Military Deployment Scenario for 802.16m

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Purpose:

    To help develop the deployment scenarios for 802.16m

Military Deployment Scenario for 802.16m

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Outline

- Introduction
- Military Deployment Scenario for 802.16m
- Military Requirements for 802.16m
- Conclusion

Introduction

- The 802.16m is in the process of soliciting contributions in the area of deployment scenario, mobile channel models, and services to be provided

- This briefing presents a military deployment scenario for 802.16m

- The briefing also presents the military requirements

Military Usage Scenarios for 802.11s

- The 802.11s (Mesh Networking) has 5 usage scenarios*
  - Military scenario is one of them (See document 802.11-04/662r6)
- Each usage scenario presents its own unique requirements
- The scenarios and their requirements are intended to help develop the standards texts and provide a baseline for network simulations

Residential / Consumer Electronics
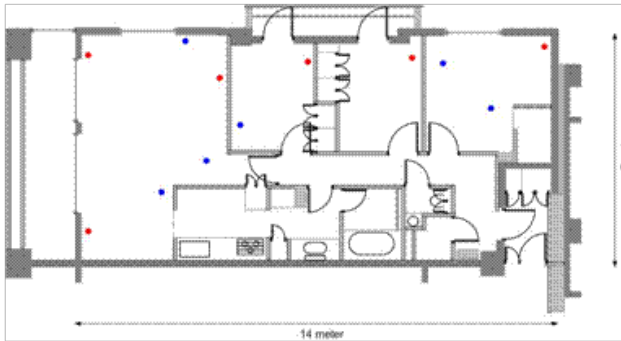
Campus/Community/Pubic Access

Office

Public Safety

Military

*802.11-04/662r16: IEEE 802.11 TGs Usage Models
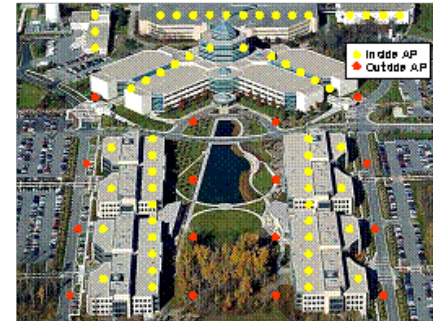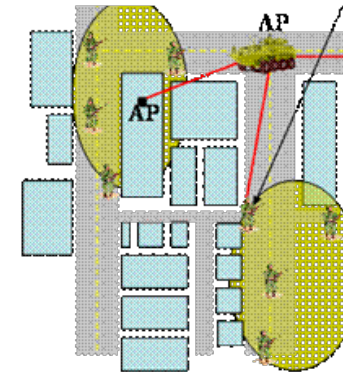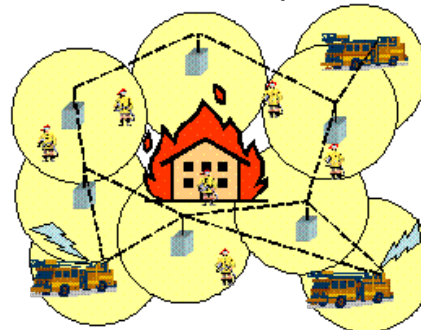
Military Usage Scenario in 802.16j

- The 802.16j (Multihop Relay) has 4 usage scenarios*
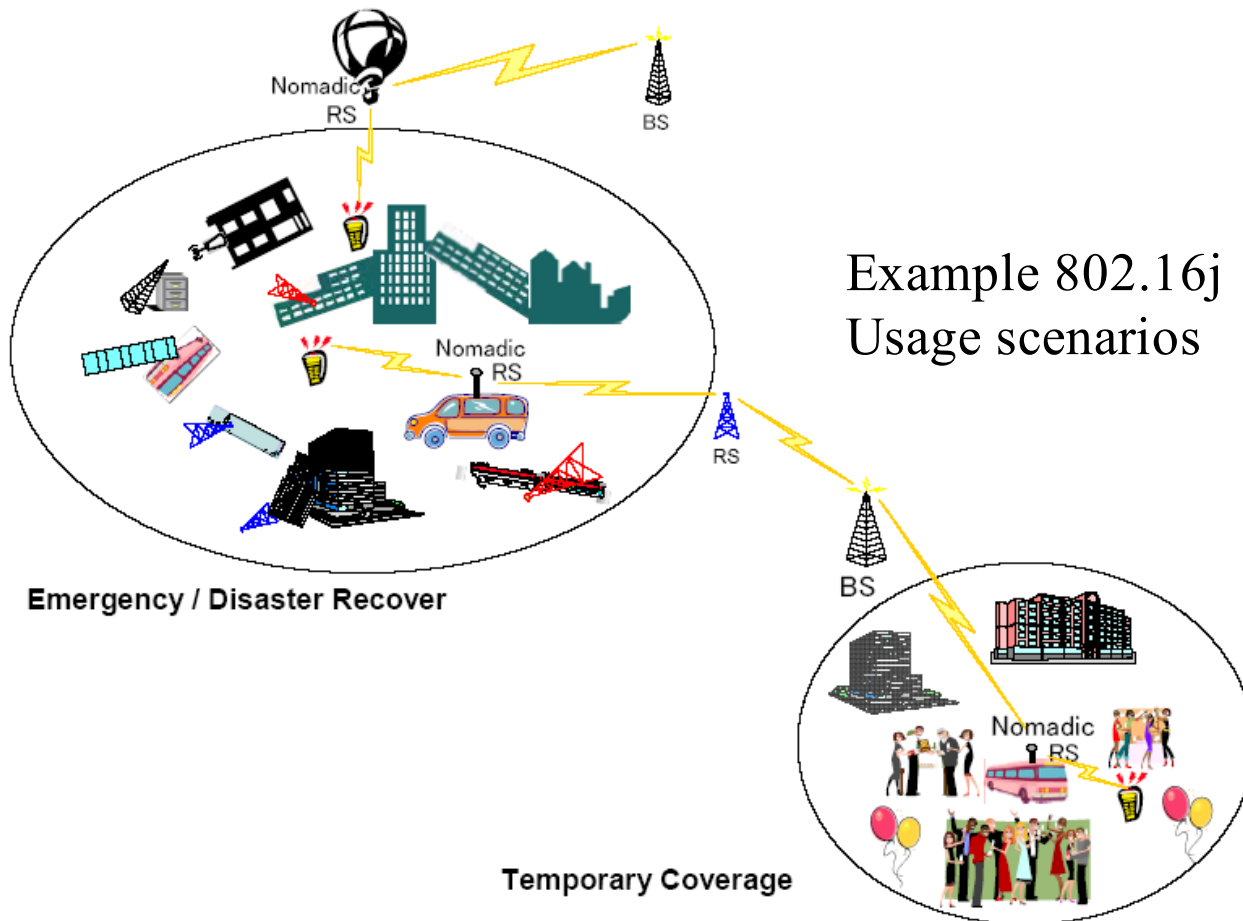 - Military needs have been considered in those scenarios
  - See document 80216j-06_015

Example 802.16j
Usage scenarios

Why Consider a Military Deployment Scenario for 802.l6m?

- Military has a strong buying power if the 802.16m products meet their requirements
  - Government would like to leverage commercial products as much as possible (with some military enhancements)
- Military helps advance the technological envelope
  - ARPANET   Internet
  - MANET
  - 802.11s
  - 802.16j
  - Spread spectrum   commercial CDMA
- Today's military requirements could become tomorrow's civilian requirements
  - Public safety and first responders

Military Deployment Scenario for 802.16m
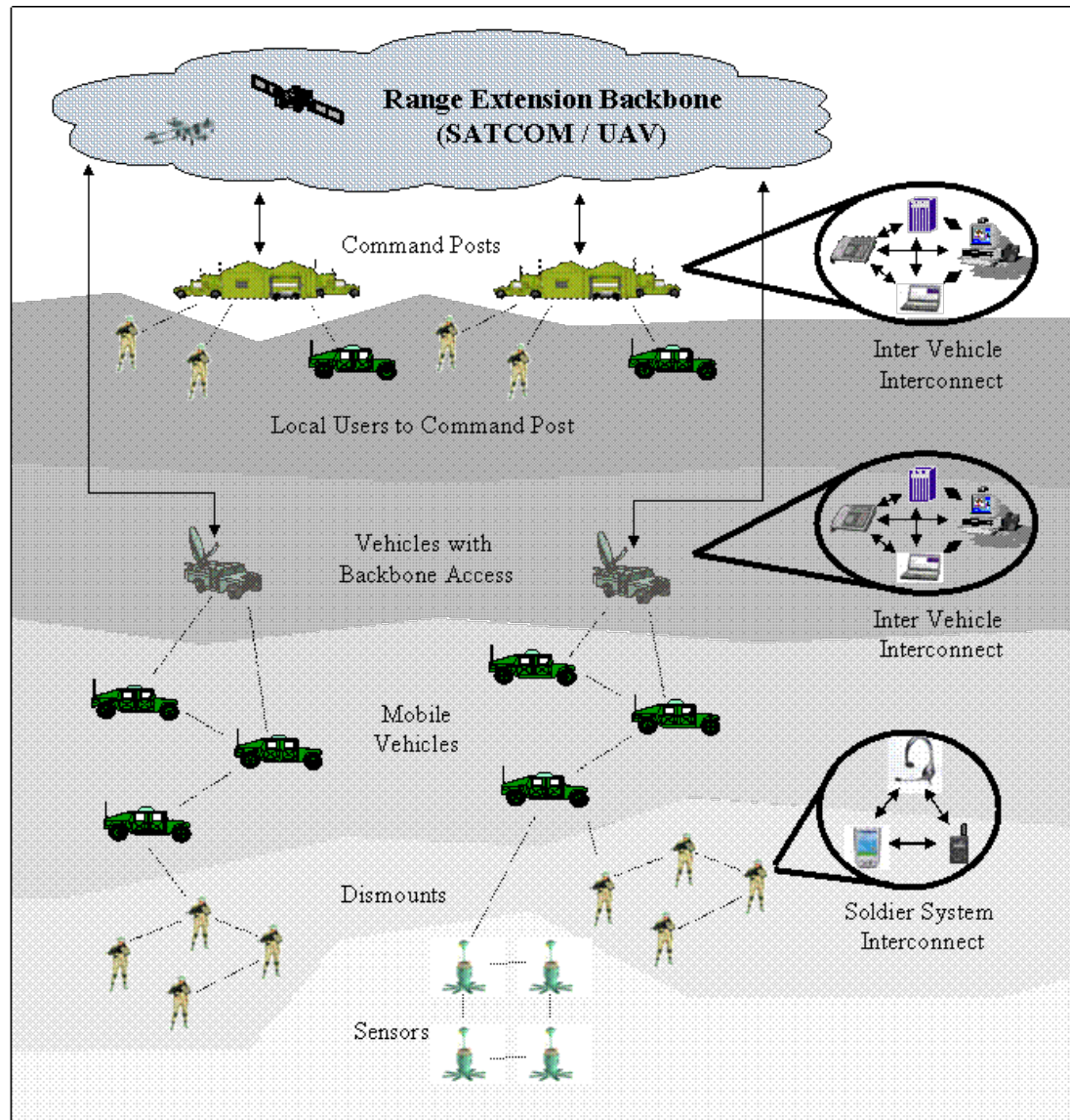
Military Requirements for 802.16m

- Support multi-hop communications

  – The majority is 2 hops from the BS with a small number being 3 hops

- Support BS/relay mobility
- Support handover with relay
- Security/Survivability and QOS (for different applications)
- Support multicast traffic

- Compensate for variable radio link capacity

- Minimize battery power consumption
- Support the frequency bands within the current 802.16d/e/j framework that do not interfere with the other technologies that are part of IMT.

- Priority and preemption
- Simplify the design of multi-mode devices

Conclusion

- It is a win-win situation (for commercial and military) if the 802.16m adopts military deployment scenario

- Consider military requirements when developing the deployment scenario for 802.16m