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| Title | **Comments on relaying RNG-REQ message with RS basic CID at a transparent RS** |
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| Re: | IEEE 802.16j-07/043: "IEEE 802.16 Working Group Working Group Letter Ballot #28" |
| Abstract | This contribution proposes that the transparent RS should relay the received RNG-REQ message on the ranging CID. |
| Purpose | Text proposal for 802.16j Baseline Document. |
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# Comments on relaying RNG-REQ message with RS basic CID at a transparent RS

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# Introduction

In the accepted comment #565 (contribution IEEE 802.16-07/459r6), the transparent RS must relay the received RNG-REQ message form MS to the MR-BS on the RS basic CID. Since RNG-REQ message for the association scan, location update, network re-entry, and handover procedure must contain the value of HMAC or CMAC, which is derived from the value of CID in the MAC header, the CMAC value in RNG-REQ message will become invalid after the transparent RS replaces the ranging CID by the RS basic CID (see Figure 1). The original idea of replacing the ranging CID by the RS basic CID is to identify the access transparent RS during the network entry procedure. However, in the MR system with transparent RSs, the access RS for a MS may be reassigned by the MR-BS whenever the MS performs the contention-based CDMA ranging. Therefore, it is not necessary to identify the access RS at this stage because the MS must send CDMA BR ranging in order to transmit the SBC-REQ right after receiving the RNG-RSP. Hence, we proposes that the transparent RS must relay the received RNG-REQ message form MS to the MR-BS on the ranging CID.
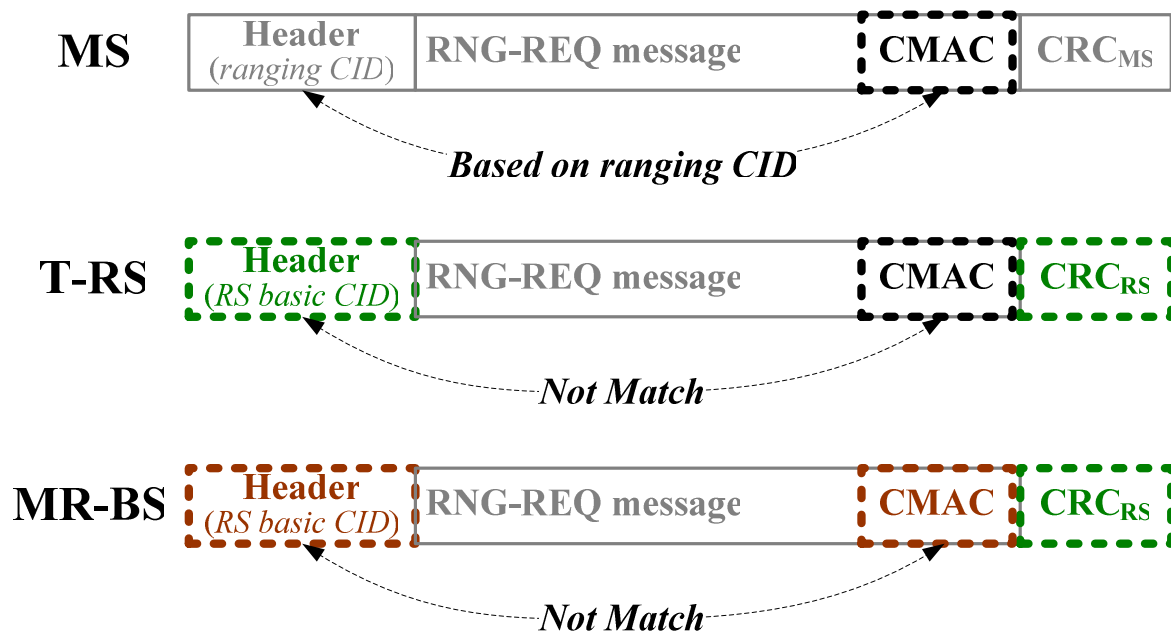


Figure 1 Verify the CMAC TLV of the RNG-REQ message at MR-BS with transparent RS

In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the draft document P802.16j/D1 are listed below.

# Text Proposal

*[Note: The text accepted in the previous meeting (comment #0565: document IEEE C802.16j-07/459r6) are marked in "Gray"]*

*[Modified 6.3.10.3.1.1 as following indicated:]*

— If adjustments are required, the MR-BS shall transmit the RNG-RSP to the SS and the process shall repeat. When the ranging code requires no further adjustment, the MR-BS shall provide an allocation in the access uplink for the SS to forward a RNG-REQ with its MAC address by inserting a CDMA_Allocation_IE in the UL-MAP. If management messages are relayed on the uplink, the MR-BS shall precede the CDMA_Allocation_IE with an UL_Burst_Receive_IE containing the access RS's basic CID.   A transparent RS, whose CID matches the RS basic CID of the UL_Burst_Receive_IE, shall receive the RNG-REQ on a burst specified by the CDMA_Allocation_IE and relay it to the MR-BS ~~on the RS basic CID~~.