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Special Focus on Convergence Communications

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Editor's note

Because modern communication networks are expected to deliver increasingly high data rates at a decreasing cost per bit, the spectral efficiency of communication systems must be further improved to facilitate emerging ubiquitous services. Furthermore, because future communication networks will comprise a large number of network elements with varying functionalities/capabilities, the property of high heterogeneity will need to be observed in such networks. The past few years has seen increased interest in research on heterogeneous convergence networks such as fiber-wireless, heterogeneous, machine-to-machine, and long term evolution (LTE)-wireless sensor networks. Moreover, the convergence of computation and communication, which significantly upgrades the communication capability of networks by effectively exploiting the computational capability of the network elements, is expected to lead to the next revolution in communication technology.

This special focus comprises nine papers, which were selected as the best papers from the submissions to the Workshop on Convergence Communications (WCC), COIN 2013. Different aspects of heterogeneous convergence networks ranging from optical-wireless and communication and service convergence, to broader categories, are covered in this special issue. The issue also focuses on state-of-the-art research and development in various aspects of convergence networking technologies and ubiquitous services for next-generation convergent communication systems.

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