TSG RAN Meeting #22 **RP-030593**
Maui, Hawaii, US, 9 - 12 December 2003

Title **CRs (Rel-4 and Rel-5 Category A) to TS 25.106 & TS 25.143 (Repeaters specifications), "Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement"**
Source **TSG RAN WG4**
Agenda Item **7.5.4**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-031097	25.106	028	1	F	Rel-4	4.6.0	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement	RInImp-REP
R4-031098	25.106	029	1	A	Rel-5	5.6.0	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement	RInImp-REP
R4-031099	25.143	039	1	F	Rel-4	4.8.0	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement	RInImp-REP
R4-031100	25.143	040	1	A	Rel-5	5.6.0	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement	RInImp-REP

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031097**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.106** **CR** **028** ⌘ **rev** **1** ⌘ 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:	⌘	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement
Source:	⌘	RAN WG4
Work item code:	⌘	RInImp-REP
Date:	⌘	26/11/2003
Category:	⌘	**F**
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:	⌘	A spurious emission requirement was missing for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Summary of change:	⌘	A spurious emission requirement was added for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Consequences if not approved:	⌘	Requirements for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS is missing.. **Isolated Impact Analysis:** UTRA FDD network performance could be affected by to high FDD Spurious Emission, if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.
Clauses affected:	⌘	9.2.2.1

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	TS25.143
	X		Test specifications	
		X	O&M Specifications	

Other comments: ⌘ Equivalent CRs in other Releases: CR029r1 cat. A to 25.106 v5.6.0

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:

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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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.

9.2.2 Co-existence with UTRA-FDD BS

9.2.2.1 Operation in the same geographic area

This requirement shall be applied for the protection of UTRA-FDD BS receivers in geographic areas in which UTRA FDD Repeater and UTRA FDD BS are deployed. ~~The requirement applies only to the down link direction of the Repeater.~~

9.2.2.1.1 Minimum Requirement

In the down link direction of the Repeater t~~T~~he power of any spurious emission shall not exceed:

Table 9.7A: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the down link direction of the Repeater

Band	Maximum Level	Measurement Bandwidth	Note
1920 - 1980MHz For operation in Frequency Bands defined in sub-clause 5.1(a)	-96 dBm	100 kHz	
1850 - 1910 MHz For operation in Frequency Bands defined in sub-clause 5.1 (b)	-96 dBm	100 kHz	

In the up link direction of the Repeater the power of any spurious emission shall not exceed:

Table 9.7B: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the up link direction of the Repeater

Band	Maximum Level	Measurement Bandwidth	Note
1920 - 1980MHz For operation in Frequency Bands defined in sub-clause 5.1(a)	-53 dBm	100 kHz	
1850 - 1910 MHz For operation in Frequency Bands defined in sub-clause 5.1 (b)	-53 dBm	100 kHz	

NOTE 1: These requirements in Table 9.7B for the up link direction of the Repeater reflect what can be achieved with present state of the art technology and are based on a coupling loss of 73 dB between a Repeater and a UTRA FDD BS receiver.

NOTE 2: The requirements shall be reconsidered when the state of the art technology progresses.

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031098**

San Diego, USA 17 - 21 November 2003

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CHANGE REQUEST

⌘ **25.106** **CR** **029** ⌘ **rev** **1** ⌘ Current version: **5.6.0** ⌘

*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:	⌘	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement
Source:	⌘	RAN WG4
Work item code:	⌘	RInImp-REP
Date:	⌘	26/11/2003
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:	⌘	A spurious emission requirement was missing for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Summary of change:	⌘	A spurious emission requirement was added for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Consequences if not approved:	⌘	Requirements for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS is missing.. **Isolated Impact Analysis:** UTRA FDD network performance could be affected by to high FDD Spurious Emission, if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.
Clauses affected:	⌘	9.2.2.1

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	TS25.143
	X		Test specifications	
		X	O&M Specifications	

Other comments: ⌘ Equivalent CRs in other Releases: CR028r1 cat. F to 25.106 v4.6.0

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:

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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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.

9.2.2 Co-existence with UTRA-FDD BS

9.2.2.1 Operation in the same geographic area

This requirement shall be applied for the protection of UTRA-FDD BS receivers in geographic areas in which UTRA-FDD Repeater and UTRA-FDD BS are deployed. ~~The requirement applies only to the down link direction of the Repeater.~~

9.2.2.1.1 Minimum Requirement

In the down link direction of the Repeater t~~T~~he power of any spurious emission shall not exceed:

Table 9.7A: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the down link direction of the Repeater

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980 MHz	-96 dBm	100 kHz	
II	1850 - 1910 MHz	-96 dBm	100 kHz	

In the up link direction of the Repeater the power of any spurious emission shall not exceed:

Table 9.7B: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the up link direction of the Repeater

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 – 1980 MHz	-53 dBm	100 kHz	
II	1850 - 1910 MHz	-53 dBm	100 kHz	

NOTE 1: These requirements in Table 9.7B for the up link direction of the Repeater reflect what can be achieved with present state of the art technology and are based on a coupling loss of 73 dB between a Repeater and a UTRA FDD BS receiver.

NOTE 2: The requirements shall be reconsidered when the state of the art technology progresses.

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031099**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.143** **CR** **039** ⌘ **rev** **1** ⌘ Current version: **4.8.0** ⌘

*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:	⌘	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement
Source:	⌘	RAN WG4
Work item code:	⌘	RInImp-REP
Date:	⌘	26/11/2003
Category:	⌘	**F**
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:	⌘	A spurious emission requirement was missing for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Summary of change:	⌘	A spurious emission requirement was added for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Consequences if not approved:	⌘	Requirements for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS is missing.. **Isolated Impact Analysis:** UTRA FDD network performance could be affected by to high FDD Spurious Emission, if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.
Clauses affected:	⌘	9.2.2.3.1

Other specs affected:	⌘	Y	N		⌘
		X		Other core specifications	TS25.106
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

Equivalent CRs in other Releases: CR040r1 cat. A to 25.143 v5.6.0

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:

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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.

9.2.2.3 Co-existence with UTRA-FDD BS

9.2.2.3.1 Operation in the same geographic area

This requirement shall be applied for the protection of UTRA-FDD BS receivers in geographic areas in which UTRA-FDD Repeater and UTRA-FDD BS are deployed. ~~The requirement applies only to the down link direction of the Repeater.~~

9.2.2.3.1.1 Minimum Requirement

In the down link direction of the Repeater t~~T~~he power of any spurious emission shall not exceed:

Table 9.11A: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the down link direction of the Repeater

Band	Maximum Level	Measurement Bandwidth	Note
1920 - 1980MHz For operation in Frequency Bands defined in sub-clause 4.1(a)	-96 dBm	100 kHz	
1850 - 1910 MHz For operation in Frequency Bands defined in sub-clause 4.1 (b)	-96 dBm	100 kHz	

In the up link direction of the Repeater the power of any spurious emission shall not exceed:

Table 9.11B: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the up link direction of the Repeater

Band	Maximum Level	Measurement Bandwidth	Note
1920 - 1980MHz For operation in Frequency Bands defined in sub-clause 4.1(a)	-53 dBm	100 kHz	
1850 - 1910 MHz For operation in Frequency Bands defined in sub-clause 4.1 (b)	-53 dBm	100 kHz	

NOTE 1: These requirements in Table 9.11B for the up link direction of the Repeater reflect what can be achieved with present state of the art technology and are based on a coupling loss of 73 dB between a Repeater and a UTRA FDD BS receiver.

NOTE 2: The requirements shall be reconsidered when the state of the art technology progresses.

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031100**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.143** **CR** **040** ⌘ **rev** **1** ⌘ Current version: **5.6.0** ⌘

*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:	⌘	Spurious emissions: Co-existence with UTRA-FDD BS new UL requirement
Source:	⌘	RAN WG4
Work item code:	⌘	RInImp-REP
Date:	⌘	26/11/2003
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),*
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D *(editorial modification)*
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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:	⌘	A spurious emission requirement was missing for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Summary of change:	⌘	A spurious emission requirement was added for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS.
Consequences if not approved:	⌘	Requirements for the UL band in the case of co-existence of a repeater with a UTRA-FDD BS is missing.. **Isolated Impact Analysis:** UTRA FDD network performance could be affected by to high FDD Spurious Emission, if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.
Clauses affected:	⌘	9.2.2.3.1

Other specs affected:	⌘	Y	N		⌘
		X		Other core specifications	TS25.106
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

Equivalent CRs in other Releases: CR039r1 cat. F to 25.143 v4.8.0

How to create CRs using this form:
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Below is a brief summary:

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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.

9.2.2.3 Co-existence with UTRA-FDD BS

9.2.2.3.1 Operation in the same geographic area

This requirement shall be applied for the protection of UTRA-FDD BS receivers in geographic areas in which UTRA-FDD Repeater and UTRA-FDD BS are deployed. ~~The requirement applies only to the down link direction of the Repeater.~~

9.2.2.3.1.1 Minimum Requirement

In the down link direction of the Repeater t~~T~~he power of any spurious emission shall not exceed:

Table 9.11A: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the down link direction of the Repeater

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980 MHz	-96 dBm	100 kHz	
II	1850 - 1910 MHz	-96 dBm	100 kHz	

In the up link direction of the Repeater the power of any spurious emission shall not exceed:

Table 9.11B: UTRA Repeater Spurious emissions limits in geographic coverage area of UTRA FDD BS receiver for the up link direction of the Repeater

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 – 1980 MHz	-53 dBm	100 kHz	
II	1850 - 1910 MHz	-53 dBm	100 kHz	

NOTE 1: These requirements in Table 9.11B for the up link direction of the Repeater reflect what can be achieved with present state of the art technology and are based on a coupling loss of 73 dB between a Repeater and a UTRA FDD BS receiver.

NOTE 2: The requirements shall be reconsidered when the state of the art technology progresses.