Radiocommunication Study Groups

Revision 1 to
Document 5D/TEMP/219-E
17 June 2009
English only

Working Party 5D
(Sub-Working Group Evaluation)

CORRECTION OF TYPOGRAPHICAL ERRORS AND PROVISION OF MISSING TEXTS OF IMT-ADVANCED CHANNEL MODELS IN REPORT ITU-R M.2135

1 Introduction

IMT-Advanced channel models were agreed in the 3rd ITU-R Working Party 5D meeting in Seoul, Korea in October 2008, and approved in the ITU-R Study Group 5 meeting in Geneva in November 2008. The channel models were published in Report ITU-R M.2135 – Guidelines for evaluation of radio interface technologies for IMT-Advanced.

Two typographical errors are identified in the IMT-Advanced channel models part of Report ITU-R M.2135. The corrections are provided in Section 2 of this document.

It was also identified that some texts are missing in the IMT-Advanced channel models part of Report ITU-R M.2135. The missing texts are provided in Section 3 of this document.

All IMT-Advanced evaluation groups and candidate technology proponents are requested to take corrective action in their evaluations or self-evaluations by incorporating the corrections identified in sections 2 and 3 below.

2 Correction of typographical errors

In Report ITU-R M.2135, there are two typographical errors in Section 1.3.2.1 of Annex 1.

1) In step 6 (equation (11)), page 34, the per cluster shadowing term $Z_n \sim N(0, \zeta)$ is a typographical error. From the table on page 39 of M.2135, we can see ζ is the per cluster shadowing std, also known as standard deviation. Gaussian distribution is supposed to be expressed as $Z_n \sim N(0, \zeta^2)$, and ζ^2 is the variance. Therefore, $Z_n \sim N(0, \zeta)$ should be corrected as $Z_n \sim N(0, \zeta^2)$.

2) In step 7 (equation (17)), page 35, add component $Y_n \sim N(0, \sigma_\varphi/7)$ is a typographical error. It is the same case as the previous typographical error. Therefore, $Y_n \sim N(0, \sigma_\varphi/7)$ should be corrected as $Y_n \sim N(0, \sigma_\varphi^2/7^2)$.

3 Provision of missing texts

In Report ITU-R M.2135, Section 1.3.2.1 of Annex 1, page 34, step 6, the following texts should be added after (equation (12)) for clarification (for LoS case only).

In the case of LoS condition an additional specular component is added to the first cluster. Power of the single LoS ray is:

$$P_{1,LOS} = \frac{K_R}{K_R + 1}$$

and the cluster powers are not as in equation (12), but:

$$P_n = \frac{1}{K_R + 1} \frac{P'_n}{\sum_{n=1}^{N} P'_n} + \delta(n-1) P_{1,LOS}$$

where δ(.) is Dirac's delta function and K_R is the Ricean *K*-factor defined in Table A1-7 converted to linear scale. These power values are used *only* in equations (13) and (14) of ITU-R M.2135, but *not* in equation (20).

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