

Analysis of Voice over IP performance on Wi-Fi Networks

Group #14

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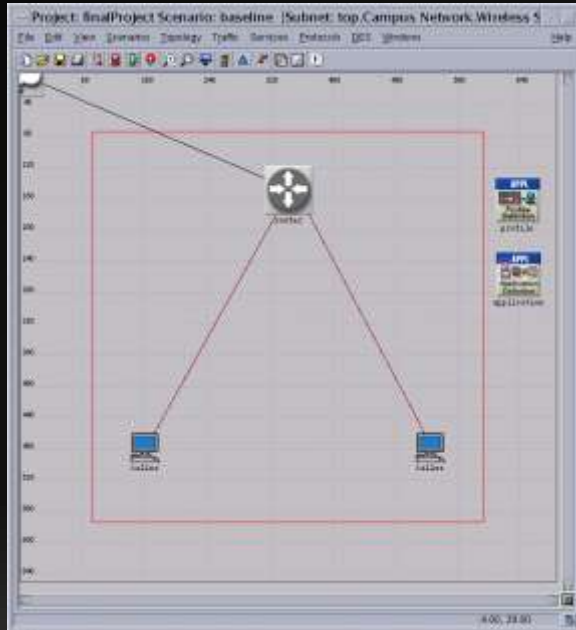
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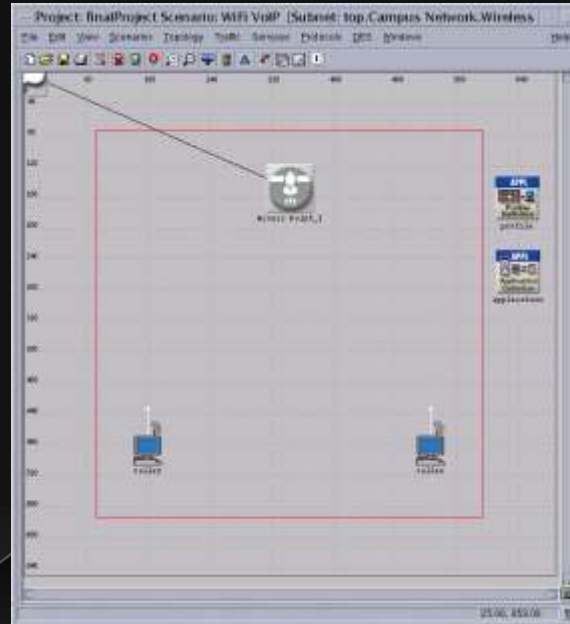
Scenarios and Test Criteria

- Three Scenarios:
 - Baseline Ethernet
 - Wi-Fi Fixed node
 - Wi-Fi Mobile node
 - Wi-Fi two subnets (load)
- Four Test Criteria:
 - Jitter
 - End-to-End delay
 - Packet Loss
 - MOS (Mean Opinion Score)

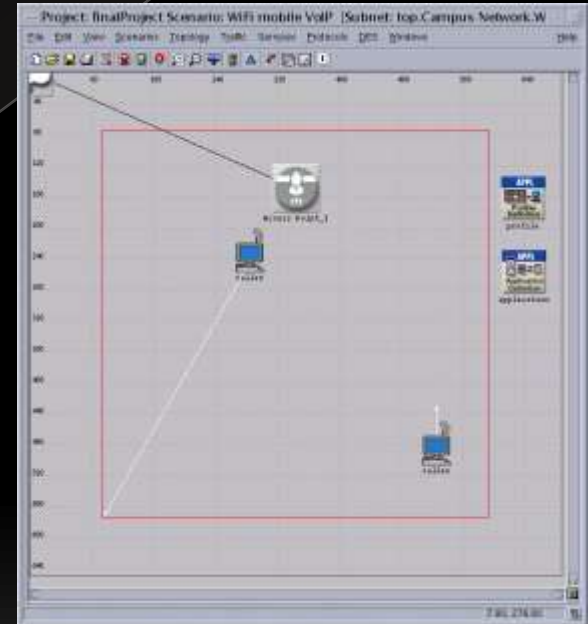
Scenarios



Baseline

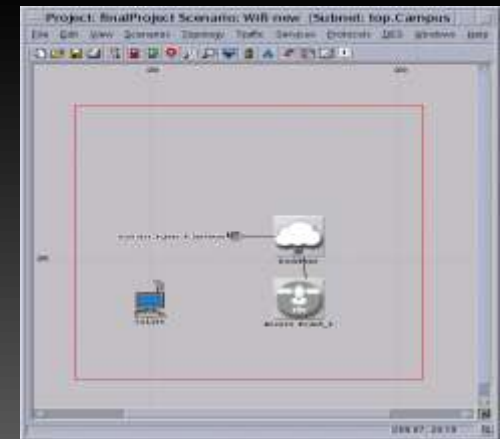
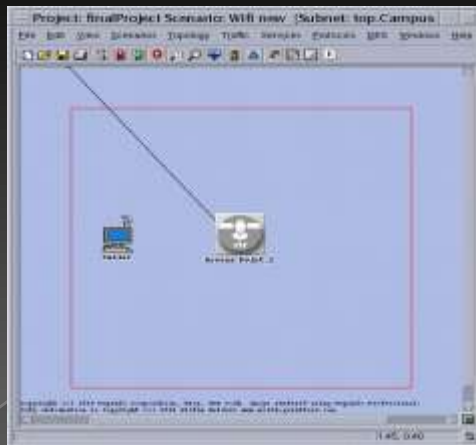
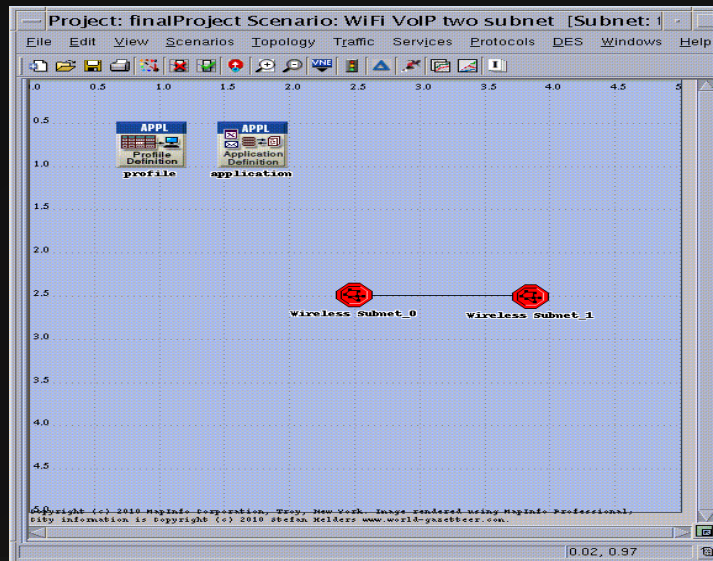


Wi-Fi (fixed)

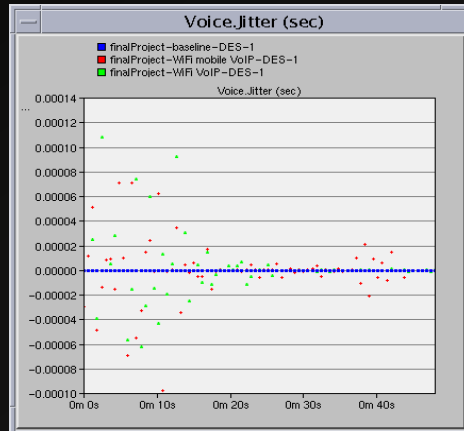


Wi-Fi (mobile)

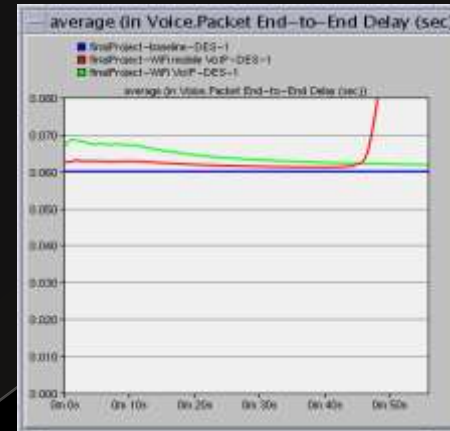
Scenario: Wi-Fi (load)



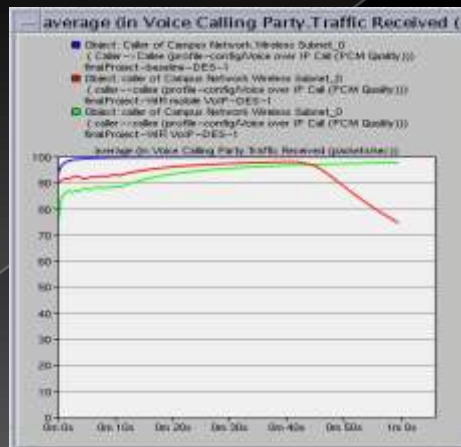
Results



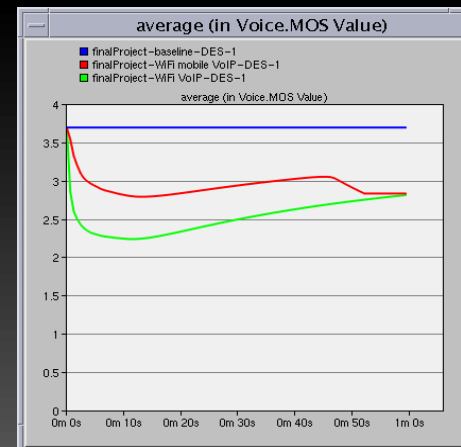
Jitter



End-to-End Delay



Packet Loss



MOS Value

Conclusion

- Setup typical Wi-Fi VoIP scenarios
- Measured VoIP quality parameters
- Wi-Fi scenario had:
 - More end-to end delay as baseline
 - Slightly more jitter than baseline
 - Similar packet loss as baseline
 - Slightly worse MOS value as baseline