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CEO & co-Founder
at e2mos
Acting Chief Editor

*Over 3 decades
Chips & Embedded Systems
Global Market Expertise*

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WELCOME TO THE NEW CENTURYLINK

CenturyLink understands the power of the digital world is related to our customers' specific needs – that life is powered by connections, and business is connections. By combining Level 3 and CenturyLink, consumers and businesses alike will benefit from expanded network reach and capabilities with a renewed commitment to delivering an outstanding customer experience.

Constantly evolving business challenges are the reality for enterprises today. Those challenges raise the expectations of IT – which often bring new opportunity. But with opportunity comes more complexity, more decision makers, more risks, and, ultimately, more demands on your network.

The new CenturyLink can help you capitalize on those opportunities.

- Extensive local reach with significant local presence

- Reliable connections when, where, and how you need them

- Best-in-class network security, with scale that allows us to see more traffic and proactively thwart potential threats before they become security breaches

- An expanded portfolio of innovative adaptive technology solutions for choice and control

- Access to talented employees and partners

- Financial strength providing more resources for the business

- A relentless focus on the customer experience with an unwavering commitment to your success

Your connections are imperative. You need an agile, efficient and secure networking environment to answer the call of digital transformation. And you expect an exceptional customer experience delivered by a genuine team of people committed to your business' success.

Connect with the new CenturyLink. Your link to what's next.

Figures & Facts: Download the One-page Company Overview

ADLINK Partners with FFG for 5G- and ROS2-based Factories of the Future

Taipei, Taiwan 04 June 2018

ADLINK Technology, a global leader in Edge Computing, has joined forces with Fair Friend Group (FFG) to develop the new ROS2 toward Converged 5G for Factories of the Future project. The collaboration integrates wireless 5G network technologies with ROS2 (Robot Operating System 2) platforms to provide system architecture enabling real-time control and reliable communication. Igniting the next wave of growth for the network communication sector, the project can drive Industry 4.0 ecosystem development to bring on a productivity revolution for Factories of the Future.

With Industry 4.0 implementation growing, smart manufacturing has advanced to a high level of automation. Manufacturing using AMR (Autonomous Mobile Robots) and COBOT (Collaborative Robots) is quickly becoming standard, with the result of increased demands on network systems and interface standards for communication between machines.

5G-enabled industrial wireless communication is capable of support for wide-ranging needs arising from communication between humans, machines, and sensors, with high reliability, low latency, long transmission distance, multiple application scenarios, and optimal portability for mobile equipment. ROS2 provides high-efficiency middleware for data exchange and is quickly becoming the API standard for smart robotics development. ADLINK has further developed a uniform data exchange environment for factories using DDS (Data Distribution Service) as a backbone.

"Taiwan's manufacturing industry has robust capabilities that are well recognized by the world. By combining leading-edge 5G network technologies with open source ROS2/DDS platforms, we have crafted a highly competitive manufacturing environment converging IT, OT, and CT, to create a smart robotics industry ecosystem realizing challenging Future Factory implementations," said Jim Liu, ADLINK's CEO.

FFG will build the world's first demo production line for Factories of the Future, implementing fast and reliable ROS2-based data exchange. FFG CTO Dr. Ren Luo explained that, "Factories of the Future incorporate numerous portable, flexible, interconnected, and dynamically adjustable elements to accommodate customized production with optimal efficiency. The integration of 5G communication technologies and ROS2/DDS platforms at this time will realize high-performance implementation."

With ever-growing demands for highly customized products, Factories of the Future require top-speed real-time data transmission across operations lines. Production line architecture must increasingly support extreme flexibility, interconnectivity and dynamic adjustability, with a wide variety of connected elements, machine-based and otherwise. Accordingly, dedicated wireless networking is critical.

ADLINK and FFG previously participated in an EU research project with common goals, setting them up for multinational collaboration on various forward-looking industrial technology developments, with combined further cross-sector achievements generating ICT (information and communications technology) vertical application products for Factories of the Future. ADLINK will incorporate AI technologies to develop robot controllers with vision, detection, precision control and real-time communication capabilities as open source tools, thereby generating new smart manufacturing standardization of ROS2 as a common platform for mobile robots. ADLINK looks to introduce more than 200 innovative smart robotics products by 2025, further consolidating Taiwan's position of global leadership in the field.

ADLINK All Contacts Worldwide: https://www.adlinktech.com/en/contactus.aspx

About FFG (Fair Friend Group)

The FFG entities in Europe and North America unite major players from the German, Italian, Swiss and North American machine tool industry and the knowhow of the renowned machine tool brands VDF Boehringer, Hessapp, IMAS, Jobs, MAG, Meccanodora, Modul, Morara, Pfiffner, Rambaudi, Sachman, Sigma, SMS, Tacchella and Witzig & Frank. These renowned manufacturers are working together in an integrated structure, focusing on customer needs and applying their special expertise in milling, turning, grinding and high volume manufacturing.

 Since 1789, these brands have substantially contributed to the progress in industrial manufacturing and are well known as reliable and innovative equipment and systems solutions suppliers for the automotive and truck, aerospace, machine building, general machining, railway industry, energy and heavy engineering industries.

 While being an independent group, these entities benefit from the strengths and opportunities of the global Fair Friend Group. They stand for premium technology within FFG. The group comprises the following companies (without daughter companies): FFG European & American Holdings GmbH, FFG Werke GmbH, MAG IAS GmbH, Grinding Technology S.R.L., Jobs SpA, MAG Automotive LLC, K.R. Pfiffner AG, Saginaw Machine Systems, Inc. It is structured in technological and global business units, which are being supported by central functions.

TM Forum and The Linux Foundation partner to drive open source architectures, APIs and ecosystem innovation for the telecoms industry

Collaboration will see TM Forum and The Linux Foundation work together to create an open source marketplace

OPEN NETWORKING SUMMIT, LOS ANGELES, USA — 26 March, 2018: TM Forum today announced its partnership with The Linux Foundation to accelerate communications service providers' (CSPs) adoption of new technology in open source projects and facilitate the emergence of an industry marketplace of compatible open source and commercial applications.

The partnership sees TM Forum, the industry association driving digital business transformation of the communications industry, and The Linux Foundation, the nonprofit organization enabling mass innovation through open source, working together to realize the commercial deployment of open source software within industry standard architectures.

CSPs increasingly want to use open source software to support their operations and need to integrate it into their existing IT environments. The collaboration will enable open source projects to be implemented according to platform-agnostic industry standards, thereby accelerating time to market and reducing the need for expensive customization. This will be achieved through the adoption of TM Forum's Open APIs within open source projects, providing standardized interworking with other systems. As part of TM Forum's Open Digital Architecture, these APIs will speed up the deployment of open source software both within CSPs and also across broader ecosystems, supporting greater agility for a CSP's existing operations as well as enabling new business models with ecosystem partners.

TM Forum's suite of over 50 REST-based Open APIs are used by more than 4,000 software developers in over 700 companies worldwide. These APIs have previously been contributed to a number of external projects (including the extension by MEF of four TM Forum Open APIs in its multi-operator LSO Sonata software development kit), but this agreement with The Linux Foundation takes the collaborative scope much further. As part of the partnership agreement, TM Forum has introduced licensing of its Open APIs under Apache 2.0 License terms and conditions, allowing the APIs to be shared across the entire Linux Foundation community for use in any of its open source projects.

One specific example is the Open Network Automation Platform (ONAP) project. In September 2017, TM Forum's ONAP User Group was created to coordinate TM Forum's ongoing work on its Open APIs and Open Digital Architecture with the activities and requirements of the ONAP community.

"Together with TM Forum, we can shift the global industry one step closer to harmonization of open source and open standards," said Arpit Joshipura, general manager, Networking, The Linux Foundation. "Our joint efforts will help accelerate deployment and adoption for end users. We look forward to this continued and intensified collaboration and how it will advance future networks."

"Open Source and open standards – including TM Forum's Open APIs and Open Digital Architecture – have a pivotal role to play in transforming the agility of our industry, ensuring it is fit for the next decade," said Nik Willetts, CEO, TM Forum. "We're delighted to be working with The Linux Foundation to bring together our joint expertise, and look forward to partnering with a range of open source projects over the coming months."

Applications of TM Forum's Open APIs and Open Digital Architecture will be demonstrated to more than 3,000 global telco IT leaders at the Forum's annual Digital Transformation World conference in Nice, 14-16 May 2018, by more than 100 TM Forum member companies participating in collaborative proof of concept 'Catalyst' projects.

Resources

To learn more about TM Forum's commitment to Open APIs, follow this link: https://www.tmforum.org/open-apis/.

To learn more about TM Forum's Digital Transformation World, follow this link: https://dtw.tmforum.org/

To learn more about The Linux Foundation's Open Networking Summit, follow this link:

https://events.linuxfoundation.org/events/open-networking-summit-north-america-2018/

DINI Group announces the DNPCIE_400G_VU_LL -- a Xilinx UltraScale+ FPGA Board

DINI Group announces the immediate availability of the DNPCIE_400G_VU_LL a Xilinx UltraScale+ FPGA board with a capacity of 20 million ASIC gates. This product is optimized for custom network applications such as inline packet processing using TOE (TCP/IP Offload) and line speed algorithmic trading. The DNPCIE_400G_VU_LL joins a long list of FPGA-based network-targeted products from DINI Group, the industry's established leader in large FPGA platforms.

The DNPCIE_400G_VU_LL is a full-height, medium length PCIe board with a single Xilinx UltraScale+ FPGA, five banks of DDR4 memory, and a single bank of QDRII+ memory.

High speed, low latency memory is a critical resource for algorithmic acceleration and the UltraScale+ FPGAs dramatically increase the amount of internal memory by adding UltraRAM blocks. The DNPCIE_400G_VU_LL utilizes the B2104 package. Sixteen high-speed transceivers are used for a 16-lane GEN4 PCIe interface. Four sets of four of the high-speed transceivers are connected to QSFP28 sockets for four separate 40 GbE/100GbE Ethernet ports or up to 16 channels of 10 GbE.
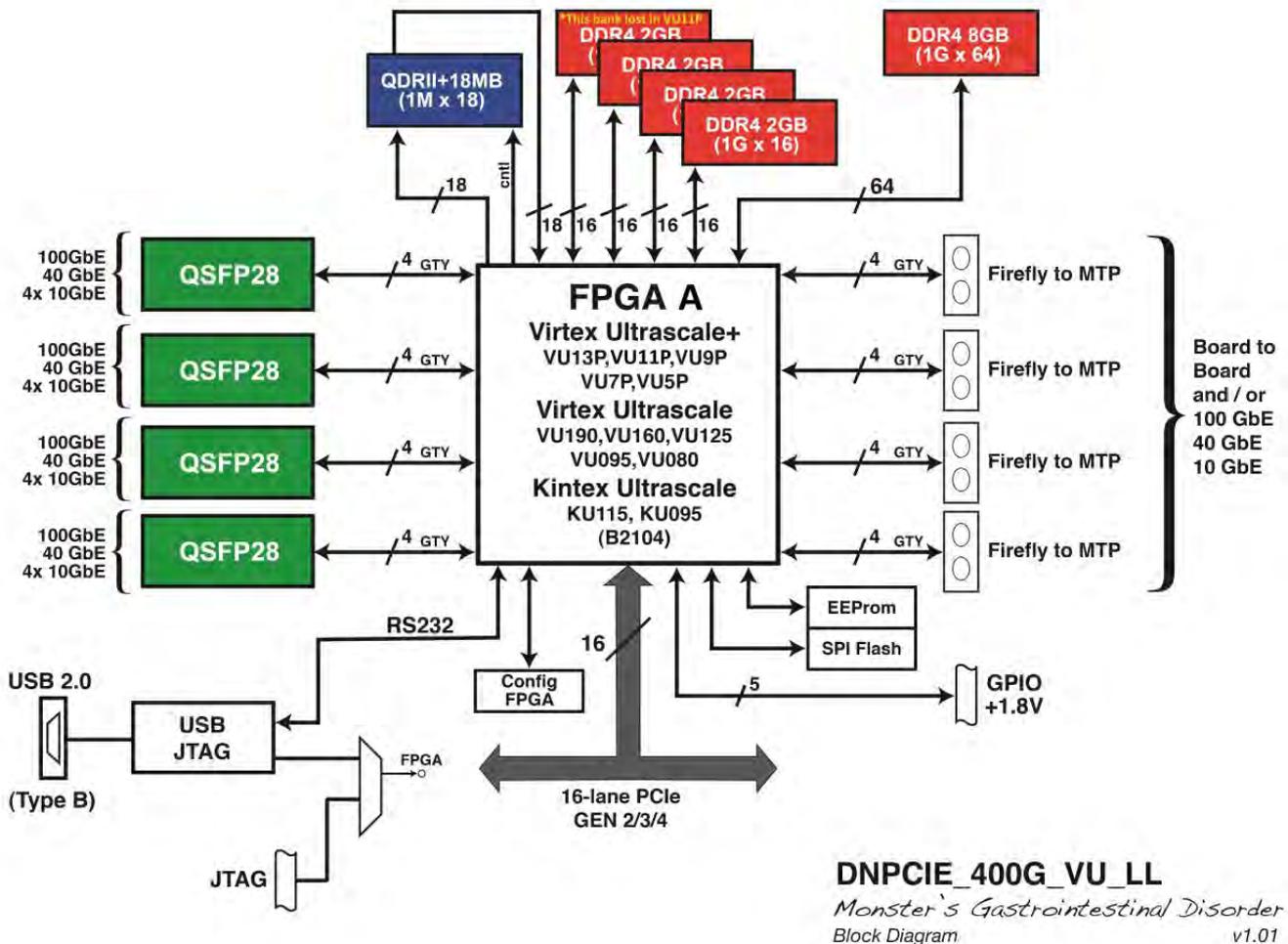
Five possible UltraScale+ FPGAs can be stuffed with the largest device, the VU13P, containing 20M ASIC gates with more than 12k, 27x18 multipliers. Five Virtex UltraScale and two Kintex UltraScale devices round out the possible FPGA stuffing options.

The DNPCIE_400G_VU_LL supports five independent PC2400 DDR4 banks. Four banks are configured as 1G x 16 (2GB), and a single bank is configured as 1G x 64 (8GB) for a total of 16GB. For data lookup that requires absolute minimum latency, the DNPCIE_400G_VU_LL has a QDRII+ memory connected as 1Mx18 with options to 4M x 18.

"We made this new UltraScale+ board as fast and as versatile as possible." says Mike Dini, president, "It is perfectly suited for cluster deployment in co-location spaces or exchanges. Network applications and High Frequency/Low Latency Algorithmic Trading can enjoy line speed communications and packet processing with this little jewel."

DINI Group is an established leader in large, FPGA-based boards, critical IP, and systems. DINI Group FPGA boards are used in large quantities for ASIC and SOC prototyping, low-latency trading, and high-performance computing. From their corporate campus in La Jolla, California, DINI Group employees have supplied over 12 billion ASIC gates.

MORE: https://www.dinigroup.com/web/DNPCIe_400G_VU_LL.php

DNPCIE_400G_VU_LL
Monster's Gastrointestinal Disorder
Block Diagram   v1.01

Vodafone agrees to acquire Liberty Global and cements its position as leading challenger: upstart to duopolist

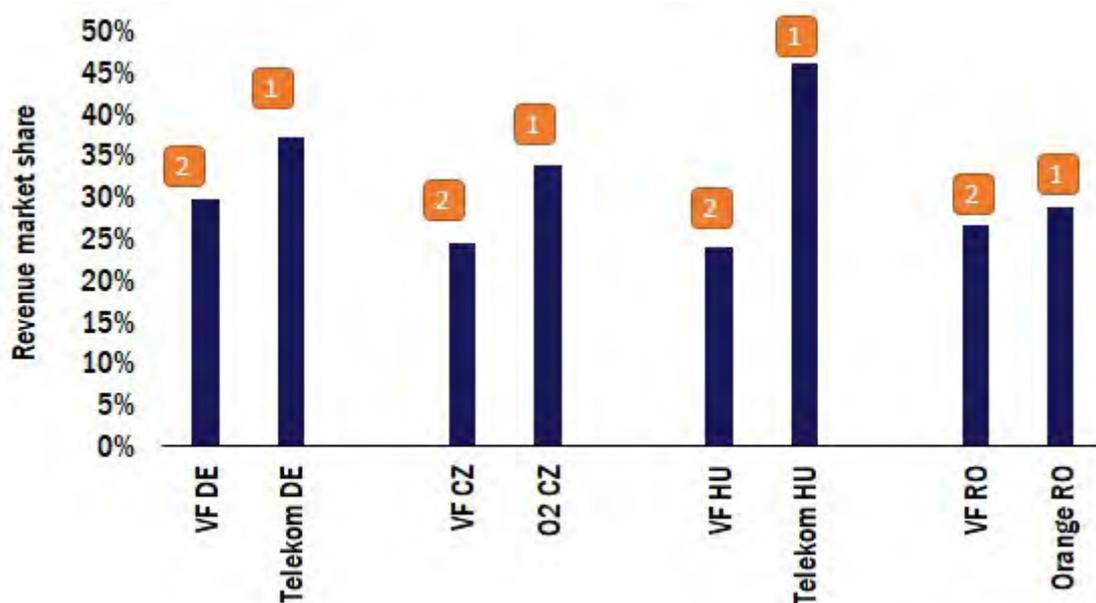By: Rupert Wood Research Director at Analysys Mason

"The German acquisition of Liberty Global completes Vodafone's 18-year transformation from a hostile foreign upstart to a player with scale and reach equivalent to that of Telekom."

Vodafone confirmed that it has agreed to acquire Liberty Global assets in the Czech Republic, Germany, Hungary and Romania for EUR18.4 billion. This are subject to regulatory scrutiny and the full deal is not expected to close for at least a year. This comment is an update to a comment that we published in February, when it was announced that Vodafone and Liberty Global were in formal talks. It focuses on the strategic positioning aspects of the deal rather than on the economic synergies.

Vodafone wants to be the leading challenger in Europe

Vodafone's long-term strategy is to be the only similarly-sized European-level competitor in fixed and mobile to the incumbents, and to have the highest number of fixed–mobile converged (FMC) accounts in Europe (an ambition shared with Deutsche Telekom and Orange). Latest available figures show it is only fourth. Orange was the clear leader with 10.6 million FMC accounts in Europe (March 2018), whereas Vodafone had 4.1 million (Dec 2017). The acquisitions will make Vodafone clear number two in terms of mass-market revenue in each of the four markets (in Romania it will be second to Orange, with former incumbent Telekom third).

Figure 1: Enlarged Vodafone share of mass-market retail revenue, plus leading operator share, four countries, YE 2017

Source: Analysys Mason

Germany

By buying UnityMedia, Vodafone would become a player of a similar scale and stature to Telekom. With increased scale in fixed comes a possible threat of more symmetrical broadband regulation, but also the possibility of deregulation. In fact, in some more-advanced European broadband markets, where the emphasis has been on infrastructure-based competition, more symmetrical commercial arrangements between fibre network owners have emerged anyway (for example, access swapping in Portugal, commercial wholesale in Spain).

Telekom opposes the German acquisition, ostensibly on the grounds of pay-TV concentration. In the past, Telekom owned all the cable networks to the building, but was forced to sell them. The pay-TV market is more susceptible than that of broadband to quick disruption: from pure all-IP plays of the international Netflix kind, from Sky's deepening all-IP portfolio, or from upstart domestic players like PurTV. It is a legitimate concern, but one that may be transient. Ultimately, we think all cable operators will see their revenue-split shifting away from TV and towards broadband.

Vodafone agrees to acquire Liberty Global and cements its position as leading challenger: upstart to duopolist

Figure 2: Broadband coverage and broadband market share based on YE 2017, incumbents and enlarged Vodafone
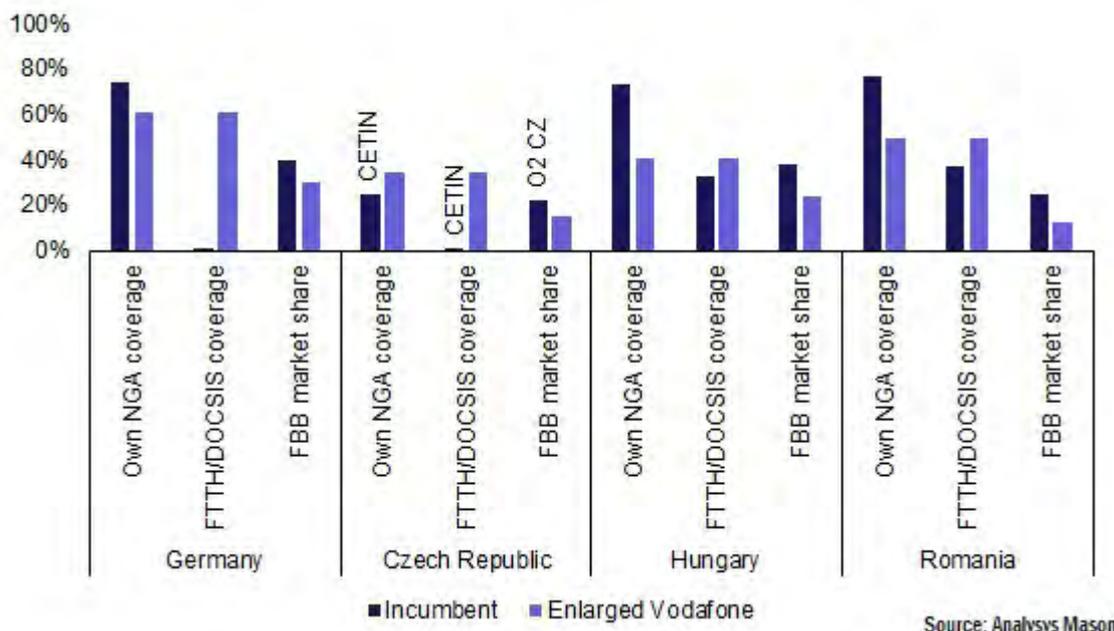

Figure 2 shows the very strong coverage position that Vodafone would have in each of the four markets for FTTP/DOCSIS3.x coverage (in other words, networks capable of gigabit speeds). An enlarged Vodafone Germany will have a higher-capacity fixed network than Telekom with good on-net coverage. By 2022, it claims that it will be able to offer gigabit services to 25 million households (60% of Germany), whereas Telekom has so far committed to little beyond an FTTC upgrade to 35b vectoring. This is probably the bigger worry for Telekom than pay-TV.

It is easy to maintain that the difference between up to 250Mbps (the top speed on 35b vectoring) and a gigabit may not matter much to many consumers now, even though higher speed is a strong marketing tool. But it is much more difficult to claim that it will not matter by 2025, by which time it is highly unlikely that Telekom will be anywhere near 60% coverage with FTTP. It is not surprising then that Telekom appears to set more store by 5G, and potential fixed gigabit wireless, than many of its peers.

What actually happens when two dominant and broadly equivalent scale vertically integrated FMC plays emerge? The Benelux countries offer some insight. In the Netherlands, it looks as if KPN and VodafoneZiggo have limited reasons to compete on quad-play so long as the remaining mobile-centric player (assuming that T-Mobile completes the acquisition of Tele2) does not mount a major challenge based on mobile networks alone. Currently, they offer only similar and modest discounts for quad-plays. In Belgium, where market structure is similar to the Netherlands, the regulator BIPT is taking a tough stance. It judges the broadband market to be uncompetitive, and has demanded symmetrical cost-oriented wholesale broadband access, but this demand has not been made elsewhere and is being challenged in Belgium by both parties.

Czech Republic, Hungary and Romania

Vodafone is currently a mobile-centric play in the three Central and Eastern European (CEE) markets, and the acquisitions will make the market structures in the Czech Republic and Hungary more like those in Western Europe (Romania already has a good level of FMC competition). Mobile-centric businesses look in theory – and in some countries in practice – vulnerable to price-squeezes in the form of integrated operators tariff rebalancing by raising the price of triple-play offerings and reducing the difference between the cost of a triple-play and a quad-play.

However, mobile-centric businesses are not all in trouble, by any means. In CEE markets, which have historically more mobile-oriented and price-sensitive consumers, some mobile-centric operators thrive, and the use of mobile broadband as a substitute in the home is more common. Driving a Western European FMC model may be particularly hard work for Vodafone when it is common to have mobile, broadband and TV from three different providers based on whichever is the cheapest. Breaking this inertia will require lots of incentives, price or otherwise.

After several years of LTE/LTE-A and with C-band becoming part of the 4G/5G ecosystem, mobile networks across Europe are in a much stronger position to replicate fixed/quad-plays than they were a few years ago. Whether they need much more fibre infrastructure for mobile yet is debatable; it helps to own backhaul, but strategic densification of networks is an ever-receding horizon. Higher-order MIMO and 3.5GHz may require similar cell infrastructure to 1800MHz.

Vodafone agrees to acquire Liberty Global

In the **Czech Republic**, the combination looks very strong: Vodafone would be the only integrated player with its own fixed and mobile infrastructure, and it would be dominant in cities. T-Mobile has focused fibre build in smaller towns. Since CETIN and O2 demerged, O2 has more incentive to rely on its mobile network than other former incumbent retail arms, and CETIN's fixed infrastructure is less well developed than that of most of its peers, leaving it in potentially rather a weak position. The fixed market is highly fragmented and underdeveloped, and there are opportunities to consolidate further or simply win customers.

Hungary would look structurally like some Western European markets (two large integrated offering quad-plays plus one mobile-centric), although Telekom will remain by far the largest player. Broadband is less fragmented than in the Czech Republic and has better coverage, so there is no low-hanging fruit for Vodafone, although penetration is lower.

Romania is a very different market: three major fibre networks and a highly competitive quad-play market already in place with much lower average revenue per account (ARPA). Vodafone will have reasonable coverage, but it would be late to the quad-play market. Already Telekom and Orange can compete only on value, not on price against Digi, the market leader in broadband, which has just about the lowest prices on the planet: Vodafone will be in same position.
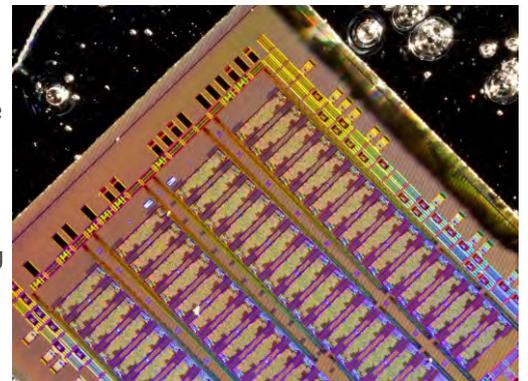
Supercharging Chips by Integrating Optical Circuits
Optical CMOS process could break communications bottleneck

By Neil Savage, IEEE Spectrum – 26-April-2018 ([Source](#))

A new way of building optical circuits on ordinary computer chips could speed up communications between microprocessors by orders of magnitude while reducing waste heat, increasing the processing power of laptops and smartphones.

"What we're talking about is integrating optics with electronics on the same chip," says Milos Popovic, a professor of electrical and computer engineering at Boston University. The method entails adding "a handful" of processing steps to the standard way of making microprocessors in bulk silicon and should not add much time or cost to the manufacturing process, Popovic says.

He, along with colleagues from the Massachusetts Institute of Technology; Univ. of California, Berkeley; Univ. of Coloardo, Boulder; and SUNY Polytechnic Institute, Albany, NY, described the method in a recent paper in Nature.

Their approach adds a thin layer of polycrystalline silicon on top of features already on the chips. The same material is used on chips as a gate dielectric, but in a form that absorbs too much light to be useful as a waveguide.

To make a material more suitable for photonics, the researchers tweaked the deposition process, altering factors such as temperature, to obtain a different crystalline structure. They also took trenches of silicon dioxide, already used to electrically isolate transistors from one another, and made them deeper, to prevent light from leaking out of their polycrystalline silicon to the silicon substrate.

Using the approach, the researchers built chips with all the necessary photonic components—waveguides, microring resonators, vertical grating couplers, high-speed modulators, and avalanche photodetectors—along with transistors with 65-nm feature sizes. A laser light source would sit outside the chip. The photodetectors rely on defects that absorb the photons. The chips were built at the 65 nm node because that is what the semiconductor manufacturing research fab at SUNY Albany is capable of, but Popovic says it should be easy to apply the same processes to transistors being made with much smaller features.

Many of the same researchers had come up with a process for integrating photonics on chips in 2015, but that only worked on more expensive silicon-on-insulator processors. The vast majority of chips are made using bulk complementary metal-oxide-semiconductor technology, which this new technique addresses.

The reason this is all necessary is that computer makers are increasingly relying on multicore chips; graphical processing units used for gaming and artificial intelligence can contain hundreds of cores. The copper wires that carry data between cores are the major bottleneck for speed, as well as producing a lot of waste heat.

"A single electrical wire can only carry 10 to 100 gigabits per second, and there's only so many you can put in," Popovic says. By contrast, splitting the signal into many wavelengths could allow a single optical fiber to carry 10 to 20 terabits per second. And at the tiny distances between microprocessors, optical losses are basically zero, so the system requires less power than copper.

This new method could lead to chips with increased processing power that would allow greater use of artificial intelligence techniques for pattern recognition. That could bring the facial recognition used in iPhones to less expensive smartphones, Popovic says, as well as create low-cost LIDAR sensors for self-driving cars.

Innovative Carrier-Class and Cloud Infrastructure Solutions Designed to Bring Any Infrastructure Application to Life for SDN and NFV

The end goal for communication service providers around the world is to find the best business cases to leverage Software Defined Networking and Network Functions Virtualization as a means to achieve a state of absolute flexibility to roll-out new services and generate new revenues, sooner.

Our mission continues to be one of helping CSPs find the right mix of hardware and software components that will work best for their infrastructure needs – for both legacy and transitioning SDN/NFV deployments.

OpenStack Cloud and NFVi

At the heart of NFV infrastructure is the integration of OpenStack as a means to provision your VNFs and services across deployed virtual machines. As an OpenStack Foundation sponsor, Kontron has tested its hardware with solutions provided by key distribution vendors including Canonical (Ubuntu), CentOS, Red Hat, Wind River (Titanium), among others.

This has helped launch a number of reference solutions and use cases developed by Kontron and its VNF partners.

Learn more about our turnkey options for OpenStack VMs and Bare Metal here.

Why Kontron

We are experienced system architects who match our clients' network application requirements with the right hardware and software solutions. By partnering with us, service providers and their ISV partners can enter new markets with greater speed, confidence and operational efficiency.

A large portion of our history is derived from long years of telecom experience designing commercial-off-the-shelf hardware used for carrier grade networks. While the requirements for all things carrier grade have not disappeared, the new cloud-based technologies to achieve them have been turned upside down.

What We Can Do For Service Providers

Backed by a growing catalogue of VNF partners and a sound foundation in carrier cloud OS solutions, Kontron is the ideal partner to help CSPs work out the hardware and software white box solutions they require. We believe in open source solutions running on standard x86 or ARM based server hardware that avoid that "locked-in" scenario and ensure optimal interoperability with other vendor offerings.

MAAS/JUJU DEPLOYER

OPENSTACK REDUNDANT CONTROLLERS x3

REDUNDANT NEUTRON NODES x2

AVAILABLE COMPUTE VMs x3

DEPLOY YOUR OPEN CLOUDS WITH EASE

Kontron has the solution for those who plan to build their own private cloud environments but do not have the resources to jump the first big hurdle: get OpenStack to work seamlessly on a piece of commodity hardware or, the reality, multiple units of hardware.

Typical OpenStack installations require up to nine (9) 1U servers to simply arrive to a redundant configuration of controllers, Neutron nodes, and a "deployer" node. To improve upon this, Kontron achieved the same set up in a single 2U enclosure for significant rack savings.

Kontron fully integrated the Canonical Distribution of Ubuntu OpenStack with the SYMKLOUD Series of MS2900 Intel®-based converged platforms for a turnkey, deploy-your-cloud-out-of-the-box solution. The hardware design of the MS2900 Platform Series is modular based and features nine (9) modular servers.

RELIANCE INDUSTRIES TO ACQUIRE RADISYS

Radisys Corporation (Nasdaq:RSYS), a global leader of open telecom solutions ("Radisys" or "the Company"), and Reliance Industries Limited, India's largest private sector company ("RIL" or "Reliance"), have entered into a definitive agreement under which Reliance will acquire Radisys for US$1.72 per share in cash.

Radisys is a leader in providing open telecom solutions to service providers worldwide. Headquartered in Hillsboro, Oregon, Radisys has nearly 600 employees with an engineering team based out of Bangalore, India, and sales and support offices globally. Radisys delivers value to service providers and telecom equipment vendors by providing disruptive open-centric software, hardware and service capabilities that enable the migration to next-generation network topologies.

"Reliance and Jio have been disrupting legacy business models and establishing new global benchmarks. Radisys' top-class management and engineering team offer Reliance rapid innovation and solution development expertise globally, which complements our work towards software-centric disaggregated networks and platforms, enhancing the value to customers across consumer and enterprise segments," said Akash Ambani, Director of Reliance Jio. "This acquisition further accelerates Jio's global innovation and technology leadership in the areas of 5G, IOT and open source architecture adoption."

Brian Bronson, CEO of Radisys said, "The backing and support of India-based global conglomerate Reliance, will accelerate our strategy and the scale required by our customers to further deploy our full suite of products and services. The Radisys team will continue to work independently on driving its future growth, innovation and expansion. The addition of Reliance's visionary leadership and strong market position will enhance Radisys' ability to develop and integrate large-scale, disruptive, open-centric end-to-end solutions."

Terms and Financing

The transaction is subject to certain customary closing conditions, including regulatory approvals and approval of Radisys' shareholders, and is expected to close in the fourth quarter of 2018. RIL intends to finance the transaction through its own internal accruals.

Advisors

Covington & Burling LLP is acting as legal advisor and Ernst & Young provided diligence and tax advisory services to RIL.

Raymond James & Associates, Inc. is acting as financial advisor and Baker & McKenzie LLP is acting as legal advisor to Radisys.

About Reliance Industries Limited

Reliance Industries Limited (RIL) is India's largest private sector company, with a consolidated turnover of USD 66.1 billion, operating cash profit of USD 9.8 billion and net profit of USD 5.5 billion for the year ended March 31, 2018. It had cash & equivalent balance of USD 12 billion as of March 31, 2018. It is the first private sector company from India to feature in Fortune's Global 500 list of 'World's Largest Corporations'. The Company's business interests span petroleum refining and marketing, petrochemicals, retail, hydrocarbon exploration and production, digital services and telecommunications.
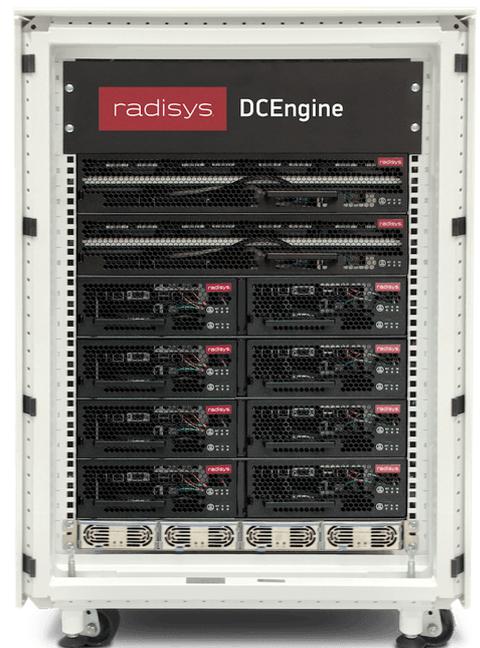
The Group's digital communications and services initiatives under Jio brand, have been redefining benchmarks, setting new milestones, inspiring unprecedented adoption, usage and service metrics.

For more information, visit www.ril.com

About Radisys

Radisys (NASDAQ: RSYS), a global leader in open telecom solutions, enables service providers to drive disruption with new open architecture business models. Radisys' innovative disaggregated and virtualized enabling technology solutions leverage open reference architectures and standards, combined with open software and hardware to power business transformation for the telecom industry, while its world-class services organization delivers systems integration expertise necessary to solve communications and content providers' complex deployment challenges.

For more information, visit www.radisys.com

New Artesyn Extreme Edge Server Enables Remote vRAN and MEC Installations

At Mobile World Congress (MWC 2018), Artesyn Embedded Technologies unveiled a powerful new network edge server that will enable service providers to cut the capital and operating cost of deploying a complete virtualized radio access network (vRAN). The MC1600 Series Extreme Edge Server uses Intel® Xeon® Processor D family devices to provide a flexible compute engine that operators can reallocate to any required load, such as multi-access edge computing (MEC), when not required for vRAN processing. An on-board Ethernet switch eliminates the need for external switching and enables a standard Ethernet remote radio head connection, while a PCI Express slot can be used to add functionality such as a CPRI remote radio head connection or offload media acceleration.

The MC1600 Series Extreme Edge Server is designed to be deployed in remote installations with a wide environmental temperature range and side-to-side cooling found in many outdoor cabinets. While initially targeted at vRAN applications, the MC1600 Series Extreme Edge Server is ideal for industrial site monitoring, Internet of Things (IoT) gateways, and smart cities applications as well as private cloud installations both on-premise and remote.

Artesyn vRAN Innovation

Artesyn has provided innovative computing platforms for virtualized and cloud RAN applications to some of the largest telecom operators, system integrators and equipment providers in the world. With public demonstrations supporting mini-cRAN, vRAN, multi-access edge computing, augmented and virtual reality, and autonomous vehicle control, Artesyn's computing platforms are the foundation for emerging smart city infrastructure, 4G and 5G networks, and the monetization of new consumer services by operators.

MORE ABOUT THE MC1600

About Artesyn Embedded Technologies

Artesyn Embedded Technologies is a global leader in the design and manufacture of highly reliable power conversion and embedded computing solutions for a wide range of industries including communications, computing, consumer electronics, medical, military, aerospace and industrial automation. For more than 40 years, customers have trusted Artesyn to help them accelerate time-to-market and reduce risk with cost-effective advanced network computing and power conversion solutions. Headquartered in Tempe, Arizona, Artesyn has over 16,000 employees worldwide across multiple engineering centers of excellence, four wholly-owned world-class manufacturing facilities, and global sales and support offices.