

TSG RAN Meeting #19
Birmingham, United Kingdom, 11 - 14 March, 2003

RP-030045

Title CRs (Rel-5) to TS 25.105, TS 25.142 & TR 25.952 on "The definition of UTRA TDD BS classes"
Source TSG RAN WG4
Agenda Item 8.4.5

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020298	25.105	150		F	Rel-5	5.3.0	The definition of UTRA-TDD BS classes	RInImp-BSCClass-TDD
R4-020300	25.142	166		F	Rel-5	5.3.0	The definition of UTRA-TDD BS classes	RInImp-BSCClass-TDD
R4-020301	25.952	002		F	Rel-5	5.1.0	The definition of UTRA-TDD BS classes	BSCClass-TDD

Madrid, Spain 17 - 22 February, 2003

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CHANGE REQUEST

⌘ **25.105** CR **150** ⌘ rev **5.3.0** ⌘ Current version: **5.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ The definition of UTRA-TDD BS classes		
Source:	⌘ RAN WG4		
Work item code:	⌘ RInImp-BSCClass-TDD	Date:	⌘ 05/03/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2 (GSM Phase 2)	
	A (corresponds to a correction in an earlier release)	R96 (Release 1996)	
	B (addition of feature),	R97 (Release 1997)	
	C (functional modification of feature)	R98 (Release 1998)	
	D (editorial modification)	R99 (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ The definitions of TDD BS classes are not appropriate.
Summary of change:	⌘ Correct the definitions of TDD BS classes in the similar way as for FDD BS classes in order to reflect correctly the performance requirements derivation for different BS classes.
Consequences if not approved:	⌘ The definitions of TDD BS classes are not appropriate and inconsistent with the definitions of FDD BS classes.
	Isolated Impact Analysis: The proposed clarification and correction change has no impact on NodeB performance.

Clauses affected:	⌘ 4.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table>	Y	N	X		X		X		Other core specifications	⌘ TS25.142
Y	N										
X											
X											
X											
		Test specifications									
		O&M Specifications									
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.2 Base station classes

The requirements in this specification apply to both Wide Area Base Stations and Local Area Base Stations in coordinated network operation, unless otherwise stated.

Wide Area Base Stations are characterised by requirements derived from Macro Cell and Micro Cell scenarios with a based-on BS to UE coupling losses equals to or higher than 53 53 70 dB and 53 dB. The Wide Area Base Station has the same requirements as the base station for General Purpose application in Release 99 for 3.84 Mcps option, and in Release 4 for both 3.84 Mcps and 1.28 Mcps option.

Local Area Base Stations are characterised by requirements derived from from Micro Cell and Pico Cell scenarios with a based-on BS to UE coupling losses equals to less than 53 45 dB.

Madrid, Spain 17 - 22 February, 2003

CR-Form-v7

CHANGE REQUEST⌘ **25.142** **CR** **166** ⌘ rev ⌘ Current version: **5.3.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ⌘ ME ⌘ Radio Access Network Core Network ⌘

Title:	⌘ The definition of UTRA-TDD BS classes		
Source:	⌘ RAN WG4		
Work item code:	⌘ RInImp-BSCClass-TDD	Date:	⌘ 05/03/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
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	C (functional modification of feature)		R98 (Release 1998)
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			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ The definitions of TDD BS classes are not appropriate.
Summary of change:	⌘ Correct the definitions of TDD BS classes in the similar way as for FDD BS classes in order to reflect correctly the performance requirements derivation for different BS classes.
Consequences if not approved:	⌘ The definitions of TDD BS classes are not appropriate and inconsistent with the definitions of FDD BS classes. Isolated Impact Analysis: The proposed clarification and correction change has no impact on NodeB performance.

Clauses affected:	⌘ 5.1								
Other specs affected:	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications ⌘ TS25.104 Test specifications O&M Specifications	Y	N	X			X		X
Y	N								
X									
	X								
	X								
Other comments:	⌘								

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5.1 Base station classes

5.1.1 Applicability of requirements and BS class definition

The requirements in this specification apply to both Wide Area base stations and Local Area base stations in coordinated network operation, unless otherwise stated.

Wide Area BS are characterised by requirements derived from Macro Cell and Micro Cell scenarios with a based-on BS to UE coupling losses equals to ~~or higher than 53~~ 70 dB and 53 dB. The Wide Area Base Station has the same requirements as the base station for General Purpose application in Release 99 for 3.84 Mcps option, and in release 4 for both 3.84 Mcps and 1.28 Mcps option.

Local Area BS are characterised by requirements derived from ~~Micro Cell and Pico Cell~~ scenarios with a based-on BS to UE coupling losses equals to ~~less than 53~~ 45 dB.

5.1.2 Manufacturer's declaration

The manufacturer shall declare the intended class of the BS under test.

Madrid, Spain 17 - 22 February, 2003

CR-Form-v7

CHANGE REQUEST⌘ **25.952** CR **002** ⌘ rev ⌘ Current version: **5.1.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ The definition of UTRA-TDD BS classes		
Source:	⌘ RAN WG4		
Work item code:	⌘ BSCClass-TDD	Date:	⌘ 05/03/2003
Category:	⌘ F	Release:	⌘ Rel-5
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	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ The definitions of TDD BS classes are not appropriate.
Summary of change:	⌘ Correct the definitions of TDD BS classes in the similar way as for FDD BS classes in order to reflect correctly the performance requirements derivation for different BS classes.
Consequences if not approved:	⌘ The definitions of TDD BS classes are not appropriate and inconsistent with the definitions of FDD BS classes.
	Isolated Impact Analysis: The proposed clarification change has no impact on NodeB performance.

Clauses affected:	⌘ 6.1, 7.1.1										
Other specs affected:	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> </table>	Y	N	X		X			X	Other core specifications	⌘ TS25.105
Y	N										
X											
X											
	X										
		Test specifications	TS25.142								
		O&M Specifications									
Other comments:	⌘										

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6.1 Base station class criteria

Different sets of requirements are derived from calculations based on Minimum Coupling Loss between BS and UE. Each set of requirements corresponds to a base station class used as criteria for classification. Two classes are defined: Wide Area BS class and Local Area BS class.

Wide Area BS class assumes relatively high MCL, as is typically found in outdoor macro and outdoor micro environments, where the BS antennas are located off masts, roof tops or high above street level. Existing requirements are used, as they are in [1], for the Wide Area BS class. Requirements have been derived assuming 53 dB and 70dB MCL for micro and macro scenarios, respectively.

Local Area BS class assumes relatively low MCL, as is typically found ~~in indoor~~ [Pico Cells](#) (offices, subway stations etc) where antennas are located on the ceilings or walls or possibly built-in in the BS on the wall. Low-CL can also be found outdoors on hot spot areas like market place, high street or railway station. New requirements, as defined in this TR, are set for the Local Area BS class. Requirements have been derived assuming ~~450~~[45](#)dB [BS to UE](#) MCL.

7.1.1 New text for base station classes

The requirements in this specification apply to both Wide Area Base Stations and Local Area Base Stations, unless otherwise stated.

Wide Area Base Stations are characterised by requirements ~~derived from Macro Cell and Micro Cell scenarios with a based-on~~ BS to UE coupling losses ~~es equals to or higher than 53~~ [70 dB and 53 dB](#). [The Wide Area Base Station has the same requirements as the base station for General Purpose application in Release 99 for 3.84 Mcps option, and in release 4 for both 3.84 Mcps and 1.28 Mcps option.](#)

Local Area Base Stations are characterised by requirements ~~derived from Micro-Cell and Pico Cell scenarios with a based-on~~ BS to UE coupling losses ~~es equals to less than 53~~ [45](#) dB.