

Telecom Industry News

By: Jim Schakenbach

The New Year got off to a strong start with a number of developments on all industry fronts – from connectivity to security and the ongoing development of 5G wireless technology.



Advances in connectivity

Newer, easier, and more reliable ways to connect the user to the network and network-to-network represented a sizable portion of this month's news.

Fibercom announced the availability of the [world's first LTE Cat 9 M-2 module](#) with global industrial and carrier certifications, including over 10 carrier certifications, over 35 regulatory certs, and field tests with over 70 carriers across 20 countries.

Linksys launched its new combination router range extender, access point, and bridge device. The company claims it is [the first Tri-Band modular Wi-Fi system](#) that can be installed in various mesh configurations providing fast and reliable Wi-Fi to the edge of a home network with 100 percent of the speed.

NimbeLink announced the [launch](#) of its Skywire LTE Category M1 (LTE-M) modem designed to fully utilize the Verizon 4G LTE network for IoT and M2M applications. The company has posted design files product developers can use to plan cellular access for IoT products. Designed specifically for Internet of Things (IoT) and machine-to-machine (M2M) applications, Skywire LTE-M modems will make full use of the capabilities of Verizon's 4G LTE cellular network.

Verizon claimed this month that it has successfully demonstrated the use of different vendor equipment at the CSP and customer ends of a passive optical network, completing what it believes is the [first interoperability trial of NG-PON2](#) (next generation passive optical network) technology at its Verizon Labs location in Waltham, Mass. The trial demonstrated that equipment from different vendors on either end of a single fiber -- at the service provider's endpoint and at the customer's endpoint -- can be used to deliver service without impacting the end user. Until now, equipment from the same vendor had to be used on both endpoints.

Carrier-neutral fronthaul fiber provider **ZenFi** and telecom service provider **Cross River Fiber** announced they are teaming up to offer an [online platform](#) that streamlines the ordering of network-to-network metro cross-connects between data centers. Together, the companies are launching zXc (ZenCross Connect), a self-service platform enabling automated purchase and configuration of interbuilding and interstate network cross-connects. Leveraging a robust fiber-optic network, zXc offers a streamlined portal for ordering bandwidth between data centers and colocation facilities in the New York/New Jersey metro area, making interconnections simple and easy to procure.

This month, **Ixia** announced it has successfully demonstrated [400 Gigabit Ethernet \(GbE\) technology](#) designed to support the persistent growth in global bandwidth demand and IP traffic that is expected to increase 3X over the next 5 years. The first-of-its-kind live demonstration was delivered to key members of the 400 GbE ecosystem including a variety of end-users, as well as network equipment, chip, and optics manufacturers. Attendees were provided with a first-hand view into Ixia's ability to integrate new and existing solutions, including PAM-4 (the most scalable multi-level signaling protocol for next-generation line rate), with the company's advanced 400 GbE

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Nokia and **T-Mobile** this month achieved [LTE speeds near 1 Gbps](#) in a demonstration using Nokia's deployed 4.5G Pro technology. The demonstration, conducted at T-Mobile's lab in Bellevue, Washington, encompassed technologies currently live in the operator's network, including carrier aggregation, 256 QAM (Quadrature Amplitude Modulation) and 4x4 MIMO (Multiple Input and Multiple Output) on Nokia's commercially available radio access hardware. With Category 16 (Cat 16) capable devices becoming commercially available early this year, the solution enables an even faster network for T-Mobile. Currently, the network provides speeds up to 400 Mbps.

Verizon announced the launch of a [new broadband service that provides instant Internet connections](#) with equal upload and download speeds for customers with a number of connected devices. The new Fios Instant Internet's 750/750 Mbps symmetrical speeds will be available to nearly seven million homes and businesses in greater New York City / northern New Jersey, Philadelphia and Richmond, with more to follow later this year.

EXFO Inc. unveiled a [new optical short link characterization solution](#) that it claims is five times faster than currently available software and will accurately test link loss, length, and high-level link mapping in under 10 seconds per fiber. Fast Short Link is a new feature of EXFO's iOLM software driving its line of OTDRs to optimal performance through automation and intelligent diagnostics. Fast Short Link is designed for applications such as data centers, FTTH, Enterprise LAN/WAN and for any other high count of short links.

Security: Staying ahead of cyberthreats

Security and protection from cyberattack, identity theft, privacy breaches, and general intrusion continue to top the news. Advances in policy and products continue to try to keep pace with current and emerging threats.

ETNO and **GSMA Europe** this month called on the **European Commission** to revise its [new e-privacy regulation](#) to make it more customer-friendly and innovation-ready so telcos can provide faster, more innovative consumer services. The call was in response to the European Commission's Proposal for a Regulation on e-Privacy which is intended to replace Directive

2002/58/EC and add to the existing General Data Protection Regulation (GDPR). ETNO and GSMA Europe stated they recognize the European Commission's goal to protect the confidentiality of electronic communications and establish a harmonized framework for electronic communications data but want to ensure it allows a positive customer experience and supports innovation for telco operators.

CyberGhost VPN announced the launch of an Android native core VPN service for a [seamless mobile connectivity and cybersecurity](#) subscriber experience. The new Android app is designed to adapt to various use scenarios such as unblocking streaming services, protecting and encrypting any connection while on public WiFi's, and offering enhanced anonymity for privacy-concerned users.

A new report by **Juniper Research** released in January predicts that the vast scale of embedded connectivity related to the Internet of Things (IoT) will lead to an [unmanageable cybersecurity risk](#) created by botnets. Juniper's latest study, Internet of Things for Security Providers: Opportunities, Strategies, & Market Leaders 2016-2021, found that recent IoT botnets will prove merely to be the tip of the cybersecurity iceberg. Botnets were uncovered as a key factor in the largest DDoS (distributed denial-of-service) attack ever recorded last year. **Hortonworks, Inc.** announced an open source technology collaboration with **Neustar, Inc.** to create powerful, business-friendly security and identity [management tools for IoT devices](#). Hortonworks' connected data platforms enable Neustar to extend its OneID identity management to the open source community, utilizing Hortonworks Data Platform (HDP) and Hortonworks Data Flow (HDF), to enable the development of new industry-leading identity management and security solutions for IoT devices.

The [first year-long robocall study](#) has been completed by the **YouMail Robocall Index** and the numbers are staggering -- two and a half billion monthly robocalls, that works out to 80 million calls per day and 921 calls per second.

Given the staggering robocall numbers, it's no surprise that robocalling topped the [list of worst nuisance calls](#). The **YouGov survey** released this month reveals the five top nuisance calls received by nine out of ten consumers in 2016 with robocalls heading the list, followed by credit card/loan arrangers, charitable causes, telephone/long distance providers, and last, lottery/sweepstakes providers.

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5G gains momentum

The drive to increase bandwidth and boost ultra-fast internet access is continuing to push 5G development to meet the growing demand for content-rich data traffic. **AT&T** this month announced its 5G Evolution plans for 2017 and beyond, and highlighted its other [initiatives to expand and enhance ultra-fast internet access](#) for millions of customers. The carrier claimed data on its mobile network has increased about 250,000% since 2007, and the majority of that traffic is video. 5G promises greater speed and overall network performance for the Internet of Things, 4K video, augmented and virtual reality, smart home and cities, autonomous vehicles and more.

The push for 5G is being felt worldwide. **Turkcell**, in cooperation with **Ericsson**, has completed

[Turkey's first ever 5G test](#), reaching speeds of 24.7 Gbps on the 15GHz band and representing one of the first 5G tests in the world.

The **CEA Tech Leti research institute** has been granted a six-month license from **Arcep**, France's telecommunications regulatory agency, to run a [field trial with multiservice transmission](#) at 3.5 GHz TDD band with 40MHz bandwidth. 3.5GHz might be the first carrier frequency that will be released for 5G. Leti will deploy a 5G framework on the MINATEC campus in Grenoble to demonstrate a new post-OFDM (orthogonal frequency-division multiplexing) multicarrier waveform.

5G represents more than just the [next stage of wireless communications](#), it also represents a potential economic bonanza. A CTIA-commissioned analysis by **Accenture Strategy** released this month estimates 5G may yield a US GDP boost of \$500 billion and provide three million new jobs along with savings and benefits to local communities in excess of \$160 billion. Accenture Strategy's analysis estimates that wireless operators will invest as much as \$275 billion nationwide over seven years as they build out 5G.