MOBILE WiMAX

GUIDED BY

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INTRODUCTION

- WiMAX is Worldwide Interoperability for Microwave Access.
- Mobile WiMAX is a rapidly growing broadband wireless access technology.
- It is based on IEEE 802.16 standard.
- It is evolving to include new technology and to meet the new demands.
HISTORY

- First activity of IEEE 802.16 started in 1998, describes air interface (between subscriber station and base station).
- Mobility added during 2004-05 that is Mobile WiMAX as a 4g voice and data network.
- Next generation activity of IEEE 802.16m started in 2007.
- Further standard generations are expected in 2009.
HOW IT WORKS?

- It can take advantage of licensed spectrum owned by wireless service providers, allowing a signal that is free of interference.

- Whereas WiFi can be subject to interference from devices that also emit signals and noise over the same spectrum.
WORKING OF MOBILE WiMAX
Its coverage will take advantage of sectorized antennas on towers.

It provides a wide blanket of coverage over a metropolitan-size area.

Its devices and towers will take advantage to collect reflected energy and create more reliable signal.
CONTINUED

- Its base station power levels will be 1-2 orders of magnitude greater than Wi-Fi network power levels.
SECURITY

- Authentication
- Encryption
- Availability
- WiMAX Threats
APPLICATIONS

1. Mobile voice (cell phone and data).
APPLICATIONS (CONT..)

- Samsung's mobile WiMAX phone, the M8000
ADVANTAGES

- Flexible network architecture.
- It supports fixed and wireless applications.
- It provides security to the WiMAX subscribers.
ADVANTAGES (CONT..)

- It will be designed for the future scalability enabling a continuous increase in bit throughput with decrease in cost.
DISADVANTAGES

- Lack of volume and poor economies of scale.
- Few large carriers ready to deploy.
- Lack of valuable spectrum.
- In mobile WiMAX Omni directional antennas are used, which have lower-gain when compared to directional antenna
CONCLUSION

- It enables efficient communication to support a seamless voice and video experience.

- It offers open standard approach and healthy ecosystem.
THANK YOU!