



MeshTech 2010

Fourth IEEE International Workshop on Enabling Technologies and Standards for Wireless Mesh Networking

November 8, 2010. San Francisco, CA, USA

co-located with IEEE MASS 2010

<http://www.ing.unipi.it/meshtech10>

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Call for Papers

Wireless mesh networks have emerged as a key technology for next-generation wireless networking. Several standardization bodies specify MAC layer protocols and architectures for interoperable Wireless Mesh (IEEE 802.11s, and IEEE 802.15.5) and Relay Networks (IEEE 802.16). At the Network layer, IETF related groups (e.g. MIPSHOP, NETLMM and MANET Working Groups) develop technologies in the context of wireless access and mobility support for the Next Generation Internet.

While these standards mainly address broadband access or military usage scenarios, new environments calling for wide area communication technologies such as wireless mesh are now arising. One noticeable example is the smart grid, whereby a distributed network topology is needed to signal the current grid utilization and energy demands. As part of the smart grid, wireless mesh inherently becomes a critical part of the national infrastructure. On the other hand, on the consumer electronics side, new topologies alternative to the classic, base-station centred ones are required. Accordingly, so called "single hop" mesh and demand for other ad hoc networks emerge, like the next generation Bluetooth, the Wi-Fi Direct developed by the Wi-Fi Alliance, and the Direct Link Set-up specified by the IEEE 802.11 Task Group "z".

With the emergence of these novel topologies, wireless mesh networks and their ad hoc relatives have become a hot topic in the research community. However, these new topologies affect protocol designs and interoperability with existing networks. Loop-free set-ups, broadcast traffic handling, inter- and intra-standard connectivity, and handover of roaming devices are a few examples that these new technologies need to be aware of. Furthermore, it is still to be fully understood what technological challenges the above-mentioned standardization efforts will face, how they evolve, and what application scenarios will drive their possible success in the market.

Building on the success of the previous editions, MeshTech 2010 aims to bring together again practitioners and researchers from both academia and industry in order to discuss the recent advances and future evolution of next generation peer-to-peer and mobile mesh/multi-hop relay networking technologies and standards for Wireless Personal, Local, Metropolitan, Rural and Regional Area Networks.

Within the scope of wireless mesh networks, topics of interest include, but are not limited to:

- Routing protocols
- Medium access control protocols
- Quality of Service and fairness provisioning
- Mesh networks configuration and management
- Topology discovery, association and control
- Mesh networks measurement
- Mobility management
- Interworking of heterogeneous standards wireless mesh networks
- Coexistence with existing wireless infrastructures
- Performance evaluation
- Security architectures, functions and protocols
- Comparative study of competing solutions
- Cross-layer design and optimization
- Cognitive and frequency-agile radios
- Fault tolerance, anomaly detection and error recovery schemes
- Mesh networks for TV white spaces
- Wireless mesh networks for the Smart Grid
- Vehicular wireless mesh networks

Submission instructions

All submissions must describe original research, not published or currently under review for another workshop, conference, or journal. Submission implies the willingness of at least one author to attend the workshop and present the paper. Accepted papers will be included in the main proceedings of IEEE MASS 2010 and published by IEEE. You can find detailed submission instructions at <http://www.ing.unipi.it/meshtech10/submission.shtml>.

Important dates

Manuscript Submission Due:

Notification of acceptance:

Final Manuscript Due:

Contact information

For any further information, please do not hesitate to send an e-mail to: meshtech10@ing.unipi.it

June 28, 2010 (11:59pm EDT). * EXTENDED *****

August 13, 2010.

September 3, 2010.