|  |  |  |
| --- | --- | --- |
| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** | |
| Title | **Performance Projections for Sub-1.25 MHz Channels** | |
| Date Submitted | **2017-02-13** | |
| Source(s) | Doug Gray, EPRI | E-mail: dgray.tcs@gmail.com  \*<<http://standards.ieee.org/faqs/affiliationFAQ.html>> |
| Re: | IEEE 802.16s GRIDMAN Task Group | |
| Abstract | Provides an excel spreadsheet for evaluating throughput performance for channel bandwidths from 0.100 MHz to 1.200 MHz with parameters based on draft 802.16s amendment to IEEE Std 802.16-20xx. | |
| Purpose | This document is intended to facilitate further GRIDMAN Task Group discussions related to the proposed amendments to IEEE Std 802.16 in support of channel BWs less than 1.25 MHz and in particular the projections for throughput performance for small channel bandwidths. | |
| Notice | *This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups*. It represents only the views of the participants listed in the “Source(s)” field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who reserve(s) the right to add, amend or withdraw material contained herein. | |
| Copyright Policy | The contributors are familiar with the IEEE-SA Copyright Policy <http://standards.ieee.org/IPR/copyrightpolicy.html>. | |
| Patent Policy | The contributors are familiar with the IEEE-SA Patent Policy and Procedures:  <<http://standards.ieee.org/guides/bylaws/sect6-7.html#6>> and <<http://standards.ieee.org/guides/opman/sect6.html#6.3>>.  Further information is located at <<http://standards.ieee.org/board/pat/pat-material.html>> and <<http://standards.ieee.org/board/pat>>. | |

**Performance Projections for Sub-1.25 MHz Channels**

The following excel spreadsheet provides an assessment of the channel throughput performance for channel bandwidths below 1.25 MHz based on the proposed 802.16s amendment [1] to IEEE Std 802.16-20xx [2].

There are 3 worksheets. Worksheet 1 covers Channel Subgroup 4 for bandwidths from 1.20 MHz to 0.55 MHz and Worksheet 2 covers Channel Subgroups 3, 2, and 1 for channel bandwidths from 0.55 MHz to 0.10 MHz. Worksheet 3 provides an assessment of tradeoffs for different permutation choices for subgroups 3, 2, and 1.



References:

[1] P80216s\_D1

[2] P80216Rev4\_D0

[3] DCN 16-16-0059-00-000s Proposed MAC Layer Overhead Reduction Schemes <https://mentor.ieee.org/802.16/dcn/16/16-16-0059-00-000s-proposed-mac-layer-overhead-reduction-schemes.docx>

[4] DCN 16-16-0060-00-000s IEEE 802.16s Calculator for Proposed MAC Layer Overhead Reduction, Revision 0 <https://mentor.ieee.org/802.16/dcn/16/16-16-0060-00-000s-caculator-for-proposed-mac-layer-overhead-reduction-schemes.xlsx>

[5] DCN 16-16-0047-02-000s Benefits of Specific PHY Layer Parameters to Support 1MHz Channels <https://mentor.ieee.org/802.16/dcn/16/16-16-0047-02-000s-benefits-of-specific-phy-layer-parameters-to-support-1mhz-channels.docx>

[6] DCN 16-16-0037-03-000s Evaluation of Alternatives for 1 MHz Channels <https://mentor.ieee.org/802.16/dcn/16/16-16-0037-02-000s-evaluation-of-alternatives-for-1-mhz-channels.docx>