MS Network Entry with RS

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IEEE C802.16j-06/207r1 http://dot16.org/CSUpload//upload/Relay_db/C80216j-06_207r1.pdf

Purpose:

Propose the text regarding MS network entry with RS.

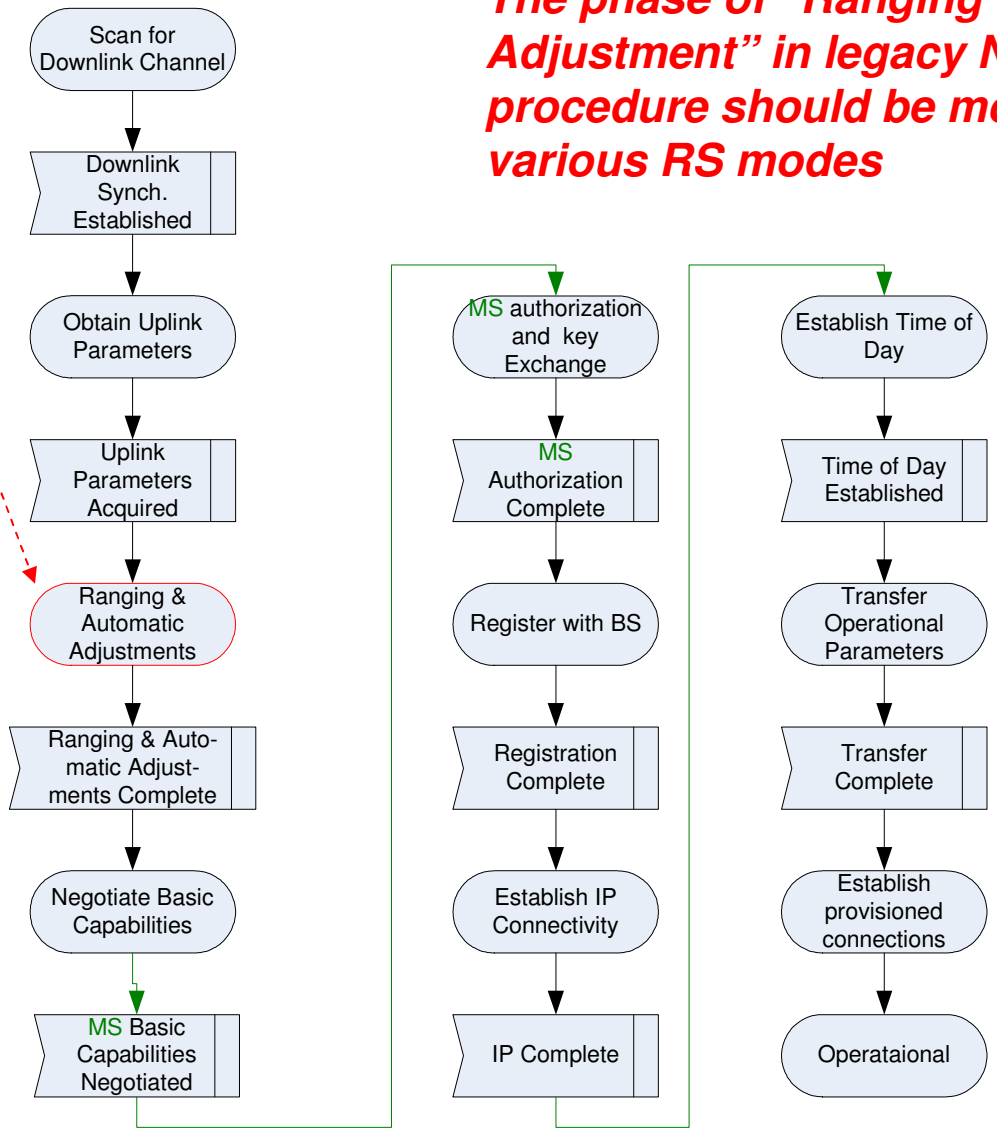
Design Objectives

- Shall support MS to join Multihop Relay network without any modification on MS
- Should support MS to enter and register the Multihop Relay network via various RS modes
- Should be centralized controlled by the MR-BS
- The modifications to legacy Network Entry Procedure should be minimized

Proposed Remedy

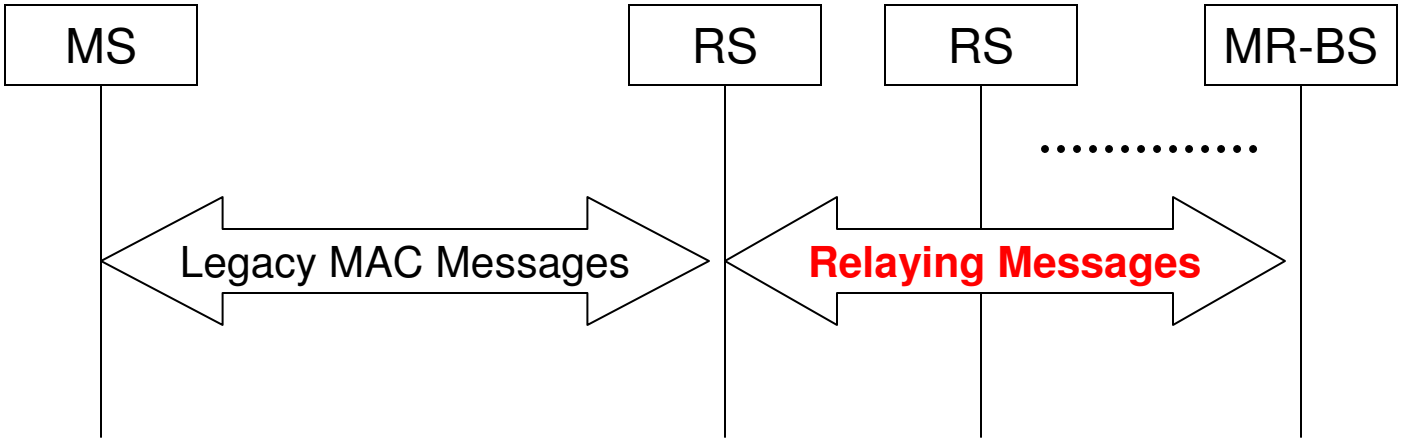
Need modifications for different RS modes

The phase of "Ranging & Automatic Adjustment" in legacy Network Entry procedure should be modified for various RS modes



Proposed Remedy

- Relaying messages are defined to transport the information in the relay path required for completing the Network Entry procedures



Proposed Relaying Messages

Same as C80216j-06_208

Message name	**Message description**	**Connection**
RLY_CFG-MAP	MR-BS configure associated RS for RS broadcasting	Broadcast/Multicast /Basic
RLY_Transship-CIRC	RS transport RS/MS CDMA initial ranging code to associated MR-BS	Basic
RLY_Transship-DATA	RS transport RS/MS data to associated MR-BS	Primary
RLY_CIRC-IND	MR-BS notify candidate RS to accept the new coming RS/MS CDMA initial ranging code	Basic
RLY_IR-IND	MR-BS notify candidate RS to accept the new coming RS/MS	Basic

Key Points & Benefits

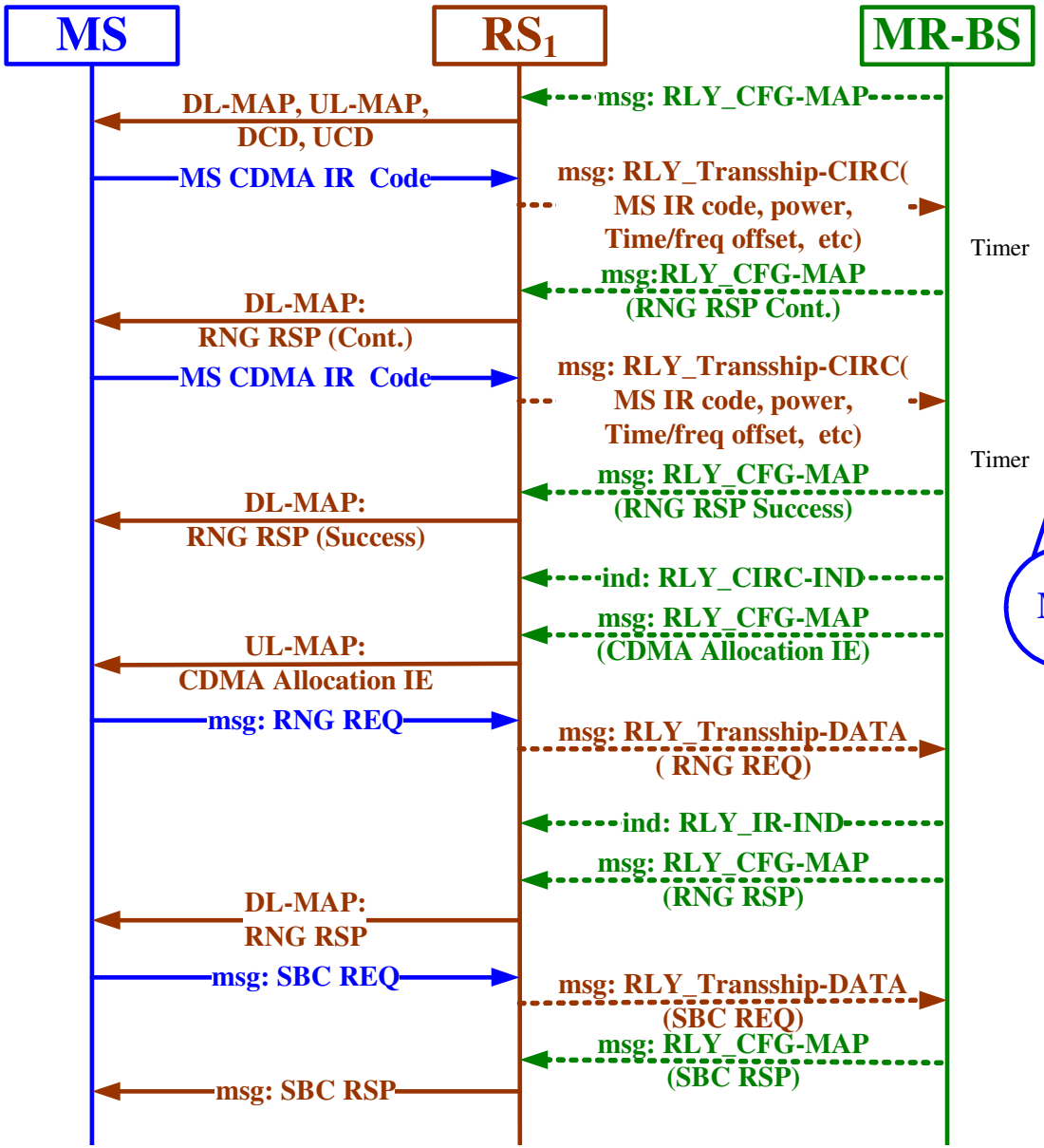
- Proposed procedures of MS entering a Multihop Relay network via RS are centrally controlled by the MR-BS

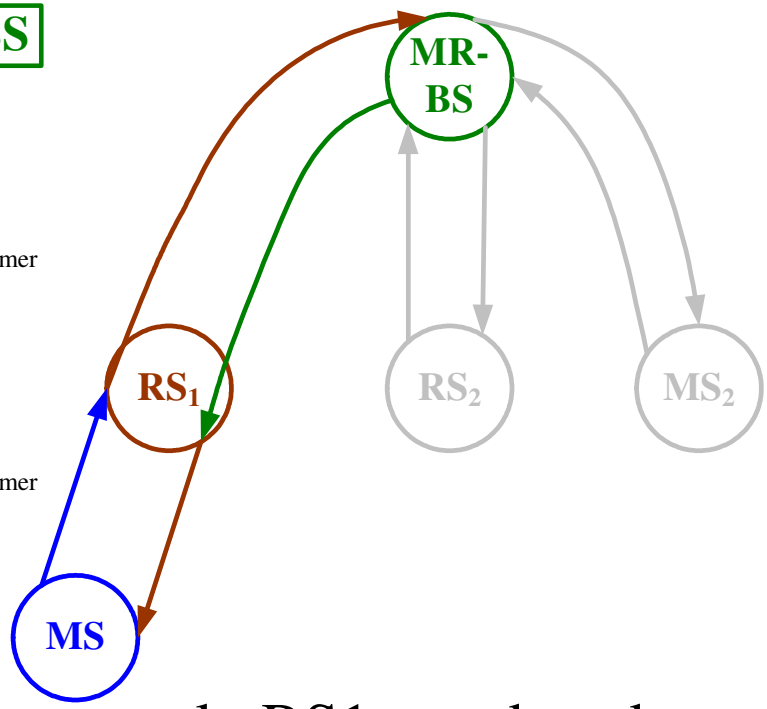
- Define five relaying messages in the relay path for completing MS joining a Multihop Relay network

- Only “Ranging & Automatic Adjustments process” need to be modified to allow MS entering a Multihop Relay network via various RS

Backup

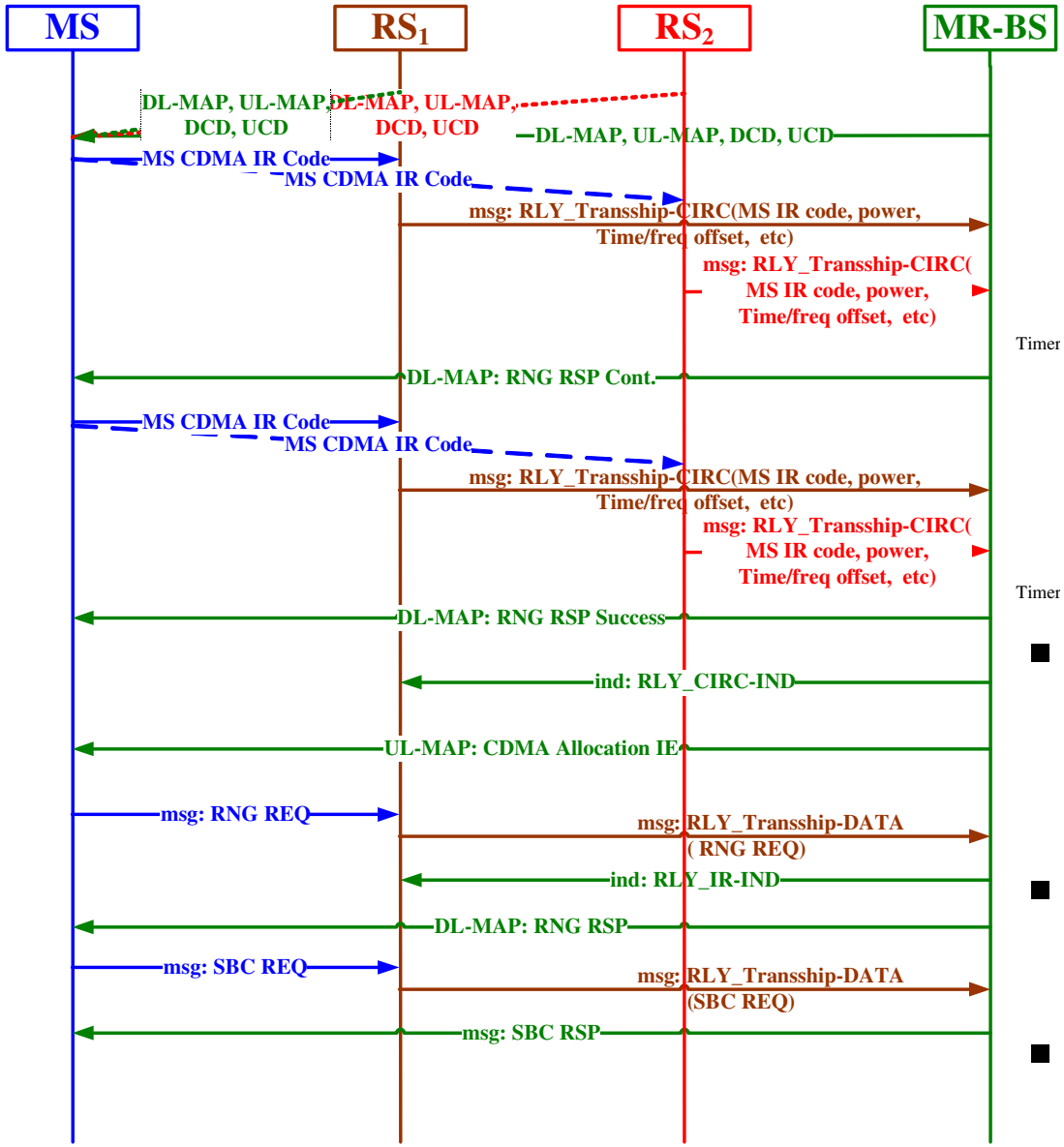
MS joining Multihop Relay Network via RS Example 1

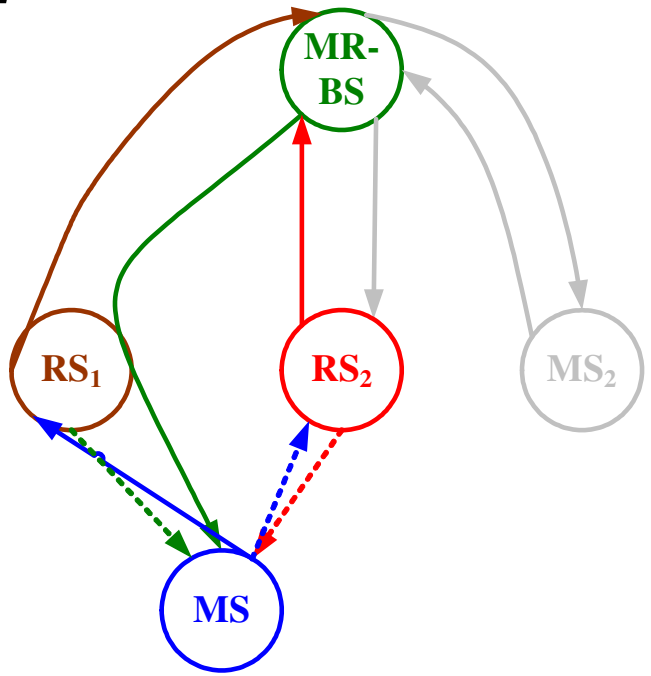




- only RS1 can decode messages from the MS and vice versa
- MR-BS assigns the MS to join the network via RS1negotiation

MS joining Multihop Relay Network via RS Example 2





- Both RS1 and RS2 can decode messages from the MS and vice versa
- The MS can also decode messages from MR-BS
- MR-BS assigns the MS to join the network via RS1