

# ELECTRONICS & COMMUNICATION NEWSLETTER

## U.S. Telecommunications Industry Outlook

### Special points of interest:

- Industry outlook to lookout for in 2017.
- Recent trends in 5G, network security, etc.
- New Mobility Industry Concepts, technologies and Launches.
- Fixed Wireless Technology

The U.S. telecommunications industry is currently balanced with almost equal proportions of positive and negative influences.

The broadband privacy rules proposed by former FCC Chairman Wheeler required ISPs to get consumers' explicit consent before selling or sharing Web browsing data and other private information with advertisers and other companies. Since ISPs have direct access to user database, they used to sell the data to digital marketing firms for targeted advertising.

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### Game-Changing Telecommunication Trends to Follow in 2017

The race for 5G was hot in 2016, and this trend is expected to continue this year.

Google, Uber, and Ford have already established their blueprints. We expect most of these companies to initiate their field tests this year. 2017 will see the first wave of 5G architectural attempts. It will witness the initial stages of commercial offers launched amidst widespread testing of the technology. For instance, most developers will focus on improving the level of access to the database. Expect significant changes such a 1GB access to 10GB or 10GB to 100GB. Such improvements will allow a smooth transition from 4G



to 5G networks.

Operators spent most of 2016 searching and testing new securities given the multitude of risks. Most of them rolled out the business-wide encryption services. In 2017, network security will be more important to operators than ever.

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### Inside this issue:

IoT:What's New	2
5G and other innova-	3
Augmented Reality/ Virtual Reality	4
The Global Giants: What are they upto?	5

### Fixed Wireless Technology

Many experts in telecom admit that fixed wireless is shaping up well for 2017. Companies such as Google, Verizon, and AT&T have already put in place different mechanisms that will help them come up with new and innovative ways to make fixed wireless technology work in telecommunication systems. With the 5G spectrum almost available, fixed wireless will have a major bandwidth boost.

There are already tests being done in different companies. Organizations such as the Connect America Foundation require their carriers to comply with the broadband deployment offered through fixed wireless platforms.

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### Value-added services and OTT

Over-the-top service will be a hot area this year. OTT will be highly favored, especially with the growth of live streaming and increasing demand for non-linear media consumption by the public.

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## IoT: WHAT'S NEW




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*It is a new milestone of transparent electronic systems," says Jung Won Seo. "By integrating TRRAM with other transparent electronic components, we can create a total see-through embedded electronic systems."*

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### Smart Receptionist With Smartlock System

Presented here is a security system that lets you see a visitor while your main office door is locked. If you are in the middle of a meeting in a conference room and there is a visitor at the door, this system will send a notification to your smartphone with a photo of the visitor as email.

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### Google's new IoT Core service helps businesses manage their IoT data and devices

Google Cloud launched a new Internet of Things management service today called Google Cloud IoT Core that provides a way for companies to manage IoT devices and process data being generated by those devices.

By making this into a service, Google is not only keeping up with AWS and Microsoft, which have similar services, it is tapping into a fast-growing market.

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## Evrythng, the Internet of Things platform for 'smart products,' scores \$24.8M Series B

Evrythng, the Internet of Things (IoT) smart products platform that gives any physical object a so-called "digital identity," has closed a \$24.8 million Series B funding.

Founded all the way back in 2011, Evrythng offers an enterprise-focused IoT platform for managing what it calls "intelligent software identities" for products that have been made

smart via anything from smart tags like QR codes, to NFC, BLE, RFID, or which are directly connected to the internet.

In a sign of how far the company has come since its upstart beginnings, over the past 12 months, Evrythng has announced partnerships with leading global packaging companies Avery Dennison Retail Branding, Information Solutions (RBIS), Crown Holdings and

WestRock.

On the consumer side, these digital identities can also be connected to an app to enable things like further product information and various digital experiences, or something as simple as re-ordering a very specific product SKU.

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## Transparent Smartphones

Inventors, Jung Won Seo, Jae-Woo Park, Keong Su Lim, Ji-Hwan Yang and Sang Jung Kang, who are scientists at the Korean Advanced Institute of Science and Technology, have created the world's first transparent computer chip.

The chip, known as (TRRAM)

or transparent resistive random access memory, is similar to existing chips known as (CMOS) or metal-oxide semiconductor memory, which we use in new electronics.

The difference is that TRRAM is completely clear and transparent.

What is the benefit of having

transparency?

"It is a new milestone of transparent electronic systems," says Jung Won Seo. "By integrating TRRAM with other transparent electronic components, we can create a total see-through embedded electronic systems."

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## Li-Fi and other news in 5G

LiFi is the high-speed bidirectional network and mobile communication of data using light. LiFi comprises multiple light bulbs that form a wireless network. When an electrical current is applied to a LED light bulb, a stream of light (photons) is emitted from the bulb. LED bulbs are semiconductor devices, which means that the brightness of the light flowing through them can be changed at extremely high speeds. This allows us to send a signal by modulating the light at

different rates. The signal can then be received by a detector which interprets the changes in light intensity (the signal) as data.

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### UK government sets out 5G strategy and creates National 5G Innovation Network

The National 5G Innovation Network will be up and running later this year and will conduct initial trials through to 2018, followed by support for a num-

ber of testbeds through to 2019.

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### Apple a step closer to 5G iPhone

“Apple intends to transmit from two fixed points located at Apple-controlled facilities in Cupertino and Milpitas, CA. These transmissions will be consistent with the parameters and equipment identified in Apple’s accompanying Form 442,”.

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## How telecoms applications can become ‘ripe for innovation’ through blockchain

Analysis Telecoms providers continue to be kept on their toes by the emergence of new technologies, from cloud to IoT. The allure of blockchain, and a secure, distributed ledger, is causing ripples in industries outside of the traditional financial services hotbed.

Writing on LinkedIn, Jonathan Reichental, CIO of the City of Palo Alto and a long-time ob-

server of emerging technologies, discusses the problems blockchain tries to solve and argues it ‘eliminates the middleman’, particularly around the issue of identity. “Since the distributed ledger is the authority, it becomes near impossible to duplicate or impersonate an online identity since this authority ensures a single identity for you,” he explains. “It will reject at-

tempts to foil the system.”

The concept of trust is also important in blockchain – the idea that a consensus-based system and proof of work can verify transactions without an authoritative body over it – and has proved the bedrock of various discussions at recent industry events.

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*Renewable energy and blockchain are two technologies that are worth betting on. The former is considered to be the most effective way to combat the world’s climate problem. The latter is a promising new technology whose potential for disruption of current financial and societal structures is yet to be fully realized.*

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## Blockchain and Renewable Energy Are Utterly Disrupting Society as We Know It

Renewable energy and blockchain are two technologies that are worth betting on. The former is considered to be the most effective way to combat the world’s climate problem. The latter is a promising new technology whose potential for disruption of current financial and

societal structures is yet to be fully realized. Here’s a thought: why not put the two together? That’s what Brooklyn-based startup LO3 Energy had in mind when it started a project that does just that, creating an innovative retail model for electricity.

“Oh, this is shared economy. This is Airbnb, this is Uber, this is 21st century,” Brooklyn resident Michael Guerra told *Politico*, recounting the time when LO3’s Sasha Santiago first introduced him to the idea.

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## AUGMENTED REALITY/ VIRTUAL REALITY: LATEST TRENDS

### Alexa and Google Assistant Will Infiltrate Everything

The Amazon Echo was a surprising hit when it first came out, but last year Google turned up the competition by launching Google Assistant and putting it inside its own smart speaker, the Google Home. This year at CES, the gloves came off. Google and Amazon are racing to integrate their smart assistants with every gadget in your life.

All of this points to one very

push in 2017: Smart assistants will be everywhere. Amazon and, to a lesser extent, Google want you to view Alexa and Google as a virtual person that's in every room with you.

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### Wireless Virtual Reality tech to make huge splash in 2017

In Virtual Reality, this means wireless VR Head Mounted Displays (HMDs). The current generation of hardware has the user connected to a powerful PC

via annoying cables. We are excited to be freed from cables in 2017. To the companies that are working on wireless headsets, such as HTC (which has already partnered with TPCAST to create an add-on that makes the current Vive wireless) and will be the first to market with a fully wireless HMD, we say THANK YOU! Of course, the folks at Oculus, Google, Sony, Apple or Microsoft.

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### Apple & Energous:

Word is that Apple is partnering with a company called Energous on a breakthrough wireless charging solution that will allow the next iteration of the iPhone to charge from across a room. The tech exists, and if Apple really does roll out what Energous has developed, it would instantly create a new product ecosystem around wireless charging.

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Amid rumors that Apple will release its first iPhone models with wireless charging capabilities as early as this year, its possible partner Energous has told The Verge that its first truly wireless transmitters will begin shipping by the end of 2017, over two years after it first introduced the technology.

Energous CEO Steve Rizzone also dropped yet another hint

suggesting its partner is indeed Apple. "One of the largest consumer electronic companies in the world," he said. "I cannot tell you who it is, but I can virtual guarantee that you have products from this company on your person, sitting on your desk, or at home."

[Click Here for More Info.](#)

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### VisualCommerce™ 3D Cloud

VisualCommerce™ 3D Cloud is the award-winning cloud-based content management system and suite of Augmented and Virtual Reality solutions for manufacturers, retailers and homebuilders. A proven solution designed to bring the power and persuasion of Virtual Reality and Aug-

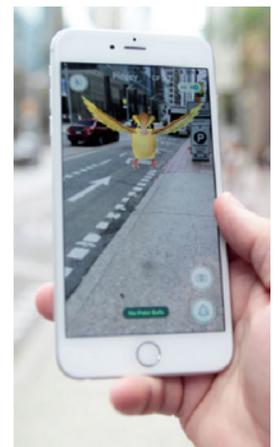
mented Reality to everything from shopping for a home to furnishing a home, VisualCommerce™ 3D Cloud AR and VR experiences scale to the enterprise, build buyer confidence and deliver sales.

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### E3 2017: Sony teases virtual reality

Sony revealed that it has sold one million PSVR headsets to date, meaning there is already a sizeable market for new VR titles.

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## THE GLOBAL GIANTS: WHAT THEY ARE UP TO

### Nokia and China Mobile extend ultra-broadband access and intelligent home services to homes across China

Under this contract, China Mobile will deploy home gateway units with Nokia's solution to over 30 million users during 2017. Using established fiber-to-the-home (FTTH) networks, which bring greater service experiences and gigabit speeds to customers, the new gateway will extend internet coverage in the

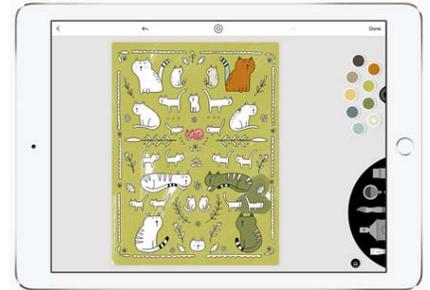
home and enable IoT communications between devices and sensors. The ability to flexibly add software functions and enhanced analytics capabilities allows China Mobile to deploy and deliver a new intelligent home experience and associated services.

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### Microsoft premieres Xbox One X, world's most powerful console

Sunday marked a milestone Xbox E3 Briefing as Microsoft Corp. unveiled the world's most powerful console, Xbox One X (formerly code-named "Project Scorpio") and its largest and most diverse games lineup in E3 history.

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## Qualcomm Brings the Power of Amazon Web Services to the Edge by Facilitating Development of IoT Solutions Using AWS Greengrass

The edge processing capabilities enabled by Qualcomm Technologies' SoCs are particularly well-suited for commercial and industrial gateways.

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### Samsung Announces New Virtual Reality Partnerships with UFC®, X Games and Live Nation

Samsung Electronics Co., Ltd. is pleased to announce VR Live Pass on Gear VR, a lineup of exciting global, live entertainment partnerships with the UFC®, X Games and Live Nation. Samsung will stream select

live events so fans can enjoy immersive virtual reality broadcasts of their favorite action sports and music events through the Gear VR platform.

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*"We're not really saying from a product point of view what we will do, but we are being straightforward that it's a core technology that we view as very important," he said.*

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## Apple Design Awards celebrate the best in innovation and creativity

On Monday, June 5, Apple handed out its annual Apple Design Awards, which celebrate the talent, artistry and creativity of developers who set the standard for ideal app design. Now in its 20th year, the Awards recognize excellence in design, innovation and technology in

apps and games across iPhone, iPad, Mac, Apple Watch and Apple TV. This year's honorees represent eight countries around the world: Austria, Canada, Germany, Israel, Italy, Singapore, Slovenia and the US.

This innovative Apple Watch app, written in Swift, enables

quick conversion between 150+ currencies worldwide. It's simple to use, and quickly infers currencies to convert based on locale and current time zone.

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