Embedded COMPUTING DESIGN
February E-Letter

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The Embedded Experts Podcast: Listen to Linus

Brandon Lewis, Technology Editor *and* Rich Nass, Embedded Computing Brand Director

Technology Editor Brandon Lewis attended the Embedded Linux Conference in Portland, Oregon this past week. There, Linus Torvalds, the creator of Linux, commented that "Linux has to remain a general purpose operating system."

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Connecting wireless sensor nodes to the cloud with the Thunderboard Sense kit

Jim Meeks, Silicon Labs

If you're developing an application that transfers wireless sensor node data to the cloud, the complexity of wireless sensor design may present challenges that delay the development cycle. Internet-of Things (IoT) design requires diverse skills in embedded, sensor measurement, wireless connectivity, and mobile software application development. IoT vendors are offering hardware reference designs and development kits to aid designers in accelerating their IoT development cycle.

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Microsemi?s PolarFire FPGAs add a low-power checkbox to the mid-range density

Rich Nass, Embedded Computing Brand Director

We just concluded our Annual Embedded Market Study, where we asked people like you, our reader community, questions about their design habits, choices, and product selections. In one question, we asked readers to choose the FPGAs that they?re working with. Inevitably, Xilinx comes up as number one, and Altera is number two. But there?s a [...]

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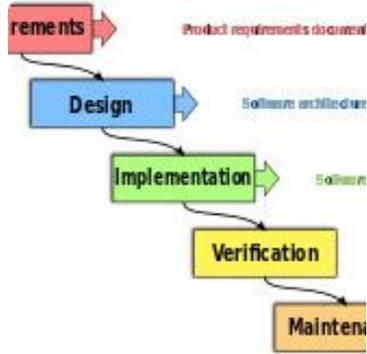
Revisiting your software development process? Do the right thing.

Arthur Hicken Parasoft

A while ago, I spoke to a client?s tech lead about why the company was making changes to their software development process. I?m always curious to hear these explanations, because often changes are being made for strange reasons ? a prescription for an incorrect diagnosis. These unnecessary changes can lead to project failure and long-term [...]

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Enabling the IoT with Bluetooth, part 1: What BLE v5.0 means to you
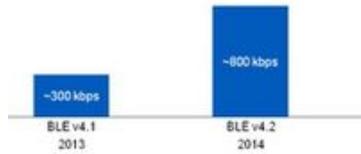
Sachin Gupta, Cypress Semiconductor

In 2010, Bluetooth Low Energy (BLE) was added to Bluetooth specification to enable connections between devices that only needed to send a few bytes of data to each other over a limited range. It focused on consuming less power compared to Bluetooth classic and other wireless technologies. As the Internet of Things (IoT) transitions from concept to execution, BLE can be found in a variety of applications, including automation, remote controllers, beacons, wireless sensor?

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Product Line Engineering: Intelligent manufacturing for intelligent products

Brandon Lewis, Technology Editor

The Internet of Things (IoT) is ramping up the creation diverse, intelligent, and connected products, in many cases much more quickly than the manufacturing people, processes, and technologies used to create them can support. This requires a new approach to engineering and product lifecycle management, according to Dr. Charles Krueger, CEO of BigLever Software, and in this interview he explains how large-scale organizations can abstract complex processes and portfolios to?

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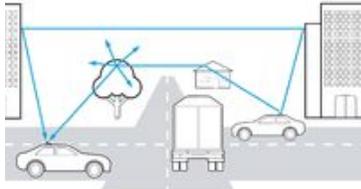
RF testing: The basis for automotive V2X

Dr. Thomas Bruggen, Rohde & Schwarz

Automated vehicles can safely navigate the road only if they have precise knowledge of the environment and traffic situation. A wide variety of sensors and cameras already provide some of this information. Additional information is supplied by using wireless technologies to connect vehicles. To ensure that safety-related data messages are received even under poor transmit conditions, the transmitter and receiver must adhere to minimum standards. Adherence can be verified using RF tests.

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Embedded AI is here

Todd Mozer, Sensory, Inc.

The wonders of deep learning are well utilized in the area of artificial intelligence, aka AI. Massive amounts of training data can be processed on very powerful platforms to create wonderful generalized models, which can be extremely accurate. But this in and of itself is not yet optimal, and there?s a movement afoot to move [...]

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Security and the Cortex-M MPU, part 5: Step-by-step MPU security

Ralph Moore, Micro Digital

Previous blogs have presented an introduction to the MPU and terminology , MPU multitasking , defining MPU regions , and a software interrupt (SWI) API for use with an MPU . In the first blog, privileged tasks (ptasks) and unprivileged tasks (utasks) were defined. The former run in?

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STOP doing error checking!

Bill Gatliff, Freelance Developer

Error codes are the problem, not the solution.

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The Embedded Experts Podcast: Inside TrustZone for Cortex-M with Reinhard Keil

Brandon Lewis, Technology Editor *and* Rich Nass, Embedded Computing Brand Director

ARM?s TrustZone technology has been available in higher end Cortex-A-class processors for some time, affording developers in the mobile industry the ability to secure their designs by isolating critical system functions from non-critical programs in secure, memory protected regions. However, just because the technology has been available doesn?t necessarily mean that it?s been put to use.

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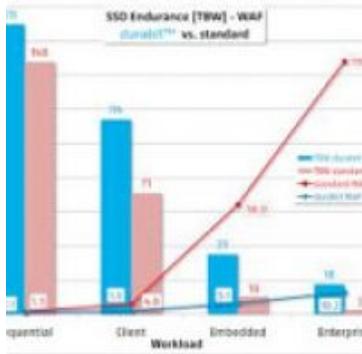
DESIGN ARTICLES

Autonomous drive by 2020: Over-promised, under-delivered?

Shawn Andreassi, SAE International

A look at the future vehicle through the eyes of SAE International

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Asking the right questions when selecting flash memory devices for industrial applications

Ulrich Brandt, Swissbit

Selecting flash memory devices, or solid-state drives (SSDs), for industrial applications is complex. Price-performance comparisons are of little use because the demand-driven definition of performance hinges on a host of factors.

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White Paper: Production Floor Trends: Justifying Additive Manufacturing Through Jigs & Futures

Joe Hiemenz   Stratasys

Making jigs and fixtures using additive manufacturing provides dramatic cost savings compared to conventional machining. But the savings involve more than how the tools are made. When companies understand the full scope of benefits that 3D printed tools offer, the ROI becomes very attractive, making it easier to justify the technology. Download the white paper to learn more about these advantages from the experience of three companies that benefited through: - Decreased demands on engineering?

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M to M & Objets Connectés Embedded Systems

E-cast

SYNOPSIS: A one-hour, live, moderated problem/solution technical webcast.

Using default time zone: America/New_York

See how system-on-modules can improve your wireless designs

Sponsored by: Digi International and Digi-Key Electronics

March 29th
11 am EDT
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