IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>

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Re:	Call for technical proposals regarding IEEE project P802.16j
Abstract	This contribution proposes the scheme with which a serving MR-BS informs an old access RS of the release of MS context information.
Purpose	Discussion and Adoption in IEEE 802.16j
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MS context release indication

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Introduction

This contribution proposes handover signals to inform an old access RS that MS has successfully attached itself to a new access station and make the RS release MS context information if it maintains the information.

In the current 802.16e, serving BS releases MS context information after the expiration of Resource retain timer. Regardless of Resource retain timer, upon receiving the MS Network Attachment signal from a new serving BS, the old serving BS shall discard MAC context and MAC PDUs associated with the MS, if it has not already done so.

Similarly in 802.16j, RS as an old access station may maintain MS context information such as MS CIDs while an MS moves to another access station. After the MS attaches to the new access station or the expiration of Resource retain timer negotiated between serving MR-BS and MS, the old access RS does not need to retain the MS context information. So the serving MR-BS informs the old access RS of the release of MS context information if the RS maintains it. Upon receiving a signal of MS context release, the old access RS shall send its acknowledgment to the MR-BS and release the saved MAC context of the MS.
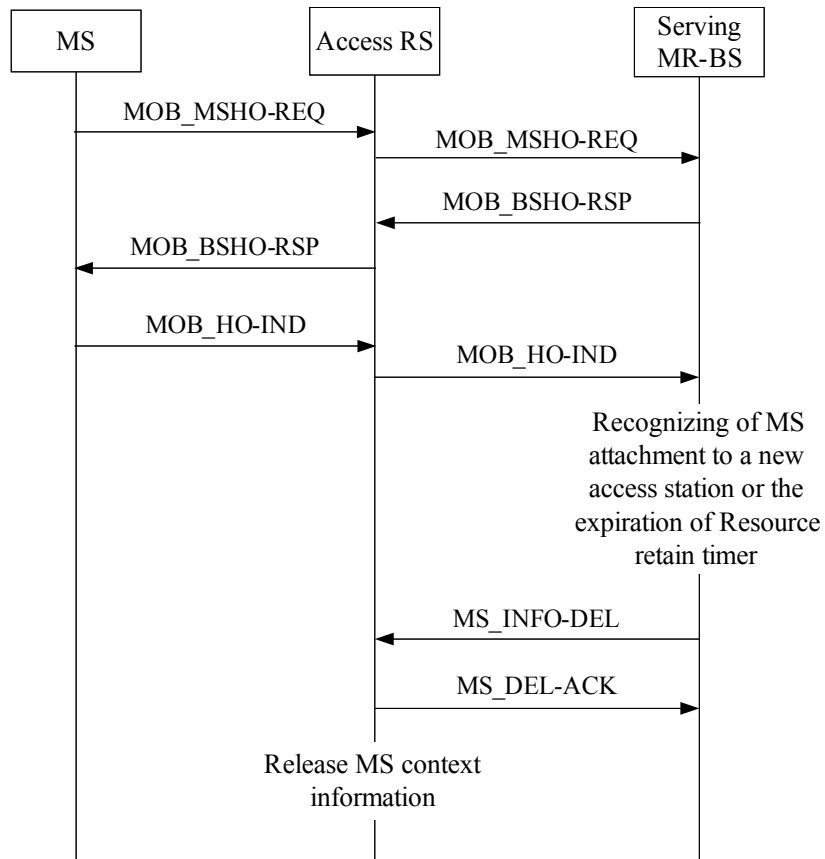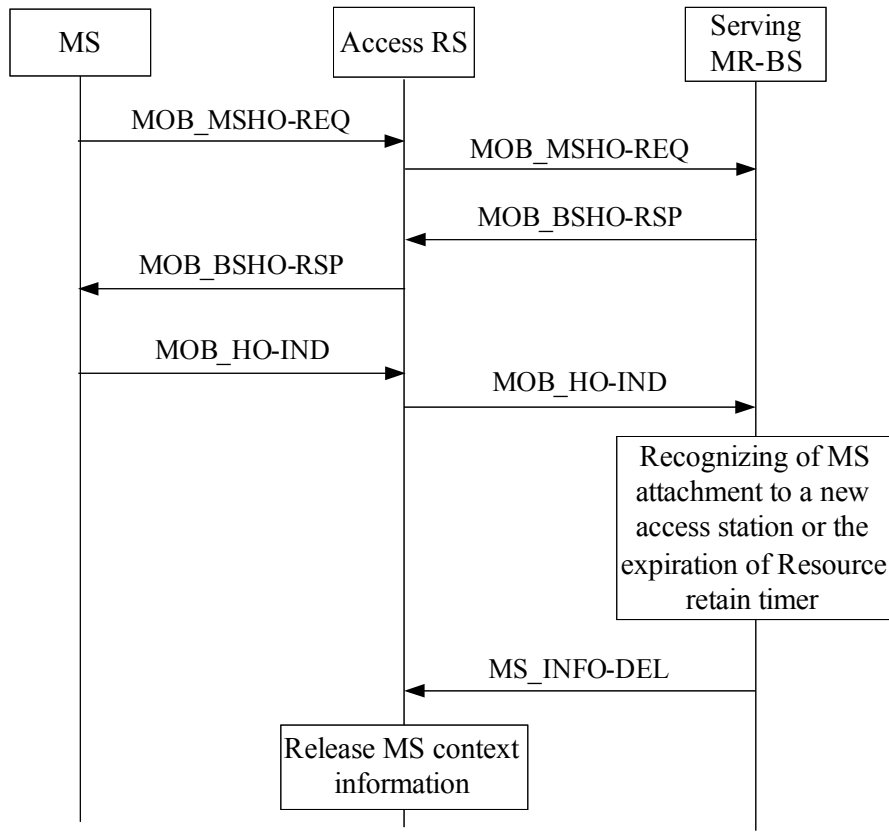
```
   MS            Access RS         Serving
                                   MR-BS

   |    MOB_MSHO-REQ   |              |
   |----------------->|MOB_MSHO-REQ  |
   |                  |------------->|
   |                  |MOB_BSHO-RSP  |
   |   MOB_BSHO-RSP   |<-------------|
   |<-----------------|              |
   |                  |              |
   |    MOB_HO-IND    |              |
   |----------------->| MOB_HO-IND   |
   |                  |------------->|
   |                  |              |
```

Recognizing of MS attachment to a new access station or the expiration of Resource retain timer

```
   |                  |  MS_INFO-DEL |
   |                  |<-------------|
```

Release MS context information

```
   MS            Access RS         Serving
                                   MR-BS

   |    MOB_MSHO-REQ   |             |
   |----------------->|MOB_MSHO-REQ  |
   |                  |------------->|
   |                  |MOB_BSHO-RSP  |
   |   MOB_BSHO-RSP   |<-------------|
   |<-----------------|              |
   |    MOB_HO-IND    |              |
   |----------------->| MOB_HO-IND   |
   |                  |------------->|
```

Recognizing of MS attachment to a new access station or the expiration of Resource retain timer

```
   |                  |  MS_INFO-DEL |
   |                  |<-------------|
   |                  |  MS_DEL-ACK  |
   |                  |------------->|
```

Release MS context information

Figure 1 an example of MS context release in old access RS

Proposed Text Change

[Insert the followings at the end of section 6.3.22.5.1 in page 30]

If a serving MR-BS recognizes that MS attaches to a new access station or Resource retain timer expires, and the MS's old access station is an RS which is controlled by the MR-BS, the MR-BS may send the MS_INFO-DEL message to make the RS discard MS context information. Upon receiving the MS_INFO-DEL message, the RS shall transmit MS_DEL-ACK as a reply and remove the MS context information.
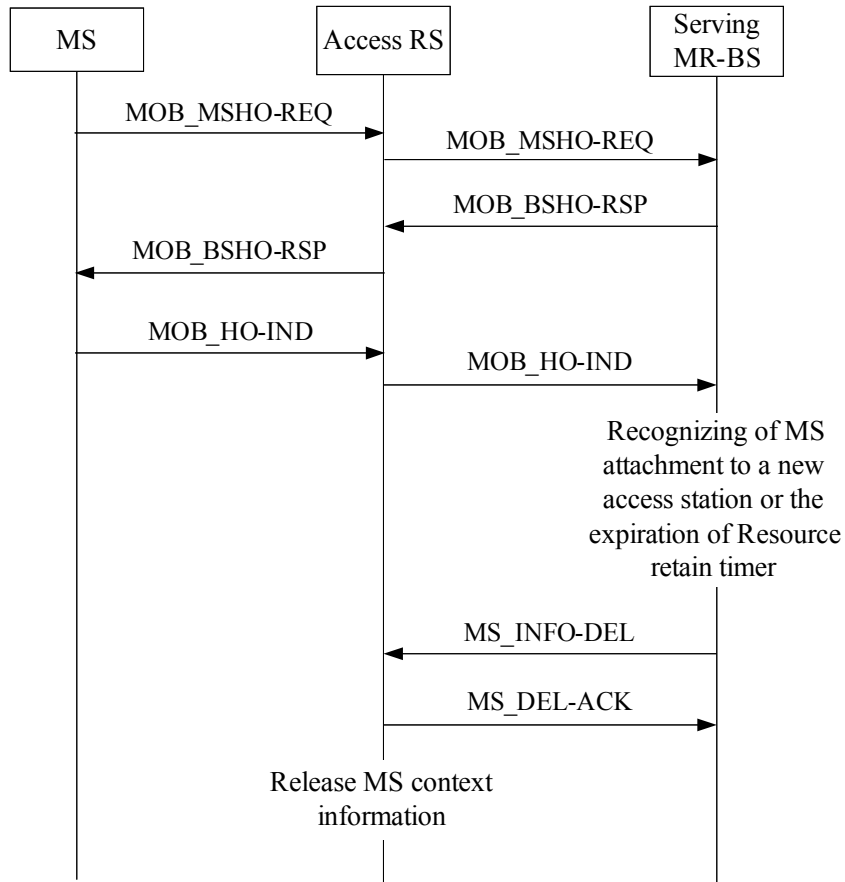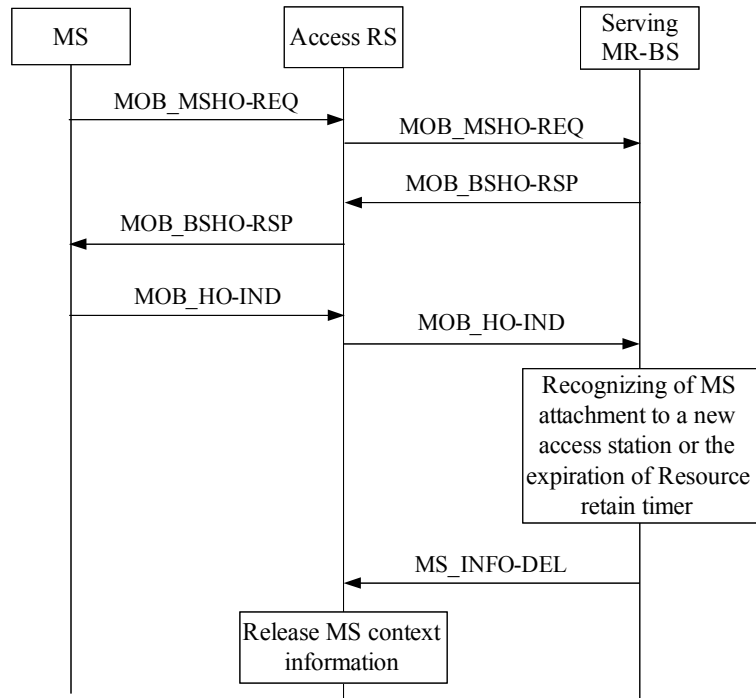
Figure xx: Handover procedure involving RS with centralized HO control from MR-BS

[Insert the followings after section 6.3.2.3.64 at page 13]

6.3.2.3.xx MS Context Information Delete (MS_INFO-DEL) message

An MR-BS transmits a MS_INFO-DEL message to an RS which is an old access station and controlled by the MR-BS when the MR-BS recognizes that MS attaches to a new access station or that Resource retain timer expires.

An MR-BS shall generate MS_INFO-DEL messages in the format shown in Table x.

Table x – MS_INFO-DEL message format

Syntax	Size	Notes
MS_INFO-DEL_Message_format() {		
Management Message Type=TBD	**8 bits**	-
Transaction ID	16bits	-
MS ID	1648 bits	MS Basic CID MAC address
}		

6.3.2.3.yy MS Context Information Delete Acknowledgement (MS_DEL-ACK) message

An RS transmits a MS_DEL-ACK message to an MR-BS as a response of MS_INFO-DEL message.

An RS shall generate MS_DEL-ACK messages in the format shown in Table y.

Table y – MS_DEL-ACK message format

Syntax	Size	Notes
MS_DEL-ACK_Message_format() {		
Management Message Type=TBD	**8 bits**	-
Transaction ID	16 bits	The same Transaction ID in the corresponding MS_INFO-DEL
}		