QMesh: a QoS Mesh Network with Mobility Support

http://www.comnet.technion.ac.il/magma/qmesh/index.htm

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Highlights

• Novel WMN solution within the Windows XP kernel
• Leverages the Mesh Connectivity Layer (MCL)
• Seamless mobile WLAN access for external users
• No client software, standard mobility support (3 alternatives)
• Centralized management for QoS-aware user assignment
• Gateway selection policies consider distances and loads

AP Handoffs with Gratuitous ARP

Load-Distance Balancing

Single VoIP stream:
Handoff performance

Multiple VoIP streams:
Impact of LD-Balancing

Load (number of users)

Mean Opinion Score (MOS)

Balanced assignment
Acceptable MOS
Unbalanced assignment