ENSC 427: COMMUNICATION NETWORKS
FINAL PROJECT DEMO

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Performance analysis of mobile VoIP calls over WIMAX network

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PROJECT DESCRIPTION

- Conduct performance analysis of WIMAX
- Find out environmental variable that affects QoS
- OPNET simulator
- VoIP call between two workstations
- Measured QoS: packet loss, jitter, end-to-end delay

IMPLEMENTATION

1. Application and profile configuration
2. Deploy wireless network
3. Define modulation method
   - Uplink/Downlink – QPSK
4. Voice codec scheme
   - G.729a voice codec
6. Scenario
   - Case 1 – single cell; cell size – 2km radius
   - Case 2 – multi cell; cell size – 1km radius
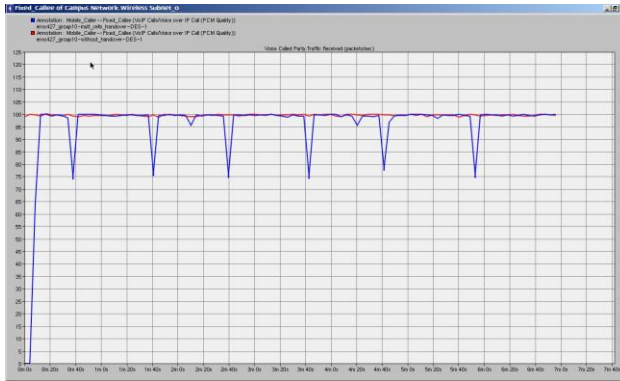
Design and Development

Define trajectory

- Along hexagonal path
- Speed – 100 km/hr

WIMAX work station

SIMULATION RESULTS

- **Packet Loss**

- **End-to-End delay**