

Conference on CE-Berlin 2014 and the Global Conference on CE 2014 (Japan), respectively. This is a collective effort from the committee members to bridge the gap between current research activities and the consumer-centric approach. These sessions will aim to organize paper presentations, a keynote speech, a panel on standardization efforts, posters, and demonstrations. We are soliciting papers, posters, and demos from academia and industry on the following topics:

- ▼ the consumer-driven IoT ecosystem of smart objects, gateways, applications, and services
- ▼ semantic technologies, enriching M2M sensor data, data security and

storage, linked data, and semantic for interoperability as applicable for CE devices, users, and applications

- ▼ scalability and interoperability of architectures, protocols, and software solutions for efficient interconnection of smart objects
- ▼ security, privacy, and trust in the IoT ecosystem
- ▼ use of M2M gateway, RFID, sensors, and actuator networks in commercial applications
- ▼ consumer application of the IoT in e-Health, smart city, smart grid, etc.

Finally, we would like to thank committee members Bob Frankston, Joseph Wei, Peter Corcoran, and Stephen Dukes

for their valuable suggestions for the sessions. We solicit active participation from industry and academia to make the two sessions a success.

## SESSION CHAIRS

- ▼ Thomas Coughlin, IEEE CE Society FD chair, e-mail: tom@tomcoughlin.com
- ▼ Soumya Kanti Datta, member, IEEE CE Society FD on IoT and Research Engineer, EURECOM, France, e-mail: soumya-kanti.datta@eurecom.fr.

—Tom Coughlin  
—Soumya Kanti Datta

# Consumer Electronics and the Internet of Things

The Internet of Things (IoT) refers to uniquely identifiable objects and their virtual representations in an Internet-like structure. The term, *Internet of Things*, was first proposed by Kevin Ashton in 1999 [1] although the concept has been discussed in the literature since at least 1991 [2], [3]–[5].

Today, research into the IoT remains in its infancy. Some consider any Internet-connected device to be a member of the IoT; others restrict the definition to machine-to-machine interactions or sensor networks. For this call, our principal theme is focused on how the IoT will integrate with, change, and disrupt different sectors of the consumer electronics (CE) industry. We actively seek articles on CE- and IoT-related topics from both

industry and academic researchers. Where does your research or industry niche fit into the emerging ecosystem of IoT and CE techniques, devices, and



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technologies? What are the emerging trends and impacts? And what are the long-term consequences for society?

Articles should be broadly scoped—typically review and tutorial articles are particularly suited to *IEEE Consumer Electronics Magazine*. Articles presenting industry and societal perspectives on CE are also welcome. Technical articles may

be suitable but these should be of general interest to an engineering audience and of a broader scope than regular technical papers for archival journals.

## SUITABLE TOPICS

Articles related to practical testing and evaluations of state-of-the-art and next-generation technologies and IoT systems are particularly welcome. While some emphasis on the CE-related aspects of these systems is required, articles dealing with interdisciplinary aspects of the IoT will be considered. Articles placing an emphasis on the societal and economic impact of the IoT are encouraged. We are also looking for tutorials on all CE-related technologies or systems that are relevant to the IoT.

Interested in contributing? Please contact tom@tomcoughlin.com or the editor at cesmagazine@ieee.org for

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Graphene, quantum dots, 3-D ICs, and supercapacitors provide us the excitement and anticipation that make being an engineer great. And as we make this new technology a reality and incorporate it into a product, we should have at least one eye (and maybe an ear as well) on the older technology that provides the product foundation and compatibility with the wider world. This eye should be aware of how design, materials, quality, and environment influence the behavior and robustness of this older technology. It should also realize when information is simply lacking (even for 50-year-old technology!) and more conservative design principles are necessary. The ear should listen to ensure that all requirements are clearly communicated all the way down the supply chain. And when time is of the essence, simpler, easier to use simulation tools should take the place of system-level testing to ensure that all changes, even form-fit-function, do not affect the user experience.

Revolution is exciting, but evolution is never as easy you think (just ask Darwin).

## ABOUT THE AUTHOR

**Craig Hillman** (chillman@dfrsolutions.com) is the chief executive officer and managing partner of DfR Solutions. He earned his B.S. degree in metallurgical engineering and material science from Carnegie Mellon University, his Ph.D. degree in materials from the University of California, Santa Barbara, and his postdoctoral fellowship at Cambridge University. His specialties include best practices in design for reliability, lead-free strategies for transitioning to lead-free, supplier qualification (commodity and engineered products), passive component technology (capacitors, resistors, etc.), and printed board failure mechanisms.

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feedback and to discuss the suitability of your ideas for an article. Articles should be submitted to: <http://mc.manuscriptcentral.com/cemag> by 30 September 2014 to allow time for peer review and any revisions.

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—Peter Corcoran

IoT and mobile devices	Home IoT networks	TV, broadcast technology, and IoT
IoT in the clouds	Social impact of IoT	Security, trust, privacy issues for IoT
IoT services for CE devices	Open IoT versus proprietary	User interfaces and IoT
IoT historical origins	IoT and health care	Energy and environmental impact of IoT
IoT and smart cities	IoT standards	IoT and education