

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group &lt;<a href="http://ieee802.org/16">http://ieee802.org/16</a>&gt;</b>	
Title	<b>Section describing change of channel descriptors</b>	
Date Submitted	<b>2001-06-15</b>	
Source(s)	Carl Eklund Nokia Research Center P.O.BOX 407 FIN-00045 Nokia Group, Finland	Voice: +348504836566 Fax:+358718036851 <a href="mailto:carl.eklund@nokia.com">mailto:carl.eklund@nokia.com</a>
Re:	Recirculation Ballot #3a	
Abstract	Describes how channel descriptors are changed	
Purpose	Attachment to submitted comment	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.	
Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) < <a href="http://ieee802.org/16/ipr/patents/policy.html">http://ieee802.org/16/ipr/patents/policy.html</a> >, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair < <a href="mailto:r.b.marks@ieee.org">mailto:r.b.marks@ieee.org</a> > as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site < <a href="http://ieee802.org/16/ipr/patents/notices">http://ieee802.org/16/ipr/patents/notices</a> >.	

# Proposed section describing channel descriptor change

*Carl Eklund*

*Nokia*

## 0.0.1 Update of Channel Descriptors

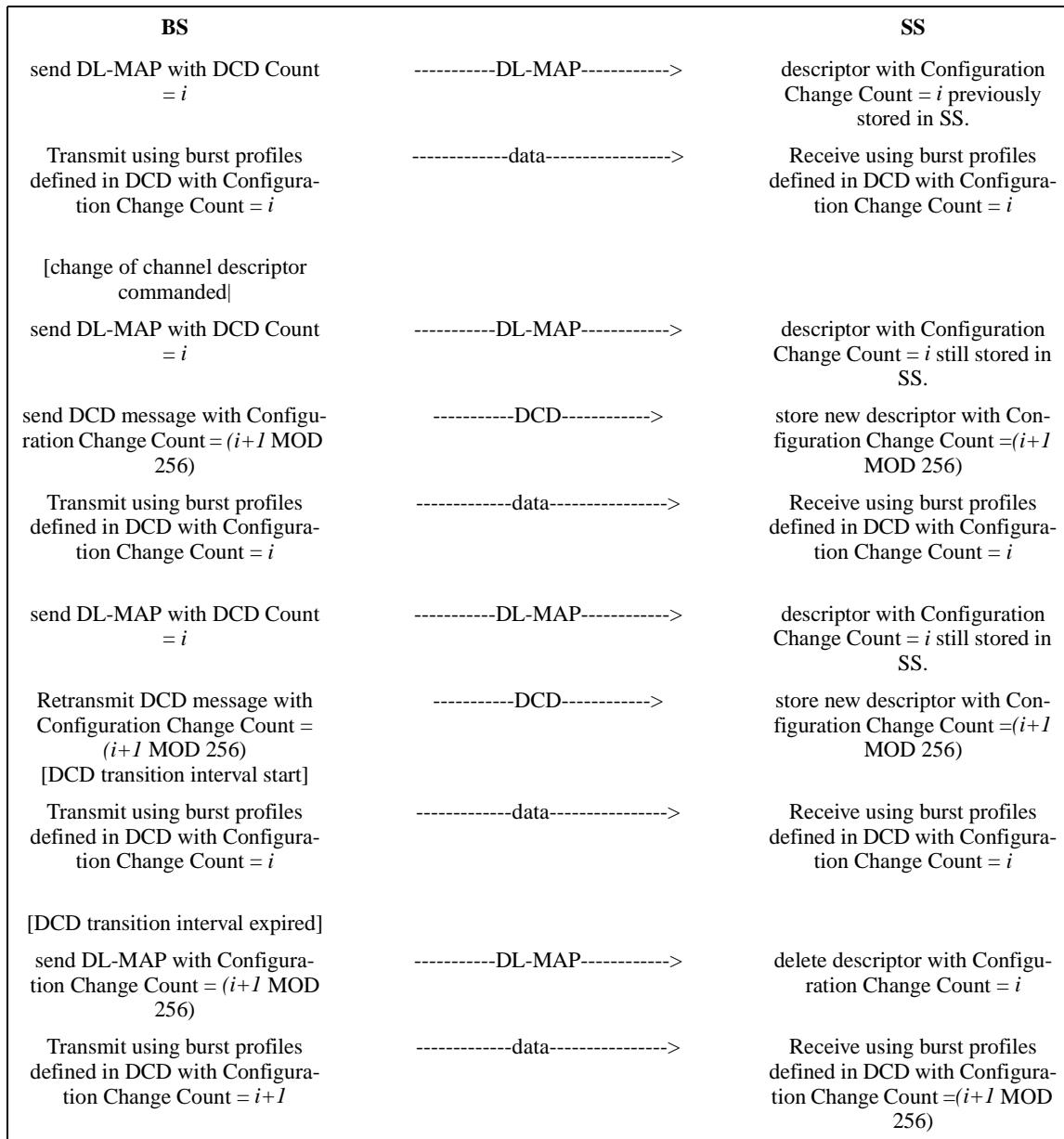
The channel descriptors, i.e., the UCD and DCD messages, are transmitted at regular intervals by the BS. Each descriptor contains the Configuration Change Count which shall remain unchanged as long as the channel descriptor remains unchanged. All UL-MAP and DL-MAP messages allocating transmissions and receptions using burst profiles defined in a channel descriptor with a given Configuration Change Count value, shall have a UCD/DCD Count value equal to the Configuration Change Count of the corresponding channel descriptor.

The procedure to transition from one generation of the channel descriptors (and as a consequence the set of burst descriptors) to the next is shown in Figure 1 and Figure 2, for the up- and downlink respectively. The Configuration Change Count shall be incremented by 1 modulo 256 for every new generation of channel descriptor. After issuing a DL-MAP or UL-MAP message with the Configuration Change Count equal to that of the new generation, the old channel descriptor ceases to exist and the BS shall not issue UL-MAP and DL-MAP messages referring to it. When transi-

tioning from a generation to the next the BS shall schedule the transmissions, of the UCD and DCD messages in a way, that each terminal has the possibility to hear it at least once.

BS		SS
send UL-MAP with UCD Count $= i$	-----UL-MAP----->	descriptor with UCD Count = $i$ previously stored in SS. Transmit using burst profiles defined in UCD with Configuration Change Count = $i$
[change of channel descriptor commanded]	<-----data-----	
send UL-MAP with UCD Count $= i$	-----UL-MAP----->	descriptor with Configuration Change Count = $i$ still stored in SS.
send UCD message with Configuration Change Count = $(i+1 \text{ MOD } 256)$	-----UCD----->	store new descriptor with Configuration Change Count = $(i+1 \text{ MOD } 256)$ Transmit using burst profiles defined in UCD with Configuration Change Count = $i$
	<-----data-----	
send UL-MAP with UCD Count $= i$	-----UL-MAP----->	descriptor with Configuration Change Count = $i$ still stored in SS.
Retransmit UCD message with Configuration Change Count = $(i+1 \text{ MOD } 256)$ [UCD transition interval start]	-----UCD----->	store new descriptor with Configuration Change Count = $(i+1 \text{ MOD } 256)$ Transmit using burst profiles defined in UCD with Configuration Change Count = $i$
	<-----data-----	
send UL-MAP with UCD Count $= i$	-----UL-MAP----->	descriptor with UCD Count = $i$ previously stored in SS. Transmit using burst profiles defined in UCD with Configuration Change Count = $i$
[UCD transition interval expired]	<-----data-----	
send UL-MAP with UCD Count $= (i+1 \text{ MOD } 256)$	-----UL-MAP----->	delete descriptor with Configuration Change Count = $i$ Transmit using burst profiles defined in UCD with Configuration Change Count = $(i+1 \text{ MOD } 256)$
	<-----data-----	

**Figure 1—Uplink Channel Descriptor update**

**Figure 2—Downlink Channel Descriptor update**