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Abstract	Clarify the use of wildcards (like CID=0) representing several CIDs in a PSC definition, and what kind of CID can co-exist in a PSC.
Purpose	Adopt proposed changes.
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Clarifications on the definition of Power Saving Classes

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Problems Description

Use of "wildcards"

A power saving class (PSC) definition can use wildcard-like definitions by setting the Number_of_CIDs field to 0, to represent all the CIDs of the MS, or using CID=0, or using the MS basic CID. But the standard does not indicate if these wildcards shall be evaluated once only, at PSC creation time or are permanent (new CIDs of the appropriate type would be automatically added to the PSC). This distinction is only relevant for the MOB_SLP-RSP message that actually creates the PSC.

The proposed remedy is to clarify that wildcard-like definitions are to be evaluated only once, at the time when the MOB_SLP-RSP message is received.
For consistency, the Basic CID (a management connection) is changed to represent all management connections instead of all the MS connections while CID=0 is used to represent all transport connections instead of management connections.

Types of CIDs in a PSC

There is a contradiction in the definition of a PSC. On one hand using Number_of_CIDs=0 or the basic CID it is possible to put all the MS CIDs (whatever their type) in a PSC: "In case the message is sent on Basic connection of certain MS, Number_of_CIDs = 0 means that all CIDs associated with the MS are included into the class." for example.
On the other hand, if CIDs are explicitly listed we are prevented to mix types: "This list shall contain either unicast connections or multicast connections or management connections, but not combination of connections of different types.". Note that management CIDs are unicast, so the wording is confusing. In the MOB_SLP-REQ there is no restriction related to management CIDs.

The propose resolution is to remove any restriction. Note that the BS can still enforce any restriction it wants, for example it can prevent mixing unicast and multicast CIDs in the same PSC. But this is an implementation dependant decision.

Proposed Remedy

[Modify the first paragraph of Page 114 , 6.3.2.3.45 as indicated:]

The MOB_SLP-RSP message shall be sent from BS to an MS ~~on Broadcast CID or~~ on the MS's basic CID in response to an MOB_SLP-REQ message, or may be sent unsolicited. If Definition bit is set, the message contains the definition of a new Power Saving Class together with an assigned Power_Saving_Class_ID that shall be unique per MS if ~~only~~ unicast traffic connections are included and unique per cell if only multicast connections are included. ~~Mixture of multicast and unicast connections in a single class is not allowed.~~

[Modify descriptions of MOB_SLP-RSP in page 117, 6.3.2.3.45 as follows:]

Number_of_CIDs

~~In case the message is sent on Basic connection of certain MS,~~ Number_of_CIDs = 0 means ~~that~~ all CIDs associated with the MS <u>at the time the MOB_SLP-RSP message is received</u> are <u>added to the Power Saving Class.</u> ~~included into the class.~~

CID

CIDs of all connections comprising the Power Saving Class. ~~This list shall contain either unicast connections or multicast connections or management connections, but not combination of connections of different types.~~ If Basic CID is ~~encoded~~ <u>included,</u> it means that all MS <u>management</u> connections are included in <u>the Power Saving Class.</u> ~~a single class.~~ <u>If</u> CID = 0 is <u>included,</u> ~~reserved for~~ ~~management operations~~ <u>that means all current transport connections are added to the Power Saving Class.</u> ~~In case the message is sent on Basic connection of certain MS, CID = 0 denotes set of all management connections associated with the MS.~~

[Modify descriptions of MOB_SLP-REQ in page 113, 6.3.2.3.44 as follows:]

Number_of_CIDs

~~If Number_of_CIDs = 0, it means that all unicast CIDs associated with the MS are requested for addition to the class.~~

<u>Number_of_CIDs = 0 means all CIDs associated with the MS at the time the MOB_SLP-REQ message is transmitted are added to the Power Saving Class.</u>

CID

~~CIDs of unicast connections comprising the Power Saving Class. CID = 0 denotes set of all management connections associated with the MS.~~

<u>CIDs of all connections comprising the Power Saving Class. If Basic CID is included, it means that all MS management connections are included in the Power Saving Class. If CID = 0 is included, that means all current transport connections at the time the MOB_SLP-REQ message is transmitted are added to the Power Saving Class.</u>