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| Title | **Transport Connection Establishment of MS by a RS Implementing Localized MS CID Management** |
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| Re: | IEEE P802.16j/D1: IEEE 802.16j working group letter ballot #28 |
| Abstract | This contribution addresses the transport connection CID assignment of MS by a RS implementing localized MS CID management, under the assumption that the access RS is also performing distributed security function. |
| Purpose | To incorporate the proposed text  into the P802.16j/D1 Baseline Document |
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# Transport connection establishment of a MS by a RS implementing localized MS CID management

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## 1. Introduction

Based on current baseline document, the connections of a MS can be managed either by MR-BS (end-to-end connection management) or by the access RS of the MS (localized connection management). The text regarding localized MS transport connection management currently is missing. In this contribution, the transport connection CID assignment of MS by a RS implementing localized MS CID management is addressed. In this contribution, it is assumed that the access RS is also performing distributed security function, i.e., the RS has security materials of MSs served.

## 2. Proposal

When a MS is attached to an access RS implementing localized MS CID management, the CID of a transport connection is assigned locally by the RS during MS service establishment.

The procedure of service flow set up initiated by MR-BS is shown in Figure 1.
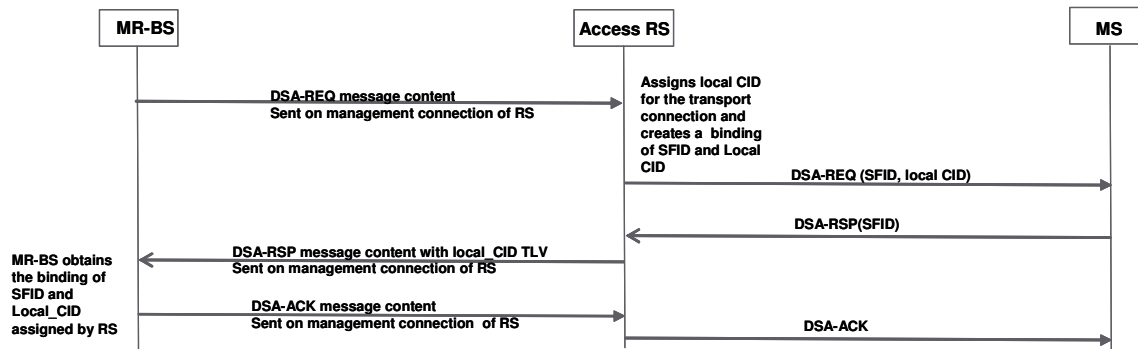


Figure1. Transport connection setup via a RS implanting both localized MS connection management and distributed security functions (MR-BS initiated)

For MR-BS initiated service flow setup to a MS, the MR-BS sends DSA-REQ message without the CID TLV over the management connection of the RS. After the RS receives this message, the RS shall assign a local CID (L_CID) to the transport connection to be established for this service flow and creates binding between this SFID and this L_CID. The RS shall then send the DSA-REQ message to corresponding MS with the assigned local CID. After RS receives the DSA-RSP message from the MS, the RS shall relay this message as well as the assigned local CID TLV to MR-BS over its management connection.

After this MR-BS receives this DSA-RSP message, the MR-BS creates a binding between SFID and local CID assigned by this RS.

For MS initiated service flow setup (refer to Figure 2), after a RS receives DSA-REQ from a MS, the RS shall assign a local CID to this potential UL service flow and relay the received DSA-REQ message as well as the locally assigned CID to the MR-BS. The binding between the UL service flow and the local CID is established by MR-BS. The MR-BS shall send DSA-RSP message to the RS. The RS then relays the DSA-RSP message to the MS including the local CID assigned by the RS. The RS crates a binding between the SFID and the local CID.
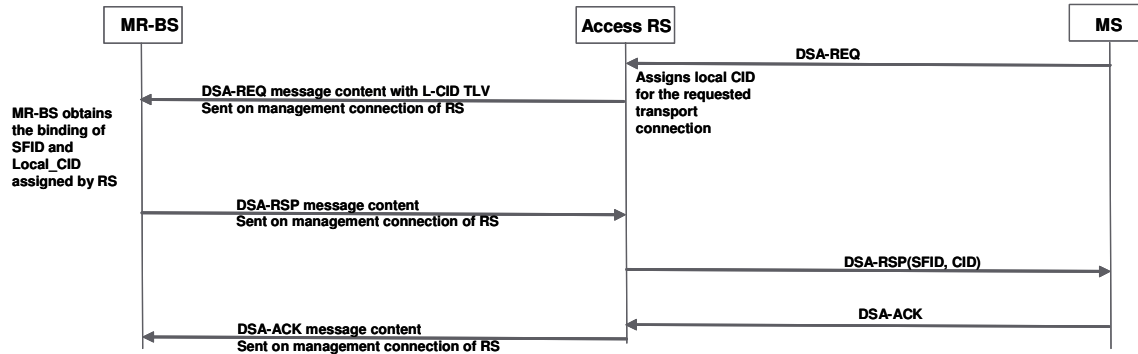
Figure 2. Transport connection setup via a RS implanting both localized MS connection management and distributed security functions (MS initiated service set up).

## 3. Proposed text change

*[Add the section 6.3.14.9.6 as followings]*

+++++++++++++ Start text ++++++++++++++++++++++++++++++++++++++++++++++++++++

6.3.14.9.6 Service flow management through a RS with localized MS CID management and distributed security

When a MS is attached to an access RS with localized MS CID management, the CID of a transport connection is assigned locally by the RS during MS service establishment.

For MR-BS initiated service flow setup to a MS, the MR-BS sends DSA-REQ message without the CID TLV over the management connection of the RS. After the RS receives this message, the RS shall assign a local CID (L_CID) to the transport connection to be established for this service flow and creates binding between this SFID and this L_CID. The RS shall then send the DSA-REQ message to corresponding MS with the assigned local CID. After RS receives the DSA-RSP message from the MS, the RS shall relay this message as well as the assigned local CID TLV (using the CID TLV) to MR-BS over its management connection.

After this MR-BS receives this DSA-RSP message, the MR-BS creates a binding between SFID and local CID assigned by this RS.

For MS initiated service flow setup, after a RS receives DSA-REQ from a MS, the RS shall assign a local CID to this potential UL service flow and relay the received DSA-REQ message as well as the locally assigned CID (use the CID TLV) to the MR-BS. The binding between the UL service flow and the local CID is established by MR-BS. The MR-BS shall send DSA-RSP message to the RS. The RS then relays the DSA-RSP message to the

MS including the local CID assigned by the RS. The RS crates a binding between the SFID and the local CID.


+++++++++++++ End text ++++++++++++++++++++++++++++++++++++++++++++++++++++