Military Usage Scenario for 802.16 MMR

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To help shape the direction of MMR SG

Military Usage Scenario for 802.16 MMR*

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*Note: Briefing compiled in collaboration with ARMY CERDEC.

Outline

- Introduction
- Military Usage Scenario for 802.16 MMR
- Military Requirements for 802.16 MMR
- Conclusion

Introduction

- The 802.16 Mobile Multi-hop Relay (MMR) Study Group (SG) is in the process of soliciting contributions in the area of service scenarios and network topologies.

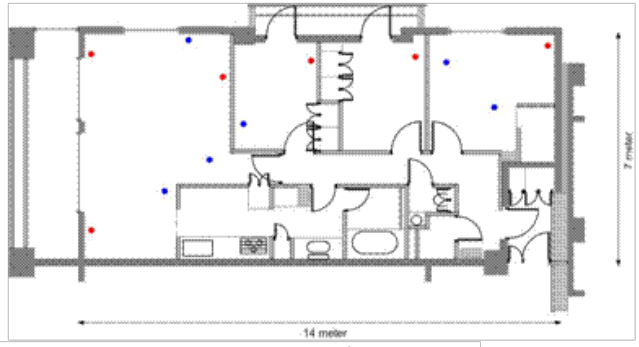
- This briefing presents the military usage scenario for 802.16 MMR

- The briefing also presents the military requirements

Military Usage Scenario in 802.11s

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

Residential / Consumer Electronics



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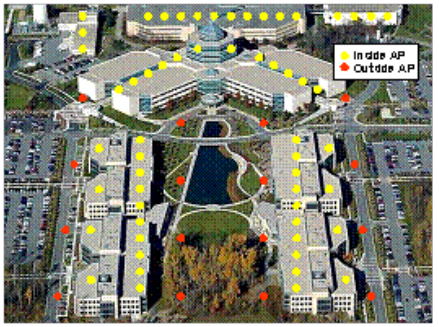

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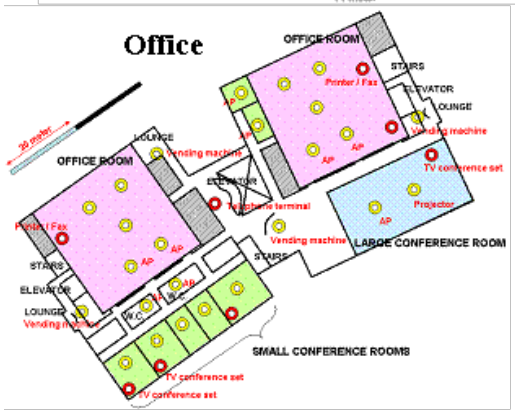
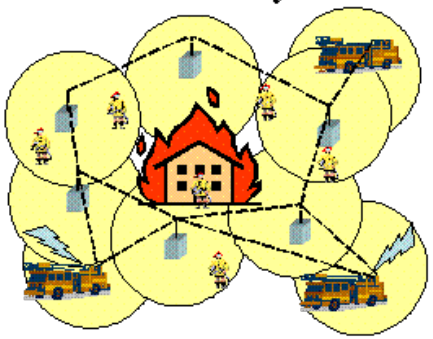
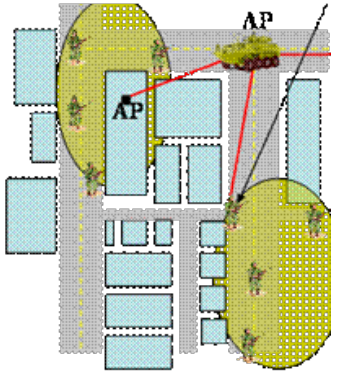


Public Safety



Military

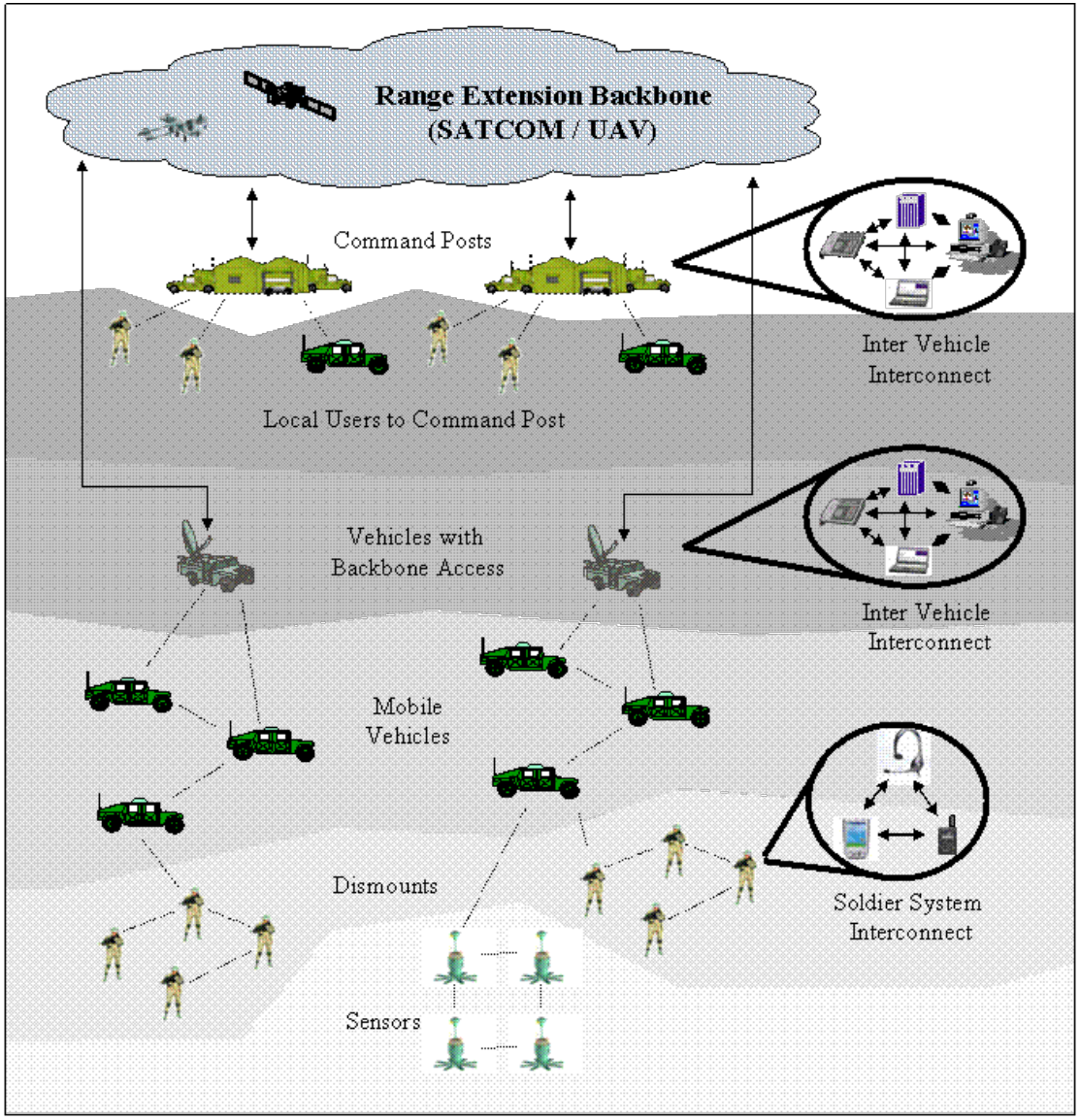


*802.11-04/662r16: IEEE 802.11 TGs Usage Models

Why Considering Military Usage Scenario?

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

Military Usage Scenario for 802.16 MMR



Military Requirements for 802.16 MMR

- The majority is 2 hops from the BS with a small number being 3 hops
- Support BS/relay mobility
- Support handover with relay
- Security and QOS
- Support multicast traffic
- Consider the device willingness to relay
- Compensate for variable radio link capacity
- Minimize battery power consumption
- Military frequency band

Conclusion

- It is a win-win situation (for commercial and military) if the 802.16 MMR group adopts military usage scenario

- Consider military requirements when developing the PAR for 802.16 MMR