3GPP TSG GERAN Meeting #23 **GP-050284**
Tampa, FL, USA January 24-28, 2005 **A.I.: 7.1.5.8**

Title:	**Proposed Work Item: MS Antenna Performance Evaluation Method and Requirements**
Agenda:	
Source:	TeliaSonera, T-Mobile, Ericsson, Motorola, Orange, Siemens, Nokia

---

At RAN WG4#33 it was reported that COST273 SWG2.2 has finalized the specification of a method for measurement of radiated output power and radiated sensitivity. The method developed is applicable both to 3G UE, 2G MS, as well as dual-mode 2G/3G MS/UE antennas for the "speech mode" (MS/UE close to the head). The specification of the method was presented to RAN WG4#33. It was noted that future envisaged steps will cover the "data mode" and diversity antenna MS/UE, though it was currently unclear which body would undertake this work [R4-040612].

MS/UE antenna performance has a critical impact on coverage and capacity. To enable for operators to plan their networks in a systematic manner, ensuring a certain coverage and QoS for their customers, a method for MS/UE antenna performance evaluation and MS/UE antenna minimal performance requirements are needed [R4-030546, R4-030994].

At the RAN plenary #26 a new WI “UE Antenna Performance Evaluation Method and Requirements” was approved to include the COST273 SWG2.2 antenna performance evaluation method into the 3GPP specifications and to set minimal requirements for the UE antenna performance [RP-040521].

As there is sufficient commonality in the 2G and 3G measurements a single TR[25.9XX] will describe the test method with RAN4 as leading group by urgency. This would be especially useful if we want to describe the 2G/3G terminal testing.

Here, a new work item “MS Antenna Performance Evaluation Method and Requirements” is proposed for the inclusion of an MS antenna performance evaluation method and for the inclusion of minimal requirements for MS antenna performance in the 3GPP specifications. A work item description proposed for approval by the GERAN plenary is enclosed below.

Work Item Description

Title: **MS Antenna Performance Evaluation Method and Requirements**

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

RAN WI: **"**UE antenna performance evaluation method and minimal requirements**"** [RP-040521].

3 Justification

The MS antenna performance has critical impact on both system performance (throughput) and coverage. In order to ensure a certain level of coverage and QoS for the user, minimal requirements for MS antenna performance are necessary.

4 Objective

The aim of this work item is to define MS antenna minimal performance requirements, taking into account the feasibility of a variety of terminal types, based on an MS antenna performance evaluation method being specified in 3GPP RAN4.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects:	UICC apps	ME	AN	CN	Others
Yes		X			
No	X		X	X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
25.9XX	User Equipment (UE) Antenna Performance Evaluation Method	RAN4	GERAN		RAN#29, GERAN #27	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
45.005		Radio transmission and reception	GERAN#27	The equivalent performance requirements for UMTS FDD and TDD terminals are expected to be in 25.101 (FDD) and 25.102 (TDD)

11 Work item rapporteurs

Ulf Tegth
Ulf.Tegth@teliasonera.com

12 Work item leadership

TSG-GERAN WG1

13 Supporting Companies

TeliaSonera, T-Mobile, Ericsson, Motorola, Orange, Siemens, Nokia

14 Classification of the WI (if known)

	Feature (go to 14a)
	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

n/a

14b The WI is a Building Block: parent Feature

n/a

14c The WI is a Work Task: parent Building Block

n/a

3GPP TSG RAN Meeting #27 RP-050032
Tokyo, Japan, 9 - 11 March 2005

3GPP TSG GERAN **TDoc GP-050541**
Meeting no 23
Tampa, FL, USA
January 24-28 2004

Title: LS on Antenna Performance Evaluation Method and Requirements

Source: 3GPP TSG GERAN
To: 3GPP RAN4
Cc: 3GPP RAN

Contact Person:

Name: Ulf Tegth
Tel. Number: +46 70 591 04 45
E-mail Address: Ulf.Tegth@teliasonera.com

---

1. Overall Description:

GERAN has received information regarding the new approved RAN#26 WI: “UE Antenna Performance Evaluation Method and Requirements [RP-040521].

GERAN has started studies on the same subject and approved a new GERAN WI: “MS Antenna Performance Evaluation Method and Requirements” [GP-050284].

As there is sufficient commonality in the 2G and 3G measurements based on the finalized COST273 SWG2.2 specification, GERAN intends to use the RAN4 TR[25.9XX] to describe the test method defined within RAN4. This would be especially useful if a description of the 2G/3G terminal testing is wanted [RP-040612].

The performance specifications are still dedicated to RAN4 (TS25.101 & TS25.102) and GERAN (TS45.005), where a way ahead for 2G/3G terminals will be needed.

2. Actions:

To RAN4

ACTION:

GERAN kindly asks RAN4 to note these commonalities, and asks RAN4 to apply a wording in the TR that allows GERAN to also use it. GERAN would appreciate to be kept informed of the progress, and requests secondary responsibility for the TR.

3. Date of Next TSG-GERAN Meetings:

TSG-GERAN # 24	4th – 8th April 2004	Dublin, Ireland