Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>	
Title	RS amble Rrepetition Rate	
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Re:	80216j-07_007r2: “Call for Technical Comments and Contributions regarding IEEE Project 802.16j”	
Abstract	This document specifies the RS amble repetition rate.	
Purpose	Text proposal for 802.16j Baseline Document	

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RS Amble Repetition Rate.

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Introduction

In order to provide proper time and frequency synchronization, and Cell ID information for the sub-ordinated Relay Stations attempting to enter the network through getting connected to a parent RS, a relay amble structure has to be defined. One of the parameters of this relay structure is its related repetition rate.

Details

The repetition rate of the relay amble has to comply with the following conditions:
The intended amble position is in the last symbol of the DL sub-frame.
The relay amble has to provide support for the time and frequency synchronization algorithms (implementation specific). The initial synchronization takes places on the access preamble while the RS' holding sync and AFC tracking logic rely on the repetition rate of the relay amble sequence.
The functionality of the Common Sync symbol as defined by [2], Section #8.4.6.1.1.1 has to be preserved
The BW throughput degradation due to relay amble repetition rate has to be minimized.

Conclusion

In order to comply with the above conditions, the relay amble shall be a repetitive structure, with a repetition rate of at least 1 out of 4 every frames. It is proposed that the text in the following section be included into the baseline document to specify this requirement.

Specific text changes

~~Add sub-clause #8.4.6.1.1.1~~ [Insert new subclause 8.4.6.1.1.3]

8.4.6.1.1.3~~1~~ Relay amble
The relay amble, if present, is a repetitive structure with a maximum repetition period~~rate~~ given by Equation xxx.

Max RelayAmbleRepetitionPeriod~~Rate~~ = 40 ms~~4 frames~~
Equation xxx

References

1. IEEE 802.16-2004 “IEEE Standard for Local and Metropolitan Area Networks – Part 16”
2. IEEE 802.16e-2005