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Abstract	Enhanced CID update in Registration
Purpose	Adoption of proposed changes into P802.16e /D3-2004
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Enhanced CID update in Registration

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1. Introduction

• Problem Statements

In the current specification, CID_update encodings are sent in REG-REQ/RSP management message, to deliver the mapping information of the old CID from the old BS and the new CID from the new BS. However, when there are several numbers of connections are in service, the Value field of the CID_Update encoding comes to be large enough.

• Summary of Proposal

The contribution suggests an optional TLV to replace the Old_CID TLVs in the CID_Update encoding, to reduce the resource consumption by the CID_Update. The old CID information, unlike the new CID, can be abstracted into a bitmap instead of expressing its whole value, for it is already known to a SS by the old BS in the previous cell.

In the proposed encoding, the old CID information shall be sorted in the increasing order(or by some other previously-defined rule) before mapped onto the bit positions of Old_CID_BITMAP TLV(precisely, the value field of Old_CID_BITMAP). Then the old CID with the smallest number shall be mapped to LSB of Old_CID_BITMAP TLV, and the one with the next smallest number shall be mapped to the next LSB. This procedure continues until all of the old CIDs are mapped to the bit positions of Old_CID_BITMAP TLV. In the process, when the old CID is successfully assigned a new CID to update it, the corresponding bit position shall be set to '1', and otherwise, the corresponding bit position shall be set to '0'.

Finally, when the New_CID TLVs are inserted in the 'Value' field of CID_Update encoding, they shall be inserted in the same order as the old CIDs are mapped onto the bitmap.

2. Proposed Text Changes to 16e/D3

[Modify the text in Section 11.7.8 as follows]

11.7.8 CID update encodings

This field provides a translation table that allows an MSS to update its service flow and connection information so that it may continue service after a hand-over to a new serving BS.

Name	Type	Length	Value
CID_Update	16	variable	Compound

The New_CID TLV values shall appear in each CID_update TLV. And either the Old_CID TLV values or the Old_CID_BITMAP TLV value shall appear in each CID_update TLV

Name	Type	Length	Value
New_CID	16.1	2	New CID after hand-over to new BS
Old_CID	16.2	2	Old CID before hand-over from old BS
<u>Old_CID_BITMAP</u>	<u>16.3</u>	<u>variable</u>	<u>Bitmap for old CIDs before hand-over from old BS. The LSB of the value corresponds to the old CID that is the smallest number among all of the old CIDs. And, the next</u>

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			<u>LSB corresponds to the next smallest old CID. This process continues until all of the old CIDs are mapped to an appropriate bit of this value field. Bit positions shall be set to '1' when the new CIDs to update their corresponding old CIDs are successfully assigned by the new BS. Otherwise, Bit positions shall be set to '0'.</u>
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The following TLV element may appear in a CID_update TLV.

<u>Name</u>	<u>Type</u>	<u>Length</u>	<u>Value</u>
<u>Connection Info</u>	<u>16.34</u>	<u>variable</u>	<u>If any of the service flow parameters change, then those service flow parameter-encoding TLVs that have changed will be added. Connection Info is a compound TLV value that encapsulates the Service Flow parameters that have changed for the service. All the rules and settings that apply to the parameters when used in the DSC-RSP message apply to the contents encapsulated in this TLV.</u>