

Title:	TP to TR on altering item 7.2 title and allocation
Source:	Motorola Mobility
Agenda Item:	6.14
Work Item:	Verification of radiated multi-antenna reception performance of UEs in LTE/UMTS
Release:	11
Document for:	Approval
Abstract:	This contribution suggests a change on TR 37.977 v.3.0, item 7.2

1 Introduction

The text on sub-item 7.2 “Antenna Array Configuration” was introduced in RAN4 #62 bis (R4-122097, Spirent) with purpose of normalize the emulation of Base Station antenna arrays among different channel emulator manufacturers. Therefore minimizing the variability in the test measurement environment.

2 Discussion

Currently the TR 37.977 v0.3.0. brings on item 7.2 the definitions on “Antenna Array Configuration”. Following the text itemization; item 7 “Base Station Configuration” as is; it seems that this specification is related to the physical implementation of the Base Station antennas in the OTA test method, instead this sub-item is strictly related to the implementation of the Base Station antennas radiation pattern within the channel emulation domain.

3 Proposal

To clarify the TR text and avoid any future misinterpretation is suggested to change the sub-item from 7.2 “Antenna Array Configuration”, to sub-item 8.5 proper allocating it on session 8 “Channel Models”, and re-naming it to “Channel Model Emulation of the Base Station Antenna Pattern Configuration”. Therefore clarifying the TR 37.977 text related to this subject.

<Text Proposal for TR 37.977 v0.3.0 sub-item 7.2>

<Start of TP>

<Unchanged content omitted>

~~7.2 Antenna Array Configuration~~

8.5 Channel Model Emulation of the Base Station Antenna
Pattern Configuration

<Editor: To include the agreed X-polarized method. Any additional approach would need to be clearly specified.>

The emulated base station antennas shall be assumed to be dual polarized equal power elements that are uncorrelated with a fixed 0λ separation, 45 degrees slanted.

The slant 45 degree antenna is an “X” configuration and is modelled as an ideal dipole with isotropic gain and subject to a foreshortening of the slanted radiating element, which is observed to vary as a function of the path angle of departure. This foreshortening with AoD is a typical slanted dipole behaviour and is a source of power variation in the channel model. The effective antenna pattern for this antenna is illustrated in Figure 7.2-4 8.5-1.

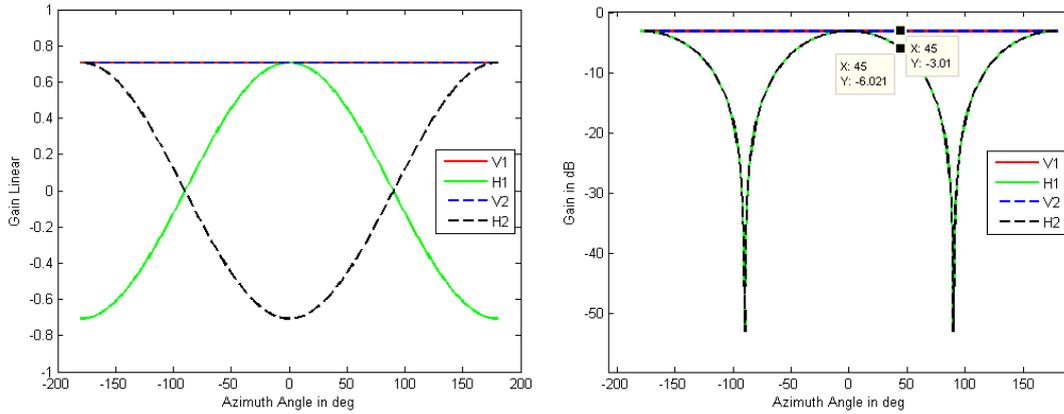


Figure 7.2-4 8.5-1, X antenna gain assumption (a) Linear gain (b) dB gain

<End of TP>