Topic 16
Mobile Computing, Mobile Networks

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The development of small and powerful computing devices and wireless, mobile communication systems offer a great variety of new applications. The design and analysis of efficient and robust mobile networks impose new challenges, which necessitate a complementary use of technology and algorithms. The aim of this topic is to bring together computer scientists and engineers in the areas of wireless mobile networks, mobile computing and parallel and distributed computing.

19 papers were submitted to Topic 16. 1 paper was withdrawn. All papers were reviewed by at least three referees, while the vast majority of them were reviewed by four referees. To support the reviewing process, a total of 23 reviews from 18 external referees specializing in the areas under consideration were collected. The Topic Committee would like to sincerely thank all those who contributed papers and the colleagues who helped with the reviewing process. Also, we would like to thank the EUROPAR 2002 Organizing Committee for valuable help.

As a result of this thorough reviewing process, 7 papers out of the 19 submissions were accepted: 1 as a distinguished paper, 3 as regular papers and 3 as short papers.

The paper titled "Distributed Maintenance of Resource Efficient Wireless Network Topologies", by M. Gruenewald, T. Lukovszki, C. Schindelhauer and K. Volbert, was accepted as a distinguished paper. This work investigates the energy, congestion and dynamic performance properties of efficient wireless network topologies and proposes a new one which is best with respect to dynamic behavior.

The paper "Weak Communication in Radio Networks", by T. Jurdzinski, M. Kutylowski and Jan Zatopianski, compares the computational power of weak and strong models of radio networks and presents an efficient simulation of the strong model by the weak one. The paper was selected as a regular one.

The work titled "A Source Route Discovery Optimization Scheme in Mobile Ad hoc Networks", by A. Boukerche, proposes, implements and evaluates an optimization technique for routing in ad-hoc mobile networks that uses GPS information and significantly increases the efficiency of the network load. This paper was accepted as a regular paper.

The regular paper titled "A Local Decision Algorithm for Maximum Lifetime in Ad Hoc Networks", by A.Clemantis, D. D'Agostino and V. Gianuzzi, proposes and experimentally evaluates a new routing algorithm that allows local selection of the next routing hop to optimize the ad hoc network's lifetime.

B. Monien and R. Feldmann (Eds.): Euro-Par 2002, LNCS 2400, pp. 933–934.

The short paper "An Efficient Time-based Checkpointing Protocol for Mobile Computing Systems over Wide Area Networks", by C-Y. Lin, S-C. Wang and S-Y. Kuo, proposes an efficient and non-blocking coordinated checkpointing method.

The short paper titled "Coordination of Mobile Intermediaries Acting on behalf of Mobile Users", by N. Zaini and L. Moreau, deals with building distributed applications across mobile devices and fixed infrastructure, by introducing a protocol for coordinating mobile Intermediaries, which are called Shadows.

Finally, the short paper by S-H. Hwang and K-J. Han, titled "A Discriminative Collision Resolution Algorithm for Wireless MAC Protocol", proposes a wireless Medium Access Control method to support the Quality of Service requirements of real-time applications.