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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>** |
| Title | **Clarify downlink burst profile change management** |
| Date Submitted | **2005-01-19** |
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| Re: | IEEE P802.16-REVd/D5 |
| Abstract | This contribution introduces clarifications for DL burst profile change management procedures. |
| Purpose | Adopt into P802.16d/D5 corrigenda |
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# Clarify downlink burst profile change management

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## Problem statement

The concept of adaptive PHY, e.g. dynamic adaptive modulation, is important to adjust the burst profile of each SS in DL and UL according to quality of the signal. However, there are several ambiguities in the procedures of DL burst profile change in IEEE P802.16-REVd/D5.

In IEEE P802.16-REVd/D5 "Figure 79 —Transition to a more robust burst profile" and "Figure 80— Transition to a less robust burst profile", the SS must monitor DL data through two different DIUC while changing the DL burst profile. This scenario is reasonable only if the *CID used* is ***not*** enabled by burst profile for SC and SCa PHY (see Table 139 and Table 190). In the case of OFDM, OFDMA PHY and in the case of SC, SCa PHY that the *CID used* is enabled by burst profile, the SS's basic CID is included in each DL-MAP_IE. Thus, the SS can check the DL-MAP for it basic CID and know what DIUC it should use. This design improves the energy efficiency of the SSs that have power consumption constrains. Due to the lack of consistency between this design and the procedures defined in specification, we provide two modified figures to clarify this issue.

We notice that DL burst profile management does not mention how the SS deals with the lost of the change request. However, the change request may be lost due to the contention or harsh mobile environment. Therefore, the additional flow chart (see Figure 81a) is proposed to make the change of DL burst profile more robust. The new timer T28 is design for handling the lost of the DBPC-REQ or RNG-REQ during the change of DL burst profile. Note that the BS should send DL data at new DIUC or send the DBPC-RSP or RNG-RSP to the MSS before T28 times out.

## Proposed changes

**6.3.10.1 Downlink burst profile management**

***[Replace Figure 79 and Figure 80 with the following figures. ]***

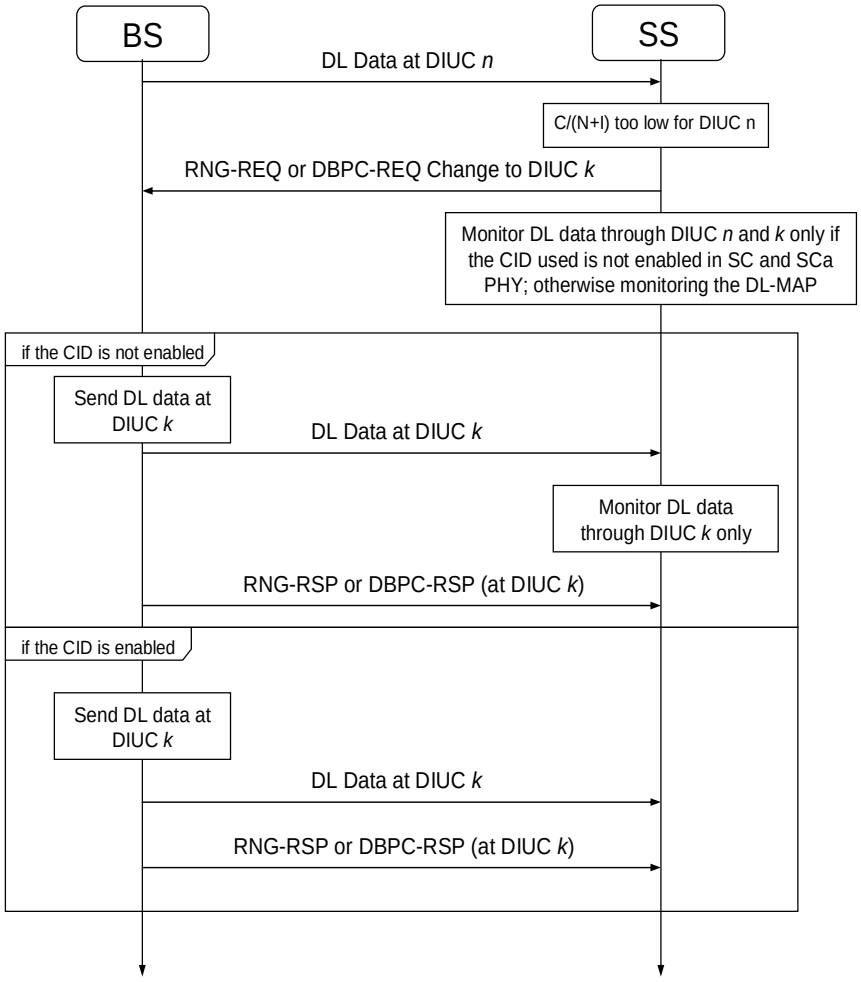


Figure 79—Transition to a more robust burst profile

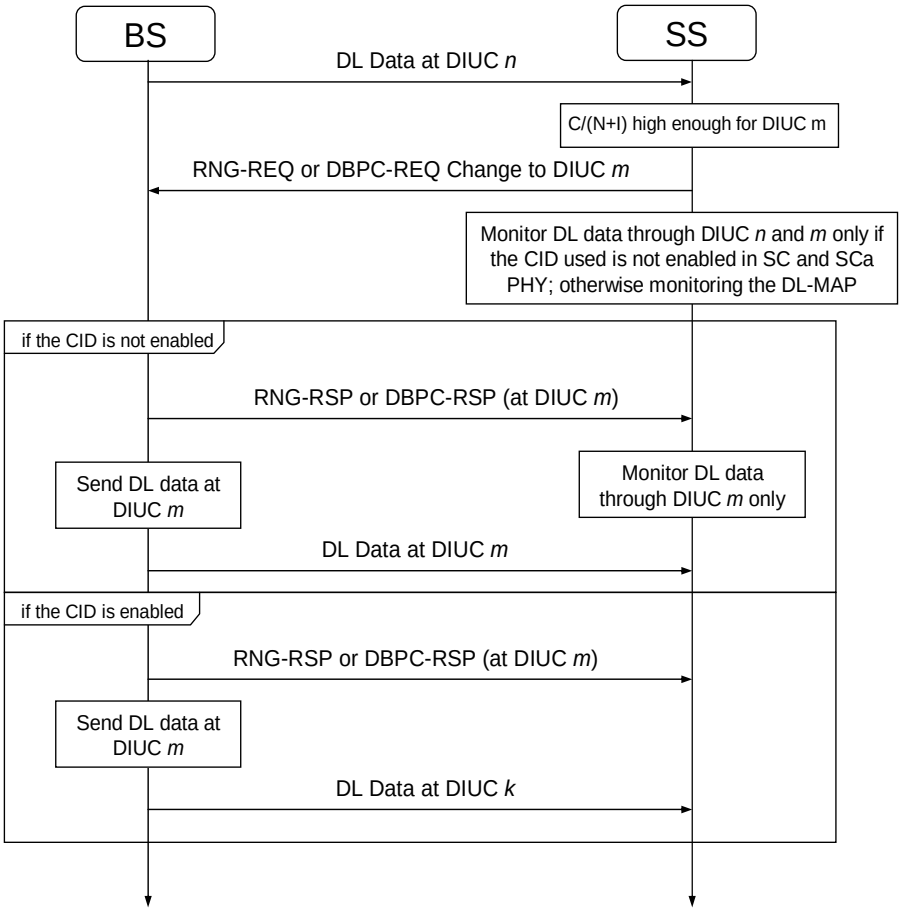


Figure 80—Transition to a less robust burst profile

***[Insert new figure before "Figure 81 – Burst profile threshold usage" with the following figure. ]***

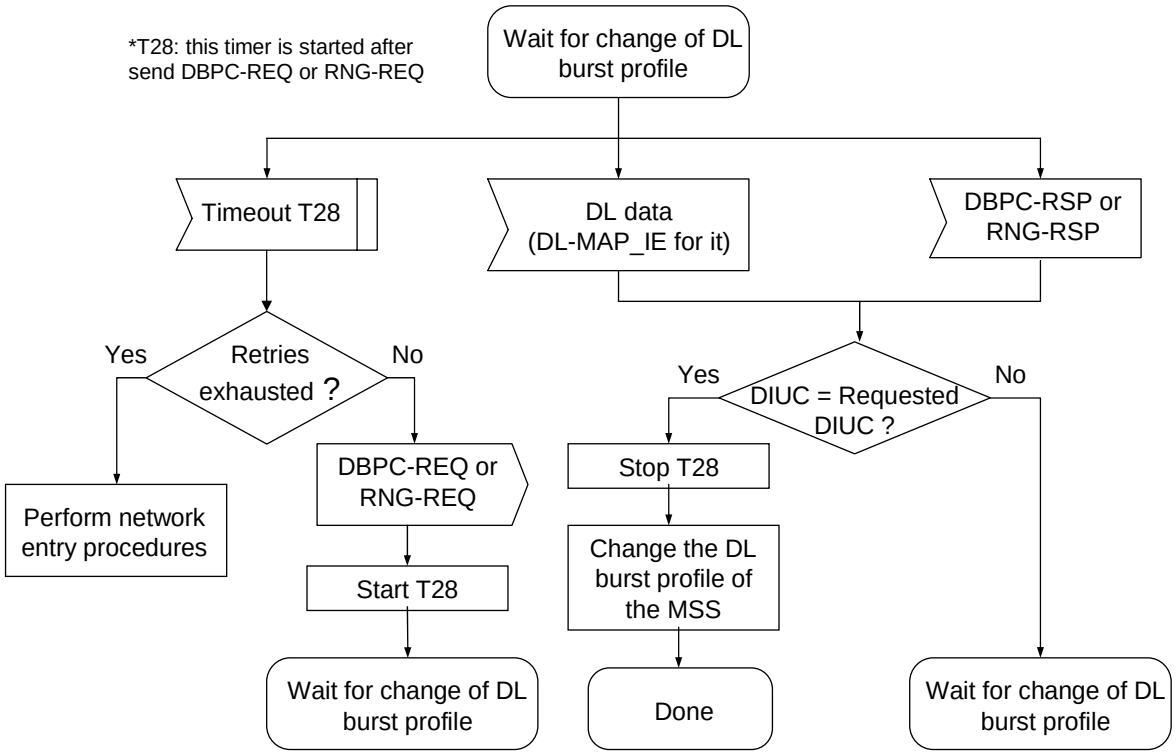


Figure 81a—Wait for response during change of DL burst profile—SS