Telecom Industry News

By: Scott St. John

This month brought news of a massive $146 million merger between T-Mobile US and Sprint Corporation to accelerate nationwide 5G innovation. Collaborations between enterprises resulted in several key proof of concept innovation scenarios and use cases to advance preparations for 5G. And eight countries in western and central Africa gained access to the latest in big-screen cinematic technology, and the FCC slammed Tele Circuit Network Corporation with a $5.33 million fine.

The top stories from the month are summarized below. To view all the news as it breaks, check out *Pipeline*'s News Center or subscribe to receive our weekly news summary.

Industry Events

WUG 2018

No one quite does it like WeDo. *Pipeline* had the opportunity to attend WeDo Technologies' 2018 Worldwide User Group (WUG18) in Cascais, Portugal earlier this month. The event brought together over 250 professionals from around the world, including those from nearly 70 service providers, in an exciting and compelling three-day event forum that rivals many larger "name brand" industry events.

The event featured back-to-back sessions detailing how WeDo's customers are using WeDo's solutions to safeguard their revenue and predict, prevent and catch risks. It spotlighted digital transformation initiatives at service providers around the globe, dove into important topics such as the Internet of Things (IoT), and showcased the company's Open Innovation project. The conference also featured timely and relevant presentations from WeDo partners, including Ericsson and Microsoft, on topics such as 5G and artificial intelligence (AI). In addition, it offered service-provider attendees a 60-day trail of its RAID.Cloud product for free.

WeDo spared no expense to make sure the event was success, valuable, and enjoyable for all participants. Direct access to WeDo's executive leadership was peppered throughout the event and throughout the network activities both at and outside of the venue. Most notably, *Pipeline* had the opportunity to interact directly with many WeDo's service-provider customers throughout the event, who spoke highly of the event and glowingly about WeDo. One after the other, customers stated their confidence in the company, its products, and—most importantly—its ability to deliver. From our perspective, WUG18 certainly delivered on all fronts, and we're looking forward to the company's North American and Asia Pacific events in the months to come.

Digital Transformation World

The following week, *Pipeline* headed to Nice, France for the TM Forum's Digital Transformation World (formerly Management World, TeleManagement World, etc.). The overall sense was that was that this year's event fell flat, and a general sense of urgency was felt by exhibitors and participants on the state of the event—and the industry as a whole. Conversations throughout the show were spun around whether the lower event attendance was a sign of the times or a result of the ongoing repositioning of the TM Forum. Several of the people *Pipeline* spoke to felt the agenda was overreaching and failed to address the real-world problems facing operators today. Yet, several also stated they found value in the event citing impressive catalyst programs, prearranged customer

meetings, and quality of the executive meeting service as reasons. Overall, it seems the core focus of the TM Forum, such as catalysts, is still strong and a notable quality remains with the event. But, the juxtaposition between the traditional market (OSS/BSS) and the new digital world leaves a question of whether the event can come together to effectively address one, both, or either.

Pipeline's independent meetings with both service providers and technology companies were productive. Most notably, a focus on data aggregation—or the "single pane of glass" approach—was a common topic. Companies such as Federos showcased system consolidation for better data decisioning, and we had an opportunity to meet with its customer, CGI, who has used Federos' product for massive system consolidation. Look for an upcoming case study in a future issue of *Pipeline*. Similarly, *Pipeline* met with EXFO, who is putting its recent acquisition of Ontology to good use. The company announced "Automated Common Cause Analysis" to map performance metrics to network topology and speed trouble shooting.

Also at DTW, *Pipeline* also got a sneak peek at new market entrant Ziotis, who is emerging from what they call "stealth mode." Ziotis is leveraging the combined power of AI and blockchain to foster collaboration across different organizations, networks, and domains. The company is promoting a "zero pane of glass" approach whereby AI and automation can action data without human intervention. AI was consistent theme and remains a hot topic, and an ongoing debate on what is being called "AI" ensued. The dividing line seems to be algorithms that sit atop data lakes, versus an actual intelligence that can learn and make independent decisions on its own.

The Sigma Systems team was out in full force at DTW, sporting fresh new kicks in what we feel was the best branding initiative at the event. If you saw a pair of trendy, orange Adidas afoot a tech guru at the event, that was them. But aside from being best-in-show from a branding perspective, behind the scenes Sigma has undergone its own transformation. The company's portfolio now encompasses all company products to form a consolidated offering it has dubbed "Next Done Now." Sigma was also recognized in *Pipeline*'s annual Innovation Awards, winning the Innovation in Business Support Systems category and being awarded runner-up in the Innovation in OSS category.

Pipeline's awards are voted on by an exclusive, external judging panel comprising technical executives from service provider and analyst companies—and this year featured judges from Singtel, Telenor, Windstream, and Analysys Mason.

Pipeline Innovation Awards

Just prior to DTW in Nice, France *Pipeline* announced the results of its annual Innovation Awards Program and held its annual Innovation Award reception. This year, the Innovation Awards program featured the latest technical innovations across categories such as Networking Technology, Big Data and Analytics, Cloud Technology, Managed Services, Security & Assurance, OSS, BSS and more. Winners of this year's program included: CENX, CSG, Netcracker, Radisys, Sigma Systems, and WeDo—with Netcracker sweeping three categories. For more on the results of this year's Innovation Awards program, which was announced just prior to DTW, check here.

Super Early Bird nominations are now open for the next *Pipeline* Innovation Awards, which allows companies to enter the competition at the most cost-effective rate. This year's program features new categories and even the ability to suggest new, custom categories. To enter the Innovation Awards competition, click here using promo code "PLSEB18". This special opportunity to enter the awards is only available for a limited time so, for those who know they want to compete, don't delay.

Mergers and Acquisitions

In an epic $146 billion merger, T-Mobile and Sprint combined forces, accelerating 5G innovation and increasing competition. T-Mobile US and Sprint Corporation announced entry into a definitive agreement in an all-stock transaction at a fixed exchange ratio of 0.10256 T-Mobile shares for each Sprint share or the equivalent of 9.75 Sprint shares for each T-Mobile US share. Based on closing share prices on April 27, this represents a total implied enterprise value of approximately $59 billion for Sprint and approximately $146 billion for the combined company.

To boost CX, Verizon has acquired Moment, a New York-based design and strategy firm founded in 2002. Verizon Communications employees can immediately join the company's growing in-house design team and be responsible for creating end-to-end customer experiences including in-store, online, mobile and live customer service by phone or chat.

In Europe, Vodafone announced it will acquire Liberty Global's operations in Germany, the Czech Republic, Hungary, and Romania. The enterprise value of the acquisition is 18.4 billion Euros.

5G Update

5G updates continued apace this month. In a joint proof of concept (PoC) called the Blade Runner project, multiple carriers—including Vodafone, Verizon, BT, AT&T, Orange, du, NTT, and TIM—participated in complex service assurance scenario testing. Designed to develop the underlying OSS infrastructure required for multiple carriers to work together to deliver end-to-end service orchestration, the project will ultimately help carriers serve large enterprise customers with multiple global locations and complex service assurance scenarios—leveraging industry standards such as ODA, ONAP, and open APIs.

After several rounds of rigorous testing and evaluation, Huawei's 5G NR products have passed TUV SUD's—the EU's certification authority's—strict verification requirements to achieve CE-TEC. Huawei has also signed a joint innovation agreement with China Unicom on 5G network slicing, which entails plans to carry out research, demonstration, and application to develop key technologies and solutions for China Unicom's 5G network slicing services and applications.

Ericsson and the Fraunhofer Institute for Production Technology have teamed up to explore and develop 5G industrial applications. The first use case—the use of low latency to improve production of jet engine components for MTU Aero Engines—was presented during the last week of April at the Hanover Fair in Germany. Over in Italy, Ericsson was selected by Italian operator Wind Tre to virtualize its core network as part of the evolution of Wind Tre's network to 5G Core.

NTT DOCOMO welcomed the xRAN Forum's release of the xRAN Fronthaul Specification in mid-April. The release sets the foundation for open radio access network (RAN) architecture, which contributes to further advancing the RAN and expanding the ecosystem in the 5G era. In further 5G-related cooperation, NTT DOCOMO is collaborating with Nokia to showcase a 5G technology innovation that will deliver massive capacity to address the ever-increasing demand in video data and applications. And, Nokia and SFR have successfully completed a 5G radio call using the 3GPP-compliant 5G New Radio (NR) system over-the-air on the 3.5GHz frequency band—making them the first in France to do so. The test took place May 3 at the Nokia 5G Test Network and Competence Center in Paris-Saclay, France.

Network News

News of developments in Latin America percolated this month. Telia Carrier announced an expansion of its global IP backbone into Mexico to provide wholesale IP Transit, Ethernet, IPX and Cloud Connect for Internet Service Providers (ISPs), content and cloud providers in the region. GlobeNet deployed new submarine cable linking Argentina to Brazil, using infrastructure already deployed in Bermuda, Brazil, Colombia, the United States and Venezuela. The expansion is intended to attract OTTs, cloud providers and carrier customers looking to enhance their reach throughout the region. And, Latin America now has an open network, thanks to InterNexa and Coriant, which together announced the successful completion of an open optical transport field trial featuring disaggregated 100G and 200G transmission over third-party optical infrastructure.

In May, US network expansion and infrastructure improvement news rolled in. Spectrum Enterprise, a part of Charter Communications, announced an investment of more than $1 billion in new fiber infrastructure in 2018. The improvements will increase the density of its national fiber network and allow the deployment of new tools, training and resources required to provide a differentiated client experience. Declaration Networks Group (DNG) and Microsoft have entered an agreement to deliver broadband internet access to rural areas of Virginia and Maryland. The service will benefit

approximately 65,000 people on the Eastern Shore of Virginia, including Accomack and Northampton Counties, and Garrett County, Maryland, over the next three years. Southern Telecom, Inc. (STI) announced Georgia System Operations Corporation (GSOC) has entered a leasing agreement for dark fiber on STI's Atlanta central business district fiber ring. Bluebird Network, a Midwest telecommunications company, announced an expansion of its fiber-optic network with 45 fiber route miles in the St. Louis metropolitan area and St. Charles County. The new network build, which began this month, is projected to be complete by year's end.

The FirstNet Association announced three initiatives to support public safety and give back to causes dear to the first responder community: the APCO Sunshine fund, which provides financial aid to telecommunicators and immediate family members who are in need of support; the National Fallen Firefighters Memorial, which provides programs and resources for the families for fallen firefighters and for the fire service; and the National Law Enforcement Officers Memorial Fund, which aims to make life safer for those who serve.

In other news out of the US, the FCC proposed a $5,323,322 fine against Tele Circuit Network Corporation for slamming and cramming. The Georgia-based phone company is alleged to have switched consumers from their preferred carrier to Tele Circuit without their permission, misled consumers into believing that telemarketing calls were from the consumer's current carrier, provided fabricated verification recordings of consumer consent to the FCC, added unauthorized charges to bills, and failed to fully respond to a Commission inquiry.

In Europe, ADVA announced that Chaos Computer Club utilized the ADVA FSP 3000 CloudConnect to provide the continent's largest conference of digital experts—12,000 conference attendees in all—with ultra-fast broadband. To bring 4G to rural communities in Scotland, EE has built its 90th new site in the country within the last 12 months. As a result, 4G is now available for the very first time in some locations, and coverage extends over more than 75 percent of the country.

News on global entertainment also dominated May updates. One of the fastest-growing international sports, Esports features ESL tournaments taking place in arenas around the globe as players and teams battle in front of a live audience and millions of online fans. ESL has selected Vodafone as its Premium Partner. Vodafone will sponsor ESL's flagship event series, Intel Extreme Masters, ESL One and ESL Pro League. In other global entertainment news, Orange, Vivendi, and CanalOlympia have joined forces to bring the big-screen cinematic experience to central and western Africa. CanalOlympia is the leading network of cinemas and performance venues deployed by Vivendi in the region. As part of this partnership, Orange will offer its "Cinédays" programme in CanalOlympia cinemas in eight countries. In Canada, TELUS launched 4K HDR TV to offer live and on-demand 4K content for Optik TV customers.

In Asia, Telstra expanded its world-first "Always On" service to provide more bandwidth options and lower latency on some of Asia's busiest subsea cable routes—Hong Kong to Singapore and Japan to Hong Kong. The service will use Telstra's cable network in the Asia Pacific region to reroute traffic to another path, even in the event of a cable cut or damage due to a natural disaster.

Telefonica International Wholesale Services went live with service automation across its physical and virtual networks. The automation and simplification of its operations includes some of its most in-demand services, including IP/VPN, DIA/Broadband, Ethernet (E-Line & E-LAN), Colocation, IPX, NGN Voice, Satellite and WAN2Cloud services, among others. NETSCOUT announced that Telefonica has certified its virtualized solutions vSCOUT and vSTREAM for deployment with their UNICA Lab architecture that supports future networks based on network function virtualization and software-defined networking (NFV/SDN) technologies.

Mobile & Wireless

To counter robocalls—from the merely irritating to the overtly malicious, Verizon has introduced a new Caller ID tool, Spam Alerts, to help protect landline phone customers. Spam Alerts will now show "SPAM?" before a caller's name on the Caller ID display if the calling number matches Verizon's spam criteria.

Just in time for Memorial Day, T-Mobile introduced T-Mobile ONE Military, an expansive, companywide initiative to thank America's military members, veterans, and their families. T-Mobile ONE Military offers a 50 percent discount for family lines—the biggest military discount in wireless —as well as commitments to hire 10,000 military members over five years, expand LTE coverage and capacity, and bring 5G to US military communities.

Sprint launched Sprint Smart UC, a robust and affordable "work anywhere" solution. The as-a-service voice and Unified Communications productivity suite is powered by BroadSoft and designed to improve both CX and employee collaboration.

Overseas, Nokia and KDDI have successfully demonstrated the use of LTE in Japan to deliver cost-efficient, low-latency connectivity for vehicles. These proof-of-concept trials evaluated the role of cellular technology in enabling safe, cost-efficient, low-latency car connectivity. The trials were the world's first use of LTE broadcast for vehicle-to-network-to-vehicle connectivity and network Real-Time Kinematic for location awareness and accurate navigation.

Advancements in Agility

A newly released Ericsson Consumer & IndustryLab Insight Report—*The Zero Touch Customer Experience*—explores the future of customer interactions with telecom service providers. Current frustrations with mobile CSPs are highlighted: an average of 2.2 attempts and 4.1 days to successfully complete or resolve an interaction. The report details how zero touch can drastically reduce frustration, improve CX, and enable innovation.

At Digital Transformation World in Nice, France, AT&T, KDDI, TIM, and Spirent showcased a new TM Forum Catalyst project, the Automated Optimization of Customer QoE (quality of experience). The catalyst focuses on the role of network automation as providers seek to improve QoE for subscribers amidst the improvement of operational efficiencies.

It's been a busy month for Telinta. The US- and Europe-based VoIP white label solutions provider announced the launch of a complete solution for VoIP service providers to offer DIDs and toll-free numbers to their customers and resellers. In addition, Telinta has teamed up with Magic Telecom on a convenient API that integrates Magic Telecoms DID with Telinta's switching and billing solutions.

Datavision completed a Proof of Concept demonstration showcasing interoperability between ONAP and MEF 3.0—Lifecycle Service Orchestration (LSO) architecture, alongside BringCom and ADVA. The POC, which was developed to instantiate a firewall VNF onto the ADVA Ensemble Connector platform, was performed at the recent MEF Member Meeting in Athens, Greece.

During this month's TM Forum Show, Velankani Communications Technologies announced that a leading Tier-1 US-based service provider has selected its NOCVue UNITY Platform to improve operational efficiencies in addressing the fall-out from provisioning their multi-vendor xDSL/GPON access network.

The New York State Education and Research Network (NYSERNet), a non-profit organization that provides Internet access to education, research and health care institutions across the state, deployed ADVA's FSP 3000 CloudConnect to create an agile, open and automated transport network.

Data Center Expansion

Nokia and Nuage Networks—its venture focused on software-defined networking (SDN)—are partnering with Telefonica Spain to modernize its data center network architecture for massive scale, agility and efficiency of its cloud-based services.

In other data center news, EdgeConneX announced a partnership with Pilot to upgrade Edge Data Centers in Atlanta, Denver, Miami, Minneapolis, Portland and Santa Clara. EdgeConneX

customers will gain access to Pilot's flexible and scalable network solutions with quick provisioning and bandwidth options up to 100 Gbps.

Video Analytics

To meet increased demand for flexible deployments and operations amid continued pressure from OTT providers, Agama Technologies announced the launch of a fully containerized solution for monitoring, analytics and customer insights for video services. It will showcase this new functionality at TV Connect, Digital Transformation World, ANGACOM and IBC.

Digital Transformation

Digital transformation for 24 Hour Fitness gets a boost with a new agreement from Microsoft Corp. and Adobe. 24 Hour Fitness will deploy Microsoft Dynamics 365 and Adobe Experience Cloud across its nationwide network of more than 420 clubs.

To build a digital Indonesia, Telkomsel has selected Sigma Systems as its partner. With more than 190 million customers, Telkomsel is the country's leading mobile operator. The partnership supports Telkomsel's digital mandate and establishes Sigma Catalog as the central enterprise catalog in its evolving business.

Innovation

Pervacio—headquartered in the US and operating in 30 countries—works with larger device manufacturers and mobile carriers to provide solutions for enhanced customer service in retail and warehouse operations. To improve service to its rapidly growing market of European customers, Pervacio has established a new UK technology hub.

In other stateside news, Unified Office, a managed services provider offering reliable hybrid cloud-based Voice/UC communications service to SMBs, announced that the US Patent Office has issued a patent for its Highest Quality Routing Protocol (HQRP), U.S. Design Patent Number 9,929,950, method and apparatus for routing voice calls over VoIP networks. This is Unified Office's second patent award.

Netcracker Technology showcased its leadership in enabling successful large-scale digital transformations for service providers at TM Forum's Digital Transformation World in Nice, France, which took place May 14-16.

IoT and Device Revolution

As the IoT market continues to grow and develop, telecom CSPs are pursuing many paths to profitability. A new Ericsson study, *Exploring IoT Strategies*, provides insights on value chain positioning from 20 leading telecom service providers globally as they engage with and position themselves in the IoT market. It was released this month.

To further the adoption of IoT in the industrial sector, Orange Business Services and Siemens have joined forces. Together they will develop solutions to optimize the supply chain and improve efficiencies, as well as focus on digitally enhanced products to increase customer satisfaction.

May was a fruitful month for Nokia. It expanded its IoT portfolio by acquiring SpaceTime Insight, which also bolsters its IoT analytic capabilities and helps to accelerate its development of new IoT applications for key verticals. Nokia also signed an agreement with OSIsoft to integrate IoT data and connectivity with private LTE.

By 2020, the US mobile worker population is projected to be nearly 106 million—over 70 percent of the total US workforce. Operations outside a controlled office environment make risk management

more challenging. To address this issue and bring awareness to growing safety needs, AlertGPS and AT&T joined forces to support World Day for Safety and Health at Work on April 28.

Cloud and Transformation

Nokia launched the Nokia AirFrame open edge cloud infrastructure, the industry's first Edge Cloud data center solution to meet the stringent and diverse low-latency data processing demands of Cloud RAN and advanced applications for consumers and industries. Doing so expands the Nokia AirFrame portfolio to optimize performance and operator costs as they evolve their networks and prepare for 5G.

AI

Microsoft dominated AI news this month during Microsoft Build 2018, its annual developer conference. As part of its commitment to trusted, responsible AI products and practices, Microsoft announced AI for Accessibility, a $25 million, five-year program to harness the power of AI to amplify human capabilities for more than 1 billion people with disabilities worldwide. Additionally, Microsoft strengthened its longstanding partnership with Italian telco and ICT Group TIM with the announcement of a new agreement intended to develop new AI-based tools and services. It's a win-win-win: both companies, as well as TIM customers in Brazil and Italy, will benefit.

Security and Fraud

To combat voice fraud in international telecoms, nearly 20 carriers have joined together in an industry-led Code of Conduct. The ITW Global Leaders' Forum (GLF), a leadership body of the international Carrier industry and i3forum, a non-profit focused on supporting transformation in carrier business, have announced that BTS, Interoute, Sprint, Tele2, Telia Carrier, Telstra, MNF Group including TNZI, and Vodafone have joined 10 other carriers in the effort.

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