

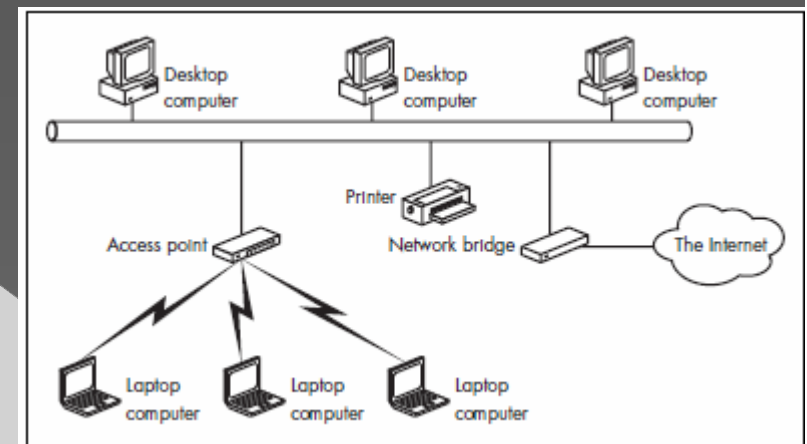
# Characteristics of Wi-Fi

Group 13

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# Introduction

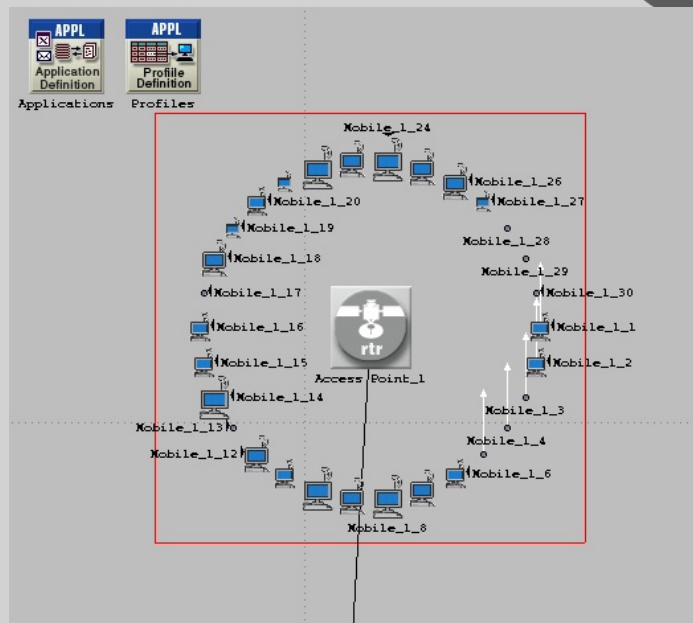
- Wi-Fi is a form of wireless communication that uses IEEE 802.11 networking standards.
- We will be analyzing 802.11g, which is the most common standard.
- Wi-Fi is very flexible, it could be used in a simple home to a large campus.
- We will be using a simple infrastructure network



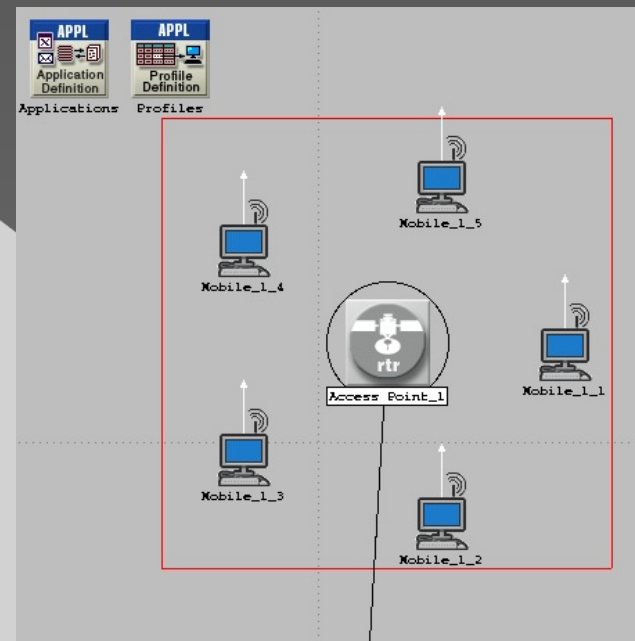
Infrastructure Network Sample

# Case 1: Analyzing Number of Users

- Topology of 30 users vs. 5 users



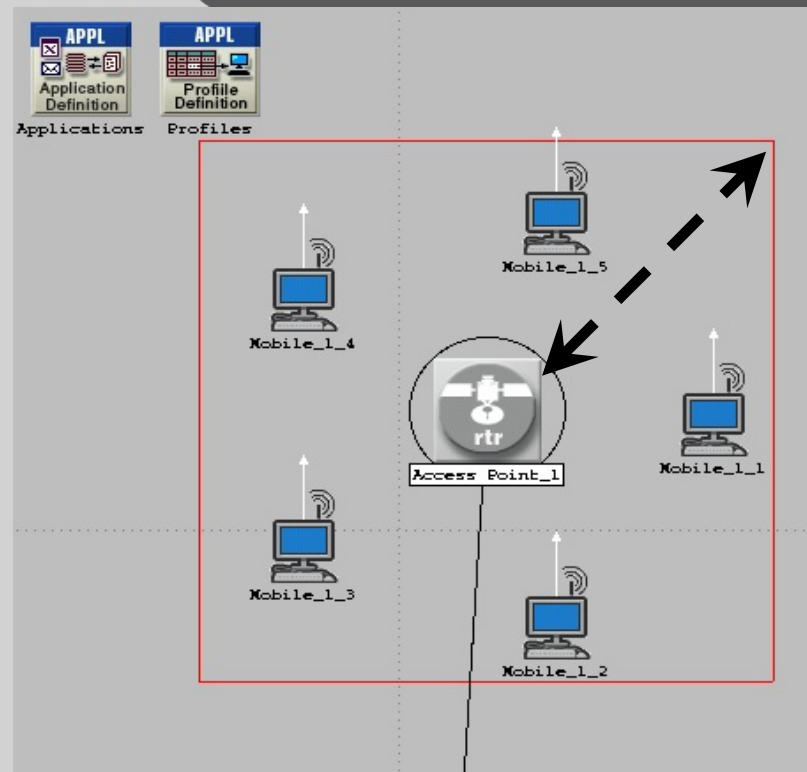
30 users



5 users

# Case 2: Analyzing Distance

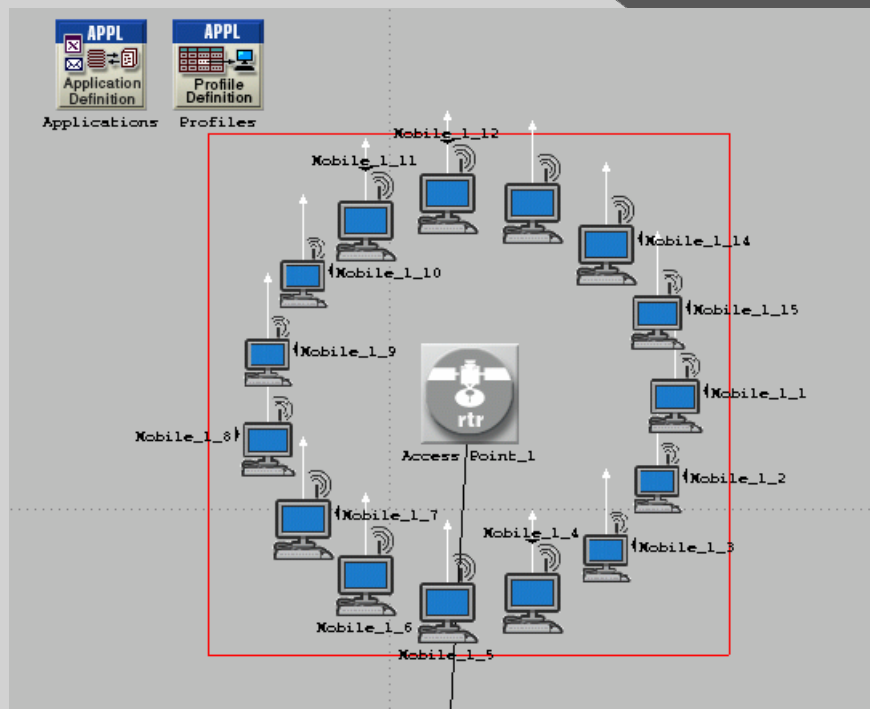
- Topology of Workstations to AP Distance



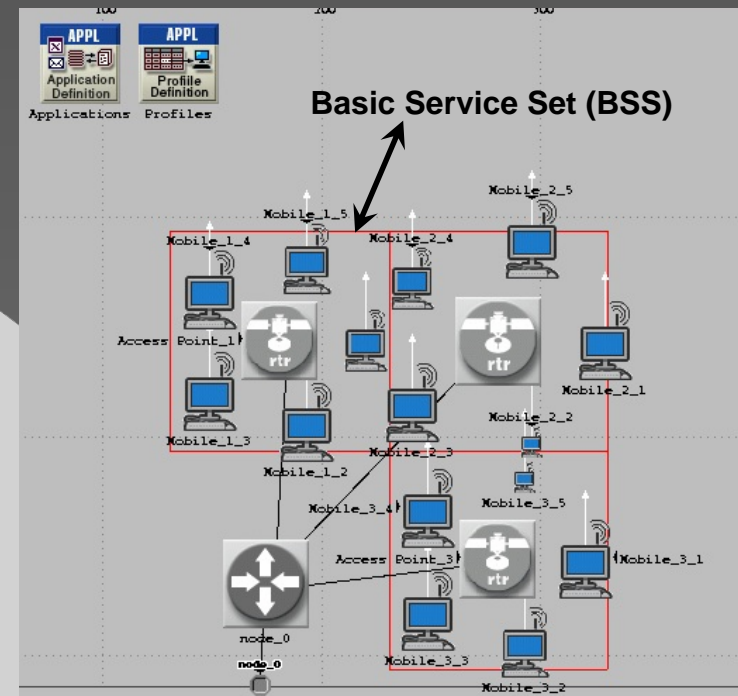
Distance between AP and Workstations varies

# Case 3: Analyzing Number of APs

- Topology with Different Number of APs



1 AP with total 15 users



3 APs with total 15 users in 3 BSS

# Conclusion

- More users would cause higher delay, but the throughput has higher ratio of growth comparing with delay ratio
- There is a certain range that each router can provide good service. The shorter distance gives lower delay and better throughput in short time
- More BBS can reduce the overall time delay, but unable to process large amount of bytes in a short time.
- Low-Delay combination should be: Few users with several designated AP in short distance