

## Dedicated Interface Between MMR-BS and RS

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# Dedicated Interface Between MMR-BS and RS

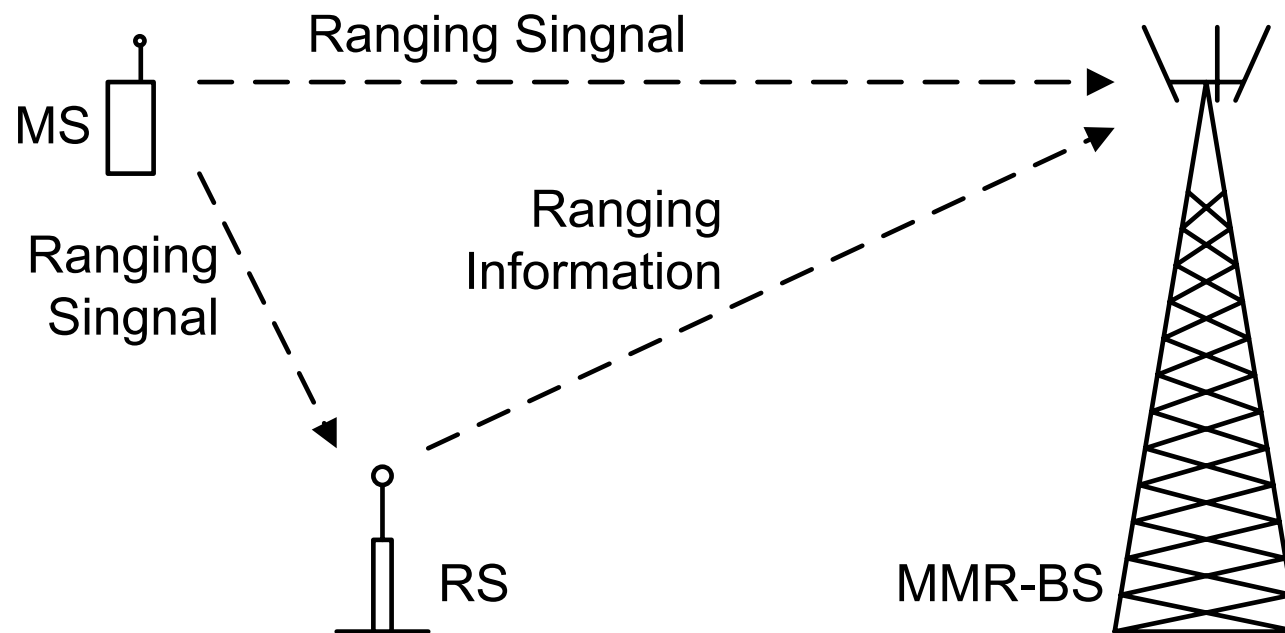
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ETRI, Korea  
July, 2006

## Objective of This Contribution

- To draw attention to the performance issue of MMR networks caused by the delay of control messages between RS and MMR-BS
- Problem:
  - Delay of control messages between MMR-BS and RS causes performance degradation

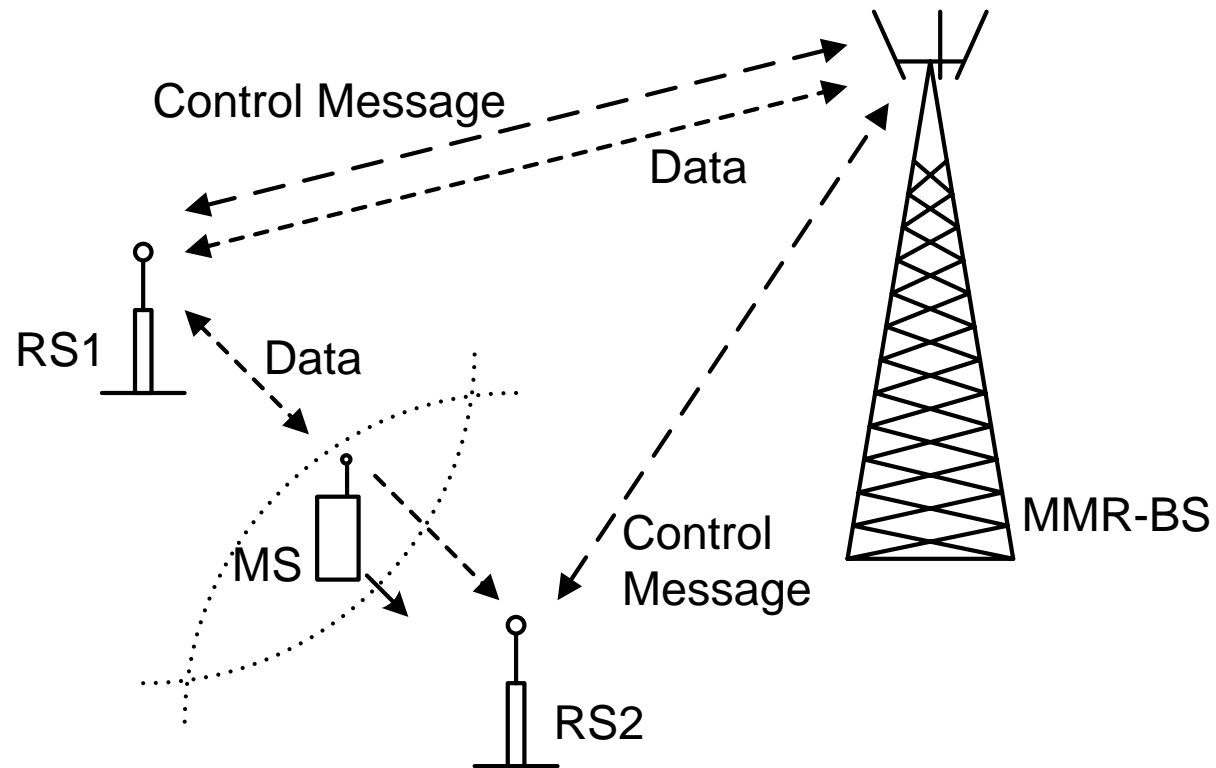
# EX1: Control Messages Between RS & MMR-BS

- Initial Ranging



## EX2: Control Messages Between RS & MMR-BS

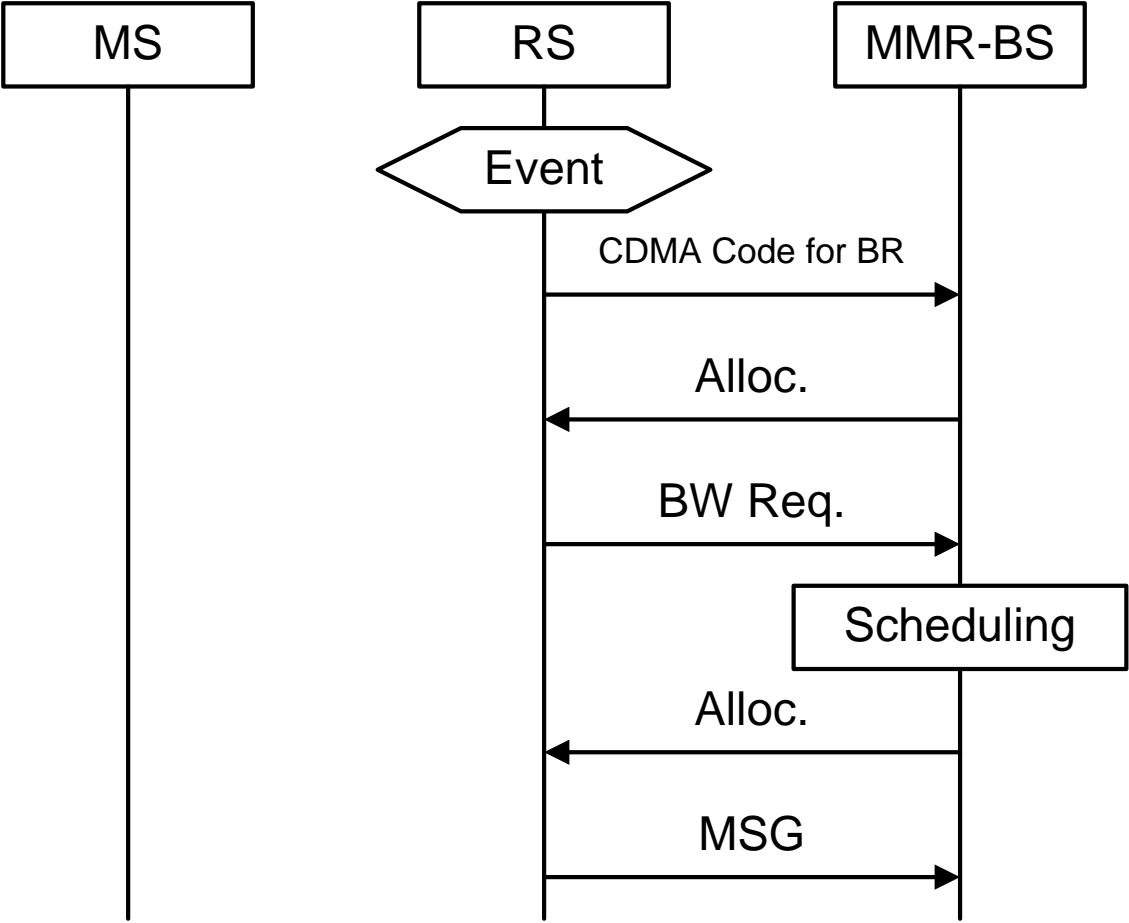
- Relay Path (RS) Switching



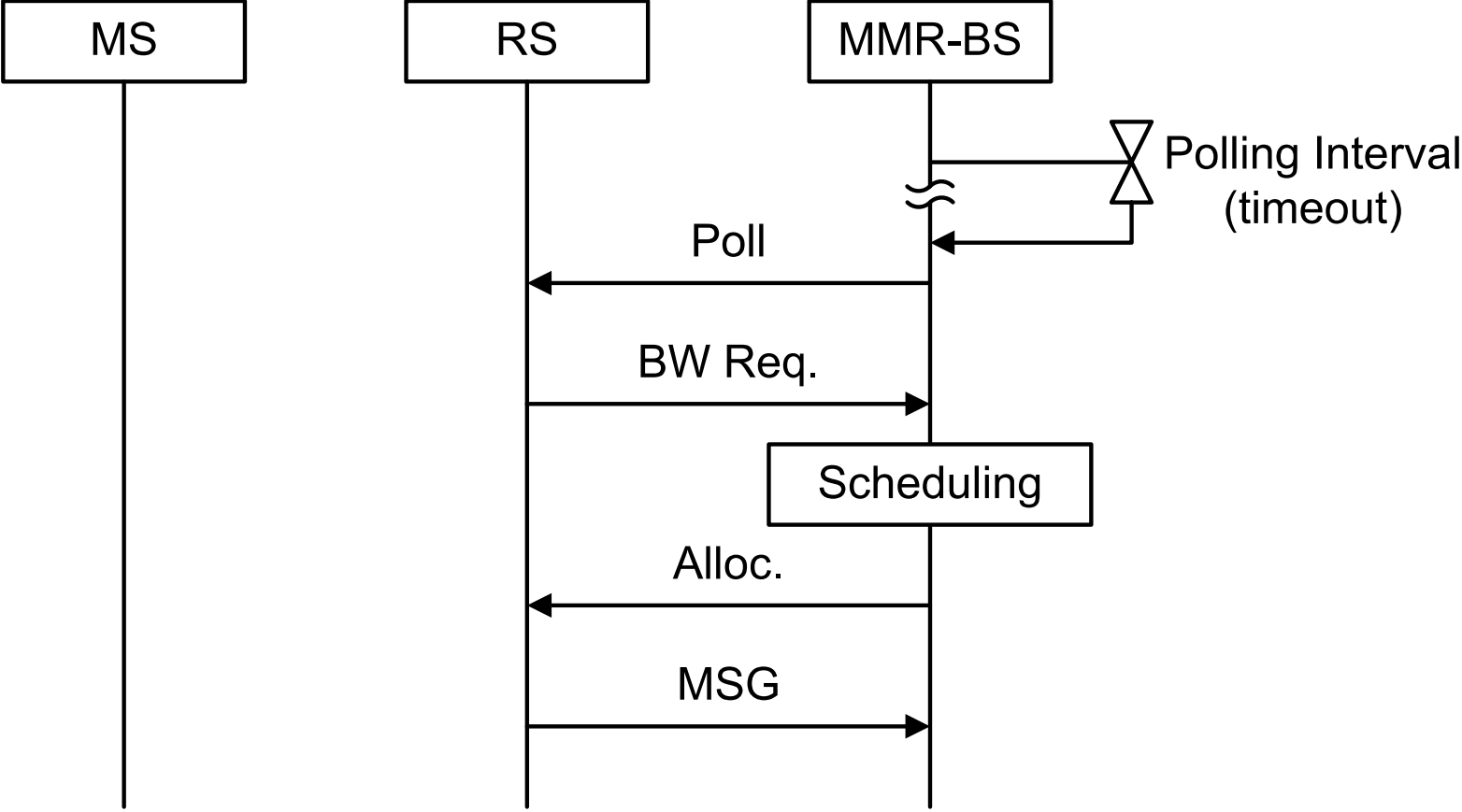
## Transporting Control Messages to MMR-BS for Relay Management

- Contention Based
  - Minimum overhead
  - Un-reliable
- Polling
  - Overhead vs. Delay
  - Reliable
- Dedicated Allocation (“Hot line”)
  - More overhead, smaller delay
  - Overhead vs. Delay
  - Reliable

# Transporting Control Messages: Contention Based

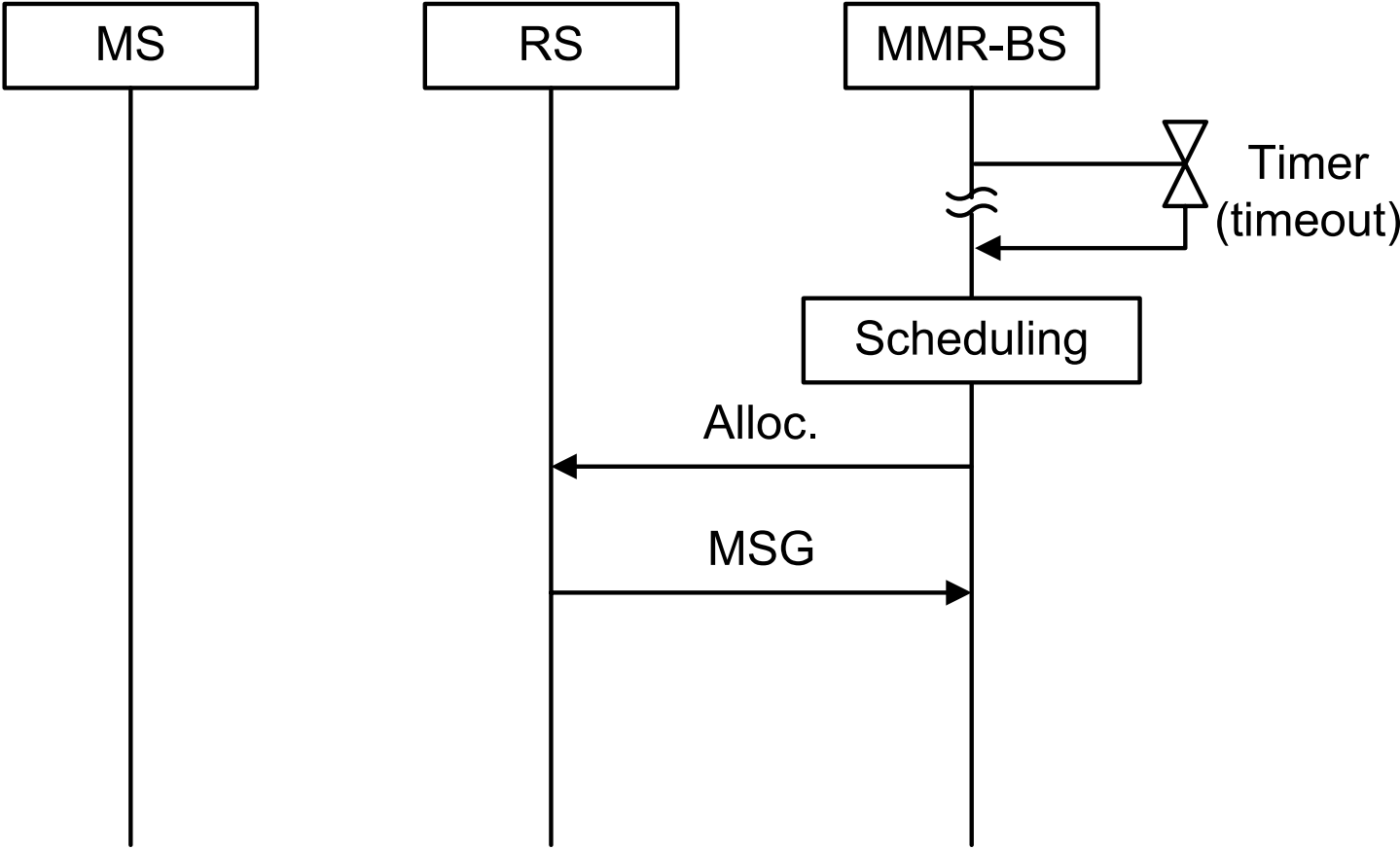


# Transporting Control Messages: Polling





# Transporting Control Messages: Dedicated Allocation



## Conclusion & Discussion

- Requirement: MMR networks need efficient means to exchange control messages with minimal time delay between RS and MMR-BS
- Hot Line: Subject to further study
  - Traffic estimation
    - Identification of control messages
    - How often?
  - Consideration of 2+ hops
  - Performance evaluation

Thank You!