TSG-RAN Meeting #14 ***RP-010834***
Kyoto, Japan, 11 – 14 December 2001

Title:	**Proposed Work item "Interface to control electrical tilting of antennas"**
Source:	Mannesmann Mobilfunk GmbH, Omnitel-Vodafone, Deutsche Telekom MobilNet, Eplus, Vodafone Group, Telecom Italia
To:	TSG RAN
Document for:	Approval, Agenda item 9.9
Contact person:	Dr. Volker Hoehn E-mail: volker.hoehn@d2vodafone.de Tel: +49 211 533 3637

In the present UMTS Radio Access Network antennas with variable electrical tilting are needed to adjust the coverage area including soft handover areas. Due to the interference limited property of the UMTS Radio Access Technology it is essential for optimising and operating the UMTS network.
Current solutions would lead to costly site visits and antenna climbing.
Current solutions available or in development are proprietary and will lead to incompatibility problems or cumbersome work-around solutions.
To reduce the costs and to speed up the optimisation of the network an remote adjustance of the antenna tilt is essential.
A new interface is needed to be specified to ensure vendor independency and to minimise cost.
The requirements from an interface between Antenna and node B should be identified and a viable solution should be assessed to be specified for UTRAN, including

- Protocol aspects and signalling
- Possible interface impacts
- Operation and Maintenance impacts
- Minimising costs
- Vendor independency.

A solution should be found to reduce the costs and speed up the optimisation of the network by avoiding costly site visits and antenna climbings.
In order to identify the requirements and potential solutions a work item is proposed on considering an Interface to control electrical tilting of antennas. The work should focus on the protocol aspects of this interface.
The work item description is attached to be approved by TSG RAN.

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Work Item Description

Title

Interface to control electrical tilting of antennas

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None identified

3 Justification

In the present UTRAN antennas with variable electrical tilting are needed to adjust the coverage area including soft handover areas. Due to the interference limited property of the UMTS Radio Access Technology it is essential for optimising and operating the UMTS network.
Current solutions would lead to costly site visits and antenna climbing. Current solutions available or in development are proprietary and will lead to incompatibility problems or cumbersome work-around solutions.

4 Objective

The requirements from an interface between Antenna and node B should be identified and a viable solution should be assessed to be specified for UTRAN, including

- Protocol aspects and signalling
- Possible interface impacts
- Operation and Maintenance impacts
- Minimising costs
- Vendor independency.

A solution should be found to reduce the costs and speed up the optimisation of the network by saving costly site visits and antenna climbings.
The work should only cover the protocol aspects of this interface in order to allow maximum multi-vendor flexibility.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes			X		X
No	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
TBD	Interface to control electrical tilting of antennas	RAN3	RAN4 SA5	RAN #15	RAN #16	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments

11 Work item rapporteur

(Tim Frost)

12 Work item leadership

TSG-RAN WG3

13 Supporting Companies

Mannesmann Mobilfunk, Omnitel-Vodafone, Deutsche Telecom MobilNet, Eplus, Vodafone Group, Telecom Italia

14 Classification of the WI (if known)

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

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

(list of Work Items identified as building blocks)

14b The WI is a Building Block: Parent Feature: RAN Improvement

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

(one Work Item identified as a building block)