

# Discussion on R-zone/R-MAP and Frame Structure for MMR

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Purpose:

To introduce the terminologies of R-Frame, R-zone and R-MAP

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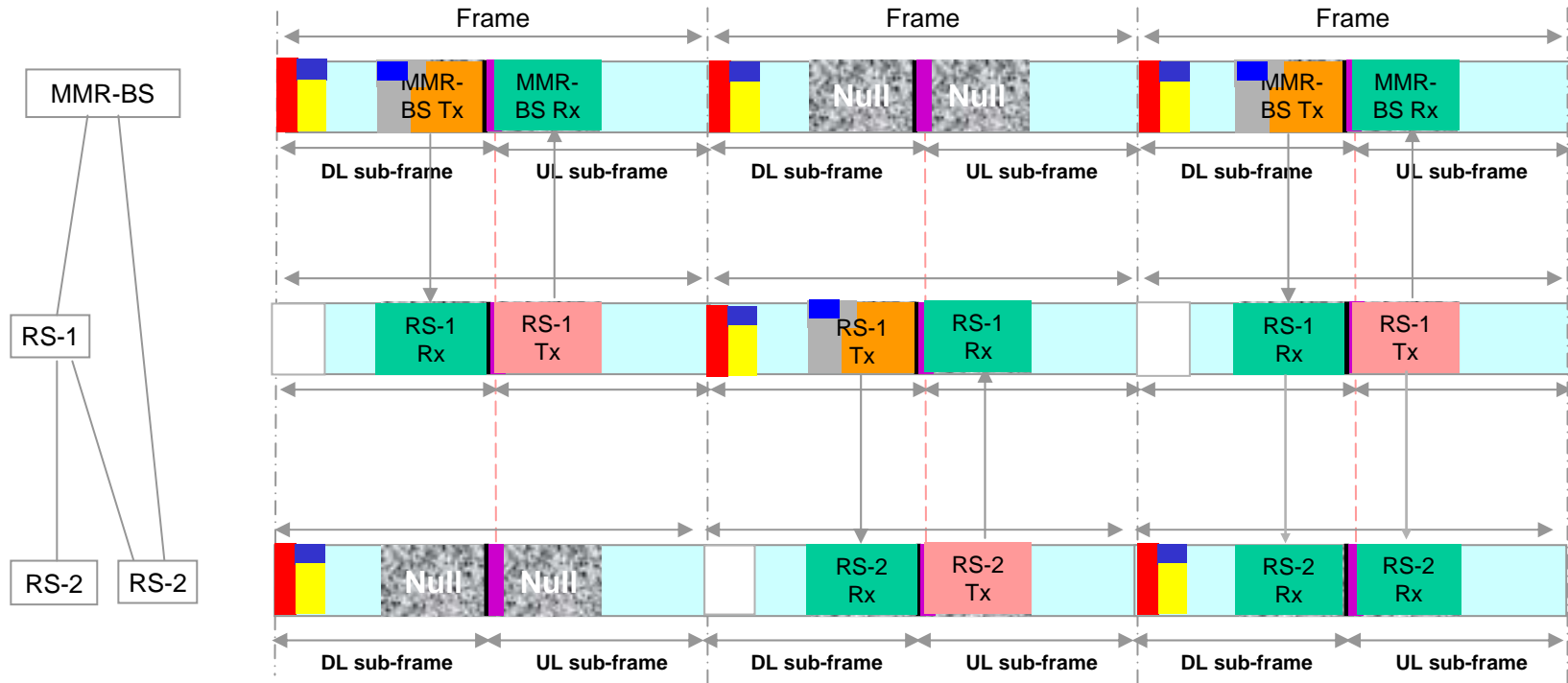
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# Introduction and Background

- Based on IEEE802.16j PAR, the new node RS is introduced and new function/capability is added for MMR-BS without modification of MS, in order to retain the backward compatibility,
- We define the following:
  - Frame structure that enables the relay  $\rightarrow$ MMR-frame,
  - Relay zone  $\rightarrow$  R-zone
  - Relay zone MAP  $\rightarrow$  R-MAP

# MMR Frame Structure Example (3 hops)

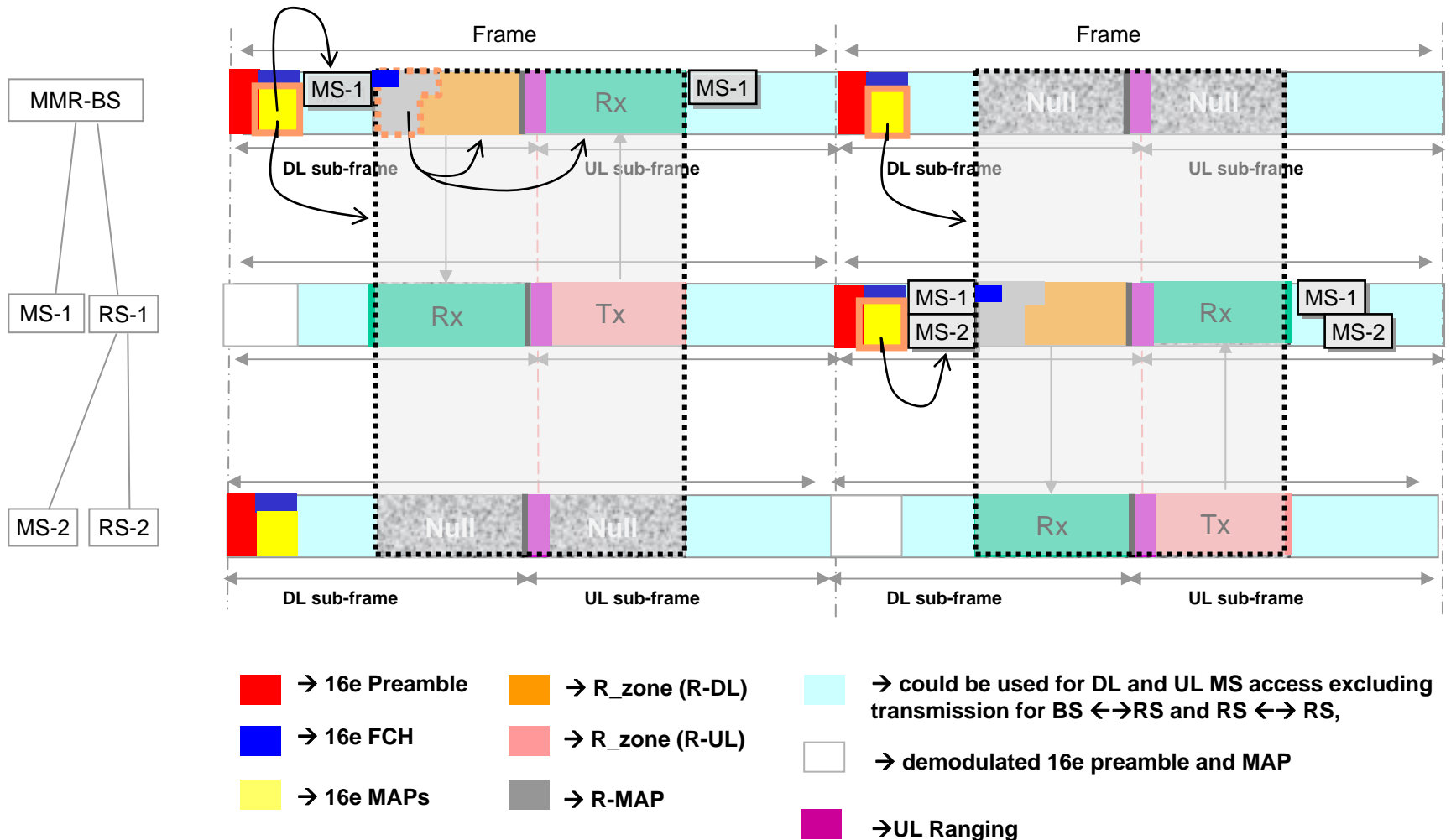
- Single carrier and single radio RS case



- |   |                |   |                 |   |   |
|---|----------------|---|-----------------|---|---|
|  | → 16e Preamble |  | → R_zone (R-DL) |  | → could be used for DL and UL MS access excluding transmission for BS ↔ RS and RS ↔ RS, |
|  | → 16e FCH      |  | → R_zone (R-UL) |  | → demodulated 16e preamble and MAP  |
|  | → 16e MAPs     |  | → R-MAP         |  | → UL Ranging  |

# R-zone and R-MAP Example (3 hops)

- Each R-zone is associated with a R-MAP, R-zone can be dynamically allocated and de-allocated by MMR-BS



# Summary

- MMR-Frame is introduced to support the mapping of R-zone which maintain the backward compatibility based on PAR
- 16e MAP\_IE is reused to support the links
  - MMR-BS  $\leftrightarrow$  MS
  - RS  $\leftrightarrow$  MS
  - No impact on MS
- R-zone is introduced to support dedicated links for
  - MMR-BS  $\leftrightarrow$  RS
  - RS  $\leftrightarrow$  RS
  - Serving MMR-BS and Serving RS are required to
    - transmit 802.16e preamble
    - transmit 802.16e FCH and MAP
- R-MAP is introduced for RS related resource assignment

# Text Proposal

- MMR-Frame
  - “The frame support the links between MMR-BS and RS and between RSs”
- R-Zone
  - “The OFDMA resource dedicated to the links between MMR-BS and RS and between RSs”
- R-MAP
  - “The MAP dedicated to the R-zone resource allocation”