A Special Issue of Ad Hoc Networks
On “Recent advances on practical aspects of Wireless Mesh Networks”

Wireless mesh networks (WMNs) have attracted a lot of interest from both academia and industries in the past few years, due to the challenging research problems they pose and the new possibilities they open to deploy large-scale wireless networks. Wireless mesh routers have limited (if any) mobility, are usually connected to power supply and route packets along multi-hop wireless paths. If equipped with the necessary gateway and bridging functionalities, mesh routers enable the integration of wireless mesh networks with other networks such as the Internet, cellular, IEEE 802.15, IEEE 802.16, sensor networks, etc.. Wireless mesh networks are attractive for several applications, e.g., wireless last mile access of ISPs, wireless enterprise backbone networks, building automation, broadband home networking, intelligent transportation systems, community or neighborhood networks, etc. The main reason is the low cost of devices and the easiness of deployment and maintenance due to the absence of a wired infrastructure.

WMNs are now in a stage where more practical aspects need to be investigated, so as to drive a stronger market penetration in the context of medium- and large-scale wireless networks and to enable the use of new applications and services in existing networks. Such aspects involve standardization and regulation aspects, which are the basis for mass production and allow the inter-operability of devices from different manufacturers and, hence, stimulate market competition, as well as business models and realistic use cases, so as to make the technology appealing for public institutions and private companies. Furthermore, results from real-life experiments are required to validate the mathematical models and the simulations tools, available in abundance nowadays, and provide them with adjustments to refine their accuracy and extend their scope.

Topics of interests include, but are not limited to:
- Regulation issues
- Network management
- Standards: 802.11s, 802.16j, ...
- Testbed activities
- Measurement studies
- Case studies
- Large-scale WMN deployment
- Community WMNs
- Business models and enabled applications
- Coexistence, vertical handover
- Comparative evaluation of wireless platforms
- Network deployment and topology control
- Interconnection with WiMAX or 3G networks
- Smart antennas and multi-radio systems
- Evolving applications
- Deployment in rural areas and developing countries

A companion special issue will focus on the latest advances of more theoretical aspects of WMNs (see http://www.elsevier.com/framework_products/promis_misc/cfp_adhoc0410.pdf for full details).

About the Ad Hoc Networks

The Ad Hoc Networks is an international and archival journal providing a publication vehicle for complete coverage of all topics of interest to those involved in ad hoc and sensor networking areas. The Ad Hoc Networks considers original, high quality and unpublished contributions addressing all aspects of ad hoc and sensor networks.

Submission format

The submitted papers must be written in English and describe original research which is not published nor currently under review by other journals or conferences. Author guidelines for preparation of manuscript can be found at www.elsevier.com/locate/adhoc
For more information, please contact the Editor-in-Chief:
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Submission Guideline

All manuscripts and any supplementary material should be submitted through Elsevier Editorial System (EES). The authors must select as “SI: Practical aspects of WMNs” when they reach the “Article Type” step in the submission process. The EES website is located at: http://ees.elsevier.com/adhoc/

Guide for Authors

This site will guide you stepwise through the creation and uploading of your article. The guide for Authors can be found on the journal homepage (www.elsevier.com/locate/adhoc).