

Open problems in Mobile Multi-hop Relay System

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Open Problems in Mobile Multi-hop Relay System

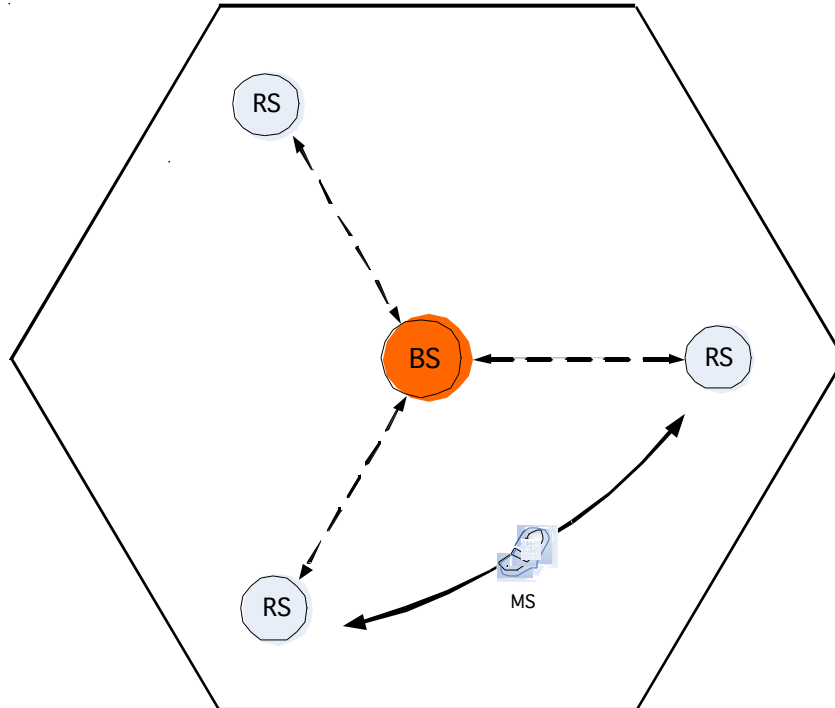
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Handoff Scenario

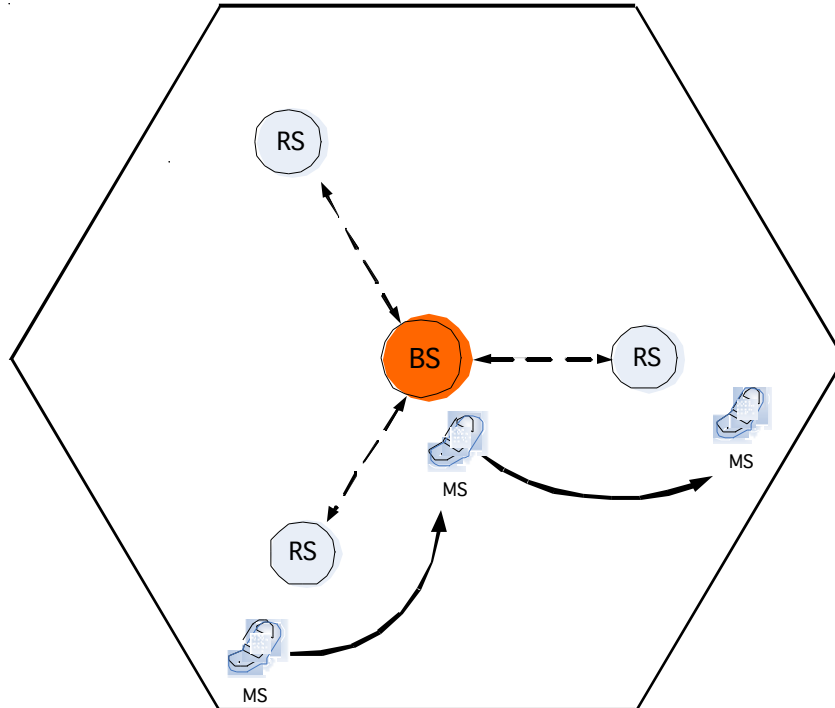
- Intra BS handoff
 - Intra BS, Inter RS Handoff
 - RS 1 \rightarrow RS 2
 - BS \rightarrow RS
 - RS \rightarrow BS
- Inter BS Handoff
 - BS 1 \rightarrow BS2
 - BS1.RS \rightarrow BS2
 - BS 1 \rightarrow BS2.RS
 - BS1.RS \rightarrow BS2.RS

Intra BS, Inter RS Handoff (RS 1 \rightarrow RS 2)



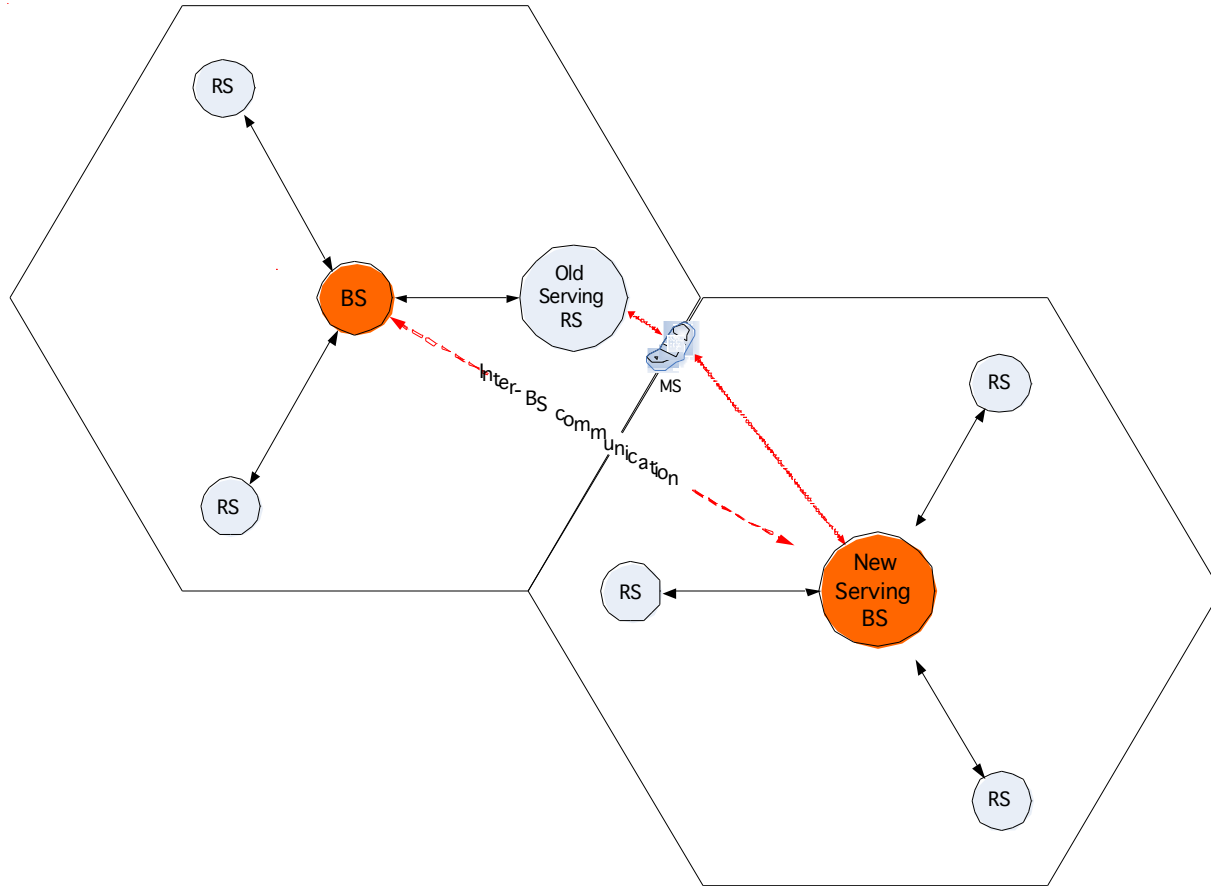
Intra BS Handoff

BS \rightarrow RS or RS \rightarrow BS



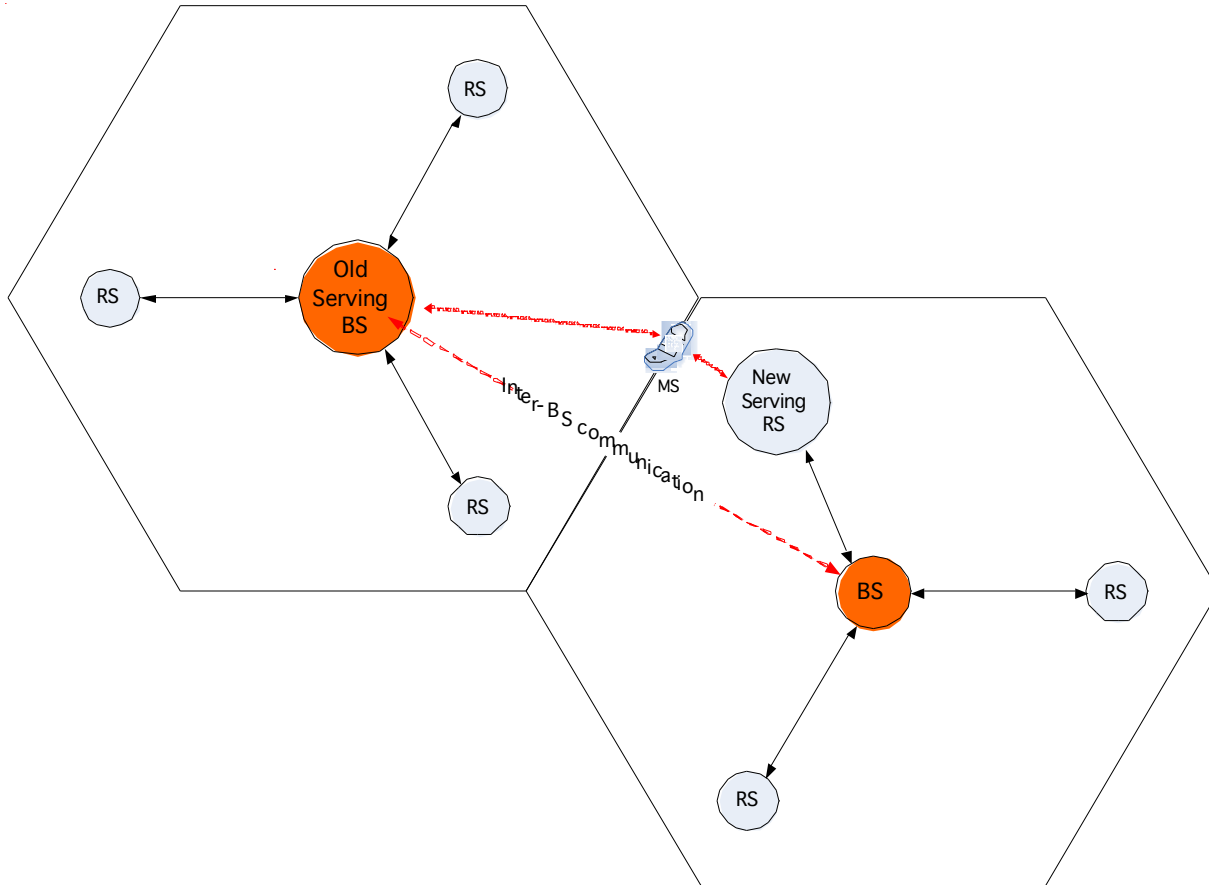
Inter BS Handoff

BS1.RS \rightarrow BS2



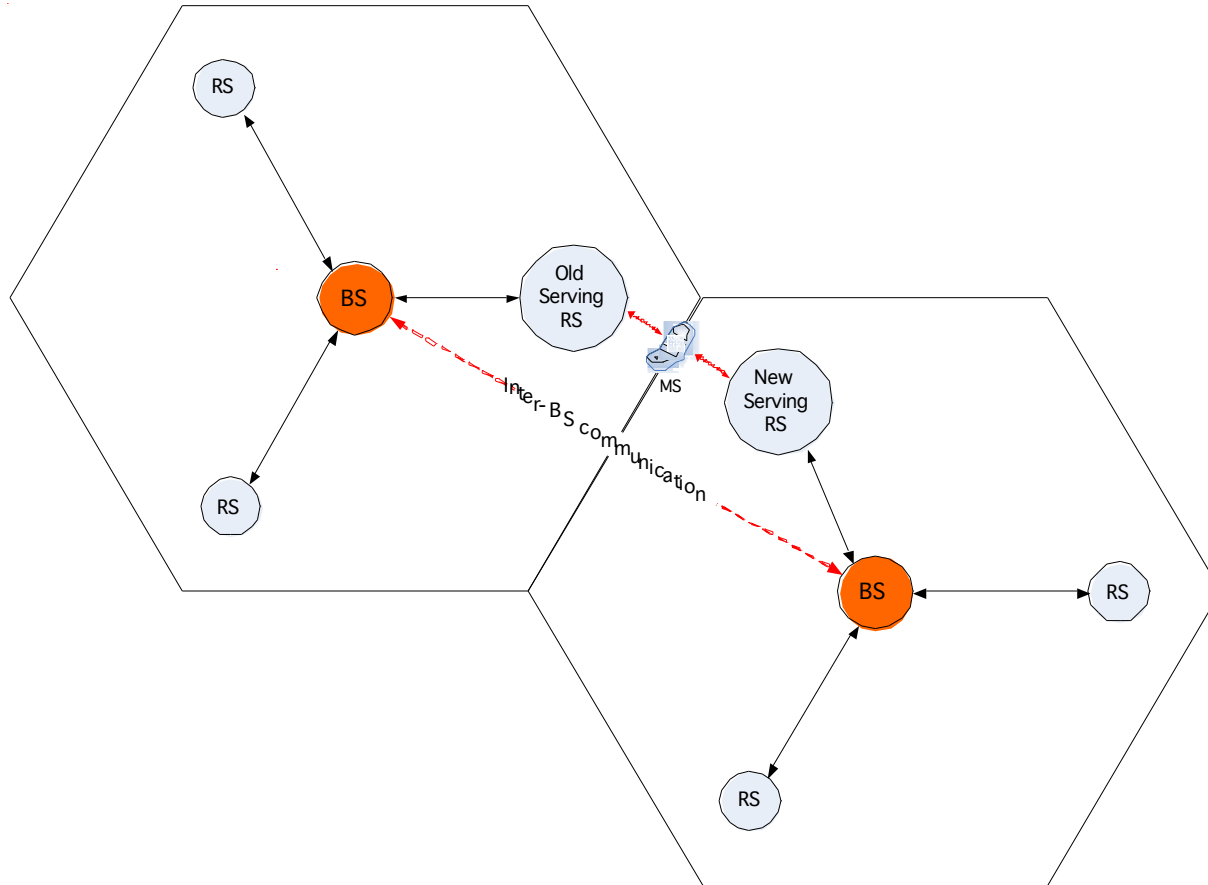
Inter BS Handoff

BS1 \rightarrow BS2.RS



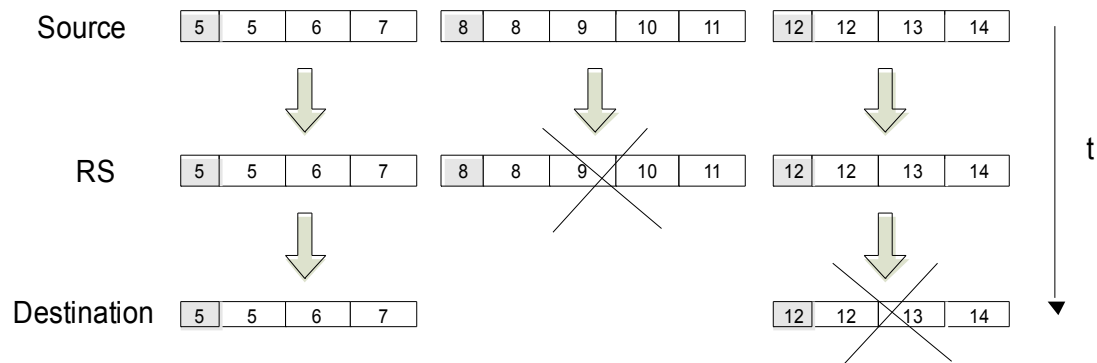
Inter BS Handoff

BS1.RS \rightarrow BS2.RS



ARQ scheme

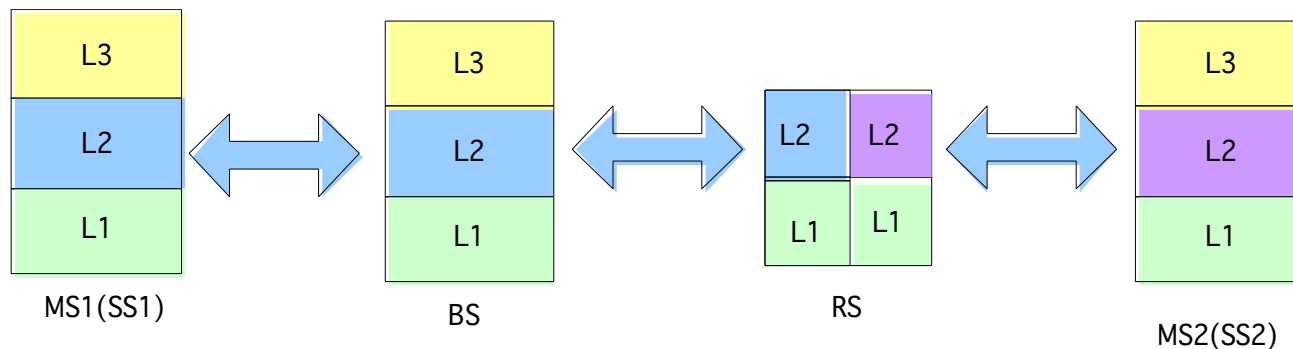
- Problem definition
 - ARQ is specified during connection setup between BS and MS
 - When RS is introduced, the function of RS related to ARQ should be defined for efficient data delivery and ARQ feedback
 - Example : ARQ selective ACK map



ARQ : Error recovery per hop

- Error recovery per hop
 - Different blocks may be used for each ARQ
 - Different block sizes
 - Different sequence number

- Protocol Stacks



ARQ : Error recovery for multi-hop route

- Error recovery for complete multi-hop route
 - The same blocks are used in multi-hop links
 - The same block sequence number
 - The same block sizes
 - The number of blocks used in one transmission of RS may be changed
- Protocol Stacks

