

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Editorial Remedies related to the Credit Token based Coexistence Protocol</b>	
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Re:	Working Group Review of Working Document P80216h_D1	
Abstract	This contribution provides some editorial text remedies for [1] on the credit token co-existence rental protocol section. This contribution is related to the comments #161, #171 and #174 provided in the review [2] corresponding to the IEEE 802.16 Working Group Letter Ballot #24.	
Purpose	Propose editorial text remedies in the credit token based co-existence protocol section (15.4.2.5).	
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# Editorial Remedies related to the Credit Token based Coexistence Protocol

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## Overview

This contribution provides some editorial text remedies for the credit token co-existence rental protocol section of [1]. This contribution is related to the comments #161, #171 and #174 provided in the review [2] corresponding to the IEEE 802.16 Working Group Letter Ballot #24. The proposed text remedies for these comments are intended to be included in section 15.4.2.5 of the draft [1].

## Specific editorial changes

This section provides a list of changes to the draft document.

Blue text represents specific editorial additions.

~~Red strikethrough~~ text is to be deleted.

Black text is text already in the draft.

***Bold italic*** text is editorial instructions to the editor.

## Text proposal for section 15.4.2.5

*Update the introductory text of section 15.4.2.5 with the text below (related to comments #161 of [2]).*

~~Spectrum~~ Radio resource sharing between several systems (S) can be achieved collaboratively by the sharing a common MAC frame among the different systems (operated by different operators) with the frame structure of type 1 or type 2 (as depicted in subclause 15.1.4.2). ~~as exemplified by Figure h 47.~~ In such a MAC frame structure, dedicated portions (denoted as “master system sub-frames”) of the frame are periodically and exclusively allocated to a system (denoted as the “master system”) respectively in the forward and reverse link. ~~The terminology used hereafter defines a slave system as a system that may operate during the other master systems sub frames. With respect to this definition, the slave system sub frames are the time intervals operating in parallel of the master systems sub frames.~~

~~Additional flexibility can be provided by such a frame structure if~~ Therefore, the length of each master sub-frame (interference free sub-frame) can be dynamically adjusted as a function of the spatial and temporal traffic load variations of each system as stated in section 15.1.4

At some times, some systems (e.g.  $S_{N-1}$  and  $S_{N+1}$  in Figure h 47) might need temporally some more bandwidth (i.e. higher master subframe durations) while some other (i.e.  $S_N$ ) does not fully use the master subframe during the same period. As exemplified in Figure h47, this means that an underused master subframe of a system (e.g.  $S_N$ ) can be re-allocated temporally to one or several subframes of some other systems (e.g.  $S_{N-1}$  and  $S_{N+1}$ ) after negotiation.

~~To achieve this, this section proposes the dynamic coordination of the frame structure sharing between BSs when several master systems compete to share this common shared MAC frame.~~

The re-allocation of the unused part of the master  $S_N$ 's subframe requires some scheduling. This subclause proposes a dynamic and fair coordination of the resources between  $S_N$ ,  $S_{N-1}$  and  $S_{N+1}$  when  $S_{N-1}$  and  $S_{N+1}$  compete to access  $S_N$ 's resource.

### Figure h47 remedy

*Remove current Figure h47 and replace by the one below in the introductory text of section 15.4.2.5 (related to comments #161 of [2]).*

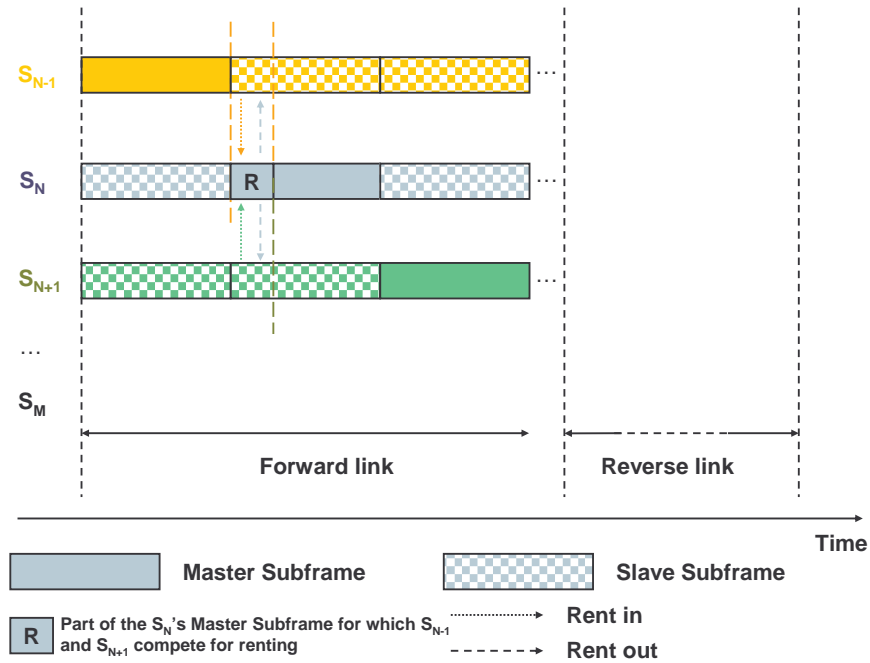
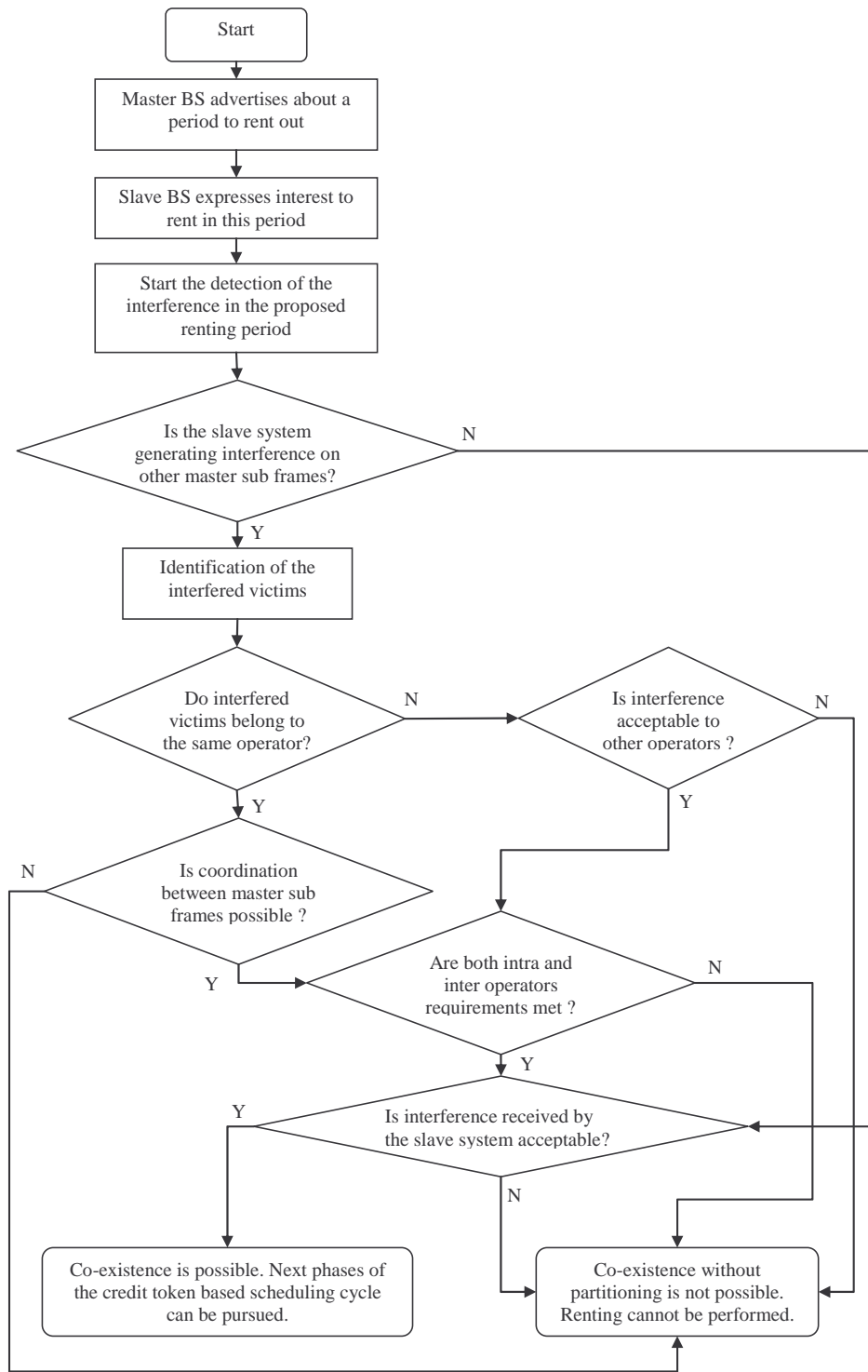


Figure h47 - Example of TDD based MAC frame sharing structure between M systems

**Figure h51 remedy**


*Remove current Figure h51 and replace by the one below in section 15.4.2.5.4 (related to comments #171 of [2]).*




**Figure h51-Process of co-existence conflicts identification**

## Legend remedy

*Remove current legend of section 15.4.2.5.6.1 by the one below (related to comments #174 of [2]).*

 Master cell (offeror)

 Slave cell (requestor)

 « Master » SS (SS belonging to the master cell)

 « Slave » SS (SS belonging to the slave cell)

## References

[1] IEEE 802.16h/D1: Part 16: Air Interface for Fixed Broadband Wireless Access Systems Amendment for Improved Coexistence Mechanisms for License-Exempt Operation; 2006-10-10

[2] IEEE 802.16 Working Group Letter Ballot #24 comments review, “LB24\_Grandblaise\_David.cmtb”, 2006-11-05