

# Telecom COTS World

Broadband Broadcast IoT AI Convergence

Telecom IT - HPC - A.I. - IoT  
Infrastructures - Networks - Edge - RAN  
Cloud - Data Centers - Storage  
Video Networks - Broadcast - Digital TV  
From Chips to Rack Scale Systems

Telecom COTS World is a Global Publication of e2mos

May-Jun 2019

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- V-Nova and Xilinx® launch high-quality PERSEUS™ dense transcoder and accelerator
- EMERGING TRENDS Cybersecurity
- Radisys, Intel and China Mobile Team Up for 5G Open RAN Architecture
- AT&T Aims to 'Break the Vendor and Technology Lock-In'



**DVB-I “Internet”  
World’s first  
working demonstration  
will take place at IBC 2019**

**... bringing together Broadcast & OTT Television**

IBC 2019  
The world's most influential media, entertainment & technology show  
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Products & Technology from Silicon to Application-ready Platforms

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... bringing together Broadcast & OTT Television

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Daniel Dierickx  
CEO & co-Founder  
at e2mos  
Acting Chief Editor



Over 3 Decades  
Semiconductors & Computer  
Systems Market Expertise

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# The world's first working demonstration of DVB-I « Internet » will take place at IBC 2019

... bringing together Broadcast & OTT Television



June 28, 2019 12.09 Europe | London By [Julian Clover](#) | Broadband TV News

Broadpeak, Expway, Harmonic, ITV, Kineton, RAI and TP Vision are already confirmed to participate in the demo that will include Several OTT and broadcast services, DVB-I Service List, Low Latency DASH streaming and Multicast Adaptive Bit Rate streaming.

The initiative is designed to bring together broadcast and OTT television with the aim of bridging the gap between OTT and hybrid use cases.

The Geneva-based standards organisation says OTT services provide access to a much greater range of content, allow viewer's consumption to be easily time-shifted and bring television to a much greater range of devices. However, that has led to a fragmentation of the market, and a departure from television's traditional plug and play.

With DVB-I, OTT services will be signalled and distributed in a standardised manner, and individual services will not require specific applications or integration.

**Broadpeak at IBC 2019 – Booth 5.B78**  
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# Cybersecurity Trends 2019

An analysis of emerging cybersecurity trends using the CB Insights NEXTT framework.

## What's next for cybersecurity?

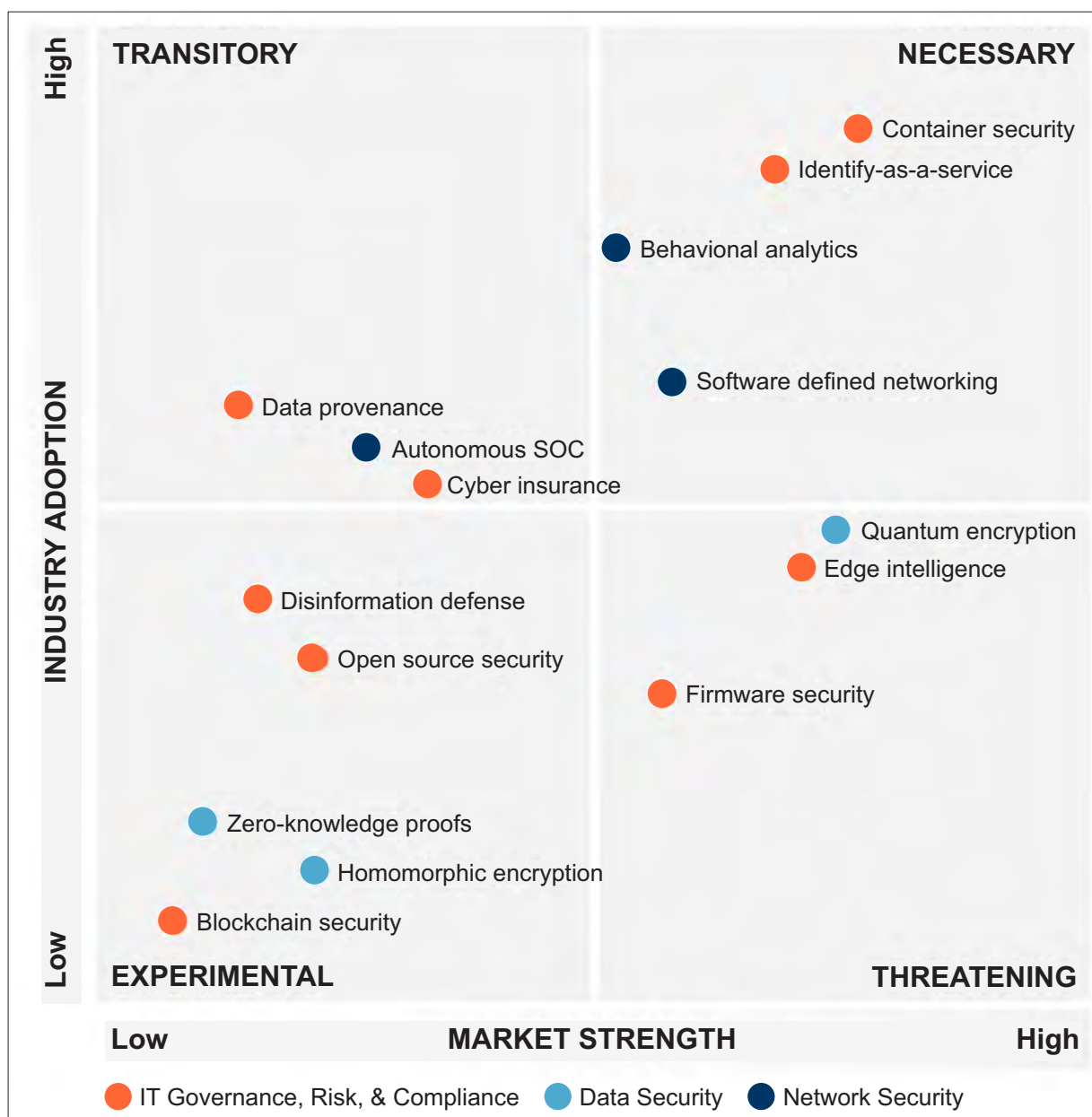
CB Insights examined 15 of the biggest cybersecurity trends, covering everything from zero-knowledge proofs to Identity-as-a-Service.

Using the NEXTT framework, we looked at the industry adoption and market strength of these trends, categorizing them as necessary, experimental, threatening, or transitory (NEXTT). The framework educates businesses about emerging trends and guides their decisions in accordance with their comfort with risk.

Trends highlighted in the report include:

- Homomorphic encryption keeps data secure while it's in use — which is why it's often considered the "holy grail" of enterprise data security.
- Quantum computers threaten to undo all modern forms of cryptography. They will also be critical to defending the future of enterprise data security in the coming quantum age.
- With the growing need to prevent data manipulation and comply with new privacy regulations, data provenance systems will become increasingly important.

[Download](#) the entire cybersecurity trends report to see the top 15 trends shaping the industry.



Source: [CB INSIGHTS](#) - [MORE](#)



## Aviat Networks Signs Global Frame Agreement with Ooredoo Group Allows Ooredoo Operating Companies Worldwide to Purchase Aviat Solutions



SOURCE Aviat Networks, Inc. | May 14, 2019



MILPITAS, Calif., May 14, 2019 /PRNewswire/ -- Aviat Networks, Inc. (NASDAQ: AVNW), the leading expert in wireless transport solutions, today announced a 5-year global supplier frame agreement with Ooredoo, an international telecommunications company headquartered in Qatar with ten (10) operating companies in the Middle East, North Africa, and Southeast Asia. This agreement enables all Ooredoo operating entities around the world to purchase Aviat's complete portfolio of wireless transport solutions.

This agreement was initiated based on Aviat's recent deployments with Ooredoo in Southeast Asia. Ooredoo is leveraging Aviat's solutions to lower overall capital expenditures and operating expenses, while also ensuring high availability and very high bandwidth connectivity for mobile backhaul and fixed internet connectivity.

"As a company focused on enriching our customers' digital lives and enabling them to enjoy all the internet has to offer, we've chosen Aviat for their unique product capabilities and their support and services expertise," said Sheikh Saud Bin Nasser Al Thani, Group Chief Executive Officer, Ooredoo. "We're very happy with the level of knowledge and professionalism demonstrated by the Aviat team and we look forward to an ongoing successful partnership."

"We are excited to see the positive impact our new products are having with Ooredoo and our other mobile operator customers," states Michael Pangia, president and CEO, Aviat Networks. "We are looking forward to leveraging this global frame agreement and replicating our recent success in Southeast Asia within Ooredoo operating entities around the world."

### About Aviat Networks

Aviat Networks, Inc. is the leading expert in wireless transport solutions and works to provide dependable products, services and support to its customers. With more than one million systems sold into 170 countries worldwide, communications service providers and private network operators including state/local government, utility, federal government and defense organizations trust Aviat with their critical applications. Coupled with a long history of microwave innovations, Aviat provides a comprehensive suite of localized professional and support services enabling customers to drastically simplify both their networks and their lives. For more than 70 years, the experts at Aviat have delivered high performance products, simplified operations, and the best overall customer experience. Aviat Networks is headquartered in Milpitas, California.

For more information:

visit [www.aviatnetworks.com](http://www.aviatnetworks.com)

or connect on LinkedIn <https://www.linkedin.com/company/aviat-networks/>

### About Ooredoo

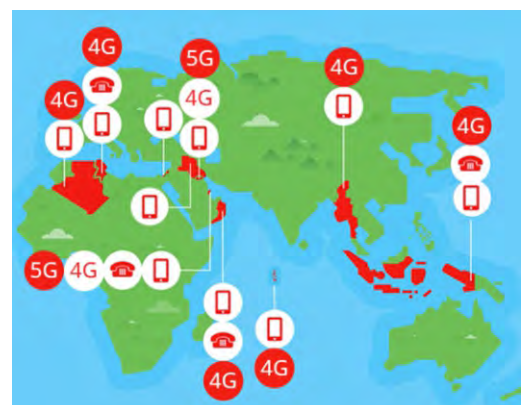
Ooredoo is an international communications company operating across the Middle East, North Africa and Southeast Asia. Serving consumers and businesses in 10 countries, Ooredoo delivers the leading data experience through a broad range of content and services via its advanced, data-centric mobile and fixed networks.

Ooredoo generated revenues of USD 8.2 billion as of 31 December 2018. Its shares are listed on the Qatar Stock Exchange and the Abu Dhabi Securities Exchange.

Website: [www.ooredoo.com](http://www.ooredoo.com)

LinkedIn: [www.linkedin.com/company/ooredoo-group/](https://www.linkedin.com/company/ooredoo-group/)

YouTube: [www.youtube.com/ooredoogroup](https://www.youtube.com/ooredoogroup)



## Broadcom Named a Leader in the Gartner Magic Quadrant for Application Performance Monitoring Suites for Second Consecutive Year

Broadcom Believes It Delivers on Market-leading Monitoring and Analytic Capabilities Across Distributed Cloud Environments

SAN JOSE, Calif., March 22, 2019 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ:AVGO) today announced that it has been named a Leader in the Gartner Magic Quadrant for Application Performance Monitoring for the second consecutive year\* for its CA Digital Experience Insights platform.

Digital Experience Insights includes operational intelligence, monitoring for application performance management (APM), user experience and infrastructure monitoring, and automation for self-remediation.

"We are pleased that our APM suites, as part of our AIOps solution, have been recognized once again as a Leader by Gartner," said Ashok Reddy, Senior Vice President and General Manager, Enterprise Software Division at Broadcom. "This offering combines advanced machine learning at enterprise scale, with concurrent use for multi-cloud environments whether deployed on public or private cloud. Now, with the strength, vision and investment of Broadcom, and the new flexible Portfolio License Agreement, we can deliver the best AI-driven operations solution, providing the best digital experience for omnichannel with greater business insights and self-remediation."



To receive a complimentary copy of the report, please visit <http://www.ca.com/GartnerAPMMQ>. For additional information on Broadcom's application performance monitoring and management solutions, visit [www.ca.com/APM](http://www.ca.com/APM).

**About Broadcom** - Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops and supplies a broad range of semiconductor and infrastructure software solutions. Broadcom's category-leading product portfolio serves critical markets including data center, networking, enterprise software, broadband, wireless, storage and industrial. Our solutions include data center networking and storage, enterprise and mainframe software focused on automation, monitoring and security, smartphone components, telecoms and factory automation. For more information, go to [www.broadcom.com](http://www.broadcom.com).



# AT&T Aims to 'Break the Vendor and Technology Lock-In'



Matt Kapko  
April 5, 2019  
8:01 am MT  
[mkapko@sdxcntral.com](mailto:mkapko@sdxcntral.com)

SAN JOSE, Calif. — AT&T is redoubling efforts to reduce the power and control that infrastructure vendors have held over the telecom industry for decades. The carrier this week made a series of announcements at the Open Networking Summit aimed at fostering a more open and interoperable approach to the hardware and software that powers radio access networks (RAN).

The initial seed code for the 5G RAN Intelligent Controller, which AT&T co-developed with Nokia, was contributed to the Linux Foundation in partnership with the O-RAN Alliance as open source software. "This is really the first open source project that we're launching. There will be more down the road, but this is really the first step here in terms of opening up the radio access network," Andre Fuetsch, president of AT&T Labs and CTO at AT&T, told [SDxCentral](#).

"We want to be able to expose more of the controller so we can drive more visibility and more control. And when you have more visibility and control, then you have programmability," he said. "It is going to break the vendor and technology lock in" and "open up a whole new level of interoperability. ... Traditional areas of the network that have been controlled by a few are now being opened up to many."

Having more competition, more developers at the table and lowering the entry barrier will ultimately drive better solutions and experiences for AT&T's customers, Fuetsch explained. "O-RAN will help drive greater interoperability between RAN equipment vendors," he said. "I think it's fair to say that all the O-RAN operators are highly motivated to drive more innovation and interoperability, and thus competition into their radio access networks."

Participation from incumbent RAN suppliers is critical to that effort, and a majority of vendors have at least joined the O-RAN Alliance, but some are contributing much more than others, Fuetsch explained.

## Window of Opportunity

With AT&T's standards-based 5G network already live in a dozen cities and nine more coming soon, Fuetsch dismissed the notion that open-standard efforts such as the RAN Intelligent Controller are arriving too late for 5G. "5G is a great window of opportunity to get these initiatives going," he said.

The operator this week announced that its white box switches that interconnect servers in the network cloud are live and carrying 5G traffic. This is part of the company's push to virtualize and SDN control 75 percent of its core network functions by 2020. "This year our goal is to get to 70 percent," Fuetsch said in his keynote. "We left all the hard stuff for last."

Here at the ONS Summit 2019 event, AT&T is demonstrating a white box cell site gateway router that supports high bandwidth requirements for 5G cell site backhaul, boasting potential speeds up to 100 Gb/s.

"These white boxes and open source routing software that we're deploying, the cell site router initiative that we're putting in is going to 65,000 (domestic) cell sites over the coming years," Fuetsch said. The white box routers have also been installed in Toronto and London for business customers with plans to expand to 76 countries by the end of this year, according to AT&T.

Fuetsch declined to give a timeframe for when a majority of AT&T's network might operate on open source-based hardware, but said certain aspects of it will in the coming years.

Speaking more broadly about AT&T's motivations for open source, Fuetsch identified security, freedom of choice, flexibility, and interoperability. "As we shift from a hardware-centric network to a more software-centric network we needed a way to get our software to become more open, more flexible. We also were looking for software that's more secure. Open source is inherently more secure because you have more eyeballs on it," he said.

"We believe that not only having more open reference designs on the hardware level but also having more open source based projects in that ecosystem will drive more innovation, more economic solutions, more competition, thus a better experience and products and services for our customers," he said. "Open source has really become a major foundation to a lot of our major network initiatives."



# The Forrester New Wave™: Enterprise Container Platform Software Suites, Q4 2018

**“Docker leads the pack with a robust container platform well-suited for the enterprise”**

*The Forrester New Wave Enterprise Container Platform, Q4 2018 Report*

In the Forrester New Wave™: Enterprise Container Platform Software Suites, Q4 2018 report, Docker was cited as a leader in enterprise container platform category with [Docker](#) and our Docker Enterprise Container platform receiving a “differentiated” rating in eight criteria including runtime and orchestration, security, image management, user experience, vision and more.

Docker’s customers interviewed for the report highlight Docker’s approach to end-to-end security, support for Windows and support expertise.

Docker Enterprise enables organizations to build, secure and manage both existing and new applications with the freedom to deploy these applications across any infrastructures. Download the report and learn how Docker stacked up among the 8 other enterprise container platform providers and why we were ranked a Leader.



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# Radisys, Intel and China Mobile Team Up for 5G Open RAN Architecture



*China Mobile Research Institute to demonstrate 5G NR sub-6 GHz Standalone (SA) mode reference architecture for high-definition video and IoT applications during MWC Shanghai*

**MWC SHANGHAI, June 26, 2019** – Radisys® Corporation, a global leader of open telecom solutions, today announced that it has collaborated with Intel and China Mobile Research Institute (CMRI) to demonstrate a 5G New Radio reference architecture and use cases based on the O-RAN Alliance specification. The solution leverages Radisys' disaggregated RAN software architecture building blocks for 4G, 5G and IoT and Intel's FlexRAN Layer 1 based on Intel architecture platforms. By leveraging open RAN architectures in their networks, mobile operators will be able to accelerate their 5G deployments.

## News Highlights

Mobile operators around the world are seeking to accelerate their 5G network deployments by leveraging disaggregated and open reference architecture solutions that use open components with standard APIs from a multi-vendor ecosystem. The [O-RAN Alliance](#) is focused on bringing openness, programmability, self-healing and intelligence to the RAN, and its Work Group 8, co-chaired by China Mobile, AT&T, Radisys and Intel, is defining a 5G NR reference software architecture.

- Radisys is delivering an integrated 5G solution for a public demonstration of 5G NR sub-6 GHz SA mode that leverages Radisys' L2/L3 software stack and Intel's FlexRAN Layer 1 software on an Intel architecture platform.
- China Mobile will demonstrate the **5G NR Sub-6 GHz SA demo showcasing eMBB and IoT use cases for video streaming and factory floor robot control** respectively in Booth N3.E20 at MWC Shanghai, on June 26-28.

"China Mobile is a founding member of the O-RAN alliance. The disaggregated and open RAN architecture will help accelerate the time-to-market of new RAN features. The ability of a fast iterative software upgrade will be the key for operators to provide vertical industry customized RAN services with agility and cost effectiveness. We believe the open source strategy is one of the cornerstones to speed up this progress," said Dr. Chih-Lin I, China Mobile. "We are excited to showcase the demo of the open-source solution of O-RAN to the industry for the first time at the MWC Shanghai."

"Intel is committed to the RAN market with a broad portfolio of optimized solutions for all nodes in an end-to-end access network," said Cristina Rodriguez, Intel VP and general manager of Data Center Group, Wireless Access Networking Division. "Intel is collaborating with O-RAN Alliance members to specify hardware and software reference architectures for virtualized RAN with standardized interfaces. This demonstration of wireless protocol stack layers from Intel and Radisys running on Intel Xeon based general purpose servers is an important step in getting broader acceptance of open RAN architecture, expanding the ecosystem, and ultimately enabling service providers all over the world to speed up RAN deployments."

"The RAN is the last part of the network to undergo disaggregation, and open ecosystem efforts such as the O-RAN Alliance are key to delivering a unified reference architecture for open RAN deployments," said Neeraj Patel, VP and general manager, Software and Services, Radisys. "We're pleased to team with Intel and China Mobile to showcase the benefits of this SDN-ization of 5G NR access, a critical and hitherto costly piece of the RAN jigsaw, with the use of open software, open APIs, open architecture and standard hardware components enabling seamless interoperability across Radio layers from different RAN vendors paving the way for accelerated innovation. Enabling enterprise use cases and deployment scenarios such as the ones being showcased leveraging the Radisys high performance Radio Stack are really driving this forward-looking architecture that can meet the demands of 5G and IoT."

## About Radisys

Radisys, 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](http://www.Radisys.com).

## Radisys taps ex-Ericsson exec as new CEO, Arun Bhikshesvaran

Arun serves as Radisys CEO where he is responsible for the vision, strategies, and execution to further Radisys' role in transforming the telecom industry. He brings to Radisys a wide range of industry experience and a proven track record of leadership. Most recently as CMO for MediaKind, Arun was responsible for creating and establishing the brand and marketing/communications functions for a joint venture media technology company of Ericsson and One Equity Partners. He has also held multiple VP and senior leadership positions at Ericsson, including VP and Chief of Staff of Ericsson North America, VP of Sales, VP of Strategy and Marketing, VP of Customer Solutions, and SVP of Strategy, Marketing and CTO Office, and a global role as Chief Marketing Officer for the Ericsson Group.



Arun completed his Master of Science degree from the University of Texas at Arlington and is a Distinguished Alumni. In addition, Arun received an Executive Certificate in Business Marketing from the Kellogg School of Business and completed the Executive Program in Strategy and General Management from the Columbia Business School.

# The best kept secret in the Cloud

By [Abigail Opiah](#) Published: 11:24, 12 March, 2019 Updated: 10:54, 11 March, 2019  
Source: <https://data-economy.com/the-best-kept-secret-in-the-cloud/>



Michel Paulin, CEO of OVH  
Visit OVH: [www.ovh.com/world/](http://www.ovh.com/world/)

***French cloud computing company OVH is on a mission to take over all four regions with the intent to have a better profile outside of Europe, and with that comes plans of a mega-scale investment of €3bn just after the year 2020.***

The company's CEO Michel Paulin dreams of a world where OVH is the top pick for all cloud clients, and [presents the 'SMART Cloud' strategy](#) which is key to its 2019 expansion and investment plans. He sat down with Abigail Opiah in a modern-styled West London office as he arrived fresh off the Eurostar from Paris that very same morning to explain how being a pure cloud company with billions to invest, sets OVH miles ahead of its competitors.

Paulin goes on to explain what differentiates OVH from other cloud computing companies. "We are pure cloud. No e-commerce, no software, no SaaS. Sometimes there is some drawbacks with this, because you cannot over-invest, but we do believe it is a way of showing our customers that we are fully dedicated to the cloud," he states.

"All the big cloud players today are in the US and in China – we are in Europe, which sets us apart from our competitors, giving us local presence. We are an integrated player in the sense that we built and own our data centres, and we built our servers too. Off the shelf servers are all good and well but its highly likely that it may not fulfil all the customers needs."

With 28 data centres in four regions, the CEO points out that OVH is investing 1.5bn euros from 2016 to 2020, with the intent to increase its investment and capacity further. "We roughly invest 300m euros a year, but our mission is really to multiply that. We aim to have new data centres in Europe, we are already going to invest in Spain, Italy and in the Nordics. We are also planning to extend in other areas with great emphasis on Asia. We already have a big footprint in north America, so we intend to try and match that in south America," he said.

OVH celebrates its 20th year this year, with plans to continue on the same path of M&A deals to widen its footprint, and with OVH's Founder Octava still owning 80% of his company, the ultimate goal for world domination is very much a possibility. "We've acquired a company in the US, a subsidiary of VMware called V Cloud Air two years ago which expanded our footprint. We provide a full set, while most of the big players were public cloud driven only, we provide private cloud, hybrid cloud, public cloud and even hosting," he mentions.

[He concludes by saying that: "OVH is a young company](#), despite being 20 years old this year which isn't young, we are young in terms of mindset. We hired a lot of people last year, nearly doubling our size with the number of people. It's not easy to attract young talented people because of the competitive market," he stresses.

Paulin once met someone who told him that OVH was the 'best kept secret in the cloud' as they were not aware of the company thus was surprised about everything it managed to achieve.

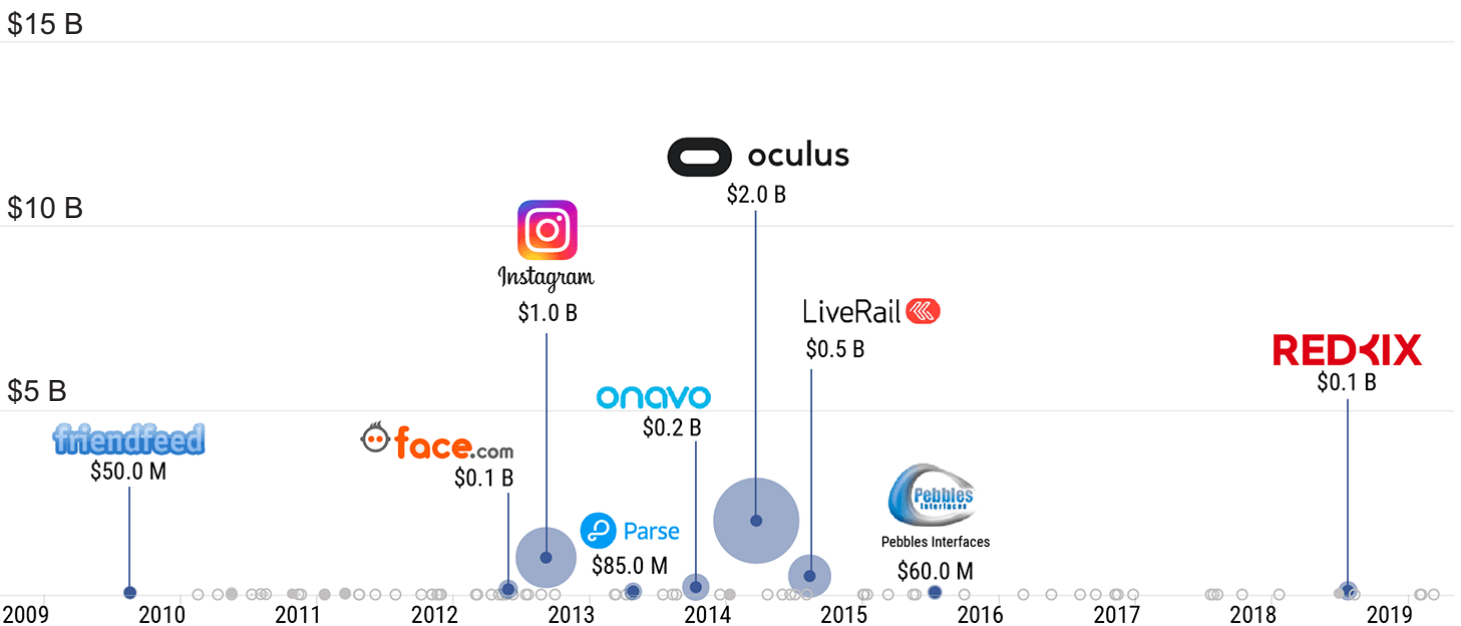
# Facebook's Biggest Acquisitions

April 25, 2019 | [CB INSIGHTS](#)

## FACEBOOK'S TOP 10 ACQUISITIONS SINCE 2017 FOR \$25B

1. **WhatsApp** (\$22B, 2014) is Facebook's largest acquisition to date. WhatsApp is a free SMS alternative that offers messaging and calling, available on phones all over the world. The app counts 1.5B+ users in over 180 countries.
2. **Oculus VR** (\$2B, 2014) is the developer of Oculus Rift, a virtual reality headset for immersive gaming.
3. **Instagram** (\$1B, 2012), a photo sharing application, continues to see major growth, outshining Facebook itself. In mid-2018, the app surpassed 1B monthly active users (MAUs), hitting roughly 25% growth year-over-year. (In comparison, Facebook grew 3.1% to reach 2.2B MAUs.)
4. **LiveRail** (\$500M, 2014) provided technology products and services for online video advertising. In 2016, Facebook stopped accepting new customers for LiveRail's ad server to focus on other similar products.
5. **Onavo** (\$200M, 2013) was a mobile analytics and data compression app, allowing users to maximize data plans while collecting information on user activity. After May 6, 2019, Onavo will no longer be available.
6. **Face.com** (\$100M, 2012) is a facial recognition software company, offering a platform for developers and publishers to automatically detect and recognize faces in photos.
7. **RedKix** (\$100M, 2018) is an enterprise messaging platform that was integrated into Workplace by Facebook.
8. **Parse** (\$85M, 2013) was a company aiming to help mobile app developers automate the set up of back-end functions. Facebook closed the Parse developer platform in January 2017.
9. **Pebbles Interfaces** (\$60M, 2015) developed hardware and software that provides 3D gesture interaction with consumer electronics devices. Pebbles Interfaces was integrated into the hardware engineering and computer vision teams at Oculus upon acquisition.
10. **FriendFeed** (\$50M, 2009) was a social network that let users share posts in a custom feed. The service was shut down in 2015 due to a lack of user interest.

### VALUATION OF ACQUIRED COMPANY



ACQUISITION DATE



# V-Nova and Xilinx® launch high-quality PERSEUS™ dense transcoder and accelerator « on a single FPGA card »

- **Solution natively delivers live 4Kp60 encoding on a single FPGA card or accelerates existing HD software and hardware codec workflows by a factor of 4x.**
- **PERSEUS Plus provides up to 50% compression efficiency at 4x the density of previously available solutions coupled with broad consumer device support.**
- **PERSEUS solution offers support for FFmpeg workflows and is available as a bundle with the Xilinx Alveo™ card for private cloud and on-premise deployment.**

London, UK and San Jose, US – 21 March 2019 – V-Nova, a leading provider of video compression solutions, and Xilinx, Inc. (NASDAQ: XLNX) the leader in adaptive and intelligent computing, today announced the availability of PERSEUS XSA, an easily-deployable plug-and-play encoding accelerator for existing live or VOD encoding pipelines and PERSEUS XDE, a native encoding solution running entirely on FPGA. Both solutions are available for Xilinx's Alveo cards and deliver unparalleled video quality and processing density in private or public clouds.

Xilinx Alveo Data Center accelerator cards are designed to meet the constantly changing needs of the modern Data Center, providing up to 90x performance increase over CPUs for common workloads, including machine learning, video transcoding, and database search and analytics. Xilinx FPGA platforms are broadly deployed across leading cloud platforms including **AWS, Alibaba Cloud and Huawei as well as leading video service providers like Twitch.**

PERSEUS Plus is a codec-agnostic video compression technology that can be added to any standard encoder such as AVC/h.264, HEVC, VP9 and Av1 (soon). PERSEUS Plus was designed from the ground-up to deliver next-generation compression efficiencies at much lighter overall processing, further boosting the advantages of FPGA-based solutions.

PERSEUS XSA is designed with hyper-scale live encoding operators such as e-sports operators and social networks in mind. The solution is compatible with all major server hardware and existing software encoding, leveraging PERSEUS Plus to enhance the underlying codec and providing a 4x increase in the number of channels or streams per server. **Alternatively, adopting the XDE solution enables even greater density and 4Kp60 real-time transcoding on a single Xilinx Alveo card.**



“The extreme processing capabilities of our FPGA solutions only matter when paired with IP that can truly leverage it” said Sean Gardner, senior marketing manager, Cloud Video, Xilinx. “PERSEUS Plus is the perfect example of that, and we’re excited about the potential this solution has to deliver a higher-quality video experience to millions of users whilst saving millions for the operators serving them. For services delivering thousands of streams a day these savings are transformative.”

“We are really proud to announce the availability of PERSEUS XSA and PERSEUS XDE.”, Guido Meardi, CEO and co-founder at V-Nova, said, “The explosion of streaming services across the globe requires the best efficiencies in every part of the delivery chain. The combination of our PERSEUS Plus technology and Xilinx FPGA simply enables best quality video per bit, in the most cost-efficient way. This is valuable to all service providers and especially those that are looking to scale on cloud platforms, where the combination of V-Nova PERSEUS Plus and Xilinx FPGAs is ready to provide this step-change in the video quality and processing cost trade-off that can redefine the bottom line for video service operators.”

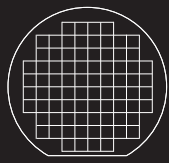
The bundled V-Nova and Xilinx solution is an industry first being able to enhance quality and accelerate throughput of existing large-scale software transcoding deployments, allowing both a reduction of 4x in transcoding cost and 4Kp60 real-time transcoding on systems that until today were only capable of HD transcoding.

**Visit us at IBC 2019: Hall 14 — 14.A07**

## About V-Nova

V-Nova Ltd. is a London-headquartered technology company providing next-generation compression solutions that address the ever-growing media processing and delivery challenges. V-Nova provides solutions spanning the entire media delivery chain, including content production, contribution, storage and distribution to end users. V-Nova's award-winning PERSEUS™ is the only cross-media codec format and delivers on the promises of next-generation image and video compression, today. Using PERSEUS technology, media and entertainment companies can now monetise unmet consumer demand for higher definition video everywhere, on existing devices and infrastructure, with a simple software upgrade.

The PERSEUS technology works in two ways: PERSEUS Pro is an Intra codec for mathematically lossless and visually lossless professional production, contribution and imaging workflows. PERSEUS Plus is a temporal codec designed to enhance a base codec such as H.264, HEVC or AV1 adding additional layers of detail for unbeatable distribution efficiency to consumers. For more information please visit [www.v-nova.com](http://www.v-nova.com)



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Message from Daniel Dierickx, CEO, Co-founder & Principal Consultant

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**Here are some Vendor's REFERENCES:**

IBM Telecom IT, Intel, Microsoft Embedded, Cisco/Tail-f Systems,  
Motorola, Emerson, Artesyn, Adlink, Kontron,  
Enea (RTOS - Linux), Green Hills Software, Telco Systems,  
Procera Networks/Vineyard Networks Visibility, Texas Instruments,  
NEC, Toshiba, NXP, STMicroelectronics, Infineon/IR, Vishay,  
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# KENET in Kenya Upgrades its Carrier Ethernet Network to 100GE with T-Metro 8100 ATCA-based from Telco Systems



## ALL-IN-ONE 100GE SERVICE AGGREGATION PLATFORM AND CLOUD GATEWAY

Expanded network capacity allows KENET to improve service quality and support growing data traffic demands

MANSFIELD, MA — Telco Systems, the leading provider of innovative SDN/NFV, CE 2.0, MPLS and IP solutions, today announced that the company has completed an upgrade of the carrier Ethernet network of [Kenya Education Network \(KENET\)](#), the National Research and Education Network (NREN) of Kenya, from 10GE to 100GE.

As the NREN of Kenya, KENET provides high-speed Internet access and data center services to member university campuses and research facilities across the country and interconnectivity with other NRENs around the world. KENET also provides shared cloud-based services, including co-location of servers, dedicated virtual servers for e-learning systems and video and web conferencing.

Three years ago, Telco Systems supplied KENET with its IP/MPLS technologies that were used to build KENET's 10GE carrier Ethernet network, which was managed and fully orchestrated by an aggregation and demarcation solution.



For this 100GE network upgrade, Telco Systems delivered its [T-Metro 8100](#) service aggregation platform and cloud gateway. T-Metro 8100 provides carrier Ethernet 2.0, MPLS, IP (Layer 3) and SDN capabilities and offers massive service scalability and carrier class resiliency. T-Metro 8100 includes industry leading features like QoS, SLA management and OAM. It is built with a modular architecture designed with future expansion capabilities, such as adding compute nodes or new networking capabilities.

For KENET, these T-Metro 8100 devices are managed and orchestrated by Telco Systems' [EdgeGenie Orchestrator](#) service provisioning management system, which was also previously deployed in 2013 when Telco Systems originally supplied KENET's carrier Ethernet network.

By upgrading its network capacity to 100GE, KENET has been able to improve the quality of existing services, offer additional advanced services and meet the growing bandwidth requirements of its education and research institution customers and their users.

"We have been working with Telco Systems for five years now and we have developed trust and confidence in the company and its technologies," stated Professor Meoli Kashorda, Executive Director of KENET. "Telco Systems has played a strategic role in the expansion of our network and the services from 1GE to 10GE and now to 100GE and I am certain that the company will continue to do so for many years to come."

"More and more service providers around the world are upgrading their network capacities to 100GE in order to better serve their customers and grow their businesses and we are proud to be supporting KENET in this important move," said Ariel Efrati, CEO at Telco Systems. "We are experiencing strong traction in the education vertical and our T-Metro 8100 solution is well-positioned to help network operators serving this market space, especially the government E-Rate projects in the United States, to upgrade their networks and improve the performance of their services."

## More ATCA Products - 100GE (ATCA = Advanced Telecom Computing Architecture)

■ [T-ATCA 510](#): 100GE AdvancedTCA® Switch blade  
Telco Systems' T-ATCA 510 delivers unparalleled connectivity to ATCA platforms with support for 10/40/100Gbps multi-rate switching on the fabric interface (FI) and 1/10Gbps multi-rate switching on the base interface (BI).



■ [T-Metro High density Carrier-Grade aggregation switches](#) provide:

- Highly scalable solution to support a wide variety of services
- SLA performance assurance with multiple resiliency mechanisms
- MEF CE 2.0, MPLS & IP transport technologies
- Hardware-based, field-proven OAM support
- Enhanced Hierarchical Quality of Service (HQoS) and service granularity support
- SDN ready with NETCONF/YANG and OpenFlow support
- Remotely deploy routing capabilities through IP-PLUS Software Enhancement Package DIA, L2/L3 VPNs & Mobile Backhaul services



**More & Contact:** <https://www.telco.com/>



# Casa Systems Showcases Transformational Access Technology Solutions for Broadband Networks at ANGA COM 2019



*Robust end-to-end portfolio opens up new opportunities for service providers including LowLatency DOCSIS 3.1, Standards-Based Virtual CCAP (vCCAP) with Orchestration, ProfileManagement and Multiservice Edge Access*

ANDOVER, Mass. – June 5, 2019 – To keep up with the growing demands of an all-connected world, service providers are looking for innovative and efficient ways to increase capacity and improve agility of broadband networks while reducing space and power constraints. Casa Systems accelerates network innovation with its suite of intelligent, end-to-end broadband solutions that provide a clear path to a converged, virtualized and distributed multi-access network.

At this week's ANGA COM conference, Casa Systems is demonstrating end-to-end, interoperable, standards-based solutions that allow service providers to take a step-wise approach to transform cable networks for the all-connected future. In addition, Casa's product and solution experts are participating in panels that discuss the benefits of multiservice 5G core, virtual CCAP, and low latency DOCSIS 3.1 best practices.

"There are many paths that service providers can take to transform their networks. Casa Systems has the expertise and technology to help service providers navigate their broadband network's potential no matter where they are in the process," said Peter Wolff, VP Wireline Product Management at Casa Systems. "Our portfolio of end-to-end agile broadband solutions, from the network core to the network edge, are engineered for the performance, flexibility and scale that cable, wireless, fixed and converged networks require. At ANGA COM, we are demonstrating solutions that enable service providers to fully maximize their existing network and prepare for the converged future."

## **Casa Systems Featured Demonstrations in Hall 7, Stand #G10 at ANGA COM 2019**

### **Standards-Based vCCAP with Orchestration**

Developed for the virtual compute environment from the ground up, the Axyom vCCAP is designed to support full interoperability in a distributed access architecture. Casa is demonstrating an end-to-end, standards-based, integrated and interoperable solution that features bottoms-up provisioning using our new Axyom™ Intelligent Access Manager (IAM) - powered by Intraway, a leading software provider in Americas. The new IAM automates the Remote PHY Device (RPD) provisioning process. IAM provides AP-based tools and work-flow modules for both legacy equipment and next-generation components that can scale during the transition to distributed access architectures.

### **Multiservice Edge Access**

The latest addition to Casa's converged software architecture that includes 5G and FTTx, the Axyomä Virtual Broadband Network Gateway (vBNG) Router solution is the industry's first virtualized broadband network gateway that delivers superior performance, multi-dimensional scaling, and flexibility needed to address the greater diversity of broadband demands. At ANGA COM, Casa is showcasing an end-to-end, integrated, interoperable service provider edge access solution that offloads and distributes the data plane so service providers can better control and distribute intelligence to the network edge.

### **Low Latency DOCSIS 3.1**

From gaming to virtual reality to wireless backhaul, service providers are looking for solutions to keep pace with demands for more bandwidth and lower latency to support applications without choppiness, freezing or other latency issues. Casa's enhanced software-based architecture provides significant improvement to keep ahead of increasingly latency-sensitive application requirements.

### **Increase Spectral Efficiency with PMA**

Service providers are looking for ways to provide unique and innovative services and solutions that consumers demand and want. With a profile management application (PMA) solution, service providers can deliver a consistent user experience with network management solutions that dynamically adjust to changing network conditions. The result is increased spectral efficiency which means higher throughputs and better performance.

### **About Casa Systems, Inc.**

Casa Systems, Inc. (Nasdaq: CASA) delivers converged broadband technology solutions that enable mobile, cable and fixed network service providers to meet the growing demand for gigabit bandwidth and services. Our suite of distributed and virtualized solutions for fixed and mobile 5G ultra-broadband networks are engineered for performance, flexibility and scale.

**Commercially deployed in over 70 countries, Casa serves more than 450 Tier 1 and regional service providers worldwide.**

For more information, please visit us at <http://www.casa-systems.com>.

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**500** EXHIBITORS    **21,700** PARTICIPANTS    **47%** INTERNATIONAL    **78** COUNTRIES

### BROADBAND TELEVISION ON-LINE

*" The international telecommunications and media industry meets at ANGA COM. It is therefore the perfect platform for a constructive dialogue on regulation and competition, market trends and the future of the industry. I have rarely experienced an opening discussion which was as honest, effective and entertaining at the same time. "*



Dr. Hannes Ametsreiter  
 CEO, Vodafone Deutschland

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