Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	Supplementary Changes for Comment #30 in 80216-04/20
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Re:	This is a contribution to IEEE 802.16-REVd.
Abstract	This contribution describes the proposed changes to not have multiple UL channels for a DL channel in 802.16REVd.
Purpose	To remove the unnecessary complexity in 802.16 systems.
Notice	
Release	

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	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 <mailto:r.b.marks@ieee.org > 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 <http://ieee802.org/16/ipr/patents/notices>.

Supplementary Changes for Comment #30 in 80216-04_20

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1. Introduction

This document describes the supplementary changes for comment #30 in 80216-04_20.

2. References

[16REVd/D4]   IEEE P802.16-REVd/D4-2004

3. Rationale

802.16 systems are different from Cable modem systems in number of active UL channels for a DL channel. 802.16 systems have only one active UL channel for a DL channel. However, the current 802.16 standard, i.e., IEEE P802.16-REVd/D4-2004, still contains the specifications that are originally from DOCSIS for supporting multiple UL channels for a DL. This definitely adds unnecessary complexity to our 802.16 systems.

This document describes the supplementary changes for comment #30 in 80216-04_20, which proposes to support one active UL channel for a DL channel.

4. Proposed Changes

The following changes are required in [16REVd/D4] to reflect the above proposal:

1)   Page 46, line 62, remove the last sentence.

2)   Page 153, line 30, Section 6.3.9.3, make the following changes.

6.3.9.3 Obtain uplink parameters

After synchronization, the SS shall wait for a UCD message from the BS in order to retrieve a set of transmission parameters for a possible uplink channel. These messages are transmitted periodically from the BS for the all available uplink channels and are addressed to the MAC broadcast address. The SS shall determine whether it may use the uplink channel from the channel description parameters.

~~The SS shall collect all UCDs which are different in their channel ID field to build a set of usable channel IDs.~~ If no <u>uplink</u> channel can be found after a suitable timeout period, then the SS shall continue scanning to find another downlink channel. The process of obtaining uplink parameters is illustrated in Figure 56.

The SS shall determine from the channel description parameters whether it may use the uplink channel. If the channel is not suitable, then the SS <u>shall</u> ~~shall try the next channel ID until it finds a usable channel~~ <u>continue scanning to find another downlink channel</u>. If the channel is suitable, the SS shall extract the parameters for this uplink from the UCD. It then shall wait for the next DL-MAP message and extract the time synchronization from this message. The SS then shall wait for a bandwidth allocation map for the selected channel. It may begin transmitting uplink in accordance with the MAC operation and the bandwidth allocation mechanism.

The SS shall perform initial ranging at least once, per Figures 58 and 59. If initial ranging is not successful, ~~then the next channel ID is selected, and~~ the procedure <u>is</u> restarted from ~~UCD extraction~~ <u>scanning to find another downlink channel</u>. ~~When there are no more channel IDs to try, then the SS shall continue scanning to find another downlink channel.~~ The SS MAC is considered to have valid uplink parameters as long as it continues to successfully receive the UL-MAP and UCD messages. If at least one of these messages is not received within the time intervals specified in Table 295, the SS shall not use the uplink. This is illustrated in Figure 57.
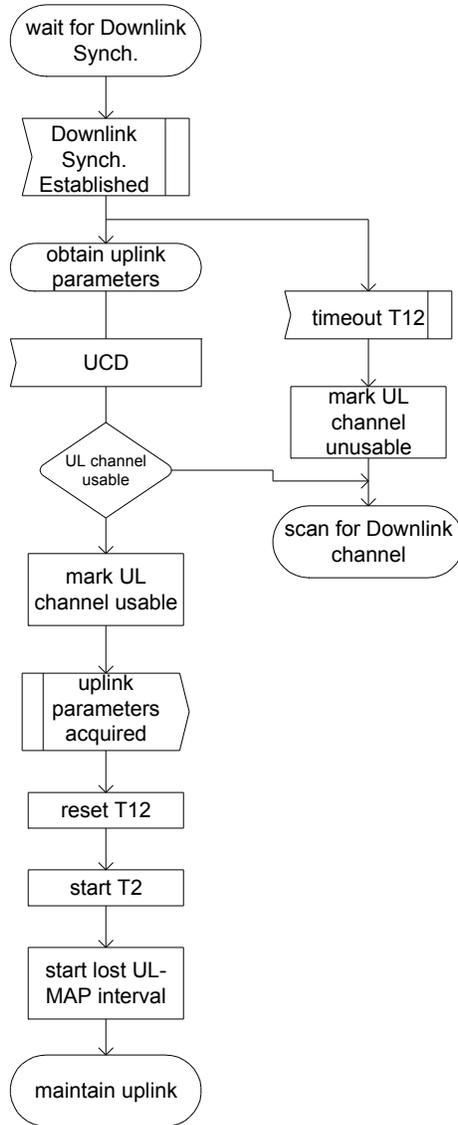
wait for Downlink Synch.

Downlink Synch. Established

obtain uplink parameters

timeout T12

UCD

mark UL channel unusable

UL channel usable

scan for Downlink channel

mark UL channel usable

uplink parameters acquired

reset T12

start T2

start lost UL-MAP interval

maintain uplink

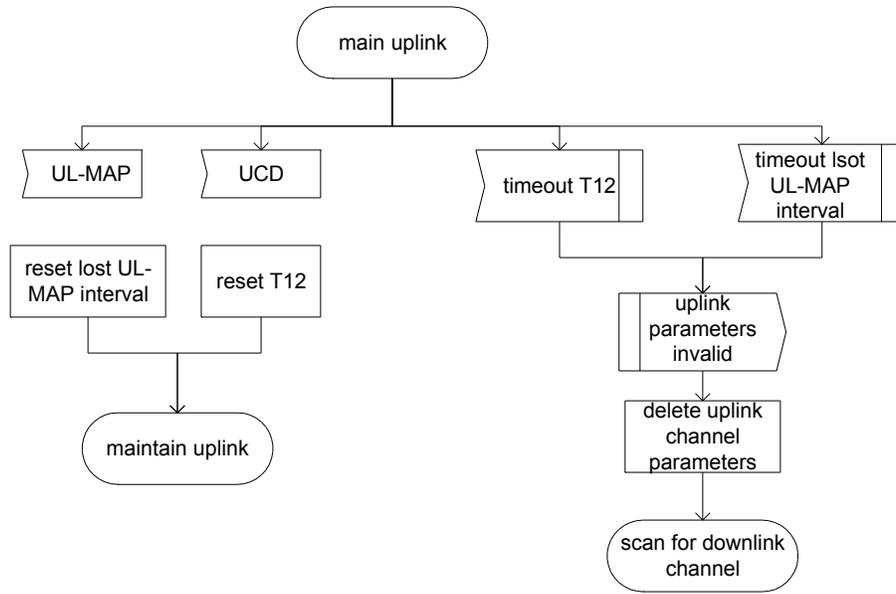**Figure 56—Obtaining uplink parameters**

Figure 57—Maintain uplink parameters~~, single uplink case, ChID=i~~