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Huawei Founder Ren Zhengfei Breaks Silence !



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We have seen tremendous growth in providing for the “underserved” markets



Editor's Note

First of all, I would like to wish you all a very happy and promising new year. 2018 was an excellent year for Teletimes and the ICT industry at large. We have seen key developments in the 5G and IoT space which we expect to roll-out further in the market during 2019 and nothing could be more exciting for all of us.

Talking about 5G and connectivity, it is the time of the year where we are all looking forward to the MWC Barcelona 2019. The event will bring together all the minds that shape this industry together at the end of February. With over 107,000 key decision-makers expected to attend, the event also features extensive learning opportunities from dozens of partner-led programmes, GSMA seminars, summits and more.

After an excellent 2019 with the success of the P20 Pro amongst other things, Huawei recently confirmed that it will be hosting a press conference and launch at Mobile World Congress 2019 in Barcelona. The company has often used MWC as a launch platform for new products and new products can be very much expected to be on display at this year's MWC.

As always, Teletimes will be a partner to the event and I will be present there throughout the event along with my team. Meetings can be scheduled directly via email to khalidathar@teletimesinternational.com

I look forward to meeting our partners, sponsors and contributors at the event.

Enjoy reading this edition of Teletimes International.

Khalid Athar
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STC announces new appointments of a number of Saudi Senior Executives



Eng. Haithem Bin Mohammed Al Faraj



Eng. Ulaiyan Bin Mohammed Al Wetaid



Eng. Badr Bin Abdullah Al Lahib



Eng. Abdullah Bin Mohsen Al Owaini



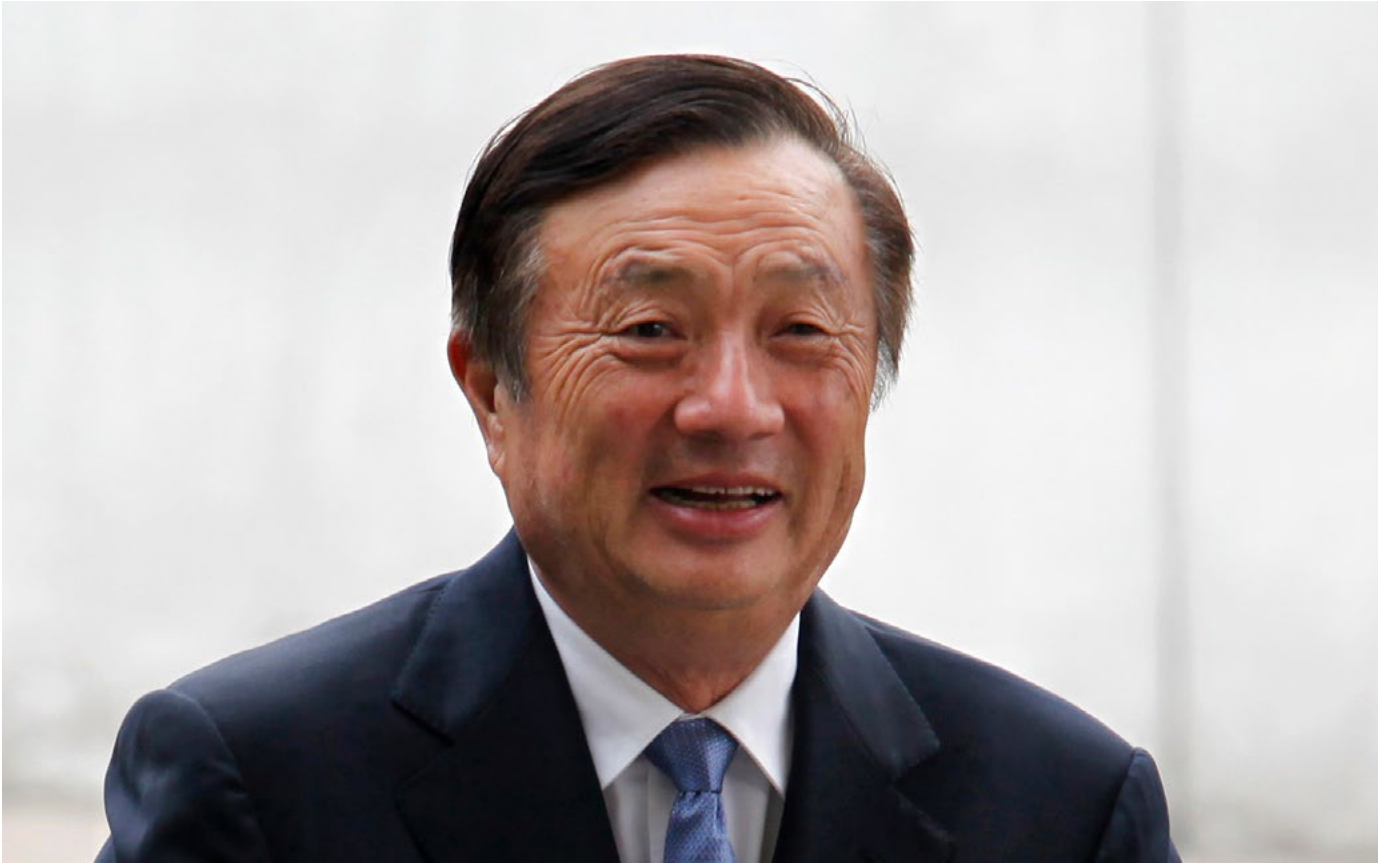
Eng. Riyadh Bin Hamdan Al Enzi

STC has announced new appointments of a number of Saudi senior executives, including the appointment of Eng. Haithem Bin Mohammed Al Faraj as senior VP - Technology & Operations, Eng. Ulaiyan Bin Mohammed Al Wetaid as senior VP - Customer Unit, Eng. Badr Bin Abdullah Al Lahib as VP - Operation Sector in the Technology and Operations Unit, Eng. Abdullah Bin Mohsen Al Owaini as VP -

Applications sector in the Technology and Operations Unit and Eng. Riyadh Bin Hamdan Al Enzi as VP - Customer Care sector in the Customer Unit.

STC CEO, Eng. Nasser Bin Suleiman Al Nasser commented that STC is committed to empowering Saudi cadres based on their qualifications and expertise and to appointing young Saudi qualified employees

in leadership positions, in order to enhance the performance of the STC Group in line with its pivotal role in enabling the digital transformation in the Kingdom to the public and private sectors in accordance with Vision 2030. Al Nasser continues: "This also comes in line with STC "Dare" strategy to lead the transformation and development in new paths, especially with the rapid changes in the global ICT sector".



Ren Zhengfei breaks silence to alleviate concerns around Huawei

In his first interview since 2015, Ren Zhengfei broke his silence on the series of allegations that have roiled Huawei since the second half of 2018, from restrictions on the company selling 5G products and infrastructure in some Western countries, to the arrest of his daughter Huawei CFO in Canada. Mr. Ren Zhengfei spoke openly to journalists at a press conference organized at Huawei's headquarters in Shenzhen, China.

The press conference focused heavily on the topic of cybersecurity as journalists questioned the Huawei founder on allegations by some Western countries that the Chinese government could spy on foreign nations by infiltrating Huawei's 5G networks. Mr. Ren categorically denied the notion that the Chinese government could force Huawei to hand over sensitive information. In the first place, he said, the government would never make such a request: China's Ministry of Foreign Affairs has officially stated that no law in China requires any company to install backdoors for the government. He clearly stated many times in the course of the meeting that, "Neither Huawei, nor I personally, have ever received any requests from any government to provide improper information."

Mr. Ren then clarified that Huawei's position as a fully privately owned company allowed it greater flexibility than its competitors, and that Huawei is not in any way under the authority of the Communist Party of China. "There is no external institution or government department that owns our shares, not even one cent's worth." He noted that, "Because we are not a public company, so we can work truly for our ideals, and for the greater good of society."

Public companies tend to focus more on their financial numbers.” And Huawei’s ideals are clear: “When it comes to cyber security and privacy protection, we are committed to siding with our customers. We will never harm any nation or any individual.”

Mr. Ren emphasized: “We are a company, and we are a business entity. The values of a business entity are such that it must be customer-centric and the customer always comes first. Within that context, I can’t see close connections between my personal political beliefs and the business actions we are going to take as a business entity.”

When pressed to answer whether he would be obliged to hand over sensitive information in the unlikely event that the Chinese government make such a request, the answer was a categorical denial. “I think I already made myself very clear earlier. We will certainly say no to any such request.”

Mr. Ren called directly on the US government to step back from its punitive sanctions and promote greater international collaboration. He said: “The message to the US that I want to communicate is collaboration and shared success. In our high-tech world, it is increasingly impossible for any single company or even any single country to do the whole thing. We are in a world of information. In an information society, interdependence between one another is very significant. And it is these interdependencies that drive human society to progress even faster.” In today’s globalized world, no company can afford to refuse international collaboration. Technological progress calls for the concerted efforts of thousands or even tens of thousands of companies working in tandem.

Despite the challenges Huawei is facing in the U.S. market, Mr. Ren Zhengfei praised the leadership of the current U.S. President, remarking that, “For President Trump as a person, I still believe he’s a great president, in the sense that he was bold to slash taxes. I think that’s conducive to the development of industries in the U.S.”

Mr. Ren remains optimistic about Huawei’s prospects, and said the company would continue to focus on the many markets which are welcoming Huawei’s investment and infrastructure. “Some countries have



decided not to buy equipment from Huawei. Therefore, we can shift our focus to better serve countries that welcome Huawei.” He vowed that Huawei will continue to invest in R&D to ensure that their customers have access to the most advanced and innovative products currently on the market.

Mr. Ren noted that Huawei remains highly competitive in the 5G market globally. The company has landed 30-plus commercial contracts as of today, and shipped 25,000 5G base stations, in addition to possessing ownership of 2,570 5G patents. Over the next five years, Huawei pledged to invest a total of more than 100 billion US dollars into R&D. He commented, “I believe that, as long as we develop very compelling products, there will be customers who will buy them. If your products are not good, no matter how strong you go for publicity, nobody will buy them.”

He noted that Huawei had some unique advantages that no competitor could match. There are only several companies in the world working on 5G infrastructure equipment, and not many companies are engaged in microwave technology. Huawei is the only company in the world that can integrate 5G base stations with the most advanced microwave technology. With that capability, Huawei’s 5G base stations do not require fiber connections. Instead, they can use superfast microwave to support

ultra-wide bandwidth backhubs. This is a compelling solution that makes a lot of economic sense for regions around the globe, and no other competitor offers it.

Mr. Ren attributed Huawei’s success to its commitment to research and development. Currently, Huawei’s R&D investment averages 15–20 billion US dollars per year. That puts Huawei in the top 5 position across all industries in the world in terms of R&D spending. In total, Huawei has been granted 87,805 patents. In the United States, the company has registered 11,152 core technology patents and is actively involved in 360+ standards bodies, where it has made more than 54,000 proposals. Globally, Huawei is strongest in terms of telecommunications capabilities.

Finally, when questioned about his daughter’s arrest in Canada on charges of illegally maintaining business ties with Iran under a front company, he commented that he had full faith his daughter would be treated fairly: “I trust that the legal systems of Canada and the United States are open, just, and fair, and will reach a just conclusion. We will make our judgment after all the evidence is made public.” He added that should any Huawei employee violate local laws anywhere in the world, whether he be Chinese or non-Chinese, Huawei would always cooperate with the investigations. **T**



Guo Ping, Rotating Chairman - Huawei

Despite external pressure, Huawei Rotating Chairman expresses confidence in the company business performance and growth

“For 5G markets that choose not to work with Huawei—they will be like an NBA game without star players” - Gue Ping

In a New Year letter sent by Huawei Rotating Chairman Guo Ping to the company 180 thousand employees worldwide, he expresses his confidence about the company business performance as Huawei never stopped pushing forward, and as a result the company 2018 sales revenue is expected to reach 108.5 billion US dollars, up 21% year-on-year.

Listing some 2018 milestones, he mentioned that Huawei has

signed 26 commercial contracts for 5G with leading global carriers, and have already shipped more than 10,000 5G base stations to markets around the world. More than 160 cities and 211 Fortune Global 500 companies have selected Huawei as their partner for digital transformation. Huawei shipped more than 200 million smartphones, and has made remarkable breakthroughs in PC business and IoT ecosystem for smart homes. Huawei Cloud has launched over 140 cloud services in 18 categories, and Huawei

is working with partners to serve global customers with 37 availability zones across 22 regions. This year, the company also announced AI strategy and launched a full-stack portfolio of AI solutions for all scenarios. This portfolio includes the world's first all-scenario AI chips—our Ascend series—as well as related products and cloud services.

As a result of all the previously mentioned milestones, Gou Ping said: "Our business performance remains strong, and this is by far the most direct form of validation that we can receive from our customers. It is also our best response to negative conjecture and market restrictions".

"In the coming year, we will see new waves of development in digitization and intelligence, and we may very well



"In 2019, we will focus on strategic businesses and strategic opportunities and build a more resilient business structure

encounter even greater difficulties. In times like this, we must summon our inner strength, improve the quality of our operations, inspire passion across the organization, and continue forging ahead to satisfy customer needs and achieve strategic leadership". He added.

About 2019, he said: "In 2019, we will focus on strategic businesses and strategic opportunities and build a more resilient business structure. He highlighted that Huawei products and solutions have earned the trust of customers in more than 170 countries and regions, and stressed that Huawei has a very strong track record in cyber security, emphasizing that "Huawei has never and will never present a security threat".

In 2019, the company intends to look out



for others, collaborate for shared success, and build a favorable business ecosystem. As the dynamic between world powers becomes more intense, we will see even greater uncertainty in the macro business environment. "We aren't equipped to change the macro environment, but what we can do is keep our feet on the ground and improve the business ecosystem for our own industry".

On compliance, Guo Ping said: "Going global means complying with the laws of all countries and regions where we operate. This is the most important basis for us to survive, serve, and contribute to the world at large. We must continue to incorporate compliance requirements into all business activities through carefully aligned policy, systems, organizations, processes, culture, training, and communications. These requirements must be ingrained in the awareness and behavior of each and every Huawei employee. We must not be discouraged by malicious incidents or temporary setbacks, and must remain determined to achieve global leadership. Setbacks will only make us more courageous, and incredibly unfair treatment will drive us to become the world's number one".

Huawei today is a member of more than 380 industry organizations, where we serve in 300+ key positions and submit more than 6,000 proposals each year. We are ahead of others in domains like wireless, optical, data communications, and smart devices.

Commenting on the current 5G challenges and allegations Huawei is faced with, Guo Ping said: "For 5G markets that choose not to work with Huawei—they will be like an

NBA game without star players: the game will go on, but with less deftness, flair, and expertise".

"As for new developments in technologies like AI, big data, and cloud, we are in sync with the industry and primed to take the lead" he added.

In his letter closing remarks, he said: "the years ahead, the ICT industry will continue to overflow with excitement and promise. Digital transformation is in full swing, and we find ourselves at the cusp of an intelligent world. Consumers are actively looking for more advanced, more trustworthy digital technologies and services. Going digital and intelligent will be a long process, so we need to keep innovating and delivering cutting-edge results".

On a related note, Huawei said it will ramp up 5G development efforts. The company is rolling up its sleeves, vowing to push on with its 5G network development despite its technology being banned by some Western nations. Huawei Chairman Liang Hua told media that the firm's operations remain "normal" even as it faces a "complicated environment".

"In the face of a crisis of confidence from the West, first we must do our own work well, and continue to build Huawei's competitiveness in the field of 5G," Liang said. "We believe that customers will make their own decisions." To that end, Huawei is planning to release its first 5G-enabled smartphone in the first half of 2019, and will achieve "commercial scale" of those phones by the second half of 2019, Liang added. **T**



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European operators still see Huawei as their strategic partner to play crucial role in advancing the next generation of wireless technology

Huawei is still gaining foreign carriers' support on 5G

Analysts says banning Huawei will create a vacuum that no one can fill in a timely fashion, and may seriously impair 5G deployments

Nasreen Akhtar

During a year-end press briefing held in central Seoul, LG U+ CEO and Vice Chairman Ha Hyun-hwoi has made it clear that the carrier does not think there are any security threats related to its use of Huawei equipment in its 5G infrastructure, rebuffing claims by some lawmakers that there is a risk of security leaks through the use of the Huawei equipment in the network.

LG U+ currently partners with Huawei for its 5G infrastructure. According to Ha, Huawei



Ha Hyun-hwoi

has already applied for security certification of its 5G network equipment from an international certifying body in Spain, and the public will be able to see how secure the equipment is once the evaluations are complete next year.

"Security concerns apply to every equipment vendor we partner with, not only Huawei,

and we need to thoroughly verify all the equipment [we use] is secure," Ha said. "There are roughly 170 countries that are already using Huawei's network equipment, and there hasn't been any security problems reported so far." He added.

Locally, Huawei has set up equipment that abides by over 70 security guidelines set by the Korea Internet & Security Agency, according to LG U+.

LG U+ has built 5,500 base stations to service the next-generation 5G network as of Wednesday, while its local competitors have reportedly established less than 1,000 5G base stations. The company invested roughly 4 trillion won (\$3.6 billion) to set up its 5G infrastructure, including at 5G spectrum auctions.

On a related note, at year-end news conference in Ottawa, Canada prime minister's Justin Trudeau said: Canada's decision on whether to allow Huawei access to its next-generation wireless network won't be a political one".

"There are millions of dollars, billions of dollars at stake in technology and in communications infrastructure, there is also the extraordinary imperative that Canadians and people around the world expect to be kept safe and free from interference and cyber attacks," Trudeau said.

"It shouldn't at all be a political decision made on how we engage, but a decision made by experts and a decision based on recommendations by our intelligence and security agencies," he added.



"Canada's decision on whether to allow Huawei access to its next-generation wireless network won't be a political one"

Justin Trudeau

Also in a reversal of its earlier stance, India said is unlikely to ban China's Huawei from selling 5G equipment in the country, despite the US calling for a boycott over espionage concerns. Indian officials now say the telecom gear maker can't be singled out in

Czech Government reverses ban on Huawei

Czech Prime Minister Revokes Web Watchdog's Huawei Warning

The Czech cyber security watchdog's warning against devices made by the world's biggest telecoms equipment maker, China-based Huawei, are not representative of the Eastern European nation's government, according to Czech Prime Minister Andrej Babis.

The Czech National Security Council reversed the decision in a meeting held on Friday, saying that the "security threat" warning had no tech basis. The council said that the Czech Republic welcomes all kinds of foreign investment.

The National Security Council has denied the warning, Babis told Chinese Ambassador



Czech Prime Minister Andrej Babis



Li Jian

Zhang Jianmin in Prague. The embassy also made a post online, saying the Czech Republic welcomes Chinese and other foreign firms to do business or invest there.

Babis had ordered his government office to stop using Huawei phones on Dec. 18, and the Ministry of Industry and Trade and other agencies quickly followed suit. That made the Czech Republic the first Eastern European country to ban the Huawei products behind the US, Australia and Japan.

The move was based on the National Cyber and Information Security Agency's Dec. 17 warning about telecoms equipment made by Huawei and its compatriot rival ZTE, the report added.

Huawei welcomed the government's reversal of the decision, with Huawei's President for European Business Li Jian saying he believes the firm's cooperation with Czech partners will not be affected. He hopes "Huawei will not be harmed by baseless accusations again,"

In his meeting with leading global media at the company's new campus at Dongguan, Huawei Rotating Chairman Ken Hu rejected allegations about the company network security saying: "No evidence has been presented to back the allegations up, and no one can improve by locking out competition".

"Some security concerns based on the technology for 5G were very legitimate, but able to be clarified or mitigated through collaboration with operators and governments". Ken clarified.

"Almost all network customers have indicated they want Huawei, which is currently the market leader with the best equipment and will remain so for at least the next 12 to 18 months, for faster and more cost-effective upgrades to 5G". Ken added, showing confidence in Huawei's business growth and prospects, citing the trust of hundreds of network operators, nearly half of the world's Fortune 500 companies, and hundreds of millions of consumers. Huawei's 2018 revenue, he said, was expected to exceed US\$100 billion.

China Proposes Prohibiting Forced Technology Transfers

China is expected to prohibit local governments from forcing foreign businesses to transfer technology or illegally restrict their market access, according to a draft law reviewed by the legislature. The law will also ensure foreign investors enjoy equal treatment with domestic counterparts in China, except in areas specified in a negative list.

The Standing Committee of the National

People's Congress began reviewing China's foreign investment law. The new law, if adopted, is expected to replace three existing laws on Chinese-foreign equity joint ventures, contractual joint ventures and wholly foreign-owned enterprises.

Foxconn to Build \$9 Billion Chip Factory in Zhuhai

Foxconn Technology Group is planning to launch a \$9 billion semiconductor factory in Zhuhai, a city in the southern province of Guangdong.

As demand for iPhones wanes, the Apple supplier has been looking for other sources of income in the last few years. Foxconn will make chips for ultra-high definition 8K televisions and camera-image sensors in the factory, since the company already owns Japanese display maker Sharp Corp., Nikkei has learned.

Foxconn is also aiming to expand its 12-inch chip factory in the future, to manufacture chips for robotics and autonomous cars. (Nikkei)

Mobike Founder Hu Weiwei steps down as Meituan takes control

<http://companies.caixin.com/2018-12-23/101362500.html>

Beijing Mobike Technology Co. Ltd. founder Hu Weiwei will step down as CEO from the company for "personal reasons," the bike-sharing startup announced Sunday. Liu Yu, president of Mobike since April, will succeed Hu as CEO.

Hu co-founded Mobike in 2015, but sold it to China's largest on-demand services platform Meituan Dianping in April 2018 for \$2.7 billion.

Hu's resignation comes at a time when the bike-sharing business is under intense scrutiny for its lack of a clear, sustainable business model. Mobike's main competitor Ofo is struggling to repay massive debts to suppliers — several of which have filed lawsuits — and customers who are lining up for hours in hope of getting refunded the deposit they gave Ofo to use its bicycles.

In her letter to Mobike employees, Hu said that people should be more optimistic about the bike-sharing business and give



it more time to mature. Hu said she plans to continue working in the transportation business. (Caixin, link in Chinese)

HNA Hopes to Sell Ingram Micro for \$7.5 Billion

Debt-ridden HNA Group is in talks with private equity firm Apollo Global Management to sell the world's largest IT distributor Ingram Micro Inc.

HNA bought Ingram Micro in 2016 for \$6 billion and is hoping to sell it for \$7.5 billion, including \$1.5 billion in debt, The Wall Street Journal reported.

While several U.S. private-equity firms are discussing the sale with HNA, the talks with Apollo appear to be the most advanced. Both sides are working to see if they can agree on a sale price, and there is no guarantee for a deal. (The Wall Street Journal)

Luckin Coffee to Lose More than \$127 Million in 2018

Luckin Coffee, the Chinese chain that hopes to challenge Starbucks, will lose more than 857 million yuan (\$127 million) in 2018, the company told Caixin Saturday. The revelation comes after Luckin's financial information was leaked online on Friday. According to the leaked information, Luckin's revenue was 375 million yuan in the first nine months of 2018, but the company lost 857 million yuan in this period as it opened hundreds of shops nationwide. Luckin hopes its revenue can reach 18.5

billion yuan in 2021.

Luckin told Caixin that a loss in 2018 was expected and is in line with its current strategy for expansion. The company was founded in January, and is now valued at \$2.2 billion after a \$200 million B funding round in December financed by Joy Capital, Dazheng Capital, China International Capital Corp. and Singapore's GIC Private Ltd. (Caixin, link in Chinese)

JD. Com Faces Enormous Challenges Even as Its Founder Clears U.S. Charges

The year 2018 has been a nightmare for China's 20-year-old e-commerce giant JD.com Inc. and its billionaire founder Richard Liu. Haunted by bad news including weakening sales and a sexual assault scandal involving Liu, JD.com's Nasdaq-listed shares took a nosedive this year, losing as much as 60% of their value from a January peak.

JD.com got some relief when Minnesota prosecutors said Friday that they wouldn't press felony rape charges against Chairman Liu because of insufficient evidence. But challenges on other fronts still hang over the company.

In November, JD.com reported disappointing results and its first sequential decline in annual active customers since its 2014 listing in New York. Sales for the third quarter of 2018 were 104.8 billion yuan (\$15.3 billion), a year-on-year increase of 25%. The gain fell well below previous growth rates, which reached more than 60% in 2015. (Caixin) **T**



Huawei moves to dispel security concerns about its products

Huawei is cooperating with the Japanese government and bolstering purchases of parts in Japan

Huawei is cooperating with the Japanese government and bolstering purchases of parts in Japan to ease concerns that its products could be used in espionage or cyber-attacks by Beijing.

"It is just normal for the government, telecommunications companies and society at large to take an interest in security and the protection of privacy," Wang Jianfeng, president of Huawei Technologies Japan KK, said. "Compared with our rivals, we have taken more safeguard measures to ensure security, including the use of a third-party safety assessment organization." Wang added.

Wang said he believes the Japanese government's decision to effectively ban ministries and agencies from buying Chinese telecommunications equipment starting in fiscal 2019 "is not targeted at specific companies," but he confirmed that Huawei is holding talks with the Ministry of Internal



Wang Jianfeng

Affairs and Communications and the Ministry of Economy, Trade and Industry.

Wang also said that Huawei's global business prospects for 5G are good, and the company has already signed 26 contracts and shipped more than 10,000 5G base stations.

"You cannot resolve concerns about cybersecurity even if you eliminate a leading company from the competition," he said. "That would only stall the introduction of the new technology and add to the burden of consumers in the end."

Japan is important market for Huawei in terms of procuring core parts. The company spent an estimated 670 billion yen (\$6.06 billion), up 40 percent from a year earlier, for parts bought in the Japanese market in 2018. Huawei will "further bolster" such purchases in 2019, Wang said. The company has already opened a new research and development center in Osaka Prefecture to strengthen its ties with Japanese suppliers, he added. **T**

Intelsat joins GSMA to spur integration of Satellite and Terrestrial Solutions, create Hybrid Networks, and advance 5G Development

Stronger relationships with mobile operators, ubiquitous broadband services, and hybrid networks will meet fast-growing connectivity demands and fulfill promise of 5G

Intelsat S.A., operator of the world's first Globalized Network and leader in integrated satellite communications, announced that it has joined GSMA, the organization representing mobile operators worldwide, to further strengthen the integration of satellite and terrestrial technologies and advance 5G deployments.

Intelsat is now a full member of the London-based GSMA. The association unites more than 750 operators with over 350 handset and device makers, software companies, equipment providers, and internet companies as well as organizations in adjacent industry sectors.

Satellites have a long-established record of complementing terrestrial mobile networks to ubiquitously, seamlessly, and



Jean-Philippe

Intelsat is now a full member of the London-based GSMA. The association unites more than 750 operators with over 350 handset and device makers, software companies, equipment providers, and internet companies as well as organizations in adjacent industry sectors.

cost-effectively deliver connectivity in and around cities as well as to more remote and rural regions. With demand for broadband growing exponentially, driven by consumers as well as by machine-to-machine and Internet-of-Things applications, the development of fully integrated, hybrid satellite and terrestrial networks will be essential to meeting that demand and in an efficient and cost-effective manner. Incorporating the strengths of different technologies under one seamless network will accelerate the development of the 5G network architecture. This will deliver

enhanced connectivity to a world in constant motion and expand opportunities for the entire MNO ecosystem, a shared goal of Intelsat and the GSMA.

"As 5G comes to market, we must capitalize on the strengths of multiple delivery technologies to satiate the connectivity demands of businesses and communities around the world," said Jean-Philippe Gillet, Intelsat's vice president and general manager of Networks. "By joining the GSMA, we will continue to forge new working relationships and develop business models that accelerate the expansion of more powerful mobile networks. We will collaborate even more closely with companies across the mobile ecosystem and build innovative partnerships that incorporate the complementary strengths of satellite and terrestrial technologies and create the hybrid networks that advance the cost-effective deployment of mobile connectivity around the world." **T**



We have seen tremendous growth in providing for the “underserved” markets

Exclusive Interview with
Daniel A. Losada
VP International Sales &
Dharmendra Singh
Regional Director
Hughes Network Systems

By Gulraiz Khalid

Question: Can you tell us about your approach towards “underserved” and “unserved” markets with the latter being a primary market for satellite operators?

Answer: It’s a misconception that satellite works only in “unserved” markets. Today, you will see that one of the biggest targets for satellite companies is actually the “underserved” markets. This part is as big as or more than the unserved markets and if you look at certain regions, you see that the people who have the purchasing power might not be in the unserved markets so of course they need connectivity, but they can’t buy it directly and the go-to-market is quite different. The underserved is where we have seen the most growth.

Who are the underserved? It is people who for example have DSL at 2/3 mbps and can barely get that service (its in and out) which is very unreliable and there comes the satellite connectivity solution that gives them 25 megabits per second. In such scenarios, the solution provides service which the terrestrial network is unable to.

We have done really well in this market which has helped us grow.

Another big market for us remains to be the people that don’t have internet connectivity. We have to find users who have the purchasing power (for example farmhouses or people with second homes who need connectivity) that have the money to pay for the service but haven’t had a solution in the past. This can be Island or mountains where people have resorts or something like that where people don’t have connectivity. In Latin America within pure rural areas, we have the approach of a community Wi-Fi model (instead of one house buying service from the provider, there is one village or a community center that buys the service and then you have a Wi-Fi system localized in that region). For such scenarios, we have a community Wi-Fi solution that’s a fully managed service.

Q: Please tell us about your operations in the Brazilian market.

A: We have celebrated our 50 years anniversary in Brazil a while ago. We have been in Brazil for a long time, but the difference is that

we have been an enterprise provider, a B2B provider. In the B2C world, we operated in Brazil since the launch of 65 west satellite. We started some of the B2C in KU earlier, but we truly started pushing when we had our own payroll on 65 West. When we did the launch that was three years ago, we

most influential companies in the world award recently for the very reason of being able to provide internet connectivity to the underserved and also for the emergency communication solutions. Those are the two main points that led us to win the award under the Fortune magazine. Interestingly

satellite.

Q: Please tell us in detail about the project with Reliance Jio.

A: Reliance Jio Infocomm Ltd. (Jio), the largest 4G and mobile broadband digital services provider in India, selected the Hughes JUPITER™ System to enable satellite connectivity in hundreds of sites in remote and rural locations.

The JUPITER System is a high-performance, field-proven satellite networking solution that backhauls all generations of cellular technologies. The system delivers more than 200 Mbps of TCP throughput per terminal and includes built-in 4G/LTE optimization capability that can yield 30 to 60 percent bandwidth savings versus that of standard satellite backhaul solutions.

Reliance Geo came out with a need of technology partner to support the deployment of a brand-new network that they are looking at in India to reach all those points that they have not reached in India before.

Initially, the first phase was about 400 sites and the next phase was an additional 600 sites. And this for 4G Backhauling, not 2G or 3G.

What they did very smartly is, while other people were going where the business is, they decided they want to go everywhere. They aimed to create a market for 4G LTE and took everybody by surprise. And they didn't have to depend to grow as they decided to reach everywhere through satellite.

It's a one of a kind of connection where earth stations are redundant and even the satellites are redundant, so they have got took two satellites in the same orbital slot and have two earth stations looking at them. So, if anything happens to the satellite or the remote or the earth stations, the system is going to be up 100 % of the time yet still.

The project spans over India. Most of the sites are in the difficult to reach regions of India which are the Northern Areas and Northern East area. And they provide 100% coverage pan India so that's the most important thing. They have changed the way people are living. ■



I think the competitor or the new company that has just entered with their service is only at the beginning - they are launching what they have in the market just now while we have been there for three years so we have the advantage of early entry and know-how"

really started going directly into the B2C world. We are very successful; I think we have passed the 100,000 subscribers mark in Brazil alone, so we have added capacity there now with our 63 West payload. We had 65 West and have added 63 West, as we have high targets for that market.

Q: How is the competition in Brazil?

A: The competition in the B2C world there has just started. I think the competitor or the new company that has just entered with their service is only at the beginning - they are launching what they have in the market just now while we have been there for three years so we have the advantage of early entry and know-how. In these kinds of markets, the key is the distribution system.

Getting to the distributors and getting to the end points (the selling end points) is important and we have a big advantage of having a jump-start in that aspect. So, the competition will need to build up and catch up, of course they will bring more capacity and learn from seeing us about what has worked and not worked. We have added capacity and we already have good capacity, so we still can maintain a good competitive edge in the market.

Q: Do you get involved or initiate any social initiatives where you are providing communications for emergencies or for people who cannot afford it at all?

A: You will see that we have won the 10

enough, out of those awards the number one company was Reliance Geo which is also a customer of ours and the technology that they use to reach all these regions is ours. So not only we are number one through Reliance as we are a part of that but we are also a part of the top 1- because of the work we do for reaching the



You will see that we have won the 10 most influential companies in the world award recently for the very reason of being able to provide internet connectivity to the underserved and also for the emergency communication solutions"

underserved. We work in partnership with providers who want to extend their reach in these areas for example we have a great program in Latin America with Telefonica.

We are also working with Facebook and of course now with One Web. We are a big part of the One Web project both as technology providers and ultimately as providers of

Hughes achieves Verifone Managed Network Service Provider Certification

Company now offers Verifone POS Retailers Easy Transition to PCI-Compliant Solution from Discontinued Enhanced Zone Router (EZR)

Hughes Network Systems, a leading provider of managed network services under its HughesON™ brand, has announced its certification as a Verifone Managed Network Service Provider (MNSP). This certification enables the company to offer Verifone POS retail customers an easy and seamless transition to a PCI-compliant solution compatible with outdoor Europay, MasterCard and Visa (EMV) chip-card readers, replacing the discontinued Enhanced Zone Router (EZR).

“Retail petroleum customers can’t afford any downtime on their POS systems,” said Dan Rasmussen, senior vice president, North America sales and marketing, Hughes. “With this certification, Hughes completed a rigorous vetting process with Verifone to ensure existing and new HughesON Managed Services customers can transition easily to a PCI-compliant solution replacing the discontinued EZR – and with the assurance that it will work seamlessly and affordably with their existing infrastructure.”

As part of the fully turnkey HughesON offerings, the EZR replacement solution is also EMV-compatible, making the network transition to Outdoor EMV technology

seamless and under a comprehensive managed service contract. Whether an existing or new HughesON customer – all



As part of the fully turnkey HughesON offerings, the EZR replacement solution is also EMV-compatible, making the network transition to Outdoor EMV technology seamless and under a comprehensive managed service contract.

enjoy the many benefits of one-stop service, including installation and ongoing support.

Hughes Network Systems, is the global leader in broadband satellite technology and services for home and office. Its flagship

high-speed satellite Internet service is HughesNet®, the world’s largest satellite network with over 1.3 million residential and business customers across North and South America. For large enterprises and governments, the company’s HughesON™ managed network services provide complete connectivity solutions employing an optimized mix of satellite and terrestrial technologies.

The JUPITER™ System is the world’s most widely deployed High-Throughput Satellite (HTS) platform, operating on more than 20 satellites by leading service providers, delivering a wide range of broadband enterprise, mobility and cellular backhaul applications. To date, Hughes has shipped more than 7 million terminals of all types to customers in over 100 countries, representing approximately 50 percent market share, and its technology is powering broadband services to aircraft around the world.

Headquartered outside Washington, D.C., in Germantown, Maryland, USA, Hughes operates sales and support offices worldwide, and is a wholly owned subsidiary of EchoStar Corporation, a premier global provider of satellite operations. **■**

Newtec boosts affordable broadband across Asia-Pacific on KACIFIC1

Newtec, a leader in the design, development and manufacture of equipment for satellite communications, has announced that its Newtec Dialog® VSAT multiservice platform has been selected by broadband satellite operator, Kacific, for its new High Throughput Satellite, Kacific1, to significantly expand its broadband service delivery in underserved areas of South East Asia, New Zealand and the Pacific Islands.

The initial contract is for \$10million of Newtec Dialog hubs and this is expected to result in further terminal procurements totaling several million in the first years of service.

Kacific1 will deliver affordable, high-speed internet broadband to telecommunications companies, internet service providers and governments throughout the region, with Newtec's Mx-DMA® return technology providing the highest possible bandwidth efficiency. The Kacific1 satellite features 56 high power subscriber spot beams, each with the capability to provide targeted capacity at high speeds. Kacific services enable access to high demand applications, such as community internet access and mobile backhaul, that will help stimulate socio-economic activity throughout the region. Public institutions will benefit from dedicated services including healthcare, education and civil defense, in areas that are beyond the economical reach of terrestrial infrastructures in most of Kacific's coverage areas. Kacific was recently presented with



Thomas Van den Driessche, CEO Newtec

the Better Satellite World award for its focus on connecting underserved populations.

"The Kacific HUB, based on the Newtec Dialog multiservice platform is a pivotal part of the satellite network and we selected Newtec because it demonstrates the highest performance and ability to offer the very high link efficiencies and availabilities required for our Ka-band spot beam system," said Christian Patouraux, CEO and Founder of Kacific. "We have also been

very impressed with other unique features offered by Newtec such as the Satellite Network Calculator, which enables us to tailor new services in a very efficient and fast-to-market manner, which will only help ensure the reliability and enhance the quality of our services to our customers."

Chosen for its excellence in innovation, Newtec's next-generation Mx-DMA return technology incorporates the best features of MF-TDMA and SCPC technologies to provide dynamic bandwidth allocation with the highest level of efficiency. Mx-DMA return technology on the Newtec Dialog platform uniquely adjusts the frequency plan, the symbol rate, the modulation, coding and power in real-time for every terminal in the satellite network in response to traffic demand and Quality of Service (QoS) changes.

"In partnering with Kacific, we are strengthening our presence in South East Asia and the Pacific and we are extremely proud to be involved with a project that bridges the digital divide to people in regions that have never before had access," said Thomas Van den Driessche, CEO at Newtec. "Amongst many other features, our Satellite Network Calculator has an acute ability to provide valuable insight into the performance of the network. Its use in a multi-beam satellite network such as this will allow Kacific to harness these insights to optimize future deployments and add value for its regional partners and customers." **T**

Yahsat and Hughes finalize joint venture to deliver satellite broadband connectivity across MEA and South West Asia



AlYah Satellite Communications Company (Yahsat), a leading global satellite operator based in the United Arab Emirates and wholly owned by Mubadala Investment Company (Mubadala), and Hughes Network Systems (Hughes), a subsidiary of EchoStar Corporation have announced the completion of a joint venture arrangement to provide greater access to commercial Ka-band satellite broadband services across Africa, the Middle East and Southwest Asia. The joint venture was officially announced in September 2018, during the World Satellite Business Week Conference held in Paris and was at the time subject to regulatory and other approvals, which have now been obtained.

A ceremony took place at Mubadala's headquarters in Abu Dhabi, in the presence of Khaldoon Al Mubarak, Group Chief Executive Officer & Managing Director (Mubadala); Charlie Ergen, Chairman (Hughes) and parent company (EchoStar); along with Masood M. Sharif Mahmood, Chief Executive Officer (Yahsat) and Ramesh Ramaswamy, Senior Vice President and General Manager, International Division (Hughes).

Through the collaboration, Yahsat will combine its unique position and knowledge as the leading provider of satellite

broadband solutions within its current markets with Hughes' expertise as the global leader in broadband satellite networks and services. Together, the two companies will continue to provide unserved and underserved communities with reliable, high-speed Internet services via Yahsat's Al Yah 2 and AlYah 3 Ka-band satellites, while utilizing the capabilities of the Hughes' innovative systems, designed and optimized for large scale High-Throughput Satellites. The newly formed joint venture company will go to market as "YahClick (powered by Hughes)" and will be operational with immediate effect.

While the company's board of directors consists of three members from Yahsat and two members from Hughes, Masood M. Sharif Mahmood, Chief Executive Officer (Yahsat) will serve as the chairman of the board and Pradman Kaul, President and Chief Executive Officer (Hughes) will serve as a board director.

"In finalization of this joint venture with Hughes, we're building upon the digital landscape of our target regions to empower and enable communities, governments and businesses in unserved and underserved communities to realise economic and social benefit from Yahsat's high-performance satellite broadband services." commented

Masood M. Sharif Mahmood, Chief Executive Officer (Yahsat). "This is an important step in unlocking not only our potential, but the potential of those we serve by combining our respective leadership and global experience."

Pradman Kaul, President and Chief Executive Officer (Hughes), added, "The commencement of the joint venture furthers Hughes commitment to bridging the global digital divide, bringing unserved and underserved communities everywhere the benefits of the connected experience. We are pleased to join with longtime partner Yahsat in serving these important and growing markets."

The joint venture will provide "direct-to-premise services" to homes and small to medium-sized enterprises, and to community centres and schools that are served under local government programs across the focus regions. The agreement also offers "community hotspot" solutions to make satellite-enabled broadband more accessible to many more users across Yahsat's global footprint, which today covers more than 1 billion people. Further, the agreement enhances the trend within the Mobile Network Operator community to benefit from the efficiencies provided by Ka-band-based backhaul and carrier solutions. **T**



Thaicom signs Long-term Contract with TrueVisions to strengthen the Future of Broadcasting

Thaicom Public Company Limited, a leading Asian satellite operator and provider of integrated satellite end-to-end solutions, has announced that True Visions Group Co., Ltd. one of Asia's leading pay TV providers has signed a long-term transponder capacity contract for continuing its pay TV service to audiences in Thailand.

The company has retained several Ku-band transponders on the new Thaicom-8 satellite which delivers pay TV services to audiences in Thailand and across Asia including premier sports and entertainment events. TrueVisions will start using the service on the Thaicom-8 satellite from 2019 onwards. The transfer of subscribers from Thaicom-5 to Thaicom-8 is necessary as Thaicom-5 does not serve TrueVision's long-term requirements. "This long-term transponder capacity contract will support

the mission of TrueVisions to provide premium pay TV broadcasting services to all subscribers in Thailand", said Patompob (Nile) Suwansiri, Chief Commercial Officer with Thaicom. "It proves that satellite technology remains a strong value proposition for broadcast expansion in Thailand."

The capacity agreement with TrueVisions is focused on the reliable delivery of one of the best entertainment and sports television platforms in Southeast Asia at the 78.5 degrees East orbital position. The new Thaicom-8 satellite represents a total solution for broadcast and data clients in Asia with excellent Ku-band coverage. It supports the high demand for capacity of the broadcasting industry as it transitions from standard definition to high-definition and ultra-high definition. **T**



Patompob (Nile) Suwansiri

Azerbaijan's ICT market: key events of 2018

The year 2018 was marked by stabilization of Azerbaijan's ICT market after stagnation a year earlier. Thanks to balanced macroeconomic policy and structural reforms, Azerbaijan managed to stop the GDP fall and set a course for further economic growth.

In many ways, this was possible thanks to the tightening of monetary policy and more flexible exchange rate policy. In the real sector of the economy, the rise in oil prices, as well as the growth of non-resource sectors of the economy, such as agriculture and services, led to recovery in aggregate demand and budget revenues. There are a number of prerequisites that indicate the growth prospects of Azerbaijan's IT market for the near medium term, according to IDC (International Data Corporation).

The most positive changes that in the coming years will significantly affect the economy of Azerbaijan as a whole and the IT market, in particular, include restructuring of the banking sector, reforms in the social sphere, completion and launch of major projects.

In the medium term until 2022, Azerbaijan's IT market will maintain double-digit growth rates largely due to measures taken in the field of government digitalization, the spread of broadband internet and digital transformation of the private sector.

The average annual growth rate of Azerbaijan's IT market until 2022 will be 12 percent (IT equipment will grow 11 percent, IT services will grow 16 percent and software will grow 16 percent). By 2022, the volume of the IT market will double in comparison with the level of 2018 and will amount to \$1.6 billion.

Despite that there were few key events in the ICT market of Azerbaijan in 2018, nevertheless, the year was quite successful. Commercial enterprises successfully developed, new products and solutions appeared. The key events of the year are the following:

Owner of Azercell mobile operator changed
The purchase of 51.3 percent of shares of the company Azertel [the

sole shareholder of the Azerbaijani telecommunications operator Azercell] by the state company Azintelecom from the company Fintur became the key event of the beginning of the year.

Fintur is owned by Telia Company (58.55 percent) and Turkcell (41.45 percent).

The agreed price for 51.3 percent of Fintur's shares in the company Azertel was 222 million euros, which implies the cost of capital of 432 million euros for 100 percent of Azercell shares and a company's value worth 197 million euros based on cash and without debts.

Prior to signing the deal, Telia Company completed a rigorous verification of the buyer's trustworthiness and declared satisfaction with the results of all proper checks and controls.

Azercell's re-branding is the subject of discussions and this issue is likely to be resolved in 2019. Establishment of a center for the study and development of the cryptocurrency market and blockchain technology

The second quarter of 2018 was marked by the creation of a center for the study and development of the cryptocurrency market and blockchain technology, which included interested market participants.

During the year, the Center regularly organized meetings, held discussions as part of which issues of regulation of the cryptocurrency market and blockchain technologies were touched upon, provided advisory services, prepared proposals on issues of legal regulation of the industry.

If we consider that this is a completely new direction for everyone, there is an urgent need to exchange experience, study aspects of the legal regulation of the cryptocurrency market and using the blockchain technology. Readiness to use the blockchain technology and SMART contracts in housing and communal services was

recently announced by the Ministry of Justice of Azerbaijan.

The ministry provides over 30 electronic services, there are about 15 information systems and registries. They include the register of "electronic notary", "electronic court", penitentiary service, information systems of non-governmental organizations, population register, etc. The planned project "Mobile Notary Office", which provides for the accumulation of all notarial documents in one case, seemed interesting.

The plans of the ministry also include, among other things, the implementation of a project related to notarization of an electronic document.

It was announced that in the future, SMART contracts will be implemented in the field of public services (water, gas and electricity). That is, the existing contracts of citizens for public services will be transferred to SMART contracts, and this will ensure transparency and will allow preventing the facts of falsification in this area. Moreover, the citizens themselves will be able to independently control all these processes.

In world practice, the blockchain technology is successfully used where the registry is formed. Most of the services of the Ministry of Justice (registers and databases of the population) are based namely on them.

Launch of the second telecommunications satellite - Azerspace-2 / Intelsat-38

A significant event of the year was the launch of the second communications satellite - Azerspace-2 / Intelsat-38. The countdown for the launch of the Ariane 5 carrier rocket with a satellite on board was started on September 26 on the launch platform ELA-3, in the Guiana Space Center.

Azerbaijan's telecommunications satellite Azerspace 2 reached its test orbit on Dec. 18. The company noted that the satellite will be in test mode for about two months, after which it will be placed in its final orbit of 45 degrees east longitude. At the beginning of 2019, the satellite will be transferred to the management of Azercosmos and then the satellite will be fully ready for commercial operation

Flight VA243 will become the 100th mission for the Ariane 5 heavy-lift launch vehicle



Rashad Nabiyeu, CEO Azercosmos

and the 300th for the Arianespace launcher family.

Azerspace 2/Intelsat 38 is designed to provide a number of telecommunication services and will serve two operators - Intelsat SA and Azercosmos OJSC.

The satellite will provide coverage of the growing demand for DTH (Direct-to-Home) satellite broadcasting services in Europe, Central and South Asia, the Middle East and in the part of Africa south of the Sahara desert for Azercosmos OJSC.

The satellite will also provide continuity of service from the orbital position of 45 degrees for the Luxembourg office of the Intelsat SA, as well as will ensure the delivery of DTH services to Central and Eastern Europe, the Asia-Pacific region, and the provision of communication services in Africa. The Azerspace-2 satellite, worth \$190 million, is projected to bring revenue to Azerbaijan's economy in the amount of \$400 million.

The satellite has been built on the 1300-series platform (SS/L 1300). The satellite will be placed at an orbital position of 45 degrees. The lifetime of the satellite in orbit will be 15 years.

The first communication satellite Azerspace / Africasat-1a was launched into a geostationary orbit at 46 degrees east longitude on February 8, 2013. This satellite was also launched from the Kourou space

base by Arianespace company.

Issuance of a new generation of identity cards

The year was also marked by the transition to identity cards of a new generation, the issuance of which started on Sep. 1. IDs are issued to the Azerbaijani citizens in stages. The Certification Center handles requests from personalization centers operating under the Ministry of Internal Affairs of Azerbaijan. Based on the received requests, the center prepares certificates and sends them back.

Three application programs are recorded on the chip of IDs: personal information about the owner, data of two certificates (the first one is an authentication certificate, the second one is for e-signature) and the so-called domestic applications, the functions of which make it possible to automatically update information about the ID holder.

For example, in the case of a change of last name or updating marital status information, this data will be automatically updated by means of special card readers as soon as a citizen applies for a service to an authorized body where these devices will be installed.

Citizens having received new IDs can independently activate the e-signature integrated into them. The term for using the e-signature is three years. **■**

Top IT trends that will redefine businesses in 2019

Sami Abi Esber

We are living in an era of unparalleled innovation. As new and emerging technologies continue to redefine IT and business, the pace of change and technological advancement is accelerating. Today, we are looking at a smarter, intelligent future driven by technologies such as cloud, artificial intelligence, blockchain, internet of things, and more. While the industry has already embarked on its digital transformation journey, businesses are yet to realize the full potential of these technologies and how they will shape the way we do business in the future.

In the coming years, new digital businesses and brands will bring greater focus into the region and will help accelerate the ICT business. Across the Middle East, Africa and Turkey, banking, finance, healthcare and utilities are taking the lead in driving digital transformation. The local drivers for such initiatives center around customer experience enhancement and achieving competitive advantage. These initiatives are driving investments into mobility, analytics, cybersecurity and cloud solutions.

Regardless of the industry or enterprise, one or the other technology will definitely play a part in transforming the business by offering benefits like cost savings, improved security and better customer experience, among others. Here we define the top technologies that regional organizations can leverage to transform their business in 2019:

Internet of Things

With the acceleration of digital transformation in the region, more and more devices are getting connected. Although the adoption of IoT will be massive, it is still slow as the devices are not standardized. From autonomous vehicles to drones to sensors in oilfields, healthcare, transport, Oil & Gas etc., IoT will have a huge impact on enterprises and consumers. Our Group is developing innovative IoT solutions and is



working with IBM and other major players like Microsoft, Cisco & GE to implement solutions like Predictive Maintenance instead of the traditional Preventative Maintenance model for Oil and Gas assets and Real Estate facilities based on Maximo. One of our affiliated companies recently signed an agreement with Etisalat to jointly offer Smart Integrated Facility Management Solutions to achieve Cost savings, Operational efficiencies and enhanced Customer satisfaction.

Artificial Intelligence

The use of AI technologies is now penetrating many aspects of business. A recent survey by ServiceNow across Europe, Middle East and Africa indicates that customer service is an area that is showing a fast return on investment. Companies across these regions are deploying AI technologies to revolutionize customer service as more and more consumers are showing an acceptance to AI-driven experiences. Nearly 30% of EMEA organizations have introduced AI technologies to customer service and 72% of those are already seeing benefits that include freeing up agent time, more efficient processing of high-volume tasks and providing always-on customer support.

Blockchain

Interest in blockchain technologies in the region is growing rapidly. The pace is being set by the government and public sector including education, healthcare, finance, distribution and services. The most popular blockchain use cases in the coming years will be cross-border payment and settlements, asset and goods management and identity management. Across the private sector, we have seen announcements of recent initiatives by The Atlantis, Jordan Investment Bank, Noon Capital, DIFC, Halal Guide, amongst others. Global blockchain player, ConsenSys recently conducted a blockchain developer training and hackathon camp in Lebanon.

Multi-Cloud

Enterprises in the region are now using multiple cloud solutions whether on-premises, public cloud, or a hybrid of both. In the coming years, upfront costs will become less important as cloud vendors continue to produce convincing use cases. AI and machine learning will be fundamental in increasing the levels of automation. Corporate cloud literacy is becoming an operational prerequisite as technological progress accelerates in EMEA. With a multi-cloud strategy, businesses can decide how to distribute workloads to cloud platforms that are best suited for specific tasks.

Big Data

With massive volumes of data being generated every second from connected devices, machines and IoT, Big Data is definitely a trend to watch out for. Big Data is the new oil as it has the potential to empower organisations to make better business decisions, in real time. By unlocking the organisation's data, they can fundamentally change the way it operates and steer the transformative, digital journey the company's stakeholders expect. **IT**

STC signs 3 agreements within “Rawafed” program to maximize the local content



The Saudi Telecom Company (STC) has signed three new agreements under Rawafed Program with Cisco, Ejada and Amwaj Factory. STC previously signed 7 agreements, bringing the total to 10. These agreements aim at building partnerships to improve the innovative environment of the inspireU business incubator which will help in the transfer of international knowledge and expertise to emerging projects.

The agreements focus on increasing the Saudization of leadership positions, supporting small and medium-sized enterprises and nationalizing the industry. They also aim to support innovation and enable digitization as part of STC's commitment to achieve the goals of the Kingdom's Vision 2030 which seek to maximize the local content and enable digital transformation.

The agreements were signed by STC's Vice President for Procurement and Support Services Sector Eng. Emad Bin Aoudah Al Aoudah and by Region GM in Cisco, Salman Faqeeh, and by GM of Ejada Hani Al Hussein in addition to chairman of



Amwaj, Ahmed Al Samadi.

On his part, STC's Chief Executive Officer, Eng. Nasser Bin Sulaiman Al Nasser, discussed the results of Rawafed Program stating that the Program managed to achieve a 20-40% increase in Saudization, in addition to its efforts in supporting small and medium-sized enterprises and the nationalization of the

industry. He also pointed out that in 2018, STC began working on developing and expanding the manufacturing of optic fibers in addition to the implementation of several plans aimed at producing high-tech products. He also provided details about the progress being made regarding the construction of 4 innovative centers which he said will be officially opened in few weeks. **T**

Apple, Qualcomm spar over CEOs' comments on settlement talks

Qualcomm Inc has responded to comments made by Apple Inc. Chief Executive Tim Cook in an interview, in which he said there had been no recent settlement talks between the iPhone maker and chip supplier in their global legal battle, calling Cook's remarks "misleading."



Apple said it stood by Cook's comments. The two companies are disputing comments their respective CEOs have made over settlement talks. Apple's chief had earlier said any talks ended in September 2018. Qualcomm's Chief Executive Steve Mollenkopf in November made comments about the supplier's efforts to resolve the dispute.

But Qualcomm said Cook had miscast Mollenkopf's remarks, which did not mention a settlement and which Qualcomm maintains are accurate.

The war of words is unlikely to play a major role in the outcome of the legal fight between the two firms. But it signals the high stakes and deeply entrenched positions of each side, with Apple arguing in court that Qualcomm charges an unfair "tax" on its phones while Qualcomm fights to protect a patent licensing model it argues has helped bring connectivity to billions of new users through wireless networks.

In a television interview on CNBC earlier,

Cook responded to a question from host Jim Cramer about whether Apple would settle with Qualcomm after Qualcomm had announced legal victories against Apple in patent cases in China and Germany.

"Look, the truth is, we haven't been in any settlement discussions with them since the third calendar quarter of last year. That is the truth. So I'm not sure where that thinking is coming from," Cook said. Cook's comments contrasted with those Mollenkopf made in November on CNBC. "We do talk as companies, and I think what you're seeing, really, are activities consistent, really, with the fourth quarter of the game, and not the first quarter," Mollenkopf told CNBC then. "We always talk about - and I've been very consistent that this second half of (2018) and into (2019), is when we're really on the doorstep of finding a resolution."

In a statement, Qualcomm said the company stands by Mollenkopf's remarks. "We have been consistent for the last 18 months in making clear that we have,

at various times, been in discussions with Apple about a possible resolution to our licensing dispute," a Qualcomm spokesperson said in a statement. "We have also stated clearly on several occasions that we believe it will be resolved, one way or the other, in the near future, either through a settlement or court decisions."

Apple said Cook's comments were accurate. "Qualcomm is desperate to obfuscate the tales it has been telling its investors. Their accusations are a red herring," Apple said in a statement to Reuters.

Apple has accused Qualcomm of engaging in illegal patent licensing practices to preserve a dominant market position in so-called modem chips, which help mobile phones connect to wireless data networks. Qualcomm has argued that its practices followed decades-long tech industry norms and that Apple has not compensated it fairly for its intellectual property.

The primary case in Apple and Qualcomm's legal battle goes to trial in April. **T**

Etisalat Digital accelerates adoption of Artificial Intelligence and Blockchain in the region



Future Now, the innovation programme of Etisalat, has signed agreements with four scaleups to develop Artificial Intelligence and Blockchain solutions following the successful Dubai Future Accelerators programme.

The signing ceremony also marked the opening of the Future Now scale-up collaborative space for Etisalat Digital's partners, namely Yitu Technology (China), Com IoT Technologies (UAE), 300cubits (Hong Kong), and Tradefin (USA). They were chosen based on their capability to build and launch their core technology and be able to demonstrate traction and substantial use cases.

These selected companies will continue their journey through the 'Future Now' scale-up programme, where they will receive access to Etisalat Digital resources and experts, office space, and support needed to deliver joint projects to Etisalat's client base.

As part of the fifth cohort of Dubai Future Accelerators, Etisalat Digital launched in July this year three challenges to companies across the world. Out of all the companies that applied, seven companies were selected to address these challenges. The companies had the opportunity to network with a number of key stakeholders and have access to resources and expertise.

Etisalat Digital selected two companies, Yitu Technology (China), and Com IoT Technologies (UAE), for the first challenge that sought to leverage artificial intelligence for video surveillance systems and

create solutions that would reduce crime rates and road congestion. To support the UAE 2021 vision of making the UAE the safest place in the world, the challenge focused on scaleups that could deliver solutions that would analyse behavior and predict crime-related patterns, in addition to enhancing transportation issues like congestion and accidents, and take automated decisions with the use of artificial intelligence on existing video surveillance systems.

The second challenge addresses the use of Blockchain to reduce the transactional costs and complexity in business processes for banks, governments and private organisations, with the goal of reducing the costs and complexity by 40 percent over five years. 300cubits (Hong Kong) was selected for this challenge.

Tradefin (USA) was selected for the last challenge that was focused on the adoption of Blockchain to enable exchange across various loyalty currencies and to transform a loyalty currency into a crypto currency that can be used to perform online and physical transactions.

In line with the Future Now's vision of accelerating innovation, the partnerships will fast track the deployment of latest technologies such as Artificial Intelligence and Blockchain to avail them to Etisalat's client base. The scale-up program is a key pillar of the Future Now ecosystem that aims to provide a collaborative platform for innovators, partners and customers to expedite the adoption of such cutting-edge technologies. **T**

Huawei unveils Industry's Highest-Performance ARM-based CPU bringing Global Computing Power to next level



Huawei has announced the industry's highest-performance Advanced RISC Machine (ARM)-based CPU. Called Kunpeng 920, the new CPU is designed to boost the development of computing in big data, distributed storage, and ARM-native application scenarios. Huawei will join with industry players to advance the ARM industry and foster an open, collaborative, and win-win ecosystem, taking computing performance to new heights.

"Huawei has continuously innovated in the computing domain in order to create customer value. We believe that, with the advent of the intelligent society, the computing market will see continuous growth in the future. Currently, the diversity of applications and data is driving heterogeneous computing requirements. Huawei has long partnered with Intel to make great achievements. Together we have contributed to the development of the ICT industry. Huawei and Intel will continue our long-term strategic partnerships and continue

to innovate together," said William Xu, Director of the Board and Chief Strategy Marketing Officer of Huawei.

"At the same time, the ARM industry is seeing a new development opportunity. The Kunpeng 920 CPU and TaiShan servers newly released by Huawei are primarily used in big data, distributed storage, and ARM-native applications. We will work with global partners in the spirit of openness, collaboration, and shared success to drive the development of the ARM ecosystem and expand the computing space, and embrace a diversified computing era." The industry's highest-performance ARM-based CPU

Kunpeng 920 is the industry's highest-performance ARM-based server CPU. Using the cutting-edge 7nm process, the CPU was independently designed by Huawei based on ARMv8 architecture license. It significantly improves processor performance by

William Xu, Director of the Board & Chief Strategy Marketing Officer - Huawei



optimizing branch prediction algorithms, increasing the number of OP units, and improving the memory subsystem architecture. At typical frequency, the Kunpeng 920 CPU scores over 930 in the SPECint Benchmarks test, which is 25% higher than the industry benchmark. At the same time, power efficiency is 30% better than that offered by industry counterparts. Kunpeng 920 provides much higher computing performance for data centers while slashing power consumption. Kunpeng 920 integrates 64 cores at a frequency of 2.6 GHz. This chipset integrates 8-channel DDR4, and memory bandwidth exceeds incumbent offerings by 46%. System integration is also increased significantly through the two 100G RoCE ports. Kunpeng 920 supports PCIe 4.0 and CCIX interfaces, and provides 640 Gbps total bandwidth. In addition, the single-slot speed is twice that of the incumbent offering, effectively improving the performance of storage and various accelerators.

Huawei TaiShan, ARM-based server with the industry's best performance
Huawei today also released its TaiShan series servers powered by Kunpeng 920, including three models: one with a focus on storage, another on high density, and a third focused on balancing both requirements. The TaiShan servers are built for big data, distributed storage, and ARM-native application scenarios. The ARM architecture is best suited for these scenarios with advantages in many-core and performance per watt.

TaiShan will enable computing platforms with high performance and low power consumption for enterprises. For example, in big data scenarios, the TaiShan servers are tuned for optimal many-core high concurrency and resource scheduling to deliver a 20% computing performance boost. Based on the TaiShan servers, Huawei Cloud also provides elastic cloud services, bare metal services, and cloud phone services.

Building an open and collaborative ARM ecosystem founded on shared success
Huawei continuously promotes industry cooperation in terms of hardware, basic software, and applications. Huawei has been working with industry organizations such as Green Computing Consortium (GCC), Linaro, and Open Edge and HPC Initiative (OEHI) to build an open, collaborative industry ecosystem, alongside partners such as Hortonworks, Microsoft, Oracle, SAP, SUSE, Ubuntu, and China Standard Software.

On the hardware side, Huawei is a core member of Linaro. On the basic software side, Huawei is a Platinum member of the OpenStack Foundation and a founding member of Cloud Native Computing Foundation (CNCF). With regard to applications, Huawei has joined the GCC.

GCC has released the Green Computing Consortium Server Technical Standards Report, along with other efforts to build a green open source computing community. Huawei is also a member of the OEHI.

Huawei believes that an intelligent society with all things connected, sensing, and intelligent is underway, and this trend is picking up speeds. The development and convergence of ARM-based applications on smart terminals are accelerating, along with cloud-device collaboration. In addition, new applications in cloud computing are driving data diversity. For example, big data applications, distributed storage, and some edge computing scenarios have specific energy efficiency requirements for many-core high-performance computing. In such a context, ARM systems stand out with unique advantages in performance and power consumption.

Therefore, in view of the industry trends and application requirements, a new era of diversified computing is unfolding. Multiple data types and scenarios are driving computing architecture optimization. Combining multiple computing architectures for optimal performance becomes a must.

Building an open and collaborative ARM ecosystem founded on shared success Huawei continuously promotes industry cooperation in terms of hardware, basic software, and applications

"With Kirin 980, Huawei has taken smartphones to a new level of intelligence. With products and services (e.g., Huawei Cloud) designed based on Ascend 310, Huawei enables inclusive AI for industries," William Xu noted. "Today, with Kunpeng 920, we are entering an era of diversified computing embodied by multiple cores and heterogeneity. Huawei has invested patiently and intensively in computing innovation to continuously make breakthroughs. We will work with our customers and partners to build a fully connected, intelligent world." 

Amendment of the Network Rollout and Coverage Obligations approved

CRA grants Radio Spectrum Licenses of 5G Commercial Networks to Telecommunication Companies

Ashraf Siddiqui

H.E. Jassim Saif Ahmed Al-Sulaiti, Minister of Transport and Communications, has approved the amendment of the network rollout and coverage obligations of Ooredoo and Vodafone Qatar licenses, for the provision of public mobile telecommunications networks and services. The amendments adopted unified obligations for both companies related to the Second Generation (2G), Third Generation (3G) and Fourth Generation (4G) networks, that is in accordance with the amendments of the Annexure (G), of the network rollout and coverage obligations of both companies licenses related to public mobile telecommunications networks and services.

Also, the Communications Regulatory Authority (CRA) has issued decisions to grant the radio spectrum licenses to both companies for the deployment of the Fifth Generation (5G) commercial networks in Qatar as of the beginning of January 2019. In addition to that, CRA has unified all prior existing radio spectrum licenses and replaced it with a single document "Radio Spectrum License" that includes harmonized terms and conditions for both companies. In the mentioned radio spectrum licenses, CRA has initially assigned to each company 100 MHz within the 3500 - 3800 MHz frequency band for the commercial deployment of 5G networks.

Under the radio spectrum licenses, the two companies will be committed to rollout the 5G networks before the end of 2020 in all densely populated areas, all primary roads and highways as well as all venues associated with FIFA 2022 World Cup including stadiums and fan zones.

"Unifying the obligations of telecommunications companies for the 2G, 3G and 4G networks is a very important step



H.E. Mohammed Ali Al-Mannai
President - CRA



H.E. Jassim Saif Ahmed Al-Sulaiti
Minister - Transport and Communications

Under the radio spectrum licenses, the two companies will be committed to rollout the 5G networks before the end of 2020 in all densely populated areas, all primary roads and highways as well as all venues associated with FIFA 2022 World Cup including stadiums and fan zones

towards the development of a sustainable and fair competition in the telecom market in Qatar. This will benefit the sector and consumers at the same time, as the companies are keen to provide competitive, innovative and high quality services, and that will contribute to the development of the Information and Communications (ICT) sector in the State of Qatar," said H.E. Jassim Saif Ahmed Al-Sulaiti, Minister of Transport and Communications.

"CRA was keen to facilitate the introduction of 5G technology to the State of Qatar,

and to assign the necessary frequencies to telecommunications companies in Qatar. Qatar will be one of the first countries in the world to launch 5G commercial services, which undoubtedly will contribute to the achievement of Qatar National Vision 2030 goals by ensuring the sustainable development of the ICT sector. On behalf of the CRA, I would like to thank all stakeholders and telecommunications companies for their cooperation and efforts to contribute to the development of the sector," said His Excellency Mohammed Ali Al-Mannai, President of CRA. **T**

Effective Congestion Management- The Key to a Prosperous 2019 for MEA Telcos

Ahmad Sayed
Regional Director, MEA at Nexign



Happy New Year. I trust the holiday season was a time of celebration and delight for all of you. In an expat-heavy region, you undoubtedly observed another tradition—that of phoning home. That simple observance probably had a range of outcomes. Some of you may have been connect straightaway; others may have experienced lags; others may have given up and tried the next day.

As communication service providers (CSPs) face the new generation of consumers—millennials and younger—they are increasingly under pressure to get things right the first time, every time. That is the nature of digital natives, and to cater to their demands, the solution is also digital.

Holidays are not the only time that core and radio networks face peak hours. Business hours in commercial areas, big events such as sporting tournaments and concerts, and locations such as airports and metro stations also present challenges in resource allocation. Operators have to invest heavily in their networks to handle the explosive traffic growth generated by over-the-top (OTT) services and user-generated video. These operators know that the new generation of consumers is also the new generation of business managers. “Traffic congestion” is no longer an excuse for performance degradation; it is a problem to be solved.

The light at the end

But how? It is hard to make a business case for the significant capital outlays necessary to expand resource pools, just to cater for events that do not happen every day. Meanwhile, the market is paying for just such a change. But what if there was an elegant solution that introduced elasticity into infrastructure, allowing the radio-access network (RAN) to tailor connection speeds to specific circumstances?

Enter Congestion Management—a feature that is now supported by some telecom vendors. CSPs with access to a business support system (BSS) solution that offers a RAN congestion-awareness function (RCAF), find themselves better able to solve a lot of problems. Operators can increase the number of satisfied subscribers and give them fast access to priority applications even in peak-use periods. Additionally, they can dynamically manage temporary failures on radio and core networks, improving user experience (UX) for high-value subscribers, and prioritising mission-

critical communication traffic for dedicated groups of subscribers.

Prioritised plans

This function presents new opportunities for monetisation. Subscribers can pay premium rates for prioritised service plans. Users that opt for these premium subscription plans will have faster connection speeds in congested locations than those of users on normal plans, but during non-congested periods or in non-congested areas, all users will experience the same speeds. In this scenario, the operator can build incentives for users to move to premium plans and ensure optimum connection speeds regardless of network conditions.

Speed limits for heavy users

Operators can limit heavy users’ activity, in congested locations, to provide a better UX to the majority of common users. This step is essential when an operator offers unlimited data plans to their subscribers. All users, including heavy data consumers, will enjoy the same speed in non-congested periods and areas, but high-priority users with high average revenue per user (ARPU) and low monthly data consumption will have a much better UX in congested locations.

Application control

A further advantage of RCAF is the ability to optimise license fees for 3rd party telecom vendors, while still increasing network capacity and providing enhanced user experiences for all subscribers.

Because each application requires different connection speeds to deliver a great user experience, as an example, operators can prioritise internal resources, text messengers and partner content-providers over other applications, such as video streaming, P2P traffic or software updates. Users on congested networks will not experience any performance degradation for priority applications but will see a slide in performance for other applications. And a single default bearer can be used for all applications, without the need to raise several dedicated bearers for different priority applications.

Third-party application partners

Now let’s consider the future. Let’s assume that the operator has

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The 2019 trends impacting mobile on the African continent

According to the GSMA Mobile Economy 2018 report for sub-Saharan Africa, mobile subscribers rose by 44% in 2017 and this was further bolstered by an increase in smartphone penetration that rose by 75%. Mobile broadband is anticipated to comprise 87% of total connections by 2025 across 690 million smartphones. According to Joachim Wuilmet, Head of Customer Marketing and Communications MEA at Nokia, Africa is poised at the edge of an evolution, ready to show the rest of the world what it can do with a handful of innovation and a commitment to improving infrastructure.

“People in Africa are increasingly connected and most market players are focused on bringing this connectivity into rural areas and all aspects of society,” he adds. “Currently, sub-Saharan Africa is still locked into 2G but this is about to change. The move from 2G to 3G requires significant investment and access to the right devices and technology, but then it becomes easier as 4G is a natural evolution. Currently it is a 3G and 4G play with 4G launching in some countries,” says Wuilmet.

The shift from 2G to 4G on the continent is being driven by both improved infrastructure and access to cost-effective smartphones. This allows for more people to experience the benefits of 3G and 4G in terms of connectivity, efficiency and mobile



Daniel Jaeger

capabilities. That said, the continent’s slow and steady shift away from 2G doesn’t mean that 5G is an afterthought.

“There are some impressive innovations around 5G in Africa and some commercial sites in South Africa have started roll-out already,” says Daniel Jaeger, Market Unit Head, Central, East, West Africa at Nokia. “However, we need to keep perspective – we need to reach as many people as possible, migrating them to 3G and increasing smartphone penetration – before we leapfrog to 5G. Africa is poised to take advantage of the latest technologies to ensure modernisation of mobile infrastructure and potential, but it must be done intelligently.”



Joachim Wuilmet

In addition to the connectivity and the platforms, mobile operators will be focusing on software and how to deliver services in more effective ways. Insights gleaned from software and data will see them streamline operations and provide more targeted and relevant solutions.

Jaeger concludes: “Companies are focusing on their backhaul and the new spectrum, looking to strategically build networks in the right places and to take advantage of the technology that’s sitting and waiting for the right opportunity to thrive. The continent will be chasing the potential of 5G but the focus will be measured and strategic to ensure uptime, security and long-term capability.” **T**

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forged strategic partnerships with several third parties by opening up its core platform to integration with many others. It has enriched its offerings, eliminated barriers to new markets and broadened its talent pool; customer engagement and brand loyalty are at an all-time high.

Congestion management function serves this ecosystem as well. In times of congestion, the operator can inform partner applications and content providers of users that are experiencing performance dips. A third-party application can be notified when a subscriber enters or exits congested conditions, to optimise content delivery. Providers of these applications can compress or transcode traffic into formats

that require less bandwidth, or they can send lower-resolution content. And a third-party video-streaming platform can select codecs with low data-consumption rates for users in congested locations.

Full speed ahead

The benefits of applying RCAF (RAN congestion awareness function) are obvious and far-reaching, encompassing monetisation, customer experience and resourcing issues. It is nothing less than the ability to dynamically manage service quality, either scheduled or in real-time. It is a nuanced tool that allows digital service providers to consider and prioritise technologies, locations, applications and users, in view of ARPU and immediate or

projected congestion states. RCAF enables the delivery of mission-critical communication as a service. It leads to increases in subscriber loyalty, by coupling ARPU to service levels during congested periods. And it attracts high-value subscribers willing to pay a premium for enhanced connection speeds during busy times.

We often talk of “digital transformation” in lieu of specifics. RCAF has proven, obvious applications in the battle for consumer loyalty. As operators continue the move to becoming digital-service providers (DSPs), RCAF will be an indispensable tool for differentiation, alleviating the need for massive capital investment in infrastructure. **T**

Winning against SIM box fraud

By-pass fraud in mobile telecom sector is a major challenge and wide spread all around the world

Ahmad Nadeem Syed

By-pass fraud in mobile telecom sector is a major challenge and wide spread all around the world, particularly in countries having higher interconnect rates. The motives behind this fraud are; earning money, money laundering and fund generation for terrorist activities. By-pass fraud is committed using various methods such as SIM box, transit service, domestic interconnect by licensed operators, PRIs etc. SIM box fraud is the most common of all because of ease in deploying/expanding fraud network, its continuously declining operating cost and poor/inefficient controls by the operators and/or government agencies.

The SIM box fraud is conducted by an Organized Crime Group (OCG) using smart SIM box equipment available at cheap rates, updated analytical tools and VOIP as medium on 3G/4G network. The OCG comprises of the following:

- The financier who is responsible for arranging the funds, deploying the network in the country and interacting with the traffic carriers outside the country
- International by-pass traffic carriers which takes traffic from the originators and pass on to the SIM box networks using internet media. At times some operators deliberately provide their traffic to such carriers to manage the cost.
- The SIM box network operators hired by the financiers who are responsible to operate the SIM boxes, interacting with SIM suppliers and balance rechargers
- The SIM suppliers who ensure uninterrupted supply and activation of prepaid SIMs faking biometric (fingerprint) verification system, where applicable
- The balance recharging team, which



ensures that the SIMs always have sufficient balance to remain usable

This fraud is causing huge losses to the operators, who spend huge money to prevent this by deploying expensive solutions. Unfortunately, most of them keep struggling and only few may be succeeding on perpetual basis. The reason for this formidable success is the dependence on deployment isolated unidimensional solutions which are limited to detection and blocking of SIMs, whereas the success lies in deployment of a composite framework. There are two major categories of solutions to combat SIM box fraud (1) Call pattern and (2) Test Call Generator.

The call patterns solutions are built around the fact that unlike human calls, the SIM box always make calls on a certain pattern called machine behavior. The key characteristics of machine behavior include continuous calls, high "B" party

dispersion, frequent call drop, common IMEI for multiple calls, specific cell sites etc. The call pattern solution is believed to be the most effective method for the simple reason that no matter what, elimination of machine behavior is never economically and/or technically feasible for the fraudsters. However, this solution has some inherent challenges, such as:



The SIM box fraud is conducted by an Organized Crime Group (OCG) using smart SIM box equipment available at cheap rates, updated analytical tools and VOIP as medium on 3G/4G network"

- Long gap between the time, first call was originated of a SIM and the time it was identified and blocked. This gap is unavoidable as identification is only possible when the suspected SIM crosses given thresholds in a given time, after which the suspected CDRs are to be analyzed to remove false positive before the numbers are blocked. The more the gap the better for the fraudsters
- The fraudsters are using smarter SIM boxes

trying to get closer to human behavior, meaning changing the calling patterns by gauging/analyzing the possible parameters used by the operators such as spoofing IMEIs, lowering "B" party dispersion, call tumbling, lowering number of calls per SIM, changing location etc.

- Slow counter corrective measures by the operator mainly because of dependence on the solution provider
- The existence of high false positive level could raise subscriber complaints and regulatory risks

The Test Call Generator (TCG) is considered to be the most efficient tool in terms of accuracy, identification and blocking of the Grey SIMs, but it has its own challenges:

- It has very low coverage limited to the percentage of grey traffic landing on the small number of TCG SIMs
- The fraudsters, very soon identify such TCG SIMs and start by-passing them leaving the operators for quick replacement
- Call originating plan for TCG probes, being vendor dependent is usually not dynamic and becomes less effective as the fraudsters start using alternate destinations and routes

The TCG therefore may be useful for small operators for short time but is never the ultimate solution for long time for any size of operator. It is however, very useful when used complementing the Call Pattern solution.

In addition to the above conventional techniques, analysis of bulk recharge, single or multiple SIM activation activity using query analyzer is also used to identify the grey SIMs, (used and in stock) and unearthing the fraudsters network. Unfortunately, in most of the cases, success rate starts declining very soon after the solution(s) are deployed.

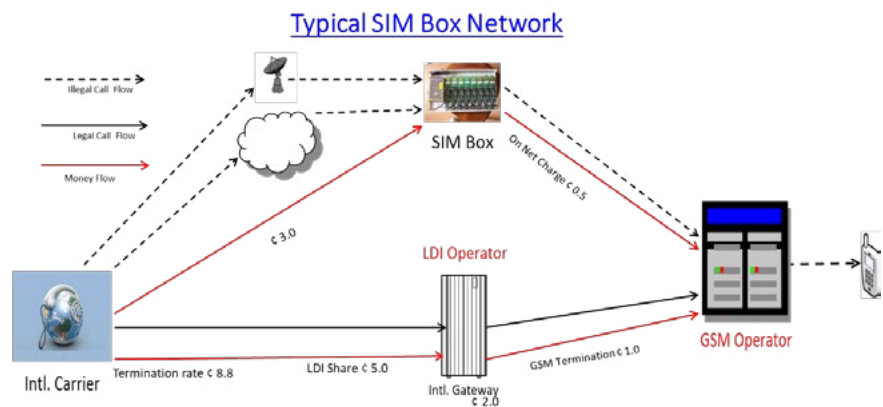
The major reason for not having a sustainable success is dependence on a unidirectional approach i.e., detection and blocking only by fraud management team. The other relevant departments in most of the cases may chose either to resist or provide lukewarm support because of conflicting KPIs such as increased churn because of SIM blocking, possibility of unearthing colluding sales staff, decline in domestic on-net revenue for commercial, and avoiding engaging government agencies to save on reputation loss. It is therefore important that SIM box fraud management is done under a well-defined

framework (tried and tested), built on four pillars; (1) having a charter, (2) a dedicated skillful team, (3) efficient tools and (4) set of preventive controls.

The first pillar is having a charter, signed and approved by CEO and all the relevant top management to ensure that SIM box fraud management becomes a collective responsibility. It states the responsibilities and roles and authorities of all the relevant functions under a RACI matrix. A SIM box steerco or board comprising of usually top

are defined by the vendors, leaving the operators to always remain dependent. It must be remembered that time is money for the fraudsters.

The trends show that a SIM used for about 3 hours has already paid back to them and rest being bonus saving them on recouping of SIM stock. The good practice (tried and tested) therefore is to develop and use own tools (not a rocket science), may be in parallel, covering call pattern, recharge and activation along with TCG. This will ensure



management is formed to prepare the strategy and doing a progress review on periodic or as and when basis.

The second pillar is having a dedicated team of highly skillful data analysts under fraud management function capable of developing logics, defining parameters, preparing TCG call plans, report writing and coordinating with other departments.

The team is authorized to access any requisite data, support from other departments in terms of deployment of controls/tools development, investigation and ensuring actions are taken.

The third pillar is having highly efficient and flexible set of detective tools. The common practice is using vendor solutions as they have expertise. This however, entails certain challenges (1) non-awareness of local situation (2) inflexibility to counter rapidly changing tactics of fraudsters, (3) being expensive (4) declining performance over period and/or (4) delayed response from vendor to change/update logics, parameters and thresholds, which in most of the cases

less dependency, more flexibility, efficiency in time to react and less cost.

The fourth and most important pillar is deployment of preventive controls. This includes (1) cutting the SIM supply line engaging sales department (2) non-permission of new SIM activation by querying black listed "Citizen Identification Data" (3) deactivating active sold but not used SIMs. The control on new activation could be both proactive or reactive.

This may include (1) making sales channels responsible to make quality sales and taking punitive actions against violators, (2) verification of new activations against blacklisted subscribers before issuance and (3) deactivating SIMs issued to blacklisted subscribers in near real time after issuance.

This framework, deployed at a very large GSM operator, produced sustainable long term success only after years of continuous struggle on isolated solutions. **■**

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Emails containing dangerous attachments up more than 25 percent

Latest ESRA detected incumbent Email Security Systems are leaving organizations vulnerable to dangerous attachments, malware, impersonation attacks and malicious URLs

Mimecast Limited an email and data security company, has announced the availability of its latest quarterly Email Security Risk Assessment (ESRA), an aggregated report of tests that measure the efficacy of widely used email security systems. * In comparison to last quarter's findings, this new assessment found that email security systems are missing 25 percent more emails containing dangerous file types.

Typically dangerous file types are rarely sent via email for legitimate purposes, such as: .jsp, .exe, .dll and .src, and can be used facilitate an attack. Detailed Mimecast ESRA's help organizations better understand what types of email-borne threats are getting through their current security system. Every quarter Mimecast aggregates the results of individual ESRA tests and reports to the industry its findings. To date Mimecast has inspected more than 180 million emails that were deemed "safe" from these incumbent systems. Within these emails, the tests found 16,581 emails that contained dangerous file types.

The report also found 21,183,014 spam emails, 17,403 malware attachments, 42,350 impersonation attacks and 205,363 malicious URLs, all missed by these incumbent providers and delivered to users' inboxes. This latest report concludes that an aggregate 12% of all secured and filtered email were unwanted emails and thus were false negatives.

"Mimecast has seen an increase in security efficacy versus legacy vendors along with detailed information on the proliferation of threats of all types. The ESRA provides deep insights for our customers on the types of attacks threatening their business," says Lindsay Jack, security service director at Mimecast. "Attacks we are seeing include



Matthew Gardiner, Cybersecurity Strategist at Mimecast

key executives being targeted with cloud storage services exploits, impersonation attacks targeting legal, finance and administrative assistance as well as social engineering attacks against the C-suite.

Mimecast helps organizations understand how they compare with other organizations in their geography or industry vertical. Additionally, these reports provide insights on the rise of new types of malware and key trends in malicious email campaigns. "Cybercriminals are constantly adapting

their email-based attacks, looking for new ways to bypass security solutions that rely too heavily on reputation-based detection or file signature matches. This quarter we saw a particularly large jump in emails containing dangerous file types," said Matthew Gardiner, cybersecurity strategist at Mimecast. "Mimecast uses multiple layers and types of detection engines, combined with high performance analytics, a diverse set of threat intelligence sources, and computer aided human analysis to identify and stop unsafe emails from getting into our customers' inboxes." **T**

du presents 'Coach Career Award' to Fabio Capello on one of Football's most prestigious Awards Stages

du presented the 'Coach Career Award' and rewarded 10 lucky customers with a special chance to meet their favourite players and coaches at the Ceremony

As part of its continuous efforts to support the national sporting agenda of the UAE, du, from Emirates Integrated Telecommunications Company (EITC), has reiterated its commitment to bolstering the UAE's sporting agenda and recognition as a leading regional sporting hub by participating as one of the official sponsors of the 10th Globe Soccer Awards.

The telco presented the 'Coach Career Award' to Fabio Capello at the distinguished awards celebration and also gave 10 lucky customers an exclusive meet and greet opportunity with the sport's star players and coaches.

'An advocate for sport in the UAE' Abdulwahed Juma, EVP Brand & Corporate Communications at du, presented the award to Fabio Capello in recognition of his illustrious efforts as one of the greatest and most successful football managers of all time. Commenting on their participation in this prestigious event, Juma said: "It is a great



opportunity to have this prominent event in Dubai and, in conjunction with the 2019 AFC Asian Cup, this underscores the UAE's status as a major incubator for various

international sports activities in line with the national sporting agenda.

"du has been involved in several sports initiatives and events in the past, which has culminated in the launch of several premium platforms, such as du Sports, which gives customers direct and exclusive access to diverse sporting content. We are committed to continuing to provide our support and achieve the nation's aspirations – not only in sport, but in all areas of the UAE's future progress," he added.

'The opportunity of a lifetime'

du rewarded the 10 lucky winners of a recent promotion to attend the prominent award ceremony. In doing so, the telco allowed the fans an exclusive opportunity of a lifetime to meet their favourite players and coaches in person. **T**



Two-thirds of organizations intend to deploy 5G by 2020

Some organizations need 5g more quickly than many communications service providers can deliver it - Gartner Survey



Sylvain Fabre

Sixty-six percent of organizations have plans to deploy 5G by 2020, according to a new 5G use case and adoption survey* by Gartner, Inc. Organizations expect 5G networks to be mainly used for Internet of Things (IoT) communications and video, with operational efficiency being the key driver.

"In terms of 5G adoption, end-user organizations have clear demands and expectations for 5G use cases," said Sylvain Fabre, senior research director at Gartner. "However, one major issue that 5G users face is the lack of readiness of communications service providers (CSPs). Their 5G networks are not available or capable enough for the needs of organizations."

To fully exploit 5G, a new network topology is required, including new network elements such as edge computing, core network slicing and radio network densification. "In the short to medium term, organizations wanting to leverage 5G for use cases such as IoT communications, video, control and automation, fixed wireless access and high-performance edge analytics cannot fully rely on 5G public infrastructure for delivery," added Mr. Fabre.

Top Use Cases for 5G

IoT communications remains the most popular target use case for 5G, with 59 percent of the organizations surveyed expecting 5G-capable networks to be widely used for this purpose. The next most popular use case is video, which was chosen by 53 percent of the respondents.

"The figure for IoT communications is surprising, given that other proven and cost-effective alternatives, such as Narrowband IoT over 4G and low-power wide-area solutions, already exist for wireless IoT connectivity," said Mr. Fabre. "However, 5G is uniquely positioned to deliver a high density of connected endpoints — up to 1 million sensors per square kilometer."


"Additionally, 5G will potentially suit other subcategories of IoT that require very low latency. With regard to video, the use cases will be varied. From video analytics to collaboration, 5G's speed and low latency will be well suited to supporting 4K and 8K HD video content," added Mr. Fabre.

Status of 5G Deployment

Gartner predicts that, by 2022, half of the CSPs that have completed commercial 5G deployments will fail to monetize their back-end technology infrastructure investments, due to systems not fully meeting 5G use case requirements. "Most CSPs will only achieve a complete end-to-end 5G infrastructure on their public networks during the 2025-to-2030 time frame — as they focus on 5G radio first, then core slicing and edge computing," said Mr. Fabre.

Mr. Fabre added that this is because CSPs' 5G public networks plans vary significantly in timing and scope. CSPs will initially focus on consumer broadband services, which may delay investments in edge computing and core slicing, which are much more relevant and valuable to 5G projects.

Gartner advises that, to meet the demands of businesses, technology product managers planning 5G infrastructure solutions should focus on 5G networks that offer not only 5G radio but also core slicing and edge computing infrastructure and services for private networks. CSPs alone may not fully satisfy the short-to-midterm demands of organizations that are keen to deploy 5G quickly.

"Private networks for enterprises will be the most direct option for businesses that want to benefit from 5G capabilities early on," said Mr. Fabre. "These networks may be offered not only by CSPs but also directly by infrastructure vendors — and not just by the traditional large vendors of infrastructure, but also by suppliers with cloud and software backgrounds." 

Du Talents expands football talent hunt in UAE

The launch of du Talents will expand exploration to all talents in the UAE and extend the reach of du Football Champions, which has attracted over 21,500 players in its first three years, all hoping for a chance to be selected for du La Liga High Performance Centre, their first step towards football recognition.

The du Football Champions in partnership with LaLiga has been growing in importance with each passing year. Running successfully in its fourth season the du Football Champions, the international scouting platform, officially launched the unveiling of du Talents, the Middle East's first sports tech scouting platform. The announcement was made at a press conference at GITEX.

The first of its kind in the Middle East, du Talents is a digital scouting platform for football talent of all ages, enabling young football players to upload their profiles and highlights of their skills and communicate directly with coaches, which increases their exposure and opportunities for scouting.

Ahmed 'Mido' Hossam, former Celta Vigo player, said: "duFC and du Talents are an amazing opportunity for any young talented football player. Being able to play with a LaLiga club is an unforgettable experience and I encourage you all to



Osman Sultan

participate in the tournament and sign up for du Talents and du Sports. The exposure it provides and LaLiga's development centre are a huge advantage to any player wanting to pursue a football career."

Also speaking at the press conference, Osman Sultan, du CEO said, "Today, we launched du Talents, the Middle East's only sports tech scouting platform, aligned with our commitment to produce tomorrow's champions today.

"This launch also reflects du's leadership in harnessing technology and innovation to

develop and connect talent in the digital age with this disruptive digital platform. du Talents also enables us to extend the highly successful duFC scouting platform we launched 4 years ago, in partnership with LaLiga, into an integrated, comprehensive and sustainable talent ecosystem. These platforms are integral parts of du Sports, which we established to create a distinctive sporting community of fans and talent online and offline across the UAE." "Mido' said he wished he had such facilities when he was young. "I wish I had such facilities like this when I was a bit younger. It's a great opportunity for the kids to express themselves, to build their character and to dream and I think that's the great thing about this project.

"I've heard there is some great talent here and some great coaches as we all know that talent is not enough so you need good coaches to nurture them. It's also important how the children develop at this age so I think these kids have the right platform and hopefully in 5 or 6 years we will see at least 10 to 15 players coming through the system. These kids can realise their dream" When asked what was his dream, 'Mido' said, "My dream was always to play at the top level, compete with the best players in the world and to be one of the best in my country and I can say I have achieved it." **T**

PCCW Media secures the exclusive broadcast rights for Premier League

PCCW Media has secured the exclusive rights of Premier League for the broadcast of the 2019/20 to 2021/22 Premier League seasons in Hong Kong.

Now TV continues to be the exclusive licensed broadcaster in Hong Kong delivering live coverage of all 380 matches, bringing viewers exciting live action throughout the season. Committing to providing viewers with the best viewing experience with the highest quality, a total of 76 matches will be delivered in 4K per season through the Now One set-top box. Now TV customers can

also enjoy matches on-the-go via the Now Player app or relive their favorite matches using Now TV's Video-on-Demand service.

Ms. Janice Lee, Managing Director of PCCW Media Group, said, "We are pleased to extend our long-time partnership with Premier League for the coming three seasons exclusively in Hong Kong.

PCCW Media has once again acquired all rights to the live Premier League matches with pay-TV, free TV and OTT rights. Being Hong Kong's home of sports, the continued

broadcast of the Premier League and the introduction of matches live in 4K reaffirmed our commitment to bringing the world's best sports actions to our customers."

Mr. Paul Molnar, Director of Broadcasting, Premier League, said, "We know that Hong Kong has many passionate fans of the Premier League and our clubs, and that PCCW Media does an excellent job making the competition available to them. We are very pleased to continue our partnership with PCCW Media and look forward to working with them for the next three seasons." **T**

PTCL injects PKR 4 Billion in U Microfinance Bank for growth

Pakistan Telecommunication Company Limited (PTCL) has signed an agreement for PKR 4 Billion Unsecured Subordinated Debt Facility (Tier 2 capital) with U Microfinance Bank (U Bank), which is a wholly owned subsidiary of PTCL. This capital injection will enable the bank to further capitalize on the growth opportunities possible in Pakistan's microfinance sector.

In the constantly changing competitive landscape, this Tier 2 facility will enable U Bank to expand its current customer reach for serving the under-served population. U Microfinance Bank plans to utilize these funds in its business operations and expansion plans. Serving its customers through disruptive innovation and digitization, the bank will focus on achieving its growth targets.

Not only will it enable the bank to utilize additional capital with flexibility as it grows, the debt amount will also contribute towards U Bank's Supplementary/Tier 2 Capital for Capital Adequacy Ratio (CAR) as per the guidelines for Microfinance banks that are set out by State Bank of Pakistan (SBP). On the occasion, Dr. Daniel Ritz, President



Dr. Daniel Ritz

& CEO PTCL, and Chairman U Microfinance Bank, said, "Seeing the potential in U Microfinance Bank's ability to further expand and grow, PTCL has taken the decision to further inject Tier II capital into the bank. This is in line with PTCL's commitment to support Pakistan and its economy as a whole."

Expressing his views, U Microfinance Bank's President & CEO, Kabeer Naqvi, said, "U Microfinance Bank has been successfully enabling underserved Pakistanis and has been positively contributing towards poverty alleviation and economic empowerment. This Tier 2 injection is a testament to our sponsor's confidence in our ability to deliver positive results. It also reiterates PTCL's commitment towards contributing to the economic uplift & enablement of Pakistan."

Currently, U Microfinance Bank serves more than 850,000 customers, where 22% of the served customers are women. By the end of 2018, U Bank's deposit portfolio grew from PKR 11.97 billion to PKR 19.0 billion, while the loan portfolio grew from PKR 10.6 billion to PKR 17.0 Billion. Most significantly, the number of employees increased from to 1,321 to 1,980, where 9% of the total work force comprises of women.

PTCL & U Microfinance Bank are at the forefront of fighting poverty in Pakistan and will continue to play their role in improving the economic situation of the people of Pakistan. **T**

Telenor hosts "The future of Machine Learning & AI"

Stephen Brobst, CTO of Teradata, conducted an enlightening session on the future of Machine Learning (ML) & Artificial Intelligence (AI) at Telenor Pakistan headquarters '345' in Islamabad. The session was attended by Telenor Pakistan employees and executives from across industries including Irfan Wahab Khan, CEO Telenor Pakistan and President OICCI, Haroon Bhatti, Chief Business Officer (CBO) at Telenor Pakistan, BadarKhushnood, Cofounder & VP at Bramerz, QazafiQayyum, Country Manager Teradata, Khimde Ando, CEO Mitsubishi Corporation, Brig. Tahir Mehmood, Director ISPR, AVM Faaiz Amir, Vice Chancellor Air University, Barkaan Saeed, Ex-Chairman PASHA and Retd. Brig. Saleem Ahmed Moeen, CEO SecureTech.

The participants learned about the future of artificial intelligence, the role of emerging



Irfan Wahab Khan

technologies, differences between deep and shallow learning and their application techniques, and the opportunities of using advanced analytics to create high-value outcomes.

"We have entered a new era of analytics with machine learning and artificial intelligence algorithms beginning to deliver on the long-promised advancement into self-learning systems," Brobst told the audience. "These approaches allow us to solve previously intractable problems with completely new attack plans. The appetite of deep learning algorithms for vast amounts of data and the ability to derive intelligence from diverse sets of noisy data allows us to go far beyond previous capabilities in what we used to call advanced analytics," he added.

Brobst informed that in order to be successful with the use of new technologies we need to fully understand their capabilities and limitations. He also stressed the need to develop new skill sets in order to harness the power of deep learning to create business value in an enterprise. **T**

PSEB IT Export Award

Aftab Raza Khan



Syed Ali Abbass Hasani, MD PSEB

Pakistan Software Export Board IT Export Awards were held in Islamabad. The event was attended by Federal Secretary, IT and Telecommunication, Maroof Afzal, PSEB Board members, senior government officials and representative of Pakistan's IT Industry.

The Federal Secretary IT & Telecommunication lauded the IT sector for its contributions to Pakistan. He said that Pakistan's IT industry has reached an important milestone in its journey and has positioned itself to become one of the leading countries in the software and outsourcing services market and that it is vital at this stage to attract major investments in the IT sector. He further stated that improving IT export remittances by IT companies to the State Bank of Pakistan is a step in the right direction and that several recommendations based on industry consultations for ease of business and hence improving IT export remittances have been proposed and are under

consideration by the senior leadership of the Government.

PSEB IT Export Awards is an immensely important yearly event in which Pakistan's top IT exporters are recognized for their contributions to Pakistan's economy and therefore to the growth of the IT Industry in Pakistan. These exporters carry the flag of Pakistan high and contribute towards projecting Pakistan's as a vibrant and dynamic nation brimming with top notch talent and high end expertise. It is no coincidence that the winners of this year's awards are providing services to world's largest and most reputed companies across the globe.

Federal Secretary for IT & Telecommunication, distributed the trophies to the winners. Top IT exporters for 2018 include NetSol Technologies, S&P Global Pakistan and Systems Limited. Top IT Products and Solutions exporters were Netsol Technologies, i2c Pakistan and

Mentor Graphics. In IT Consultancy Services export category, winners were Systems Limited, Teradata Global Consulting Pakistan and Afiniti Software Solutions. Business Process Outsourcing export awards went to S&P Global Pakistan, Ibex Global Solutions and MTBC. Call Centre Services awards went to SBT Pakistan, Ahsan Enterprises and Mindbridge. Top IT Startups exporters were Digitronics Labs, Synavos Solutions and 3D Modelling Services.

Managing Director, Pakistan Software Export Board, Syed Ali Abbass Hasani said that in line with the policy of the current government to bolster the IT Industry, all possible government incentives are being offered to the IT industry including zero income tax on IT exports till June 2025, zero income tax for PSEB registered IT start-ups for 3 years, up to 100% foreign ownership of IT companies, up to 100% repatriation of profits for foreign investors, and tax holiday for venture capital funds till 2024. He said that the IT industry is already among the top 5 net exporters of the country with the highest net exports in the services industries, the highest growth rate in comparison with all other industries, and the highest growth in the region. He said that it is a matter of great pride that Pakistan is ranked the 3rd most financially attractive location in the world for offshore services, according to A.T. Kearney's Global Services Location Index. There are more than 6,000 IT & Allied companies are currently registered with SECP comprising of both domestic and export oriented enterprises. Whereas, PSEB has over 3,000 active member companies.

The number of IT companies is expected to surge with rise of entrepreneurship in the younger population of the country. MD PSEB congratulated the winners of PSEB IT Export Trophy and thanked the Federal Secretary IT & Telecommunication, Mr. Maroof Afzal and the esteemed guests in recognizing and applauding the real heroes of the IT industry. **T**

Vodafone partners Amdocs to automate billing operations

OSS/BSS solutions provider Amdocs has successfully helped Vodafone India to automate its billing operations, and has enabled the telcos to roll out new services, offers and service plans for its post-paid consumers and enterprise customers in a faster manner.

The transformation has enabled Vodafone India to reduce the duration of billing cycles and deliver accurate bills to all its post-paid customers faster. This has resulted in a better customer experience and improved revenue realization, according to an official statement.

Amdocs had first implemented its Service Monetization suite at Vodafone India in 2015, and subsequently, in 2016, signed a multi-year services contract to manage and automate operations.

"The transformation also enabled us to significantly improve our digital offerings to customers enabling them to get their account information and services through digital channels such as the My Vodafone APP and Vodafone websites on a real-time basis," Vishant Vora, chief



Gary Miles

technology officer at Vodafone India said in a statement.

"Vodafone India is a strong consumer brand built over the years by continuously focusing on the customer," said Gary Miles, chief marketing officer at Amdocs.

Amdocs had previously bagged a deal with Bharti Airtel to create an innovation



Vishant Vora

foundry to bring new services to its customers in India. Under the partnership, Amdocs is deploying machine learning and advanced Artificial Intelligence (AI) based technologies across Airtel's multiple lines of business to help pre-empt and self-heal operational issues, introduce smartbots into digital channels, and quickly launch and activate new services, thereby enabling a seamless customer experience. **T**

T-Mobile adds more phone subscribers than expected

T-Mobile US Inc. beat Wall Street estimates for net new phone subscribers who pay a monthly bill, adding 1 million customers in the fourth quarter.

The third largest U.S. mobile carrier was expected to add 857,900 new phone subscribers, according to research firm FactSet.

Last month, T-Mobile won backing from two national security reviews for its deal to buy smaller rival Sprint Corp as it strives for more scale to compete with Verizon Communications Inc. and AT&T Inc.

The report on subscriber numbers comes a day after Verizon beat Wall Street estimates for net new phone subscribers who pay a monthly bill, adding 650,000 customers in the fourth quarter.

T-Mobile's postpaid phone churn, or the percentage of subscribers who leave a service provider, was 0.99 percent in the fourth quarter, down from 1.02 percent in the quarter ended Sept. 30.



For the third quarter, T-Mobile exceeded analysts' estimates for net new phone subscribers and profit, driven by its competitive wireless plans and trade-in offers for iPhones aimed at fending off its bigger rivals. **T**

Ericsson and Panasonic Avionics bringing connectivity to the skies with 5G-ready platform

Ericsson and Panasonic Avionics Corporation (Panasonic) have announced that Ericsson's Core Network as a Service solution is now live, supporting connectivity services across multiple markets served by Panasonic.

Ericsson's Core Network as a Service solution will help Panasonic and its subsidiary AeroMobile, a global GSMA telecoms operator, provide data, voice and messaging services to the millions of airline passengers that use these services in-flight.

The collaboration between Ericsson, Panasonic and AeroMobile started in 2016. It is now fully operational and delivers services to Panasonic customers worldwide.

As part of Panasonic's initiative to bring a superior connected experience onboard commercial aircraft, Panasonic and Ericsson have seamlessly migrated the existing service operating across a global fleet of aircraft onto the core network, delivered as a service, while maintaining network performance and customer



Kevin Rogers, CEO AeroMobile

experience.

Every passenger whose mobile service provider has a roaming agreement with AeroMobile can use the service, which is supported by mobile operators across the globe and delivered in-flight on board more than 20 of Panasonic's global commercial

airline customers.

The geo-redundant solution is delivered through Ericsson's ground-breaking Core Network as a Service and includes virtualized network applications such as packet core, unified data management, mediation, and mobile switching delivered on Ericsson Network Functions Virtualization (NFV) Infrastructure. The core network solution is part of Ericsson's as a Service offering to service providers globally, and is able to support 5G services to the passenger and airline.

Kevin Rogers, Chief Executive Officer, AeroMobile, says: "Our partnership with Ericsson, and the technology provided, will allow us to better serve the communications needs of our passenger and airline customers. Furthermore, the solution enables us to grow our footprint and expand into other services offering a richer experience for the passenger and operational efficiencies for our airline customers. We are looking forward to continuing our exciting collaboration with Ericsson". **T**

TIM and Ericsson make first 5G NR video call using mmWave spectrum in Europe

Telecom Italia (TIM), Qualcomm Technologies and Ericsson have successfully completed the first, live video call in Europe using 5G millimeter wave (mmWave) spectrum. The partners used a smartphone equipped with the Qualcomm Snapdragon X50 5G chipset on Ericsson equipment to make the call during the inauguration of the TIM's new 5G Innovation Hub in Rome.

The new TIM 5G Innovation Hub aims to attract and support an ecosystem of startups, research centers and other stakeholders interested in the digital transformation. In addition to the 5G video call, TIM also showcased a series of new

services including a remote-driven car; a virtual museum tour, remote controlled industrial robots; and multiplayer interactive video gaming using augmented reality.

Mario Di Mauro, Chief Strategy, Innovation & Customer Experience Officer at TIM, says: "When we started to define the strategy and the development plans for 5G, we immediately realized that such a massive challenge could not be faced without the support of a wide range of partners committed to the same goal. We therefore proposed Qualcomm Technologies set up a place where work on the new 5G services and every business idea could find a quick



realization thanks to the support of leading international technology players, innovative partners and start-ups from the local and national ecosystem." **T**

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