



TELECOM BUZZ

“Expanding Telecom World Horizon”

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Editorial

vRAN: A BIG LEAP IN NETWORK TRANSFORMATION

Cisco VS. Nokia/Verizon story

Mobile Operators are going through a tough phase owing to the consistent competition in the market and retaining the customers is another big challenge for them in this scenario. Huge demand for bandwidth from the user end is skyrocketing day by day while maintaining Average Revenue Per User (ARPU) also adds pressure to the operators. It's a prevalent problem that requires innovative solution based on revenue-generating services. Evidently, it will work smoothly on a flexible service delivery environment by reducing Capex and Opex.

Network Function Virtualization (NFV) laid the foundation of an advanced architecture. Technical progress also helped virtualize many functions of mobile network including Evolved Packet Core (EPC), IP Multimedia Subsystems (IMS), the Gateway Internet LAN (Gi-LAN) and data transport. Similarly, virtualizing the Radio Access Network (RAN) driven by SDN/NFV is the most pivotal transformation that enables end-to-end software defined mobile network. Today an open virtualized Radio Access Network (vRAN) is considered as the key enabler for creating a dynamic multi-vendor ecosystem. In a nutshell, RAN software has to be virtualized running on white box hardware to ensure profit margin of the operators along with sustainability in the market while meeting the growing demand at the same time.

There's no doubt that significant development took place focusing on vRAN, still there are distinctive gaps that often throw challenges when it comes to assembling end-to-end

solutions. At the end, operators come under heavy pressure. Considering the situation, it's high time to work hand in hand for achieving a set target. Cisco being the market leader in building the largest multi-service, open IP networks is launching multi-vendor ecosystem to resolve these issues and similarly, it will also work to increase the viability and adoption of open vRAN solutions. Presently, ecosystem vendors like Altiostar, Aricent, Intel, Mavenir, Phazr, Red Hat and Tech Mahindra have confirmed their collaboration with Cisco to bring a noticeable development in both hardware and software segments.

Similarly, Nokia too is gearing up to bring a path breaking Cloud RAN architectures in collaboration with Intel and Verizon. It is also claiming to offer flexibility required for the operator's future services and demand for 4G, 5G and IoT in the cloud. The first trial of Cloud RAN went successful in Oklahoma followed by the second venture by Nokia and Intel that developed Verizon's vRAN 2.0 architecture. Except for the radio network in the cloud it almost brings everything. The aim is to run advanced virtualized RAN successfully. Radio access network is the powerhouse that can give a boost to 4G and 5G networks. Nokia being the pioneer in the virtual RAN is expected to bring a revolution in the telecom.

As a user our only expectation is to get a cost-effective plan and high internet speed from the operators and those days are not far behind when they can meet all our requirements.

Sneha Bose
Sr. Executive - Corporate Marketing & Communication,
MobileComm Professionals Inc.



Company Highlights



- Baseband Swaps project awarded to MobileComm Professionals Inc by Ericsson for Tier 1 Operator (T-Mobile) - 5G readiness.
- MobileComm Professionals Inc bagged Nokia Airscale Migration project for all Tier 1 Operators in USA - 5G readiness.
- MobileComm Professionals Inc supporting AT&T on FirstNet deployments – Installation, C&I and data validation.



- MobileComm Professionals Inc Supporting Freedom Mobile in Canada east and West coast on their LTE deployment and getting ready for VoLTE.
- MobileComm Professionals Inc Supporting Nokia in the Small cell and In-building Optimization projects in Ontario.

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Main Story

Nokia continues to focus on 5G with series of new updates

Nokia has continued its focus on 5G and a series of new updates from the Finnish telecom firm is an obvious proof of that – the introduction of the industry-first Edge Cloud data centre solution for 5G and its team up with NTT DOCOMO on 5G innovations.

Nokia has formulated the AirFrame open edge cloud infrastructure for the 5G era, as 5G opens doors for operators to support high-tech applications such as AR/VR video and real-time industrial automation. The portfolio of the Nokia AirFrame data center solution has been further extended with the ultra-compact Nokia AirFrame Open Edge server. The complete AirFrame data centre solutions portfolio is designed by Nokia to help operators in optimising their network resources and dispensing workload rationally across the network considering the data traffic type in addition to latency and throughput requirements.



Nokia has designed the AirFrame open edge server for deployment at extant base station sites by keeping a strict focus on its size: 133.5 x 444 x 430mm (HWD). During Q3/2018, Nokia will start shipping the AirFrame Open Edge server.

The hardware solution complements with a real-time, Open Platform for NFV (OPNFV)-compatible, OpenStack-distribution created to function in petite data centres while delivering performance and low latency demanded by the edge environment. In addition, operators can successfully plan and initiate their edge cloud deployments with the help of Nokia cloud-wise services and Cloud Collaboration Hubs.

"The Nokia AirFrame open edge cloud infrastructure has been formulated to address "stringent and diverse low-latency data processing demands of Cloud RAN and advanced applications for consumers and industries", as a company press release states.

Alongside this, Nokia and NTT DOCOMO are all prepared to exhibit 5G technology innovations at the Brooklyn 5G Summit. Both the parties have joined hands to formulate technologies that will back the delivery of improved mobile broadband applications for 5G. The extensive availability of advanced



applications such as AR/VR video will enable fresh capabilities for consumers as well as industries. Delivery will depend on ultra-responsive networks with massive wireless capacity in dense deployment scenarios.

At the summit, Nokia and NTT DOCOMO will demonstrate a pair of technology innovations that are formulated to meet these demands. In the first demonstration, both the parties will apply a compact mmWave phased-array antenna system, developed by Nokia Bell Labs, scalable up to 256-elements via an integrated circuit (RFIC) solution in the 90 GHz frequency band to enable multi-gigabit per second speeds, complexity and a larger number of antenna beams, while enabling greater bandwidth", as Nokia puts it.

In its press release, Nokia said that the other joint demo "will also show how dynamic offloading relocation in a 5G core will enable the low-latency networks required to support time critical mobile broadband applications for future automation and augmented reality."

Further trials on these technologies will continue in a research lab in Japan owned by NTT DOCOMO.

In the meantime, data and analytics firm GlobalData said that satellite operators can emerge to be the leading players in the emerging 5G ecosystem by grabbing the opportunity of enhancing 5G mobile networks with next-gen satellite capabilities.

Source: Telecoms

Photo Credits - Google

AT&T: 'MORE EXCITED' ABOUT FIRSTNET, FIBER THAN 5G FIXED WIRELESS

As AT&T reported its quarterly earnings, CFO John Stephens expressed some reservations about the clarity of the business case for 5G fixed wireless access, and said that the operator is "more excited" about other things it has in motion, including its build-out of Band 14 for the First Responders Network Authority, its fiber build and its mobile 5G and "5G Evolution".

NOKIA'S Q1 REVENUES DECLINE BUT THE FIRM SEES REVAMP IN SALES DUE TO 5G

Finish vendor Nokia experienced a challenging first quarter due to lower sales in the North American region, which negatively impacted the vendor's quarterly earnings. However, the company's CEO Rajeev Suri said Nokia is well-positioned to take advantage of an expected surge in sales during the second quarter of the year, mainly due to increasing opportunities in the 5G field.

T-MOBILE, SPRINT AGREE TO MERGE

Sprint and T-Mobile announced today that they are merging into one \$146 billion company, setting the company up to compete against AT&T and Verizon in 5G and the internet of things. If the deal passes regulatory approval, the U.S. will have three large carriers instead of four.

VERIZON AIMS TO LAUNCH 5G WIRELESS SERVICES IN NEW GEOGRAPHIES NEXT YEAR

Verizon aims to launch residential broadband services through 5G fixed wireless access in additional geographies in 2019, the telco's Chief Financial Officer Matthew Ellis said during a recent earnings call.

AT&T TO DEPLOY SMALL CELLS IN SAN JOSE; SIGNS NEW MACRO TOWER DEAL

AT&T and the city of San Jose have reached a tentative agreement to install a network of 170 small cells on lampposts by the end of the year in a move to improve wireless coverage across the Californian city.

5G TECHNOLOGY TO OPEN UP NEW LICENSING OPPORTUNITIES FOR ERICSSON GLOBALLY: GUSTAV BRISMARK, IPR HEAD

Swedish telecom gear maker Ericsson said that the 5G technology is set to open up new licensing opportunities for the company across the globe. In an interview with ET's Danish Khan, Gustav Brismark, head of IPR said that roughly 30% of the company's filings last year based on 5G.

DOT AWAITS FDI CLEARANCE FOR IDEA TO APPROVE MERGER WITH VODAFONE

DoT is waiting for DIPP to give clearance for raising the foreign direct investment (FDI) limit in Idea Cellular to 100 per cent before approving the merger of Vodafone India with the Aditya Birla group firm, as per official sources.

TELEFONICA SHOWCASES 5G USE CASE AS PART OF ITS TECHNOLOGICAL CITIES PROJECT

Spanish telecommunications firm Telefónica has showcased a 5G use case in Talavera de la Reina, Spain, with an EZ10 autonomous-driving, electric minibus, as part of the company's 5G Technological Cities project presented by the operator in January this year. The telco claimed this use case was the first 5G demonstration that makes use of the 3.5 GHz band with mobility.

AT&T 5G TRIALS YIELD 1.2 GBPS, NINE MILLISECOND LATENCY

Ahead of a planned commercial 5G service launch later this year, AT&T is continuing trial activities around the country, including in Waco, Texas, where the carrier has deployed 5G-backed Wi-Fi for Magnolia Market at the Silos, the brainchild of HGTV Fixer Upper stars Chip and Joanne Gaines.

FIXED WIRELESS BROADBAND EXPECTED TO GROW 30% IN 2018

The global fixed wireless broadband market will grow 30% in 2018 and generate \$18 billion in service revenue, forecasts market analysis firm ABI Research. By 2022, worldwide fixed wireless broadband market are expected to generate \$45.2 billion, thanks to an estimated compound annual growth rate of 26%.

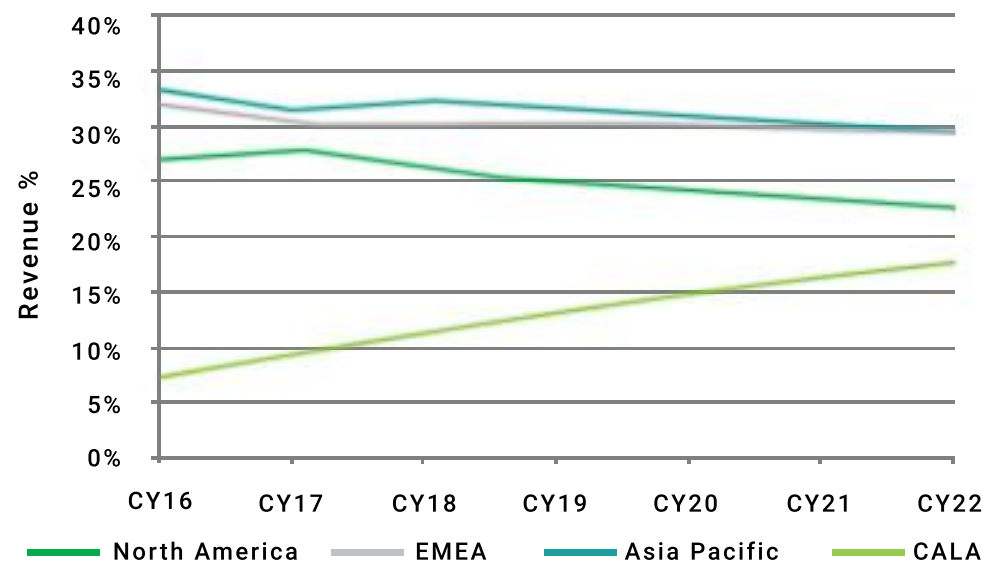
HUAWEI INKS 5G NETWORK SLICING DEAL WITH CHINA UNICOM

China's second-largest mobile operator, China Unicom, has signed an agreement with Huawei for the development of 5G network slicing technologies. The two companies said they plan to jointly carry out research, demonstrations and applications of 5G network slicing.

CARRIER WI-FI EQUIPMENT REVENUE FORECAST

A IHS Markit report said the cumulative spending on carrier Wi-Fi equipment between 2018 and 2022 will be \$3.5 billion – fuelled by 5G investment.

Carrier Wi-Fi equipment revenue by region



Source: IHS Markit

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The carrier Wi-Fi equipment revenue rose 1.3 percent to \$626 million in 2017, driven by broadband demand and a strong role within 5G era.

“The carrier Wi-Fi equipment market will touch \$725 million by 2022 – a cumulative size of over \$3.5 billion from 2018 to 2022.

There are two growth drivers. First, fixed-line operators will be spending on standalone Wi-Fi access points, triggering the growth in the global carrier Wi-Fi equipment market.

Second, mobile operators will be spending on wireless ISPs and dual mode Wi-Fi/cellular access points.

Asia Pacific region will be the strongest driver of growth considering the scale of requests for proposals (RFPs) from mobile operators.

China and Indonesia are already driving the growth. China Mobile and China Unicom and China Telecom are the key telecom operators in China. Indonesian telecom market is dominated by Telkomsel, Indosat, XL Axiata, among others.

India’s carrier Wi-Fi equipment market is likely to swell closer to 2022. Main operators in India include Bharti Airtel, BSNL, Idea Cellular, Vodafone and Reliance Jio.

“The 5G era will transform network architectures, but the requirements for network density mean that Wi-Fi will continue to play a strong support role for mobile broadband end-users and for newer applications such as the Internet of Things and smart city,” said Richard Webb, director of research and analysis for service provider technology at IHS Markit.

Telecom operators and enterprises in all regions will be spending on Wi-Fi, demonstrating evidence of proliferation in developing countries in addition to developed markets where mobile data growth is well documented.

The report said dual mode 3G / Wi-Fi equipment revenue fell 66.4 percent to \$17 million in 2017.

SIM-based Wi-Fi access points achieved 21.6 percent growth in 2017, driven by the desire to have closer integration between Wi-Fi and the mobile network.

Both fixed and mobile operators will benefit from network functions virtualization (NFV) due to Opex and Capex efficiencies, service flexibility and creation, reduced power usage and new service environments, including data analytics and location-based services.

Source: Telecomlead



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Professional Speaks

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Deepak Gururaja
Program Director, USA

THE PEOPLE FACTOR

The mobile industry, over the past few decades, has proven to be one of the most influential driving forces, around the globe, behind evolution of technology as well as the Human Experience. The impact of this industry is calculated to be in trillions of dollars around the world; with opportunities generated for birth and growth of innovative business endeavors. This environment continues to expand and innovation in this industry seems endless. Now, as multiple countries embark on 5th Generation (5G) network, these dramatic changes are expected to gain momentum.

MobileComm Professionals, Inc does also find itself right in the middle of this ecosystem; facing the expectations of an evolving market. As we, at MobileComm, are gearing up for the coming years, intending to be a major key player, as we have in the past, in the new arena, I take immense pride in the fact that our competitive edge is and always has been our people. I am reminded of an adage by Chanakya in his ground-breaking Arthashastra that says that the seven pillars of any organization, be it a kingdom in the past or a corporation today, can be enumerated as "The king, the minister, the country, the fortified city, the treasury, the army and the ally are the constituent elements of the state." Translating the same to today's corporate structure, it is comparable to the Leader (King), the managers (minister), client/market place/customer (country), the headquarters (fortified city), Finance management (treasury), our team (army) and our

friends & stakeholders (ally). For every component of our organization and at every stage, MobileComm's success has been through its people.

For the past decade and a half, since inception, that I have been a part of this organization; the underlying philosophy of MobileComm has always been developing the people factor. This, obviously, extends to our commitment to our client relationships, our partners, our vendors supporting our portfolio, the communities we are a part of and the incredible talent we have as our team. From strategizing to innovation to development to execution, MobileComm's distinct advantage has been leveraging our people's talent and fostering a nurturing environment that begets innovation, camaraderie and success through win-win solutions. It is with great confidence that I look ahead to both near and far future and take comfort in the fact that, with our enduring philosophy of "people first", we are poised to take on the challenges and make significant contributions, as the world progresses towards a technological evolution and advancement.

MobileComm Buzz

MobileComm arranges career enhancing courses for enthusiastic engineering students to help them shape their career in the Telecom world. Join us to update your skills and learn the latest technological advancement.



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