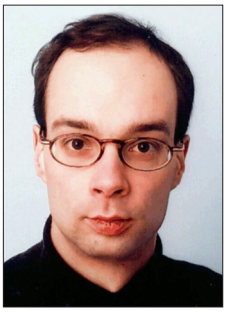
TRENDS IN CONSUMER COMMUNICATIONS: NETWORKED HOMES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A major theme in the consumer communications area has been networked homes. In the past this has often focused on networking consumer devices within a single home to offer added value or better control. Initially, these solutions were often closed and only worked with devices of a single manufacturer. Subsequently, this interworking has been extended to include equipment from different sources. With the increasing number of solutions available, and the increasing demand for sharing audio and video, the demands on the home network have grown substantially. Another focus of increased activity is extending the sharing of devices and services within a single home to across many homes. These two themes are covered by the two articles in this current issue of the Consumer Communications and Networking Series.

More specifically, the first article, "Plastic-Optical-Fiber-Based In-Home Optical Networks" by Y. Shi *et al.*, argues that with the deployment of fiber-to-the-home (FTTH) technology and the corresponding increase in available bandwidth outside the home, the home itself should not constitute a communications bottleneck. They argue that plastic optical fiber has been recognized as a viable candidate for future in-home networks. In their article they present an overview of plastic optical fiber technologies, and recent developments in the research and industry contexts.

The second article, "Consumer-Managed Federated Homes" by R. Brennan, Z. Etizoni, K. Feeney and D. O'Sullivan, looks beyond networking a single home and focuses on how users can securely share and manage services and resources of their home network. Their article offers a novel architecture for federated homes and discusses prototype implementations that allow for sharing of devices and services without a centralized authority but through peer-wise trusted relationships between consumers.

If the articles in this series are of interest to you, we strongly urge you to consider participating in the IEEE Consumer Communications and Networking Conference (CCNC) 2015, which will be held next January in Las Vegas, Nevada in conjunction with the Consumer Electronics Show (CES) — the largest CE show in the world. See http://www.ieee-ccnc.org for details.

BIOGRAPHIES

ALI C. BEGEN [SM] (abegen@cisco.com) is with the Video and Content Platforms Research and Advanced Development Group at Cisco. His interests include networked entertainment, Internet multimedia, transport protocols, and content delivery. He is currently working on architectures and protocols for next-generation video transport and distribution over IP networks. He is an active contributor in the IETF and MPEG, and has given a number of keynotes, tutorials, and guest lectures in these areas. He holds a Ph.D. degree in electrical and computer engineering from Georgia Tech. He received the Best Student Paper Award at IEEE ICIP 2003, the Most Cited Paper Award from *Elsevier Signal Processing: Image Communication* in 2008, and the Best Paper Award at the Packet Video Workshop 2012. Recently, he served as a General Co-Chair for ACM Multimedia Systems 2011 and Packet Video Workshop 2013. Further information on his projects, publications, presentations, and professional activities can be found at http://ali.begen.net.

MARIO KOLBERG [SM] is a senior lecturer with the Institute of Computing Science and Mathematics at the University of Stirling, United Kingdom. His research interests include peer-to-peer overlay networks, home automation, and IP telephony. He is on the Editorial Board of the Springer journal *Peer-to-Peer Networking and Applications* and has a long standing involvement with the IEEE CCNC conference series. He served as its TPC Chair in January 2011. Currently, he is charing the Human Centric Computing track for IEEE GLOBECOM 2014. He has published more than 50 papers in leading journals and conferences. He is a member of a number of international conferences program committees on networking and communications. He holds a Ph.D. from the University of Strathclyde, United Kingdom.

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