



EDITORIAL COMMENT

By Caroline Hayes, Editor-in-Chief, EPN

In the nature of computing, a cloud meets a stream

IBM's VP of innovation, Dr Bernard S Meyerson, believes he has seen the future. And it is an IT-rich one.

At the GlobalPress Summit, in Santa Cruz, California, Meyerson expanded on IBM's concept of the Smarter Planet where data will all-pervasive. It refers to a world where IT dependency is inevitable with the proliferation of data traffic, the introduction of smart meters, e-banking, electronic medical records, the proliferation of RFID tags, surveillance and transport data not to mention that generated by the YouTube generation and businesses.

However, too much visible information can cause problems. Meyerson made the analogy of the amount of information that is available, but that is not necessary to view, from the hundreds of processors in the average car. Here, information is distilled down into dashboard dials of speed, temperature and mileage. He points out, a driver does not need to know when each and every element is working as it should, a driver only needs to know when a part, like the tyre pressure monitoring sensors are NOT working.

The fact that there is a significant increase in data, and more is inevitable, does not mean that individuals have to monitor all the information, all the time. However there are some instances when several pieces of data have to be analysed as a whole to identify an anomalies. This is where computer streaming is to be used.

Computer streaming eliminates extraneous data, and relies on the IT capability to learn what is extraneous in each case. For example, it has been used in intensive care units to identify babies at risk of nosocomial,

or hospital-acquired infections. In an experiment, the continual monitoring of heart, oxygen levels in the blood and blood pressure could alert medical staff. When certain levels are reached in combination, an alert to an infection was issued 24 hours ahead of alerts from experienced intensive care nurses.

This level of data and data processing will involve the cloud infrastructure. Meyerson describes cloud computing as the first stage in handling the volume of data produced by the interconnected, Internet-driven 'systems within systems' that will make up cities and communities. These can be smart meters and energy usage or traffic flows.

The demand for interactive computing is assessed at each request and the cloud will close down some 'batch jobs' to accommodate new projects. The batch jobs will be reloaded when the interactive project logs off. Meyerson estimates that this process means 3000 uses can run in real-time on a common set of instructions and on a common infrastructure. This translates into 40,000 jobs each day and over 50 million simulation cycles.

A project with the university in Stockholm applied the complexity of traffic to paradigms of streaming computing to reduce congestion with real-time directions for vehicles to navigate a route. The Smarter Planet will model figures to predict traffic flow and to plan routes for large vehicles at different times. The cloud has already been used, says Meyerson, by EDA teams to create 22nm designs, demonstrating that it allows larger systems to run smoothly. It also, says Meyerson, paves the way for a more holistic approach to computing. He envisages a world where companies will develop and deploy systems

ON THE WEB

The best of EPN Online

There are some things you won't read in EPN—because there are even more stories and news items online. Naturally, online there is the latest news on new product releases and announcements, from components to sub-assemblies and including software, power supplies and management, test and measurement and materials. However, only at www.epn-online.com can you access the **Interview of the Week**, a sharp and concise Q&A with top executives and technology experts in the electronics industry. Also exclusively online is the **Industry News** section—news of industry alliances and mergers, as well as even more products.

EPN's Web site has an **online datasheet-download facility** so that you can instantly access datasheet information. There is no faster way to get the information your design project needs.

Among the news stories to be found on the EPN Web site this month are:

European companies, including **ST Microelectronics** and NXP, are joining together to partner in a three-year research project to devise thermal models for devices used in the automotive and industrial markets. **40569**

<http://www.st.com/stonline/index.htm>

Electronic Design Automation organisations, **Accellera** and The SPIRIT Consortium, have merged. The new name of the joint organisation is Accellera and it will create formal standards through the IEEE. **40769**

<http://www.accellera.org/activities/techrep/>

A lighting alliance, Zenaro, has been founded by Taiwan's **Everlight Electronics**, Germany's Lighting Competence Centre, the R&D centre of Everlight Electronics Europe in Karlsruhe, Germany and America's Aphos Lighting. It aims to combine LED competencies to create "innovative design" in street, interior and consumer lighting. **40770**

http://www.everlight.com/product.php?item=147&cate_index=0&dis=2&set_lang=en

At the National Association for Broadcasters Conference, **Gennum** demonstrated its 3G interfaces in a live working demonstration of 3DTV and demonstrated future-proofing current designs. **40808**

<http://www.gennum.com/products/video-optical-modules>

At the GlobalPress Summit in California, **Global Unichip** revealed its virtual IDM that addresses power consumption challenges posed by iPads, smartbooks and e-books. **40833**

<http://www.globalunichip.com/2-0.php>

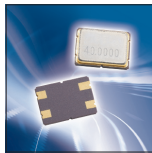
Also, visit Mick Elliott's Disti Blog for a daily dose of distribution news and anecdotes: <http://blog.epn-online.com/distiblog>.

Read these stories, and many more, in full on www.epn-online.com.

Mini SMD Quartz Crystals

is low-cost and designed for Bluetooth applications

Designed for Bluetooth applications, the SMD03025/4 mini SMD quartz crystal series has dimensions of 3.2x2.5x0.6mm and is from Petermann-Technik. It is, claims the company, the lowest-priced mini SMD crystal in a ceramic housing. The crystal is available from 12MHz and above with frequency tolerances of 25°C at ±10ppm and above, temperature stabilities of ±8 ppm and



above and aging of maximum ±1ppm/year. For automotive applications, the crystal meets the AECQ200 automotive standard with its extended temperature range of -40 to +125°C. To improve EMC performance the crystal must be earthed through pins two and four.

PETERMANN-TECHNIK

www.epn-online.com/search?search_keyword=40567

APD Direct PCB Connector

eliminates board to board connectors

A new cost-saving plastic connector, which eliminates the need to use board-to-board connectors, has been developed by ITT Interconnect Solutions. The APD direct PCB connector provides a direct interface into the "box" but is connected to a PCB internally, instead of using the standard crimped cable connection. The new connector requires no harnessing, which saves board space. Robust and lightweight, the connector



is sealed to IP67/IP69K. Combined with high resistance to oil, this connector suits a wide range of industrial, transportation, and military applications. Operating voltage is 48V maximum. The connector is available in 6, 7, 19 37 or 51-way versions, plus a four-way configuration for sensor applications.

ITT INTERCONNECT SOLUTIONS

www.epn-online.com/search?search_keyword=40687

to solve ambiguities of the modern IT infrastructure.

The future is that two elements meet; with cloud computing as the means for capacity, and streaming for the throughput to present relevant data in a timely fashion. That cliché of not working harder but working smarter is closer to become the de facto standard for all IT.