Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>
Title	**Text Modification for Draft 802.16m Evaluation Methodology Document: 4. Link-to-System Mapping**
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Source(s)	Hyunkyu Yu hk.yu@samsung.com, Jeongho Park jeongho.jh.park@samsung.com, Tang Yang y2006.tang@samsung.com, Jaeweon Cho jaeweon.cho@samsung.com, Hokyu Choi choihk@samsung.com Samsung Electronics
Re:	IEEE 802.16m-07/023– Call for Comments on Draft 802.16m Evaluation Methodology Document
Abstract	This contribution proposes to add the subsection to the Section '4.5. Per-tone SINR Computation' for supporting simulation assumptions in the Section 2.2.
Purpose	For discussion and approval by TGm
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Text Modification on Section 4 Link-to-System Mapping

Hyunkyu Yu, Jeongho Park, Tang Yang, Jaeweon Cho, and Hokyu Choi
Samsung Electronics

I. Introduction

This contribution provides text proposal for the Section 4 in the evaluation methodology document IEEE C802.16m-07/080r2.

In the Section 2.2 simulation assumptions, MRC is specified as the baseline receiver structure for the detection of MAP. The Section 4, however, does not include the per-tone SINR description for the MRC receiver.

Therefore, we propose to insert the subsection about the per-tone post processing SINR for SIMO with MRC in front of the Subsection 4.5.1.

II. Proposed Text for Section on *Per-tone SINR Computation*

---Start of the text---

[*Add the following text after the line#21 of the page62 in C802.16m-07/080r2*]

4.5.1. Per-tone Post Processing SINR for SIMO with MRC

In order to obtain the per tone post processing SINR for the SIMO with MRC, we consider a 1 transmit and N_R receive antennas system. The received signal at the *n*-th subcarrier in the *r*-th receive antenna is expressed as

$$Y_r^{(0)}(n)=\sqrt{P_{tx}^{(0)}P_{loss}^{(0)}}H_r^{(0)}(n)X^{(0)}(n)+\sum_{j=1}^{N_I}\sqrt{P_{tx}^{(j)}P_{loss}^{(j)}}G_r^{(j)}(n)X^{(j)}(n)+U_r^{(0)}(n)\,. \tag{x}$$

After MRC process, the post-processing SINR of the desired user for the *n*-th subcarrier is given as

$$SINR^{(0)}(n)=\frac{P_{tx}^{(0)}P_{loss}^{(0)}\left(\sum_{r=0}^{N_R-1}\left|H_r^{(0)}(n)\right|^2\right)^2}{\left(\sum_{r=0}^{N_R-1}\left|H_r^{(0)}(n)\right|^2\right)\sigma^2+\sum_{j=1}^{N_I}P_{tx}^{(j)}P_{loss}^{(j)}\left|\sum_{r=0}^{N_R-1}H_r^{(0)}(n)^*G_r^{(j)}(n)\right|^2}\,. \tag{y}$$

--End of the text--