TSG R4-(99)281

Agenda Item: 8.2

Source: Telia, T-Mobil

Title: UE Handheld Antenna Efficiency Performance in 25.101/104

Document for: Discussion & Decision

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1. INTRODUCTION

UE handheld antenna efficiency in scattered field can vary substantially between different models on the market as measured on GSM 900 & GSM 1800 with link budget losses between 3 dB and 18 dB.

2. BACKGROUND

UE handheld antenna efficiency in scattered field defined by "Antenna/Body Loss" = -MEG in dBi, where MEG = "Mean Effective Gain" being the antenna gain in scattered (multipath) environment, is typically used in RF link budgets representing the coverage range. The UE "Effective Isotropically Radiated Power" = EIRP = Pout + MEG, where Pout = UE output power on the antenna port. [1], [2]

3. SUGGESTION

Add 2 identical notes in paragraphs 6.1 and 7.1 of 25.101 (and 25.104):

"Note: The UE antenna performance has a significant impact on system performance, and minimum requirements on the antenna are therefore intended to be included in a future version of this specification, once a test method has been agreed.

Work in this area is ongoing in COST 259 and scheduled for completion by end 2000."

4. OBSERVATION

25.101 Clause 6.2.1 Note 3 puts a requirement on the EIRP for some UE. How can RAN accept this requirement, if no test method on the antenna is acceptable?

REFERENCES

[1] R4-99193: Basic requirements for "Test Methods for Handheld Antennas"

[2] R4-99194: Description of Antenna Test Method Performed in Scattered Field for GSM MS