Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>	
Title	Editorial Changes of IEEE C802.16j-06/013 (Multi-hop System Evaluation Methodology)	
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Re:	Editorial changes on IEEE C802.16j-06/013	
Abstract	This document captures the editorial changes for the Multi-hop System Evaluation Methodology.	
Purpose	Editorial Corrections for IEEE C802.16j-06/013	
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Editorial Changes of IEEE C802.16j-06/013

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Nortel

1 Introduction

To the Editor: ~~xxxxx~~ is the text deletion, xxxxx is the text insertion

2 Detailed Editorial Changes

Page 2, Section 2
Delete
~~[Editor's note: adopt the modified IEEE802.16d SUI channel model as baseline [14], and open for further comparison with other models such as the path-loss models in [6]]~~

Page 3, Section 2.1.1.1
Delete
~~[Editor's note: The linkage with the path-loss models defined in and the usage models for the IEEE802.16j is FFS]~~

Page 3, Section 2.1.1
The Note column ;
Modified IEEE 802.16 Type A model
Modified IEEE 802.16 Type B model
Modified IEEE 802.16 Type C model

Page 3, Section 2.1.2.1
The modified IEEE 802.16 path-loss ~~and shadowing~~ model is recommended for these links where this is given in ~~by~~[~~14~~9]

Page 6, Section 2.1.2.4, Second sentence of second paragraph:
Consequently, the section 2.1.2.1 is a good model for this case, where all three categories (A, B, and C) are ~~now~~ applicable to cover different environments.

Page 8, Section 2.1.2.6 (second paragraph)
For this case an advanced LOS model is recommended. This is a two-slope model, where the breakpoint is dependant on the relay and MS antenna heights.

Page 9, Section 2.1.2.7 (second paragraph)
For this case, the model takes the minimum of an over-the-rooftop component and a round-the streets component. The round-the-streets component is based on a model by Berg, although this has been modified to be compatible with the advanced LOS model (see section 2.1.2.6), such that the visibility factor is included, and the effective road height to give the correct breakpoint in the first street section. The full model is shown below

Page 11, Section 2.1.2.7
For Type-F NLOS scenario the alternative path-loss model (for 5GHz) can be:

Page 12, Section 2.1.2.8
Delete
~~[Editor: The indoor model is FFS, the default model is shown in this section]~~

Page 12, Section 2.2.1.1
Delete
~~[Editor's note: The following informative text captures the advanced standard deviation correction factor for the lognormal shadowing]~~

Page 14, Section 2.2.2.2.2 (first paragraph)
For modelling the shadowing correlation between two BSs at a given MS location a model ~~based~~ is recommended based on one proposed ~~given~~ by Saunders.

Page 18, Section 3
Delete
~~[Editor's note: Full buffer is the baseline model, and needs to specify real-time traffic models. For this purpose, adopt [4] and use references]~~

Page 18, Section 3 (first paragraph)
This section describes the traffic models in detail. Section 3.1 addresses the DL and Section 3.2 the UL A major objective of multihop simulations is to provide the operator a view of the maximum number of ~~how many~~ active users that can be supported for a given service under a specified multihop configuration at a given coverage level. The traffic generated by a service should be accurately modeled in order to find out the performance of a system. This may be a time consuming exercise. Traffic modeling can be simplified, as explained below, by not modeling the user arrival process and/or assuming full queue traffic which is considered as the baseline. These two assumptions are further discussed proceeding paragraphs. Modeling non-full-queue traffic is also discussed in the next subsections. ~~explained below~~

Page 19, Section 3
Modeling of user arrival process: Typically, all the users are not active at a given time and even the active users ~~they~~ might not register for the same service. In order to avoid different user registration and demand models, the objective of the proposed simulation is restricted ~~made limited~~ to evaluate the performance with the users who are maintaining a session with transmission activity. These can be used to determine the number of such registered users that can be supported. This document does not address the arrival process of such registered users, i.e. it does not address the statistics of subscribers that register and become active.

Page 19, Section 3.1
The required traffic models are listed in Table 5.

Table 1: Services to be considered

#	Application	Traffic Category	Definition ~~Priority~~
1	Full buffer		Provided above and in Appendix C.2.1.
2	FTP	Best-effort / Non real-time	Provided in Appendix C.1.1 and C.2.2.
3	Web Browsing	Interactive	Provided in Appendix C.1.2 and C.2.3
4	VoIP	Real-time	Provided in Appendix C.3.1
5	Video Streaming	Streaming	Provided in Appendix C.3.2
6	Live Video	Interactive Real-time	TBD

Page 20 Section 4.1.1
Link budget evaluations is a well known method for initial system planning and this needs to be carried out for relay to base, relay to user and base to user links separately. Although a link budget can be calculated separately for each link, it is the combination of the links that determines the performance of the system as a whole.

Page 31, Section C.1.2.1
HTTP requests and TCP ACKs come under this category. It is not known, what percentage of traffic would be ~~ack~~ACKs and HTTP requests in a broadband systems. It is clear that the size of the access page increases with time, while ACK messages and HTTP requests may not be increased by that much. However there is no known models for those traffic types and the complete (UL and DL) messages may need to be implemented in the simulations to model those two traffic types, For simplicity, the HTTP requests and ACKs are neglected for the initial performance evaluations. ~~remains the same. Therefore, we can expect that in the future systems, the impact of AC K and HTTP requests will be negligible compared to size of the data contents~~.

Note to the editor: need to re-run the Figure caption and Table caption after implementation of above editorial changes