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Identity management: The latest trends and concerns from IT decision-makers



Eric Avigdor, Gemalto

Just weeks ago, Gemalto released results of its annual Authentication and Identity Management Index . The survey, conducted by independent research firm Vanson Bourne, questioned 1,150 IT decision-makers from around the globe on a variety of identity protection and authentication policies that were either already implemented or planned for the future. For starters, results showed 90 percent are concerned employee reuse of personal credentials for work purposes could compromise security. However, with two thirds (68 percent) saying they would be comfortable allowing employees to... [Continued...](#)

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Digital Receiver K707 Supports GNU Radio- GSM Digital Beamforming

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Discovering the technologies behind the autonomous vehicle



Rudy Ramos, Mouser

The concept of autonomous vehicles is driving dynamism and innovation in the components industry. Sensors, power converters, GPS systems, wireless modules, control and communications technologies, and HMI products are all being developed with the autonomous vehicle in mind. In the meantime, Advanced Driver Assistance Systems (ADAS) are already producing revenue for the component makers. Here's a peek at some of the most interesting developments announced in the last few months. Neural network-based driving platforms The first generation of self-driving cars used LIDAR systems to... [Continued...](#)



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The latest USB innovations are driving the market to unprecedented highs



Khusro Khan, Transparency Market Research

USB cables are about as ubiquitous as any connecting medium can be. There are several USB standards with varying connector types, including Standard A, Standard B, Micro A, Mini B, Micro AB, and Micro B. Standard A is the most common, found in most PCs, while Standard B is for large peripherals, like scanners and printers. Micro and Mini adapters are generally used for small portable devices, such as mobile handsets and digital cameras. Super speed USB cables are expected to drive the global... [Continued...](#)

Who's ready to jump into a self-driving car?



Julien Mottin, Leti

Safety is a major concern for self-driving cars. In constant motion, their perception of the vehicle environment is one of the most challenging tasks for engineers. To understand the whole process involved, let's review the decision channel (Figure 1). It all begins with various sensors that provide information about the environment surrounding the vehicle, as well as the vehicle itself. This info is then assessed – obstacle detection, lane detection, position, analysis of the surrounding objects' dynamic (e.g speed of car ahead), as well... [Continued...](#)



CES 2017: Leti says RELAX with new EEG wearable



Pierre Jallon, Leti

At CES 2017, French technology research institute Leti will introduce an electroencephalography (EEG) wearable device that measures brain-activity via alpha waves, allowing consumers to measure relaxation levels in real-time. The RELAX headgear aims to allow users to maximize relaxation, adding a new dimension to wellness management in every area of life, from working to studying to exercising or simply listening to music. Medically certified-ready, user-friendly, affordable, and non-invasive, RELAX lets users monitor their own level of attention and enhance mindfulness. The RELAX app, which... [Continued...](#)

Mobile Device Trends in the Internet of Things

Sponsored by: Ayla Networks and Cardinal Peak

January 19, 2pm ET

Map data as co-pilot: Extended scope for autonomous driving

 Thomas Barthel, Elektrobit Automotive

In this decade, highly automated driving is the goal of every car manufacturer. New players have entered the market while traditional car manufacturers gradually improve driving assistance functions until they finally become completely independent from the driver. The newcomers have less experience in actual car manufacturing, but great know-how in machine learning and interaction with the cloud. The commonality is the need for sensor data to replace human senses. An autonomous car requires information about its environment to act properly. Each type of sensor... [Continued...](#)



Connectivity and the new face of machinery



Peter Thorne, Cambashi Ltd.

There are new ways of interacting with connected products. Why build instrumentation and controls into machines if every user will have a tablet or phone? Just run an app to see the displays and buttons, and operate the machine. Manufacturers will change their approach to development, operations, and service. I remember feeling mildly alarmed during a 2012 research interview with a medical equipment designer. At that time, her main project was to estimate the potential cost savings of using the electronics and display of... [Continued...](#)



Embedded Android hits its stride



Nathan Tennies, Barr Group

Google's Android OS has limited real-time support and a checkered past with security. It's also big, complex, and resource-intensive. Yet, it's starting to take the embedded software world by storm, via a two-pronged approach. One prong involves Google slowly adding official support for more embedded device types, allowing Android to make inroads into a wider range of embedded markets. Having grown to dominate the worldwide market for smartphones and tablets, today Android also supports smart TVs and set-top boxes, wearables such as smart watches... [Continued...](#)

2017 IIoT Prediction: Edge computing goes mainstream



Steve Jennis, PrismTech

Market trends show that edge computing will come to represent many implementation scenarios for the Industrial IoT (IIoT) in 2017. Adding new capabilities “at the edges” of existing OT and IT systems and Internet/cloud services is driving the evolution of the IIoT and the new business value-add it provides. Edge computing is also gaining increased recognition as the solution to the shortcomings of M2M for the IIoT (e.g. latency, resilience, cost, peer-to-peer, connectivity, security). Thus, I predict that edge computing — connected embedded computing... [Continued...](#)

Hardware developers: Take a cue from your software brethren



David Andeen, Maxim Integrated

Software developers have a great solution in the open-source world, where they can tap into code and libraries that give them a head start on the development process. What a great way to save time and stand on the shoulders of giants! Since your life as an engineer is about doing more with less, why not take advantage of a similar resource? As a hardware designer, you could reap the kinds of timesaving benefits that your software brethren enjoy if you start your design... [Continued...](#)

In 2017, antennas will play an integral role in the success of the IoT



Dermot O'Shea, Taoglas

Ever wonder if the headlines for projected growth of certain technologies in the wireless and Internet of Things (IoT) markets are realistic? Ask the antenna manufacturers; they are involved in the design of IoT devices from concept all the way to certification and launch. As early predictions for the IoT spiraled wildly upwards, antenna manufacturers saw the true demand in terms of orders placed, and have an insider's view into what's real and what's hype, based on requests from device manufacturers. Using this same... [Continued...](#)

PCIe/104 – The ‘fishal’ recognition revolution in fish counting



Rory Dear, European Editor/Technical Contributor

Fish-count surveys are vital in ensuring the conservation and management of fish stocks in our increasingly over-fished seas. The accuracy of those surveys being critical in providing evidence of over-fishing to drive restorative and preventative legislation. Traditional fish-counting is inherently manual, relying on fishing trawlers casting enormous nets into the ocean, pulling aboard as many fish as possible to manually count and develop the trawl survey. Environmentally, the primary shortcoming of this approach is the number of fish killed during the course of this... [Continued...](#)

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