a \$78 million long-term agreement with Indonesian satellite service provider BigNet for high speed broadband starting in 2017. The contract is the seventh for Kacific, which plans a Ka-band High Throughput Satellite (HTS) known as Kacific 1 to serve the Pacific market. The coverage is to include Indonesia's more than 17,000 islands, providing broadband to BigNet customers with 75cm to 1.2m diameter inexpensive Very Small Aperture Terminals (VSATs). Christian Patouraux, CEO of Kacific called the deal "the largest proof we have had to the key underlying belief behind the vision of the founders of Kacific: broadband Internet demand is stifled by the current high prices," adding that "bringing connectivity with disruptively low cost can unlock tremendous untapped demand in the South-East Asian and Pacific countries." Indonesia is the fourth most populated country on Earth, following China, India and the United States. The country's 250 million inhabitants constitute 3.5 percent of the global population. BigNet CEO Nicolas Tannady expects the HTS service will create opportunities for government and enterprise users to provide services in regions that would otherwise be underserved. "Both companies believe that if you lower the price of broadband sufficiently you will generate demand and create a market where others thought none existed in countries like Indonesia," said Patouraux.

Inmarsat Appoints MVS USA as Maritime VAR for Global Xpress

Inmarsat has appointed MVS USA, one of the company's founding distribution partners, as a Value Added Reseller (VAR) for Global Xpress in the maritime market. The company will sell the FleetBroadband Xtra and Fleet Xpress products, which leverage the high throughput Ka-band constellation. MVS' representative office in Cyprus has Inmarsat's GX service on-boarded, and intends to launch a similar demo site at its New York area showroom later this year. The companies are planning the first beta-testing project with a ship-owner operating in the Mediterranean Sea.

Lepton Starts North America Managed Satellite Services on Intelsat's Horizons 1

Lepton Global Solutions has launched a managed satellite network service for enterprise and government markets in North America. The company is providing services through Intelsat's Horizons 1 satellite at 127 degrees west, and a Lepton-owned iDirect hub collocated with the operator's Paumalu teleport on the island of Oahu, Hawaii. Lepton will offer customized, managed turnkey satellite communications with network infrastructure designed to protect sensitive communications. The company plans to manage the end-to-end service from its Secure Operations Center (SOC) located at its Vienna, Va. headquarters.

Globalstar Launches SmartOne C Simplex Asset Manager

Globalstar has released the SmartOne C, a new one-way asset manager for commercial and government customers. The simplex device builds on the company's existing SmartOne B model with new features for monitoring and managing fixed and portable assets. The SmartOne C uses an accelerometer to alert owners of any unexpected motion, and also employs motion sensors, comparative Global Positioning System (GPS) data, and custom configured sensors to gather and transmit asset status information. The device includes features such as a reduced messaging mode, lowering the rate of messages when an asset

remains in the same location, and an automatic switch to batteries should line power fail or experience an interruption. The device weighs 3.6oz, including four batteries and mounting hardware, and has more than 1.5 years of battery life using AAA 1.5V lithium batteries. "Harnessing the power of the Internet of Things has the potential to help businesses and governments realize numerous operational efficiency benefits. The reliability and reach of our global [Low Earth Orbit] LEO satellite network allows us to offer a superior [Machine-to-Machine] M2M management service and with the launch of SmartOne C, we can continue to provide compact, feature-rich, cost-effective solutions," said Jay Monroe, chairman and CEO of Globalstar.

Belarus' Belintersat Project Prepares for Inaugural Telecom Satellite

Belintersat, the new national satellite operator of the Republic of Belarus, is less than a year away from the launch of its first spacecraft. Established by the government for the purpose of creating a modern satellite communications and broadcasting infrastructure throughout the country, the organization is readying for the day its inaugural satellite, Belintersat 1, goes live at 51.5 degrees east. China Great Wall Industry Corporation began manufacturing Belintersat 1 in 2012, with the Export-Import Bank of China securing a preferential credit line for the project. The satellite is scheduled to launch during the fourth quarter of 2015 or the first quarter of 2016 from China's Xichang Satellite Launch Center. After a three-month period of in-orbit testing, Belintersat 1 will begin providing telecommunications services in C and Ku band. The satellite is designed for a 15-year lifespan with 20 C-band transponders and 18 Ku-band transponders, of which four of the Ku-band transponders are 54MHz instead of 36MHz. Now with the satellite nearly complete, Belintersat is preparing to provide telecommunications services for Belarus and international markets.

First GPS 3 Satellite Integrated, Ready for System-Level Testing

Lockheed Martin has completed the

final integration of the first Global Positioning System 3 (GPS 3) satellite, pairing the system module with the propulsion core and paving the way for system-level testing. Built for the U.S. Air Force, the GPS 3 Space Vehicle One (SV 01) satellite is the first of eight GPS 3 satellites for which Lockheed Martin is under contract. GPS 3 satellites feature improvements over their predecessors, providing three times the accuracy and up to eight times the anti-jamming capabilities of GPS satellites launching today. Each is designed for a lifespan of 15 years, a 25 percent increase over currently launching GPS spacecraft. The satellites are also the first to be interoperable with other international Global Navigation Satellite Systems (GNSS) by using the L1C civil signal. "This summer, SV 01 will begin thermal vacuum testing, where it will be subjected to simulated harsh space environments. Successful completion of this testing is critical as it will help validate our design and manufacturing processes for all follow-on GPS 3 satellites," said Mark Stewart, VP of Lockheed Martin's navigation systems mission area.

Harris Completes Final Testing of NOAA's GOES-R Series Ground Segment Infrastructure

Harris Corporation has successfully completed the final two tests of the ground segment of the National Oceanic and Atmospheric Administration's (NOAA) Geostationary Operational Environmental Satellite - R Series (GOES-R). The ground system is now ready for use by NOAA as it prepares for the GOES-R satellite launch in March 2016, with Harris providing training and operations support. Through testing and verification, Harris demonstrated the ability of the GOES-R Series ground system to generate weather products at all operational sites. Harris also performed successful interface testing with the National Weather Service's (NWS) Advanced Weather Interactive Processing System, including the ability to send continuous images processed by the ground system. Once launched, the GOES-R satellite, the first of the series, will be a primary tool for detecting and tracking hurricanes and other severe weather in the Western Hemisphere, reducing risks to lives and property. The ground system is an enterprise-wide network

backbone, which will ingest, process and distribute 40 times more data to the NWS than current systems and to more than 10,000 other direct users. It also will provide command and control of the GOES-R constellation of satellites and their onboard instruments. Harris is the prime contractor and systems integrator for the GOES-R Series ground segment, which includes 2,100 servers, 149 racks of network equipment, 317 workstations and storage services totaling three petabytes. The system also contains 454 blade servers for product processing and distribution across all environments, delivering approximately 40 trillion floating-point operations per second of processing power. In addition, the GOES-R ground segment architecture has a flexible design that will support additional requirements in the future.

Kratos Epoch IPS Ground System Supports Two Japanese Micro-Satellites

Kratos Defense & Security Solutions has announced that an Epoch IPS ground system from Kratos Integral Systems International (Kratos ISI) is providing command and control for two Japanese micro-satellites. The University of Tokyo developed the Hodoyoshi 3 and Hodoyoshi 4 spacecraft as part of the FIRST program of the Cabinet Office of Japan. Launched in June 2014, the satellites are now operational and transmitting Earth observation images. The Epoch IPS system was provided under the contract with Fujitsu Limited Japan and Integral Systems Japan to support development and testing of the micro-satellites at the University of Tokyo and provides command and control for them once in orbit. The Epoch T&C Server and the Epoch Client modules provide command and control for the satellites. The server provides complete off-the-shelf satellite telemetry and command processing for operations and test environments. The client provides complete operations capability for real-time monitoring and control of all satellite and ground equipment systems and functions. Hodoyoshi 3 has 40-meter and 200-meter GSD cameras and Hodoyoshi 4 has a 6-meter GSD camera to capture Earth remote sensing images. Hodoyoshi 4's first wide-angle camera image was successfully downlinked. Newly

developed advanced components such as a high-speed X-band transmitter and an ion propulsion system will also be tested on Hodoyoshi 4.

Kratos Wins Ground System Contracts for Thaicom 8 Satellite

Thaicom has awarded Kratos Defense and Security Solutions with two contracts for ground systems to support the upcoming Thaicom 8 satellite. The first contract is for a Satellite Control Center. Kratos Integral Systems International (ISI) will provide the satellite control system based on the company's Epoch command and control and Oasys flight dynamics solutions. The Epoch Integrated Product Suite (IPS) is an all-in-one satellite fleet management system with the ability to simultaneously control multiple satellites from different manufacturers from a single consolidated system. Kratos ISI's U.K team will provide the Tracking, Telemetry and Command (TT&C) earth station, which will include an 11 meter C-band turning head antenna with a monopulse tracking system and fully redundant RF system. Procured through the second contract, the system will support both nominal on-station and emergency TT&C operations with a frequency-agile RF system and continuous wide-angle steering, combined with pointing and tracking from its precision drives system. Built by Orbital ATK on the GeoStar 2 platform, the Thaicom 8 satellite will carry 24 Ku-band transponders to serve customers in Thailand, South Asia and Africa. The satellite is scheduled to launch in the first half of 2016 aboard a SpaceX Falcon 9 rocket.

Ukraine Ready to Continue Cyclone 4 Launch Program with Brazil

Ukraine has expressed its intention to continue with the Cyclone 4 launch vehicle program. Oleh Uruskyi, president of the State Space Agency of Ukraine, confirmed this during an April meeting with Alcantara Cyclone Space's general assembly, and requested that Brazil inform Ukraine about its official position regarding continuation of the Cyclone 4 project. Delayed from its scheduled inaugural launch in 2014, the Cyclone 4 rocket

has been jeopardized by a number of factors including Russia's invasion of Ukraine in February 2014. According to a May 6 press release, Alcantara Cyclone Space's board of directors has requested discussion with the general assembly to make a decision regarding the bi-national project. The meetings also resulted in the approval of the company's annual report on activities and financial statements for 2014, opinions of the independent and internal audits of the company, and the amount of remuneration for management out to March 2016.

Inmarsat Expects Revenue Boost from Completed Global Xpress Constellation

Inmarsat is confident that the upcoming launch of the third satellite in the Global Xpress constellation will open the floodgates for new business. The date for full commercial service has slipped slightly again, now from early in the second half of 2015 to mid-to-late third quarter. Nonetheless, Inmarsat expects no material impact from the delay on revenues in 2015 or its growth trajectory for 2016. "As we've said since the start of the program, we expect global coverage to be the takeoff point for GX revenue growth. The launch of regional service on F1 at the half year in 2014 enabled some customers, in particular various U.S. government users, to start to trial and then buy GX and to commence operations over the network," Rupert Pearce, CEO of Inmarsat, said during the company's first quarter earnings call. "However, many of our largest customers including many U.S. government as well as commercial customers in target markets for GX, have been waiting for global coverage before they commit to buying and deploying in bulk. And when F3 enters commercial service and we have full service available globally, that will be the trigger for them." Inmarsat 5 F3, the third spacecraft in the Ka-band High Throughput Satellite (HTS) constellation, shipped recently from Boeing's El Segundo facility in Los Angeles, Calif., to the Baikonur Cosmodrome in Kazakhstan. International Launch Services (ILS) is slated to conduct the mission using a Proton rocket in June. Despite the delays of ILS' current Mexsat 1 mission — which a satellite issue elicited and not a launch vehicle problem — Pearce said Inmarsat is not concerned

about any read-across to its launch date or satellite. The Mexsat 1 satellite, also known as Centenario, is the first of three Boeing-built satellites for the Mexican government's Ministry of Communications and Transportation. The GX satellite network is a \$1.6 billion investment that Inmarsat expects will generate annual revenues of \$500 million by the fifth anniversary of the commencement of global services. The first GX satellite launched in December 2013, and the second satellite in February 2014. Following this, the failure of a Federal Proton mission introduced a significant delay in achieving global services. Still, Inmarsat has signed customers on GX, of which one notable capacity buyer is the U.S. government. Though government sales were down in the quarter by \$12.7 million to \$66.8 million, Pearce expects this sector to be a major user of GX services. Pearce added that much of the U.S. government's current interest in GX has been for regional services. Boeing is a prominent partner of Inmarsat's for sales to the U.S. government and Pearce expects this will be an important component of GX's success in the early years. Aviation is another top market for GX in which Pearce highlighted progress. Inmarsat now has approval from 11 countries for the ground component of its European Aviation Network, and 25 of 28 European Union (EU) states have issued S-band licenses for EuropaSat, currently under construction by Thales Alenia Space. The hybrid system comprised of the EuropaSat satellite and an Air-to-Ground (ATG) network, will be compatible with GX. Pearce said he expects regulatory concerns will be largely retired by the end of this year, paving the way for rapid deployment in 2016. Inmarsat's fourth GX satellite, I-5 F4, is under construction by Boeing. The company said in its earnings report that the spacecraft remains on schedule for completion in mid-2016, with a potential SpaceX launch in the second half of 2016. The fourth satellite could serve as a spare in the event of a launch failure, or alternatively as a means to support incremental growth opportunities.

Arabsat, Globecast Launch OTT Service

Arabsat has started a multiplatform Over-The-Top (OTT) television service with long-term partner Globecast called Arabsat TV Everywhere. The service builds on the Arab States

Broadcasting Union's (ASBU) Global Arabic Bouquet, bringing content to devices such as computers, smartphones and tablets. Globecast's end-to-end solution includes content preparation; content management; application design and development; delivery and a player for Arabsat. Together Globecast, Arabsat, and ASBU have grown the reach of the Global Arabic Bouquet to five continents Free to Air (FTA). "The world of OTT service delivery is one that's growing rapidly. You only have to look at the growth in the sale of connected devices to see why," said Khalid Balkheyour, president and CEO of Arabsat.

Hughes Creates Combined Portable BGAN Terminal with Inmarsat

Hughes Network Systems has released a portable BGAN terminal for communications-on-the-move (COTM) applications. The Hughes 9211-HDR docks with a Class 10 or Class 11 vehicle mounted active tracking antenna for BGAN COTM enabled through Inmarsat. Targeted for media, government, emergency responders and remote workers, the device can connect at background IP speeds of more than 400 kbps in both transmit and receive, while being used as a portable or on-the-move application. "As we continue to evolve and enhance our BGAN service, we anticipate a broad range of new applications that the 9211-HDR will enable, which will add significant value for our customers around the world," said Greg Ewert, president of enterprise at Inmarsat.

Inmarsat Debuts First IsatPhone 2 Vehicular Antenna

Inmarsat has launched the company's first vehicular antenna for the IsatPhone 2. Designed by AeroAntenna Technologies, the new external, vehicle-mounted, active antenna enables IsatPhone 2 voice connectivity while on the move by providing "line of sight" to a satellite while a user is traveling. Inmarsat anticipates the new antenna kit will be beneficial for organizations with teams travelling in remote locations, where constant contact is essential to work and safety. The omni-directional antenna has an ultraflex cable for easy

Beyond Connectivity

11th May, 2015

Ritz Carlton West Bay Lagoon, Doha, Qatar



Beyond Connectivity 2015 Meeting the digital agenda: “Maximizing Telcos’ revenues through harmonized excellence”

Report Sponsored by:



SAMENA’s annual conference Beyond Connectivity was held in Doha on May 11, 2015, and discussed a number of issues revolving around the theme of the event, Meeting the digital agenda: “Maximizing Telcos’ revenues through harmonized excellence”.

Industry challenges and major issues such as achieving the digital agenda, the rise of spectrum needs, cooperation across content stakeholders, digitization in the SAMENA region, and international roaming, among others.

This year’s BYC convened industry leaders on this very important subjects facilitating the thought provoking discussions and helping devise the effective strategies to tap the enormous potential that exists in terms of industry revenue & growth in the SAMENA region. This year’s Beyond Connectivity was a great help at a time when telcos around the region are under in the quest for to maintaining profit and revenue growth amid the telecoms & ICT industry’s continued journey into the digital age.

This year’s BYC topics of discussion include:

- Achieving the digital agenda – Key milestones across different verticals
- The rise of spectrum needs – WRC15 preparations
- Emerging trends in satellite broadband
- International mobile roaming regulations

- Cooperation across content stakeholders

The event was held with kind support from, Vodafone Qatar and Devoteam, among others. CEOs and other Industry leaders from around the region and beyond, shared vital business insights, policy & regulations knowledge, and market experiences. Executive leaders and senior decision-





makers from the region's leading telecom operators such as Vodafone Qatar, Ooredoo, Yahsat, ICANN, O3b, and as well as from technology providers, regulatory bodies and industry associations shared their valuable insights with the audience. Mr. Bocar A. Ba, CEO of the SAMENA Council in his welcome speech said that "the SAMENA Council's Beyond Connectivity Conference this year represents a key milestone in the Council's progress towards achieving the Digital Agenda. The participation of the different telecom industry stakeholders in the conference reflects the spirit of cooperation towards building consensus around major industry challenges and opportunities like: achieving the digital agenda, the rise of spectrum needs, satellite broadband emerging technologies, international mobile roaming and the cooperation across the content stakeholders."

Mr. Ahmed Al Derbasti, Group COO of Ooredoo, while representing the chairman of the SAMENA Council, Dr. Nasser Marafih, Group CEO of Ooredoo, in his opening speech

shared that "the Summit is an unrivalled industry platform for our region, helping facilitate the meaningful discussions among the industry stakeholders. This is important as the future of our industry is dependent on our ability to

work together to find solutions to the issues discussed today. As an industry we have a responsibility to provide the best possible service for the people of this region and to continue removing the barriers which prevent us from fully supporting their increasingly digital lifestyles." He further added that "broadband connectivity is an essential element in order to enable the knowledge base economy and that all the stakeholders of the industry need to work together so as to help materialize the long terms socio-economic benefits.

Mr. Mohammed Al Yami, Chief External Affairs Office at Vodafone Qatar, said: "On behalf of Vodafone Qatar, I would like to thank SAMENA Council for the opportunity to help organize and to be part of this valuable and important event. Beyond Connectivity has, since beginning, proved to be a great industry platform that has sparked

countless interesting debates, thoughts and recommendations. Over the past 6 years, Vodafone's role was and remains as one of the key enablers of the digital agenda of the country backed by our steadfast commitment to continuously invest in the development of the sector. However, our nation and region's digital ambitions cannot be achieved unless we all work together towards the common goals for the benefits of our industry, our customers and our stakeholders."

Ms. Reem Al-Mansoori, Assistant Undersecretary for Digital Society Development, Ministry of Information and Communications Technology, ictQATAR, highlighted the significance of adoptions of ICTs and its role in becoming a knowledge economy. She added that "it is also in line with the Human Development pillar of



the Qatar National Vision 2030. We are making considerable progress in increasing connectivity, improving digital literacy and fostering economic development through ICTs."

Mobile operators today face a disruptive landscape, with increased





competition from a variety of players, exponential growth in mobile data usage, industry consolidation and regulatory change,” said Peter Lyons, Director, Head of MENA, GSMA. “Against this backdrop, operators are strategically aligned on important issues such as consumer trust and the value of being local, the relevance of the SIM, as well as the importance of global interoperability and scale. The GSMA is focused on driving collaborative action to enable operators to capitalize on new technology and market opportunities and address industry challenges, while providing significant socio-economic benefits for consumers, businesses and governments globally.”

Panel sessions at the summit opened with an engaging discussion on the topic ‘Achieving the Digital Agenda’ that sought to identify the measures of success vis-à-vis the implementation of the digital agenda and explore constructive solutions to the economic, regulatory and security challenges that might hinder the adoption of a truly digital society. Participants also discussed the possible socio- economic benefits

of the Digital Agenda focusing on the impact of connectivity on human capital in particular. Similarly, the second panel discussion was on “The rise of spectrum needs – ITU WRC15 preparations and panelists highlight the significance of spectrum for the cellular industry by coining the terms “fuel of the mobile industry” for spectrum. Experts at the panel agreed on the evolving demand for spectrum in order to meet or exceed the expectations of the end users both in terms of quality and cost of service. The significance of spectrum harmonization on regional basis was also discussed and at the same time the need for innovative spectrum allocation model was addressed.

“Emerging trends in satellite broadband”, the third panel discussed the evolving trends in the regional satellite broadband industry and the potential therein. A number of sectors were highlighted which can prove to be of huge value in terms of revenue for the satellite broadband players. A number of important issues including “bill shock prevention measures” and GSMA’s “roaming transparency initiative” were discussed in the 4th panel which was on the subject of “International mobile roaming

regulations.” Panelists highlighted the fact that the industry still need to explore innovative models to encourage subscribers to use data roaming amid the competitive pressure from OTT players.

Various panels discussed the motivation for digitization within the SAMENA region, cooperation across content stakeholders, the challenges being faced and the possible ways to overcome these challenges, all in light of the theme of Beyond Connectivity.

Following the region-wide cooperation and collaboration with the industry stakeholders, its



continuously increasing contribution to the telecoms & ICT landscape of the region, SAMENA Council is committed to focus on digitization and broadband investment policies, and aims to highlight the need to meeting the digital agenda as well as cooperation among key ICT industry stakeholders.





2015 TELECOM LEADERS' SUMMIT

Emphasizes Strong Need to Establish Close Cooperation between Government & Industry Stakeholders to Meet the Growing Demand for Broadband & Connectivity

Emphasizing the strong need to establish a strong base of cooperation with governments and industry to meet the growing demand for broadband and connectivity, SAMENA Council's 2015 Telecom Leaders' Summit took place recently in the esteemed presence of His Highness Sheikh Nahyan Bin Mubarak Al Nahyan, Minister of Culture, Youth and Community Development in the UAE.

Addressing the leaders attending the Summit, His Highness Sheikh Nahyan, said: "Successful action demands cooperation among the many stakeholders in the broadband universe. Moreover, you operate under ever-increasing pressure from the ultimate stakeholders, the millions of consumers in the SAMENA region, who wish to be connected

more reliably, more swiftly, more inexpensively, and more securely. Global citizens are counting on telecom entrepreneurs to succeed. The SAMENA Council aims to develop a unified voice among operators and

service providers in cooperation with national administrations to enable, to shape, and to affect changes in policies and regulations."





His Highness Sheikh Nahyan added, "The President of the UAE, His Highness Sheikh Khalifa Bin Zayed Al Nahyan has always sought productive cooperation among governmental agencies, business and corporate leaders, and the people who live and work in the country. We have for over forty-three years visualized new opportunities and figured out the best ways to put our new ideas into action successfully. We have realized that successful action demands compromise and cooperation among the many stakeholders in our country. Compromise and cooperation have been particularly vital because we have always forged our way into an unpredictable future. What is reasonably predictable about our future, however, is the absolute need to be connected within our country, our region, and our world. We depend on you telecom leaders for those connections," His Highness Sheikh Nahyan concluded.

"The industry is going through major

transformations. Currently, there are about 3.9 billion mobile subscribers and by 2020 this number is expected to rise to almost 5 billion mobile subscribers with the ratio of 10 IP connected devices per subscriber. This will result in the creation of approximately 40-50 billion connected devices by 2020. Operators are

therefore facing huge challenges and we have to establish excellence as a standard in our efforts to create a strong base of cooperation between the public and private sectors," said **Bocar BA, Chief Executive Officer, SAMENA Council.**

Speaking on the occasion, **Mr. Shiyaohong, Huawei Middle East President**, said, "The availability of fast ubiquitous broadband connectivity is transforming the telecommunications landscape in the region as we work towards our vision in building a better connected world. For 15 years in the

Middle East, we understand that cross-industry cooperation and placing the customer at the heart of our innovations is crucial for progress as the industry continues to evolve. The Telecom Leader's Summit is a great way for Huawei to show our gratitude to our loyal regional partners and

support the growth of the Middle East's broadband economy. Our end-to-end solutions connect systems, businesses, cities, societies and people in order to transform industries, improve efficiencies, creates better experiences for everyone and pushes the boundaries of ICT industry."

Hosted by Huawei for a second consecutive year, the Summit gathered leaders, policymakers, regulators, telecom operators, Internet players and technology providers, including Dr. Nasser Marafih, SAMENA Council Chairman and Group CEO – Ooredoo Qatar; **Mr. Yang Yougui, Middle East President**, Huawei; Dr. Khaled H. Biyari – CEO, STC Group; Dr. Kamal Shehadi – Chief Legal and Regulatory

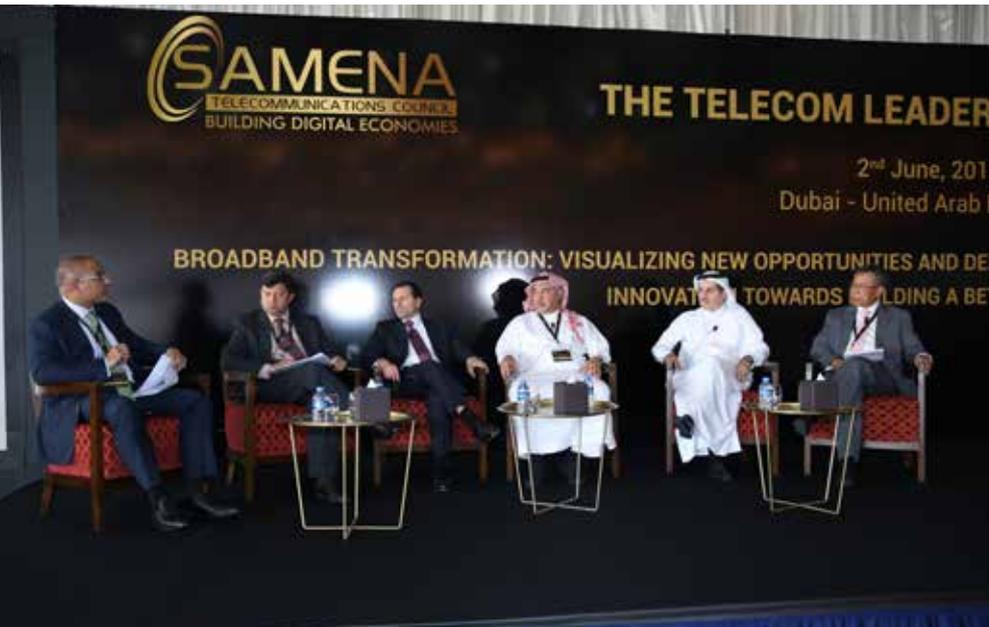


Officer, Etisalat Group; Dr. Syed Ismail Shah – Chairman, PTA Pakistan; Tony Wong – Head of FBB Business Consulting, Huawei; Jean-Francois Thomas – CEO, Orange Jordan; Dr. Hamadoun Toure – Former SG ITU; Safder Nazir – Regional Vice President Smart Cities & IoT, Huawei; Hakam Kanafani – Chief Adviser and Board Member, Turk Telecom Group; Maciej Witucki – Chairman of the Supervisory Board, Orange Poland; Ihab Ghattas – Assistant President of Middle East, Huawei.

The summit also witnessed three panel discussions where panelists deliberated on a number of issues facing the telecom industry today, under the theme "**Broadband Transformation: Visualizing New Opportunities and Defining Urgent Imperatives in Stakeholder Cooperation - Innovation towards Building a Better Connected World.**"

As part of the first panel discussion on the topic "Broadband Infrastructure Deployment in the SAMENA Region", speakers turned the spotlight on





suitable services to citizens. They further highlighted that while certain aspects of digital innovation are negatively affecting the quality of human interactions, Smart Cities aim to facilitate increased productivity.

The concluding panel on the topic "Accelerating Broadband Development to Drive Citizen-Centric Innovation" focussed on adoption of smart regulation to help bridge the digital divide, building a truly digital society and sustainable digital economies, the leading role of telecom operators in empowering the evolution of citizen-centric digital solutions and services, and strategies to meet the massive current and future mobile data demand especially in the domain of video content. All the participants agreed that the ecosystem is much bigger than operators and vendors and that all stakeholders should cooperate to define and build smart regulations.

balancing innovation, investment and inclusion against the backdrop of an ever growing need for connectivity. It was highlighted that 73% of the population in the SAMENA region is covered by 3G while 65% has access to relevant content and 54% can afford broadband. Leaders explored answers to barriers that continue to hinder broadband connectivity and usage in the SAMENA region in addition emphasizing affordability as one of the main challenges. Panellists agreed that the rising demand for data has made the Internet and broadband a human right and that mobile alone cannot cater to this demand indicating the need for governments and policymakers to support infrastructure development through investment-friendly policies. There was also widespread agreement that regulations and business models that worked for the industry 10-15 years ago are no longer effective and that broadband is a core prerequisite

for greater connectivity.

The second panel on the topic "Stakeholder and Cross-Industry Cooperation in the Age of Smart Cities" aimed at exploring means of enabling the smart city vision to pave the path for the creation of smarter digital societies, identifying priorities of digital development taking into account data security and privacy and the interdependencies of emerging technologies for smart cities. The speakers initiated the discussion by setting the definition of a Smart City as a connected city where citizens can exercise all their rights using technology as an integral and effective tool. Panellists agreed that a stronger partnership and openness with other parties is crucial to provide



The speakers also highlighted the critical nature of Investment-friendly policies for the development of the telecom sector.





#304, Alfa Building, Knowledge Village, PO. Box: 502544, Dubai, UAE.
Tel: +971-4-364-2700 | Fax: +971-4-4369-7513

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