#### **RP-020297**

TSG RAN Meeting #16 Marco Island, FL, USA, 4 - 7 June 2002

# TitleCRs (Rel-4 and Rel-5 Category A) to TR 25.943SourceTSG RAN WG4Agenda Item7.4.4

RAN4 Tdoc	Spec	Curr Ver	New Ver	CR	R	Cat	Ph	Title	Acronym
R4-020785	25.943	4.1.0	4.2.0	2		F	Rel-4	Correction of error in Annex A	TEI4
R4-020786	25.943	5.0.1	5.1.0	3		Α	Rel-5	Correction of error in Annex A	TEI4

R4-020785

# 3GPP TSG RAN WG4 Meeting #23 Gyeongju, Korea 13th -17th May, 2002

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#### A.3 Reduced complexity models

It is possible to reduce the complexity of the COST 259 model by approximating the continuous distributions with a small number of cases, selected to be typical representations of the channel in common environments. We propose a set of models with fixed parameters as shown in Table A.3. The selected parameters correspond to the COST 207/GSM models with one important difference namely the delay spread value for the Typical Urban channel. This has been reduced to better correspond to typical measurement results.

A cluster in the models outlined here is represented by a number NP independent Rayleigh-fading paths with Classical Doppler spectrum, randomly distributed in the interval [ $\tau i$ ,  $\tau i + k \cdot \sigma \tau$ ,i]. Preliminary assignments are NP = 20 and k = 4.

The fast fading (property 3 in Table A.2) should be included in the model as a Doppler frequency

Environment	Channel shape	Channel parameters	
Typical Urban	One exponential cluster consisting of NP Rayleigh- fading paths	NC = 1 P1 = 1 $\tau 1 = 0 \ \mu s$ $\sigma \tau, 1 = 0.5 \ \mu s$	
Rural Area	One exponential cluster consisting of NP-1Rayleigh- fading paths and 1 non-fading path.	NC = 1 P1 = 1 $\tau 1 = 0 \ \mu s$ $\sigma \tau, 1 = \frac{0.4 \ 0.14}{\mu s} \ Add one deterministic (non-fading) path with: fD = 0.7 fMax P2 = 0.43 \tau 2 = 0in order to get Ricean fading$	
Hilly Terrain	Two exponential clusters each consisting of NP/2 Rayleigh- fading paths each	NC = 2 P1 = 1 $\tau 1 = 0 \ \mu s$ $\sigma \tau, 1 = 0.29 \ \mu s$ P2 = 0.04 $\tau 2 = 15 \ \mu s$ $\sigma \tau, 2 = 1 \ \mu s$	

 Table A.3: Reduced complexity channel model parameters

R4-020786

# 3GPP TSG RAN WG4 Meeting #23 Gyeongju, Korea 13th -17th May, 2002

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