Topic 14
Mobile and Ubiquitous Computing

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Topic Chairs

Mobile computing has evolved tremendously in the past few years with advances in wireless networks, mobile computing, sensor networks along with the rapid growth of small, portable and powerful computing devices. These advances offer opportunities for the development of new mobile/ubiquitous computing applications and services. Topic 14 of Europar 2007 covers all aspects related with the creation of such systems.

Our topic has attracted sixty six submissions. With the help of external reviewers we ended up accepting nine papers (14% acceptance ratio).

The papers were selected on the basis of their perceived quality, originality and appropriateness to the theme of the topic 14. We thank the authors of all the submitted version for submitting their papers. These papers were organized in three sessions of three papers each: the first one addresses multi-hop wireless networks; the second one presents services for mobile systems; and the last one is devoted to wireless networking connectivity.

In the multi-hop wireless networks session, "An Algorithm for Dissemination and Retrieval of Information in Wireless Ad Hoc Networks" proposes a new algorithm to place data replicas in wireless ad hoc networks that provide good availability and low latency. In "Securing Sensor Reports in Wireless Sensor Networks", the authors propose a security mechanism for early detection of falsely injected data in sensor networks, thus saving unnecessary transmissions and energy. "Surrendering Autonomy: Can Cooperative Mobility Help?" proposes an algorithm that determines how a cooperating node should move to improve communication in battlefield MANETs.

In the services for mobile systems session, "A Context-Dependent XML Compression Approach to Enable Business Applications on Mobile Devices" proposes a context-dependent XML compression approach for helping the deployment of business application on mobile devices. "A Distributed, Leaderless Algorithm for Location Discovery in Specknets" proposes a method for node location discovery in sensor networks (specknets). In "Analysis of a Kalman Approach for a Pedestrian Positioning System in Indoor Environments", the authors propose a positioning system for unprepared indoor environments that uses Kalman filters for providing positioning information in shadow zones.

In the wireless networking session, "Performance of MCS Selection for Collaborative Hybrid-ARQ Protocol" proposes an algorithm to improve throughput by selecting the most suitable MCS level. In "New approaches for Relay selection in IEEE 802.16 Mobile Multi-hop Relay Networks", the authors propose a path selection and signaling scheme for relay-enhanced IEEE 802.16 WMANs. presents

a theoretical and simulation-based study of the connectivity of bluetooth-based ad hoc networks.