

Telecom Industry News - March 2018

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This month's news was dominated by the announcements, releases, and advancements of global partnerships that continue to evolve 5G, loT, and network technologies. Highlights also include plans for the first 4G network on the moon to support of a 2019 mission and a Microsoft renewable energy deal in Karnataka, India. The top stories from the month are summarized below.



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5G Update

Advancements in solutions testing born from collaboration dominated this month's 5G news. The concept of digital massive MIMO (multiple-in-multiple-out), introduced in 4.5 G technology, holds the promise of vastly improving network capacity and energy efficiency by increasing the number of data signals that can be sent and received as well as optimizing performance. Testing the performance of multiple signals, however, remains a big challenge. To address this, <u>Cobham</u> <u>Wireless announced this month</u> that it has delivered its massive MIMO test solution to China Mobile Research Institute, creating a cost-effective and efficient way to validate massive MIMO core technologies and system functions.

To expand its 5G customer offerings, <u>Coriant announced a partnership with Affirmed Networks</u>. Building upon its new Multi-Sided Platform Partner Program, the agreement allows Coriant to introduce the industry's first cloud-native 5G mobile core solution with advanced capabilities including network slicing, integrated virtual probes, and end-to-end service automation, as well as significant performance gains.

Ericsson has been busy this month. In a joint project to deploy and explore new use cases for 4G and 5G, <u>Swisscom and Ericsson are closely collaborating</u> on end-to-end network slicing for critical communications. The project is based on Ericsson radio access and core networks and early on will focus on how functionality can support critical communications over such public networks as public transportation. In a new milestone in Ericsson's collaboration with TIM toward early 5G adoption, the companies have started to digitalize TIM's nationwide radio access network in Italy. They have deployed the <u>first virtual Radio Access Network (RAN)</u> platform in a live advanced LTE network in the city of Turin. Additionally, in support of T-Mobile's commitment to deploy a nationwide 5G network in the United States, Ericsson has announced that it will <u>provide T-Mobile</u> with 5G radio access products. The new products, available for 600 MHz and mmWave in 28 GHz and 39 GHz, will allow T-Mobile to begin building out 5G in its network this year.

In further US 5G developments, <u>Nokia and T-Mobile will roll out a nationwide 5G multi-band</u> <u>network</u> using the commercial Nokia 5G solution. Nokia will also advance T-Mobile's existing 4G LTE network by providing advanced RAN support for 4G and 5G subscribers.

To cap 5G news, <u>Netcracker Technology unveiled the launch of its 5G Monetization solution</u>, designed to help service providers accelerate commercialization of new 5G-enabled services. <u>Radisys announced the delivery of a smart</u>, <u>virtualized RAN Accelerator solution</u> to

deliver 10x performance for 5G applications. It enables mobile operators to offload computeintensive operations, such as networking and crytography workloads, onto FPGA boards to overcome performance bottlenecks. And, <u>Deutsche Telekom and Huawei</u> have successfully completed multi-cell high millimeter waves field tests of 5G mobile communications with 73GHz mmWave technology under an array of real-world environments at the DT campus in Bonn, Germany.

Network News

In network news, Vodafone has unveiled collaborative plans that push the frontiers of connectivity. In 2019, a half-century after astronauts first walked on the moon's surface, <u>Vodafone and Nokia will</u> <u>bring 4G coverage to the celestial body</u> for the first time in support of a mission by PTScientists. Earthside, Vodafone has become Automobili Lamborghini's connected car partner. Starting in 2019, Lamborghini drivers will have access to an infotainment experience and the world's largest Internet of Things (IoT) network, with connectivity to over 190 countries. Finally, in an industry first, this month Vodafone UK offered all new and upgrading Home Broadband customers <u>the ultimate</u> <u>speed guarantee</u> with a minimum of 25 Mbps.

March also included two important developments involving Ericsson. In a deployment first for North America, Ericsson successfully deployed Ericsson Expert Analytics for T-Mobile across its nationwide network of more than 72 million subscribers; the goal is to monitor the customer experience across all mobile services to elevate it to new heights. Additionally, <u>NTT DOCOMO</u> <u>selected Ericsson</u> to automate the deployment of Ericsson's virtual infrastructure manager (VIM) solution, Ericsson Cloud Execution Environment (CEE) based on OpenStack, at commercial sites in Japan.

<u>Managed software-development wide area networks services (SD-WAN)</u> got a lift this month with the integration of EXFO's NFV Service Assurance solution with the ADVA Ensemble open virtualization suite. The fully integrated and automated solution provides communications service providers with tools to transform their networks from physical to digital and drive new efficiency and revenue.

With more and more connected devices and signal interference straining in-home wi-fi networks, <u>Nokia introduced several enhancements</u> to maximize performance and simplify network management. The enhancements are designed to help reduce or more efficiently resolve service issues that can account for up to 30 percent of customer calls each month. In other Nokia news, the company is collaborating with <u>Verizon and Intel on Cloud RAN architectures</u> to provide flexibility crucial to the operator's future services and to meet requirements for 4G, 5G, and IoT in the cloud.

In other stateside news, <u>T-Mobile announced a partnership with NBC5</u> that would add 600 MHz to LTE network, enhancing capacity more than a year earlier than planned for large areas of north Texas. The enhancement provides capacity and coverage for subscribers while also laying the groundwork for 5G.

<u>Dictum Health also announced it has chosen AT&T</u> to power mobile connectivity for its Virtual Exam Room (VER) product line, which provides clinical care almost anytime and anywhere through telehealth solutions.

To offer its corporate customers the most complete, flexible, and secure multicloud services in the B2B market, <u>Telefonica Business Services announced the inclusion of Microsoft Azure</u> services in its cloud portfolio.

Global partnership news proliferated this month. In a modernization project to prepare for the launch of 4G services in seven African countries, <u>Nokia and Orange Middle East & Africa</u> are rolling out a Nokia single radio access network and network management technology. The modernization involves 11,000 radio sites in Egypt, Ivory Coast, Cameroon, Senegal, Mali, Guinea-Bissau, and Niger in one of the largest LTE rollouts in Africa.

In an effort to accelerate internet exchange speeds for communication service providers globally,

<u>Omantel Wholesale and DE-CIX embarked on a partnership</u> announced this month. The speed at which local, regional, and global service providers will be able to connect to DE-CIX IXs globally will be reduced. Additionally, Omantel Wholesale is the first connectivity partner in the Gulf to provide ultra-low latency networking to DE-CIX IX exchanges in Europe and the US.

<u>VOSS Solutions and BroadSource</u> will develop a range of automation solutions for Cisco's BroadSoft platforms, BroadWorks and BroadCloud. Service providers will see enormous advantages in new automation tools and professional services to be competitive in the cloud collaboration environment.

In other global news, <u>Microsoft Corp.</u> has announced its first renewable energy deal in the Karnataka state of India. Microsoft will purchase 80 percent of the projected electricity needs for its new facility in Bangalore and the deal encourages investment in developing local solar energy initiatives.

<u>Telia Carrier and Coriant</u> completed their first complete fiber field trial with real-time optical awareness on the Telia network between Hamburg and Prague. An industry first, the trial showcased the ability to reduce manual provisioning and increase service agility.

Etisalat, the leading communications provider in the Middle East, serving 142 million customers with a range of 3G, 4G, and fiber-to-the-home services, has selected <u>NEC/Netcracker's Network-as-a-Service (NaaS) solution</u> to deploy a complete virtual customer premises equipment (vCPE) solution for enterprises.

At the Optical Networking and Communication Conference & Exhibition, <u>Huawei officially released</u> <u>its latest 400G optical network solution</u> for commercial use. Huawei's network optimizes high-speed transmission signals, balancing between the theoretical limit and commercial use.

Mobile and Wireless

To enhance the passenger experience, <u>Telenor Maritime has teamed up with Finnlines</u> to introduce its mobile ecosystem onboard passenger ships. The deployment of a connectivity platform with Mobile/3G, Premium Wi-Fi, Ka-VSAT and mobile broadband backhaul benefits passengers on routes in the Baltic Sea.

<u>Orange Bank</u> has introduced a new and innovative customer experience that allows customers to interact with their bank when and where they want via a digital advisor called Djingo. Djingo is powered by IBM Watson delivered through IBM Services.

To help telecom service providers better understand key trends and identify new opportunities for monetization, <u>Mobileum and Juniper Research</u> announced a new roaming revenue and CX report. The research will help telecom service providers provide better customer service to travelers and better overall network efficiency.

Connected Devices and the Internet of Things (IoT)

Ericsson dominated news in connected devices and IoT this month. Enabling massive adoption of IoT is a precursor to making 5G a reality. In recognition of this, Ericsson launched the IoT Accelerator Marketplace to address the need for collaboration within the digital ecosystem community. The initiative will benefit both developers and service providers' needs within the digital ecosystem needs. In Greece, Ericsson has completed deployment of cellular NB-IoT clusters in the COSMOTE 4G network to support emerging mMTC (massive Machine Type Communications) use cases. The network covers eleven Greek cities and hotspots. Additionally, in a partnership, Singtel and Ericsson have made a nationwide cellular IoT network commercially available for the first time in Singapore to accelerate the proliferation of IoT devices.

In other IoT advancement news, <u>Nokia and Marubeni signed a Memorandum of Understanding</u> to develop, test and deliver IoT services to local and global enterprise customers. The solution will be based on Nokia's worldwide IoT network (WING).

In Norway, <u>Telenor Group and Wireless Trondheim</u> opened the doors of the new IoT ProtoLab for entrepreneuers, scientists and students seeking to develop new IoT services and products. The goal is to increase innovation and new national competences in addition to promoting healthy competition among Norwegian entrepreneurs.

Seeking to usher in a new era of connected car solutions, Verizon announced the launch of <u>Verizon Connect</u>. Verizon Connect integrates two recently acquired fleet and mobile workforce management companies with Verizon's existing connected vehicle division under a single, combined brand.

This month also brought an announcement from <u>Kerlin and IoTerop</u>, who announced that Kerlink will leverage widely used open standards for firmware updates and remote management of LoRaWAN end-devices. The collaboration confirms Kerlink's long-term commitment to compatibility and interoperability in its growing portfolio of products as IoT evolves.

In New Jersey, <u>Hudson Fiber</u> confirmed its agreement to deploy smart grid connectivity across eight prime properties in Jersey City, Hoboken and Paramus. The properties will connect to the HFN smart-grid platform.

Security

New research this month from Juniper Research finds that <u>global business spend on cybersecurity</u> <u>solutions will grow by 33%</u> over the next four years, reaching \$134 billion annually by 2022. Driven by digital transformation and IoT but also the increasing prioritization of security by medium-sized enterprises, the spend will accelerate as businesses understand the threat posed and work to increase asset protection.

While Juniper projects spend will increase, <u>a new report from Verizon</u> found that speed-to-market priorities and a lack of threat awareness across numerous industries put enterprises' mobile data security at risk. Nearly a third of survey respondents indicated knowingly sacrificing security to prioritize business performance in the shorter term.

To manage cyber risk by catching significant security vulnerabilities before they are exploited, <u>Aricent announced the launch</u> of its Highly Automated Vulnerability Assessment Orchestration Containers (HAVOC) framework. The framework is intended to help identify product and infrastructure vulnerabilities earlier in the DevOps cycle.

Telefonica announced two new agreements this month. In the first, it announced <u>an agreement with</u> <u>McAfee to reinforce the online security for Telefonica's broadband and mobile customers</u> across its markets in Europe and Latin America by embedding the McAfee Secure Home Platform in routers to protect customer devices. The agreement is a first in which a telecommunications company will provide security for all customers regardless of where they connect from. In the other agreement, <u>Telefonica Business Solutions and Huawei</u> have signed a global alliance focused on the development of a Network Service Platform and CloudVPN to power SME, small-to-medium enterprises. The alliance is intended to accelerate digital adoption and offer increased cybersecurity protection.

To deliver secure, ultra high-quality IP voice and video services to enterprise customers, <u>Nokia</u> <u>unveiled its cloud-native Enterprise Session Border Controller</u>. The software is intended to mitigate cyber attacks, optimize the use of IT bandwidth for communications, and block unauthorized access attempts.

Atos and Senet announced a partnership this month to bring security to LoRaWAN networks. The partnership will enable customers to use Atos' comprehensive IoT security suite, Bull Horus, integrated with Senet's LoRaWAN cloud-based network connectivity platforms for IoT. Atos is the only company in the market that provides a complete, end-to-end security system for IoT.

Innovation

In innovation news, AT&T announced the opening of its <u>first AT&T Foundry innovation center in</u> <u>Latin America</u>. Located inside AT&T's corporate headquarters in Mexico City, the center will focus on developing technology solutions for emerging markets. IoT, software development, and new technology trials will be central to the AT&T Foundry efforts.

To advance improved commercial in-flight connectivity, <u>Gilat launched its AeroEdge 6000 terminal</u> this month. The highly efficient, high-performance terminal operates in both Ka and Ku band, providing aeronautical broadband satellite communication for high-speed internet and multimedia applications.

The Society of Cable Telecommunications Engineers (SCTE) and its global arm, the International Society of Broadband Experts (ISBE) announced a joint effort to provide <u>training for Millicom's</u> <u>cable workforce in Latin America</u>. The agreement gives 700 employees and business partners access to Spanish language training in on-premises installation, cable distribution, and wireless technologies. Millicom operates with the commercial brand Tigo in Latin America.

<u>Italtel and the Consiglio Nazionale della Richerche (CNR)</u>, Italy's national research council, signed a new framework agreement intended to promote research, knowledge exchange, and innovation within the country's information and communication technologies sector. The agreement is expected to launch an array of new programs and initiatives.

M&A

In mergers and acquisitions news, <u>GTT announced this month that it had acquired Accelerated</u> <u>Connections (ACI)</u>. ACI, the Toronto-based provider of managed networking, VoIP, and colocation services, gives GTT one of the largest non-incumbent network footprints in the Canadian market.

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