TSG RAN Meeting #19 **RP-030167**
Birmingham, UK, 11 - 14 March 2003

Title **Revised CRs (R'99 and Rel4/Rel5 category A) to TS 25.101 on "Variable TX/RX frequency separation”**
Source **Ericsson**
Agenda Item **8.2.6**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
-	25.101	207	2	F	R99	3.12.0	Variable Tx/Rx frequency separation in the 1800 and 1900 bands	TEI
-	25.101	208	2	A	Rel-4	4.6.0	Variable Tx/Rx frequency separation in the 1800 and 1900 bands	TEI
-	25.101	209	2	A	Rel-5	5.5.0	Variable Tx/Rx frequency separation in the 1800 and 1900 bands	TEI

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CHANGE REQUEST

⌘ **25.101** **CR** **207** ⌘**rev** **2** ⌘ Current version: **3.12.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Variable Tx/Rx frequency separation in the 1800 and 1900 bands
Source:	⌘	Ericsson
Work item code:	⌘	***Date:*** ⌘ 10/03/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Currently in the 3GPP specs there is intended support of variable Tx/Rx frequency separation. However, this support that was introduced for 2100 MHz in R99 have not been correctly enhanced for later introduced 1800 and 1900 bands. Clarification will be needed also in TS 25.331.
Summary of change:	⌘	The table in clause 5.3 is extended to also include the ranges of optional Tx/Rx frequency separations.
Consequences if not approved:	⌘	There would be no support of Variable Tx/Rx frequency separation for band "(b)" (Rel-5 Band II). **Isolated Impact Analysis:** For band (a) the change is a clarification with no real impact. For band (b) the change enables support of a feature not correctly described before and which therefore could not be implemented up to this point.

Clauses affected:	⌘	2, 5.3			
Other specs affected:	⌘	**Y** / **N**			
		X /	Other core specifications	⌘	25.331
		X /	Test specifications		34.121
		/ **X**	O&M Specifications		
Other comments:	⌘				

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] (void)

[2] ITU-R Recommendation SM.329-8: "Spurious emissions".

[3] (void)

[4] 3GPP TS 25.433: "UTRAN Iub Interface NBAP Signalling".

[5] ETSI ETR 273: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement of radiated methods of measurement (using test sites) and evaluation of the corresponding measurement uncertainties; Part 1: Uncertainties in the measurement of mobile radio equipment characteristics; Sub-part 2: Examples and annexes".

[6] (void)

[7] 3GPP TS 25.331, "Radio Resource Control (RRC); Protocol Specification"

5.3 TX–RX frequency separation

(a) UTRA/FDD can support both fixed and variable transmit to receive frequency separation. ~~UTRA/FDD is designed to operate with the following TX–RX frequency separation~~

~~**Table 5.0: TX-RX frequency separation**~~

~~Frequency Band~~	~~TX-RX frequency separation~~
~~For operation in frequency band as defined in subclause 5.2 (a)~~	~~190 MHz~~
~~For operation in frequency band as defined in subclause 5.2 (b)~~	~~80 MHz.~~

(b) ~~UTRA/FDD can support both fixed and variable transmit to receive frequency separation.~~ The transmit to receive frequency separation is included in TS 25.331 [7] as a part of "RF capability FDD" and is either "Default", "Medium variable" or "Full variable". The corresponding ranges of Tx-Rx separation in Table 5.0 shall be supported by the UE.

Table 5.0: TX-RX frequency separation

Operating Band	Tx/Rx frequency separation ("RF capability FDD" [7])		
	Default	Medium Variable	Full Variable
For operation in frequency band as defined in subclause 5.2 (a)	190 MHz	174.8 – 205.2 MHz	134.8 – 245.2 MHz
For operation in frequency band as defined in subclause 5.2 (b)	80 MHz	64.8 – 95.2 MHz	24.8 – 135.2 MHz

(c) The use of other transmit to receive frequency separations in existing or other frequency bands shall not be precluded.

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CHANGE REQUEST

⌘ **25.101** **CR** **208** ⌘**rev** **2** ⌘ Current version: **4.6.0** ⌘

*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:	⌘	Variable Tx/Rx frequency separation in the 1800 and 1900 bands
Source:	⌘	Ericsson
Work item code:	⌘	***Date:*** ⌘ 10/03/2003
Category:	⌘	**A** ***Release:*** ⌘ Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Currently in the 3GPP specs there is intended support of variable Tx/Rx frequency separation. However, this support that was introduced for 2100 MHz in R99 have not been correctly enhanced for later introduced 1800 and 1900 bands. Clarification will be needed also in TS 25.331.
Summary of change:	⌘	The table in clause 5.3 is extended to also include the ranges of optional Tx/Rx frequency separations.
Consequences if not approved:	⌘	There would be no support of Variable Tx/Rx frequency separation for band "(b)" (Rel-5 Band II). **Isolated Impact Analysis:** For band (a) the change is a clarification with no real impact. For band (b) the change enables support of a feature not correctly described before and which therefore could not be implemented up to this point.

Clauses affected:	⌘	2, 5.3			
Other specs affected:	⌘	**Y** / **N**		⌘	
		X /	Other core specifications		25.331
		X /	Test specifications		34.121
		/ **X**	O&M Specifications		
Other comments:	⌘				

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[1] (void)

[2] ITU-R Recommendation SM.329-8: "Spurious emissions".

[3] (void)

[4] 3GPP TS 25.433: "UTRAN Iub Interface NBAP Signalling".

[5] ETSI ETR 273: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement of radiated methods of measurement (using test sites) and evaluation of the corresponding measurement uncertainties; Part 1: Uncertainties in the measurement of mobile radio equipment characteristics; Sub-part 2: Examples and annexes".

[6] (void)

[7] 3GPP TS 25.331, "Radio Resource Control (RRC); Protocol Specification"

5.3 TX–RX frequency separation

(a) UTRA/FDD can support both fixed and variable transmit to receive frequency separation. ~~UTRA/FDD is designed to operate with the following TX–RX frequency separation~~

~~**Table 5.0: TX-RX frequency separation**~~

~~Frequency Band~~	~~TX-RX frequency separation~~
~~For operation in frequency band as defined in subclause 5.2 (a)~~	~~190 MHz~~
~~For operation in frequency band as defined in subclause 5.2 (b)~~	~~80 MHz.~~

(b) ~~UTRA/FDD can support both fixed and variable transmit to receive frequency separation.~~ The transmit to receive frequency separation is included in TS 25.331 [7] as a part of "RF capability FDD" and is either "Default", "Medium variable" or "Full variable". The corresponding ranges of Tx-Rx separation in Table 5.0 shall be supported by the UE.

Table 5.0: TX-RX frequency separation

Operating Band	Tx/Rx frequency separation ("RF capability FDD" [7])		
	Default	Medium Variable	Full Variable
For operation in frequency band as defined in subclause 5.2 (a)	190 MHz	174.8 – 205.2 MHz	134.8 – 245.2 MHz
For operation in frequency band as defined in subclause 5.2 (b)	80 MHz	64.8 – 95.2 MHz	24.8 – 135.2 MHz

(c) The use of other transmit to receive frequency separations in existing or other frequency bands shall not be precluded.

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CHANGE REQUEST

⌘ **25.101** **CR** **209** ⌘**rev** **2** ⌘ Current version: **5.5.0** ⌘

*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:	⌘	Variable Tx/Rx frequency separation in the 1800 and 1900 bands
Source:	⌘	Ericsson
Work item code:	⌘	***Date:*** ⌘ 11/02/2003
Category:	⌘	**A** ***Release:*** ⌘ Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Currently in the 3GPP specs there is intended support of variable Tx/Rx frequency separation. However, this support that was introduced for 2100 MHz in R99 have not been correctly enhanced for later introduced 1800 and 1900 bands. Clarification will be needed also in TS 25.331.
Summary of change:	⌘	The table in clause 5.3 is extended to also include the ranges of optional Tx/Rx frequency separations.
Consequences if not approved:	⌘	There would be no support of Variable Tx/Rx frequency separation for Band II or Band III.

Clauses affected:	⌘	2, 5.3

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		25.331
		X		Test specifications		34.121
			X	O&M Specifications		

Other comments:	⌘	

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The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

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[1] (void)

[2] ITU-R Recommendation SM.329-9: "Spurious emissions".

[3] (void)

[4] 3GPP TS 25.433: "UTRAN Iub Interface NBAP Signalling".

[5] ETSI ETR 273: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement of radiated methods of measurement (using test sites) and evaluation of the corresponding measurement uncertainties; Part 1: Uncertainties in the measurement of mobile radio equipment characteristics; Sub-part 2: Examples and annexes".

[6] 3GPP TS 45.004: "Digital cellular telecommunications system (Phase 2+); Modulation".

[7] 3GPP TS 25.331, "Radio Resource Control (RRC); Protocol Specification"

5.3 TX–RX frequency separation

a) UTRA/FDD can support both fixed and variable transmit to receive frequency separation. ~~UTRA/FDD is designed to operate with the following TX-RX frequency separation~~

~~**Table 5.0A: TX-RX frequency separation**~~

~~Operating Band~~	~~TX-RX frequency separation~~
~~I~~	~~190 MHz~~
~~II~~	~~80 MHz.~~
~~III~~	~~95 MHz.~~

b) ~~UTRA/FDD can support both fixed and variable transmit to receive frequency separation.~~ The transmit to receive frequency separation is included in TS 25.331 [7] as a part of "RF capability FDD" and is either "Default", "Medium variable" or "Full variable". The corresponding ranges of Tx-Rx separation in Table 5.0A shall be supported by the UE.

Table 5.0A: TX-RX frequency separation

Operating Band	Tx/Rx frequency separation ("RF capability FDD" [7])		
	Default	Medium Variable	Full Variable
I	190 MHz	174.8 – 205.2 MHz	134.8 – 245.2 MHz
II	80 MHz	64.8 – 95.2 MHz	24.8 – 135.2 MHz
III	95 MHz	79.8 – 110.2 MHz	24.8 – 165.2 MHz

c) The use of other transmit to receive frequency separations in existing or other frequency bands shall not be precluded.