Volume 05, May, 2017

A SAMENA Telecommunications Council Newsletter

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SAMENA TRENDS

EXCLUSIVELY FOR SAMENA TELECOMMUNICATIONS COUNCIL'S MEMBERS

BUILDING DIGITAL ECONOMIES

The Digital Transformation - Driving the Engine of Economic Growth 25

The eSim Revolution is Coming to the Middle East 35

Featured

Sh. Nasser bin Mohamed Al Khalifa
Deputy General Director
TRA Bahrain

INCREASING COST AND OPERATIONAL EFFICIENCIES

"Telecom operators can reduce opex by 30-40% by eliminating the complexities accumulated during their growth phase"

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SAMENA TRENDS

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CONTENTS

04 EDITORIAL

10 REGIONAL & MEMBERS UPDATES
- Members News
- Regional News

37 SATELLITE UPDATES
- Satellite News

49 WHOLESALE UPDATES
- Wholesale News

58 TECHNOLOGY UPDATES
- Technology News

71 REGULATORY & POLICY UPDATES
- Regulatory News
- A Snapshot of Regulatory Activities in the SAMENA Region
- Regulatory Activities Beyond the SAMENA Region

05
SAMENA COUNCIL ACTIVITY

08
FEATURED
Sh. Nasser bin Mohamed Al Khalifa
Deputy General Director
TRA Bahrain

ARTICLES

25 The Digital Transformation – Driving the Engine of Economic Growth

35 The eSim Revolution is Coming to the Middle East

46 GCC Telcos: Is a Digital Operational Turnaround Overdue?

54 Middle Eastern Telcos - Where is the Next Efficiency Frontier?

CONTENTS

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Increasing Cost and Operational Efficiencies

For operators, seeking improvements in operational efficiency and cost structures usually implies migrating to more advanced networks. But there is more to that: Many inefficiencies are not related directly to the network but to the growth phases that operators have been going through. Thus it has become critical to eliminate unnecessary complexities accumulated over the years since operators started as PSTN operators, but now are transitioning into becoming digital service providers.

To be objective, unnecessary complexities that operators need to overcome in order to transition forward into the digital realm are, in many ways, similar to redundancies that regulators also need to eliminate. This is so, because both operators and regulators have "grown" over the years and thus what may have worked in earlier phases of development and progress may no longer work. In fact, it will not work.

Expectations from the digital communications industry are now much more complex and intertwined than they have ever been. What this implies then is that all forms of internal inefficiencies at the operational level - whether as a regulator, policymaker, or as a network operator or a service provider - should be eliminated to be able to successfully manage complexities that exist externally.

Investments needs to happen in innovation and in products and services that comply with end-user behavior, future digital trends, and ICT visions set forth both by nations, individually, and by the world, collectively.

On many accounts, however, there is a need for greater predictability of investment and regulatory certainty before investment commitments in innovation can be made. Moreover, with clear regulatory rules, which, at best, should be in compliance with emerging industry requirements and sector-agnostic, more attention can be given to better innovative products and digital offerings by the private sector.

A new regulatory regime is needed that is collaborative across sectors and facilitates and enables co-operation between ecosystem players to drive investment, local value creation, and customer benefit.

As digitization has been reshaping the digital communications landscape, increasing efficiencies has become a function of rebuilding market positions, revamping business systems, and following new paths to innovation. The digital communications industry, while having overcome some issues by virtue of having evolved at its own pace, continues to struggle in addressing some basic regulatory reform requirements and in creating enabling environments. With region-wide collaboration and understanding of digital transformation trends and needs, and with measureable ICT policy planning in mind, which can help accelerate digitization within the region, new reform requirements can be better defined and visions aligned.

The pursuit of efficiency is a consideration for both operators and regulators, and it seems that just as operators can no longer afford just to be mere connectivity providers, regulators too no longer should just be regulators; both need to become partners in success and write new rules of mutual co-operation and engagement. In so doing, new rules in achieving operational efficiencies can be written and put into practice for times to come.

Bocar A. BA
Chief Executive Officer
SAMENA Telecommunications Council

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POST EVENT REPORT

Leaders' Summit 2017
A Call for Action on
Aligning Visions and Making Transition
to Digital More Inclusive and Less Disruptive

Aligning Visions to Meet the Demands of the Digital World

This year's Leaders' Summit emphasized to industry stakeholders of the digital communications industry that connectivity for everyone is a basic human right and it is exponentially transforming from being physical to virtual. It was reiterated that digital is the new way of life, and thus the industry must work tirelessly, driven by innovation and co-operation, to capture its true value, develop new pricings systems and do everything in its collective power to connect everyone to the Internet; with the aim of eliminating digital divides, which still persist and may still be growing, despite high rate of adoption of connectivity services and investment by telecom operators. The industry must also work collaboratively to go beyond connecting people to promoting the usefulness and the relevance of digital communications in the evolving human society. The address of the UAE's Minister of Culture and Knowledge Development, HH Sheikh Nahyan bin Mubarak Al Nahyan to the leaders of the public and private sectors helped place emphasis on the need to reduce confusion, conflict, and uncertainty in order to transition well into the digital future.

The expectations of the industry were clearly expressed in words, which carried as much implication to them as there was inspiration: "Your foresight and wisdom are needed to help make that transition [from physical to the Internet-driven world] more inclusive and less disruptive for everyone. I am grateful that you are taking your responsibilities seriously as evidenced by this forward-thinking Leaders' Summit." Some of the key messages from the panel discussions included following:

- The industry must transform to share in the value of the new digital world through collaboration in building and sharing infrastructure; diversifying into content and other sectors, including healthcare and education; embracing IoT to stimulate increased network use and moving into analytics; and applying new business models, including the advertising model.
- Operators need to take a critical look at their internal operations and structures and re-evaluate their position in the ecosystem.
- Refreshed thinking of subscription model is needed; but unlimited data packages do not make business sense.
- Regulators and governments must be more technically proficient and should enable growth in network use.
- There should be general data protection regimes or laws, as they incentivize operators. Such laws, however, should not be sector-specific. Broader, general data protection is most desirable.
- Regulations should be ex-post, not ex-ante. Sector-specific regulation is not desired.

With the purpose of aligning the industry stakeholders on the creation and provision of digital services, the discussions also invited attention on reducing costs, increasing flexibility to deliver new digital services through cloud for a better customer experience, meeting policy efficacy and regulatory efficiency requirements for facilitating fair and healthy business practices, and creating open digital platforms.

To enable effective digital transformation and accelerate digitization, the digital communications industry requires a makeover, including a revamp of current regulatory regimes; operator business models; and multi-stakeholder approaches that should be sector-agnostic and collaborative. Understanding challenges of the digital economy and the stakeholders' need for aligning visions to meet the demands of the digital world are new collaboration imperatives for shaping the future of the digital marketplace.

To enable effective digital transformation and accelerate digitization, the digital communications industry requires a makeover, including a revamp of current regulatory regimes; operator business models; and multi-stakeholder approaches that should be sector-agnostic and collaborative.

The SAMENA Telecommunications Council's Leaders' Summit, held in partnership with Huawei Middle East, sponsored by Nokia, Ericsson, du and Etisalat, and with the patronage of Telecommunication Regulatory Authority (TRA) of the UAE, proved yet again to be a well-received annual collaborative and communication-centric industry-wide experience, created by SAMENA Telecommunications Council for the leaders of the public and private sectors of South Asia, the Middle East, North Africa, Asia, Europe and beyond.

Sh. Nasser bin Mohamed Al Khalifa
Deputy General Director
TRA Bahrain

Increasing Cost and Operational Efficiencies

Q. What is the latest developments in GCC roaming regulation and what can the consumers expect?

A. At the moment, the Roaming Working Group is observing the evolution of the marketplace. The Roaming working group is also reviewing the current consumer protection measure being implemented by the operators to assess whether any additional measures are required in the future.

Q. What has been the most critical motivational factors for the GCC region to introduce the roaming regulation?

A. The roaming working group has been very keen on two aspects in terms of the regional roaming regulation and they are mainly consumer protection and economic cohesion of the GCC region.

The roaming working group has been very keen on two aspects in terms of the regional roaming regulation and they are mainly consumer protection and economic cohesion of the GCC region.

Q. What are the new approved price caps for the citizens of Bahrain traveling to other GCC countries, and when do these caps take effect in 2017?

A. The new price caps are implemented as part of the 5-year roaming cap evolution and is implemented on a retail level on the 1st of April of each of the 5 years. It started in 2016 and it will continue to be implemented until the final price caps are reached in April 2020. The price drops between 2016 and 2017 are an average or 3% for voice calls made, 20% for voice calls received, 13% for SMS and 35% for data roaming.

TRA Bahrain chaired the Roaming Working Group since it started its work in 2009. The work involved was a collaborative effort, which included all the telecoms regulators within the GCC region and has had several interactions with mobile operators through meetings and consultations.

Q. Please share the brief history of events that led to GCC roaming regulation, and how its implementation in 2017 is different, or is the next step, from 2016?

A. The roaming price concerns started at the Arab level in 2007/2008 through the work of the Arab Regulatory Network (AREGNET). At the same time the GCC council had established a regional roaming group chaired by TRA Bahrain. The GCC Roaming group reached an initial roaming cap for initiated voice calls in March 2010. This was implemented later in 2010. Further to that, the Roaming Working Group appointed a consultancy firm and issued a consultation to mobile operators in 2013. A final report was later submitted to the GCC Telecommunication and Post Ministerial meeting in 2015. Following the approval of this new recommendation, the Mobile service providers in the GCC region where subject to apply such rates as of January 2016.

Q. What has been TRA-Bahrain's role in promulgating this regulation?

A. TRA Bahrain chaired the Roaming Working Group since it started its work in 2009. The work involved was a collaborative effort, which included all the telecoms regulators within the GCC region and has had several interactions with mobile operators through meetings and consultations.

Q. What is your view on the extent to which telecom operators will be affected by the implementation of this roaming regulation?

A. We have observed that operators have been more innovative and have started to introduce better consumer tailored packages. This would lead to better regional cohesion and enhanced regional interaction on various levels and not just within the telecommunication area, especially that the telecommunication services are a base for other regional activities such as trade, tourism and other sectors.

Q. How do you relate GCC roaming regulation to region-wide efforts to digitally transform the region?

A. This Roaming initiative is indeed a step towards a digitally transformed region but for sure if not the only step taken by the GCC Council or its member states.

We have observed that operators have been more innovative and have started to introduce better consumer tailored packages. This would lead to better regional cohesion and enhanced regional interaction on various levels and not just within the telecommunication area, especially that the telecommunication services are a base for other regional activities such as trade, tourism and other sectors.

MEMBERS NEWS

STC Launches $500m VC Fund

Saudi Telecom Company (STC) unveiled a $500 million (€445.6 million) venture capital fund, aimed at stimulating the Middle East's digital ecosystem. Called STV, it will be the largest technology-focused VC fund in the region, investing in promising digital companies. STC said it will help to meet the objectives of Saudi Arabia's Vision 2030 strategy, which aims to overhaul and modernize the economy, diversifying away from oil. "Global telecoms have two choices: to either change or evolve into digital companies, or to convert into a utility. We have elected to go down the first route," said Khaled Biyari, CEO of STC, in a statement. "STC has the potential, resources and strategic assets to make a quantum leap in the technology and entrepreneurial sectors it is working on transforming," he said. STV will have its own independent governance and operating structure, but will be able to leverage STC's assets to enable the companies it invests in to grow and scale. STV will be managed by a combination of international and regional talent. "We believe the region can create its own future and we will invest in the next generation growth engines that will make this happen," said Abdulrahman Tarabzouni, CEO of STV. "The centers of gravity for growth and value across the world's economies and industries will undergo profound transformations due to technology disruptions, and we believe STV will create value for STC and the region amidst these transformations."

Dr. Khaled H. Biyari, STC Group CEO Participates in Saudi Smart Cities Conference

Dr. Khaled H. Biyari, STC Group CEO and during his participation at the Saudi Smart Cities Conference 2017 met Abdullatif bin Abdulmalik Al AlShaikh, Minister of Municipal and Rural Affairs (MOMRA) and discussed the roll of the telecommunication sector and STC in particular to support the ministry to apply the smart cities concept by spreading the broadband services and digitalizing the society.

STC Announces the Successful Trial of Innovative 5G Technologies

Saudi Telecom Company (STC) and Huawei jointly announce the successful trial of the first 5G innovative Massive MIMO network in MENA region. STC completed the testing of the latest 3.5GHz Massive MIMO technology, which is considered as a corner stone technologies enabling core 5G services. It uses a large number of antennas and beam forming to enhance spectrum multiplexing among multiple user equipment (UEs) to improve the end user experience. The new 5G technologies aim at providing huge capacity, better spectral efficiency and lower latency. Widespread 5G connectivity will eliminate information islands, boost the prosperity of a digitalized sharing economy, promote changes to existing production methods and lifestyles. Massive MIMO increases the cell capacity without the need for extra spectrum or additional new sites. Eng. Nasser Al Nasser, Technology & Operations SVP, said: "STC is committed to continuous innovation to provide the best network and services for our deserving customers in the modern digitalized society. This 5G partnership with Huawei is one step forward towards enabling the establishment of 5G networks and pioneering the launch of new 5G services in KSA. Continued Cooperation between STC and Huawei will surely expand the commercial use of 5G and explore further innovations, paving the way to 5G commercial deployments." Edward Deng, President of Huawei Wireless Network, said: "I believe that continuous technology innovation and open collaborations is the key to a successful launch of 5G network and service. As strategic partners, Huawei will continue to cooperate with STC to make strategic investments in 5G technology research and industrialization to make sure STC maintains its pioneering

Eng. Nasser Al Nasser, Technology & Operations SVP

position in the region." STC is always committed to introducing cutting-edge technologies to fully explore the highest potential of its network resources. This deployment resulted in improvement in network performance and consequent enhancement in user experience. This landmark achievement allowed STC to assume its technology pioneering role and explore further communications innovations through the commercial deployment of 5G technologies.

STC to Provide 60% of Funding for State-Backed Fiber-Optic Network

Khalid bin Hussain Biyari, CEO of Saudi Telecom Company (STC), has revealed that his company will contribute 60% of the required funding for the government's fiber-optic broadband project aiming to link 1.3 million households with high speed services by 2020, although Al Arabiya writes that the company may seek external funding if required. As reported by TeleGeography's CommsUpdate earlier this week, STC signed an agreement with the Ministry of Communications and IT (MCIT) and telecoms regulator the Communications and IT Commission (CITC) to provide high-speed fiber-optic services in the Kingdom of Saudi Arabia. The project is estimated to cost SAR7.3 billion (USD2 billion), with more than one firm understood to be involved in its execution; the state will offer direct financial and organizational incentives to all participants.

STC Net Income for the 1st Quarter Increased 5.4% to Reach SR 2.5 Billion

STC Net Income for the 1st quarter increased 5.4% to reach SR 2.5 billion compared to the same quarter last year, and distributes SR 1 per share dividends for the 1st quarter. Gross profit and operating profit for the quarter increased 4.3% and 42.4% respectively compared to the immediate prior quarter Saudi Telecom Company (STC) today announced the company's interim financial results for the period ending at March 31, 2017. STC group net income for the 1st quarter of 2017 increased 5.4% compared to the comparable quarter last year, and increased of 21.3% compared to the immediate prior quarter. Earnings Per share for the 1st quarter grew to reach SR 1.26 compared to SR 1.20 for the comparable quarter last year. In accordance with the approved dividend policy for three years starting from the 4th quarter 2015 which was announced on November 11, 2015, and have been ratified during the General Assembly Meeting on April 4th 2016, STC will distribute a total of SR 2,000 million in cash dividend for Q1 2017, representing SR 1 per share. Commenting on the results, STC Group CEO, Dr. Khaled H. Biyari, stated: "The financial results achieved for the 1st quarter of 2017 reflects the efforts being made to constantly evolve, improve and develop the company's strategy and operations and achieve the best returns for the shareholders. Despite the various difficulties facing the sector, company sponsored programs contributed to improve operational efficiency and cost control leading to improved income and margins. Therefore, net income for the 1st quarter increased 5.4% compared to the comparable period last year. Also, net income for the quarter increased 21.3% compared to the immediate prior quarter as the company managed to reduce the cost of revenues by 4.3% and reduce operating expenses by 13.6% compared to the previous quarter." Dr. Biyari, added: "STC continues to invest in digital platforms to provide unique and innovative services to customers, both individuals and businesses. This goes along with the world economy direction towards the digital economies, also comes under the Kingdom's Vision 2030 and the national transformation plan 2020 and its pursuit of serious transition to the digital economy because of its positive impact on people's lives in health, education, cultural aspects and everything that touches people's lives. The company operates through an integrated program of digital transformation for all internal processes, in addition to digitizing various services both in service delivery and after sales services. As an example, the company recently launched "JAWWY" as an innovative mobile service that provides integrated digital platform for STC customers. In this context, the company also had several meetings with different sectors in the Kingdom to achieve homogeneity of employing modern technology with these sectors both in terms of health, education, financial transactions and other sectors. STC is going in this direction, and monitor the great progress in digital communications and its impact on changing the nature of the Telecom sector. Hence the importance of STC's vision, to continue to adopt initiatives to invest in the development of non-traditional communications infrastructure, especially the transition to digital services, cloud computing services and managed data services with great emphasis on information security."

STC Signs MOU with Optics Company to Deploy Fiber Optic Networks

STC and Optics Company, a subsidiary of the Saudi Electricity Company, signed a memorandum of understanding, which will cooperate in the deployment of fiber optic networks in Saudi Arabia to utilize the potential of the two companies for the dissemination of broadband services in communications and information technology. The agreement was signed by Dr. Khaled Bin Hussain Al Biyari, STC Group CEO and by Dr. Ahmed Sandi, Executive Chairman of Optics Company.

Batelco & Huawei Partner on Fiber Experience Van

Batelco, the Kingdom's leading digital communications services provider, is delighted to introduce its innovative new Fiber Experience Van, in collaboration with its partner Huawei, to allow customers to have a-hands on experience of its fiber broadband services in its fiber ready areas. The brightly colored Fiber Experience Van will be travelling around various areas of the Kingdom of Bahrain where Batelco has developed its state of the art fiber network, to promote the services and offer the best fiber deals in town to existing and new customers. Batelco is offering a variety of packages designed to suit varying needs and budgets. As part of its roll-out of fiber internet services Batelco has been extending its ambitious plan to reach all areas of Bahrain with its fiber network which delivers speeds of up to 500 Mbps. Batelco Bahrain CEO Eng. Muna Al Hashemi said that Batelco has been investing continuously over recent years to expand the reach of its Fiber network to reach all areas including new developments throughout the Kingdom. "We are very pleased with the progress made with rolling out fiber services and with the enthusiastic response from customers. The new van, launched in collaboration with Huawei, will support our fiber drive and deliver fantastic benefits for residents through exclusive offers and discounted rates," she said. Huawei Bahrain Director Tausif Khan said over the past decade, Huawei and Batelco have collaborated on many of the milestones projects in the Kingdom of Bahrain, including the first next generation network deployment, high speed internet broadband in Bahrain. "Huawei is committed to supporting our partners in connecting communities and enriching people's lives through better communication solutions, and towards a Smart Kingdom. Huawei has supported Batelco with innovative telecommunications solutions; we look forward to bringing additional value to the organization and to Batelco's customers." Thanks to the amazing high speeds and reliable service offered by Batelco, customers are able to download movies, stream high definition videos, play online games and upload large files in seconds without experiencing any delays. Bahrain's residents are invited to visit the van to ensure they don't miss out on the amazing super-fast internet deals.

Zain Bahrain sees Revenue Growth

Zain Bahrain, a leading telecommunications provider in the Kingdom of Bahrain, posted a net profit of BD503,000 (US$1.3 million) for the three-month period ending March 31, 2017, down 45% on the BD917,000 (US$2.4 million) reported a year earlier. The operator continues to invest in developing innovative new product offerings with total revenues for the quarter standing at BD18.3 million (US$48.5 million), up 14% year-on-year from BD16.1 million (US$42.7 million) in Q1, 2016. Zain Bahrain's customer base stood at 845,000 at the end of Q1 2017, up 5% from 807,000 a year earlier. Zain Bahrain Chairman Shaikh Ahmed bin Ali Al Khalifa said: "2016 was an exceptional year, with heavy investment in innovative new technologies and services that will enable Zain Bahrain to deliver an unsurpassed digital lifestyle to our customers. This has meant a decrease in net profits even as overall revenues have risen during this quarter, as we continue to develop the most competitive packages in the market and create new product offerings to transform the user experience, tap into unexplored niches, and create additional value for our shareholders. This strategy will guide Zain Bahrain as it continues to face the pressures of intense competition and a highly saturated market." The first quarter of 2017 saw the launch of the 21st Zain Experience Shop in the Kingdom, at Wadi Al Sail Mall in Riffa. The new store provides a complete range of products and services, including mobile and broadband services, along with the latest handsets and other electronic items. Open seven days a week from 9am to 10pm, it underlines the operator's commitment to being easily accessible to customers across the Kingdom. Zain Group signed a number of key agreements with service providers to provide enhanced digital lifestyle products to customers. Zain Group and iflix, the world's leading Internet TV service for emerging markets, established a joint venture, 'iflix Arabia', to bring iflix's world class service to the Middle East and North Africa (MENA). The commercial launch of iflix Arabia across the MENA region is planned for Q2, 2017, at which time iflix

Arabia will offer Zain mobile customers an extensive range of thousands of TV shows, movies and more with Arabic and English subtitles, including many first run exclusives and award winning programs. Zain Group has also inked an agreement with YOYO, one of Turkey's most innovative digital startups, to bring an exciting new car sharing concept to Bahrain. The app allows users to book vehicles of their choice, unlock them via their smartphones or membership cards, and return them to designated locations after use. The service will be piloted in Bahrain in Q2 2017 before being rolled out across the MENA region, and will enable Zain Bahrain to tap into a market that is forecast to reach as high as US$30 billion worldwide by 2020. Zain Bahrain took part in the Mobile World Congress (MWC) in Barcelona, where its booth was visited by Bahrain's Minister of Transportation and Telecommunications, Engineer Kamal bin Ahmed. The Minster held talks with Zain Group Executive Management and Zain Bahrain General Manager, Mohammed Zainalabedin, in which they discussed the telecommunications industry in Bahrain and its role in driving development and creating economic opportunities. They also discussed the groundbreaking future technologies and services being offered by Zain.

Zain Group's Efforts in Making Technology Virtualization a Reality Wins 'Best NFV/SDN Solution Provider' at 5G MENA Awards

Zain Group, the leading mobile telecom innovator in eight markets across the Middle East and Africa, has been named the region's 'Best Network Functions Virtualization and Software-Defined Networking (NFV/SDN) Solution Provider' with Zain Saudi Arabia also being singled out as having the 'Best IoT Application/Service', at the 5G MENA Awards ceremony held in Dubai, organized by Informa, a leading business intelligence, academic publishing, knowledge and events group. The annual 5G MENA Awards ceremony is aimed at recognizing the most innovative, secure, and leading solutions, companies and individuals making a difference in the areas of NFV/SDN, LTE, 5G and Internet of Things (IoT) in the MENA region. Zain Group's NFV/SDN solution has been implemented in Kuwait and Saudi Arabia and is being rolled out to other key markets. It was judged to be the best among those from operators making a demonstrable impact in facilitating the development of NFV/SDN over the last year. Nominees for the category were required to showcase that they had devised an innovative NFV proof of concept or introduced a new service that would help revolutionize the market, lower barriers and help make technology virtualization a reality. Additionally, Zain Saudi Arabia was also singled out as having the 'Best IoT Application/Service', in a category recognizing innovative IoT devices, products, applications, services, or solutions that address a specific challenge, or enable a specific outcome that was not previously achievable. Commenting on the accolade at the 5G MENA Awards, Scott Gegenheimer, Zain Group CEO-Operations said, "Innovation in the quest to offer superior customer experience lies at the heart of what we do, and we are grateful to have our efforts recognized in this way. We shall continue in our endeavors to introduce cutting-edge technologies into the region, and leverage our networks to provide the highest quality customer service in the most efficient manner possible." Over the last two years, Zain has been working with leading global technology solutions provider in developing its NFV/SDN solution and IoT Application Service. Early 2015, Zain undertook the Middle East's first demonstration proof of concept for NFV with the objective to demonstrate cloud use cases that give Zain a faster time-to-market, offer high-quality user experiences and easily deploy ICT services such as Voice over LTE (VoLTE), Machine to Machine (M2M), Rich Communication Services (RCS) and enterprise solutions. Furthermore, Zain tested the utilization of power of virtualized network technologies to deliver more dynamic, flexible, and efficient mobile services to its customers, combining traditional telecommunications hardware with contemporary cloud-based and software-driven IT solutions.

Turkcell Sees Hhighest Revenue, EBITDA Growth in 10 Years in Q1

Turkcell recorded in Q1 the highest revenue and EBITDA growth of the past 10 years both at the Group and Turkcell Turkey level. Group revenues were up by 25.6 percent year-on-year in Q1 to TRY 4.053 billion. EBITDA grew by 39.8 percent year-on-year in Q1 with a 3.4 percent improvement in EBITDA margin to 34.5 percent. Net income of the Group declined to TRY459 million year-on-year in Q1 from TRY 563 million. Turkcell Group subscribers amounted to approximately 50.4 million as of March 31, that's up 0.6 percent sequentially and down 0.8 percent year-on-year.

Sudatel Bids for Oman's License

Sudatel Telecom Group has announced that it has submitted a bid for Oman's third mobile network operator (MNO) license, stating that the move is in line with its policy 'to enter new markets with potential growth'. In a statement published on the Abu Dhabi Securities Exchange, Sudatel said its submitted bid includes a comprehensive technical plan and a financial offer for the license. The company, which has operations in Sudan, Senegal, Guinea and Mauritania, noted that adding Oman to its footprint would strengthen its strategic role in connecting Africa and the Middle East to the rest of the world, and supports its commitment to growing its business to meet increasing demand for telecoms services across the region. Earlier this month it was reported that three Middle Eastern companies – Saudi Telecom Company (STC), Kuwait's Zain Group and UAE-based Emirates Telecommunications Corporation (Etisalat) – had also submitted technical and financial bids for the concession to the Sultanate's Telecommunications Regulatory Authority (TRA). A shortlist of the qualified bidders is expected to be published on August 14, with the winner scheduled to be announced on September 4. The country is currently home to two MNOs, majority state-owned Oman Telecommunications Company (Omantel) and Ooredoo Oman, in which Qatari incumbent Ooredoo holds a 55% stake. In addition, two MVNOs – FRiENDi mobile and Renna Mobile – are active in the wireless sector. In a separate announcement, Sudatel has reported total operating revenues of USD122.7 million for the three months ended March 31, 2017, an increase of 5.2% from USD116.6 million in the year-ago period. Gross profit rose from USD42.1 million to USD51.7 million over the same timeframe, while net profit almost doubled to USD10.5 million in Q1 2017 from USD5.3 million twelve months previously.

VIVA Recognized as Best "Industry Call Centre", "Sales Program" & "Technology Platform"

Sudatel Telecom Group has announced that it has submitted a bid for Oman's third mobile network operator (MNO) license, stating that the move is in line with its policy 'to enter new markets with potential growth'. In a statement published on the Abu Dhabi Securities Exchange, Sudatel said its submitted bid includes a comprehensive technical plan and a financial offer for the license. The company, which has operations in Sudan, Senegal, Guinea and Mauritania, noted that adding Oman to its footprint would strengthen its strategic role in connecting Africa and the Middle East to the rest of the world, and supports its commitment to growing its business to meet increasing demand for telecoms services across the region. Earlier this month it was reported that three Middle Eastern companies – Saudi Telecom Company (STC), Kuwait's Zain Group and UAE-based Emirates Telecommunications Corporation (Etisalat) – had also submitted technical and financial bids for the concession to the Sultanate's Telecommunications Regulatory Authority (TRA). A shortlist of the qualified bidders is expected to be published on August 14, with the winner scheduled to be announced on September 4. The country is currently home to two MNOs, majority state-owned Oman Telecommunications Company (Omantel) and Ooredoo Oman, in which Qatari incumbent Ooredoo holds a 55% stake. In addition, two MVNOs – FRiENDi mobile and Renna Mobile – are active in the wireless sector. In a separate announcement, Sudatel has reported total operating revenues of USD122.7 million for the three months ended March 31, 2017, an increase of 5.2% from USD116.6 million in the year-ago period. Gross profit rose from USD42.1 million to USD51.7 million over the same timeframe, while net profit almost doubled to USD10.5 million in Q1 2017 from USD5.3 million twelve months previously.

PCCW Global Plans Expansion to Deliver Enterprise, Edge Applications, NFV and IoT Enablement to Customers

PCCW Global, the international operating division of HKT, Hong Kong's premier telecommunications service provider, is collaborating with Canonical, the company behind Ubuntu and CPLANE NETWORKS, the leader in multi-site OpenStack cloud orchestration, to create new cloud services for its customers. Implementation at PCCW Global's two next generation data centers in Reston, VA, US and Hong Kong is currently underway, with plans to expand to other strategic cities around the world over time. Cloud services provided in these centers are designed to enable "self-service" provisioning to accelerate service deployment for customers as well as seamless integration with and easy consumption of existing PCCW Global integrated communications solutions. Mr. Bret Rehart, Chief Network and Information Officer of PCCW Global, said, "As applications continue to move closer to the network edge, the demands for workload agility and mobility are becoming increasingly important for our customers. Customers have needs for new applications for NFV and Internet of Things (IoT) and want them faster, at the right location, and tailored to their specific needs. Our aim is to provide dynamic network and cloud based services that not only automatically flex in response to our customers' policies and service level commitments, but also self-adjust based on rapidly changing network conditions. The approach we have taken, working with Canonical and CPLANE NETWORKS, will enable us to deliver a level of performance, scalability and automation that would otherwise be unachievable with traditional service configuration solutions." The delivery of additional value-added services such as security, video or application suites can be easily added on-demand as well as integrated with connectivity to public clouds and other infrastructure to create enhanced, enterprise-level services, a truly hybrid private to public cloud offering. Using Ubuntu OpenStack and CPLANE's Multi-Site Manager, Canonical and CPLANE NETWORKS will deliver unmatched performance and scalability for a truly global OpenStack cloud. Canonical's Juju Charms will also extend the Canonical / CPLANE OpenStack solution by providing an automated mechanism to deploy base OpenStack cloud services, and enables a full ecosystem of value-added services for enterprise and edge applications, NFV and IoT enablement. Mr. Brandon Williams, Chief Executive Officer of CPLANE NETWORKS, said, "The two great market forces of today, the proliferation of mobile / IoT devices and the conquering wave of public clouds, are growing at a phenomenal rate. But they are growing apart; the first is becoming more distributed and fragmented while the latter is becoming cheaper and more centralized. Canonical and CPLANE NETWORKS have bridged this gap with a hyper-distributed cloud solution for service providers. PCCW Global will be the first to market with an edge-cloud offering for the applications that will power this new frontier." Mr. Anand Krishnan, Executive Vice President and General Manager of Cloud, Canonical, said, "Canonical in partnership with CPLANE NETWORKS is enabling PCCW Global to deliver new cloud services. These services will be supplied to the edge of the network, meeting customer's growing need for services at scale and speed with the economic benefit of an automated OpenStack deployment. Using Ubuntu OpenStack, the most widely deployed OpenStack in production clouds today, and CPLANE NETWORKS' Multi-Site Manager, Canonical and CPLANE NETWORKS are delivering unmatched performance and scalability for a truly global OpenStack cloud."

Viu Launches in Thailand

Viu, a leading pan-regional OTT video service by PCCW Media, is officially launched in Thailand today, bringing the service now to 15 markets including Hong Kong, Singapore, Malaysia, India, Indonesia, the Philippines and the Middle East namely Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, Saudi Arabia and UAE. Premium Asian content with Thai subtitles, comprising the latest dramas and variety shows from Korea and Japan, will be delivered quickly after local telecast and can be easily accessed via Viu mobile app and www.viu.com website. Ms. Janice Lee, Managing Director of PCCW Media Group, said, "The Hallyu which is sweeping across Asia is notable in Thailand and we are pleased to see that Viu has already recorded over 820,000 fans on Viu Thailand Facebook page even months before our launch. Leading K-communities and die-hard Korean fans in Thailand all eagerly await Viu's service launch to access our vast library of premium Korean and other Asian content." Ms. Lee said, "Our recent research^ shows that 93% of online population in Thailand have watched videos on the web. We are fully leveraging this surging trend with a two-pronged approach of our services: ad-supported free viewing of their favorite shows and subscription services with express content access and premium features such as unlimited downloads, 1080p HD video quality and ad-free video viewing. As Thailand is one of the most highly Internet penetrated markets with Millennials who are very receptive to online video viewing and digital advertisements, we expect Viu Thailand to mirror the success we have in other Asian markets with healthy growth in subscription and advertising revenue in due course." Advertisers will be able to leverage Viu's video platform to reach out to their target consumers. 80% of Southeast Asian digital consumers have been motivated to search for an item seen within online video advertising, and 62% have made a purchase as a result of seeing an online video advertisement#.

PCCW Global and Caton Technology Collaborate in Taipei 2017 Summer Universiade international Distribution

PCCW Global, the international operating division of HKT, Hong Kong's premier telecommunications service provider, and Caton Technology Corp. (Caton), a technology provider of advanced video transmission and managed file transfer solutions, will work together to deliver to international viewers the exciting 29th Summer Universiade, a global student sporting and cultural event to be hosted by Taipei, Taiwan in August. Licensed broadcasters at the games will be able to contribute and distribute their live videos and big media files seamlessly from the International Broadcasting Center back to their home countries via the integrated delivery solution provided by this collaboration. PCCW Global and Caton will jointly deliver new, innovative, cost-effective, and reliable services that redefine the workflow for global media contributions and distributions. PCCW Global will integrate Caton's professional video transmission and managed file transfer solutions using Caton's Real-Time Transport Protocol (R2TP*) and Fast Files Transfer Protocol (F2TP*) technologies, into PCCW Global's reliable Global Television Network (GTVN) and Global Internet Access (GIA) networks. These innovative technologies and service solutions will be installed and utilized at the 2017 Summer Universiade, a major international event staged every two years. Second only to the Olympic Games in significance and prestige, the Universiade covers 12 days of sporting competition, allowing university student-athletes from all over the world to celebrate with the host city in a true spirit of friendship and sportsmanship. This year's competition will involve a total of 22 sports and 270 gold medal events. More than 150 countries are expected to participate in the Summer Universiade, confirming its status as a major media event with global connections. Mr. Jordick Wong, Senior Vice President, Product and Vendor Management, PCCW Global, said, "We are extremely excited about our collaboration with Caton, which gives us another opportunity to serve international broadcasters with our robust global fiber infrastructure which delivers 99.999% service availability to our customers. By integrating Caton's R2TP and F2TP technologies with our GTVN and Tier 1 GIA network, we are able to provide services with a perfect balance of cost, quality, reliability, and lead-time for live video signal and large media file delivery over the Internet." Mr. Eric Hamilton, Chief Operating Officer, Caton Technology Corp., said, "In 2011, Caton foresaw the need for dramatic improvements in how we support the surging demand of video on the Internet. We developed R2TP and F2TP technologies to enable more flexible, stable and reliable transmission even under the most demanding conditions. Now, building on our long standing partnership with PCCW Global, our combined solution will provide additional capacity, reliability and security to the global market." These integrated solutions are now available from PCCW Global and ready to service world class sports events, such as the Universiade, other live events, and worldwide media content contributions and distributions.

*R2TP – a high-speed, secure IP-based broadcast solution over the Open Internet, eliminating QoS and QoE issues in live video transmissions.
* F2TP – an enterprise-class file transfer technology with end-to-end security and powerful features to facilitate effective workflows over Internet, optimizing performance even in highly congested and high-latency environments.

Djibouti Telecom to Peer its Traffic through DE-CIX Marseille and UAE-IX

Djibouti Telecom, the international carrier with the strongest presence in both the Horn and the East of Africa has joined DE-CIX, the world's leading Internet Exchange operator, to peer its IP traffic through DE-CIX's Internet Exchange in Marseille and the Dubai based UAE-IX powered by DE-CIX. "The main two reasons to peer with any Internet exchange are quality, reducing latency and the cost of IP transit," stated Mohamed Ahmed, Director of International Business at Djibouti Telecom. "Joining DE-CIX will provide Djibouti Telecom with the opportunity to improve its customer's experience, especially with the presence of Akamai, Google, Microsoft and other global ISPs and CDNs at DE-CIX," he added.

Tap & Go Mobile Payment Platform Wins GTB Innovation Award

Tap & Go mobile payment platform has won the Wholesale Service Innovation Award at the GTB Telecoms Innovation Summit and Awards 2017 held on May 23. The Awards recognizes the telecommunication industry's most innovative and successful project partnerships between operators and vendors of the past year and showcases the best project entries to reveal the latest telecom innovations in application, design, network or product. Developed by HKT Payment Limited in Hong Kong, and operated and distributed worldwide by PCCW Global, the Tap & Go mobile payment platform partnership with an African mobile operator has won the Wholesale Service Innovation Awards. This successful go-to-market collaboration involving the Tap & Go mobile payment platform combines both PCCW Global and HKT Payment's specialist knowledge in customizing mobile payment solutions to meet local market and business requirements with global telecom expertise and solutions developed specifically for the demanding Hong Kong market, to deliver a groundbreaking cloud-based mobile payments solution. With additional unique feature extensions to suit the specific needs of the African target market, the success of Tap & Go highlights the ease with which a cutting-edge white label solution can be repackaged to address local requirements quickly and cost effectively, thereby providing an ideal combination of speed to market and local customization. As with all of its telecom projects, PCCW Global adopted a forward-thinking approach that started the exciting payment innovation process with the customer at its core to deliver an enhanced customer experience, while working to ensure that the operator's service needs and market aspirations are met. In the case of the Tap & Go project, the African mobile operator was seeking to position itself as a major mobile banking player in its domestic market by providing an effective mobile money platform with appropriate features to both meet the needs of the market and address the operator's strategic business development objectives. The operator was also looking for a mobile payment platform with the flexibility to support and enable the provision of additional services beyond pure payments, as well as enabling the operator to enter into partnerships with local governmental agencies and other enterprises to deliver a range of socially meaningful services. PCCW Global, HKT Payment and the African mobile operator successfully implemented Tap & Go, delivering not just mobile payment and stored value capabilities but also added functionalities such as support for social benefit services. The African mobile operator planned to commercially launch the service in July 2017.

Princess Reema Bint Talal Bin Abdulaziz Honors Mobily for Technically Sponsoring Saudi Women Exhibition

Princess Reema Bint Talal Bin Abdulaziz Al Saud honored Etihad Etisalat (Mobily) for its technical sponsorship of Saudi Women Exhibition in addition to designating a special wing for Mobily that meets the needs of Saudi women in terms of cosmetics and entertainment and others. The honoring shield was received on behalf of Mobily by Ms. Maha Alsayegh, Director Organization Design. Mobily sponsorship for this exhibition comes out of its social responsibility in supporting events that takes care of social development and adds more and different information to its visitors like Saudi Women Exhibition, which all of its participants are professional and experts in various fields related to women needs. It is worth mentioning that Mobily provided several sponsorships lately for technical, entertainment, and marketing programs because of its belief in supporting such events, in order to fulfill different society segments whether technically, entertainment, or marketing.

Targets for a Better Tomorrow - Nokia Publishes its People & Planet Report for 2016

Nokia published its annual sustainability report, outlining the company's performance in 2016 and setting aggressive sustainability targets through to 2030 for top focus areas. Nokia's sustainability activities are based on four priority areas: improving people's lives with technology, protecting the environment, conducting our business with integrity, and respecting our people. Nokia People & Planet Report 2016, now available at www.nokia.com/people&planet, outlines the company's sustainability ambitions, performance, and achievements for the year. The report also unveils Nokia's new sustainability targets and renewed priorities for 2017 and beyond. In the report, Nokia CEO Rajeev Suri stated: "We believe we can make our greatest impact on the world's sustainability challenges by developing and enhancing solutions that improve lives. This core belief is at the heart of everything we do, and as a global leader in delivering technology solutions, we know we must continue to apply our solutions, our robust innovation, to make a positive impact on the world and those living in it."

2016 Key achievements

The integration of Alcatel-Lucent in 2016 provided an opportunity to apply the best practices of both companies, and Nokia made great progress in several key focus areas during the year. The highlights include:

- We entered the digital health market through our acquisition of Withings, and collaborated with over 50 institutions around the world to help advance medical research.
- The mobile networks we modernized brought average energy savings of 43% for our customers. We have also continued to expand our Zero Emission base station offering that can reduce site energy consumption and CO2 emissions by up to 60 percent.
- Nokia was the first telco equipment vendor to have signed the commitment letter and submitted our targets through the Science Based Targets initiative.
- Our facility emissions decreased by 14% year on year.
- 243 of our key suppliers, representing 54% of our total procurement spend, responded to the CDPs request to disclose their climate performance information.
- We undertook an extensive review of the Nokia Human Rights Policy and consulted with outside stakeholders, taking our commitment even further. We joined the Global Network Initiative Board and committed to its external assessment, collaborating with key customers, academia and NGOs.
- We spent 109 auditor days conducting in-depth Corporate Responsibility supplier audits, more than doubling the total of the previous year.
- 84% of smelters supplying to Nokia have been validated as conflict free or are undergoing the validation process.
- We conducted 382 health and safety maturity assessments on suppliers providing high risk activities.
- On International Women's Day, our CEO signed the United Nations Women Empowerment Principles, and over 1,900 Nokia leaders and managers were trained on gender balance topics during 2016.
- We supported 42 community projects worldwide and reached around 868 300 direct beneficiaries, with children making up the largest proportion.

SAMENA Council Confirms Nokia Membership

SAMENA Telecommunications Council today announced global technology leader Nokia as the newest addition to its membership. Nokia, the leading provider of state-of-the-art end-to-end telecom infrastructure solutions, has unparalleled credentials in enabling infrastructure for next generation mobile as well as fixed broadband networks including 5G and the Internet of Things. Nokia is focused on developing solutions that expands the human possibilities of the connected world by leveraging the emerging trends in virtual reality and digital health, etc. In the SAMENA region, Nokia serves communications service providers, governments, large enterprises and end users, with the industry's most complete, end-to-end portfolio of products, solutions and licensing services. Bocar A. BA, Chief Executive Officer of SAMENA Council extended his welcome to Nokia on joining the Council and emphasized the significance of leading technology providers, like Nokia, in the telecommunications sector in the region. "At SAMENA Council, we are constantly seeking to explore possibilities of collaboration with key industry stakeholders, and Nokia's participation will further help in voicing key perspectives on industry developments and requirements. We are pleased to see Nokia among us and we congratulate Nokia for choosing to become a part of SAMENA Council," he added.

Nokia Begins First Key Tests on 4.5GHz Band With DOCOMO to Develop 5G Ecosystem in Japan

Nokia is to develop the 5G ecosystem with leading Japanese operator NTT DOCOMO, INC. in Japan to prepare for the upcoming introduction of the next generation wireless network. The collaboration - which uses the Intel® 5G Mobile Trial Platform - will commence with the key interoperability testing of multi-vendor technology using the 4.5GHz frequency band. 5G will deliver high speeds and low latency. Nokia will conduct trials of 5G technology with DOCOMO in the Tokyo metropolitan area throughout 2017, with particular focus on busy tourist, shopping and business locations as well as at key public events hosted by the operator. The tests will use the Nokia 5G FIRST solution, incorporating the Nokia AirScale base station transmitting over a 5G radio interface to the Intel® 5G Mobile Trial Platform. The companies will test end-to-end applications over the air between the base station and the device on the 4.5GHz frequency band, which is one of the candidate bands for 5G in Japan. The Nokia 5G FIRST solution is based on early-adopters radio specifications that define a common interface to allow equipment from multiple vendors to connect over a 5G radio network. Nokia is working with industry leaders around the globe to deliver a 5G infrastructure that will meet the massive broadband needs of a variety of industries and applications. Seizo Onoe, Executive Vice President, Chief Technology Officer and Member of the Board of Directors of NTT DOCOMO, said: "This is a vital first step to allow us to ensure that we have the 5G network infrastructure available for when we commercially introduce the technology, with an ecosystem of device vendors to offer our subscribers the best possible choice and highest quality." Asha Keddy, vice president and general manager of Next Generation and Standards in the Communication and Devices Group at Intel, said: "Intel believes key collaborations such as this one driving ecosystem partner trials and early deployments are critical to building successful 5G technologies and accelerating the vast benefits they will bring to users. We are excited to be part of this interoperability testing in Japan using the 4.5GHz radio spectrum as part of the 5G end-to-end solution." Jae Won, head of Nokia Japan, added: "This trial is an important milestone for the development of 5G in Japan, which will be one of the first countries in the world to adopt the technology. Furthermore, the initiative is an important step forward in our collaboration with NTT DOCOMO, as well as other key technology partners, as we develop a technology that will meet the ever-growing demands of huge numbers of people living in megacities." A demonstration of the end-to-end tests supporting low-latency 4K video streaming and other 5G applications will be given at the Nokia booth at 5G Tokyo Bay Summit 2017.

Nokia Enhances Emergency Service Response Times and Situational Awareness with ViTrust Critical Communications Portfolio

Orange is a provider of integrated communications that has, since entering the Jordanian market in 1998, become a leader and a staple of the telecommunications sector in Jordan. Venture spoke with Orange Jordan CEO Jérôme Hénique about the origin of Orange's Jordanian presence, its journey to becoming an indispensible part of the sectors in which it is involved (which have expanded beyond just ICT and now include social outreach), and what's in store for its future in Jordan. It has been 17 years since Orange first entered the Jordanian market. What were the main attractions that you saw in the market at the time, and, in hindsight, how do you regard the decision to invest in Jordan today? There were numerous things that initially attracted us to the Jordanian market. Jordan is characterized by its overall stability despite various regional challenges. We were very much encouraged by His Majesty King Abdullah II's vision of transforming the Kingdom into an ICT hub, thereby contributing to the growth of the country. Additionally, we find that Jordan harbors much talent, as its people have high levels of education, expertise, and passion for what they do in their respective fields. We still remain confident today that our decision to invest in Jordan was well made. Things have changed a lot over the past 17 years, but our primary concern is those challenges that have affected us recently. For example, beginning three years ago, there was a 150% increase in energy costs, in addition to a surge in tax rates and spectrum costs, as well as the lack of Mobile Number Portability (MNP). We have worked diligently to ensure that the adverse effects of these challenges have minimal impact on our operations, including embarking on a revolutionary

solar farm project that will drastically decrease our energy expenditures. We are also confident that, with time, the government, the TRC, and all other related entities will be able to find solutions to these issues and enhance the telecommunications industry on a national level. Historically, Orange has been the backbone of the ICT sector in Jordan, always being the first to introduce the newest technologies in the Kingdom and ensure that the infrastructure is prepared for them, whether they be fixed network, fixed lines, ADSL, fiber, or mobile networks. Orange Jordan started with 2G, was the first to introduce 3G, successfully launched 4G in 2015, and since then has refurbished its 2G and 3G networks. Moving ahead and motivated by our five-year corporate strategy Essentials 2020 since its launch, we are focusing on Next Generation Networks, which are a new era of networks representing the future of connectivity, including LTE, Fiber-To-The-Home (FTTH) for individual subscribers, Fiber-To-The-Business (FTTB) for enterprise customers, and IMS (IP Multimedia Subsystem). Along with reaching 95% 4G/LTE coverage, we have also already deployed 6,000 kilometers of FTTB cable and are in process of installing more than 700 kilometers of FTTH cable by the end of year, collectively covering a majority of the Kingdom and connecting people to the fastest internet speeds via advanced fiber optic technology. Accordingly, we, backed by our global expertise, are successfully enabling these new networks to bring not only businesses but also consumers closer to meeting their connectivity needs with smart homes and offices to make their operations more efficient and effective, positively contributing to the economy. The total amount of investments made by Orange Jordan since 2000 is around USD2 billion. We are dedicated to developing fully sustainable CSR programs to give back to the community by focusing on several aspects, such as social solidarity through our longstanding partnerships with Generations for Peace, Tkiyet Um Ali, and the Jordanian Hashemite Fund for Human Development. We focus heavily on corporate entrepreneurship responsibility through a variety of initiatives, including sponsorship of students at Princess Sumaya University for Technology, the Orange Yarmouk Innovation Lab at Yarmouk University, and our Business Innovation Growth (BIG) growth-mode startup accelerator program at the King Hussein Business Park.

Nokia and China Huaxin Sign Definitive Agreements for Creation of New Nokia Shanghai Bell Joint Venture

Beijing, China - Nokia and China Huaxin Post & Telecommunication Economy Development Center ("China Huaxin") today signed the definitive agreements of the proposed integration of Alcatel-Lucent Shanghai Bell Co. Ltd. (ASB) and Nokia's China business. The new joint venture will be branded as Nokia Shanghai Bell (NSB). As a result of today's announcement, the joint venture will become Nokia's exclusive platform in China for the continued development of new technologies in areas like IP routing, optical, fixed and next-generation 5G; and with the support of Nokia, NSB will continue to look for opportunities in select overseas markets. ASB and Nokia's China business have been effectively operating as one entity since January 2016 when an interim operational agreement was signed. The closing of today's agreement, targeted to happen in July 2017, is subject to various customary administrative, legal, regulatory and other conditions. Nokia will own 50% plus one share of NSB, with China Huaxin owning the remainder, and the new joint venture will have one board of directors and one management team. NSB will represent the major part of Nokia's overall Greater China business and fully leverage both shareholders' strengths, including innovation, global scale, efficiency and a deep understanding of the local market; and with the aim of increasing Nokia's market presence in China. It will further Nokia's strategic goals of leading in high-performance networks with communication service providers and expanding to new vertical markets in enterprise, public sector, and cloud/internet companies. NSB research and development (R&D) will be an integral part of Nokia's global R&D community, with a total of around 16 000 personnel, including 10 000 researchers, working across six R&D sites in China. It will maintain and further enhance Nokia's world-class product and research capabilities in areas that include 5G, IoT and Cloud. NSB's R&D scope and activities will be carried out according to Nokia's applicable policies, global R&D processes and product roadmaps. NSB will also support strategic initiatives of the Chinese government and engage in long-term research projects aligned with and implementing Nokia Bell Labs' Future X Network. Rajeev Suri, President and CEO of Nokia Corporation, said: "Today's agreement is historic for Nokia and for China, marking the next step of our decades-long commitment to the country and underscoring China's leading role in developing next-generation communication technologies. Nokia Shanghai Bell will enhance our ability to innovate, helping us strengthen ties with communication service providers and expand to new, fast-growing sectors in need of high-performing networks." Yuan Xin, General Manager of China Huaxin, said: "We are fully confident in the new joint venture's success during the industry transformation brought by the new technologies like 5G and IoT. The successful combination globally and in China brings together the leading E2E network technologies and most powerful innovation engines from both sides. We're excited to work with Nokia to establish a future-oriented innovative technology company, with a win-win cooperative model for the bigger success in the new era."

Huawei Revolutionizes Indoor Coverage with LampSite 3.0

During its participation at the 2017 5G MENA Forum in Dubai, leading global ICT provider Huawei, has released its LampSite 3.0 for enabling indoor digital economy, a revolutionary solution that offers full bandwidth on multi-frequency bands and extends digital network sharing among operators to indoor scenarios. As mobile broadband usage continues to grow, with statistics indicating that 80% of mobile data traffic is generated indoors, there has been a marked increase in demand for indoor network solutions. By removing longstanding technical bottlenecks, the futureproof solution supports a number of new-age technologies, including flexible multicarrier aggregation, distributed MIMO, and 256QAM, paving the way for evolution to 5G networks, in addition to offering throughput of up to 2 Gbps and an excellent experience for mobile users. LampSite 3.0 supports multi-operators sharing to reduce costs. Once an indoor network is built by one operator, it is available for lease by other operators for network. A network shared among four operators reduces each operator's TCO by as much as 70%. As well as giving indoor digital dividends, indoor network sharing attracts more investors, proprietors, tower companies, and other interested parties. All these contributors build a win-win ecosystem for capital, policy support, and property resources to promote the development of indoor MBB business. "LampSite 3.0 is an important milestone in Huawei indoor digitalization, as it opens the door for enabling indoor digital economy. Huawei indoor digitalization keep on building up ecosystem, enabling new experience and new service," said Peng honghua, President of Huawei Small Cell Product Line. "In addition to offering unparalleled speeds, LampSite offers carriers a quick and cost-effective solution to upgrade their networks, while bypassing many restrictions imposed by landlords". Huawei had designed LampSite to help carriers in the region rapidly upgrade their indoor coverage infrastructure. This comes at a time when the world's next generation of digital innovators opportunity to share in the wealth of the indoor digital economy.

Huawei Releases C-C4ISR Collaborative Public Safety Solutions

Huawei has introduced the C-C4ISR Collaborative Public Safety Solutions, which will drive digital transformation of the global public safety industry. Together with world-leading public safety partners such as YITU, SenseTime, Zenith, iOmniscient, and GSAFETY, Huawei also released the first all-cloud and matrix intelligence Video Cloud Solution and Crisis and Disaster Management Solution. The solutions are designed to address diverse safety threats and protect citizens in cities across the world. With increasing global urbanization, cities are expanding and becoming less safe. Governments are increasingly focused on developing safe cities and aim to reshape urban public safety systems through innovative ICT. However, traditional siloed public safety systems typically lack information sharing capabilities and are major barriers to effective collaboration between different government agencies, which is essential for prevention of and response to emergency situations. Commenting on public safety, Fan Siyong, President of Public Sector of Huawei Enterprise Business Group, said: "As cities embrace digital transformation, new safety threats are emerging that need to be addressed by the public safety industry. We need to keep pace with social and technological developments and shift from a traditional city safety construction model to one of collaborative public safety. By building cross-region and cross-agency collaborative public safety systems that connect governments and citizens, we can help cities better prevent, detect, handle, and recover from various threats. The 'collaborative' method of C-C4ISR will be fundamental to digital transformation of the public safety industry. Using new ICT such as Internet of Things (IoT), Big Data, mobile broadband, and Software-Defined Networking (SDN), as well as cloud-pipe-device synergy, the solution will drive efficient collaboration among governmental agencies as well as between governmental agencies and citizens."

Etisalat CEO Says Digital Shift Factor in Q1 Profit Growth

Etisalat reported strong figures for the first quarter, noting its "ability to sustain momentum in spite of vastly changing global industry trends". Saleh Al Abdooli, group CEO (pictured), said: "Etisalat has continued its efforts to align its business with the digital mandate it has undertaken, by shifting the operating model, investing in future technologies, and by acquiring and disseminating digital capabilities across its operations." The company reported a Q1 2017 net profit after federal royalty of AED2.1 billion ($571.7 million), up 5 per cent year-on-year, on revenue of AED12.5 billion, down 3 per cent. It said its revenue was impacted by unfavorable exchange movements, mainly in Egypt. In constant currency, revenue growth was 3 per cent. Revenue in UAE, Etisalat's home market, increased 5 per cent to AED7.6 billion, as a result of growth in the subscriber base with increased bundles, strong performance in the "eLife" segment, and increased business solutions, digital and ICT services. For international consolidated operations, revenue fell 14 per cent to AED4.7 billion, with the company citing the Egyptian exchange issues, and competitive pressure in Morocco (in the mobile market) and Pakistan (fixed line) for the drop. International operations represented 38 per cent of group revenue. Operating expenses of AED7.9 billion were down 5 per cent year-on-year, which was attributed to lower depreciation and amortization expenses, lower network costs, and other reductions. Etisalat's aggregate subscriber base stood at 159 million by end Q1, a year-on-year decline of 3 per cent, due to disconnections related to regulatory registration requirements in various markets.

Ericsson and Etisalat Trial 5G

Ericsson and United Arab Emirates (UAE) telco Etisalat have completed a trial of 5G mobile technology with outdoor mobility. The pair say that the trial has 'demonstrated 5G capabilities in a real-world environment over a live network, including tests on speed, latency and beam steering'. The test used 800MHz of spectrum in the 15GHz band, achieving an aggregate site throughput of over 24Gbps. Saeed Al Zarouni, Senior Vice President for Mobile Networks at Etisalat, commented: 'The live demonstration provides a glimpse into the future and what mobile services will be like in the next few years … 5G enhances existing services with additional capacity, higher speeds and lower latency, while supporting a large number of machine-type connections.'

Etisalat Group the Most Admired Telecom Operator in the GCC Featured in the List

Arabian Business revealed its first list of the Most Admired Companies in the GCC' comprising of top businesses across various industry sectors who have made significant investments in innovation laying the foundational steps in the journey towards digital transformation while at the same time reflecting positively in their business performance amid today's global economic challenges. The 'Most Admired Companies in the GCC' were recognized based on the strong commitment showcased by such businesses in making bold decisions required to respond to the new economic landscape at the same time focusing on innovation. The top companies that made it to the list are from various sectors across GCC mainly including hospitality, infrastructure, banking, telecom, technology, property developers, chemical, advertising, online businesses and food and beverage. Etisalat Group was named the most admired telecom company in the GCC, as it was recently named the most valuable telecoms brand in the Middle East by 'Brand Finance.' The group's portfolio is valued at $7.73bn, according to Brand Finance's annual ranking. Etisalat has admirably transformed to a comprehensive digital and ICT provider meeting the growing challenges in the business while engaging in mega digital transformation projects in the region. Listed on the Abu Dhabi bourse, Etisalat's current market cap is over AED 152 billion (42 billion USD). With reported net revenues of AED 52.4 billion and net profit of AED 8.4 billion for 2016. The company also enjoys high credit ratings at AA-/Aa3 reflected the company's strong balance sheet and proven long-term performance.

ALFA Opens its New Flagship Store, the First of Its Kind in Lebanon

Under the patronage and in the presence of His Excellency the Minister of Telecommunications Jamal Jarrah, Alfa, managed by Orascom TMT, launched its new Alfa Flagship Store, the first of its kind in Lebanon, at its headquarters in Parallel Towers - Dekwaneh. The opening of the Store is part of Alfa's strategy to provide the highest level of service speed and quality and the latest mobile and electronic devices, in addition to offering customers on the spot consultation and services, same as in other modern stores in the world. The event was attended by MPs Mohammed Al-Hajjar, Alain Aoun, Ziad Qadri and Simon Abi Rumia, Alfa CEO and Chairman Marwan Hayek, the General Director of Construction and Equipment at the Ministry of Telecommunications Naji Andraos, the General Director of Investment and Maintenance at the Ministry of Telecommunications Bassel Al Ayoubi, the Minister's advisor Nabil Yamout, the Head of Owner Supervisory Board Naji Abboud, as well as representatives of supplier companies and the media, and Alfa's administrative staff. The ceremony began with a tour in the Flagship store during which the Alfa staff presented the integrated and modern services that will be provided to customers. In addition, a documentary was broadcasted showing the store's different completion stages. Alfa's technical team then did a live demo of 4G+ advanced services, with the live speed reaching up to 500 megabits per second, which reflects the high speeds provided by the Alfa 4G+ network across Lebanon. The team also gave a presentation on the Alfa Smart Home service which was launched alongside the flagship store opening. Minister Jarrah, Mr. Hayek and the attendees also visited the Networks Operations Center, where they had in a tour in the center which monitors the network's performance accurately and in real time. After welcoming the attendees at the opening of the prestigious Alfa Flagship Store, Hayek said, "Following the wish of many people to have offers, stores and outlets like those made available abroad by global operators, we have opened this modern store, which is the first of its kind in Lebanon. This is yet another achievement by Alfa, managed by Orascom TMT, thanks to a modern vision and a strong will, with funding and support from the Ministry of Telecommunications. This achievement would not have been complete without the creative vision of designer Ferdinand Djurovic, the Alfa Stores artist, in addition to the perfect execution by FMC, and the efforts of the Alfa team who worked around the clock to make this project happen". "We have harnessed all our energy, and the result is exceptional: a store with the latest technology offering a modern experience to customers that will cater to the needs of two thousand Alfa subscribers each month. It will feature a section showcasing various mobile and electronic devices for various brands alongside all the services offered and launched by Alfa, such as Alfa Smart Home, which we are also launching today". "The new design will be adopted in all Alfa stores, and we have already started working on two Flagship stores in the Unesco area and in Bikfaya. We will soon have presence in Downtown Beirut, in addition to Jounieh, Jbeil, Tripoli, Saida, Chtaura, Halba and Nabatiyeh, knowing that the expansion plan consists of reaching 20 Alfa stores across all regions". Hayek added, "In addition to the Alfa-owned and directly managed Stores network, we have adopted this year the concept of co-branding with key distributors, which will involve 120 stores in 2017 and reach 250 stores by the end of 2018. We are also present through 34 points of sales with Ogero in a number of areas. Furthermore, 15 new franchises will be added to the 10 existing ones by the end of 2017 to reach 25 franchise stores in line with the same modern concept, in addition to 2,000 points of sale across all regions. This distribution network is the largest and most modern network in Lebanon ready to support our two million subscribers through which we can reach our customers wherever they are". "This event coincides with the completion of the installation of 1,100 4G+ stations, one year after the launch of the project, operating on carrier aggregation and covering more than 90 percent of Lebanese and residents. We will be equipping 200 additional 4G+ stations in areas where we face logistical difficulties, and we promise that we will complete them within the next two months to reach 100% coverage". Hayek noted that 4G+ technology currently provides tremendous speeds of 150 and 200 megabits per second in the current coverage areas for customers who hold 4G+ capable devices. "We saw today through the 4G+ live demo in cooperation with Ericsson that the Internet speed reached 470 megabits per second, and we have already exceeded earlier today the 500 megabits per second threshold, and this is the fastest speed achieved in Lebanon. I challenge anyone to break this record, knowing that subscribers are the first and foremost beneficiaries of all types of competition. We promise that we will break this record in two weeks to set a new record in Lebanon and the region". He concluded, "4G+ is now a reality and we are keeping pace with this development through our Flagship stores". In his speech, Minister Jarrah said, "I congratulate Alfa on this Flagship store, which reflects the company's image and ambition to provide the best for the Lebanese people and its customers through the excellent services and offers it provides thanks to the efforts of the Alfa staff and under the wise management of Mr. Marwan Hayek, who has many innovative ideas. The Ministry of Telecommunications supports you at all stages so you can implement these ideas that place you on the same footing as other countries globally thanks to the 4G+ technology".

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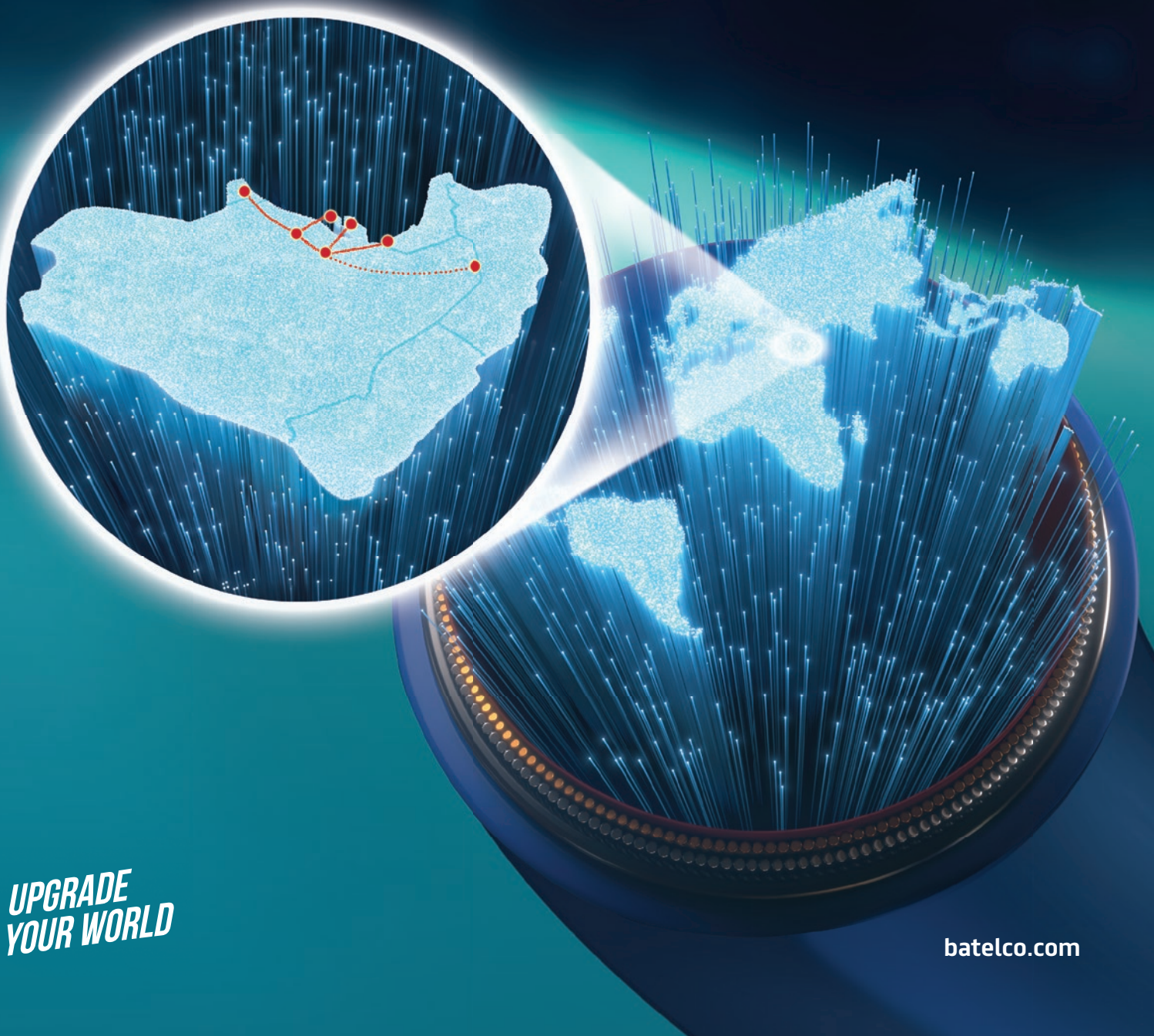

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ARTICLE

The Digital Transformation – Driving the Engine of Economic Growth

Charles Yang, President, Huawei Middle East, looks at how investments in ICT infrastructure directly relate to a country's GDP, and the importance of the digital transformation within the Middle East region.

As the digital economy continues to burgeon, nations with access to advanced ICT are innovating new business models and prospering. Staying competitive is paramount. This is particularly relevant to oil-producing countries such as those in the Middle East, at a time of challenging economic growth. While International Monetary Fund projections put global economic growth at 3.5% this year, the forecast for the seven oil-exporting countries is nearer to 1.9%.

The most digitally-developed economies around the globe are progressing the fastest, because of the level of their ICT investments.

That said, there are great opportunities ahead, as some of the leading economies look to ICT infrastructural investments as the most significant driver of their GDP growth. The most digitally-developed economies around the globe are progressing the fastest, because of the level of their ICT investments.

In economic terms, a nation that increases its ICT infrastructure investment by 10% annually from 2017 to 2025 can expect to benefit from what we term as the multiplier effect. Every additional US$1 of ICT infrastructure investment brings a current return of US$3 in GDP. By 2020, the return is forecast to increase to US$3.70, rising further to US$5 in 2025.

On a global scale, the same 10% annual investment increase is expected to boost an estimated US$17.6 trillion in GDP to the global economy as a whole by 2025. In real terms, this potential impact is equal to the size of the European Union's GDP in 2016. This doesn't even take into account the huge benefits to social development.

Charles Yang
President,
Huawei Middle East

HUAWEI

The Global Connectivity Index

We forecast these figures based on an extensive study Huawei has produced over the past four years titled the Global Connectivity Index (GCI). The study shows how 50 different countries are progressing with digital transformation based on five technology enablers: broadband, data centers, the cloud, big data and the Internet of Things (IoT). The 50 countries comprise around 90% of global GDP and 78% of the world's population.

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The GCI 2017, which we recently launched at the SAMENA Telecom Leaders' Summit, shows that of the 50 countries analyzed, 16 are considered 'frontrunners' (those with an average GDP per capita of US$50,000). The next 21 are 'adopters', with an average GDP per capita of US$15,000. The remaining 13 are 'starters', with an average GDP per capita of US$3,000.

To bring these classifications into a practical perspective, frontrunners are mostly developed economies. They continually boost the digital user experience, and use big data and IoT to develop smarter, more efficient societies. Adopters are focused on increasing ICT demand to facilitate industry digitization and high-quality economic growth. Starters are in the early stage of ICT infrastructure build-out, and focus on increasing ICT supply to give more people access to the digital world.

The GCC's positioning

Returning now to the Middle East economic context, three countries in particular fell into the GCI 2017's adopters cluster. All three of them have predominantly oil and gas based economies. Equally, each of them is proactively looking towards strengthening their ICT infrastructure. Ranking second in the adopters cluster and 18th overall is the UAE. Qatar ranks 22nd overall and Saudi Arabia 29th.

Each of these countries understands one very crucial principle – that in order to stay competitive, nations at an early stage of digital transformation need to prioritise ICT infrastructure development (especially broadband connectivity and cloud adoption) to reach sustainable growth.

An interesting point to note is that it is the adopters that experience the highest GDP growth from their ICT infrastructure. Much in the same way as the growth of the GCC countries has been so rapid and dynamic over past years. The overall GCI score for the UAE, Qatar and Saudi Arabia has increased in the past year due to the roll-out of various national ICT initiatives. However, Qatar and Saudi Arabia have both dropped two places in the GCI ranking among the 50 countries.

It is essential that as adopters, the GCC countries must invest to enhance their broadband infrastructure. It is equally crucial that policymakers should not underestimate the important benefits of embracing the cloud. It is through the cloud that they will effectively deliver big data and IoT capabilities and the resulting benefits. By leveraging the multiplier effect of the cloud, companies and society as a whole can innovate and transform into the knowledge-based economy.

By reaching a threshold of 35% fixed broadband subscriptions and 70% 4G coverage, UAE, Qatar and Saudi Arabia falling in the adopters category, will move forward to compete with the frontrunners' cloud adoption rate.

The cloud remains a key component in furthering the digital transformation. Cloud services incur much lower levels of investment, while being more versatile and secure in their application. Cloud capabilities can be accessed without the need to set up local datacenter facilities. Software and services can be purchased on a pay-as-you-use basis.

Employing cloud services will open the way for adopters, such as the GCC states, to transform their economies. In will provide the means to innovate, develop new business models and deliver higher-level products and services to global markets.

Next steps

So, what are the imperatives for digital transformation planning moving forward? First, policymakers should be focusing on ICT policies as part of a nation's economic development strategy to encourage and incentivize the digital transformation.

To illustrate the point, broadband is not just for fast internet access. Ultimately, its role is to enable cloud services and the software that runs on the cloud – namely big data and IoT. This includes building a public-private partnership approach for long-term planning, and pairing ICT initiatives together with new civil works – for example deploying broadband connections over electricity networks.

From a business perspective, policymakers can consider more industry-friendly policies to help promote the digital transformation. Nations that have developed an advance ICT infrastructure have been able to transform their industry-base from low-value manufacturing to higher-value information services.

Policymakers should be focusing on ICT policies as part of a nation's economic development strategy to encourage and incentivize the digital transformation.

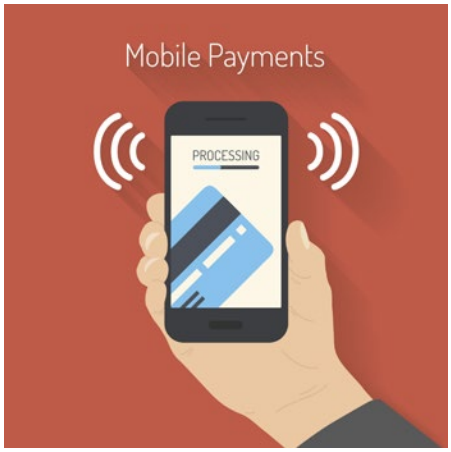
Drilling further down to a people perspective, policymakers can collaborate with educational institutions, ministries, labor departments and technology enablers. In this way, they can ensure that education for building digital access and skills is universally accessible, targeted and fully utilized. This includes improving digital literacy in schools and universities, deploying labour upskilling initiatives, and job matching to secure inclusive employment.

Once countries create the balance to energise their industries, companies and people towards a digital transformation paradigm, they have the basis for driving their GDP growth through a digital economy.

REGIONAL NEWS

Mobile Payments Gain Boost Across GCC

Online payments, including mobile payments and e-commerce, are set to become a crucial part of the digitization wave currently sweeping across the GCC, according to a number of industry executives in attendance at the event. "Major trends include subscription payments, payments through mobile app, tracking fraudulent consumer behavior, multicurrency and payments from Facebook and Twitter (social commerce)," Sirish Kumar, Founder & CEO, Telr said in an interview with Gulf News. Lieutenant-General Shaikh Saif Bin Zayed Al Nahyan, Deputy Prime Minister and Minister of Interior, on Tuesday visited Seamless Middle East 2017, a two-day event which hosted 350 exhibitors from the payments, eCommerce and retail industries. There are more and more transactions taking place daily remotely, otherwise known as distance selling. However, the amount of transactions in the Middle East taking place online are still comparatively small, research suggests. According to a Euromonitor International 2016 report, online retail was reported to be less than 1.5 per cent of the total retail sales in Middle East region in 2015, while mature e-commerce markets are seeing 15 per cent to 20 per cent of their total retail business from online purchases. A growing number of people are making purchases from social media channels, and companies are being advised to jump on this trend. As per a 2016 Mary Meeker report, there is an increasing move across social media from simple social conversation to business conversation and online transactions. In these instances, customers do not need to visit the merchant's website to make payments. This in turn helps drive online payment tools such as email invoicing and quick links, which are expected to increase by more than 30 per cent of payment features use in the next year. Many merchants that have an offline presence can enable their presence on the web, mobile apps and social media and accept online payments. "There is a digitization wave across the UAE. With e-commerce penetration currently at a lower level than markets in Europe and North America, it is important that the UAE merchants embrace e-commerce and expand online and each to their consumers in overseas markets," Kumar said. In Egypt, according to the World Bank, at least 85 per cent of the population remains totally unbanked. "A lot of these people, the underbanked, don't have access to a credit card, so by giving them a prepaid card, you can allow them to shop online," Andrew Sims, Chief Executive Officer of NEC Payments said. "You see a lot of people walking around with smartphones, but no way to make purchases with them. If you ask them how they use the phone, they'll tell you they use third-party vouchers," he added. Sims said that virtual cards would allow these people to make payments directly, and avoid needing to purchase vouchers. Telr has also recognized the need for enabling smartphones to become the factor of authentication for transactions. According to its CEO, the company has seen more than 60 per cent of transactions through mobile phones in the case of some of their merchants — in such instances, mobile applications can use biometrics in the phone to capture credentials for online payment processes, ensuring safety and reliability.



Lebanese ISP Connect Boosts Backbone, Access Network with InfiNet Wireless

Lebanese fixed-wireless broadband provider Connect has upgraded its backbone network and augmented its end-user access links using solutions from InfiNet Wireless to meet the 'zero-downtime, high-bandwidth' demands of enterprise and premium residential customers across the country. Connect's existing WiMAX 2.3GHz access platform was limited to 5Mbps/2Mbps (down/uplink), and to serve premium/corporate clients it previously resorted to using Wi-Fi based point-to-point (PTP) solutions, although the latter had recently begun to suffer from 'major interference issues', the company disclosed. In its new network implementation, Connect deployed the InfiLINK XG backbone solution (capable of peak net throughput of 500Mbps in 40MHz of spectrum and 130Mbps in 10MHz) and the InfiMAN 2×2, InfiNet's range of wireless Point-to-Multipoint (PTMP) solutions, to connect its high-demand customers. Over 30 base stations and 250 subscriber terminals were deployed across Lebanon in the initial project, operating alongside the existing WiMAX network.

3G, 4G Users in Pakistan Reach 3.98 Million

The number of 3G and 4G users in Pakistan has soared to 39.8 million. According to details available, amount of 3G and 4G subscribers has gone up by 10.3 million in first nine months of fiscal year 2016-17 alone. These statistics were issued by Pakistan Telecom Authority (PTA). Stats further disclosed that number of broadband users has reached 40.23 million by the end of March, recording a hike of 31 per cent in the nine months of FY 2016-17. Likewise, figure for local loop consumers stood at 3.1 million by December-2016.

PTCL Inks Fiber Leasing Agreement with Telenor

Pakistan Telecommunication Company Limited (PTCL) and Telenor Pakistan (TP) for the second consecutive year have entered into a fiber backhaul and infrastructure sharing agreement, under which PTCL will deliver 950+ kilometers of fiber footprint to Telenor Pakistan, which will enable delivery of quality telecommunication services for the Pakistani market. The agreement entails to fiber leasing, which shall enable Telenor to utilize PTCL's extensive nationwide fiber optic footprint and its expertise in deploying, operating and maintaining a fiber optic network. Dr. Daniel Ritz, President & CEO, PTCL and Irfan Wahab Khan CEO of Telenor Pakistan signed the agreement in a ceremony held at PTCL Headquarters. It is pertinent to mention here that earlier in 2016, PTCL successfully signed and delivered 900+ kms of fiber infrastructure to Telenor Pakistan. Speaking on the occasion, Dr. Daniel Ritz, President & CEO PTCL said, "We are delighted to sign yet another partnership with Telenor Pakistan, in fact, the second year in succession for provision of PTCL's fiber optic network. Having served as the communication backbone of the country since inception, our partnership with Telenor Pakistan will help them to expand their 3G and 4G network further in order to provide high quality voice and data services. PTCL will continue to play its major role in fiber and other telecom infrastructure developments, contributing to the overall growth of the country." Speaking on the occasion, Mr. Irfan Wahab Khan, CEO Telenor Pakistan said, "Our need for a more robust infrastructure will be met with this partnership with PTCL. This project is in line with our fiber needs for traffic expansions with regards to 3G and 4G network advancement and will also help us with our mission of empowering societies and making mobile broadband services available to a larger customer base. We're pleased to have entered into another fiber leasing agreement with PTCL and believe that the collaboration for second consecutive year will prove to be mutually beneficial for both business partners, and even more so for our valued customers." The project is specifically aimed at enhancing and extending Telenor Pakistan footprint in order to offer high quality voice and data services to their rapidly expanding 3G/4G subscriber base across the country. The senior management from the two companies emphasized the need for deployment of cost-effective solutions which will enable delivery of quality telecommunication services for the Pakistani market. This partnership will go a long way in paving a bright future for both the stakeholders' involved.

Ten Smart Cities to be Established in Saudi Arabia

Minister of Municipal and Rural Affairs Abdullatief Al-Asheikh unveiled plans to establish 10 smart cities in the Kingdom. "The ministry will create partnerships to implement smart city project in 10 cities across the Kingdom as part of realizing the goals of the National Transformation Program of 2020. The highest authorities have entrusted the ministry to implement the smart city projects," he said while inaugurating the First Saudi Conference for Smart Cities at Riyadh InterContinental Hotel organized by the ministry. The theme of the three-day event is "Smart solutions for a better living." Al-Asheikh noted that a study carried out by the ministry in 2015 envisages making available of smart facilities in 17 major cities that host around 75 percent of the Saudi population.

Batelco and Ericsson Carry Out First 5G Trial in Bahrain

Leading Bahraini telecoms operator Bahrain Telecommunications Company (Batelco) has announced it has joined forces with Swedish technology provider Ericsson to conduct Bahrain's first 5G trial. The trial of the next-generation mobile technology took place at Batelco's headquarters in Hamala as part of the two companies' 5G Forum. The trial demonstrated the capabilities of 5G in a real world environment over a live network, including testing speed, latency and beam steering, with 'record speeds' of 25Gbps achieved. Commenting on the success of the trial, Batelco Bahrain CEO Eng. Muna Al Hashemi said: 'The trial was a demonstration of our commitment to ensure that we are offering the very best telecommunications services and digital solutions, as well as providing a digital backbone for the Kingdom of Bahrain as it moves to life in the Networked Society of the future.'

Eutelsat Signs New Launch Contract with Arianespace

With this latest contract, Arianespace now has three further satellites to launch for Eutelsat

Following the launch of the EUTELSAT 172B satellite, Eutelsat Communications (NYSE Euronext Paris: ETL) announces a new launch services contract with Arianespace. The Arianespace order book now includes three future launches for Eutelsat in addition to the 32 Eutelsat satellites already launched by the European launch services provider over more than 30 years for one of the world's leading satellite operators.

Of the three satellites to be launched, EUTELSAT 7C (built by SSL) will be orbited in 2018, followed in 2019 by Eutelsat Quantum built by Airbus and the high throughput satellite built by Thales.

Commenting on this latest contract, Rodolphe Belmer, Chief Executive Officer of Eutelsat, said: "Following today's historic Ariane launch of Europe's first high-power all-electric satellite, we are proud to once again team up with Arianespace, a long-standing partner and a leader in Europe's vibrant space industry. The technological diversity of the three new satellites entrusted to Arianespace is a compelling reflection of our commitment to innovation for the greater benefit of our customers, and to maintaining our competitiveness."

Stéphane Israël, Chief Executive Officer of Arianespace, added: "This latest contract bolsters Eutelsat's position as a benchmark customer of Europe's heavy launcher, since Ariane 5 will launch three satellites for the European operator in 2018 and 2019. Our hope is that Ariane 6 will subsequently take over so that we can help Eutelsat meet its objectives even more efficiently."

PTCL Boosts Reach to Europe Through Sparkle Sicily Hub in Palermo

Sparkle, the international service arm of TIM Group and among the top 10 global operators, announces that PTCL, the leading telecom operator and ICT service provider in Pakistan and Sparkle's long term partner in the region, has increased its reach to Europe, leveraging Sparkle's open ecosystem and rich market place Sicily Hub in Palermo. Through Sicily Hub, PTCL will be able to peer with world major content, media and CDN service providers already active in Sicily Hub which remains the closest European open ecosystem to the Mena Region and provides improved latency and overall network efficiency to operators seeking to expand in Europe. The increased quality will allow PTCL to effectively deliver on–demand as well as bandwidth-intensive content and provide its users with an enhanced data experience. PTCL's presence in Sicily Hub will also generate further efficiencies for PTCL in terms of improved control over routing and IP traffic flows. Moreover, Palermo represents a strategic presence for PTCL as it provides additional access to SEA-ME-WE 4 and IMEWE cable systems. With its ever growing presence of multi-breed global players, Sicily Hub continues to grow by attracting new content and interconnections configuring itself as a rich marketplace where service providers, content and media players and system integrators have an opportunity to grow their business. Pakistan Telecommunication Company Limited (PTCL) is the largest telecom and ICT services provider in Pakistan. The Company's cutting-edge technology and powerful array of telecom services, including Voice Telephony, Fixed and Wireless Broadband, Over-the-top Applications, Digital Television, Carrier & Wholesale, Satellite Services and Data Centers, serve the connectivity needs of over 24 million fixed, 3G enabled mobile and 4G enabled wireless consumers and businesses nationwide. PTCL supports both VoIP and TDM through Gateways and Soft switches. PTCL owns more than 45,000 Km optical fiber (OFC) network connecting more than 1200 cities/towns providing voice, data and video services through terabit capacity transmission bandwidth. PTCL is also member of SMW3, SMW4, IMEWE & AAE-1 Submarine Cable Systems.

Chinese Company to Set Up Telecom Infrastructure in Pakistan & Bangladesh

China Telecommunications Corp will set up resources to complete cross-border telecom infrastructure initiatives including the China-Pakistan information corridor, the China-Laos-Thailand and the China-Bangladesh-Myanmar-India projects. "Cross-border telecommunication infrastructure is one of the first steps for international cooperation," Deng Xiaofeng, CEO of its international unit China Telecom Global Ltd said on Tuesday. "Our experience in deploying one of the world's largest information networks in China can help narrow the digital gap," he added. The company will invest more than $1 billion over the next three to five years to expand its presence in the economies along the Belt and Road Initiative including Pakistan. He said it will also raise more money from state-owned financing institutions and private investors, in a move to build land cables, internet data centers and other infrastructure in Southeast Asia, Europe and other regions. "State-owned and private capital are now keen to be part of our efforts. We also need their expertise to help us evaluate whether the plans are plausible," Deng added. Deng said the company did not exclude the possibility of investing in foreign telecom carriers to help other developing countries accelerate the development of 4G. But Deng did not disclose more details. As of 2016, China Telecom has more than 4,700 overseas employees, with branches and offices in 30 countries and regions, most of which are along the Belt and Road. It has already built 13 internet data centers in six of them. According to data from the International Telecommunication Union, the Asia-Pacific region scored 4.58 in informatisation level in 2016, lower than the global average of 4.94. Xiang Ligang, a telecom analyst and founder of the telecom industry website cctime.com, said China Telecom was one of the first Chinese telecom carriers to go global, with the push starting in the 1990s. "Its expansion plans will also help more Chinese telecom equipment makers venture into overseas markets," Xiang said. China Telecom expects that China's plan to help economies along the Belt and Road improve telecom services will create a market worth $10 billion to $20 billion for the telecom industry over the next five years.

PTA to Crackdown Sale of Illegal Mobile Handsets

In its proactive efforts to curb the illegal telecom activities in the country, Pakistan Telecommunication Authority (PTA) is continuously monitoring and carrying out raids in collaboration with Federal Investigation Agency (FIA) to unearth illegal telecom activities. PTA to Crackdown Sale of Illegal Mobile Handsets. In a recent crackdown PTA along-with FIA Cyber Crime circle teams raided the mobile market at Bahadurabad Karachi and confiscated 216 non-typed approved mobile handsets of different models. FIR has accordingly been registered by FIA. The non-typed approval mobile handsets of Samsung, HTC, LG, I phone, Motorola, Lenovo, Hisense have been confiscated during the raid. The successful raids against illegal telecom activities were made possible because of continuous monitoring, commitment and persistent efforts by PTA in curbing the menace of illegal and unlawful activities where the cheaters are fleecing the Government with grey channel import of mobile devices to avoid taxes. It is pertinent to mention here that every model of mobile handset as well as tablet PC is required to be type approved from PTA prior to its sale in the open market.

STC, Zain in the Running for Oman's Third MNO License

Two Middle Eastern telecoms companies – Saudi Telecom Company (STC) and Kuwait's Zain Group – have submitted offers for Oman's third mobile network operator (MNO) license. Tadawul reports that STC has submitted a technical and financial bid, including an integrated business plan, to Oman's Telecommunications Regulatory Authority (TRA), while Zain Group has also revealed that it made its own offer for the new concession. A shortlist of the qualified bidders is expected to be published on August 14, with the winner scheduled to be announced on September 4. As previously reported by TeleGeography's CommsUpdate, the TRA published an Information Memorandum (IM) detailing the process for the award of the Sultanate's third MNO license in November last year, in a move which is aimed at improving the market's competitive environment. The country is currently home to two MNOs, majority state-owned Oman Telecommunications Company (Omantel) and Ooredoo Oman, in which Qatari incumbent Ooredoo holds a 55% stake. In addition, two MVNOs – FRiENDi mobile and Renna Mobile – are active in the wireless sector.

Ooredoo to Shun Telecom Acquisitions as Competition Heats Up

Ooredoo QSC, the Qatari-owned phone carrier, wants to focus on the 10 countries where it operates rather than grow through acquisitions in the telecommunications business, according to Deputy Chief Executive Officer Waleed Al Sayed. Ooredoo, the sixth-biggest telecommunications company in the Middle East and Africa, has no plans to buy phone carriers although it is considering purchases in technology services, Al Sayed said in a phone interview from Doha. Ooredoo is currently negotiating to buy a majority stake in Salam Technology, and the deal may close in the second quarter, he said. The company grew in the past decade from its base in Qatar to serve about 150 million customers from Algeria to Myanmar, largely through acquisitions. First-quarter revenue rose 2 percent to 8 billion Qatari riyals ($2.2 billion), driven by growth in Qatar, Indonesia and Oman, the company reported April 27. Sales increased amid tough competition for consumers, and was in contrast to other providers that had shrinking revenue, Al Sayed said. "Our strategy is that we aren't going to think about geographic expansion," the deputy CEO said. "We are going to strengthen our footprint." A subdued acquisition strategy also means Ooredoo won't be issuing bonds or taking out new loans. The company plans to repay or refinance a $1.25 billion sukuk, or Islamic bond, due in 2018, Al Sayed said. Ooredoo fell 2.3 percent on the Doha Stock Exchange, bringing the shares down 1.2 percent for this year. Ooredoo is on track to reach its 2017 revenue and earnings guidance, he said. Earnings before interest, tax, depreciation and amortization are forecast to be unchanged to up 3 percent, while revenue will decline 1 percent or grow as much as 2 percent, he said.

5G to Create Opportunities for UAE ICT Players

Information and Communication Technologies (ICT) players in the UAE who leverage 5G to digitalize industries can capture business worth $6.5 billion by 2026, according to a new report from Ericsson. The report is titled The 5G business potential - Industry digitalization and the untapped opportunities for operators , and it analyses the 5G business opportunity that comes from industrial digitalization, focusing on eight key global industries, including: manufacturing, public safety, financial services, healthcare, automotive, public transport, media and entertainment and energy and utilities. For telecom operators who address industry digitalization, Ericsson foresees revenue potential of $3.1 billion for UAE telecom operators by 2026. The report shows that manufacturing and energy/utilities sectors represent the biggest opportunity for revenues created or enhanced by 5G. To capture this market potential requires investment in 5G technology, but also business development, go-to-market models and organizational adaptation. To leverage the power of 5G technologies, operators need to rethink their role and what value to deliver, and what business models to use. The fast-paced change in business ecosystems and disruptive technological advances affect vertical industries to different extents. As the world becomes ever more digitally and globally connected, industries are experiencing an ICT-driven transformation. For operators, traditional methods of revenue are slowing, however, the market for industrial digitalization is only just beginning.

Iran's TCI Begins FTTH Rollout

The Telecommunication Company of Iran (TCI) has launched a project to deploy the country's first fiber-to-the-home (FTTH) connections in Tehran and seven other cities. The initial phase of the rollout will see 580,000 lines installed, including 245,000 in Tehran, 85,000 in Isfahan, 80,000 in Mashhad, 61,000 in Shiraz, 61,000 in Ahvaz, 28,000 in Karaj and 20,000 in Kermanshah. Fiber-to-the-cabinet (FTTC) technology has previously been used by another state-backed operator, Iranian Net, but TCI's new TANOMA project will mark the first time that fiber connections have been installed directly to the customer premises. The FTTH links will offer connectivity both to Iran's National Information Network (NIN), which is a closed system of state-approved sites, or to the wider internet.

du Telecom Offers 6th Annual Sustainability Report

Emirates Integrated Telecommunications Company, du, recently released its 6th annual Sustainability Report in line with Global Reporting Initiative, GRI, G4 Comprehensive guidelines, making tangible, sustainable and long term impact across social, environmental and economic pillars in line with the UAE National Agenda. du's sustainability report indicates that the initiatives and paths set forth are developing accordingly in several areas, such as Emiratisation and employee engagement, its customers, by providing value that goes beyond telecommunications services, environmental impact through transformation of its BTS (base transceiver station is equipment that facilitates wireless communication) sites, and the community, through a variety of commitments and initiatives. "Our experience is now a decade strong, and we are pleased to have taken the decision to embrace the strategy whereby we are utilizing the power of communications and connectivity to empower both citizens and residents, and enhance life in the UAE. In fact, strengthening our relationship with both our customers and employees has been a key focus for us in 2016," said Osman Sultan, Chief Executive Officer, Emirates Integrated Telecommunications Company. "As we chart a new story for our growth, we will continue to adapt our sustainability approach in the coming year in our bid to transform ourselves and our society for the better." Abdulwahed Juma, Executive Vice President, Brand and Corporate Communications, du, said, "2016 saw us expanding our initiatives well beyond connectivity to truly entrench our business as a sustainability leader to watch in the UAE. It has become increasingly important for us to take responsibility for sustainability efforts that extend beyond communications to create an environment that promotes business, people and the environment. The spirit of governance, ethics and transparency remains ever-present throughout all levels of our organization." According to the report, du adopted 33 percent Emiratisation, with 54 percent Emiratis in senior management positions. The company achieved a Gallup Employee Engagement Score of 4.44 which lands the company in the 76th percentile in the Gallup Global Database. The company increased solar powered mobile signal masts sites from four to eleven in 2016, 100% of du vendors conform to health and safety criteria upon registration and the company eliminated 99 percent of plastic from SIM card packaging. The report says that du committed to a two-year agreement to promote BabNoor, the first Arabic language app supporting communication for children with autism and other speech impairments, including the distribution of 2,200 app licenses to special needs organizations. du supported the '#Year of Reading' initiative by distributing close to 12,000 books across 200 public school libraries, and donated AED3 million in support of the 'Reading Nation' campaign which aimed to provide books to refugee camps and schools around the world.

UAE and Saudi Lead Arab World in Connectivity

UAE, Qatar and Saudi Arabia remain top 'adopter' economies in terms of connectivity within the Arab world, according to Huawei's Global Connectivity Index (GCI) 2017. Global progress towards a digital economy is picking up pace, with the world's GCI score moving up four percentage points since 2015, the report said. The report also shows that ICT has become an engine of economic growth, with the 50 countries assessed by the GCI 2017 accounting for 90 percent of global GDP and 78 percent of the world's population. The report has revealed that digitally-advanced and digitally-developing nations continue to gain strong economic growth and secure larger ICT investments, while less developed nations see much slower growth, widening the digital divide between nations into a chasm. The GCI 2017, was shared by Huawei at the SAMENA Telecom Leaders' Summit 2017, this index is the fourth annual study that compares how 50 countries are progressing in their digital transformation based on 40 unique indicators that cover five technology enablers: broadband, data centers, cloud, big data and Internet of Things. Investing in these five key technologies enables countries to digitize their economies. Through centralized planning, potential connectivity can be fully leveraged and ICT capabilities can support positive growth of national economies. "The GCI Report measures the relationship between ICT investment and GDP growth, and shows that every additional $1 of ICT infrastructure investment made could bring a return of $3 in GDP at present, $3.70 in 2020 and the potential return increases to $5 in 2025," said Sami Nashwan, VP Strategy at Huawei Middle East. "While this presents a clear case for increasing investment in ICT, the report also reveals that countries who invest in ICT gain an accumulated advantage over time which has a multiplier effect and enables them to distance themselves ahead of competitors, and causing a widening of the digital divide to become a digital chasm." Of the 50 countries that were analyzed, 16 are considered Frontrunners, 21 are Adopters, while the remaining 13 are Starters. These clusters reflect the nations' progress in digital transformation. Frontrunners (with an average GDP per capita of $50,000) are mostly developed economies, continually boosting digital user experience, using big data and IoT to develop more intelligent, efficient societies.

Currency Devaluations, Intense Competition Affect Zain Group's 1Q17 Financials

Kuwait-based telecoms giant Zain Group has published its consolidated financial results for the first quarter of the year (ended March 31, 2017), reporting revenues of KWD247 million (USD810 million), down 11% year-on-year, while EBITDA decreased 13% annually to reach KWD107 million. However, the company booked a net profit of KWD38 million in the three months under review, up 3% from the KWD37 million reported in the previous year. The company disclosed that it incurred foreign currency losses amounting to USD32 million in net income and USD68 million in EBITDA for the three-month period to March 31, predominantly due to a 59% currency devaluation in Sudan. Excluding the currency translation impact, revenues would have grown by 4% y-o-y, while EBITDA and net income would have increased 3% and 27% respectively. Further, intense price competition in Kuwait coupled with additional operational costs in network expansion and upgrades severely impacted the operation and consequently Zain Group's overall financial metrics. In operational terms, Zain Group reported a consolidated customer base of 46.1 million at March 31, 2017, corresponding to a 1.4% increase y-o-y. In Kuwait subscriber numbers reached 2.8 million, while Jordan and Bahrain saw customer base increases to 4.3 million and 845,000 respectively. Zain Saudi Arabia's subscriber base, meanwhile, decreased 13% to ten million in Q1 2017 as a result of the government's biometric identification project, while Zain Sudan served 13 million users at that date, up from 12.2 million in 1Q16.

China and Afghanistan Sign MoU on Optic Fiber Link

In present technologically advance world, fast speed internet connectivity is now important for every state so that its nationals can enjoy good services. For ensuring better telecommunication and internet services, fiber optics is now the hour of need. The Government of Afghanistan, for this purpose, has also shown interest in improving its telecom services and signed an agreement with China. Sayed Ahmad Shah Sadat, the acting Telecommunications & Information Technology Minister of Afghanistan, has signed an agreement with Chinese counterpart "Miao Wei" in Beijing. Under this agreement Afghanistan will be linked to China through "Wakhan" district of Badakhshan province through a fiber optic line. Sadat told "Pajhwok Afghan News" that: "Implementation of the agreement with China would help Afghanistan shun reliance on other countries. He further said that: "Under the agreement, China will help Afghanistan in three main areas and a 4,800km fiber optic line would be extended from Kashgar city of China to Faizabad, the provincial capital of north-eastern Badakhshan via Wakhan border district." This agreement of fiber optics will play a significant role in realizing the digital Silk Road project. Further, Afghanistan will now be able to connect to European countries. After the completion of the project, Afghanistan will become more like a square between India, Pakistan, Uzbekistan, Iran, Tajikistan, China and Turkmenistan. Sadat is presently also in talks with other Chinese companies like Huawei and ZTE to further improve the Information and Communication sector of Afghanistan.

SyriaTel Reports 37% Increase in Revenues in FY2016

Mobile network operator SyriaTel has announced its consolidated financial results for the fiscal year ended 31 December 2016, showing an improvement in the results posted in the corresponding year-earlier period. Annual net revenue reached SYP129.5 billion (USD602.7 million) it said, up 37.1% year-on-year, while net profit for the twelve months climbed 5.6% y-o-y to SYP24.8 billion. Earnings per share soared to SYP24.8, compared to SYP13.5 for 2015.

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ARTICLE

The eSim Revolution is Coming to the Middle East

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strategy&

The telecom sector will soon experience another disruption, one that will reach the Middle East in coming years. After mobile and then the Internet, the next change will be the demise of the physical SIM card, the chip that sits inside mobile phones and that connects consumers to telecom operators. Etisalat is planning to introduce eSIMs in 2017. Saudi Telecom Company has recently announced that it will introduce the eSIM in collaboration with Oberthur Technologies' subscription platform and the Huawei smartwatch. The demise of the SIM card will mean that telecom companies will lose control of connectivity, with important implications for consumers, device manufacturers, mobile network operators, and mobile virtual network operators. At the same time, the market for connectivity is growing quickly because there are more and more smart devices that need connectivity—such as connected cars, connected fridges, or home security systems.

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The SIM card allows a mobile operator to identify and authenticate a consumer, which in turn gives the consumer access to the mobile network to for calls and data. In the past, this meant that mobile operators could control connectivity. In the future, devices, such as smartphones or tablets, will not need a physical SIM. Instead, these devices will use an eSIM, a mixture of software and apps.

The main beneficiaries will be consumers because they will have more control over connectivity. They will be able to connect to operators' networks in the same way that they now choose WiFI networks. Consumers will decide which plan they want when they buy their device or turn it on for the first time—the plan could come from a telecom company or from the device manufacturer.

The device manufacturers could also gain because they can sell directly to consumers more often, disintermediating telecom operators. In the past device manufacturers had bulk agreements with telecom operators. In the future, device manufacturers will also be connectivity providers. Many devices, whether cars, tablets, home security systems, or even fridges, are connected to the Internet through mobile networks. These eSIM-enabled devices can offer connectivity, giving consumers more choices.

The eSIM could be an opportunity for telecom companies, whether they are mobile network operators (MNOs) or mobile virtual network operators (MVNOs, which buy network capacity from MNOs and then sell it to consumers).

If the eSIM is introduced gradually, then MNOs would manage connectivity for consumers' multiple devices, remain the main sellers of these devices, and would offer new additional services. MNOs have until now retained their customers by having them sign long-term contracts and by subsidising the cost of devices, whether handsets or smartphones. They can respond to the eSIM by providing bundled contracts for multiple connected devices (e.g. cars, domestic appliances, wearables, tablets), which would create a closer connection to consumers than at present. To do so will require operators to embrace the new technology. They will have to revise contract structures and change how they subsidise devices.

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MVNOs and smaller MNOs will also need to make changes. They will face competition from new connectivity providers such as smart device manufacturers. The makers of these smart devices—such as fridges, ovens, dishwashers, or home security systems—need connectivity to give their customers the ability to order suppliers or to call for maintenance. The best response for small MNOs and MVNOs is to form partnerships with smart device manufacturers to help them provide connectivity rather than wait for these device makers to become their competitors.

Much will depend on the attitude of regulators. The eSIM could be the catalyst for regulators to accelerate measures that are currently under consideration. In particular, regulators could use the eSIM to force large incumbents to shape up. The attitude of consumers will also have an impact as they will push for a free for all. Consumers will choose their device first and carrier second—with the list of potential carriers including MNOs, MVNOs, and device manufacturers.

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The eSIM means consumer choice. There are certainly opportunities for device manufacturers, but the consumer relationship with telecom operators is far from over. If MNOs and MVNOs respond wisely by building on their core capabilities, they can establish a new connection with their customers that will be more enduring than the SIM card.

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SATELLITE NEWS

Intelsat, Globecast to Expand TRT World into the Americas and Asia

Intelsat announced that Globecast signed a multi-year agreement with the company to distribute the English version of TRT World in High Definition (HD) format to cable outlets in Asia and the Americas. Intelsat will distribute the 24-hour news program via the Intelsat 20 and Intelsat 21 satellites using IntelsatOne terrestrial fiber and teleport services. Globecast is expanding its longstanding relationship with Intelsat to distribute TRT World content to Asia and Latin America on Intelsat's penetrated video neighborhoods. Intelsat 20, located at 68.5 degrees east, is a Direct-to-Home (DTH) distribution platform serving Africa and the Indian Ocean region. Intelsat 21, located at 302 degrees east, is one of four satellites comprising Intelsat's video neighborhoods serving the Latin America region. "It is our goal to provide our customers with efficient distribution into new growth markets around the world," said Philippe Bernard, Chief Executive Officer (CEO) at Globecast.

Arabsat to Support EuroNews on BADR 4 Satellite

Arabsat announced the launch of Euronews' new frequency on its wide coverage satellite BADR 4. Euronews joins other tier-one regional and international news channels run on Arabsat's news frequency at 11996 MHz. Euronews' original frequency will remain active until the end of May, while Arabsat viewers will be informed about the change via Arabsat's linear and non-linear media distribution network. "This move supports our content strategy to deliver specialized video frequencies reflecting market demand to Arabsat audience across the Middle East and North Africa (MENA) and Europe, and ensuring the best Free-To-Air (FTA) viewing experience at home," said Khalid Balkheyour, Arabsat's president and Chief Executive Officer (CEO). BADR 4, also known as Arabsat 4B, has been in operation since 2006, and provides fixed satellite communications services from 26 degrees east. The satellite carries 22 C-band transponders and 12 Ku-band transponders.

Arianespace Launches SES 15 on Soyuz Rocket

Arianespace announced that it successfully launched the SES 15 satellite onboard a Soyuz rocket from the Guiana Space Center in Kourou, French Guiana. This is SES' first satellite to launch on a Soyuz rocket for a Geostationary Transfer Orbit (GTO) mission. SES 15 carries a hybrid payload, comprising Ku-band wide beams and Ku-band High-Throughput Satellite (HTS) capability, with connectivity to gateways in Ka-band. The satellite will be located at the orbital position of 129 degrees west and is equipped with 16 Ku-band transponders (36 MHz equivalent) as well as HTS capabilities to serve North America, Mexico, Central America and the Caribbean. According to SES, SES 15's high throughput payload will deliver optimized and flexible coverage for global In-Flight Entertainment and Connectivity (IFEC) service providers, such as Global Eagle Entertainment, Gogo and Panasonic Avionics. In addition, SES 15 has a dedicated wide beam to enable IFEC providers to deliver live TV content on all flight routes across the United States, including Hawaii and Alaska, as well as Canada, the Caribbean and Mexico. This combination of beams allows IFEC providers to optimize HTS capacity use for internet traffic and wide beam coverage for broadcast content, according to the company. The satellite will also enable Very Small Aperture Terminal (VSAT) networks and other traffic-intensive data applications in the government and maritime sectors. SES 15 also carries a Wide Area Augmentation System (WAAS) hosted payload, which will enable the U.S. Federal Aviation Administration (FAA) to augment the Global Positioning System (GPS) with the goal of improving accuracy, integrity and availability of the system for the aviation industry. The satellite is equipped with an electric propulsion system for orbit-raising and in-orbit maneuvers.

Teledyne Delivers Space-Grade Processors to Thales Alenia Space

Teledyne has enabled Thales Alenia Space to gain a 10-fold increase in the processing speed and power for its On-Board Computers (OBC), with the design and qualification process cut by up to four years, according to the company. Teledyne e2v's re-engineered PC7448 microprocessors will be used at the heart of Thales Alenia Space's OBC that serve the Lightning Imager (LI) systems on Eumetsat's Meteosat Geostationary Orbit (GEO) meteorological satellites. Thales Alenia Space will equip four Meteosat MTG 1 satellites, scheduled for launch from 2019, with LI systems that will place a major demand on their OBCs to deliver the sensitivity and discrimination required for near real-time lightning detection over the Earth's full hemisphere. Teledyne e2v has helped Thales Alenia Space meet this challenge by re-engineering commercial grade PC7448 1.3 GHz processors in accordance with NASA's MIL-PRF-38535 Class Y (QML Y) quality standard. Now, according to the company, Thales Alenia Space can use a microprocessor offering the same performance as the latest desktop PCs in a spaceflight-ready version capable of surviving the rigors of a 15-year mission. The satellite LI systems will facilitate the monitoring and tracking of active convective areas and storm life cycles critical for nowcasting and very short range forecasting of severe weather events. Monitoring of lightning also helps assess the impact of climate change on thunderstorm activity.

Aerojet Rocketdyne Increases Thrust Level of Bantam Engine by 500 Percent

Aerojet Rocketdyne recently completed a series of hot-fire tests on a 30,000 lbf thrust-class Bantam liquid-fueled rocket engine built with additive manufacturing. This is a 500 percent increase in the thrust level from the Baby Bantam engine the company 3D-printed and tested in June 2014. According to the company, at the 30,000 lbf thrust level, this engine is ideal for the rapidly growing small launch vehicle and low-cost upper-stage markets. This latest milestone paves the way for Aerojet Rocketdyne to develop a family of low-cost rocket engines for booster, upper-stage and in-space propulsion solutions. Under this activity funded by the Defense Advanced Research Projects Agency (DARPA), Aerojet Rocketdyne successfully completed a series of 17 tests of a Liquid Oxygen (LOX)/kerosene, regeneratively cooled, liquid rocket thrust chamber assembly that demonstrated the performance, durability and reusability of the design. These tests explored a range of engine operating parameters, conditions and run durations validating the design and applicability of the additive manufacturing technology and its benefits, the company stated. The 30,000 lbf thrust-class engine, which would

normally be comprised of more than 100 parts, is built from only three additively manufactured major components: the injector assembly, the combustion chamber, and a throat and nozzle section. These three major components are welded together to form a single thrust chamber assembly. According to Aerojet Rocketdyne, it designed, fabricated and tested the Bantam engine in just seven months at a fraction of the cost of producing the engine using traditional fabrication methods. "The results of this test program confirm that we are on the right path to take advantage of the advancements we've made in 3D printing technology as a key part of our strategy to deliver more affordable products to our customers while we maintain the reliability they've come to expect," said Aerojet Rocketdyne Chief Executive Officer (CEO) and President Eileen Drake.

Thuraya Launches Dual Mode Satellite & LTE Hotspot

Thuraya Telecommunications Company has launched its WE satellite and LTE portable wi-fi hotspot to meet the growing global demand for wireless data connectivity. Developed in collaboration with Beam Communications, Thuraya WE bridges the gap between satellite and GSM broadband services. It is the world's first dual mode hotspot that keeps users in contact with family and friends, no matter where they are. The terminal facilitates seamless roaming for consumers, from satellite to terrestrial LTE services or vice versa, either via a Thuraya SIM card or a standard GSM SIM card from any of Thuraya's 395 worldwide GSM roaming partners, enabling users to utilize the most suitable option available. Weighing only one kg, Thuraya WE is compact, light and portable, and offers voice and data connectivity on-the-go. It transforms any area into a wi-fi Hotspot, allowing the connection of up to 10 smart devices within a radius of 100 feet or more. "Thuraya WE reinforces our commitment towards offering innovative products. It is the first ever LTE wi-fi hotspot device that offers flawless convergence between GSM and satellite broadband services. Built for ease of use, Thuraya WE caters to the needs of users in a multitude of sectors by allowing them to enjoy uninterrupted access to voice and data services over Thuraya's network when outside terrestrial coverage," said Ahmed Al Shamsi, acting chief executive officer, Thuraya. Thuraya WE comes with a user-friendly interface that can be accessed either through the web or through a mobile app compatible with iOS and Android devices. This simple and easy-to-use interface allows users to easily access device settings, select and switch between networks, locate the satellite, and view signal strength, connection status, battery status, system alerts, and data usage reports. Michael Capocchi, Beam Communications managing director said: "We are proud to have been able to design and manufacture this product for Thuraya. WE is a pioneer product, delivering the only Hotspot in the market to offer dual mode satellite and LTE capabilities. It transforms any smartphone or tablet into a mobile satellite device by allowing users to access satellite internet at speeds of up to 384kbps and ensures that they stay connected even when their GSM service is unavailable.

Space Flight Laboratory to Build Satellite for Dubai Space Center

The Space Flight Laboratory (SFL) of Toronto announced the signing of a new contract to provide Dubai-based Mohammed Bin Rashid Space Centre (MBRSC) with a microsatellite for aerosol and greenhouse gas monitoring. SFL's Next-generation Earth Monitoring and Observation (NEMO) platform technology, which incorporates high-performance ground target tracking capability, is a key enabler for the mission. The DMSat 1 (also known as AirWatch) satellite will leverage past developments at SFL for a mission that will incorporate two payloads. The primary payload is a multispectral polarimeter used to monitor aerosols — fine particles of liquid and solids in the upper atmosphere normally caused by man-made sources, but also correlating to natural phenomena such as dust storms. The secondary instrument is a pair of spectrometers that will enable MBRSC to detect greenhouse gases like carbon dioxide and methane over the United Arab Emirates (UAE). Researchers local to the UAE will conduct the study of aerosols and greenhouse gases. According to SFL, in previous missions, the NEMO bus has demonstrated precise attitude control and target tracking capabilities that will play a key role in the accurate pointing of the DMSat 1 sensors.

Mattel Deploys New Satellite Backhaul Links

Belgium-based satellite communications firm Newtec Dialog has deployed a new multiservice platform to provide cellular backhaul for the Mauritanian mobile operator Mattel. Newtec says it has installed a Newtec Dialog Hub and deployed several remote sites across Mauritania, initially to deliver 2G mobile connectivity, but eventually also to provide 3G and 4G services to areas underserved by terrestrial networks. Satellite capacity for the project is being provided by the EUTELSAT 8 West B satellite which was launched in 2015. The installation was carried out by Newtec in partnership with GLOBAL Technologies. Mattel, a subsidiary of Tunisie Telecom, is the smallest of Mauritania's three cellcos by subscribers, behind Mauritel and Chinguitel.

Gilat, Gogo Demonstrate In-Flight Connectivity Solution

Gilat Satellite Networks announced that its In-Flight Connectivity (IFC) solution demonstrated end-user throughput of more than 100Mbps during Gogo's live airborne media and investor event. Gilat's aero modem powers Gogo's 2Ku service and will be installed in more than 1,600 aircraft across more than 13 airlines, commencing this year, according to the company. On May 9, Gogo hosted an industry event on its Boeing 737 test plane, the "Jimmy Ray." The test flight not only confirmed its throughput and user experience, but also successfully demonstrated interoperability capabilities of Gilat's aero modem with the aircraft's communication avionics system. Gogo has selected Gilat to provide the onboard Very Small Aperture Terminal (VSAT) modem and satellite baseband infrastructure for its IFC solution. The two companies recently completed Supplement Type Certifications (STC) for this system for Boeing and Airbus aircrafts.

SpaceX Launches Inmarsat 5 F4 Global Xpress Satellite

SpaceX has successfully launched Inmarsat's fourth and final high-speed broadband communications satellite, Inmarsat 5 F4, for its Global Xpress constellation. The satellite flew atop a Falcon 9 from Launchpad 39A at NASA's Kennedy Space Center in Florida. Following satellite separation at 7:53 p.m. EDT, Inmarsat acquired telemetry from its Perth ground station at 8:04 p.m. EDT. The launch team from Inmarsat and Boeing Network & Space Systems, the manufacturer of Inmarsat 5 F4, are now raising the spacecraft to a Geostationary Earth Orbit (GEO), at which point the satellite will deploy its solar arrays and reflectors and undergo payload testing. Inmarsat 5 F4 joins the three GX satellites already in orbit, which have been delivering improved service speeds, global coverage, reliability, and security to users on land, at sea and in the air since December 2015. The fourth satellite adds further capacity to the GX network, as well as in-orbit redundancy that further upgrades the reliability and resilience of Inmarsat's service offerings. Because the satellite is extremely heavy at 13,400 lbs., the Falcon 9 was unable to carry enough propellant to attempt a landing of the first stage booster. This marked Inmarsat's first flight with SpaceX.

Algeria Telecom Satellite, Arabsat Organize Workshop in Algiers

The workshop, running from 15-16 May 2017, comprises a range of forums and seminars, and will include international experts in the field of satellite communications and Internet delivery. It is aimed at those working in the satellite telecommunications sector in Algeria, from both the public and private sector. Arabsat will also showcase its satellite Badr–7 and the capabilities of its new 6th generation satellite. The first three of these are under construction and the 4th is at the research and design stage. The first of Arabsat's 6th generation satellites is set for launch by the end of 2017, with the next two to be launched in 2018. "The latest technology in the field of mobile telecommunications will also be discussed, in addition to Ka-band huge capacities coverage that meets the future demand of the market," the Saudi-based regional satellite organization said in a statement. Arabsat, which was founded in 1976 by the 21 member states of the Arab League, now carries over 500 TV channels, and 200 radio stations, as well as pay-TV networks to viewers in the Middle East, North Africa and Europe. Its video 'hotspot' at 26 degrees East now claims an audience of over 170 million viewers in the Middle East and North Africa (MENA).

SES 10 Satellite Now Operational Over Latin America

SES announced that the SES 10 satellite is now fully operational at 67 degrees west and will be serving markets in the Latin America region. SES 10 launched on March 30 from NASA's Kennedy Space Center in Florida onboard a flight-proven SpaceX Falcon 9 rocket. The satellite is the first Geostationary Earth Orbit (GEO) commercial satellite ever launched on a flight-proven first-stage rocket booster. Since then, extensive in-orbit tests have confirmed the functioning of the spacecraft. Airbus Defence and Space built SES 10 based on the Eurostar E3000 platform. The multi-mission spacecraft is the first SES satellite dedicated to providing service to Latin America and has a Ku-band payload of 55 36MHz transponder equivalents, of which 27 are incremental. SES 10's beams will augment SES' capabilities across the region and will provide Direct-to-Home (DTH) broadcasting, enterprise and mobility services to Mexico, Central America, South America and the Caribbean. Pursuant to an agreement with the Andean Community (Bolivia, Colombia, Ecuador and Peru), the satellite will operate as the Andean Community's Simon Bolivar 2, providing satellite capacity for each Andean member state. The Andean satellite project came from the shared member states' interest in having a common satellite network to take advantage of the spectrum resources at 67 degrees west.

Xplornet Hails Improvement in Rural Internet Via Satellite

Canadian rural broadband specialist Xplornet Communications has announced the launch of an upgraded internet service supported by the EchoStar XIX satellite, now available to new and existing customers. Xplornet says that, combined with the scheduled launch of the ViaSat-2 satellite on 1 June, its satellite internet capacity is being tripled, resulting in 'more speed and data at affordable prices' for its users. Xplornet's newly launched satellite internet service offers speeds up to 25Mbps (download) – the fastest of its kind in Canada. Allison Lenehan, President and CEO of Xplornet, said the latest satellite launches will 'provide new customers with more data at speeds not previously available in many parts of Canada'.

Orbcomm, Machinestalk to Deliver IoT Solutions in Saudi Arabia, GCC Region

Orbcomm announced that it has signed a strategic distribution agreement with Machinestalk, an Internet of Things (IoT) solutions provider based in Riyadh, Saudi Arabia, to provide Orbcomm's global satellite, cellular and dual-mode network connectivity; hardware; web reporting applications; and software in the Kingdom of Saudi Arabia and the Gulf Cooperation Council (GCC) region. The arrangement combines Orbcomm's portfolio of IoT products and services with Machinestalk's IoT and telematics platform technologies to provide a variety of asset tracking, monitoring and control solutions. Orbcomm and Machinestalk stated they will target core vertical markets including transportation and distribution, heavy equipment, industrial fixed assets, oil and gas, maritime, mining, and government. Through this combined solution offering, Orbcomm and machinestalk will enable customers to increase visibility and security over their fixed and mobile assets and gain operational efficiencies to streamline their business and improve logistics management. "At Machinestalk we believe that IoT is no longer an option for enterprises wishing to grow in their industry space or simply defend their market share," said Mohammad Alkhushail, chairman of Machinestalk. "Together with Orbcomm, we can deliver advanced IoT solutions that enable enterprises to maximize information access, insight and analysis as data volumes increase and real-time intelligent response becomes a necessity of doing business."

INSA Signs Eutelsat Capacity for TV Platform in Ethiopia

Ethiopia's Information Network Security Agency (INSA) has inked a multi-year contract with Eutelsat Communications for capacity at its 7/8 degrees west neighborhood, which serves satellite TV in the Middle East and North Africa. INSA will use the capacity for its new TV platform, Ethiosat, which just launched. Ethiopia's national satellite TV landscape currently features more than 30 channels that broadcast from multiple satellites. The new platform offers licensed channels the opportunity to broadcast in a single platform, ensuring easy reception for TV homes across the country and accelerating digital take-up. The first channels, including Ethiopian Broadcasting Corporation (EBC) and Oromia TV, are available to homes on a Free-to-Air (FTA) basis. Multiple national and regional channels as well as commercial broadcasters are also candidates for inclusion in the flagship platform, according to INSA. Viewers can access Ethiosat using a single 90cm antenna and set-up box rather than sourcing content through multiple providers at multiple orbital positions. The new platform also taps into the installed base of antennas already equipped for reception from the 7/8 degrees west neighborhood.

MENA Satellite Providers Set to Remove Pirate Channel Clients

The MENA Broadcast Satellite Anti-Piracy Coalition is celebrating after public commitments by all its satellite provider members to remove pirate channel clients by May 4, 2017. The breakthrough came at the Coalition's 10th meeting in Dubai attended by the region's major broadcasters and satellite providers. All but one of the satellite providers reported that they had already removed channels proven to be broadcasting content that did not belong to them. The final provider, Noorsat, made a public commitment at the Coalition meeting that it would comply by May 4 provided that the other operators agreed to maintain their current position. MBC CEO Sam Barnett said: "The coalition has been successful in highlighting where and how piracy happens, and the joint action to remove pirates from the region's satellites is a great step. Noorsat's commitment to take down the remaining pirate channels within days is clearly welcome." The Coalition also reinforced its commitment to protect content against illegal satellite distribution, and agreed to widen its focus to include new threats from internet piracy. The coalition was set up in 2014, bringing together major broadcast satellite providers (Eutelsat, Arabsat, Gulfsat) and content production and distribution companies (MBC, OSN, Rotana, ART, CNE and the MPA) to fight pirate channel operators from infringing members' rights. For the first time members discussed the increasing threat from illegal Internet streaming and downloads and agreed to work together to lobby regional regulators. Sophie Moloney, OSN Chief Legal Officer, presented the latest industry research showing IPTV piracy is growing at an alarming rate and fast becoming 'normalized behavior' within the family home. According to the UK's industry trust, the sale of IPTV boxes has risen by 99% globally in the last 12 months and 25% of users admit watching illegal content services. "Our industry faces a number of threats from illegal satellite distributors as well as from the emerging scourge of internet content piracy. The worrying thing is that illegal IPTV providers are openly selling their hardware and services through social media in the Middle East," said Moloney. The members have agreed to look at how they can widen their membership to reflect the different threats that content producers and distributors now face in the region. In a joint communiqué, the coalition members also agreed to collaborate on lobbying regional authorities, police, customs, legal and licensing bodies and to run joint education and awareness campaigns aimed at informing government entities and customers across the MENA. The Broadcast Satellite Anti-Piracy Coalition members include Noorsat, Gulfsat, Viewsat, STN, JMC, Etisalat, Du, Nilesat, Arabsat, Eutelsat, Rotana, Art, OSN, MediaGates, Motion Picture Association (MPA members include Walt Disney Studios Motion Pictures; Paramount Pictures Corporation; Sony Pictures Entertainment Inc.; Twentieth Century Fox Film Corporation; Universal City Studios LLC; and Warner Bros. Entertainment Inc.), WWE, TNA, Spot2000, Cedars Art, Egyptian Media Production City, Egyptian Chamber of Cinema, Cable Network Egypt, Eagle Films, IAA, Almassa Art Production, Miser International Film, Misr for Sound and Light, and MBC.

Air Force and Boeing Demonstrate Airborne Networking System

Boeing and the U.S. Air Force recently demonstrated that multiple aircraft and ground stations can efficiently and securely communicate using the Boeing-developed Talon Hate airborne networking system. During flight testing at Nellis Air Force Base in Nevada, Talon Hate pods on two F-15C aircraft enabled test pilots to share information through the military's Link 16, Common Data Link (CDL) and Wideband Global Satcom (WGS) satellites. Pilots using the system can transmit information quickly between the F-15C and other Air Force aircraft and weapon systems, enabling efficient information sharing in real time. The tests also validated intra-flight datalink network capabilities used by F-22 aircraft. "We look forward to fielding this system, not only to immediately provide aircrews with actionable information faster and at a higher quality, but also to help the Air Force learn important lessons for the employment of tactical gateway systems in the future," said Lt. Col. Christopher Bradley, Air Force Talon Hate manager. Boeing will conduct additional tests later this year with advanced sensors, which will offer improved aircraft targeting capabilities.

Nepal's Dish Media Network, Spacecom Sign Multi-Year Capacity Deal

Spacecom, the operator of the Amos satellite fleet, announced that Nepal's Dish Media Network has furthered its long-term association with the Amos 4 satellite. Located at the 65 degrees east prime orbital position, Amos 4 provides Dish Media Network with satellite capacity enabling the Direct-to-Home (DTH) provider to expand its Standard Definition (SD) and High Definition (HD) channel services. The operator's capacity on Amos 4 is contracted for the satellite's operational lifetime, until 2028. "This agreement provides more bandwidth for our national network and enables [Dish Media Network] to boost the number of channels we offer to improve the viewing experience for customers," said Dish Media Network Chief Executive Officer (CEO) Sudeep Acharya. Amos 4 has eight Ku-band transponders of 108 MHz and four Ka-band transponders of 216MHz, each with steerable beams. It offers broadcast and broadband reach for satellite services including DTH, video distribution, Very Small Aperture Terminal (VSAT) communications and broadband internet within the Asian, African and Middle Eastern markets.

Arianespace Successfully Orbits Telecom Satellites for Brazil, South Korea

Arianespace successfully launched two telecommunications satellites on Tuesday, May 4, from the Guiana Space Center: SGDC for Visiona Tecnologia Espacial, on behalf of the Brazilian operator Telebras and the Brazilian government, and Koreasat 7 for South Korean operator KTsat. This launch was the fourth of the year for Arianespace and the second in 2017 with the Ariane 5 heavy launcher, which also recorded its 78th successful mission in a row. SGDC is a Brazilian government program designed to meet three main objectives: reduce the country's digital divide by supplying high-quality internet services across all of Brazil, within the scope of a national broadband plan; provide independent and secure strategic communications services for the Brazilian armed forces and government; and provide the Brazilian space industry with key technologies so that it can play a growing role in the country's future space programs. Arianespace has successfully launched all 11 Brazilian telecom satellites for legacy operator Embratel, as well as Star One, a wholly-owned Embratel subsidiary. Koreasat 7 is the third satellite launched by Arianespace for South Korean operator KTsat, following the launches of Koreasat 3 in 1999 and Koreasat 6 in 2010. Koreasat 7 will provide video and data transmission applications, including internet access, Direct-to-Home (DTH) TV broadcasting, government communications, and connectivity to Very Small Aperture Terminal (VSAT) networks to extend services to isolated areas.

Inmarsat's GX Aviation In-Flight Broadband Enters Commercial Service

Inmarsat announced the commercial service introduction of GX Aviation with Lufthansa Group, the launch customer of its next-generation in-flight broadband solution. Under a 10-year strategic partnership between Inmarsat and Lufthansa Group, approximately 300 Airbus A320 aircraft will be equipped with GX Aviation. To date, Inmarsat has completed 80 of the aircraft installations and customers can now purchase GX Aviation on selected Lufthansa and Austrian Airlines short and medium haul flights. Lufthansa Group's low-cost carrier Eurowings is also set to launch its commercial services in the coming weeks. The commercial service introduction follows the completion of a test program, lasting approximately four months, during which the solution successfully met performance targets and received positive feedback from passengers as well as Lufthansa Group cabin crew, according to Inmarsat. Passengers can connect to GX Aviation using their personal devices via Lufthansa Group's FlyNet portal. Three package tiers are available with both Lufthansa and Austrian Airlines, starting with a messaging service for 3 euros ($3.27) per flight, a surfing service for 7 euros ($7.63), and a streaming service for 12 euros ($13.08). Passengers can either pay via credit card or payment services such as PayPal. Purchases using Air Miles or via roaming partners will also be available soon, Lufthansa stated. Lufthansa Technik is responsible for installing the systems and components required for GX Aviation on Lufthansa aircraft, as well as the required work for aeronautical and statutory regulations. Lufthansa Systems makes the required infrastructure available onboard the aircraft and provides portals for passengers based on its BoardConnect product line. Inmarsat partner Deutsche Telekom is Lufthansa Group's Internet Service Provider (ISP) and the airlines connect to the GX network using JetWave hardware provided by Honeywell Aerospace.

Iridium Integrates First Iridium Next Satellites, Announces Second Launch Date

Iridium Communications has announced that the first set of Iridium Next satellites have been integrated into the operational constellation and are providing service to Iridium customers. In addition, Iridium has announced the targeted launch date for the second payload of 10 Iridium Next satellites as June 29, 2017, at 1:02 p.m. PDT, with an instantaneous launch window. Prior to achieving this program milestone, the new satellites went through testing and validation, which demonstrated they met all performance requirements, the company stated. According to Iridium, the Next satellites are already providing superior call quality and faster data speeds with increased capacity to Iridium customers. All planned Iridium Next launches will take place from SpaceX's west coast launch facility at Vandenberg Air Force Base in California, on Falcon 9 rockets. The testing and validation process for the Iridium Next constellation involved a test of each of Iridium's services, an assessment of each satellite's performance against established metrics, and a formal acceptance process between Iridium and Thales Alenia Space, to ensure a smooth integration into Iridium's existing network architecture. Once completed for each new satellite, Iridium replaces the original satellite with a new Next satellite, known as a slot swap. To date, the team at Iridium's Satellite Network Operations Center (SNOC) has successfully completed three individual slot swaps, and two dual slot swaps, two of the new satellites are currently drifting to their assigned orbital plane. The June launch will deliver the second set of 10 Next satellites into Low Earth Orbit (LEO), bringing the total count to 20 in the constellation. A total of 75 satellites will be orbited over eight launches, which Iridium expects to complete by mid-2018. The new constellation is the first step in delivering Iridium's next-generation portfolio of communications services, called Iridium Certus, and will also introduce new technologies and services like the Aireon space-based Automatic Dependent Surveillance-Broadcast (ADS-B) aircraft surveillance and flight tracking network.

Morocco and Intelsat Pen Deal

Intelsat, operator of the world's first Globalized Network and leader in integrated satellite communications, announced that Morocco's INWI has signed an agreement to integrate satellite services from the Intelsat EpicNG platform into INWI's network. INWI, the fastest-growing mobile operator in Morocco, is expanding into cellular backhaul services and, following the awarding of a VSAT license by Morocco's National Agency of Telecommunications Regulation (ANRT), is also preparing to launch broadband connectivity services. Under the new agreement, INWI will incorporate services from the Intelsat 35e satellite, enabling the mobile operator to enhance its existing network while also delivering improved performance that supports INWI's goal to expand its business and reach new regions in the country. "In light of our new VSAT license from Moroccan regulators, we are able to expand our operations in Morocco and throughout West Africa," said Naoual Laabsi, VSAT Design Manager, INWI. "In order to do this, we need the ability to manage our own network and provide new solutions for customers. The Intelsat EpicNG platform, with its high-throughput capabilities and future-proof technology, provides us the best way to reach these goals and succeed in a highly competitive market." "INWI is a progressive mobile operator, incorporating new technologies that support the introduction of new services and entering into expanded geographies. As soon as Intelsat 35e becomes available, it will immediately begin supporting the INWI mission, given the backwards compatibility of the Intelsat EpicNG design," said Jean-Philippe Gillet, Intelsat's vice president and general manager, Broadband. "Intelsat 35e, with its unique collection of high power wide-beams and spot-beams in C- and Ku-band is an ideal satellite for mobile operators seeking higher performance on their current satellite infrastructures." Intelsat 35e, part of the high-performance Intelsat EpicNG network, is scheduled to launch and enter operations in 2017. The flexibility of the Intelsat EpicNG open architecture and backward-compatible design enables service providers to seamlessly transition to Intelsat EpicNG high-throughput services and immediately realize efficiency improvements. Current Intelsat EpicNG customers are experiencing up to 165 per cent improvements in efficiency. Using next generation hardware, Intelsat and its partners have demonstrated potential efficiency gains of up to 330 per cent.

Thuraya Launches In-Flight Connectivity Service Thuraya Aero

Thuraya Telecommunications has announced the launch of Thuraya Aero, a satellite communication service that enables In-Flight Connectivity (IFC) for internet access, voice calls, text messaging and high-speed data applications on board small to medium-sized aircrafts. Developed in collaboration with the Aero Group, a consortium of global technology and service innovators consisting of Cobham, Scotty Group, SRT Wireless and led by smp aviation, Thuraya Aero is suitable for fixed wing and rotary wing aircrafts as well as any other air platforms flying missions beyond line of sight, according to the company. Thuraya Aero enables applications requiring real-time airborne data such as Search and Rescue (SAR), Intelligence, Surveillance and Reconnaissance (ISR), telemedicine, military operations, office-in-the-sky and border surveillance. Thuraya hopes to provide services to a wide range of market segments including government, military, enterprise and disaster relief. Ahmed Al Shamsi, acting Chief Executive Officer (CEO) at Thuraya, iterated that launching Thuraya Aero is a vital first step toward the company's efforts to build a considerable presence in the aeronautical sector. Designed to operate at Internet Protocol (IP) broadband speeds of up to 444 kbps in single channel configuration and up to 700 kbps with a dual channel system, Thuraya Aero also comes with a built-in video transmission capability that offers real-time video streaming using on-board High Definition (HD) camera systems. According to Thuraya, this makes Aero well suited for ISR and SAR aircrafts and other air platforms. For business aviation, Thuraya Aero provides VIP and executive IFC. During flight, executives can talk on their own smartphone, send and receive text messages, access email and internet with any mobile device, and hold video conferences.

Nigeria to Launch First Nano-Satellite

Nigeria plans to launch Africa's first nanosatellite into orbit between May 23-27, reports Today.ng, citing the Director-General of National Space Research and Development Agency (NASRDA), Seidu Mohammed. He said Nigeria's nanosatellite would be launched alongside Japan, Ghana, Nepal and Bangladesh from the launch base at Miami, Florida, in the US.

ARTICLE

GCC Telcos: Is a Digital Operational Turnaround Overdue?

Following decades of comfortable margins, GCC telecommunication operators' financial standings are deteriorating at an alarming pace: Combined GCC telco revenues growth came to a standstill in 2016 at USD 33bn and profitability is eroding. In fact, two thirds of the region's telcos faced decreasing EBITDA margins (Earnings Before Interest, Tax, Depreciation and Amortization) in the past year and a third of GCC telcos just achieve EBITDA margins in the twenties to low thirties. As connectivity revenues continue to represent the vast majority of business, nascent revenues such as Information Technology (IT) services have yet to gain traction and still do not contribute to a material bottom-line impact.

A digitally-enabled operational efficiency turnaround can -allow GCC telcos to tackle these chall-enges, while enhancing customer experience and sustaining returns in the longer run.

Moreover, Capital Expenditure (CapEx) to revenues remains at high levels, reaching mid-teens level all the way to 20% of revenues for converged operators. Such a trajectory is plowing telcos Return On Capital Employed (ROCE), which dipped from 27% to 19% for GCC operators combined over the last five years. Some operators have reacted by slashing investments, which may jeopardize future growth.

A digitally-enabled operational efficiency turnaround can -allow GCC telcos to tackle these challenges, while enhancing customer experience and sustaining returns in the longer run. Leading telcos have made great strides in digitizing their operations, by not only covering their customer-facing activities and services, but also by reinventing activities across their whole value chain.

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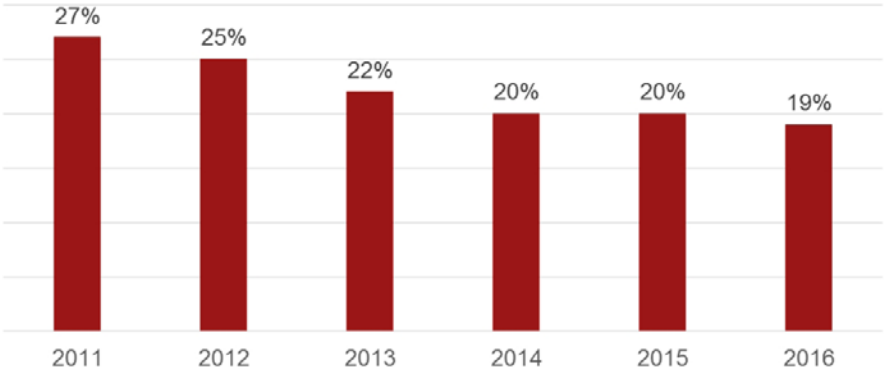

EXHIBIT 1: GCC Telco ROCE Evolution 2011 - 2016

Current financial performance may not be sustainable

Several GCC telcos are facing a declining ARPU coupled with rising traffic, along with a sustained inflationary pressure on their cost base. Maintaining their trajectory will drive the region's telcos to lower EBITDA margins which can no longer sustain current capital intensity levels. Especially when taking the upcoming 5G investments into consideration, and, in some countries, the additional spectrum that operators will need to acquire, careful cash flow management is needed.

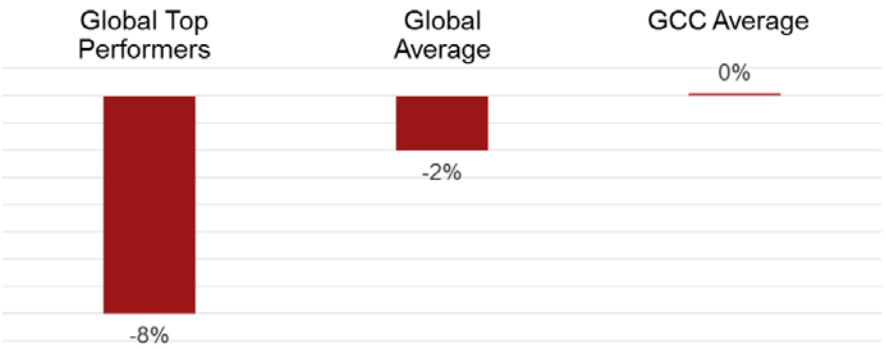

EXHIBIT 2: Cost per Subscriber Evolution for Top Performers (top quartile), Global Telco Average and GCC telcos 2014 – 2016 CAGR.

In fact, A.T. Kearney experience shows that by looking at the performance of around 200 telecom operators globally top global performers have achieved a reduction in total cost per subscriber of around 8% per year during the 2014 – 2016 period. GCC operators, conversely, are struggling to achieve a marked reduction in this metric, which is poised to further deteriorate as the subscriber base saturates.

Global top performing operators outperformed because – amongst other things – they have shifted from an incremental approach to holistic cost management. They moved from discretionary budget cuts and efficiency improvements measures to a bold re-think of their entire operating model-a digitally-enabled operational efficiency turnaround. Simply put, a 5% across-the-board Operating Expenditure (OpEx) reduction no longer suffices to safeguard margins while several cost categories have already been "cut to the bone" over the last years.

A.T. Kearney has launched a comprehensive digital benchmark of telecom operators to track the degree of digitization along their core activities. Our analysis reveals a clear correlation between top quartile performers in terms of efficiency and their degree of digitization.

Shifting from an incremental approach to a digitally-enabled operational turnaround

A new lean digital operating model for telcos is achievable, even for integrated incumbent operators with greater complexity. Like US and European flagship airline carriers in the early 2010's, which emulated low cost airlines and underwent radical transformation, telcos can learn a great deal from Over-The-Top players (OTTs) and disruptive late telco entrants and apply key concepts to their operating model (e.g. the no frills, digitally-enabled offering by Free in France).

In fact, our research shows that operators that have advanced the digitalization of their operations have also increased their operational efficiency across the value chain. Today, leading operators achieve operational efficiency levels that are superior by 20% all the way to over 30% when compared with GCC operators that still operate in a legacy fashion.

A.T. Kearney experience shows that by looking at the performance of around 200 telecom operators globally top global performers have achieved a reduction in total cost per subscriber of around 8% per year during the 2014 – 2016 period.

Below, we share some key levers to drive a digitally-enabled turnaround across the telco value chain, particularly relevant in the GCC.

Technology and Operations:

While most GCC operators have addressed inefficiency in their mobile networks, fixed networks still have ample of enhancement opportunities. For example, remote line provisioning and resolution enable substantial reduction in installation and repair costs. Globally, operators typically provision over a third of new lines remotely (i.e. without sending on-site technicians) which is not the case for operators in the region.

Digitization and automation of network processes and data mining/analytics to prioritize efforts such as for preventive maintenance remain key focus areas. In addition, operators are also adopting a customer experience management view, inserting probes on the network to measure customer perception of quality.

On the sourcing side, procurement transformation – focusing both on building up best-in-class agile procurement capabilities in tight alignment with the requirements of business and technology, and benchmark-driven large-scale strategic sourcing programs - is essential. For telco groups, we see the successes with strategically combining OpCo purchasing power for specific categories (e.g. Radio Access Network and large outsourcing contracts) and sourcing them center-led.

Most telecom operators looked until recently at efficiency as a pure financially-driven exercise. This often led to different views on cost optimization between, for example, the CFO and Commercial functions.

Another key lever is sharing of both active and passive elements. Average tenancy ratios in high-efficiency markets reach 2.5 (i.e. more than 2 operators share on average every tower in the country), which enables close to halving both OpEx and CapEx compared to single-tenancies. In addition, when smartly setup, TowerCos can help optimize cash flow and CapEx budgets significantly.

Sales:
On the commercial side, successful telcos have actively worked on reducing the number of low-value transactions across retail channels and shifting focus from volume to value. Regional operators often under-invest in digital channels and can achieve substantial savings by further pushing online and telesales especially for low-value transactions. Leading operators are typically able to migrate around 15% of transactions to digital channels.

Operators also look to realign sales incentives with the actual value created. Commissions represent up to 18% of OpEx for mobile operators, and are typically hard to address due to market-specific multi-level distribution systems and complex commission components. Regional telcos often leave commissions to indirect sales channels untouched as a supposed "must pay" to keep market momentum. Leading operators are investing in analytical, big-data driven bottom-up approach to drive the commissions / Subscriber Acquisition and Retention Cost (SARC) yield efficiency and thus optimizing indirect channel profitability. Ensuring transparency on SARC profitability by partner, product, or even Point of Sale (PoS) by calculating lifetime SARC margin can achieve a SARC budget decrease of 10% to 20% and an improvement of partner profitability of around 10 pp.

Customer Care:
We see a major shift in the way successful telecom operators are looking at customer interaction and experience – following the example of OTT players. While many operators, especially in the GCC, are still focused on those historically critical Key Performance Indicators (KPIs) such as Average Waiting Time and First Call Resolution, the leading players are all geared towards concepts such as 'no service is the best service' and self-social-resolution. We see that investments in speech recognition, chatbots, self-service apps are maximized by top-tier operators – leading to reduced cost base and radically improved customer satisfaction. For example, a European operator eliminated 70% of customer pain points related to products, billing, and payments by simplifying its portfolio and fully digitizing all processes, while in parallel reducing 35% of related OpEx.

Support and Overhead functions:
Automation of many support and overhead processes and outsourcing of the low value-add activities across HR, Finance and facility management is a primary lever for lean telcos. Even strategic corporate functions move to a lean, pool-based resource model. The challenge for these functions lies primarily in overstaffing and an unstructured reliance on third parties. Typically, operators look to contain support and overhead costs to 10% of relevant process-related OpEx. As many regional operators currently exceed this level, a very significant reduction in this cost area is warranted.

Bold moves to enhance efficiency while improving customer experience

Most telecom operators looked until recently at efficiency as a pure financially-driven exercise. This often led to different views on cost optimization between for example the CFO and Commercial functions.

While historically at odds, today the digitally-enabled operational turnaround allows to become radically more efficient while strongly improving overall customer experience. In fact, they are two re-enforcing efforts.

We see a major shift in the way successful telecom operators are looking at customer interaction and experience – following the example of OTT players. While many operators, especially in the GCC, are still focused on those historically critical Key Performance Indicators (KPIs) such as Average Waiting Time and First Call Resolution, the leading players are all geared towards concepts such as 'no service is the best service' and self-social-resolution.

This is an opportunity that many telco operators still need to recognize - and those that do can truly re-invent themselves and achieve sustainable superior returns.

WHOLESALE NEWS

Turkcell Chooses Verscom Solutions to Monitor Wholesale Voice Business

Turkcell, an integrated communication and technology services provider which serves about 50.4 million customers in Turkey and its region, selects ODINETM, a suite of intelligent wholesale voice business management applications, to increase the agility of their wholesale voice operations with greater efficiency and flexibility thanks to ODINE's highly integrated structure and tailored features for Wholesale Carriers. Rapidly integrated with Turkcell's existing back office elements and customized to its needs, ODINETM will help Turkcell; Quickly make tactical operational decisions to maintain service quality and operating margins through actionable insights into their own and partner networks KPIs Adopt a more proactive approach to optimizing their routing matrix through automated monitoring and notifications allowing them to rapidly identify and fix issues in order to meet SLAs. Improve internal operational efficiency and lower OPEX through automation and wide gamut of features. After a thorough evaluation, Turkcell has chosen ODINETM for monitoring and optimizing their Wholesale Voice Operation. They have seen that ODINE has led to significant improvements in their operational efficiency through its flexible ad-hoc CDR search engine, customizable widget-based Operational, Strategic & Analytical Dashboards, heads up NOC displays, multi-factor alarming and notification, and custom automated reporting engine. ODINE's automation of these processes assures service quality, and minimizes the time spent by account managers as well as NOC Engineers on managing their wholesale business. "Our customers and carrier partners expect high service quality from our Wholesale Voice department," said Mr. Özgür Genç, Network Technologies Core Network Operations Director at Turkcell. "With ODINE, we can make our wholesale business more efficient and agile, leading to improved quality, lowered operating costs, and higher traffic volumes & margins. ODINE has provided us with the visibility, intelligence, and actionable insights to do all of this and more." Mr. Alper Tunga Burak, Managing Partner of Verscom Solutions said; "Turkcell's decision to deploy Verscom Solutions' ODINE product has proven once again how our solutions and expertise meet the needs of complex and large scale Tier1 operators such as Turkcell and we look forward to updating Turkcell to the next generation BOS module of ODINE which adds Mobility and Offer Management." Verscom Solutions is a leading Systems Integrator and a Cloud PaaS/SaaS Service Provider to Communication Service Providers as well as Wholesale Voice/Data Aggregators across the globe. Our "Go Cloud" Service bundles ODINE which provides flexible policy driven routing, route optimization, offer management, rating, billing, number portability, technical and business reporting & analytics, as well as dispute management, with best-of-breed SBC, TDM/SIP Interworking services on the cloud. With regional offices in Istanbul, London, Dubai and Lahore, Verscom Solutions' geographical presence, experience, and cultural fluency bridges Europe and Asia, while uniquely serving emerging markets across Africa.

TRA Announces New GCC Roaming Rates

The UAE Telecommunication Regularity Authority (TRA) has announced the implementation of new price caps for Intra-GCC roaming services by UAE's mobile operators. On an average, the International roaming prices for UAE customers who travel to GCC countries have fallen by 18 per cent starting from April 1, following the new directive. The reduction in international roaming prices in the GCC countries focuses on the key services that subscribers need to use while roaming. The GCC roaming prices for data services fell by 35 per cent on an average while the prices of receiving calls during roaming in GCC decreased by 19 per cent and SMS while roaming costs 13 per cent less, a statement said. In addition, the reduction in roaming prices in the GCC also includes making local call services in the GCC countries, international calls to the UAE and international calls to other GCC countries, the statement said. Hamad Obaid Al Mansoori, TRA director general, stated: "The TRA was actively represented in the GCC's Working Group's meetings to study the regulation of roaming prices in the GCC countries. The implementation of the price caps by all mobile operators in the GCC represents a great achievement for GCC countries regionally and internationally. "The TRA strives to achieve the satisfaction and happiness of the customers and the TRA is making unremitting efforts to raise the quality of the services provided by the telecommunications sector to better serve the UAE's customers and to ensure that they have access to quality services at competitive prices. We are looking forward to the positive impact that the implementation of this directive will have on the UAE customers travelling to the GCC," he said. Under an agreement, mobile operators in the UAE are to reduce intra-GCC prices according to predetermined price caps in five phases on April 1 of each year starting from 2016 to 2020.

Wholesale and Broadband Services Boost Telekom Slovenije in Q1

Telekom Slovenije, which has operations across Slovenia, Kosovo, Bosnia & Herzegovina and other parts of southeast Europe, has reported operating revenues of EUR181.3 million (USD195 million) for the first three months of 2017, up 2% on the same period last year. The firm said the increase was primarily due to improved sales in the wholesale market and higher revenues from broadband and IT services, despite the reduced income from mobile subscribers and pre-paid users. EBITDA fell 3% to EUR50.8 million, though net profit climbed 12% to EUR9.7 million. The operator had 2.08 million retail fixed and mobile telephony subscribers in southeast Europe at the end of March 2017, down from 2.13 million a year earlier, while its broadband user total climbed slightly from 346,238 to 348,801 over the same period.

Unitel Expands Data Roaming Service in Algeria

Angolan mobile operator Unitel has expanded its data roaming service in Algeria, through a partnership with local operator ATM Mobilis, reports Sapo. Unitel thus takes the number of partners in the country to two, making it easier for its customers to receive and make calls, exchange SMS, send e-mails and use other services when traveling to Algeria. With more than 400 partner operators, Unitel's roaming service is available in around 180 countries and the GPRS/ data service is available in more than 140 countries in a partnership with more than 230 operators.

ACCC Publishes Quarterly Report on NBN Wholesale Market

The Australian Competition and Consumer Commission (ACCC) has published its report concerning wholesale market indicators for the National Broadband Network (NBN), covering the three months ended March 31, 2017. According to its findings, nbn, the company managing the NBN and overseeing its construction, was supplying a total of 2.07 million broadband wholesale access services at the end of the reporting period, more than double the 941,235 reported a year earlier, and representing a more than 21% quarter-on-quarter increase. In terms of the technologies being used, fiber-to-the-premises (FTTP) remained the most popular platform, with 1.08 million connections at end-March 2017, up by almost 42% year-on-year. Fiber-to-the-node (FTTN) is, however, gaining ground, having increased from less than 40,000 in March 2016 to more than 630,000 a year later. The number of HFC-based connections also saw a notable uplift, increasing more than four-fold over the quarter to 63,475. Meanwhile, all other technologies on offer saw customer uptake increase, with fiber-to-the-building (FTTB), TD-LTE fixed-wireless and satellite connections numbering 53,591, 173,148 and 69,037, respectively. With downloads speeds of up to 1Gbps available via the NBN, depending on the technology taken, the report also noted that the most popular speed tier remained 25Mbps/5Mbps, with 55% of connections at this level at March 2017. While uptake for plans offering speeds above 100Mbps remains relatively limited – there were just 102 such connections at the end of the reporting period – the number of customers signing up for an up to 100Mbps tariff is on the up, increasing by more than 21% q-o-q to almost 250,000. Commenting on the report's findings, ACCC chairman Rod Sims added: 'The NBN rollout to date has largely been in regional areas. Competitors to Telstra are supplying 46% of services in the regions compared with traditional market shares for broadband services where Telstra often had well over 60% market share.'

EU Data Market to Grow to EUR 107 Bln by 2020 - Study

The European market of digital products and services ("EU data market") is set to almost double in size from EUR 59.5 billion in 2016 to EUR 106.8 billion by 2020, according to the high growth scenario set out in the latest European Data Market study published by the European Commission. The study found that 6.16 million people in Europe worked in data-related jobs in 2016, a figure that's expected to increase at a compound average growth rate of 14.1 percent to hit 10.43 million by 2020.

ACCC Opts not to Declare Wholesale Domestic Mobile Roaming in Draft Decision

The Australian Competition and Consumer Commission (ACCC) has released its draft decision proposing not to declare a wholesale domestic mobile roaming service, effectively removing the possibility of mandatory roaming in the market. The regulator claims to have found 'insufficient evidence that declaration will improve the current state of competition overall,' and as such its draft decision states that declaration in regional, rural and remote areas may not reduce mobile market leader Telstra's retail mobile prices to a significant extent and 'could well result in overall higher prices if other service providers raise their retail prices to reflect the cost of roaming access prices'. As previously reported by CommsUpdate, in September 2016 the ACCC launched an inquiry considering whether or not it should declare a wholesale domestic mobile roaming service, focusing on a number of key issues, including: how consumer demands for mobile services are evolving, and whether there are differences in regional areas to urban areas; the likely investment plans of each of the mobile network operators to extend coverage and upgrade technology, absent a declaration; whether there are any significant barriers to expanding the reach of mobile networks; and any lessons from similar experience with domestic mobile roaming in other countries. The ACCC had previously considered mobile roaming in regional areas in inquiries held in 1998 and 2005, though on both occasions it opted not to regulate an access service as it was satisfied roaming agreements were being commercially negotiated. In publishing the latest draft decision, ACCC chairman Rod Sims noted: 'Many regional consumers do not have a choice of provider either because they only have one network offering coverage in their region or because they need continuous coverage … While we do not think that mandated roaming is the answer to these problems in regional and rural areas, we are seeking comment on other regulatory and policy measures that could improve coverage and competitive outcomes.' Feedback on the draft decision has now been invited by the ACCC, with a submission deadline of 2 June 2017 having been set. Mobile market leader Telstra was swift to welcome the development, issuing a press release in which its CEO Andrew Penn said the cellco would 'immediately move to expand [its] 4G coverage to reach 99% of the population by later this year' if the draft decision is made final. Further, the executive said the decision could pave the way for ongoing investment which would see an additional 1.4 million square kilometers of 4G coverage for regional and rural Australia, with around 600 base stations to be upgraded from 3G to 4G.

Danish Consumer Group Slams Price Rises for Roaming Change

The Danish consumer council Taenk is designating June 6 as switching day, urging the public to change provider after three out of four mobile firms are raising prices after the EU directive scrapping the international roaming surcharge. People should not simply accept the hikes, it said, as many already pay for talktime and mobile internet that they do not use. In reality, average data use is approximately six times lower than the average allowance in Danish subscriptions.

Windstream Wholesale Expands Reach in Deal with Switch

Windstream is now offering its wholesale, long-haul fiber network access via Switch Connect, a portfolio of networking and business management systems and services hosted at Switch data center campuses in Las Vegas and Tahoe-Reno, Nevada and Grand Rapids, Michigan. The deal with Switch expands the reach of Windstream Wholesale fiber services to include market territories and customers outside its present service footprint. "Adding Windstream Wholesale to Switch CONNECT and leveraging their significant, rapidly expanding national on-net footprint gives our customers great high-speed connectivity options to securely access our superscale campus locations across the U.S., as well as any location within the Windstream footprint," Switch VP of Connectivity Sales Scott Gutierrez explained. Switch customers now have access to Windstream's fiber network, which spans 147,000 route-miles across the U.S., as well as Windstream Wholesale's carrier solutions.

GCC Roaming Charges Reduced Again

The Communications Regulatory Authority (CRA) has coordinated the implementation of the second phase of the regulation on reducing roaming charges within the Gulf Cooperation Council (GCC) for the benefit of telecom consumers in the GCC member states. The reduced roaming rates will be for the main services consumer need while travelling outside the country like receiving and making voice calls, sending SMS messages, and using mobile data throughout the GCC countries. Receiving SMS messages while in roaming will remain free, the CRA said, adding that the decision aims at enhancing cooperation among GCC countries in the field of communication for the benefit of GCC consumers. The CRA said this is the second phase of the rates reduction. Voice calls and SMS messages charges will further reduce on April 1, 2018. As for charges for mobile data services, these will further reduce in April each year until 2020, the CRA noted. This year, mobile data charges have been reduced to QR3.094 per MByte from QR4.732 per MByte in 2016, reflecting a reduction of around 35%. Aside from that, this year has seen a reduction in the prices of the following services:

- Making local voice calls in the visited country was reduced to QR0.910 per minute from QAR 0.946 per minute compared to April 2016;
- Making voice calls to other GCC countries (including home country) was reduced to QR2.257 per minute from QR2.330 per minute compared to April 2016;
- Receiving voice calls was reduced to QR1.019 per minute from QR1.274 per minute compared to April 2016;
- Sending SMS was reduced to QR0.255 per SMS from QR0.291 per SMS compared to April 2016; and
- Receiving SMS messages while in roaming remains free.

"The CRA is continually engaging regional entities to collaborate and prepare not only for future technologies and infrastructure, but also to actively support all decisions that benefit consumers of communication services. "The decision to reduce roaming charges in a phased manner ensures customer experience is improved through the ubiquitous availability of high quality affordable services," said Faisal al-Shuaibi, the CRA's official spokesperson. It is worth mentioning that the prices caps are ceilings and the operators are free to compete by setting prices below these regulatory caps and can provide more attractive offers to the consumers.

Unlimited International Roaming Plans Offered for UAE

Vodafone India has launched an unlimited international roaming proposition for travelers to the US, UAE and Singapore in its international roaming pack, Vodafone i-RoamFREE, where customers opting for this pack will not be charged a single additional rupee for calls and data while roaming in these three countries, the company announced. This pack is available at price points with options of Rs 5,000 for 30 days, Rs 3,500 for 10 days, Rs 2,500 for seven days and Rs 500 for 24 hours, the company said in a statement here. "There is no cap on the number of calls or amount of high speed data that can be used. Also, calls include all incoming calls and outgoing calls anywhere in the world. This means customers travelling in the US can even make calls to Hong Kong at no extra charges," the statement said. Vodafone i-RoamFREE is an international roaming pack which offers home-like tariffs while roaming in 47 countries of the globe. "This is the first time ever unlimited international roaming proposition and we are very excited to introduce it for our top three travel destinations -- US, Singapore and UAE. We are making calls and data, both incoming and outgoing, while travelling in these countries completely free," said Sandeep Kataria, Director - Commercial, Vodafone India. "This completely eliminates the need and hassle of changing SIM cards when travelling abroad and customers can now freely use their local number seamlessly without worrying about any bill shocks or expensive charges. They can remain confidently connected on their existing Vodafone number when they travel, and be assured the best of voice and data services," he added.

Tele2, Bite Latvia Launch Unlimited Plans with Roaming

Tele2 and Bite Latvia have announced a revamp of their plans from June to include unlimited communications, including in the EU. Both offer international calls to Europe included in the plans, as well as an allowance for data roaming in the EU. Tele2 also includes data for tablet use, while bite offers zero-rating on some apps and a period of free screen insurance and anti-virus software.

Arthur D Little

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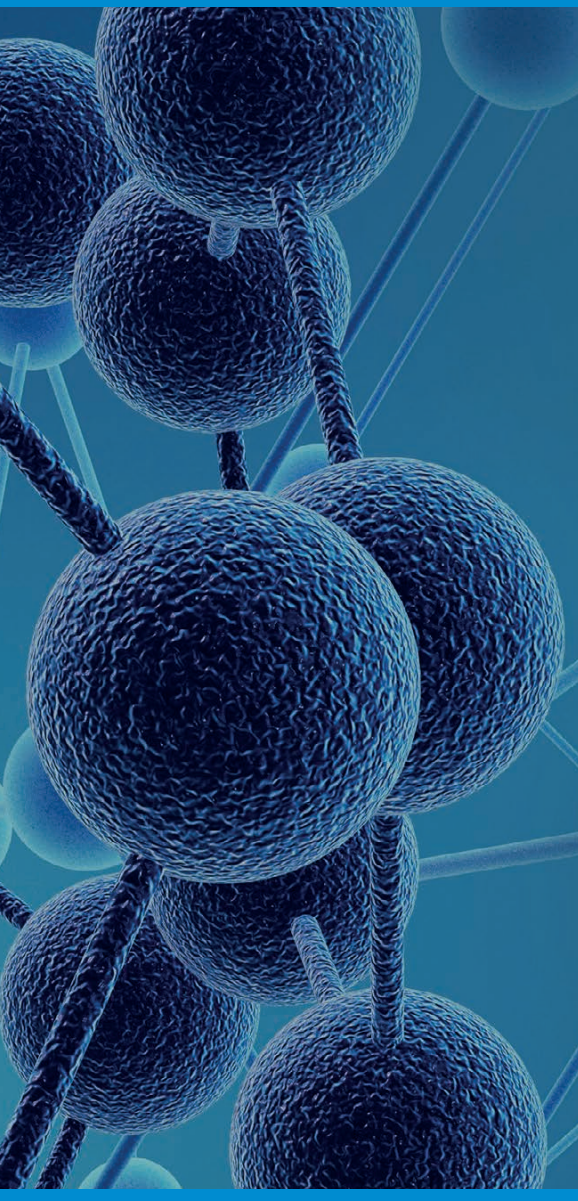

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ARTICLE

Middle Eastern Telcos - Where is the Next Efficiency Frontier?

Telecom operators have a real opportunity to reduce operational costs by 30-40% whilst improving service quality and customer satisfaction. This is primarily achieved by reducing/eliminating operational complexities accumulated during the growth phase and digitalizing the operations.

Thomas Kuruvilla
Managing Partner, Arthur D. Little

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Principal, Arthur D. Little

Lokesh Dadhich
Principal, Arthur D. Little

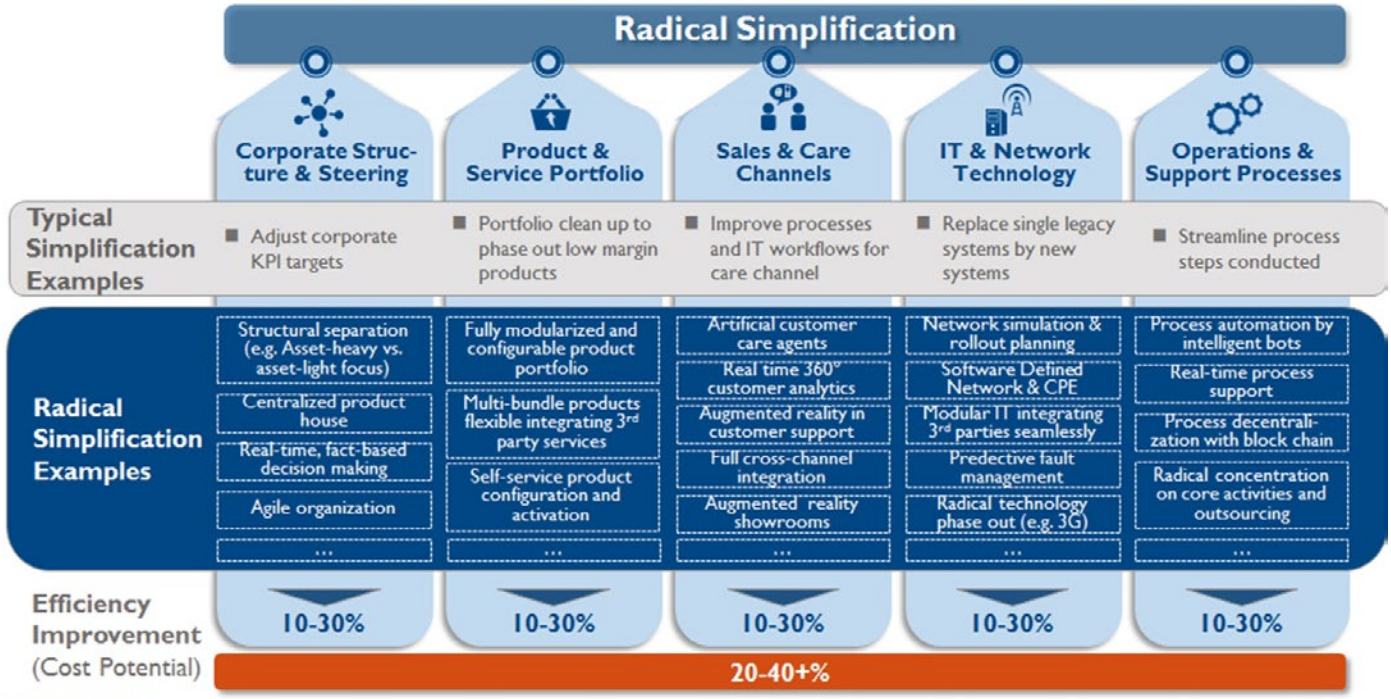
Middle Eastern Telecom industry, is entering a new phase after a sustained growth period (over almost a decade). Annual revenue growth of 5-10% driven by a sustained increase in mobile penetration and low competitive price pressures are a history now. The current and emerging outlook in some markets is reminiscent of a maturity phase that Western European telcos have long been accustomed to.

As a result of continuous efforts to pursue market opportunities during this growth era, regional telcos have amassed complexities in their services, technologies and operational (processes, structures etc.) portfolios. These complexities are major drivers of costs and if addressed in a comprehensive manner can release 20-30% efficiency. For example, we observe that typically ~20% of the service portfolio contributes ~120%-140% of the telco's margin, while the remaining 80% leads to erosion.

During the growth phase, regional telecom players have also pursued outsourcing models (e.g. Managed Services) to scale up their operations and to gain efficiency. However, such efforts have largely under-estimated the criticality of investing in internal capabilities required to steer and manage the suppliers. Resultantly, the region has very few examples of efficiency gains through outsourcing and it remains the most attractive and profitable market for telecom managed services suppliers. We estimate that telecom operators have an opportunity to reduce managed services' costs by 25%-40% whilst improving service quality and operational efficiency.

Driven by the strategic imperative to shift to new frontiers of efficiency, as well as the available opportunities and approaches, telcos should consider transforming their operations to:

1. **Radically simplify** services, technologies and operations portfolio
2. Adopt a suitable **network asset management** model
3. Rethink **sourcing/contracting model** across customer, IT and network operations
4. Exploit **technology and infrastructure virtualization** opportunities
5. **Digitalize** operational processes
6. Transform towards a **lean and agile** organization structure



Source: Arthur D. Little

1. Radical Simplification of Operations

Radical (re)thinking of services, processes and technology portfolio is required for telcos to simplify their operations and successfully shift to a higher efficiency level. Telcos have an opportunity to simplify various operational areas, as shown in the table above (Arthur D. Little's Radical Simplification Framework)

2. Network Asset Management Model

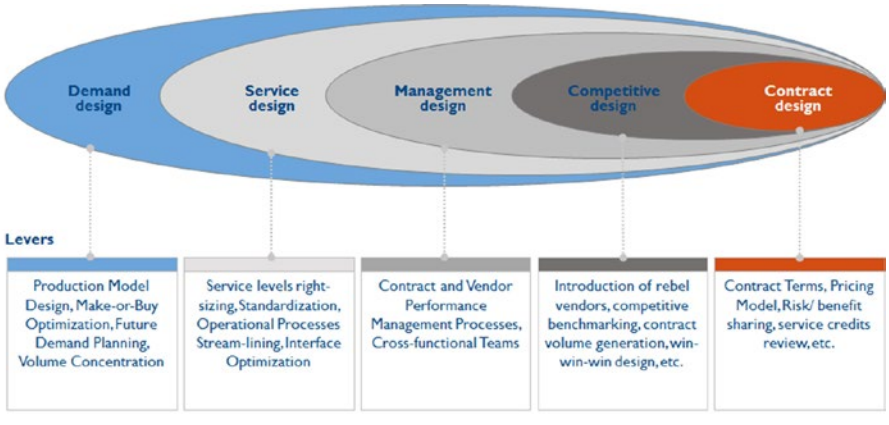
Globally, telecom players have adopted different configurations for Network assets management. These models can bring significant operational efficiencies in the regional context depending on the market specific strategic and regulatory context:

- RAN passive sharing brings Capex benefits from lower site building costs and Opex benefits from lower site lease costs, resulting in network cost savings in the 10-20% range;
- RAN active MORAN sharing generates Capex benefits from lower equipment investment needs and Opex benefits from lower operations and maintenance costs, resulting in approximately 30% savings in RAN costs;
- RAN active plus Core active sharing additionally provides synergies in the area of transmission, resulting in total Opex and Capex savings in the 35-40% range.

Established telecom players which shifted towards outsourced model, have typically reduced Opex by 20-25%4, but such moves in the region have either failed to create the desired efficiency impact, or had other adverse side effects (e.g. negative impact on customer experience). Telcos should specifically build internal capabilities to steer and manage such outsourced operations.

3. Sourcing/contracting Model

Telcos with an optimal sourcing model have a make-or-buy configuration that simultaneously optimizes time-to-market (technology growth), service quality (customer experience enhancement), operating risks and costs. Established telecom players which shifted towards outsourced model, have typically reduced Opex by 20-25%4, but such moves in the region have either failed to create the desired efficiency impact, or had other adverse side effects (e.g. negative impact on customer experience). Telcos should specifically build internal capabilities to steer and manage such outsourced operations. Specifically in Network operations, regional telcos have adopted a high level of outsourcing in both 1st & 2nd level support (67%) and Network field operations (85%), and are increasingly



Source: Arthur D. Little MSP = Managed Services Provider

exploiting offshoring opportunities (38%)4. Beyond these moves, regional telecom players can streamline existing contract portfolio, through a comprehensive DSMCC approach (refer exhibit) addressing demand optimization and revising technical and business requirements in different functions viz. Network and IT managed services, call center activities, site rental and real estate management, etc. A multitude of benefits are achievable: from improved service effectiveness (e.g. service levels and time-to-market), greater corporate agility (flexibility and variabilization) to considerable cost savings (up to 20-30%);

4. Technology and Infrastructure Virtualization

Virtualization offers efficiency potential in multiple areas of technology operations as a result of automation, simplified operations as well as integrated management of processes.

- **Data center virtualization** provides significant efficiencies compared to traditional physical data centers, in terms of reduced hardware and license costs, lower vendor lock-in, decreased energy consumptions, scalability, faster redeployment, easier backups, and allows operators to save capital and operating expenses.

- **NFV (Network Function Virtualization) and SDN (Software Defined Networking)** enable operators to consolidate the different telecom appliances into standard industry servers, to reproduce the specific Network functions through partner-provided software (NFV) and to obtain automated and policy-driven control of dynamic network interconnections (SDN), which are instrumental to support virtualization. Various benefits achievable, include lowering needs to deploy and operate hard assets, improved visibility on network performance, higher degree of network security, and enhanced network flexibility and agility to roll out new services.

- **IT & Network architectural optimization and simplification** can be obtained by performing a structured infrastructure technological audit and identifying rationalization opportunities coherent with current business delivery needs (value driven strategy); it allows to align technology strategy with corporate strategy, and to obtain

Virtualization offers efficiency potential in multiple areas of technology operations as a result of automation, simplified operations as well as integrated management of processes.

significant Opex and Capex savings depending on the magnitude of the implemented optimization.

5. Digitalize operational processes:

Emerging digital technologies are driving disruptions in operations across several industries. Telecom operators can leverage these opportunities to drive operational efficiency. Exemplary applications of such technologies and their benefits include:

- Network optimization using analytics – Network service quality is one of the key touchpoints affecting customer experience. Operators should leverage data analytics (combining network performance

Future of Operations – Applications of Digital Technologies in Telco Industry

Cognitive	Connected	Virtual	Human centered	Value add
Big data / advanced analytics Telefónica: Personalized marketing, (cross-selling) offers T-Mobile: Real-time network fault detection and prediction	**Connected things** Sensors delivering environm. & technical health information for network nodes & cabling GE: Real time and online monitoring of machines	**Augmented reality** tw telecom: AR for customer experience in stores AR in network maintenance & warehousing	**Collective intelligence / crowd sourcing** telenor group: Open innovation portal for product innovation T-Mobile: Crowdsourced product development	**Blockchain** Distributed Ledger System
Cognitive, self-learning systems / bots sky: Automated security threat detection and resolution SaskTel: Automated measures for detected network irregularities to avoid faults	**Collaborative, smart machines and robots** amazon: Robot aided movement of inventory racks SoftBank: Robots staffed store	**Cyber physical systems / virtualized networks** TELECOM: Software defined networking, network functions virtualization BT: Cloud platform to enhance internal IT operations' efficiency	**Virtual workplace / workplace 4.0** orange: Online platform for remote product & material testing Alcatel-Lucent: Mixed reality solutions for video conversations	**Integrated eco-systems / decentral (mobile) value add** vodafone: Omnichannel Platform for buying experience Smart City Platform serving multiple verticals ERICSSON: Smart city platform to scale Smart City business and exploit opportunities
Autonomous transport systems Autonomous material supply for network rollouts & maintenance amazon: Delivery of packages with drones	**Smart energy systems** Solar farm to provide corporate facilities with green energy SONY: Increasing use of green power certification system	**Virtual modeling / simulation** Telefónica: Networks simulation to optimize network build & maintenance Alcatel-Lucent: Consumer choice simulation to identify rollout technologies	**eLearning / MooC[1]** Platform for educational audio and video content SIEMENS: Virtual reality training simulator	

Source: Arthur D. Little

1) Massive open online Course

data, service usage data, customer demographics etc.) to optimize coverage and service performance and enhance customer experience.

- Omni-channel platforms can help shift a significant part of customer interactions to digital channels while delivering a seamless and consistent experience across digital and physical channels.

- Process digitalization, i.e. moving from traditional processes to digital, predictive and automated processes, can lead to significant efficiencies. For example, for which, according to a recent benchmark study , best performing Telco's in terms of Network field operations can be 56% superior on cost driver averages and 35% on resources, in commercial processes (e.g. by reducing total cost to acquire and total cost to serve) as well as in inventory management (e.g. tracking performance, stock level monitoring).

- Energy efficiency technologies can be leveraged to reduce power consumption in telcos' operations: (1) cooling optimization can lead to 15-20% cost savings through free-cooling systems and advanced climate control systems that balance free ventilation and air conditioning (2) direct current (DC) system efficiency, by ensuring use of more efficient rectifiers , can generate 5-10% cost savings; (3) the employment of radio standby modalities (TRX shut-down) can also bring additional saving in the 5 to 10% range. For telecom operators running Networks infrastructure that include off-grid sites, significant efficiencies can also be obtained from the employment of hybrid solutions, like diesel-battery hybrid systems by reducing diesel consumption and diesel generator running hours.

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6. Lean and agile organization

Legacy organization structures, processes and functional silos are widely attributed as key inhibitors of operational agility. It is becoming increasingly important for operators to reconfigure their organization structures. In our experience, through a zero-based design approach, operators can aim at a lean and agile organization with 40-50% lower headcount as compared to current scenario. Such improvement possibilities are further accentuated in case of regional operator groups who benefit from group wide consolidation of specific functions/ activities. Furthermore, regional operator groups can generate additional opportunities in form of consolidated wholesale as well as procurement activities across OPCOs. However, the success of such consolidation initiatives are contingent upon effective Group-OPCO governance.

In conclusion, GCC telecom players are racing against time to shift to the next levels of efficiency to negate the effect of top-line pressures. They need to develop an effective operational engine to protect margins for future investments, regardless of the chosen strategic positioning. Conventional one-off cost-cutting initiatives are insufficient to deliver a sustainable and impactful push towards the next efficiency frontier. As one-off sessions of physical exercise are insufficient to provide positive results for individuals, a one-off cost cutting exercise is insufficient to instill a culture of agility and cost consciousness in telecom players. Regional telcos should consider a comprehensive transformation towards efficiency, through a range of approaches to address the inefficiencies arising from legacy commercial, technology and operational portfolios. Attaining sustainable competitive advantage through "Operational Agility and Efficiency" is a continuous effort which must be exercised over and over again, in a structured way, in order to embed it in the organization's DNA.

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TECHNOLOGY NEWS

OTT Content Market to Register a CAGR of 14.5% by 2026

According to a recent market report published by Future Market Insights titled, "OTT Content Market: Global Industry Analysis & Opportunity Assessment, 2016-2026," the global OTT content market was valued at US$ 47.7 Bn in 2015 and is expected to reach a market valuation of US$ 53.2 Bn by the end of 2016. Growth of this market is driven by several factors and trends impacting the global delivery of content and in this report, Future Market Insights throws light on the key drivers, trends, and restraints influencing the growth of the global OTT content market during a 10-year forecast period (2016 – 2026). Over-the-top content (OTT) is the delivery of audio, video, images, and other media over the internet and bypasses traditional content distribution. OTT services are mostly related to communication and media and are generally lower in cost than traditional methods of content delivery. Forms of current usage of OTT include OTT voice via VoIP for local and long distance calls, video chat / conferencing, pure (short) messaging, social networking and retailing, and OTT video services. According to Future Market Insights analysts, increasing penetration of high speed data networks, increasing mobile subscriptions, rising adoption of mobile connected devices, and new features and advanced capabilities in smartphones are some of the major factors driving the growth of the global OTT content market. Additionally, attractive pricing and more content options along with favorable regulations are some other factors propelling the growth of the global OTT content market. The global OTT content market is segmented on the basis of Content Type (VoIP, Text and Images, Music Streaming, Video); Revenue Model (SVOD, AVOD, TVOD, Others (User generated content, Linear OTT, and TV everywhere)); and Device / Platform Type (Desktop and Laptop, Gaming Consoles, OTT Streaming Devices, Smartphones and Tablets, Smart TVs, Others (Internet blue ray players)). The Video content type segment accounted for a relatively high revenue share and was valued at US$ 24.4 Bn in 2015. This segment is expected to remain dominant through 2026. The AVOD revenue model segment accounted for a relatively high revenue share and was valued at US$ 17.3 Bn in 2015. This segment is expected to remain dominant through 2026.The Smartphones and Tablets device / platform type segment accounted for a relatively high revenue share and was valued at US$ 19.1 Bn in 2015. This segment is expected to remain dominant through 2026 The global OTT content market is segmented into the seven key regions of North America, Latin America, Western Europe, Eastern Europe, APEJ, Japan, and MEA. The North America OTT content market accounted for a relatively high revenue share of the global OTT content market and was valued at US$ 21.4 Bn in 2015. This high value share can be attributed to the availability of high speed internet connectivity, high penetration of smartphones, high disposable income, and presence of several well-established OTT content providers in North America. The APEJ OTT content market is anticipated to register high Y-o-Y growth rates throughout the forecast period and this market is projected to be the most attractive market in the global OTT content market in terms of revenue. Some of the top companies operating in the global OTT content market include Akamai Technologies, Amazon.com Inc., Apple Inc., Facebook Inc., Google Inc., IBM, LeEco, Limelight Networks, Microsoft Corporation, and Netflix Inc. Several Indian companies have also entered the OTT content market in a big way. Some of the Indian OTT content market players include Star India Pvt. Ltd., Zee Entertainment Enterprises Ltd., Spuul, Eros International Plc., and Viacom 18 Media Pvt. Ltd. Top OTT content market players are developing innovative marketing and distribution channels to enter and rule untapped markets.

Rostelecom, Tattelecom study 5G pilot project in Tatarstan

Russian national telco Rostelecom has announced the signing of an agreement with the government of the Republic of Tatarstan and local telecoms operator Tattelecom to study the rollout of a pilot 5G mobile network in the republic. According to the protocol, which was inked in Tartarstan's capital Kazan, the parties plan to jointly develop a 5G pilot network, as well as resolve issues concerning radio frequency resources and spectrum licensing for trialing the technology. Within six months, the parties intend to agree on an action plan and determine how much will be invested in the project.

Telefónica, Huawei Take Aldea to the Cloud in Mexico

By using Telefonica Open Cloud, Aldea's Mexican operation expects to reduce OPEX and improve business efficiency. Through its technology partner Huawei, Telefónica is already offering public cloud services to a number of Mexican enterprises, SMEs and public sector organizations. As provider of services and solutions for TV and media, Aldea offers integrated transmission services through its fiber network and associated teleports in Mexico. The Aldea proposal includes: full-time and occasional use of services, video as a file, high-definition coding, and all production and transmission solutions that a client may need. Present in the main cities throughout the Americas, located in Canada, the US, Mexico, Colombia, Panama, Venezuela, Brazil, Argentina, Peru and Chile, Aldea claims to operate the first fully-automated pan-American fiber optic network for TV broadcasting services. With the new services running in Telefónica Open Cloud, Aldea now is able to assign elastic resources (compute, network, storage, among others) to meet the fast-growing IT requirements of today's video platforms. "This project is just a beginning; we hope to get more technical support from Huawei and Telefonica in business transformation. More critical applications in Aldea need to be migrated onto the cloud, with higher efficiency and lower TCO," said Aldea Mexico CEO, Edgar Cerón.

Nokia Believes Small Cells Now Ready for Big Time

Randy Cox, Nokia Networks' head of product management for small cells, insisted demand for the technology had moved beyond one-off mass events to "everyday environments", but conceded European deployments continue to fall behind. Speaking at a press briefing in London, Cox admitted the term small cells was merely hype three years ago, but the company was now starting to see its efforts in the area "come to fruition". Nokia boosted its presence in the small cell market following its acquisition of Alcatel-Lucent, which was first announced in mid-2015. Without offering any concrete numbers, Cox said the company "had experienced tremendous growth" in terms of small cell unit shipments and revenue. "I wouldn't say we are on the up part of the hockey stick yet, but in terms of units shipped, we better than doubled last year." Nokia offers a portfolio of femto, small cells and outdoor carrier Wi-Fi offerings, as well as unlicensed systems for indoor and outdoor coverage.

Cox said the company works closely with operators on deployment, not only on the software side, but also in "understanding their network" and removing some of the obstacles from an engineering side. Nokia said it can deploy an indoor small cell in as little as 20 minutes. Cox also offered a number of use cases, focusing on some of the company's recent deployments at large scale one-off events in Australia, Singapore and Mecca. However, while such "hot zone capacity" needs have been traditional deployments for small cells, Cox said demand was evolving globally to everyday scenarios. "If you look at China, you have small cities with a million people in them. And in specific areas, you can see where the capacity demand is absolutely sky rocketing," he said, explaining capacity based small cell systems "are able to handle these types of demands."

Europe lagging

Cox said North America and China "lead by a long shot" in terms of deployments, while Japan and South East Asia "were coming up to speed". Perhaps surprisingly, Europe lags behind even Latin America and the Middle East. The executive said it was a "puzzle" why there was not more uptake in Europe, given the demand for coverage in major cities like London. "Partially, it could be because 3G is still more prominent than LTE, but even in London there is a demand for 4G that is just not being served," he said. "I still think there is a tendency by operators to feel that small cells are not the right answer. They may think it's too difficult to deploy. There are a lot of trials and experiments and testing, but pulling the trigger of actual deployment in Europe is behind." He added a recent small cell partnership with Telefonica, announced at the 2017 Mobile World Congress, could "hopefully prove to be an example for deployment in Europe to take off".

Apple Prepares for 5G With mmWave Tests

Apple will evaluate millimeter wave (mmWave) technology as part of its planning for future deployments of 5G networks, after being cleared to conduct the tests by the Federal Communications Commission (FCC). The US regulator granted Apple an experimental mmWave license, which the vendor requested, Business Insider reported. mmWave technology is designed to enable faster data speeds on mobile networks, and improve the cellular performance on smartphones, and Apple will use the license to ensure compatibility of its iPhone devices with future mobile networks. In its application to the FCC, Apple explained it was seeking to: "assess cellular link performance in direct path and multipath environments between base station transmitters and receivers using this spectrum." "These assessments will provide engineering data relevant to the operation of devices on wireless carriers' future 5G networks." The license will allow the company to test the technology from two locations in California. The testing process will take no longer than one year, according to Apple. Although 5G standards are yet to be released, operators in the US and beyond are already outlining their paths towards launching the technology, and begun to conduct trials. AT&T, for example, recently detailed plans to launch 20 networks it said will lay the foundation for 5G during 2017, while rival Verizon agreed a $3.1 billion acquisition of Straight Path Communications, which holds hundreds of mmWave licenses in the 39GHz and 28GHz bands – both of which the FCC cleared for use in 5G. Apple's move is not a surprise, given its products rely heavily on mobile networks to run.

Turkcell, Huawei Joint Efforts for Developing 5G Technologies

In accordance with the protocol signed two years ago in China, Turkcell and Huawei have begun cooperating to improve local production and 4.5 G and 5G technologies and they have taken an important step to expand cooperation last week in China. The two companies will intensify their efforts in developing domestic technology in the coming period and accelerate their joint R&D work in Turkey. The cooperation between two companies is designed to set up joint teams for the realization of smart cities using domestic production and software. The agreement signed by Turkcell Chairman of the Board of Directors Mr. Ahmet Akça and Huawei Senior Vice President Mr. Tian Feng aims at deepening cooperation on developing local production, 4.5G and, 5G technologies and on innovative solutions. Furthermore, the agreement, which also provides intensifying joint R&D efforts, requires the two companies to begin searching the ways of making the trade in Yuan. The two companies who decided to set up joint teams to work for the improvement of local technologies in Turkey, from now on will also jointly carry out standardization works of IoT. IoT has a vital importance in smart cities applications. "As Turkcell, we are making long-term collaborations in order to bring Turkey to a level that produces and develops its own technology. We believe that developing domestic technology in 4.5G and, 5G is an important opportunity for our country to make a new leap forward not only in technology but also in economy. According to the agreement we signed together with Huawei, we are expanding our cooperation in terms of joint R&D works, trading in Yuan, standardization, innovative solutions, software development and domestic production," Turkcell Chairman of the Board of Directors Ahmet Akça said. "In addition to that, we will develop new solutions in the area of smart cities which will make life easier for our expanding cities." Huawei Senior Vice President Mr. Tian Feng stated said, "As Huawei, we consider Turkey as a strategic hub located between Europe and Asia, and have accordingly structured our administrative and operational infrastructure in the country to support our Central Asia and Caucasia region operations. Our confidence in the Turkish economy and trust in the talented, young and dynamic human resource of the nation has led the establishment of our second largest overseas R&D center in Turkey. We will increase our investment in Turkey, enable Huawei Turkey R&D center not only serve Turkey, but also make fully use of Turkey's unique geographical advantages, covering other countries in Europe and Asia, and deeply involved in the development of Turkey ICT industry."

Nokia and Finnish Government Test LTE for Public Safety

Finland's public security group has carried out a demonstration of running public safety communications voice and data in a trial with Nokia and Telia. Finland's Erillisverkot – the State Security Networks Group (SSNG) – worked with Nokia and Telia Finland, formerly Sonera, to show that public safety communications are given priority over any other voice or data traffic in busy 4G/LTE networks. Sami Orakoski, COO of State Security Networks, said: "Finland has historically been a forerunner in public safety communication, demonstrating leadership in building technical solutions and many other countries have followed our lead. Although the current Tetra-based network will be in use for some time, we have now started working with commercial operators to lay the foundation for delivering public safety communication with LTE and future generation technologies." The demonstration comes just weeks after the US awarded AT&T a contract to build a nationwide LTE public safety network. BT's mobile subsidiary EE is building a similar network in the UK. Nokia said that LTE can support mission-critical operations securely and cost-effectively, enabling new capabilities for public safety agencies, such as video, in addition to traditional voice communications, to enhance situational awareness, command and control, and the safety of both first responders and the public. Tommi Uitto, head of global product sales of mobile networks at Nokia, said: "The test results show that we can priorities public safety communication over an LTE network, even when that network is extremely busy. We can use this insight to accelerate the adoption of LTE-based public safety applications, not only here in Finland, but across the globe." Nokia, State Security Networks and Telia Finland began testing the features with public authorities in 2016 to accelerate Finland's transition to LTE-based public safety communications. Pasi Mehtonen, head of operator business at Telia Finland, said: "Everyone understands the importance of public safety communication in exceptional circumstances. The successful trials show that by combining advanced technology know-how, together with deep experience of providing mission-critical services we can pave the way for future solutions."

Cellcos All Set to Spend $21b on 5G NR by 2025

Mobile operators will spend more than $21 billion on standardized 5G NR (New Radio) infrastructure by the end of 2025, according to SNS Research. Despite the lack of sufficient LTE coverage in parts of the world, mobile operators and vendors have already embarked on R&D initiatives to develop 5G. According to the GSA (Global mobile Suppliers Association), in the first quarter alone at least 25 operators from 15 countries have demonstrated 5G technologies, or announced 5G tests or trials. Last week, South Korea's KT said it is in the final stages of testing for the 5G trial network that will support next year's Winter Olympic Games in PyeongChang, while Japanese counterparts KDDI and China Mobile also announced trials on pre-5G technologies. With pre-standard 5G network deployments well underway, the research firm in March released an estimate, predicting mobile operators worldwide will spend more than $250 million on pre-standard 5G network rollouts by the end of 2017. Although 2020 has conventionally been regarded as the headline date for 5G commercialization, the very first standardized deployments of the technology are expected to be commercialized as early as 2019 with the 3GPP's initial 5G specifications set to be implementation-ready by March 2018. Between 2019 and 2025, SNS Research expects the standardized 5G NR infrastructure market to aggressively grow at a CAGR of approximately 70%, eventually accounting for over $21 billion in annual spending by the end of 2025. The market will be complemented by additional investments of over $7 billion on NextGen (Next Generation) core and transport (fronthaul/backhaul) networking infrastructure, the research firm estimates. SNS Research notes that 5G is expected to provide a single network environment to deliver not only existing mobile broadband and internet of things services, but also new innovations such as self-driving cars, cloud robotics, 3D holographic telepresence and remote surgery with haptic feedback. The 3GPP agreed in March to accelerate some elements in the 5G NR timeline to allow operators to speed up deployment of 5G services. The standard body set a December 2017 deadline to complete the non-standalone 5G NR specification process and finalize the spec by March next year. The move means non-standalone 5G NR products could be launched as early as 2019. Non-standalone 5G NR mode will be designed to anchor a connection in LTE, using 5G NR carriers to improve data rates and reduce latency.

America Movil to Launch 4.5G Network Later This Year

America Movil intends to roll out a 4.5G network in Mexico by the end of this year in preparation for the launch of 5G in 2020, reports Reuters, citing the company's CEO Daniel Hajj. "5G ... that comes in 2020. 4.5, we will have it at the end of the year," said Hajj at a news conference, adding that "it's basically thanks to all the investments that we have been doing to modernize the network over the last three years." The 4.5G network is being rolled out to handle more traffic and meet the demand generated by the increased number of connected devices. The operator last year completed a 4.5G pilot with Ericsson and Qualcomm Technologies in Brazil, reaching speeds of up to 682 Mbps. The tests, aimed at providing an experience close to that of 5G, were used with technology aggregating the frequencies in the 2,600 and 1,800 MHz bands. Mexican pay-TV and telecom operator Ultravision, part of the Ultra Telecom group, is already reportedly working with Nokia to activate the country's first 4.5G network in the 2.5GHz band, while AT&T is planning to deploy an LTE-M network across Mexico by the end of this year. Mexican pay-TV and telecom operator Ultravision, part of the Ultra Telecom group, is to partner with Nokia to launch the country's first 4.5G network in the 2.5GHz bandMexican pay-TV and telecom operator Ultravision, part of the Ultra Telecom group, is to partner with Nokia to launch the country's first 4.5G network in the 2.5GHz band

Ericsson Launches Orchestration for Hybrid Networks

Swedish kit maker enables rapid service provision across physical, virtual infrastructure. Ericsson unveiled its Dynamic Orchestration solution, which is designed to accelerate service deployment across physical and virtual network infrastructure. "The opportunities offered by virtualization are significant, but due to the complexity, many operators are taking an incremental step-by-step approach to get there," said Ulf Ewaldsson, head of business area digital services at Ericsson, in a statement. Dynamic Orchestration is a combination of software and professional services that automates the creation, delivery and assurance of new digital services, such as software-defined wide area networking (SD-WAN), enterprise and mobile virtual private networks, and 5G network slicing, among others. According to Ericsson, it manages existing technologies while integrating the latest and greatest in virtualized infrastructure, helping telcos to rapidly deploy new services. "Ericsson Dynamic Orchestration enables our customers to excel at traditional services delivery while simultaneously incorporating virtualization capabilities to embrace emerging market and business opportunities driven by 5G and IoT," Ewaldsson said.

Building an LTE Network Using Wi-Fi Spectrum

MulteFire recently released the latest version of its specification – Release 1.0, Version 1.0.1 – which makes it possible to build a network with LTE-like performance and Wi-Fi-like simplicity. MulteFire is an LTE-based technology that operates in unlicensed spectrum and doesn't require an "anchor" in licensed spectrum. The new technology broadens the LTE ecosystem to entities that may not own licensed spectrum, such as ISPs and venue owners. MulteFire also benefits mobile network operators, providing them with opportunities for augmenting their mobile networks. The goal of MulteFire is to ensure the best possible user experience for wireless access to the Internet or when making video and voice calls. MulteFire can also act as a "neutral host", with the ability to serve users from multiple operators in a single location. "By bringing the benefits of LTE technologies to unlicensed spectrum, MulteFire helps provide enhanced coverage, capacity, and mobility," it said. The MulteFire Alliance is at work on Release 1.1, targeted for publication in Q4 2017.

AT&T Outlines Business, Residential Tests of 5G for 2017, Including Fixed and Mobile Versions

AT&T is planning to conduct a range of 5G network tests this year, including tests involving enterprises, residential users, and fixed and mobile iterations of 5G technology. AT&T's Brian Daly outlined the operator's plans here during a presentation at the 5G North America trade show. He noted that the operator has already conducted a range of 5G tests, and that AT&T will continue to test the technology in the months and years ahead with an eye toward launching a "standards compliant" commercial 5G network, offering mobile services, in the 2020-2021 timeframe. Specifically, Daly said that AT&T conducted a "friendly user" trial with enterprises last year, which tested streaming and conferencing experiences with vendors Qualcomm and Intel. He said the carrier plans to conduct a friendly user trial in the second quarter of this year with residential users and small- and medium-sized businesses, offering fixed broadband services in the 28 GHz band. Further, Daly said that this month AT&T will begin its previously announced test of streaming its DirecTV Now video service over a fixed 5G connection, which he noted will include multiple sites and devices. He said that test is geared toward seeing how millimeter-wave technology handles heavy video traffic. Additionally, Daly said AT&T will team with Qualcomm and Ericsson to test mobile and fixed 5G services in the second half of this year, which he said will be AT&T's first test of the 5G New Radio specification from the 3GPP. That test will run through both the 28 GHz and 39 GHz bands. AT&T's 5G testing plans are particularly noteworthy considering the company just last week lost Straight Path to rival Verizon. AT&T initially sought to acquire Straight Path, which holds an average of 620 MHz in the top 30 U.S. markets with 39 GHz and 28 GHz licenses, for $1.6 billion. But Verizon launched a competing offer and eventually won the bidding war with a total offer of $3.1 billion. Verizon has said it will use Straight Path's spectrum holdings to offer 5G services. But Verizon and AT&T aren't the only companies pushing the 5G envelope. Both Sprint and T-Mobile have promised to launch mobile 5G services in 2019, each with their respective spectrum holdings. T-Mobile said its mobile 5G network deployment will in part leverage its 600 MHz licenses, while Sprint has said it will use its substantial 2.5 GHz holdings for its own mobile 5G service.

AT&T Launches Nationwide LTE-M Network for IoT

Seven weeks after rival Verizon announced the launch of its LTE-M network nationwide, AT&T said it has completed deployment of its nationwide LTE-M network for the internet of things (IoT) ahead of schedule. But AT&T isn't done yet. The operator plans to deploy LTE-M across Mexico by the end of 2017 to create an LTE-M footprint covering 400 million people. One of the big draws with LTE-M is supposed to be the price, and AT&T announced a new suite of rate plans with LTE-M, with monthly plans starting for as little as $1.50 per month per device. Further discounts will be available for yearly and multiyear plans, as well as volume commitments, the operator said. By comparison, when Verizon announced its LTE-M network launch in March, it referenced data plans as low as $2 per month per device, with customized options available for bulk activations and volume purchases. AT&T also said that its LTE-M modules will be available from its supplier for as low as $7.50 each, including a SIM card, which it said is half the cost of the LTE Cat 1 module AT&T launched with its supplier in 2016. In addition, its current IoT starter kits with M14A2A modules will be software-upgradeable to LTE-M with an upcoming firmware update. "Our nationwide LTE-M deployment is another example of AT&T's continued investment and leadership in IoT," said Chris Penrose, president of IoT Solutions at AT&T, in a press release. "We can now reach new places and connect new things at a price that's more affordable than ever before. Our LTE-M starter kit will also spur developers to open the doors to IoT innovation." The company said its LTE-M deployment—the result of software upgrades—marks another step forward on its path to 5G and massive IoT. And AT&T points out that the network is deployed with global, 3GPP standardized technology using licensed spectrum for carrier-grade security, something the companies touting noncellular IoT solutions can't say. LTE-M supports large-scale IoT deployments such as smart city services, smart metering, asset tracking, supply chain management, security and alarm monitoring and personal wearables. Both AT&T and Verizon have described LTE-M as a game changer. Some of the advantages of LTE-M over traditional IoT connectivity options include longer battery life—up to 10 years—as well as better coverage for IoT underground and deep inside buildings. It also offers reduced module size; modules can be as small as 1/6 the size of current modules. Most of the biggest U.S. operators are expected to deploy Narrowband IoT after LTE-M. Sprint recently said it will complete its deployment of LTE Cat 1 technology across its nationwide network by the end of July, with plans to begin deploying LTE Cat M in mid-2018 followed by LTE Cat NB1. T-Mobile CTO Neville Ray tweeted in March that his company is focused on narrowband IoT and plans to support it in 2018.

Samsung, Cisco, Verizon Embark on Multi-Vendor 5G Trial

Equipment vendors Samsung and Cisco, in partnership with US telecoms provider Verizon, have announced the successful deployment of what the trio claim is 'the first multi-vendor end-to-end 5G trial network' in Ann Arbor, a suburb of metropolitan Detroit (US). Five US cities are scheduled to begin trials in the second quarter of 2017, with pilot trials in a total of eleven markets expected by the middle of the year. The solution included a 5G virtualized packet core as part of the Cisco Ultra Services Platform with Cisco Advanced Services and Samsung virtual RAN (vRAN) solutions, paired with Samsung's 5G Radio base stations and 5G home routers, which deliver broadband services to Verizon's trial customers. The 5G trial highlighted the readiness of key 5G technologies, paving the way for deployment of commercial 5G networks, while also demonstrating that service providers could deploy 5G networks specialized to their market needs by selecting individual network infrastructure components from multiple vendors.

Ericsson in IoT Partnership with Microsoft

Combination of Azure with Swedish kit maker's IoT Accelerator aims to make it easier for enterprises to launch mobile IoT services. Ericsson and Microsoft on Friday established an Internet of Things (IoT) partnership designed to make it easier for enterprises to launch mobile network-based IoT services. "Today, enterprises face a major challenge of complexity in IoT deployment. By combining industry-leading innovations and ecosystems, our collaboration with Microsoft removes complexity and brings the possibilities of the IoT closer for enterprises everywhere," said Niklas Heuveldop, chief strategy officer and head of technology and emerging business at Ericsson. The partnership enables enterprises that use Ericsson's IoT Accelerator – its cloud-based IoT platform-as-a-service – to deploy their IoT solutions on Microsoft's Azure cloud platform. "Working together with Ericsson helps us delight out customers and partners by enabling more choices to control their cellular connected IoT devices," said Sam George, director of Azure IoT, at Microsoft. Water pump maker Grundfos is already using Ericsson and Microsoft's pre-integrated solution. "The pre-integration between the offerings from Microsoft and Ericsson allows us to focus on providing added value and new services to our customers," said Grundfos vice president Lars Enevoldsen.

Adaptrum and Oman Broadband Run TV White Space Pilot

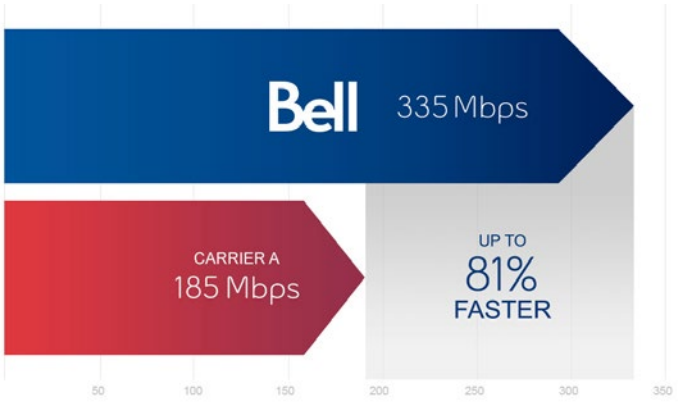
Adaptrum, a global provider of TV White Space (TVWS) technologies, has announced the completion of a successful pilot deployment with Oman Broadband Company in Muscat. This was the first time that TV White Space technology was deployed in the Middle East. The project demonstrated the ability to provide broadband communications to remote places. In this pilot project, client sites include schools under the Ministry of Education, an Oman Broadband point of presence (POP), and residential villas. It was conducted in the suburbs of Muscat city, with widespread hilly terrains and scattered buildings between the links. The result of the trial was positive, with up to 20 Mbps service delivered over distances of 4 km to over 10 km. It has demonstrated the superior performance of Adaptrum devices in penetrating trees and concrete buildings without line-of-sight. TV White Space (TVWS) equipment uses vacant channels of the UHF TV broadcast spectrum to deliver broadband wireless services resulting from legacy TV channel plans. TV band spectrum is largely underused in most places most of the time and provides abundant spectrum that can be used for broadband wireless. The spectrum is accessed using innovative dynamic access techniques, which makes the spectrum available on an unlicensed basis while avoiding any interference to existing broadcast services. Because of the low sub-GHz frequency of the spectrum, TVWS technology achieves non-line-of-sight (NLOS) long-range coverage, better than higher frequency unlicensed bands (such as 2.4GHz, 5GHz, and others).

Swisscom Demonstrates 800MBPS Download Speeds over LTE

State-owned full service provider Swisscom has demonstrated mobile download speeds of around 800Mbps at one of its stores in Zurich via a live LTE network using carrier aggregation (CA) to combine frequencies in the 800MHz, 1800MHz, 2100MHz and 2600MHz band alongside 4×4 multiple-input, multiple-output (4×4 MIMO) and 256 QAM modulation technologies. Swisscom commented that the capabilities of its network are beginning to outpace handset development, promising to offer data transfer rates of more than 1Gbps once the device market catches up. To that end, Swisscom added that the device it used for the demonstration – a Sony Xperia XZ Premium – will be available exclusively from the cellco from 6 June 2017, whilst other devices supporting similarly high speeds 'will be on the market shortly'. Swisscom went on to note that its network upgrade work forms part of its progress towards 5G technology – which the cellco plans to launch in 2020 – and is essential to maintain service quality despite the 'steep rise' in internet usage.

Bell Launching Quad-Band LTE-A

Bell Canada claims that its network is the first in North America capable of delivering quad-band LTE Advanced (LTE-A) services, which it says will deliver mobile broadband speeds of up to 750Mbps with the addition of 256 QAM (quadrature amplitude modulation) technology. Bell CTO Stephen Howe said: 'Bell delivered North America's first tri-band LTE-A mobile service in 2015, and we're proud to announce today that we're first to successfully implement not only quad-band LTE-A but also the further 256 QAM enhancements that take Canadian mobile speeds to unparalleled new levels.' Bell's four-carrier aggregation leverages multiple bands of wireless spectrum to boost existing (triple-carrier [3C]) peak mobile data speeds from 335Mbps (expected average download speeds of 12Mbps to 100Mbps) to 550Mbps (expected average 18Mbps to 150Mbps). Combined with enhanced 256 QAM technology, Bell's LTE-A network can deliver speeds up to 750Mbps, with expected average speeds of 22Mbps to 174Mbps. Bell also announced that the new Samsung Galaxy S8 and S8+ smartphones are the first devices able to take advantage of its new network capability. Bell began selling the devices on 21 April, and in the coming months the Galaxy S8 and S8+ device software will be automatically upgraded to operate on Bell Quad Band 256 QAM LTE.



Docomo Details 5G Strategy, Schedules Trials

Japan-based NTT Docomo announced plans to implement a "medium-term strategy" by 2020, through which it aims to "realize a more innovative business structure in the coming era of 5G." The country's top operator said from late May 2017, 5G trial sites will be launched to enable it and partner companies to collaborate in creating "standard-setting new services" which leverage 5G strengths such as low latency, ultra-high speed, ultra-large capacity and massive device connectivity. Docomo said in the past it wants to launch commercial 5G services in time for the 2020 Summer Olympics in Tokyo. The aim of its new strategy is to "exceed the expectations of customers and help them connect with their aspirations via exciting and unexpected services". Docomo wants to become a market leader by evolving its services, such as loyalty programmes and billing plans, and by leveraging the strengths of 5G to launch services under a project called 'empower+d challenge'. It wants to make use of technologies including VR, artificial intelligence (AI) and IoT to improve its entertainment and lifestyle offerings, such as fintech and healthcare. The operator wants to use AI to develop stress-free customer support, particularly when it comes to cutting down on waiting times. In November, Docomo claimed its drive to launch 5G by 2020 gained further momentum after it completed pre-standard 5G trials in Japan with two of its vendor partners.

T-Mobile to Begin Rolling Out 5G in U.S. in 2019

T-Mobile US Inc said it plans to begin rolling out a fifth-generation network (5G) in the United States in 2019, helped by the airwaves it bought in the U.S.

government's spectrum auction last month. T-Mobile said it was targeting nationwide 5G coverage by 2020. The No. 3 wireless carrier will use a portion of the low-band spectrum it said it was buying for $8 billion in the U.S. Federal Communications Commission's auction of broadcaster airwaves. 5G is expected to provide faster speeds and response times than today's 4G LTE network, with the potential to connect at least 100 billion devices. Wireless carriers consider it to be a multi-billion dollar opportunity, but there has yet to be a set standard for how 5G is defined. Bigger rivals Verizon Communications Inc and AT&T Inc have been conducting 5G trials that incorporate high-band airwaves called millimeter wave spectrum to deliver what they hope will be an ultra-fast broadband service that could help them better compete with cable providers. While millimeter wave technology offers faster speeds, it cannot cover big geographic areas. Verizon is testing such a service with equipment maker Ericsson in 11 markets in the U.S. and expects a commercial launch as early as 2018. Meanwhile, AT&T said earlier this year that it had successfully completed tests with Nokia [NOKI.UL] that delivered its streaming video service DirecTV Now over a 5G connection using millimeter wave technology. While AT&T and Verizon have talked about faster broadband in denser urban areas as the first stage of 5G, T-Mobile wants to try to differentiate its efforts by emphasizing broader coverage that can support connected devices in the years to come, said Roger Entner, an analyst at Recon Analytics. “Everyone is getting into 5G,” Entner said. “The angle they're using to get in is slightly different.” T-Mobile's 5G network could be used for applications such as tracking everything from packages in delivery trucks to children, he said. In an interview, T-Mobile's Chief Technology Officer Neville Ray said the company was pragmatic in its launch goals. “It's not like we're going to have a 5G network tomorrow,” he said. But “we want to start talking about...the applications that 5G can bring.”

MTS, Ericsson Claim Russian Record Data Rate in ‘Fully Mobile’ 5G Tests

Mobile TeleSystems (MTS) and Ericsson have announced successful tests of fully mobile 5G technology for the first time on a prototype Russian smartphone, claiming record data transmission speeds of up to 25Gbps. The partners noted that all previous Russian 5G tests were carried out between stationary devices. The latest tests were conducted at a Moscow stadium where a base station operating in the 14.5GHz-15.3GHz range transmitted data to a moving smartphone at 25Gbps (a speed which would allow a one-hour HD movie to be downloaded in less than three seconds). MTS and Ericsson tested 5G usage scenarios including online broadcast streaming video in 4K format, virtual reality and remote controlled robotics requiring ultra-low latency and high data rates. The tests used key technologies including Multi-User and Massive MIMO, Beam Tracking and Dynamic TDD.

Ericsson Offers Update on KT's Trial 5G Network Project

South Korean mobile network operator (MNO) KT Corp is in the final stages of 5G trial infrastructure tests in the city of PyeongChang. In a press release Swedish vendor Ericsson announced the latest development, noting that at a meeting last month, KT and its partners had agreed on the next steps needed to deploy and optimize the trial 5G network over the course of 2017, including plans for joint technology development. Additionally, it was confirmed that KT and Ericsson have conducted tests along the Incheon Airport Railway – a new high speed rail line linking the capital of Seoul with Incheon International Airport – with these including a handover between 5G base stations along the railway and a peak throughput of up to 4Gbps. Looking ahead, Ericsson and KT have agreed to jointly develop beamforming/beam tracking technology and 5G-LTE interworking technology to optimize capacity and coverage with robust performance. Infrastructure in the 28GHz trial 5G trial network will reportedly include virtual radio access network (vRAN) and virtualized core (5G core system) and KT is said to already be in the process of conducting interoperability tests based on the PyeongChang 5G SIG specification.

Cisco Splashes $610M on SD-WAN Specialist

viptela

Software Defined WAN

Cisco this week agreed to acquire software-defined wide-area network (SD-WAN) specialist Viptela in a deal worth $610 million (€558.91 million). U.S.-based Viptela offers network management, orchestration and overlay technologies designed to ease the deployment of SD-WAN solutions. "Viptela's technology is cloud-first, with a focus on simplicity and ease of deployment while simultaneously providing a rich set of capabilities and scale. These principles are what today's customers demand," said Scott Harrell, senior vice president of product management at Cisco's Enterprise Networking Group. Cisco plans to integrate the company into its Enterprise Routing unit, which is part of its Networking and Security Business, which is led by SVP David Goeckeler. The acquisition, which is expected to close in the second half of this year, will enable Cisco to accelerate its development of new SD-WAN offerings and its transition to software-centric solutions. "With Viptela and Cisco, we will be able to deliver a comprehensive portfolio of on-premises, hybrid, and cloud-based SD-WAN solutions," Harrell said.

NBN Fixed Wireless Trial Tops 1 GBPS

Australian state-owned broadband wholesaler aggregates 11 carriers of 3.4-GHz, 2.3-GHz spectrum. Australia's NBN this week achieved gigabit downlink speeds in a fixed wireless trial. The state-run broadband wholesaler used carrier aggregation technology to combine seven carriers in the 3.4 GHz band with four carriers in the 2.3 GHz band, achieving 1.1 Gbps on the downlink and 165 Mbps on the uplink. The trial took place in Ballarat, Victoria. "The company continues to demonstrate its focus on providing technology to meet today's demands while ensuring a strong path of development and upgrades to meet Australia's future data demands," NBN said, in a statement. The trial was conducted in partnership with Ericsson, NetComm Wireless and Qualcomm. NBN plans to launch a 100-Mbps fixed wireless service pitched at the regional business segment in 2018. "The success of its ultrafast fixed wireless demonstration underlines the company's ability to launch even faster services on the NBN fixed wireless network," NBN said.

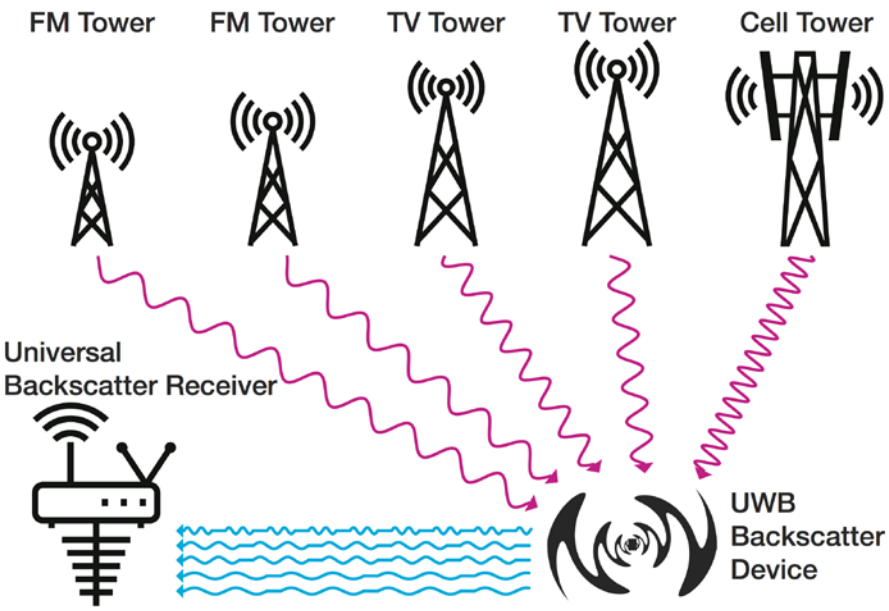
Celcom Conducts Malaysia's First 5G Trial

Malaysian mobile network operator (MNO) Celcom Axiata has carried out what is claimed to be Malaysia's first

5G trial, and the first 5G trial conducted using 28GHz spectrum in Southeast Asia, working in partnership with Ericsson. In a press release outlining the development, the Swedish vendor noted that the trial featured 5G Radio Prototypes, achieving a peak throughput up to 18Gbps and latency as low as 3ms. Further, the test was also said to have demonstrated futuristic 5G use cases, such as robotic control, connected environment, virtual reality, Internet of Things (IoT) applications and 4K video streaming. The trial forms part of a 5G memorandum of understanding (MoU) signed by Celcom and Ericsson in Barcelona in February 2017, which paved the way 'for a joint partnership to evaluate opportunities for 5G and IoT in Malaysia'. Looking ahead, Celcom's recently announced 'journey to 5G will involve the deployment of key technologies such as 4×4 multiple-input and multiple-output (MIMO) and 256 QAM (quadrature amplitude modulation) to provide users with data speeds up to 400Mbps. The cellco also plans to deploy IoT to enable digital and connected living 'in the near future'. Speaking on the company's strategy, Celcom CEO Michael Kuehner was cited as saying: 'Celcom is committed to developing and continuing the evolution of its network with the latest technologies, to bring the best digital experience for Malaysians. 5G is very important to Celcom as it will support the development and meet the communication needs of consumers and digitization of various industries. It is critical that we explore this new generation technology and its capabilities with global partners like Ericsson.'

IoT Sensors Could Connect Via Ambient Radio Waves

Internet of things (IoT) systems usually link networks of sensors via radio, but radios demand battery power thus limiting usability. Disney Research has determined that one solution may be to get rid of the radios all together and communicate via the ambient radio waves from TV, radio and cell phones. Researchers led by Alanson Sample, associate lab director and leader of Disney Research's Wireless Systems group, devised an ultra-low-power system of sensors that transmit data to a central receiver by reflecting the ambient radio waves from commercial broadcasting systems that already bathe most office environments. "Our idea is to reuse all the radio signals that are around us as a medium for transmitting data, much like sending ripples across a pond," Sample says. This approach radically reduces the power requirements of the sensor nodes because it is the generation of radio waves that consumes most of their battery power. In a demonstration in a Disney Research lab, the researchers were able to meet the tiny bit of power demand that remained by using solar cells optimized for low-light conditions. The researchers presented details of their ultra-wideband (UWB) ambient backscatter system at the IEEE Conference on Computer Communication, INFOCOM 2017, in Atlanta, Georgia. The research team, which included Chouchang Yang and Jeremy Gummeson, demonstrated the system in an indoor office environment, using ambient signals from 14 radio towers as well as two mobile phones. "The promise of the Internet of Things is that wireless sensors will be ubiquitous, allowing devices to sense their environments and talk to each other," says Markus Gross, vice president at Disney Research. "As we move towards connecting the next billion wireless devices to the internet, however, the use of batteries to power these devices will become unworkable. UWB ambient backscatter systems, which potentially could be deployed in any metropolitan area, hold great potential for solving this dilemma." Backscatter communication already is used in passive RFID tags. In that case, an RFID reader transmits radiofrequency power to the battery-free RFID tag; the tag sends data to the reader by reflecting, or backscattering, the carrier wave back to the reader. These systems have limited range, which makes them impractical for IoT systems. Other researchers have shown systems that require even less power by using ambient radio waves from a single source, such as a TV station. But, again, the range is limited to a few meters unless the power of the ambient signals is boosted to high levels. Sample said the UWB approach, which backscatters all ambient sources - offers key advantages. Using multiple backscatter channels boosts the signal-to-noise ratio, substantially improving the sensitivity of the backscatter reader and decreasing dead zones. That, in turn, enables the system to operate on real-world ambient sources and substantially extends the range - to 22 meters when using ambient signals from broadcast towers and 50 meters when using ambient signals generated by mobile phone up-link traffic. The ultra-low-power sensor nodes are necessarily simple, Sample said, which requires the backscatter reader to do the heavy lifting for the system. The reader must receive the backscatter signals, decode and combine multiple backscatter carriers to recover the data from each sensor. The reader uses four software-defined radio receivers -- one for the FM radio band, another to cover most of the cellular uplink and downlink bands and two for digital TV bands. Because the hardware doesn't have to be tuned to any particular frequency band, the UWB system can be deployed in almost any metropolitan area, he adds. Unlike other experimental systems that leverage ambient radio waves, the Disney system doesn't focus on a single signal source, but uses all available ambient radio sources, from FM radio broadcasts to digital TV signals to the transmissions to and from cellular phones.

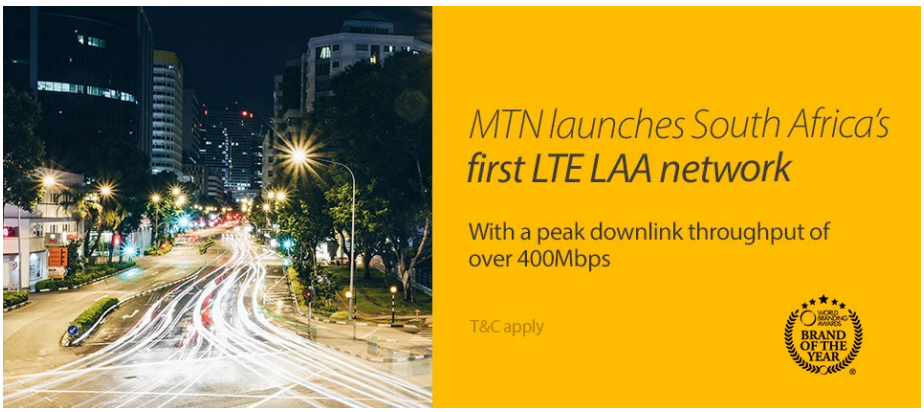


KT, Samsung Pursue NB-IoT Pilot

While Verizon is busy selling Internet of Things (IoT) services based on its newly rolled out nationwide LTE Category M1 technology and AT&T is not far behind, South Korean mobile operator KT and Samsung Electronics are launching a pilot Narrowband Internet of Things (NB-IoT, CAT-NB1) service targeting friendly users in Seoul and the surrounding metro area. The Korean trial is to last for two months, with the goal of extending diverse service models and coverage in the near future. KT and Samsung say the NB-IoT technology is designed to meet the demands for use cases that require low throughput and battery use owing to its main feature, the narrow bandwidth of 180 KHz. With its low-power consumption and cost-effective devices, NB-IoT is applicable to diverse service models for individual and industry automation, such as utility metering, smart factory, cargo tracking and location tracking of children and goods. Back in February 2017, Samsung and KT signed the supply contract for NB-IoT solutions, and two months later, the companies are now announcing their readiness to start pilot service, which, they say, indicates the proximity of commercial service. One of the key elements included in the contract was Samsung's virtualized core solution for Cellular IoT (C-GSN). As the demand for IoT services continues to grow, the current LTE network needs to accommodate large amounts of connectivity generated from the ever-growing number of IoT devices. Samsung says its C-GSN provides scalability, flexibility, cost-effectiveness and easy operation compared to other legacy core systems. Yet even though operators in Asia and Europe appear to be mostly starting with Cat NB1, that doesn't mean they're not interested in Category M1. At Mobile World Congress 2017, nine operators—including Verizon and AT&T—confirmed their support for the global deployment of LTE-M. The other operators include KPN in the Netherlands, KDDI and NTT DoCoMo in Japan, Orange (in 29 countries), Telefonica in Europe, Telstra in Australia and Telus in Canada. The supporting operators are pursuing several activities, including pilots, IoT Open Labs and launches of starter kits to support and accelerate the ecosystem of modules and objects. Cat M1, which is also called LTE-M, and Cat NB1, also known as NB-IoT, are both part of the 3GPP Release 13 standard, but they're two different categories of service, explains Kimberly Tassin, a spokesperson at chipset supplier Sequans Communications, which delves into the technologies here. They're both "narrowband" technologies: Cat M1 has 1.4 MHz channels and Cat NB1 has 200 kHz channels. Cat M1 has about 300 Kbps of throughput and Cat NB1 delivers throughput in just the 10s of Kbps (like one-tenth of Cat M1). They both serve IoT, but different use cases. Cat M1 is for those apps that need the higher throughput, like maybe wearables and smart meters, and Cat NB1 is for tiny apps like sensors and trackers, she said. Sequans' Monarch chip supports both of these LTE profiles. "We believe (and it appears to be so) that most carriers will eventually deploy both technologies," Tassin said.

MTN SA Achieves 400MBPS in LTE-LAA Trial

MTN South Africa has trialed an LTE Licensed Assisted Access (LTE-LAA) network at a test site in Pretoria, in cooperation with equipment vendor Huawei. The trial was completed by aggregating 15MHz of MTN's licensed spectrum in the 2100MHz band with 40MHz of spectrum in the unlicensed 5GHz band, achieving a peak downlink throughput of over 400Mbps. LTE-LAA is an evolution of the LTE-Unlicensed (LTE-U) mobile technology, which allows LTE networks to utilize unlicensed spectrum to enhance capacity. The new technology utilizes listen-before-talk (LBT) functionality to enable it to coexist in the same area as Wi-Fi networks without degrading their performance. Giovanni Chiarelli, chief technology and information officer at MTN South Africa, said: 'The lack of critical high-value spectrum has compelled MTN to refarm existing spectrum and combine existing licensed mobile spectrum with unlicensed 5GHz spectrum to increase mobile broadband data speeds … Due to the use of the unlicensed 5GHz band, which has a very short range determined by regulated transmission power limits, LTE LAA will be used for in-building LTE deployments.' MTN expects that commercial devices that support LTE-LAA will be available in the market later in 2017.



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REGULATORY NEWS

Telcos Call on EU to Hold its Nerve on Deregulation

Incumbents warn proposed amendments to Electronic Communications Code, ePrivacy Regulation put network investment at risk. Some of Europe's biggest telcos this week warned the European Commission that proposed amendments to the Electronic

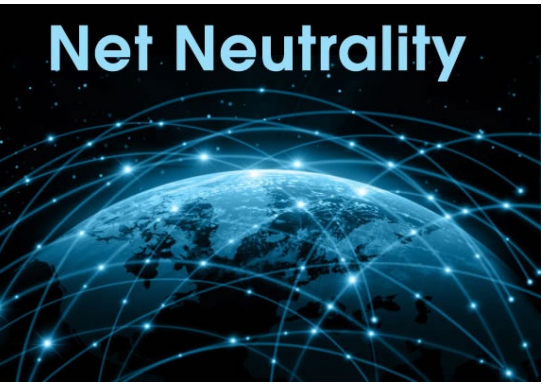
Communications Code (ECC) and ePrivacy Regulation could put future investment at risk. A letter sent to the Commission on Thursday expressed dismay at the possibility of the EU abandoning plans to ease access obligations for wholesale-only players and operators that jointly invest in new networks. It also urged the Commission to stay the course when it comes to overhauling spectrum licensing rules. The letter, seen by Total Telecom, was signed by the CEOs of several incumbents, including BT, Deutsche Telekom, KPN, Orange, Proximus, Telecom Italia, Telekom Austria, Telia, Telenor, and Telefonica, among others. "The initial strategic focus on investment and innovation appears lost and current developments risk hampering the ability of companies to deliver for European citizens and businesses," the telcos said. "We believe that growth, employment, investment and contribution to taxation are at stake." In September, the Commission unveiled the ECC, a sweeping reform package designed to stimulate investment in ultrafast broadband networks by taking a pragmatic approach to regulation, promoting intervention only in cases where competition and choice are lacking. As well as easing access obligations, the ECC also proposes 25-year spectrum licenses, and strict rules requiring the effective and efficient use of airwaves. The rules have met with opposition in the European Parliament. Some member states have expressed concern that deregulation will harm competition. Others have reportedly warned that 25-year spectrum licenses will make it harder for frequency allocation to keep pace with advances in technology. In the operators' letter this week, which was delivered by telco lobby group ETNO, the signatories claimed that other regions are out-investing Europe in networks by a ratio two-to-one. Growth in digital services in Europe remains flat, they added, whereas North America and Asia are seeing "strongly positive" trends. "This should be a reason for alarm and action, especially in the context of global competition and fast-paced technological change," the telcos said. "The EU should focus on the strategic objective of achieving ubiquitous superfast connectivity and ensuring that nobody is left behind." This will require investment of up to €660 billion, they said, and which "is incompatible with any rules extracting value from the sector." On the subject of spectrum, the telcos said that longer license duration will ensure predictability for long-term investments as well as fair and predictable license conditions. Meanwhile, in order to support the growth of digital services, the telcos called on the Commission not to over-regulate services and privacy, and to ensure there is no overlap between general data and consumer protection rules. "Consumers deserve both a clear and meaningful rulebook, and a digital marketplace that allows more innovation and competition," the telcos said.

Public Has Three Months to Respond to FCC Plan Repealing 2015 Internet Regulation Framework

The Federal Communications Commission (FCC) last week voted 2:1 in approval of proposals to overturn the 2015 FCC 'Title II' internet regulation order which contained 'net neutrality' principles preventing internet access providers from discriminating between internet content providers. The US public now has three months to respond to the FCC's proposals; over a million 'protest' statements supporting net neutrality were filed on the FCC site ahead of the official vote, according to the BBC, which adds that hundreds of internet content firms – including the largest names such as Facebook and Google – have opposed the plan to scrap the 'open internet' rules. Many fear that the return to 'lighter touch' regulation favored by Mr. Pai will give large ISPs carte blanche to block/throttle certain data traffic while channeling other selected content into so-called 'fast lanes' – potentially based on some content providers paying higher 'privilege' rates to the ISP – whilst it is noteworthy that certain large network operators including Comcast, AT&T and Verizon opposed the original 2015 regulation. In its proposal (which it refers to as 'ending utility style regulation of the internet'), the FCC states the intention to remove the classification of fixed broadband and mobile broadband internet access as telecommunications services governed by Title II of the Telecommunications Act (which currently gives the FCC broad powers to regulate ISPs). It proposes to revert the classification of mobile broadband internet access to a 'private mobile service'. It also proposes to eliminate the 'internet conduct standard' created by the 2015 Title II Order, which the statement calls 'extremely vague'.

FCC Wins Backing for Net Neutrality Fight

A majority of Federal Communications Commission (FCC) members voted to approve controversial plans from Chairman Ajit Pai to disassemble the country's net neutrality rules. At an open meeting on May 18, the committee rubber-stamped plans unveiled earlier this month, though not without opposition from several members, including Commissioner Mignon Clyburn. Proposals will now go to what promises to be a lively three month public consultation before a final decision is made. In what the FCC said was "a first step toward restoring internet freedom, promoting investment, innovation and choice," members voted to approve the reversal of open internet rules brought in during the previous FCC administration in 2015. Current regulations – dubbed net neutrality laws – state ISPs must treat all internet traffic equally and are unable to priorities specific services to the detriment of others. Critics say the rules hamper innovation and investment, while supporters maintain the 2015 order protects the integrity of the internet. At the meeting, Pai said: "Today's notice is the start of a new chapter in the public discussion about how we can best maintain a free and open internet while making sure that ISPs have strong incentives to bring next-generation networks and services to all Americans." Despite the result of yesterday's vote, Pai faces detractors from both within and outside of the FCC. At the meeting, Clyburn said the proposal "contains a hollow theory of trickle-down internet economics, suggesting that if we just remove enough regulations from your broadband provider, they will automatically improve your service, pass along discounts from those speculative savings, deploy more infrastructure with haste, and treat edge providers fairly." "It jeopardizes the ability of the open internet to function tomorrow as it does today," she added. Following the vote, The Internet Association (IA) – which counts Google, Amazon, Twitter and Microsoft as members – said current regulations were working and had not hampered investment. "The internet industry remains opposed to any changes to FCC regulations governing net neutrality," IA president and CEO Michael Beckerman said. "ISPs should not be able to use their position as gatekeepers to priorities their own content over others. Internet companies stand with consumers, startups, and other beneficiaries of the ecosystem in our fight to maintain a free and open internet."



US Cable, Wireless Mega-Merger Could be on the Horizon

T-Mobile US finance Chief Braxton Carter pitches idea of sequential deals with Sprint, Comcast and Charter at investor conference. "What about, Sprint, T-Mobile [US], and a coalition of Comcast and Charter, and the value-creation that could come out of that?" This was one exciting, and at this moment in time, purely hypothetical scenario proffered by Braxton Carter, chief financial officer of T-Mobile US – the self-styled 'Uncarrier' – at an investor conference. Until now, comments from T-Mobile and likewise Sprint about a potential tie-up have been largely limited to telling investors on quarterly conference calls that there is a willingness to do some kind of deal. Typically it has been unnamed sources and outside observers providing the really juicy speculation. This week though, Carter was a veritable juice machine, squeezing pure, fresh – probably magenta-colored – commentary about the merits of T-Mobile merging with its rival. "It's not a question of will talks happen" between Sprint and T-Mobile. "Of course they're going to happen," he said, adding that "there's a huge prize when you talk about Sprint, and that's true, hard synergies." One of the most significant areas of synergy is spectrum, Carter said. Sprint has "a treasure trove of 2.5-GHz spectrum...that you can do amazing things with," he said. Bringing together Sprint's and T-Mobile's spectrum holdings would see them well-placed to offer deep, broad wireless coverage, he said, which is only going to become more important in the run-up to 5G. "With 5G, there are going to have to be extremely dense networks, and we will have to have all the ingredients, and a spectrum portfolio to leverage in the 5G world," he said. Of course, a merger with Sprint is not T-Mobile's only option. Cable companies Comcast and Charter have ramped up their mobile strategies with MVNO services on Verizon's network – Comcast's Xfinity Mobile service launched this week, and Charter's own mobile service is expected to go on sale in 2018. There has been speculation that this will lead inexorably to some kind of combination with one of either Sprint or T-Mobile, the only two of the U.S.'s four nationwide wireless players without fixed-line businesses. When asked about the prospect of merging with a cableco, Carter responded by asking: "wouldn't it be fun to do both?" He suggested that T-Mobile could merge with Sprint, and then pursue a deal with a coalition of Comcast and Charter. "One step doesn't necessarily preclude the second step, it could actually increase the possibility," he said, pointing out that such a combination would serve consumers' growing demand for convergence. "That's where the world is going," Carter said. He also seemed fairly relaxed about how a mega-merger would be perceived by regulators. With growing competition from over-the-top (OTT) players, cable companies entering the mobile market, as well as potentially Dish Network, "it's absurd to say there are only four players in the [mobile] market," Carter said. "That could totally change the dynamics of how you look at this from a regulatory standpoint," he said.

SFR Sues Orange Over Fiber-Optic Sharing Agreement

French telecoms operator Orange has reportedly revealed that rival SFR Group (previously Numericable-SFR) filed a lawsuit against it over fiber-optic network coverage, Reuters reports. According to a report published by domestic newspaper Les Echos, SFR wants a bigger share of the fiber-optic network deployment than the two sides agreed upon in November 2011. A spokesman for Orange reportedly said that the legal action was unexpected, as the agreement between the two operators about their respective shares in the fiber-to-the-home (FTTH) network had already been approved by the regulator and the government. According to TeleGeography's GlobalComms Database, Orange and SFR agreed to share the work and deploy FTTH technology in nearly 3,000 municipalities (around 14 million households), with Orange agreeing to provide 80% of the required investment, while SFR was responsible for the remainder. Following the Numericable-SFR merger, however, the telco proposed that it should cover remote areas, which were not scheduled for fiber deployments at the time, to avoid duplication with its cable infrastructure. Indeed, in July 2015 the country's Competition Authority (Autorite de la Concurrence) lifted a restriction which prohibited Orange from deploying FTTH networks in the areas reserved for SFR. It is understood that Orange had since taken on 90% of the co-investment, while SFR's share had fallen to 10%.

ACCC Issues Final Decision on Regulation of Non-nbn High Speed Internet Services

A final decision on the regulation of high speed internet services supplied over infrastructure other than the National Broadband Network (NBN) has been published by the Australian Competition and Consumer Commission (ACCC). The ACCC's ruling sets wholesale prices and other terms and conditions that it claims will 'provide customers with a larger number of retailers to choose from and deliver them better prices and services'. One notable change from the ACCC's draft decision means that non-NBN networks will be permitted to pass on the government's proposed Regional Broadband Scheme (RBS) charge to their customer lines to help fund the supply of non-commercial regional fixed wireless and satellite services by nbn – the infrastructure company overseeing the NBN's construction. Meanwhile, the ACCC has also confirmed that those firms supplying services to less than 12,000 subscribers will not be regulated under the decision, on the basis that it would apply 'an unreasonable burden to them with little benefit to customers'. Terms set in the final decision only apply if access providers and access seekers cannot reach their own commercial agreements on prices and other terms for the relevant services. The internet services subject to the decision are the superfast broadband access service (SBAS) and the Local Bitstream Access Service (LBAS), which the ACCC describes as wholesale 'superfast' fixed line broadband services capable of download speeds of 25Mbps or more. As per the final decision the initial prices for providers other than Telstra will be AUD27.0 (USD20.2) per port per month, plus between AUD8.0 and AUD17.5 per month for aggregation to a point of interconnection (POI); the latter charge will vary by retail service provider (RSP) and depend on the average amount of aggregation capacity that it purchases per port. Meanwhile, Telstra's fiber network prices for 2017/18 are AUD16.0 per port per month (Zone 1) and AUD21.1 per port per month (Zone 2) plus AUD29.3 per Mbps per month for aggregation (i.e. 'the transport of customer traffic from multiple end users on an aggregated basis'). An RSP will also have to purchase Telstra's wholesale line rental service, which is an additional AUD20.79 per month. Telstra's fiber networks are reportedly subject to different pricing arrangements due to the cost of separating these networks from Telstra's legacy network systems and the prospect that the fiber networks may be transferred to the NBN. In announcing the decision, the regulator noted that non-NBN infrastructure largely provides service in new housing estates and apartment buildings in central city locations, and in many areas offer connectivity where the NBN does not. Major providers of such services were named as Telstra (South Brisbane and Velocity Estates fiber networks), TPG, Vocus, LBN Co, Opticomm, and OPENetworks. Commenting on the matter, ACCC chairman Rod Sims said: 'Our view is that the regulated prices based on the NBN prices may not have allowed these network providers to recover their reasonable costs if they were also required to absorb the proposed RBS charge … Consistent with our draft decision, the prices have been set in line with NBN prices and will change with NBN prices over time. Prices will reflect the growth in traffic across the high speed internet sector, which will continue to drive down the average cost of supplying services.'

Telecom Act to Be Amended in Nepal

NTA Spokesperson Min Prasad Aryal informed that a separate committee has been formed at the Ministry of Information and Communications (MoIC) to make amendments to the two-decade-old Telecommunications Act. "The committee is currently preparing an amendment draft of the Telecommunications Act. As soon as the draft is ready, NTA will forward it to the Cabinet for its endorsement," he said. According to Aryal, amendments in the Telecommunications Act are required to be relevant with different new telecommunications issues that have emerged in recent years. As the new Company Act has made it mandatory for private telecommunication service providers that have paid-up capital of more than Rs 50 million to convert to a public company within the next two years, NTA is obliged to amend the Telecommunications Act as this provision of the Company Act has to be addressed in the Telecommunications Act for its implementation.

NTA Plans to Develop Wider Information Highway in Nepal

The National Broadband Policy has envisioned to expand broadband service nationwide by 2020. The telecom sector regulator — Nepal Telecommunications Authority — has initiated different projects to achieve the target. Moreover, NTA will also be implementing new guidelines to regulate the quality of service in Nepal's telecommunication industry from July 16. The telecommunication sector of the country was running on a 'back gear' for the last one decade. Nepal was the first country to introduce 3G service in the entire South Asian region and was also a pioneer in introducing WiMAX service. However, after these services were introduced, the telecommunication industry could not move ahead as expected for a number of years. This is probably because the post of chairman at NTA remained vacant for almost three years. Though telecommunication is a sector where the latest technologies have to be introduced every year to deliver efficient telecom services, Nepal's telecommunication sector remained at a standstill for a long time due to lack of leadership in NTA. I joined NTA two years back with an aim to give momentum to the telecommunication industry. The first step I took was to reform policies and introduce new policies as it is government policies that regulate the telecommunication sector. I also took the initiative to introduce the Broadband Policy 2015 and ICT Policy 2015. Due to lack of these policies, Nepal was lagging behind in the telecommunication sector. These policies were intended to promote data service in the telecommunication industry of Nepal as voice service is getting outdated. As development today relies heavily on the ICT sector, the Broadband Policy was introduced to increase people's access to internet across the country. NTA today is working to implement these two policies. We are laying optical fiber along the Mid-Hill Highway and other places to take internet network to every district headquarter, municipality and village development committee. We have a target to take internet services to every VDC of the country by 2020. In fact, NTA today is working to develop information highway across the country. Nepal today has six telecom companies of which four companies — Nepal Telecom, Ncell, Smart Telecom and United Telecom Ltd (UTL) — have the license to deliver voice service across the country. The other two telecom companies — CG Telecom and Hello Nepal — today have negligible presence in the country and have not acquired the Unified License from the government. These two companies did not take part in the proposal that NTA had announced for this project. Moreover, these two telecom firms are yet to clear some dues to the government. However, we have a legal provision that the process of laying optical fiber and other projects under the Rural Telecommunication Development Fund (RTDF) has to be done through existing telecom service providers. Now we have four telecom companies eligible for the project. Nepal Telecom, being a government operator, hesitates to take part in tender processes. Moreover, NT has already obtained a big project from NTA to lay optical fiber along the Mid-Hill Highway. Out of the remaining three, Smart Telecom and UTL are still in a loss. If these factors are to be considered, Ncell would have got the project directly. However, Ncell is facing various tax issues at present and is in a controversy. In such a context, NTA was obliged to give the project to either UTL or Smart Telecom. UTL was the lowest bidder for the project with a proposal to implement the optical fiber laying project at Rupee two billion. Thus, we awarded the project to UTL. However, in case UTL is unable to implement the project as per schedule, NTA will re-award the project to some other service provider. Domestic telecom firms have been violating the principle of 'net neutrality' due to lack of a legal framework to guide it. By promoting single content, site and application, telecom companies are certainly violating the concept of net neutrality in Nepal. In fact, NTA has now started discussions over introducing regulatory framework on net neutrality. NTA will soon hold a meeting with experts from the Telecom Regulatory Authority of India to discuss the issues related to net neutrality and regulatory frameworks.

Sprint, T-Mobile US Get Merger Ball Rolling

SoftBank's US business Sprint kicked off informal talks with Deutsche Telekom owned T-Mobile US over a possible merger, opening up the potential for a mega deal which would severely shake up the country's mobile market. Bloomberg reported executives from Sprint and its owner SoftBank had started preliminary conversations with T-Mobile US parent Deutsche Telekom, although banks have not been formally hired at this stage. Speculation around a potential deal between the two heightened in recent months, with both Masayoshi Son, SoftBank's CEO, and Deutsche Telekom CEO Tim Hottges stating in separate earnings calls they'd be open to exploring such a merger. However, until now, there had not been any news on discussions between the two. Bloomberg said merger talks in the US mobile market have been on hold for almost a year because of a government clause relating to a spectrum auction, which required operators to avoid negotiating deals until April 27. Should a deal be thrashed out, there would no doubt be severe regulatory scrutiny involved, because the merger would reduce the number of major players in the US mobile market from four to three. Indeed, Sprint and T-Mobile US tried to merge back in 2014, but negotiations fell apart due to regulatory concerns. A T-Mobile US/Sprint tie-up would also go some way to revealing the Trump administration's stance on mega mergers in telecoms. So far, Trump's pick to lead the Federal Communications Commission, Ajit Pai, indicted the US regulator could be open to big deals. Arguably, the tables have also turned since the mooted deal in 2014, regarding the position of the two operators. T-Mobile US has gone from strength to strength in recent years, surpassing Sprint in terms of subscribers and displacing it to become the country's third largest operator. There is no clear indication yet whether T-Mobile US would want to be the acquirer in any deal, given Sprint's struggles to maintain market share. Deutsche Telekom, on the other hand, may also be reluctant to sell, given its US business fuelled much of its overall growth in recent quarters. There is also speculation the country's cable operators may be interested in acquiring a mobile operator, to boost their wireless ambitions. T-Mobile US and Sprint have been highlighted as obvious candidates, so may face competition for a deal.

Cable & Wireless Australia Loses Tax Refund Appeal

Cable & Wireless Australia has lost an appeal in which it was seeking a tax refund of AUD339 million (USD254 million) over the 2001 sale of local communications group Optus to Singtel Group. According to Reuters, C&W Australia took the Australian Tax Office (ATO) to the Federal Court in 2015, claiming it should have only paid AUD135 million in tax on the deal which saw it sell its 82% stake in Optus for AUD6.2 billion. With almost AUD4 billion of the funds received from Singtel having been treated as a dividend payment that was taxed at 15%, C&W Australia – which ended up paying tax of AUD587 million for the transaction – had argued that it should have been treated as a capital gain because of the way the deal was structured.

CNMC Issues Telefonica EUR3m Fine for Overcharging BT

Spain's anti-trust watchdog the National Commission on Markets and Competition (Comision Nacional de los Mercados y la Competencia, CNMC) has issued Telefonica a fine of EUR3.0 million (USD3.2 million) for charging BT higher fees than stipulated in its reference offer for leased line circuits. The CNMC notes that Telefonica charged BT monthly quotas that were higher than the regulated prices established in its reference offer between October 2015 and June 2016, thus impacting BT's competitiveness and causing the operator to lose 1.8 percentage points of market share. Telefonica has two months to appeal the ruling.

EC Raids Swedish Mobile Operators over Cartel Concerns

The European Commission and Swedish competition officials have raided the offices of the Swedish mobile operators amid suspicions they may have coordinated their behavior to prevent another operator from entering the market, violating competition rules. Telia, Telenor, 3 Sweden and Tele2 all confirmed they were visited by competition authorities and said they were cooperating with the investigation. Telia said the investigation concerned "questions on coordinated behavior in the Swedish mobile wholesale market". Nether the operators nor the Commission provided further details.

USF Approves New Broadband Projects, Deliberates to Work for SMEs

The Universal Service Fund (USF) Board of Directors, in a meeting under the chairmanship of Ms. Anusha Rehman, took in to consideration and approved the auction of three important broadband for sustainable development projects, i.e. Khyber Lot, Mohmand Lot and Small Lot-2. The Board also approved to award the contract for Establishment of Computer Labs in Government Girls Schools in Rural Areas of Islamabad Capital Territory, Phase 1. It also approved the phase-II of the ICT for Girls project of establishing computer labs and computer skills training program in 119 Girl's Institutions of Islamabad Capital Territory. The Board took into consideration the agenda pertaining to the provision of Information and Communication Technology to micro, small and medium enterprises in Pakistan. The micro, small and medium enterprises in Pakistan can be termed as the backbone of the economy because they constitute nearly 80% of the enterprises in Pakistan. Pakistan has a population of around 200 million and these small to medium enterprises employ some 65 million individuals. The Board discussed that by providing these enterprises the access to digital platform and bringing MSMEs online, the real potential can be reaped and will surely create opportunity to propel Pakistan to higher-income country. In this regard the Board directed the USF management to carry out a market study to understand the landscape of issues in ICT for MSMEs and prepare recommendations. Board members including the Secretary IT; Mr. Rizwan Bashir Khan, Member Telecom; Mr. Mudassar Hussain, Mr. Aamir Ibrahim; CEO Jazz, Mr. Azfar Manzoor; VP ISPS; Mr. Kaukab Iqbal Chairman Consumers Association and the senior management of USF Co also attended the meeting.

Mobile Technology Has a Major Role in Digital Society Realization - Dr. Ismail Shah

Mobile Technology has a Major Role in Digital Society Realization-said Dr. Ismail Shah while representing Pakistan at the "3rd Asia-Pacific Digital Societies Policy Forum 2017" in Bangkok, Thailand. Asia-Pacific Digital Societies Policy Forum 2017 is a joint venture of International Telecommunication Union (ITU) and GSM Association (GSMA), which took place on May 8-9, 2017 in Bangkok, Thailand. This forum is being jointly organized by ITU and GSMA each year with support from the Australian Government and partners and is the third in a series of ITU-GSMA Digital Societies Policy Forum for the Asia-Pacific region. The forum aims to convene policy makers, regulators, industry and other stakeholders from the ICT sector to deliberate challenges and potential opportunities through cross sectoral collaboration offered by digital societies in countries from the Asia-Pacific Region. The content of this 3rd year Forum focused on policy and regulatory measures ensuring hyper-connected society, digital economy and society, digital innovation promotion and other emerging issues in the digital society. The event targeted towards senior officials from government ministries, national regulators, industry, academia and international organizations who are involved in developing and implementing policies and regulations, and other associated ICT development activities in the Asia-Pacific Region.

Ministry Setting Digital Economy Agenda; Regulator Bans Four Messaging Services

Proposed new strategy for targeting Universal Service Fund (USF) spending, whilst channeling other sources of sector income – including radio spectrum fees – into a new Digital Economy development fund, ComNews reports. As previously reported by the same source, at the end of 2016 payments from operators into the USF amounted to RUB13.7 billion (USD237 million), but the sole Universal Service provider, Rostelecom, complained that it only received RUB8.9 billion in USF funding for its state-subsidized projects including rural broadband rollouts. Among other aims set out in the Digital Economy draft programme, the Ministry stated that 5G mobile networks should be commercially available in eight Russian cities (of over one million inhabitants each) by 2020, and at least 15 major cities by 2025. Also in Russia this week, Vedomosti reports that telecoms regulator Roskomnadzor has blocked Russian user access to four mobile/OTT messaging services, namely BlackBerry Messenger (BBM), Line, Imo.im and Vchat. The watchdog gave the reason for blocking the services as failure to register on its list of 'information distributors' – which are defined as website owners allowing the sending of electronic messages.

Wired, Wireless Appear Very Competitive to Him; Signals FCC Should Take that into Account Going Forward

FCC Chairman Ajit Pai gave definite signals that the FCC may have a different answer the next time it weighs in on whether wireless broadband is a competitor to wired. The FCC under his predecessor consistently said wireless broadband was a potential competitor, but not yet one for the purposes of, say, disciplining wired ISP prices. At an American Enterprise Institute speech recapping his first 100 days, Pai was asked about that relative competitiveness by host and AEI visiting scholar Jeffrey Eisenach, who was a member of the Trump FCC transition team. Eisenach asked whether Pai thought that wireless is now a substitute for wireline. Pai said, for him, at least, "they are very competitive offerings." The "for him" is because the chairman is always careful to separate his views from what the FCC as a whole might conclude based on the fact record before it. But he suggested that fact record could be a strong one. Pai said that as 4g LTE and 5G networks get rolled out, and the next generation of Wi-Fi is rolled out, " I think we are increasingly going to see that wireless is not this 'imperfect substitute' for wired connections. "It is going to be the dominant means, the preferable means, by which people access the Internet." As a result, he said, "I think the FCC needs to take stock of that and make the appropriate policy decisions as a result. Pai pointed out that, for the purposes of the Open Internet order, the FCC had no trouble lumping wireless in with wired--reclassifying both as Title II services. He cited the "well established case of goose vs. gander," calling for consistency of treatment and a "holistic view" of the marketplace. Eisenach said he had marked the convergence when Microsoft started calling Windows 10 operating system programs apps.

ETNO, GSMA fear EU 5G Roll-Outs Face Derailment

The European Telecommunications Network Operators' Association (ETNO) and GSMA fear European legislators "have abandoned their ambitions for 5G roll-out" as the European Parliament and member states discuss amendments to the draft European Electronic Communications Code. Last week it was reported a European Commission (EC) proposal to introduce 25-year minimum terms for spectrum licenses is set to be disputed by a group of 15 member states. Spectrum license reform proposals are part of the draft Electronic Communications Code first announced by the EC in September 2016. Some member states were concerned the award of long licenses would leave regulators unable to respond to market developments, and hamper innovation because spectrum bands would be awarded for longer than the lifecycle of compatible technologies. ETNO and the GSMA said spectrum measures in the code are one of the major pro-investment aspects of the telecoms reform, making them extremely relevant to the achievement of both Europe's 5G objectives and of a European Gigabit Society. "Our members are committed to achieving the 5G and gigabit society objectives, but Europe's ambition needs to be mirrored in all the upcoming legislative choices," the groups said in a joint statement. "In particular, legislators should recognize the importance of greater predictability and licensing clarity as tools to incentivize continuous investment in mobile networks, vibrant innovation and competitive mobile markets," the statement added. The organizations believe several aspects of the EC proposal should be maintained or strengthened and called on the co-legislators to ensure greater certainty and predictability over future rights of use as well as predictability of all rules in terms of interferences. Other recommendations include encouraging greater consistency among member states in their approach to spectrum awards, and continuing to enable freedom to compete and differentiate through voluntary sharing under competition law, rather than introducing ex-ante regulatory measures. Lise Fuhr, director general of ETNO, said: "The EU institutional debate

licensing conditions. They also want legislators to support easier spectrum trading and leasing proposals, allow for a neutral approach in terms of general authorizations and spectrum sharing and ensure alignment with international risks delaying a major source of societal and economic growth. 5G is the essential platform to provide new services to consumers and businesses".

TRA-UAE as Patron Recognizes SAMENA Council's Leaders' Summit as an Important Platform for the Industry

The Telecommunications Regulatory Authority (TRA) participated in the fourth annual edition of the Telecom Leaders' Summit, organized by SAMENA Telecommunications Council to help unite visions and enable collaboration. TRA was the official patron of the event, which witnesses the participation of public and private ICT decision makers from 25 countries from South Asia, Middle East, and North Africa, as well as the participation of service providers in the country, Etisalat and du. The Summit is an important platform for presenting the latest ideas and initiatives in the field of communications, digital transformation and smart solutions. The agenda included many presentations and panel discussions that highlight a number of topics including enabling operators and service providers, flexibility, operational efficiency, business growth, and the views of the operators on these points. The parties also discussed topics related to cloud computing, and the perspectives of establishing a knowledge-based economy based on digital technologies and services. On the sidelines of the summit, TRA held bi-lateral meetings with its counterparts in the GCC countries as well as private sector stakeholders, which are part of the continuous cooperation and coordination efforts between the GCC countries in all fields, including the telecommunications sector. The Summit's discussions were launched with a speech from H.E. Hamad Obaid Al Mansoori, TRA Director General in which he stated: "The telecommunications sector is an important element in the equation of the global transformations we are witnessing today. It is the nervous system for several aspects of modern life, like education, health, economy, society and security. Therefore, we expect this Summit to provide direct and accurate answers and common ideas about dealing with several future challenges. We are on the threshold of a big transformation from the Internet of Humans to the Internet of Things. The world is witnessing an explosive boom in artificial intelligence and connectivity of devices and objects. By 2020, billions of inter-connected robots, devices and data sources will make humanity enter an era of unprecedented features and relations." H.E. added: "Numbers of such flowing data exchanged among devices will be astronomical and unprecedented. Words like 'Zettabyte' will be a widely used term then. One of the new age aspects is mobility. Growth of connectivity of mobile devices became more and faster than connectivity of traditional computers. In paradox, developing and least developed countries are the main reason for growth of smartphones' usage." H.E. pointed out that one of the most significant challenges related to mobile telecommunication is the pressing need to provide sufficient broadband. Investment in broadband is a fruitful thing that deserves hard work. Such investment shall be reflected in the development of human beings and contribute directly in the achievement of the UN's Sustainable Development Goals. Moreover, they are economically successful investments.

Court Clears Tata to Pay USD1.2bn Settlement

The Delhi High Court has approved the USD1.2 billion settlement between Tata Sons and its partner NTT DOCOMO over the latter company's exit from their telecoms joint venture Tata DOCOMO. The court rejected objections from the Reserve Bank of India (RBI), which sought to block the deal on the basis that foreign companies are forbidden from selling stakes in Indian companies at a pre-determined price. Under the terms of the 2009 agreement – through which DOCOMO had purchased a 26.5% stake in the cellco – the Japanese firm had the option to exit the partnership if the operator failed to meet certain financial targets, with DOCOMO set to receive either 50% of its acquisition price, or the fair market price of its shares, whichever is higher. NTT DOCOMO chose to enact the option in March 2014, but Tata Sons was unable to find another buyer for the shares, forcing Tata to buyout its partner itself. The RBI denied Tata permission to pay out for the shares, however, citing rules preventing foreign firms from exiting investments at a pre-determined price or with assured return, and noting that the pre-agreed price of INR58 (USD0.9) for each of NTT DOCOMO's shares was substantially higher than the INR23 per share valuation determined by independent assessors. In June 2016, however, a London arbitration court ordered Tata to pay damages of USD1.2 billion to NTT DOCOMO for breaching their shareholding agreement. Under the same order, NTT DOCOMO would also release its entire stake in the wireless firm to Tata Sons or an affiliate.

D.C. Court Denies Open Internet Decision Re-Hearing

The U.S. Court of Appeals has denied a full-court rehearing of the decision upholding the FCC's Title II reclassification of Internet access service, a reclassification new FCC Chairman Ajit Pai is planning to reverse anyway. ISPs and others had asked the full court to reverse the three-judge panel decision that the FCC had reasonably defended its decision to reclassify ISPs as common carriers. The three judges that had made that decision were Judges David Tatel (who was on the panel that rejected the previous net-neutrality rules), Sri Srinivasan, and Senior Judge Stephen Williams. The court cited the Notice of Proposed Rulemaking--approved last week--in denying the en banc review, which courts rarely grant anyway. Had the court agreed to the re-hearing, the Open Internet debate would have continued on three fronts, the FCC, the Congress and the courts, though it will probably ultimately wind up being considered in all three anyway. "En banc review would be particularly unwarranted at this point in light of the uncertainty surrounding the fate of the FCC's Order. The agency will soon consider adopting a Notice of proposed Rulemaking [NPRM] that would replace the existing rule with a markedly different one. In that light," said the court, "the en banc court could find itself examining, and pronouncing on, the validity of a rule that the agency had already slated for replacement." In their concurrence in the denial, two of the judges who rendered the initial decision defended it, not as a matter of a verdict on the policy, but on the legality of the FCC's authority to make it. "Our task is not to assess the advisability of the rule as a matter of policy," wrote judges Srinivasan and Tatel. "It is instead to assess the permissibility of the rule as a matter of law. Does the rule lie within the agency's statutory authority? And is it consistent with the First Amendment? The answer to both questions, in our view, is yes." Judge Brett Kavanaugh dissented from the denial of rehearing. He said the rule was unlawful and should have been vacated. Judge Brown also would have granted the rehearing. "In light of the fact that the Commission on May 18 will begin the process of repealing the FCC's Title II regulations, it is not surprising, as Judges Srinivasan and Tatel pointed out, that the D.C. Circuit would decide not to grant the petitions for rehearing en banc," said FCC Chairman Pai. "Their opinion is important going forward, however, because it makes clear that the FCC has the authority to classify broadband Internet access service as an information service, as I have proposed to do. I also agree with many of the points made by Judges Brown and Kavanaugh in their compelling opinions explaining why the Commission's Title II Order was unlawful." "I'm disappointed that the full court denied the rehearing petition," said Free State Foundation President Randolph May. "But the fact that Judges Kavanaugh and Rogers Brown dissented certainly increases the chances that the Supreme Court will hear the case if asked. In any event, the denial makes it all the more important for the FCC to move ahead with its proposed rulemaking to build a solid record that supports eliminating Title II regulation and curtailing the other harmful aspects of the current rules."

British Government Rejects Lords Amendment Calling for 30MBPS Broadband USO

An amendment made by the House of Lords to the UK's proposed Digital Economy Bill – which called for a broadband universal service order (USO) of 30Mbps – has been rejected by the government, thinkbroadband reports. Due to the recently-called general election, which will take place on 8 June 2017, several pieces of legislation are now being rushed through parliament, and with the Digital Economy Bill being one of them it was brought back for discussion yesterday (26 April). In addressing the amendments to the bill that had been made by the upper house in February 2017, digital minister Matt Hancock confirmed that the proposal to increase the USO to 30Mbps was being watered down, with the original plan for a 10Mbps baseline restored. Speaking in the House of Commons, Mr. Hancock did note, however, that government was inserting a new amendment which calls on local telecoms regulator Ofcom to review the minimum download speed in the broadband USO once superfast services, which it describes as connections of at least 30Mbps downstream, 'are subscribed to for use in at least 75% of premises in the United Kingdom'. Alongside doing away with the call from the Lords for a 30Mbps USO, the government meanwhile also confirmed its removal of another, arguably more ambitious, amendment which proposed that the USO must specify that the target for broadband connections and services to be provided before 2020 must have speeds of 2Gbps or more, with fiber-to-the-premises (FTTP) as a minimum standard. In his remarks to parliament, Mr. Hancock said: 'According to Ofcom's latest data, in 2016, take-up of ultrafast broadband with a download speed of 300Mbps and higher was less than 0.1%, so we are nowhere near being able to demonstrate that the majority of the population have access to full fiber with a download speed of 2Gbps. We therefore cannot accept Lords amendment 1, and we are not in a position of a substantial majority having taken up superfast broadband.'

EC 25-Year Spectrum License Bill under Threat

A European Commission (EC) proposal to introduce 25-year minimum terms for spectrum licenses is set to be disputed by a group of 15 member states, Reuters reported. In a document seen by the news website, representatives from countries including Germany, Greece, Italy, the Netherlands, Spain, and the UK argued against the plan. The group said by awarding long licenses, regulators would be unable to respond to market developments and innovation would be hampered if bands were awarded for longer than the lifecycle of the technology they supported. Spectrum license reform proposals are part of the draft Electronic Communications Code first announced by the EC in September 2016. Its policies are designed to create consistent telecoms infrastructure rules across the EU, encourage innovation and ensure the efficient use of spectrum resources. The bill is currently undergoing an approvals process across the EU's legislative bodies. As reports emerged of opposition to long spectrum licenses, another strand of the EC's digital single market strategy moved closer to sign-off, as the European Council approved proposals for the coordinated use of 700MHz for mobile broadband services. In a statement, the European Council said the policy would boost mobile connectivity and drive the roll-out of 5G across the continent. Emmanuel Mallia, the Maltese minister for competitiveness and digital, maritime and services economy said it: "represents a major step in the industrial shift to 5G, which is essential for the future competitiveness of the EU." Having been drafted by the European Commission and already passed by the European Parliament, the bill will now go for final sign-off to all parties in May. It is expected to become law in mid-June.

EU States Push Back Against 25-Year Wireless Spectrum Licenses

Germany and Italy are among 15 European Union member states pushing back against a proposal to set a 25-year minimum on wireless spectrum licenses, thwarting the telecoms industry's hopes for a more coordinated approach across the bloc. The European Commission has tried for years to coordinate how national governments allocate so-called wireless spectrum or parcels of airwaves to mobile operators such as Vodafone (VOD.L), Deutsche Telekom (DTEGn.DE) and EE (BT.L) to create a single European telecoms market. Telecoms companies have also long called for a more coordinated spectrum policy. License durations vary across Europe, making it harder for the companies to operate on a larger scale and compete with U.S. rivals. But member states have in general been very sensitive about any oversight of wireless spectrum by the EU. The sale of spectrum can raise billions of euros for governments. The Commission sought to address this by proposing a minimum spectrum license duration of 25 years in a telecoms reform proposal in September. But in a position paper seen by Reuters the countries said mandatory fixed license durations were "disproportionate and insufficiently flexible to be able to respond to market developments." Excessively long license durations risk "preventing innovation if relevant frequency bands are awarded for longer than the life cycle of a technology," the paper said. The paper was signed by Austria, Bulgaria, Croatia, Cyprus, the Czech Republic, Finland, Germany, Greece, Ireland, Italy, Latvia, the Netherlands, Poland, Spain and the United Kingdom. Increased spectrum trading or the possibility of withdrawing a license from an operator if it is not used are not sufficient counterbalances to the long license durations, the paper also said. These depend either on the good will of operators or require lengthy withdrawal of rights procedures with subsequent legal uncertainty due to cases of litigation, it said. Currently spectrum licenses in Europe are awarded for around 10-15 years, except for Britain, which has awarded unlimited ones. The countries also take issue with the Commission's proposed peer review mechanism to review national regulators' draft measures on spectrum allocation. "A peer review process as proposed ... is based on the idea that any award decision can be checked against an ideal model," the paper said. The mandatory peer review would create an "immense bureaucratic burden" on national administrations and the Commission as well as creating legal uncertainty and risk stifling innovation. "Preserving the status quo is no good option," said Steven Tas, Chairman of ETNO, the European telecoms lobby group representing Deutsche Telekom (DTEGn.DE), Telecom Italia (TLIT.MI) and Telefonica (TEF.MC), among others. "5G roll-out requires longer licenses and a pro-investment approach to spectrum management as well as network regulation." The EU executive has made a priority of fostering the early development of 5G mobile technology in Europe, and estimates that 5G will bring 146.5 billion euros (122.54 billion pounds) per year in benefits. The Commission's proposals are currently being discussed by both member states and the European Parliament.

A SNAPSHOT OF REGULATORY ACTIVITIES IN SAMENA REGION

Afghanistan

The Afghanistan Telecoms Regulatory Authority (ATRA) and Ministry of Communications and Information Technology (MCIT) have signed a memorandum of understanding (MoU) with the State Ministry from Disaster Management on the cooperation of the development of the Afghanistan Emergency Telecom Regulatory Framework (AETRF). The AETRF will address the role of ICT with regards to pre-disaster, during-disaster and post-disaster situations. The framework will also provide a roadmap for the creation of a coordinated mechanism to handle related issues. A spokesperson added that governmental bodies and private stakeholders would coordinate emergency telecommunications services within the scope of the AETRF, based on the MoU. In a related development, meanwhile, the ATRA has enlisted local ISP Ariana Network Services (ANS) to provide broadband connectivity to 16 Universities nationwide. The deployment will be bankrolled with AFN30 million (USD440,000) from the Telecom Development Fund (TDF).
(May 19, 2017) telegeography.com

Aga Khan-owned mobile firm Telecom Development Company Afghanistan (TDCA), which operates under the Roshan brand name, has announced that it will be launching 4G services 'shortly' but has provided no further details of the planned development. The revelation follows a similarly vague declaration from the Ministry of Communications and Information Technology (MCIT) in February this year that the government was working towards the introduction of 4G services, without specifying what steps it was taking. Indeed, the MCIT has so far given little indication how it intends to proceed with the licensing of the new technology or what spectrum bands it plans make available for the service. Frequencies in the 700MHz band are likely to be amongst those offered to would-be 4G providers, however, as the MCIT has adopted the APT700 plan for allocations in that band. Roshan Chief Operating Officer Shireen Rahmani said of the cellco's planned 4G launch: 'Today's 4G announcement forms part of a new programme that Roshan is launching to invest in improving and upgrading our data network to reflect the significant growth in data usage that Afghanistan has seen over the last few years. Roshan's leadership in 4G will serve as a catalyst for economic growth and provide broad social benefits for both private and public sectors that will positively impact the people of Afghanistan, including support for the development of eGovernment.' (May 11, 2017) telegeography.com

Algeria

The ICT Minister Imane Houda Feraoun has revealed that the activities of state-owned companies Algerie Telecom (AT), Algerie Telecom Mobile (Mobilis) and Algerie Telecom Satellite (ATS) will now be managed by a new entity, Groupe Telecom Algerie (GTA). The restructuring – which has been on the cards since 2014 – was reportedly approved last month by the Conseil des Participations de l'Etat (CPE), the agency managing the Algerian government's stake in state-owned business entities. Feraoun said that the new group will be tasked with 'pooling certain activities, including communication, human resource development plans and purchases' of the three entities, which amount to 'millions of dollars' per year. The Minister also said that the state embarked on the restructuring project as the current model of operation of the three companies 'was not very advantageous in relation to their economic positioning.'
(May 2, 2017) Huffpost Maghreb

Bahrain

Telecommunications Regulatory Authority (TRA) Bahrain was announced the winner of the "Employer of the year award" in the public sector for the Middle East & North Africa region (MENA) for the second year in a row. TRA received the award at the 12th Human Capital Forum MENA which was held in Dubai on the 30th of April 2017, where institutions and organizations from around the region came together to recognize excellence in Human Resource Management and discuss the latest trends and best practices in the field of HR. "TRA prides itself on its dynamism and steadfast commitment to maintain an

environment where employees are motivated and empowered to achieve, to be recognized for their efforts, and to grow within the organization." Says Deputy General Director of TRA, Sh. Nasser Bin Mohamed Al Khalifa, "It is a core aim of TRA to be an employer of choice, which we've pursued by adopting a culture of excellence, and building on this with innovation. This award firmly solidifies our claim." Factors largely contributing to TRA Bahrain's selection as winner of this award included its being recognized and certified by the European Foundation for Quality Management, linking career development opportunities and succession planning with performance management reviews in a transparent manner, and providing an average of 200 hours of training and development per employee over the last three years. "It's truly an honor to receive this reward for a second year running amid challenging competition from our counterparts across the region." Says Mr. Faisal Al Jalahma, Director of Finance, Information Technology and Human Resources "This is recognition that highlights the dedication the TRA strives towards in achieving excellence and is what makes the TRA an example to follow. Today we've not only proven our leadership and merit through this award but our ability to maintain our position among the ranks of our fellow professionals across the Middle East & North Africa. Our employees are some of the most talented people and we return our pride in them by facilitating an environment in which they can thrive and add the most value." He said further TRA won the award ahead of ASTAD, Qatar who came in second. Organized by Naseba, a UAE based global firm specializing in leadership consultancy, The HR Excellence Awards are all judged by an independent panel of experts against specific criteria for each category. The Employer of the Year in the Public Sector Award recognizes government entities for its commitment to supporting employees at all levels through talent retention, employer branding, learning and development, CSR activities, health and safety, and diversity and inclusion. Other participants in the HR AWARDS include large international firms and well recognized organizations from the region such as ORACLE, Riyad Bank, Al Ahli Bank, Jordan Dubai Islamic Bank and KPMG, among others competing in multiple award categories. "We are pleased to recognize TRA as 'Employer of the Year – Public sector' for the second year in a row for its commitment to offering career development opportunities, growing leaders from within and promoting a culture of transparency. TRA is an organization that cares deeply about its people and their growth, while promoting meritocracy and performance through fair reward and incentive practices. They serve as an example for other organizations looking to enhance their competitiveness through people management." (May 25, 2017) tra.org.bh

The meeting was organized by the RIPE NCC (Réseaux IP European – Network Coordination Center) and TRA Bahrain, to discuss the need for a roadmap or plan for Bahrain's deployment strategy of IPv6 in line with international efforts underway to shift from the current IPv4 to the new iteration IPv6 to manage the growth of Internet. They identified some key issues such as interconnectivity and the possibility of implementing IPv6 locally among operators to keep traffic within the country. The meeting included a discussion about granting enterprise network requests for IPv6 connectivity and identified the key technical obstacles that hinder the rollout of the service. Participants resolved to recommend solutions to the issue in a separate one-on-one meeting to be held in mid-May. Sheikh Ahmed Bin Isa bin Daij Al-Khalifa, manager, ICT, TRA Bahrain, said: "This initiative is integrated into Bahrain's development agenda to advance the national telecommunications infrastructure on par with regional and global standards. "This meeting is an excellent venue to address key issues and facilitate efforts to find solutions. We laud the efforts of the RIPE NCC to bring together the various sector players to address key common goals on advancing Internet connectivity, particularly on this occasion where we addressed the transition to IPv6". Paul Rendek, director of External Relations, RIPE NCC, said: "Internet connectivity has become an integral aspect of sustainable development in all countries and has now become part of the development agendas of almost all nations. "This meeting aims to provide a platform for stakeholders to discuss the current challenges and opportunities to expedite telecommunications development in Bahrain, particularly the best ways to implement IPv6 in the country. This meeting affirms the strong RIPE NCC commitments towards our members by supporting them with expertise and latest innovation. (May 3, 2017) tradearabia.com

Bangladesh

The government is considering that it would resolve the VAT related case in connection with SIM replacement ahead of 4G auction through External Resources Division. According to industry insiders, before 3G auction in 2013, the government took such move to resolve the case in the wake of threat that the operators would boycott 3G spectrum auction if the VAT issue was not settled. But later the subject didn't proceed further. Since Bangladesh Telecommunication Regulatory Commission (BTRC) is planning to float the 4G auction by this year, the government has taken a further initiative to bring four mobile operators into the upcoming auction. Initially, the National Board of Revenue (NBR) is thinking about two options. Primarily, it will request VAT appellate division for quick decision, and secondly, the finance minister can inform law minister as well as Attorney General of the case to resolve the case quickly. According to provision 55(3) of VAT law 1991, mobile operators will pay VAT while they sell any SIM. The authorities concerned informed Finance Minister AMA Muhith about the VAT issue relating to SIM replacement at a meeting. Muhith agreed to resolve the matter lawfully. According to the operators, they pay VAT while selling SIM, but they do not pay VAT when a subscriber approaches them to replace SIMs because VAT is paid off during SIM sale. But NBR says operators have dodged VAT in the name of SIM replacement. Initially, NBR asked four mobile operators to pay Tk 3,062.31 crore. Later, it reduced the amount to Tk3,010.99 crore, but the mobile phone operators

declined to pay the reduced amount, saying they did nothing illegal while replacing SIMs. Finally, as of December 2014, NBR claimed Tk 2,464.88 crore as dues from four mobile operators and fixed a date for hearing on the issue, but without paying heed to the NBR claim, the operators filed writ with the High Court. Welcoming the government move to resolve the VAT related case, Ekram Kabir, vice-president (Communications and Corporate Responsibility), Robi Axiata Limited, said: "We appreciate the government initiative." Banglalink, however, declined to make any comment on it as the subject is under trial while Grameenphone didn't respond to this matter. Nurul Kabir, Secretary General, Association of Mobile Telecom Operators of Bangladesh (AMTOB), a national trade body representing all mobile-phone operators in the country, said NBR claim was fictitious. The matter turned so complex due to lack of right initiatives, he added. "We think the government should resolve the matter quickly with rationale so that foreign investors become interested in further investment in the country's telecommunication sector." said Kabir.

(May 9, 2017) dhakatribune.com

The telecom regulator is set to start technical and financial audits into Airtel -- from the start of its operations in Bangladesh till merger with Robi. Simultaneously, Bangladesh Telecommunication Regulatory Commission is taking an initiative to go for a fresh audit into Banglalink, said BTRC Chairman Shahjahan Mahmood. "We will shortly appoint audit firms for these two operators," said Mahmood, but did not mention any timeframe for the audits. The regulator is currently running an audit into both Grameenphone and Robi, which is progressing slowly. Airtel launched its operations in Bangladesh in 2006. After ten years of its journey, it merged with Robi last year. Up until the merger, it recorded yearly revenue of around Tk 2,000 crore, but was never profitable. "The merger will not be an obstacle to auditing its first ten years of operation," said Mahmood. The telecom regulator has a mandate to audit the operations of the operators from time to time, according to the Telecom Act. However, BTRC was never serious on this issue. "Actually, it is our duty to run audits on the operators, but we cannot do so for a shortage of manpower," said the chairman. BTRC first began a process of auditing the mobile operators in 2011; at that time, an audit company raised Tk 3,034 crore in claims after conducting an audit of Grameenphone's network. At the same time, BTRC also began auditing Banglalink's network. However, the audit team could not complete the task despite several attempts. Banglalink's revenue was Tk 4,870 crore in 2016, ending the year with three crore customers. The telecom watchdog began fresh audits in 2015. In October, it appointed Toha Khan Zaman & Co to run an audit on Grameenphone's network without clearing previous claims. BTRC gave a timeframe of 180 days to complete the audit, but the auditor got three time extenuations. In March last year, the regulator appointed Masih Muhith Haque & Co to examine Robi's books at a fee of Tk 7.82 crore.

(May 8, 2017) thedailystar.net

The telecom regulator will buy two devices to measure the level of radiation emitted by base transceiver stations (BTSs), or mobile phone towers, on public health and environment, according to a BTRC official. Bangladesh Telecommunications Regulatory Commission (BTRC) took the decision in line with a recent High Court directive that asked the telecom regulator to take preventive measures if any harmful radiation is found. As of June 30, 2016, there were 69,009 BTSs in operation across the country. The two devices and two cars for their transportation around the country will cost around Tk 3.4 crore -- Tk 1.5 crore for the devices, Tk 1 crore for the vehicles, and the Tk 0.9 crore for paying the customs tax. In its order, the HC also asked BTRC to formulate guidelines on the use of towers by mobile phone companies, and the commission has already taken initiatives in this regard. According to BTRC officials, international organizations including World Health Organization, International Commission on Non-Ionizing Radiation Protection, and International Telecommunication Union have taken measures keeping in mind the negative impacts of radiation from these towers. In 2012, the Human Rights and Peace for Bangladesh filed a petition with the HC over radiation from these towers. Following the court order, an expert committee formed by the Health Ministry prepared a report after examining radiation from some towers in Dhaka city. According to the report, the radiation emitted by a tower was found harmful for health.

(May 1, 2017) thedailystar.net

Egypt

The Communications Minister Yasser al-Kadi has confirmed that the LTE-suitable spectrum which has been allocated to four companies is now ready for use. The Minister was cited as saying: 'We are now ready to hand over 4G mobile frequencies to any company that is ready … We are waiting for companies to finish preparations to receive the frequencies.' Telecom Egypt was the first company to acquire a 4G concession, in August 2016, while Orange Egypt, Vodafone Egypt and Etisalat Misr all followed suit in October. Earlier this year, in January 2017, the National Telecommunications Regulatory Authority (NTRA) requested that the nation's three existing mobile network operators – Vodafone, Orange and Etisalat – halt trials of 4G services, however, amid claims the new services were impacting the quality of existing third-generation connectivity.

(May 22, 2017) reuters.com

Iran

The Communications Regulatory Authority (CRA) has launched an updated website to check ownership of cellular SIM cards as part of a transparency drive to stop mobile phone dealers holding too many numbers. The CRA is the Iranian telecommunications industry ombudsman which monitors the activities of all cellular related matters, including operations by the four major mobile networks, as well as overseeing development of the new mobile virtual network operators, according to CITNA. The website and additional SMS-based service, enables users of cell phones to check how many SIM cards are registered in their name. Cell phone owners can check their ownership details through the CRA's sub-domain, http://www.mobilecount.cra.ir/ or via a dedicated SMS number listed on the site. Hossein Fallah Joshaghani, a deputy at the Telecoms Ministry, said the new service aims to end misuse of SIM card ownership and prevent misuse of owners' ID by third parties. The news follows a previous report in the Financial Tribune that 2 million unidentified SIMs were blocked from making outgoing calls and texts in January. The owners of those SIMs had until January 19 to contact the operators and register their identity. Details that the CRA demands include the national ID number of owners and residential address. "Measures taken for sorting unidentified SIM cards have proven effective," CITNA quoted the deputy minister as saying. He did not elaborate. A plan to regulate SIM cards was launched two years ago. In the first stage those who owned more than 10 SIM cards were identified. The measure was taken to sell idle numbers and reduce prank calls. The last phase of the plan is now underway. When the plan was first launched there were 30 million unidentified SIM cards. Now it is less than 4.5 million. There are three major mobile phone operators in Iran: Hamrah-e-Avval or MCI, Irancell, and RighTel. Active cell phone users have a penetration rate of 98.72%. Taliya has less than 1.28% of subscribers. (May 8, 2017) financialtribune.com

Jordan

Jordan and the World Economic Forum (WEF) launched a new platform project called "Jordan Internet for All", which aims to bring Internet access to millions of Jordanians, including women and isolated communities for the first time through new models of public-private collaboration, a senior government official said. The project, which is aligned with Jordan's Digital Transformation Strategy, will focus on addressing the barriers that prevent universal Internet access, in particular promoting demand for Internet use, Minister of ICT Majd Shweikeh said at a press conference Sunday. This will be implemented by focusing on empowering women to use the Internet, facilitating the development of more relevant online content in Arabic and improving e-government services, she said. There will also be a work stream in the project which will focus on helping refugees to integrate into Jordanian society through use of the Internet, the minister said, adding that the initiative will be of a great value to both the Jordanian economy and society. Shweikeh said the initiative will foster Jordan's process of digitization and will help improve the performance of the public sector, noting that Internet penetration in Jordan stands at about 85 per cent, while mobile penetration is around 150 per cent. The initiative will help in efforts to empower women, adopt e-government services and support entrepreneurship, the minister said. Internet for All is a global project of the WEF to accelerate Internet access and adoption through a multi-stakeholder platform, according to a WEF statement. Companies such as Cisco, Ericsson, Huawei, Microsoft and Zain work together on this platform with government, civil society, academia and international organizations to develop and scale new Internet access models, attract and coordinate investments, and align programming, the statement said. Andrew Harper, former UNHCR representative to Jordan, stressed the importance of the scheme. "Refugees are here and empowering them by providing them with connectivity will help them contribute to the countries of the region," Harper said. Harper added that refugees can contribute to the digital transformation as well, saying that such initiatives will help refugees move away from the dependency model. Commenting on the initiative, Ahmed Hanandeh, chief executive officer of Zain Jordan, said: "Everyone deserves access to the opportunities of the Internet. At Zain, we are well aware of the transformational power connectivity plays in improving the quality of life of people and communities, and we look forward to this latest public-private partnership bolstering our efforts to foster the growth of Jordan's digital and general economy. "We see this initiative acting as a catalyst in accelerating socio-economic growth and creating more jobs and entrepreneurial opportunities for the growing youth population, while enhancing the livelihoods of the many refugees residing in Jordan." Hanandeh added that telecommunications companies in Jordan are investing heavily in the development of infrastructure to meet the rising consumption of data. Country-level Internet for All platforms are already operating in Argentina, Rwanda, South Africa and Uganda, where they have so far succeeded in developing major projects such as Rwanda's Digital Ambassadors Programme, a skills development activity that will train 5,000 trainers who will work in rural Rwanda to teach digital skills to 5 million people, according to the statement.
(May 23, 2017) zawya.com

Lebanon

Lebanon is expected to launch its biggest-ever fiber optics tender in June. Telecoms Minister Jamal Jarrah said the ministry will launch the "biggest and most important tender in Lebanon's history" after one month for the installation of fiber optics cabinets to be able to provide citizens with high-speed internet services. Jarrah said the Cabinet on May 10 approved the seventh phase of the fiber optics networks project and allocated the necessary funds to facilitate the ministry's mission in delivering its work in a timely manner. Jarrah said fiber optics will allow the Lebanese to access high internet speeds at affordable prices. He added that the ministry asked the Cabinet to reduce internet prices by 20-50 percent to enable citizens to easily access the service.
(May 15, 2017) The Daily Star

Morocco

The proportion of Moroccan households with internet access increased to 68.5 percent in 2016, up by 2 percentage points since 2015, according to a national representative survey carried out by national regulator ANRT. Take-up among rural households (51.3%) remained significantly lower than in urban areas (77.2%). The internet is still mainly accessed via mobile rather than fixed technologies. Mobile internet penetration among Moroccan homes increased by 1.5 percentage point to reach 66.5 percent, while the take-up rate of fixed internet, such as ADSL and Wi-Fi, rose by 4.4 points. (May 23, 2017) telecompaper.com

Nepal

Smallest Nepalese cellco by subscribers Smart Telecom has been awarded a 4G LTE license by regulator the Nepal Telecommunications Authority (NTA), reports The Himalayan Times. The company becomes the third in Nepal after Nepal Telecom (NT) and Ncell (the two dominant mobile operators) to be awarded the 4G LTE license and the NTA has given permission for Smart Telecom to launch this service from 30 July. NTA spokesperson Min Prasad Aryal stated: 'We have authorized Smart Telecom to launch 4G service within its existing 1800MHz frequency under the technology neutrality principle.' The granting of the 4G license has been made under the condition that Smart Telecom pays its dues such as frequency fees, renewal fees and royalty fees before 30 July. In its 4G rollout plan submitted to the NTA in December 2016, Smart Telecom explained it planned to deploy its 4G service initially to the major cities of Kathmandu, Lalitpur, Bhaktapur, Pokhara, Birgunj, Bhairahawa and others. The NTA believes that opening up 4G to more operators will help to ensure healthy competition in Nepal's mobile market and also make sure that companies maintain a high level of service and quality. (May 25, 2017) telegeography.com

NTA marks the World Telecommunication and Information Society Day (WTISD 2017). Officials said NTA is at present solely focused on promoting telecommunication services in rural parts of country to enhance domestic ICT sector. Nepal is at the 142nd position in the ICT Development Index 2016, which is published annually by International Telecommunications Union (ITU). "As we have been promoting different telecommunication services in recent times through the Rural Telecommunication Development Fund (RTDF), we are optimistic that telecommunication services will reach rural parts of the country soon," said Min Prasad Aryal, spokesperson for NTA, adding that Nepal can improve in the ICT Development Index. Nepal was ranked as the 136th nation in ICT Development Index in 2015 among 175 countries who are members of ITU. The ITU publishes annual ICT Index of its members based on people's access to telecommunication services in the respective country, ICT awareness and ICT policies. As per ITU report, South Korea, Denmark and Iceland are ranked first, second and third in ICT Development Index. Aryal informed that NTA has undertaken a project to expand broadband facility across all village development committees (VDCs), health and educational institutions, and government offices by 2020. "We have also started work to lay optical fiber along the major highways across the country to ensure that every region of the country is connected with internet facility." Aryal opined that Nepal's ICT sector will take a giant leap forward within a few years after the completion of the optical fiber laying process in different places and nationwide expansion of broadband service. The WTISD 2017 is being observed across the world today with the theme of 'Big Data for Big Impact', focusing on the power of 'Big Data' for development and to explore how to turn imperfect, complex and often unstructured data into actionable information in a development context. (May 17, 2017) thehimalayantimes.com

The Nepal Telecommunications Authority (NTA) has cleared operator Ncell to launch 4G services over its existing 900-MHz and 1800-MHz spectrum holdings, paving the way for the operator to compete with Nepal Telecom. The telecoms regulator has informed Ncell it is clear to launch 4G services using its spectrum holdings from June 1. But the move goes against the decision of Nepalese parliament's Public Accounts Committee (PAC) not to allow Ncell to launch 4G services until it pays a capital gains tax the government has been demanding from the operator. According to the report, the committee had approached the regulator asking why Ncell had been permitted to roll out 4G services despite the tax dispute. The NTA responded that it had given the directive in the spirit of the technology neutrality spectrum policy. Nepal's Development Committee had also directed NTA to allow a launch on the grounds that consumers have been negatively affected by the decision to delay providing approval, undermining the committee's authority. In light of the PAC's concerns, the regulator noted that while Nepal Telecom has been granted new spectrum to support its 4G foray, Ncell so far has not. The tax dispute centers on Ncell's former shareholder TeliaSonera's decision to exit the Nepalese market. The Sweden-headquartered operator sold its indirect majority stake in Ncell to Malaysia's Axiata Group for $1.36 billion during a deal announced in April last year. The Nepalese government has demanded that capital gains tax be paid on the transaction, but because TeliaSonera had already exited the market and had disputed the assertion that the transaction is taxable, it has been leaning on Ncell to resolve the issue and potentially pay the tax on TeliaSonera's behalf. But Ncell has resisted this pressure.

(May 9, 2017) telecomasia.net

The Nepal government is preparing to introduce a new policy allowing domestic telecom companies to merge in a bid to increase competition in the sector. Telecoms regulator the Nepal Telecommunications Authority (NTA) has prepared a draft of the Merger and Acquisition Guideline which would allow one telecoms company to buy another. According to the report, the NTA's aim is to reduce the country's telecommunication companies to just three. NTA spokesperson commented: 'Our analysis has shown that a large number of telecom companies is a setback to fair competition and does not ensure stability of telecom operators.' The draft is still in production by the NTA and will need to obtain approval from the Ministry of Information and Communications (MoIC) before it becomes law.

(May 2, 2017) The Himalayan Times

Oman

"As per TRA, this should happen by the first week of September. They are studying all the proposals and the process will be cleared soon," said Raed Haddadin, Chief Executive Officer of Renna Mobile. With the aim to increase competition in the telecom sector, TRA had last year invited operators from across the region to apply for an Omani mobile license. "TRA wants a third operator so competition will increase for the benefit of the customers. Operators might look at it like there is no need for more competition in Oman where we have four players, two MVNOs and two operators. Customers wanted a third operator for price cut and better services in the country," said Haddadin. Integrated Telecommunication Oman (TeO), which acquired Renna last year, was also in the bid to get a third operator's license. "TeO has plans to expand and prepare for the third license," he added. Currently, Omantel and Ooredoo are the two Mobile Network Operators (MNOs) and Renna and Friendi are the two Mobile Virtual Network Operators (MVNOs) in the country. "Oman started (MVNO) in 2009. It was one of the first countries in the whole region: North Africa and Middle East." He explained, "We are a mobile operator, but we don't have our own network. We depend on Omantel as our network operator. We use the Omantel network, but have totally separate offerings for our customer base." In a country with a mobile penetration of 160 per cent, the competition is bound to be extremely high. "Oman has reached a very high percentage of mobile users. Today, the penetration rate is more than 160 per cent; which means the number of mobiles is much higher than the population." He added, "The third operator will increase competition, push the current players to improve their services, prices and offers."

(May 17, 2017) timesofoman.com

Telecom Oman (TeO) has announced it has bid for Oman's third mobile operating license in consortium with Zain. Sudan's Sudatel Telecom Group is also in the fray. Etisalat Group, Saudi Telecom Company (STC) and Zain had announced bids for the third license. It is now clear that Zain is bidding for the license in consortium with TeO. (May 16, 2017) Muscat Daily

Emirates Telecommunications Corporation (Etisalat) has announced that it has submitted a bid for Oman's third mobile network operator (MNO) license. In a statement, the UAE-based telecoms group said the offer is 'in line with its expansion strategy considering the market potential and similarities, footprint proximity to our core market, and likely synergies'. A shortlist of the qualified bidders is expected to be published on August 14, with the winner scheduled to be announced on 4 September. The TRA published an Information Memorandum (IM) detailing the process for the award of the Sultanate's third MNO license in November last year, in a move which is aimed at improving the market's competitive environment. The country is currently home to two MNOs, majority state-owned Oman Telecommunications Company (Omantel) and Ooredoo Oman, in which Qatari incumbent Ooredoo holds a 55% stake. In addition, two MVNOs – FRiENDi mobile and Renna Mobile – are active in the wireless sector. (May 4, 2017) telegeography.com

Zain Group said it has submitted a formal bid for the third mobile telecom license in Oman, in accordance with the Telecommunications Regulatory Authority's (TRA) published Information Memorandum. The Oman TRA will announce the short list of qualified applicants on August 14, with the winning

applicant set to be announced on 4 September.
(May 2, 2017) telecompaper.com

The total number of fixed telephone lines till the end of March 2017 stood at 453,140 compared to 449,258 by the end of February 2017, a rise of 7.2 per cent, according to the statistics issued by the National Centre for Statistics and Information (NCSI). NCSI said that prepaid and postpaid fixed telephone lines till the end of March 2017 rose by 1.9 per cent to 302,660 compared to the end of 2016. The fixed telephone lines connected to the Internet Protocol technology stood at 97,437 subscriptions. The sultanate had a total of 6,801 public telephones last year. The number of integrated services digital networks stood at 44,633, a rise of 2.2 per cent whereas the fixed wireless lines rose by 2.2 per cent to 1,609. Meanwhile, the number of mobile subscribers at the end of March 2017 stood at 6,976,162 constituting a 1.6 per cent increase compared to the end of 2016. The largest number was recorded in the prepaid segment at 6,348,089 comprising a 1.5 per cent growth compared to the end of 2016. The number of Internet subscribers stood at 301,872 at the end of March 2017. (May 1, 2017) muscatdaily.com

The Saudi Telecom Company (STC) announced that it has applied for the third mobile license in Oman. STC has submitted to Omani Telecommunications Regulatory Authority (TRA) the technical and the financial offer to bid for the third mobile license in the Sultanate of Oman, according to the company's statement to the Saudi Stock Exchange (Tadawul). The bid includes a complete business plan, technical and financial plans along with a financial offer for the license. The qualified bidders will be shortlisted and announced by August 14, 2017 and the ultimate license winner will be announced on September 4, 2017, according to the Information Memorandum (IM) published by the Omani's TRA. (May 1, 2017) world.einnews.com

Pakistan

Pakistan Telecommunication Authority has notified that Jazz is the successful winner of 4G spectrum auction. It may be recalled that Jazz was the only operator to have participated in 4G spectrum auction and hence was qualified as the winner by default and without any bidding. According to details PTA has now officially notified Jazz that it has won the spectrum and that the operator should start preparing to submit the spectrum fee within the next 30 days. Jazz will pay 50% of USD 324 million (USD 295 million spectrum fee + USD 29.5 million tax) within the next 30 days while remaining 50% of the payment will be made by January 2018. According to IM, Jazz had two options for payment i.e; to clear all dues (USD 324.5 Million) upfront, or pay 50 percent payment upfront and clear remaining 50 percent in 5 equal annual installments with one year LIBOR plus 3%. Sources confirmed that Jazz's 4G spectrum will be assigned within the 1762.3-1785 / 1857.3-1880 range. Not to mention, Jazz can opt for any specific frequency within the assigned band. Jazz will be officially awarded the spectrum – in a short ceremony – after the spectrum fee is paid. It will then be able to use the 4G spectrum. Jazz's investment in 4G spectrum indicates that its 4G coverage is likely to grow rapidly during 2017 and beyond.
(May 18, 2017) propakistani.pk

The government has rejected the demands of mobile operators of further delay and cut in the base price of $295 million fixed for the upcoming spectrum auction (4G), it is learned. Pakistan Telecommunication Authority (PTA) has scheduled to hold auction for Next Generation Mobile Services (NGMS) spectrum (3G/4G) on May 18, 2017. According to official sources mobile operators conveyed PTA that the base price of $295 million would appear to be at odds with the principles established at the time of the 2014 auction. Whereby, the price was to be set at the price of the proceeding auction [Ref. 8.7.2 of the Telecommunication Policy, 2015]. The yield under the 2014 NGMS auction for 1800MHz LTE frequencies was $210m and as per Policy any further assignment of spectrum (following a spectrum auction) would be fair and ensure that it does not discriminate against other licensees. Therefore, clarity on the principles of the assessment of base price $295 million was required. The reserve price of $295 m for 2X10 MHz of 1800 is 40% higher than the previous base price of $210 m for 2X10 MHz block in same band. "Current base price is too high and no justification has been provided for such astronomical increase", said the telecom operators while adding that there is always high risk of auction failures if base price is set too high. Citing a study by Plum consulting (Reserve Prices in Spectrum Auctions: Why Size Matters – 2016), the operators said that if operators pay more for spectrum than its competitive market value, there is a risk that this will lead to lower network investment, reduced quality of service, and higher consumer prices. Rather than focusing on revenue maximization, focus should be on the positive social and economic outcomes generated by the use of widespread mobile services, while facilitating an appropriate level of industry competition, recommended the operators. Lower, realistic reserve prices for spectrum auctions allow the market to determine the appropriate market value of the spectrum being released. It must also be noted that "per MHz" price determined for the radio frequency spectrum for 850 has remained the same as was determined for 850 MHz ($291 for 7.38MHz). Per MHz price remained the same ($39.5 per MHz) in the auction of 2014 and 2016. In response, PTA responded that base price was fixed by Auction Supervisory Committee while keeping in view various factors such as, consultant report on market assessment, benchmarking with other countries, price ratio comparisons between different spectrum ranges, ecosystem development, handset prices and equipment cost. The telecom operators were further informed that government of Pakistan under Section 8(2) of Pakistan Telecom Re-Org Act 1996 issued the Policy directive dated March 27, 2017 containing the base price of $295 million for 10 MHz paired spectrum as a single block. Given the proposed timeline of only one working week between finalization of IM and submission

of bids; it is impractical to calling for all of the required Board of Director meetings etc. The operators had requested, the NGMS Spectrum Auction should be delayed by further 15 days i.e. around June 15, 2017. PTA, however, responded that NGMS auction process has to be completed in minimum possible time within financial year 2016-17 as per Policy directive issued by government. The revised schedule is uploaded before June 30, 2017 on PTA's website, remaining in time limits as mandated by Policy directive. (May 4, 2017) propakistani.pk

Pakistan Telecommunication Authority (PTA) has extended the auction date for Next Generation Mobile Services (NGMS) spectrum (3G/4G) to May 24, 2017. This means that the deadline for prospective applicants to submit their application form is also extended to May 17, 2017 from April 30, 2017. Prior to this, May 16 was the date of auction as per the Information Memorandum (IM) issued by the telecom watchdog PTA. The auction date has been extended on the request of mobile operators who are eager to participate in the auction but need some time to prepare themselves. It is expected that all operators will participate in the 4G spectrum auction on May 24; which indicates that this is going to be a tough bidding auction. Additionally, the participation of all operators would enable PTA to generate more revenues than the set base price of $295 million. Presently, Pakistan has around 39 million 3G & 4G users and with coming auction the number with further increase while making the country a true digital state. For the entire process of 4G spectrum auction, PTA has issued a detailed IM having the rules, process, planned timetable and other background information to help prospective Applicants for participating in the NGMSA.

(April 25, 2017) phoneworld.com

Saudi Arabia

Saudi Arabia's Communications and Information Technology Commission (CITC), represented by the Saudi Network Information Center (SaudiNIC), has hosted a workshop on the Domain Name System Security Extension (DNSSEC). It was held in coordination with the Middle East Network Operators Group (MENOG) to promote adoption of DNSSEC within national networks in Saudi Arabia. This complements efforts to develop the Saudi Internet Domain Name System (.sa), using DNSSEC technology. The meeting highlighted DNSSEC's role as a complete set of technical specifications, designed to protect information provided by the Domain Name System (DNS), which uses the Internet Protocol (IP) system. The workshop offered an ideal platform to provide participants with an overview on the benefits and advantages of adopting DNSSEC and how to activate it for both Authoritative DNS servers and DNS resolvers. Those who took part also gained knowledge about managing DNSSEC encryption keys and enabling DNSSEC in the Root Servers, while identifying the latest trends in DNSSEC at all national, regional and international technical levels. The workshop was preceded by two days of training on DNSSEC, dedicated for Internet Service Providers and the banking sector. Aside from offering a major boost to cybersecurity capacity-building efforts in the country, this enabled participants to acquire a better understanding of DNSSEC, knowledge and capabilities necessary for its optimal application in their networks, applications and services.

(May 22, 2017) telecompaper.com

The Communications and Information Technology Commission (CITC) has imposed limits on the ownership of prepaid SIM cards in the country, Bloomberg writes. According to two people familiar with the matter, foreign residents (who make up more than a third of the population) are now reportedly limited to two pre-paid SIM cards across all cellcos, while Saudis are restricted to as many as ten pre-paid SIM cards. In September 2015 all mobile subscribers had to submit their fingerprints in order to retain their SIM cards. The CITC said the fingerprint registration was meant to protect personal information of SIM cardholders and prevent buyers from obtaining mobile phones using fake or stolen identification cards. (April 28, 2017) telegeography.com

Sudan

Sudatel Telecom Group has announced that it has submitted a bid for Oman's third mobile network operator (MNO) license, stating that the move is in line with its policy 'to enter new markets with potential growth'. In a statement published on the Abu Dhabi Securities Exchange, Sudatel said its submitted bid includes a comprehensive technical plan and a financial offer for the license. The company, which has operations in Sudan, Senegal, Guinea and Mauritania, noted that adding Oman to its footprint would strengthen its strategic role in connecting Africa and the Middle East to the rest of the world, and supports its commitment to growing its business to meet increasing demand for telecoms services across the region. In a separate announcement, Sudatel has reported total operating revenues of USD122.7 million for the three months ended March 31, 2017, an increase of 5.2% from USD116.6 million in the year-ago period. Gross profit rose from USD42.1 million to USD51.7 million over the same timeframe, while net profit almost doubled to USD10.5 million in Q1 2017 from USD5.3 million twelve months previously.

(May 17, 2017) telegeography.com

Tunisia

A new Country Intelligence Report by GlobalData, provides an executive-level overview of the telecommunications market in Tunisia today, with detailed forecasts of key indicators up to 2021. The report provides detailed analysis of the near-term opportunities, competitive dynamics and evolution of demand by service type and technology/platform across the fixed telephony, broadband and mobile sectors, as well as a review of key regulatory trends. In 2016, Tunisia will generate total telecom service revenue of $1.4bn (or 3.3% of its nominal GDP), a decrease of 3.4% over 2015, due to local currency depreciation. Mobile voice will continue to be the largest revenue-contributing segment (53.1%) in 2016, with its share expected to decline to 49.2% by 2021. Mobile data will grow at a CAGR of 1.5% over 2016-2021, aided by the continuing expansion of 4G services and the growing adoption of smartphones, data bundles and value-added services. MNOs should focus on offering value-added services and low-cost bundled plans as smartphone penetration continues to increase. Overall telecom service revenue in Tunisia is estimated to generate $1.4bn in 2016 and is estimated to grow at a CAGR of 0.1% during 2016-2021. Mobile revenue will account for 82.9% of total telecom revenue in 2021. The Tunisia telecom market will be dominated by Ooredoo Tunisie and Tunisie Telecom. Operators will continue to focus on 4G coverage expansions, deployment of fiber-optic networks and offering innovative and attractive data plans to stimulate data adoption. (May 25, 2017) globaldata.com

United Arab Emirates

The Telecommunications Regulatory Authority, TRA, has signed new strategic partnerships with Etisalat and du telecommunications at its headquarters in Abu Dhabi. The memoranda are part of the TRA's plan of action aimed at achieving the objectives of the UAE National Vision 2021 to raise the country's ranking among the top 10 countries in the National Readiness Index, NRI, in the World Information Technology Report. Hamad Obaid Al Mansouri, TRA Director-General, signed the first MoU with Saleh Al Abdooli, Chief Executive Officer of the Etisalat Group and the second with Osman Sultan, CEO of du. After signing the memoranda, Al Mansouri and other parties discussed ways of cooperation and intensifying efforts to achieve the objectives of the NRI to raise the UAE's position and reach the ranks of the best-developed nations in the world during the next five years. They also dealt with how to consolidate the country's leading position in global indicators. The TRA works with the two parties in several sub-indicators that contribute to the development of the Information Communication Technology, ICT, services in the country, thus affecting the country's global ranking, including fixed broadband Internet services and increasing the Internet bandwidth for each user. Al Mansouri said, "Etisalat and du are the leading providers of telecommunications services and an important part of the country's ICT provisioning system. The partnerships with the TRA are part of the strategic direction that we are seeking to establish, which contributes to the support of the road map we have set in order to reach the top 10 in the NRI." "Our country is following the path of the global developments in the ICT world by preparing plans, equipping teams and coordinating with all federal and governmental entities as well as private sector institutions. In order to achieve global leadership and optimal use of technology, and the realization of the leadership's vision in achieving the national agenda indicators of the 'UAE Vision 2021' in creating a sustainable environment and an integrated infrastructure," Al Mansouri added. The Global Information Technology Report, published by the World Economic Forum, is based on reliable data from the best global organizations such as the International Telecommunication Union, the World Bank and the United Nations. The report ranked the UAE in 2015 at 23rd out of 143 countries. The NRI measures the economy's ability to use ICT to increase competitiveness and development. (May 9, 2017) zawya.com

REGULATORY ACTIVITIES BEYOND THE SAMENA REGION

Asia Pacific Telecommunity (APT)

The Asia Pacific Telecommunity's Wireless Group (APT-AWG) has unanimously agreed to harmonize the 700-MHz and 800-MHz bands for public safety broadband. The body has endorsed a recommendation harmonizing the spectrum bands for LTE-based public protection and disaster relief (PPDR). The recommendation was approved at the group's 21st meeting in Bangkok, and announced at Critical Communications World in Hong Kong today. Because the 700-MHz and 800-MHz bands are the two most commonly adopted public safety LTE bands in Asia, the APT-AWG has selected them to help meet the growing communications needs of public protection agencies and organizations for disaster relief and emergency response. The decision is in line with the ITU resolution from 2015 encouraging administrations to use harmonized frequency ranges for public safety to the maximum extent possible. "APT-AWG is committed to supporting standardized broadband for PPDR, for networks, devices and applications. PPDR systems have a critical role to play in effectively and efficiently satisfying local, national and international public safety objectives," APT-AWG task group on PPDR chair Bharat Bhatia said. Asia is leading the world in the allocation of dedicated spectrum for public safety LTE, the group said. The first such allocation was in South Korea, where 10-MHz of paired spectrum was assigned for a public safety LTE network following a ferry disaster in 2014 that led to the loss of 304 lives. Most ASEAN countries have also allocated 800-MHz spectrum for public safety LTE, including Thailand, Malaysia and Singapore. India has meanwhile allocated 700-MHz spectrum for use by the defense services that operate the national disaster relief agency. IHS predicts that the global critical communications LTE equipment market will grow at a CAGR of 20% between 2015 and 2020 to reach $2.6 billion.

(May 16, 2017) telecomasia.net

Australia

Mitch Fifield, Australia's Communications Minister, has confirmed the government's response to the review of the Australian Communications and Media Authority (ACMA) carried out by the Department of Communications and the Arts (DCA). The review found that the ACMA had 'generally performed its regulatory role efficiently and well over the last ten years', it made a number of recommendations regarding the ACMA's remit, objectives, functions and governance. Now, the Australian Government has confirmed that it supports, or supports in-principle, all 27 recommendations being put forward. As per the review, the DCA had argued that the measures proposed would ensure the ACMA is 'a modern, agile and responsive fit-for-purpose communications regulator', while suggesting key reforms would 'redesign the governance arrangements for the regulator and provide for greater transparency, accountability and responsiveness of the regulator's day-to-day and strategic activities'. Among the notable recommendations were plans to launch a coordinated programme of regulatory reform to establish a contemporary communications regulatory framework, while there is also a commitment to undertake further work to determine whether it may be more efficient for another body carry out the revenue collection functions currently performed by the ACMA. Meanwhile, other key reforms will 'redesign the governance arrangements for the regulator and provide for greater transparency, accountability and responsiveness of the ACMA's day-to-day and strategic activities'. (May 22, 2017) telegeography.com

A draft determination has been issued by the Australian Competition and Consumer Commission (ACCC) in which it has accepted a submission from nbn regarding the latter's revenue controls for 2015/16. In a press release the regulator revealed that, with the draft decision including values for nbn's actual capital and operating expenditure for 2015/16, as well as values for regulated assets and accumulated losses, it had determined the company's prices did not exceed the maximum regulated prices in the period covered. nbn, the company overseeing Australia's National Broadband Network (NBN) project, is required to make a submission each year to the ACCC regarding its allowable revenues, as they relate to covering the costs of providing its services. For the regulator's part, it then assesses this submission against the methodology in nbn's Special Access Undertaking (SAU), which caps the prices that the company can charge for its services, and sets out the process for pricing new products. Feedback regarding the draft determination from interested parties has now been invited, with a deadline of 26 May 2017 set for submissions. Commenting on the matter, ACCC chairman Rod Sims said: 'The ACCC's draft decision is to accept [nbn's] proposed values for determining allowable revenues for 2015/16. As the NBN's rollout approaches a midway point, the ACCC has undertaken additional testing of the processes and procedures [nbn] has in place to ensure those costs are incurred in a prudent and efficient manner.'

(April 28, 2017) telegeography.com

Bahamas

The Utilities Regulation and Competition Authority (URCA) has confirmed that mobile number portability (MNP) services were made available from last week. According to the URCA, 'scores' of Bahamian wireless customers were able to port their numbers between the nation's two cellular providers – incumbent Bahamas Telecommunications Company (BTC) and newcomer Aliv – from April 27. The regulator noted, however, that the system was experiencing some teething problems, with messages not being passed between operators within the timeframes stipulated in the MNP rules. In its statement, the URCA explained: 'The porting process should normally take no more than two hours, however we do ask consumers to be patient in the event that their request to port takes a little more time while the operators work to address any kinks'. Despite the issues, the URCA said it was 'satisfied' that BTC, Aliv and the third-party clearing house were working to tackle the issues as quickly as possible. BTC's monopoly on the Bahamian mobile market ended in November last year when Aliv launched 2G, 3G and 4G services in New Providence and Grand Bahama. The terms of Aliv's licence contained a strict network rollout schedule intended to bring the operator up to national coverage within two years. During that two year period, however, Aliv was also supposed to be granted national roaming rights on BTC's networks, but reports from the newcomer last month suggested that the incumbent was delaying the process. (May 5, 2017) telegeography.com

Belarus

The Ministry of Communications and Informatisation (Minsvyazi) says it is looking to have 4G LTE networks deployed in all towns with a population of more than 50,000 within the next two years. The government is also hoping to have live 5G networks in the country within five years. LTE services are available in Belarus over the open access network being deployed by Belarusian Cloud Technologies (beCloud). Minsvyazi recently announced that 60% of the population could access 4G services, following expansion works in the first quarter of the year, with network coverage extended to all regional centers, large cities, and to all inhabitants in the capital, Minsk.
(May 17, 2017) BelTA

Belgium

The Regulator BIPT has started a consultation on royal decrees covering mobile spectrum licenses with the aim of holding an auction for new frequencies. The current licenses for the 900, 1,800 and 2,100 MHz bands will expire in March 2021, and the plan is to also auction the 700 MHz band. Part of the existing licensed frequencies will be allocated automatically to the current three operators to provide them with investment certainty and ensure service continuity. An auction of the remaining spectrum should lead to higher proceeds for the state as well as leave the door open for a possible new entrant on the market and increased competition. The consultation also covers a proposed increase in coverage obligations in the licenses. The minimum would increase from 98 percent to 99.5 percent of the population, and the minimum speed from 3 to 6 Mbps. The estimated minimum proceeds from the spectrum auction are expected to be EUR 679 million.
(May 24, 2017) telecompaper.com

Burkina Faso

The Minister of Development of the digital economy and posts, Hadja Fatimata Ouattara Sanon has launched the construction of a metropolitan fiber-optic network in the 13 regional capitals of the country, according to Burkina 24. The rollout is part of the 'Government Cloud' (G-Cloud) project set up to improve the provision of telecommunications services in the West African state. The total cost of the fiber-optic deployment is estimated at around XOF23.6 billion (USD39.2 million) and is largely being financed by the Danish Danida Business Finance Agency, which will pay approximately XOF19.6 billion towards the project with the Burkinabe government adding the remaining XOF4 billion. Minister Sanon stated: 'The G-Cloud project is an important project for the government that will significantly improve the IT service offering and allow the administration and the private sector to focus more on their core business.'
(April 27, 2017) telegeography.com

Canada

The Canadian Radio-television & Telecommunications Commission (CRTC) has begun a consultation to hammer out the details of its planned CAD750 million (USD551 million) five-year broadband fund for rural and underserved areas, which will ultimately be designed to supersede Canada's existing basic telephony subsidy scheme. Interested parties should make initial submissions to the consultation by the end of June, with final submissions scheduled for the end of November. (April 28, 2017) telegeography.com

Canada's telecom regulator has started initiatives to figure out how to dole out its new $750-million fund for broadband Internet in underserved areas The Canadian Radio-television and Telecommunications Commission (CRTC) launched a consultation Tuesday to establish a broadband funding regime that will eventually replace its legacy telephone subsidy system, which is being phased out to accommodate spending on broadband in rural and remote places. The fund was first announced in December when the CRTC declared broadband Internet a basic service and set ambitious target speeds across the country. While the announcement marked the transition of funding to broadband, it didn't spell out exactly what projects might qualify for the money, who could apply or how it would be allocated. The consultation will hammer out specific details for the funding regime, including governance, operating and accountability frameworks, eligibility and assessment criteria for proposed projects. As it stands, local phone subsidies are distributed monthly on a fairly steady basis. Broadband funding, however, will likely require larger lump sum payments to reach project milestones. The commission must also determine which geographic areas are eligible for funding. Interested parties have until the end of June to get involved in the consultation process, but final submissions aren't expected until the end of November. It's not clear when the fund will be ready to distribute cash. The CRTC said it intended to distribute $750 million over five years, with $100 million dispensed in the first year and the amount increasing by $25 million annually to up to $200 million. (April 26, 2017) financialpost.com

Costa Rica

Claro Costa Rica and Movistar Costa Rica were the only two companies to submit offers to participate in the upcoming auction for spectrum in the 1800MHz and 1900MHz/2100MHz bands. Sector regulator the Superintendency of Telecommunications (SUTEL) now has 50 working days to review the technical offers and confirm whether the duo comply with the necessary conditions to take part in the tender. Up for grabs are 2×20MHz in the 1800MHz range – at 1730MHz-1750MHz/1825MHz-1845MHz – plus a 2×15MHz in the 1900MHz/2100MHz band, at 1940MHz-1955MHz/2130MHz-2145MHz. Millicom International Cellular (MIC)-backed cableco Tigo Star had also expressed an interest in bidding for the spectrum, and its complaints regarding the limited time initially available to prepare an offer may have played a part in the regulator's decisions to delay the auction several times. Its absence from the tender suggests that the operator has either abandoned its ambition to enter the wireless market altogether, or that it will choose an alternative route such as offering services via an MVNO agreement with an existing mobile network operator (MNO). Spokesperson for Tigo Star explained earlier this year why the operator had opted not to take part in the 2011 tender which had liberalized the cellular market: 'We were coming from a monopoly of more than 60 years [and] there were a number of infrastructure issues to be resolved access to submarine cables, the establishment of base stations, etc.'
(May 12, 2017) telegeography.com

Czech Republic

A total of seven companies have lined up to participate in the sale process for 3.7GHz frequencies being carried out by the Czech Telecommunication Office (CTU). In a press release, the regulator confirmed that all four of the nation's mobile network operators (MNOs) – Vodafone Czech Republic, T-Mobile Czech Republic, O2 Czech Republic and Nordic Telecom – had filed applications ahead of the deadline, while the other three companies seeking to take part were named as PODA, Suntel Net and Radio Spectrum CZ. The CTU has said it will now evaluate all applications, following which it expects to confirm which candidates have made the cut for the sale process on May 19. Those that are successful will be advised of exact dates for a trial auction in the first week of June, while the regulator has set a date of June 13, 2017 for the auction proper to get underway. In total the CTU is offering five 40MHz blocks in the 3.7GHz band via auction, with established operators restricted to acquiring a single block, while new players will be able to purchase a total of 80MHz. A reserve price of CZK145 million (USD5.9 million) per block has been set, following an analysis of the prices achieved in auctions for similar frequencies in other European countries.
(May 15, 2017) telegeography.com

European Union

The EU Council has approved plans to release the 700 MHz band for mobile services by 2020. After parliament approved the proposal in March, the measure is now expected to take effect by the end of May. As a result of this decision, mobile operators will obtain exclusive access to the 700 MHz band (694-790 MHz) by 30 June 2020. This timeframe coincides with the expected deployment of 5G networks in Europe. Member states may, however, delay this reallocation by up to two years, but only in duly justified cases set out in the decision. (April 26, 2017) telecompaper.com

Six months ago, the European Commission presented an ambitious plan to overhaul the EU telecoms sector, part of the wider strategy to build a Digital Single Market. A key element is to reform how radio spectrum is managed, to improve the balance between frequency availability and our future needs and demands. Not just in one country - but to coordinate better around Europe so that everyone benefits. It now appears that there is significant resistance and reluctance from several countries to what we have proposed on spectrum. They worry about the new, more specific management principles proposed, including the length of licenses and new institutional set-up, among other aspects. I am surprised to see this opposition, given the repeated calls by EU leaders for action to create the right conditions for stimulating new business opportunities by better spectrum coordination. I remain convinced that our proposal strikes the right balance if we want to put Europe in the driving seat for 5G. It promotes and stimulates the internal digital market while respecting national flexibilities for addressing particular circumstances. I know that it is always difficult to please everyone. Yes, our spectrum proposal can be improved during the decision-making process. But I also find the depth of the negative reaction to be unjustified. Spectrum, as I have often said, is a cornerstone of 5G, and therefore of the EU's new telecoms rules as well. Without timely availability of spectrum in the right bandwidths - not only in Europe but also globally - we put Europe's connected digital future at risk. With 5G, and dependent emerging sectors like the Internet of Things, we simply cannot afford to "wait and see" when it comes to reforming spectrum management. Other countries and regions are racing ahead. 5G networks are different and more demanding than what has gone before. They require significant new investment in spectrum, infrastructure and equipment. We have heard clearly from many industry representatives that Europe cannot expect to lead in 5G deployment without first making major reforms in spectrum management. This is so that wide-scale investments, starting in cities and along transport routes, can generate an adequate return. The longer license durations we have proposed – a minimum of 25 years – reflect that thinking. They give long-term visibility and greater legal certainty to operators and investors, as well as more uniformity around EU countries. Not the piecemeal approach that Europe has today. In addition, without a sufficiently long period, we simply would not see the investments that are needed in dense new wireless infrastructure. This is expensive and the business case is still evolving. It should be – and is - balanced by efficient spectrum use, based on the principle of "use it, or lose it". To sum up: our main objective is to create an investment-friendly environment for the successful development of 5G in Europe. This means better European coordination with binding rules on just a few key aspects, including maximum deadlines for assigning new bands, cross-border coordination to avoid harmful interference and a common approach to measuring network coverage objectives fixed in spectrum licenses. At no point do we propose anything that would delay an EU country that is 5G-ready before others. We just propose the final deadlines for all. I want to reassure you that better coordination and efficiency does not mean that the process will be managed from Brussels. In fact, what we want is for independent national regulators to play a role in national spectrum decisions that could affect how the market functions, and for them to advise each other via the independent body, BEREC. There is also no question that EU countries have primary day-to-day responsibility for spectrum policy, and in particular for the revenues from auctions. These remain within the countries themselves. There is a lot more I could say about this very complex area. But just one last point - and it again concerns 5G, only just around the corner. Europe came very late to 4G, partly due to limited availability of suitable spectrum at sufficient scale, unattractive terms for acquiring such spectrum and investing in networks. We do not want to make the same mistake with 5G. It is why we have set target dates so that by 2025, uninterrupted 5G should be available in all urban areas as well as major roads and railways. This is not a power game between EU countries and the European Commission. It is about the structure and environment that will best support investments in Europe for building infrastructure that we badly need. With spectrum, the status quo has to change if we are to build a functioning Digital Single Market. (April 25, 2017) ec.europa.eu

Finland

Finnish Communications Minister Anne Berner has indicated that frequencies between 3.4GHz and 3.8GHz could be put into use for 5G services in the country by 2019. The announcement comes in the wake of a seminar regarding 5G technology organized by the Ministry of Transport and Communications (MoTC) and the Finnish Communications Regulatory Authority (FICORA) earlier this week. In a press release following the meeting, Berner noted that rights to use such spectrum could be granted during 2018, with the minister also cited as saying: 'When distributing the frequencies, in addition to the needs of the traditional mobile communications network operators, we should also pay attention to the needs of the new operators and the new local solutions required by them.' Separately, the FICORA has confirmed that it has already granted 'several different organizations' a total of 13 radio licenses for 5G testing, product development and experimentation, with these having been used to support, among other things, product development, propagation measurements, and testing of services. In March 2017 the FICORA confirmed it would support experimentation and testing by flexibly issuing radio licenses for 5G trials. As per the regulator's strategy it is issuing short term concessions for tests, research and trials of systems based on 5G radio technologies, with license periods ranging from just a few days to years. With the European Commission (EC) having identified the 3.4GHz-3.8GHz and the 24GHz-27GHz bands, among others, as 5G pioneer bands in Europe, for regional 5G testing the FICORA is making available blocks of up to 100MHz in the former band (until the end of 2018), and up to 1,000MHz in the latter band, allowing high connection speeds and short latencies. Alongside these specific allocations, the regulator has also confirmed that is possible to receive licenses for 5G testing in other frequency bands, with frequency needs 'considered separately for each case and test environment'. (May 25, 2017) telegeography.com

Hong Kong

Hong Kong's mobile operators are calling on the government to release more spectrum to allow them to develop future 5G services, and are also suggesting an overhaul of the current spectrum management plan. HKT, SmarTone and Hutchison 3 have all responded to a consultation by the Office of the Communications Authority (OFCA) which asked for input on spectrum utilization fees. According to a report HKT Managing Director Alex Arena said that: there are fundamental flaws in how the government manages spectrum, they are getting it so wrong. He added that more spectrum will be needed for 5G services, and said the government's decision to not release any new mobile spectrum until 2019 was 'shameful'. Hong Kong operators currently utilize 582MHz of frequencies in total across all bands, and operators say this is not enough to support 5G services. Mainland China plans to increase its available spectrum from 522MHz to 722MHz by 2019. Meanwhile, Arena also criticized the policy of re-auctioning spectrum when licenses expire, saying it caused uncertainty for operators. SmarTone's CEO Anna Yip said that a hybrid approach for reassigning the 200MHz of expiring spectrum licenses would be best for operators, giving 40% straight back to the current licensee and assigning the remaining 60% via auction. (May 26, 2017) The South China Morning Post

Television Broadcasts, Hong Kong's dominant free-to-air television broadcaster, will be examined by the telecommunications regulator to make sure it is in compliance with the Broadcasting Ordinance amid concerns that a minority shareholder may have an undue influence on its management. The Communications Authority, which is responsible for licensing and regulating the broadcasting and telecommunications industries in Hong Kong, said on Thursday that it had engaged a Queen's Counsel to examine the relevant license conditions and the statutory declarations and deeds of undertaking submitted by TVB and the relevant parties. The regulator stepped in after the Securities and Futures Commission (SFC) flagged concerns over the influence of China Media Capital (CMC), controlled by Chinese media tycoon Li Ruigang. TVB is majority-owned by Young Lion Holdings, which bought a 26 per cent stake in the broadcaster from the late Sir Run Run Shaw in 2011. CMC became an indirect investor in TVB when it bought an undisclosed stake in Young Lion in April 2015. Other shareholders in Young Lion include TVB chairman Charles Chan Kwok-keung and HTC Corp chairwoman Wang Hsiueh-hong. The SFC said Li, dubbed as China's Rupert Murdoch, ultimately held about 20 per cent of TVB, making him the single largest shareholder. CMC had great influence over the appointment of directors at the broadcaster, the SFC said in a ruling on Young Lion's application for a whitewash waiver to allow the company to be exempted from making a general offer to buy all the outstanding shares in TVB. The commission also said CMC had the option to require Chan to sell his entire holdings in Young Lion to a Hong Kong-resident third party of its choice. In January, TVB offered to repurchase 31.5 per cent of its shares for HK$4.21 billion (US$541 million). Young Lion has indicated it will not take up the buy-back offer, which would see the stake in TVB held by the group and its affiliates rise to 41.19 per cent. As a result, a mandatory general offer will be triggered by Young Lion under the city's takeovers code. The Communications Authority said it was "seriously concerned about the possible regulatory implications" of the documents provided by the SFC. In an interview with the South China Morning Post on Wednesday, TVB chief executive

Mark Lee Po-on said the authority was fully aware of the company's shareholding structure before granting approval for Young Lion to take control of the broadcaster. The authority's legal adviser will examine whether any relevant information may have been held back and not fully disclosed during the process of considering TVB's applications for shareholding changes. A letter was issued to inform the broadcaster of the developments. TVB said it would co-operate with the authority and provide the information it requested. (May 21, 2017) scmp.com

India

Antitrust authority the Competition Commission of India (CCI) has approved Tata Group's proposal to purchase NTT DOCOMO's 26.5% stake in Tata Teleservices Ltd (TTSL). The development follows a decision by the Delhi High Court earlier this month which rejected objections from the Reserve Bank of India (RBI), potentially clearing the path for DOCOMO to exit the company. DOCOMO sought to exit TTSL in early 2014 via its 2009 shareholding agreement, the terms of which stated that DOCOMO would be entitled to either 50% of its acquisition price or the fair market price of the shares, whichever is higher. After failing to find another buyer for the shares, Tata agreed to buy the shares itself but was denied permission by the RBI. The RBI blocked the transaction on the basis that it is illegal for a foreign company to exit investments at a pre-determined price or with assured return, noting that the pre-agreed price of INR58 (USD0.9) for each of NTT DOCOMO's shares was substantially higher than the INR23 per share valuation determined by independent assessors. DOCOMO sought arbitration on the matter, and in June 2016 the London Court of International Arbitration ruled in favor of the company, ordering Tata to pay the Japanese firm damages of USD1.2 billion for breaching the terms of their shareholding agreement. Under the decision, DOCOMO would release its shares in TTSL to Tata Group. Following further resistance from the RBI, and despite Tata's agreement to cooperate on the ruling, DOCOMO moved the Delhi High Court to enforce the arbitral award. (May 26, 2017) The Economic Times

The Telecom Regulatory Authority of India (TRAI) will hold an open house on net neutrality this month in Mumbai, a first in the leg of several that will take place in key cities of the country. TRAI said on its website, that the first open house will be held on May 26, in the financial capital which will follow another open house on spectrum, roaming and quality of service related requirements in machine-to-machine communications, consultations for which are also ongoing. The regulator had in January issued a consultation paper on net neutrality — a practice that guarantees equal and unbiased access to the web — as part of its efforts to establish a regulatory framework. It had also sought views on reasonable traffic management practices to ensure wireless networks do not get choked. TRAI chairman RS Sharma had earlier told ET that the authority will hold multiple open house discussions as net neutrality is an important issue and they views of people must be taken before the regulator gives recommendations to the government. Open houses in Hyderabad, Delhi, Bengaluru and three or four more locations, are expected. (May 16, 2017) telecom.economictimes.indiatimes.com

The Indian telecom regulator on Monday floated a consultation paper seeking stakeholders' view on network testing before the commercial launch of services. Written comments on the consultation paper are invited from the stakeholders by May 29, 2017 and counter-comments by June 12, 2017, the Telecom Regulatory Authority of India (TRAI) said. "DoT (Department of Telecom) requested the Authority to provide its recommendations on testing of network before commercial launch of services including enrolment of customers for testing purposes before commercial launch, duration of testing period etc. under the terms of clause 11(1)(a) of TRAI Act 1997 as amended," the recommendation said. The paper stated that "there seems to be a need to lay down guidelines for testing of network, systems and the processes so that these can be made applicable to any new licensee." The paper has asked stakeholders: "Should a TSP (telecom service providers) be allowed to enroll subscribers as test users and in such case, should there be any restrictions on the number of test SIM cards and the period of such use." The existing license terms and conditions do not prescribe any time period for the test phase, that is, beyond which, a TSP should start providing commercial services. It also asked stakeholders: "Is there a need to have a defined timeline for testing phase i.e. period beyond which a TSP should start offering commercial services." (May 2, 2017) newsheads.in

The Telecom Regulatory Authority of India (TRAI) has announced that the country's total telecom subscriber base, which consists of mobile and landline subscribers, touched the 1.18 billion mark at the end of February 2017. The authority noted that this of a 1.17 percent growth over the previous month. The urban areas, total subscriber base of 692.15 million, while in rural areas, the total number was 496 million. India saw the addition of 13.75 million mobile users in the month of February, at a monthly growth rate of 1.19 percent. This pushed the total wireless subscriber base to 1.16 billion. Wired connections remained pretty stagnant with a monthly growth rate of 0.01 percent, with a total subscriber base of 24.35

million. TRAI's report also noted that by the end of February, 5.67 million users submitted a requests for Mobile Number Portability (MNP). Leading to a total of 266.73 million cumulative requests since the start of the service. Besides this, the report revealed that private access service providers had a 91.19 percent market share of wireless subscribers. The two PSUs, BSNL and MTNL had a market share of 8.81 percent. Bharti Airtel led the way with 23.25 percent share, followed by Vodafone at 17.80 percent. Newcomer, Reliance Jio, had a market share of 8.83 percent. (May 1, 2017) www.digit.in

Sector regulator Telecom Regulatory Authority of India (TRAI) is open to revising the reserve price of the premium 700 MHz band on the basis of industry consultation which is likely to kick off within the next two weeks. "Everything will be on table including revision of the 700 MHz price as a part of consultation process," TRAI chairman RS Sharma told ET, adding that the reserve price would only be fixed basis the outcome of the discussion process. "Within the stakeholders consultation, we will be asking whether the base price of the 700 MHz band be revisited," the regulator added. In the last auction in October 2016, the premium 700 MHz band airwaves remained unsold with telcos blaming high reserve price on the back of rising industry debt. Telecom watchdog recommended Rs 11,485 crore per MHz for the 700 MHz band frequencies which is used to rollout fourth-generation (4G) services with lesser capital expenditure having better propagation characteristics. Sharma said TRAI will be releasing consultation on spectrum pricing within next 15 days and added that the auction process would take roughly six months after making recommendations to the government. "Whatever reference was given to us by the government, it will be the part of upcoming consultation process," the top official added. The telecom department (DoT) has asked the regulator to come out with the recommendations for the bidding of airwaves including those that were left unsold in 2016. The department also sought views on the reserve price for airwaves in the 700 MHz, 800 MHz, 1800 MHz, 2300 MHz and 2500 MHz, as well as for spectrum in the 3400 MHz to 3600 MHz bands used for 5G or fifth-generation services. (April 25, 2017) telecom.economictimes.indiatimes.com

Ireland

The Commission for Communications Regulation (ComReg) has published the results of its 3.5GHz/3.7GHz spectrum sale, with five companies laying claim to a total of 350MHz of bandwidth on offer. All three of the nation's existing mobile network operators (MNOs) bagged spectrum, with market leader Three Ireland the biggest spender, successfully bidding EUR15.3 million (USD17.2 million) for 100MHz in each of the nine regions; the cellco will also pay an annual spectrum usage fee of EUR5.1 million. For its part, Vodafone Ireland secured 85MHz for rural regions and 105MHz in the country's cities at a total upfront cost of EUR17.9 million (annual fee: EUR4.8 million), while Meteor Mobile agreed to pay EUR11.5 million (annual fee: EUR4.2 million) for 80MHz in rural regions and 85MHz in cities. Rounding out the winners, new player Airspan Spectrum Holdings Ltd obtained 25MHz in all rural regions and 60MHz in all cities for EUR7.6 million (annual fee: EUR2.1 million). All spectrum rights of use licenses will run for 15 years, expiring on July 31, 2032.
(May 23, 2017) telegeography.com

Kazakhstan

The government has said it will spend KZT150.7 billion (USD454 million) on its Digital Kazakhstan programme between 2017 and 2021. The scheme is intended to push internet penetration to 81% by 2021 and see the ICT sector contributing almost 5% of annual GDP by the same date. The projected investment will be broken down as follows: KZT12 billion in 2017, KZT57.3 billion in 2018, KZT25.7 billion in 2019, KZT37.9 billion in 2020 and finally KZT17.8 billion in 2021. Of the 140 projects planned as part of Digital Kazakhstan, 69 will be paid for out of the state budget, seven will be implemented via public-private partnerships, 28 will be privately funded, and the remainder will be paid for by a mix of international financial backing and local government investment.
(May 19, 2017) profit.kz

Kenya

The Communications Authority of Kenya (CA) has responded to reports that it had improperly awarded a coveted 700MHz mobile license to Jamii Telecommunications by clarifying that the permit is not a full operating concession, but rather allows for the rollout of a one-year trial network. The Communications Authority's (CA's) Chairman Ngene Gituku said that Jamii was granted a license to trial a mobile network utilizing 700MHz spectrum in September last year, and refuted allegations that the license had been issued irregularly. 'Contrary to what appeared in the media today, the Authority wishes to clarify that no money has been lost in the authorization given to Jamii Telecommunications,' the chairman said. For his part, Jamii's chairman Joshua Chepkwony said the firm had followed CA

processes in applying for the license and pointed out that other telecoms firms have previously trialed new frequencies without paying license fees. He added that Jamii expects to launch commercial trials this quarter and had already invested KES5.1 billion (USD48 million) in network infrastructure, stating that at the end of the trial period the firm plans to pay KES2.5 billion in compliance with its agreement with the CA. (May 12, 2017) Daily Nation

Kosovo

The Regulatory Authority for Post and Electronic Communications (ARKEP) confirmed that Telenor and VIP's signals were no longer being detected within Kosovar territory, noting that its radio monitoring team had carried out a series of tests in areas that Telenor and VIP had previously covered, concluding that the duo had discontinued their services. ARKEP went on to encourage Kosovar cellco IPKO and Kosovo Telecom to bolster their networks in the northern regions to improve coverage in those areas. (May 3, 2017) telegeography.com

The Regulatory Authority for Post and Electronic Communications (ARKEP) has confirmed that Serbian mobile providers Telenor Serbia and Mobilkom Serbia (which operates under the VIP Mobile brand) have deactivated infrastructure that had previously allowed them to offer services illegally in Kosovo. Serbian mobile operators unofficially provided wireless services in Kosovo without a license via sites in the border regions. As part of an EU-brokered deal between Kosovo and Serbia, however, Serbia's wireless providers agreed last year to cease the practice. Under the deal, Serbian state-owned cellco MTS was handed a limited license to offer telecoms services in the northern areas of the country, in exchange for which Belgrade cleared the path for Kosovo to receive its own international dialing code. Following the completion of the other elements of the deal, in March this year VIP and Telenor were given until 1 May to close down operations. Last week the pair released a joint statement confirming that they were on track to meet that target, having agreed to continue serving their existing customers via a tie-up with MTS and would remove a total of fifteen base stations near the border. (May 3, 2017) Kosova Press

Myanmar

Telenor Myanmar has paid $80 million (€71.1 million) for 2x10 MHz of 1800-MHz spectrum. The technology-neutral license is valid for 12 years. It was awarded by the Ministry of Transport and Communications' Posts and Telecommunications Department (PTD) via the direct allocation method, which offered the same volume of spectrum to all four of the country's mobile operators – which as well as Telenor, includes Ooredoo, MPT, and Mytel – at the same price. "With 1800 MHz spectrum, we now are set up to provide customers with a richer Internet experience with superior download speeds, smoother high-definition video streams, lag-free gaming, a stronger social media experience, and more consistent performance in peak hours, among others," said Lars Erik Tellmann, CEO of Telenor Myanmar, in a statement last week. Telenor Myanmar said that 40% of the license fee is payable to the Ministry upon allocation, while the remainder is due between the second and fourth year of the license term. All operators have an option to purchase up to an additional 2x10 MHz of 1800-MHz spectrum on a first come, first served basis until all 150 MHz of available 1800-MHz frequencies has been allocated. The option expires after three years following the start of the 12-year license period. Telenor Myanmar's mobile data network currently spans 7,500 sites, serving close to 19 million customers across all states, regions and territories. "Telenor has built the largest mobile network in Myanmar, and over the last 10 months we have gradually introduced 4G in 19 cities and towns across the country, utilizing existing spectrum," Tellmann said. "We are in the midst of enabling 4G/LTE on 1800 MHz on our network, and hope to expand services to more cities and towns in the coming months," he said. (May 23, 2017) totaltele.com

The Ministry of Transport and Communications (MCIT) has published an unofficial English-language version of its draft Myanmar Communications Regulatory Commission Law, requesting comments from experts and industry stakeholders. The law sets out to create a new independent, autonomous and impartial regulatory body, the Myanmar Communications Regulatory Commission (MCRC), and establish its powers, functions and duties. Under the draft law, MCRC's remit would include, amongst other things: issuing telecoms licenses; administering spectrum; advising the government on matters relating to telecoms; promoting fair competition in the sector and protecting against anti-competitive practices; ensuring telecoms services are accessible by the public; and monitoring and enforcing compliance with regulations and relevant laws by licensees. Alongside setting out the new watchdog's powers and organizational structure – including specific measures to ensure that it remains transparent and independent – the draft law covers the transition of power from the MCIT's Post and Telecommunications Department (PTD) to the new MCRC. (May 17, 2017) telegeography.com

New Zealand

The Government is committed to making New Zealand's communications network one of the best in the world, Communications Minister Simon Bridges says, speaking at the 2017 Rural Connectivity Symposium in Wellington. "In 2009, the internet in New Zealand was slow, and many people didn't have adequate access at all – particularly in rural areas," Bridges says. "We've come a long way in a relatively short period of time." "Over 1.1 million households and businesses can now connect to Ultra-Fast Broadband, and over one-third of those are already connected." "In addition to this, over 90% of the population outside of Ultra-Fast Broadband areas – over 300,000 rural households and businesses – can access new or improved broadband. "Our target for connectivity is that by 2025, 99% of New Zealanders will be able to access peak download speeds of 50 megabits per second or better, and the remaining one per cent able to access at least 10 megabits per second." He says rural connectivity is a core part of the Government's plan to support the regional economies and their target reflects this. "It's about ensuring that all New Zealanders can take advantage of the benefits of improved connectivity," Bridges says. Speaking at the Symposium, Minister Bridges outlined the Government's objectives for the next phase of the Rural Broadband Initiative, and the Mobile Black Spot Fund. "These programmes focus on improving broadband services in more rural and remote areas, and improving mobile coverage on stretches of State Highway and in tourism locations which do not currently have coverage from any mobile operator." "Achieving the 2025 targets will require both private and public sector input, so I'm pleased by the strong engagement and response to the tender process for these programmes." Crown Fiber Holdings is currently reviewing the proposals received and announcements about where deployment will occur will be made once commercial negotiations are completed. "The process was designed to be as accessible as possible so that respondents both large and small could propose creative solutions, and the bids certainly demonstrate this," Bridges says. (May 23, 2017) bizedge.co.nz

Portugal

Portugal has until the end of the year to sign cross-border agreements that will allow the release of the current DTT frequency bands for mobile networks and boost IoT or services in the cloud. The National Communications Authority (ANACOM) met in Madrid with Spanish and Moroccan telecoms regulators to prepare for the migration.
(May 1, 2017) Diario de Noticias

Singapore

To spur innovation and to provide the underpinnings of emerging technologies such as the Internet of Things (IoT) in Singapore, the Info-communications Media Development Authority (IMDA) will waive frequency fees for 5G trials with immediate effect, Minister for Communications and Information Yaacob Ibrahim announced. 5G, which is expected to be rolled out by 2020, promises blazing fast speeds compared to the 4G mobile network, with projected download speeds anywhere between 1 to 10Gbps. The fastest mobile network service in Singapore is currently 450Mbps, but median 4G speeds range from 16 to 18Mbps, depending on your telecoms provider. Speaking at the opening ceremony of the Infocomm Media Business Exchange, Dr. Yaacob said IMDA will seek industry views of 5G spectrum requirements and regulatory provisions and feedback on how policies can move in tandem with technology. The consultation period kicks off on Tuesday and ends on July 7. This is the first set of consultations as part of a wider consultation exercise to ensure infrastructural plans meet industry needs. "To further multiply the potential of IoT and to further fuel the digital economy, IMDA will be partnering the industry to develop and put in place key components of future-ready and resilient communications infrastructure that will benefit consumers and businesses across various sectors," Dr. Yaacob said. IMDA said 5G trials conducted by mobile network operators in Singapore have shown "promising capabilities" and the move to waive frequency fees will lower regulatory barriers for companies, as well as encourage the industry to explore the potential benefits and applications of 5G. It has already identified several spectrum bands that could be suitable for 5G in Singapore. Additionally, IMDA is considering developing regulations to support the deployment of spectrum aggregation technologies that could help mobile network operators increase mobile data speeds and overall network capacity. (May 23, 2017) channelnewsasia.com

South Africa

Six South African telecommunication companies, including MTN Group and Vodacom, will be able to keep their broadband spectrum until their licenses expire in 2028, after agreeing to buy at least 30 percent of the government's new Wireless Open Access Network. Communications minister Siyabonga Cwele told a media briefing that the agreement was reached with operators on May 19. (May 25, 2017) telecompaper.com

Somalia

The Ministry of Posts and Telecommunications (MPT) has begun a consultation on a new 'Draft Communications Law' which aims to establish the legal, regulatory and institutional frameworks for the country's thriving telecoms sector. Somali Update reports that the ministry has discussed the proposed legislation with representatives from the Information Communication Technology (ICT) Working Group, comprising public and private sector stakeholders, at a conference in Mogadishu. Deputy Minister of Posts and Telecommunications, Ibrahim Yarow Isaq, said the MPT is now in the final stages of receiving comments and contributions from industry stakeholders before the Draft Communications Law is finalized and submitted to the Cabinet and Parliament for approval. 'It is the right time to have a regulation for the sector because we now agree that no business can survive without regulation. A regulated market is in the best interests of all,' the Deputy Minister stated. A proposed Communications Act received a first reading in Parliament in December 2014 and was approved again by the Cabinet in June 2016. However, it was subsequently reported that the proposed law had been put on hold following concerns raised by the private sector.
(May 23, 2017) telegeography.com

South Korea

The country's Constitutional Court has unanimously ruled that a law which imposes a cap on the subsidies that mobile network operators (MNO) can provide to buyers of new handsets is constitutional.
The case against the price ceilings was filed by eight plaintiffs in October 2014, just days after the Mobile Device Distribution Improvement Act (MDDIA) went into effect, with the petitioners arguing that it infringed on consumers' rights and went against principles of the market economy. In ruling on the matter the Constitutional Court said: 'The subsidy ceiling helps block excessive subsidy competition and assists the industry's healthy growth and has established a fair and transparent mobile device retail structure.' This ruling is in line with the position of the Korea Communication Commission (KCC), which for its part has also previously argued that the law has 'greatly contributed' to stabilizing the market. The Act is scheduled to expire on September 30, 2017, after the Park Geun-hye administration decided in December 2017 not to extend the law's three-year validity period. However, it remains a possibility that caps could be discontinued sooner, as one of new president Moon Jae-in's campaign vows was to scrap the subsidy ceiling system. (May 26, 2017) The Joong-Ang Daily

South Korea plans to complete deployment of a commercial 5G network in the second half of 2019 and is targeting 5 per cent 5G penetration in 2020. Speaking at the event, Heo Won-seok, Director of ICT and Broadcasting Technology Policy at South Korea's Ministry of Science, ICT and Future Planning said based on LTE uptake rates, the government forecasts 5G users will account for 30% of total mobile subscribers in 2021, 50% in 2022 and 90% in 2026. Heo said the Ministry plans to allocate spectrum in 2019 to prepare for a commercial 5G launch, which he said will be the world's first commercial 5G service. With the long-stated goal of having a trial 5G service running in 2018 for the Winter Olympics using pre-standardized technologies, he said the country's operators will start to build a trial network in PyeongChang and Seoul in the second half of this year. The government also plans to have autonomous buses in operation for the event, which take place in early 2018. KT, the country's second largest mobile operator, said in early May it is in the final stages of testing a new pre-standard 5G trial network. The global industry consensus is to bring 5G to the market in 2020, with Phase 1 standardization of the technology due for completion sometime in 2018.
(May 25, 2017) mobileworldlive.com

Switzerland

The Federal Communications Commission (ComCom) has awarded the universal service license covering 2018-2022 to state-owned full service provider Swisscom. The regulator conducted a survey last year of operators that were capable of providing universal services in principle, but found that Swisscom was the only party interested in providing universal telecommunication services. As such, ComCom opted to forgo a tender and simply award the license directly to Swisscom. Swisscom's current universal service license is due to expire in December 2017, but the requirements of the new concession are slightly different, having been modified by the Federal Council in December last year. Under the revised rules the minimum data transmission rate for internet access will be increased to 3Mbps/300kbps (download/upload). (May 22, 2017) telegeography.com

Thailand

State-owned Thai telecoms operator TOT has formally selected Telenor-backed Digital Total Access Communications (DTAC) as its preferred partner to deploy 4G LTE services using the 2300MHz band. The proposal involves DTAC's wholly owned subsidiary TriNet Company (formerly DTAC Network) purchasing 60% of TOT's total network capacity in the band; the fixed annual payment has been set at THB4.5 billion (USD131 million). TOT and DTAC aim to sign a final agreement in Q4 2017, after concluding negotiations regarding term and conditions, and securing approvals from the relevant government agencies. The National Broadcasting and Telecommunications Commission (NBTC) gave TOT the green light to develop 4G services using its existing 2300MHz spectrum for a ten-year period in October 2015 (i.e. ending in 2025). The authorization was designed to help TOT create new revenue streams to offset lost build-transfer-operate (BTO) concession revenues, the watchdog claimed at the time. The service must be operational by end-2017, and cover 80% of the population within five years. (May 24, 2017) telegeography.com

State-owned Thai telecoms operator TOT is poised to take over concessionaire True Corporation's fixed line operations in the Bangkok Metropolitan Area (BMA) upon the expiry of the long-standing build-transfer-operate (BTO) agreement on October 26, 2017. SEVP for TOT's fixed line business told that the transition will be a smooth one, as TOT has spent months preparing the operational procedures that will be needed to take over the provision of services to around 1.2 million customers. In the BMA True operates via a BTO agreement signed with TOT in August 1991 for the provision of local and domestic long-distance services. Fixed line assets outside of the BMA will be unaffected by the transfer. True has been paying 18% of its revenue to TOT under this concession. TOT assumed control of all wireline operations belonging to provincial fixed line operator TT&T on March 1, 2017, well before the stricken telco's concession is due to expire in October 2018. Previously, in March 2016 the Central Bankruptcy Court ordered the confiscation of TT&T's wireline assets, and in November that year the court requested that TOT take responsibility for two jobs: repairing or replacing transmission equipment, and maintaining TT&T's network to ensure service continuity after the concession expires.
(May 15, 2017) The Bangkok Post

The National Broadcasting and Telecommunications Commission signed an integrity pact with the Anti-Corruption Organization of Thailand as part of its efforts to ensure the transparency of its project to install broadband and cellular services in remote areas of the country. The pact also covers any state or private entity which bids to implement the project. Under the pact, the procurement process and the project's development will be observed by a third party in a bid to ensure transparency.
(April 25, 2017) nationmultimedia.com

Uganda

The Ugandan government says just 13 million SIM cards have so far been authenticated under its controversial re-registration scheme, which requires users to present their national ID card to confirm ownership of their mobile phone account. Although the original seven-day deadline for registration was extended by a month, to May 19, there are still thought to be millions of wireless users who have yet to validate their details. NTV cites Security Minister Henry Tumukunde as saying that there will be no further extension to the deadline. The country was home to more than 22 million mobile subscribers at the end of 2016. (May 9, 2017) NTV

The government of Uganda has reassured customers of struggling fixed line operator Uganda Telecom Limited (UTL) that it will continue to offer services despite being placed under receivership. Uganda Registration Services Bureau registrar general Bemanya Twebaze, who is also acting as the government's official receiver, said in a statement: 'Customer retention is key and all efforts will be put in place for a seamless service … Uganda Telecom Limited pledges to continue providing reliable services to its customers.' An audit by PricewaterhouseCoopers has found that UTL has assets of UGX248 billion (USD68 million) but debts of closer to UGX700 billion. According to a report, the government opted to place the telco under administration when local firm Cameo Techedge petitioned a court to recover UGX484 million owed by UTL. The Ugandan government regained control of UTL in March after ousting 69% shareholder LAP Green Network (LAP GreenN) of Libya for failing to inject sufficient capital to turn around the fortunes of the ailing telco. LAP GreenN has said it will contest the decision. UTL was originally privatized in June 2000 when a 51% stake was sold to the UCOM consortium – comprising Switzerland-based Telecel International, Egypt's Orascom Telecom and German consultancy Deutsche Telepost Consulting (DeTeCon). In March 2007 the government agreed to increase UCOM's holding to 69%, and the following month it was announced that LAP GreenN had acquired UCOM's 69% stake in UTL. The Ugandan government retained the remaining 31% of the company's shareholding.
(May 3, 2017) The Monitor

Ukraine

Ukrainian mobile subscribers willing to benefit from the opportunities that will open 4G. The Telecom regulator has suggested some necessary changes in legislation needed to implement 4G mobile communication. The national Commission of regulation of communications and Informatization (NCCIR) has taken two decisions that will pave the way for the launch of 4G in the 1800 MHz band. This was reported by the press service of the Ministry. The regulator decided, on the basis of changes in the government decree on licenses in the 1800 MHz band. Considering the rent in that strip (23 thousand UAH. one megahertz) the initial cost of the license for 10 MHz (2×5 MHz) in the forthcoming tender will be approximately 265 million. His other solution to the Telecom regulator has proposed to amend the plan of use of radio frequencies, allowing the launch of 4G/LTE in the 1800 MHz band. Because now, in each spectrum of the Ukrainian legislation permits the use of only specific wireless technologies. After today's meeting of the NCRC will submit their proposals to relevant public authorities for approval. Previously, the regulator announced its intentions to hold a tender for radio frequencies for 4G until the end of 2017.

(May 24, 2017) micetimes.asia

United States

US-based Straight Path Communications, which holds a nationwide portfolio of 5G-suitable mmWave spectrum, including 39GHz and 28GHz licenses, has confirmed that it has received 'a revised offer from a multi-national telecommunications company' for a second time, putting further pressure on original bidder AT&T Inc. The new offer, which is valued at USD135.96 per share (reflecting an enterprise value of approximately USD2.3 billion) trumps the bidder's unsolicited 24 April offer of USD104.64 per share (USD1.8 billion), which itself surpassed the original April 9 offer from AT&T (USD95.63 per share, USD1.6 billion). At this time, Straight Path notes that it remains subject to the AT&T merger agreement and the company's board has not changed its recommendation in support of the AT&T transaction. Under the AT&T merger agreement, Straight Path is required to pay a USD38 million termination fee to AT&T if the board terminates the AT&T deal in order to enter into an agreement with the as-yet-unnamed bidder. The bidder has agreed to pay the termination fee to AT&T on Straight Path's behalf in such event. Reuters, citing unnamed sources close to the transaction, previously indicated that Verizon Communications was the mystery bidder, although no official confirmation has been forthcoming.

(May 4, 2017) reuters.com

Federal Communications Commission (FCC) Chairman Ajit Pai reveal his plan for revoking US net neutrality rules ahead of a meeting to discuss the plan in mid-May. Pai said the regulator is ready to fight to dismantle the rules, which he believes have hampered investment and widened the digital divide in the country. The FCC will likely face a lively public debate on its target of overturning the 2015 Open Internet Order. Pai previously said the FCC wants a "light-touch framework" with vastly reduced regulation on internet service providers (ISPs). The current rules require ISPs to treat all internet traffic equally, and prohibits them from offering a superior quality service for some online content at the detriment of others. In a statement Pai said rules introduced under his predecessor failed to encourage investment in broadband networks, resulted in existing upgrade plans being shelved, and weakened consumer privacy. Pai vowed to "fix the problems that the prior FCC created," with its new policies. Since Pai, a vocal opponent of net neutrality laws, took office in January the fate of the law was the subject of much speculation. This was intensified when the US government began moves to roll-back scheduled FCC internet privacy regulations in March. The FCC is unlikely to be able to repeal the rules without significant opposition. Earlier this month, the Internet Association expressed its vigorous support for the current regulations. After a meeting with Pai and the FCC, the organization – which counts Google, Amazon and Facebook among its backers – said it would oppose any move to remove net neutrality laws. There is also likely to be opposition to Pai's plan from within the FCC and other lobby groups. "The more heavily you regulate something, the less of it you're likely to get", Pai said in a statement. "Make no mistake about it: this is a fight that we intend to wage and it is a fight that we are going to win."

(April 27, 2017) mobileworldlive.com

Uzbekistan

The Ministry of Development of Information Technologies and Communications (CCITT) has published a draft decision 'On additional measures to improve telecommunications licensing activities', inviting comments from stakeholders. The measures aim to encourage new entrants by cutting down on red tape, and making it easier for would-be operators to acquire concessions. The draft decision would remove the requirement for applicants to provide certification from other authorities confirming that the companies comply with fire safety and sanitation regulations. Further, the regulator intends ensure that applications can be completed entirely online by January 1, 2018. (May 17, 2017) telegeography.com

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