

**ENSC- 835 Communication Networks
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COMPARISON OF WIMAX AND ADSL BY STREAMING AUDIO AND VIDEO CONTENT

Team-2

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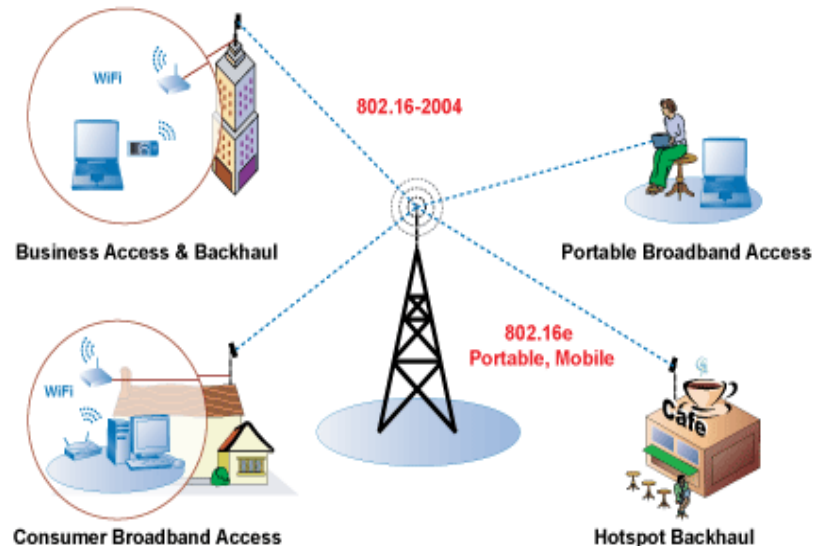
OVERVIEW

- ❑ **Introduction**
- ❑ **Design**
- ❑ **Validation**
- ❑ **Analysis**
- ❑ **Conclusion**
- ❑ **Future Work.**

INTRODUCTION

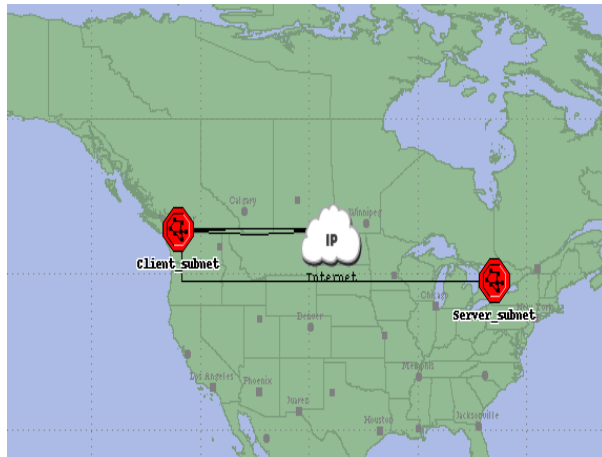
□ Focus of the study:

Can WiMAX deliver comparable network performance to ADSL broadband access for streaming audio, video applications and simple applications like HTTP, FTP and Email?

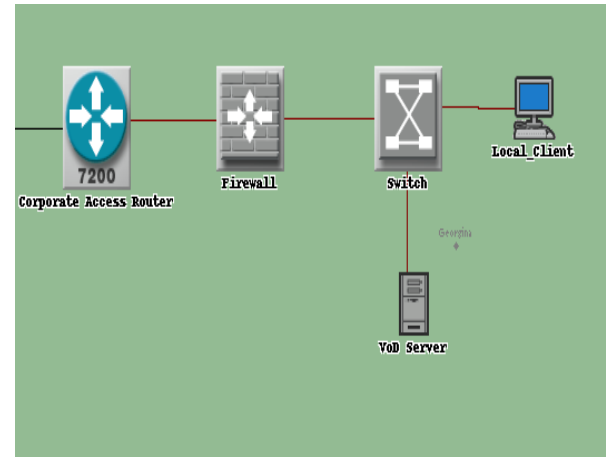


WiMAX: Worldwide Interoperability for Microwave Access.
ADSL: Asymmetric Digital Subscriber Line
HTTP : Hyper Text Transfer Protocol
FTP : File Transfer Protocol

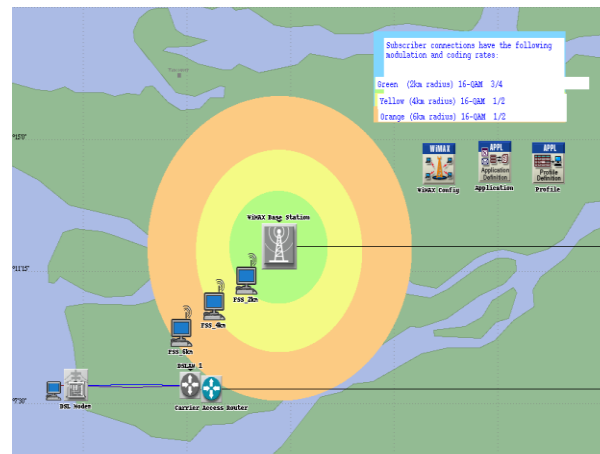
DESIGN



Network topology

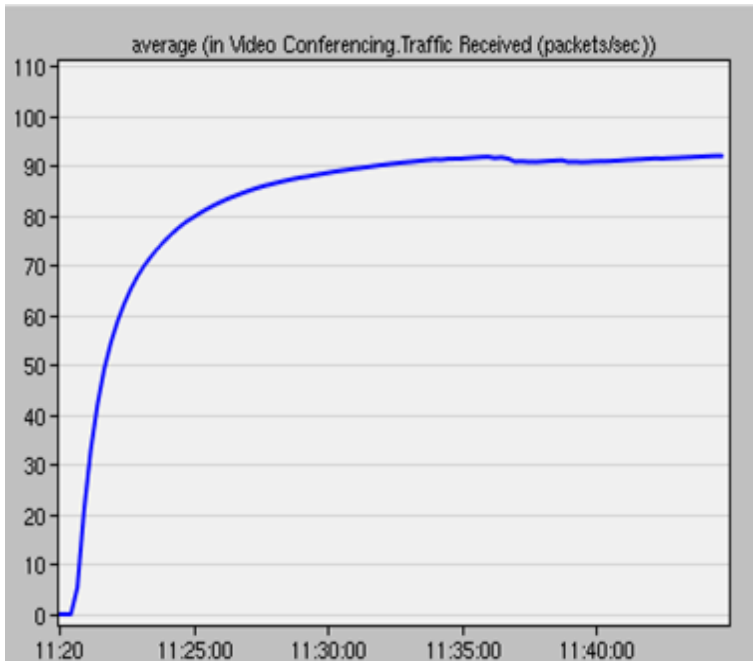


Video services subnet

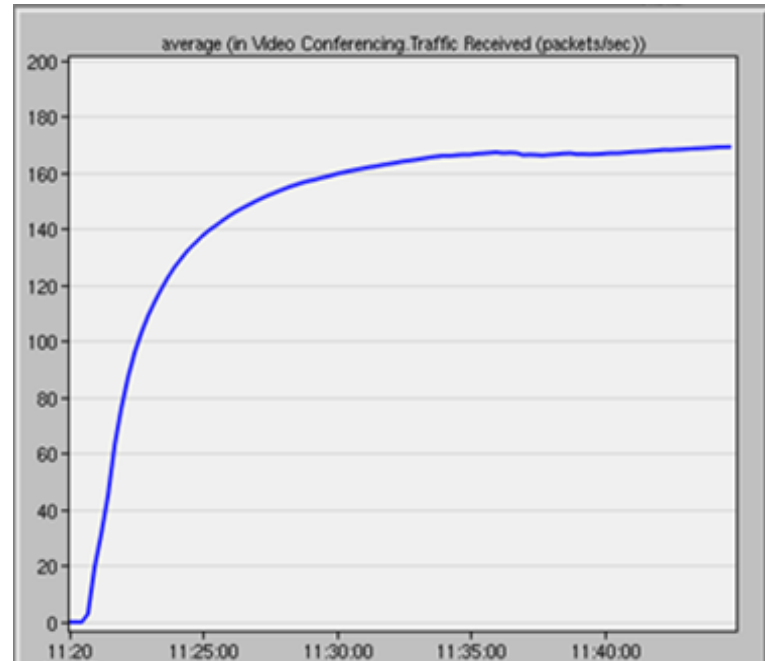


Server subnet

VALIDATION



Network traffic received (packet/sec) (reference model)



Network traffic received (packet/sec)

- Compare all performance matrices of reference model with new model
- Reference model graph shows an average of 90 packet per second, whereas new simulated model shows a significantly high rate of 165 packet per second received

ANALYSIS

- ❑ Packet Loss Measurement
- ❑ Delay Measurement
- ❑ Jitter Measurement
- ❑ Throughput

CONCLUSION

- ❑ Simulation Time : 30 minutes

- ❑ WiMAX satisfies the performance metrics
 - WiMAX packet loss significantly reduced by increasing BS buffering

- ❑ Overall results in comparison to ADSL are promising
 - Dependant on specific carrier deployment parameters WiMAX has the capacity to deliver higher throughput rates and QoS

- ❑ Simulations do not guarantee real world equivalence
 - Must be considered when interpreting results

FUTURE WORK

- ❑ Conduct comprehensive analysis of WiMAX networks and characterize more WiMAX parameters
- ❑ Research and refine all performance matrices
- ❑ Incorporate other applications like remote login and network printer
- ❑ WiMAX mobility and shadowing