TSG RAN Meeting #19   **RP-030030**
Birmingham, United Kingdom, 11 - 14 March, 2003

Title   CRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.105 & TS 25.142 on "TDD - GSM co-existence in the same geographic area"
Source   TSG RAN WG4
Agenda Item   8.4.3

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020030	25.105	145		F	R99	3.12.0	TDD-GSM co-existence in the same geographic area	TEI
R4-020031	25.105	146		A	Rel-4	4.6.0	TDD-GSM co-existence in the same geographic area	TEI; LCRTDD-RF
R4-020032	25.105	147		A	Rel-5	5.3.0	TDD-GSM co-existence in the same geographic area	TEI; LCRTDD-RF
R4-020033	25.142	156		F	R99	3.12.0	TDD-GSM co-existence in the same geographic area	TEI
R4-020034	25.142	157		A	Rel-4	4.7.0	TDD-GSM co-existence in the same geographic area	TEI; LCRTDD-RF
R4-020035	25.142	158		A	Rel-5	5.3.0	TDD-GSM co-existence in the same geographic area	TEI;LCRTDD -RF

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CHANGE REQUEST

⌘ **25.105** CR **145** ⌘**rev** ⌘ Current version: **3.12.0** ⌘

*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 **[X]** Core Network [ ]

Title: ⌘	TDD-GSM co-existence in the same geographic area
Source: ⌘	RAN WG4
Work item code:⌘	TEI *Date:* ⌘ 05/03/2003

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: ⌘	Spurious emission requirements to protect the GSM BTS receiver in case where TDD and GSM is deployed in the same geographic area are missing.
Summary of change:⌘	Spurious emission requirements for TDD to protect GSM BTS receiver in case of deployment in the same geographic area are introduced. The requirement of –61dBm/100kHz is derived from the already existing co-location requirement of –98dBm/100kHz, based on 30dB MCL between TDD and GSM. For co-excistence in the same geographic area the approved scenario of TR 25.942 with an MCL of 67dB is used (- 98dBm/100kHz + 37dB (=67dB – 30dB) = -61dBm/100kHz).
Consequences if not approved: ⌘	Co-existence of TDD and GSM in the same geographic area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of TDD and GSM is not possible as it is possible for other systems. **Isolated Impact Analysis:** GSM network performance could be affected by to high TDD Spurious Emission if this CR is not approved. Approval of this CR would not affect TDD implementation behaving like indicated in the CR.

Clauses affected: ⌘	4.3; 6.6.3.2.1; 6.6.3.3.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
	X		Test specifications	25.142

		X	O&M Specifications	
Other comments: ⌘				
		Equivalent CRs in other Releases: CR146 cat. A to 25.105 v4.6.0, CR147 cat. A to 25.105 v5.3.0	

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:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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.

4.3   Regional requirements

Some requirements in TS 25.105 may only apply in certain regions. Table 4.1 lists all requirements that may be applied differently in different regions.

Table 4.1: List of regional requirements.

Clause number	Requirement	Comments
5.2	Frequency bands	Some bands may be applied regionally.
6.2.1	Base station maximum output power	In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the range of conditions defined as normal.
6.6.2.1	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.
6.6.3.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.
6.6.3.2.1	Co-existence with GSM900 – Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA are deployed.
6.6.3.2.2	Co-existence with GSM900 – Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.
6.6.3.3.1	Co-existence with DCS1800 – Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA are deployed.
6.6.3.3.2	Co-existence with DCS1800 – Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.
6.6.3.4.1	Co-existence with UTRA FDD – Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.4.2	Co-existence with UTRA FDD – Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.5.1	Blocking characteristic Co-location with GSM900 and/or DCS 1800	This requirement may be applied for the protection of UTRA TDD BS receivers when UTRA TDD BS and GSM 900/DCS1800 BS are co-located.

--- Next changed section ---

6.6.3.2   Co-existence with GSM 900

6.6.3.2.1   Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

6.6.3.2.1.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.12: BS Spurious emissions limits for BS in geographic coverage area of GSM 900 MS and GSM 900 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915MHz	-61 dBm	100 kHz	
921 – 960MHz	-57 dBm	100 kHz	

6.6.3.2.2 Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

6.6.3.2.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.13: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915 MHz	−98 dBm	100 kHz	

6.6.3.3 Co-existence with DCS 1800

6.6.3.3.1 Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

6.6.3.3.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.14: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS and DCS 1800 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1710 – 1785 MHz	-61 dBm	100 kHz	
1805 – 1880 MHz	-47 dBm	100 kHz	

6.6.3.3.2 Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

6.6.3.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.15: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

Band	Maximum Level	Measurement Bandwidth	Note
1710 – 1785 MHz	-98 dBm	100 kHz	

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CHANGE REQUEST

⌘   **25.105** CR **146**   ⌘**rev**   ⌘   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 **X**   Core Network ☐

Title: ⌘	TDD-GSM co-existence in the same geographic area	
Source: ⌘	RAN WG4	
Work item code:⌘	TEI; LCRTDD-RF	***Date:*** ⌘ 05/03/2003

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: ⌘	Spurious emission requirements to protect the GSM BTS receiver in case where TDD and GSM is deployed in the same geographic area are missing.
Summary of change:⌘	Spurious emission requirements for TDD to protect GSM BTS receiver in case of deployment in the same geographic area are introduced.

The requirement of –61dBm/100kHz is derived from the already existing co-location requirement of –98dBm/100kHz, based on 30dB MCL between TDD and GSM. For co-excistence in the same geographic area the approved scenario of TR 25.942 with an MCL of 67dB is used
(- 98dBm/100kHz + 37dB (=67dB – 30dB) = -61dBm/100kHz).

Consequences if not approved: ⌘	Co-existence of TDD and GSM in the same geographic area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of TDD and GSM is not possible as it is possible for other systems. **Isolated Impact Analysis:** GSM network performance could be affected by to high TDD Spurious Emission if this CR is not approved. Approval of this CR would not affect TDD implementation behaving like indicated in the CR.

Clauses affected: ⌘	4.3; 6.6.3.2.1; 6.6.3.3.1

	Y	**N**	
Other specs ⌘		**X**	Other core specifications ⌘
affected:	**X**		Test specifications 25.142

	X O&M Specifications	
Other comments: ⌘		
	Equivalent CRs in other Releases: CR145 cat. F to 25.105 v3.12.0, CR147 cat. A to 25.105 v5.3.0	

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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.

4.3   Regional requirements

Some requirements in TS 25.105 may only apply in certain regions. Table 4.1 lists all requirements that may be applied differently in different regions.

Table 4.1: List of regional requirements.

Clause number	Requirement	Comments
5.2	Frequency bands	Some bands may be applied regionally.
6.2.1	Base station maximum output power	In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the range of conditions defined as normal.
6.6.2.1	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.
6.6.3.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.
6.6.3.2.1	Co-existence with GSM900 – Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA are deployed.
6.6.3.2.2	Co-existence with GSM900 – Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.
6.6.3.3.1	Co-existence with DCS1800 – Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA are deployed.
6.6.3.3.2	Co-existence with DCS1800 – Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.
6.6.3.4.1	Co-existence with UTRA FDD – Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.4.2	Co-existence with UTRA FDD – Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.5.1	Blocking characteristic Co-location with GSM900 and/or DCS 1800	This requirement may be applied for the protection of UTRA TDD BS receivers when UTRA TDD BS and GSM 900/DCS1800 BS are co-located.

--- Next changed section ---

6.6.3.2 Co-existence with GSM 900

6.6.3.2.1   Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

6.6.3.2.1.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.12: BS Spurious emissions limits for BS in geographic coverage area of GSM 900 MS and GSM 900 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915 MHz	-61 dBm	100 kHz	
921 – 960MHz	-57 dBm	100 kHz	

6.6.3.2.2 Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

6.6.3.2.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.13: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915 MHz	–98 dBm	100 kHz	

6.6.3.3 Co-existence with DCS 1800

6.6.3.3.1 Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

6.6.3.3.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.14: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS and DCS 1800 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1710 – 1785 MHz	-61 dBm	100 kHz	
1805 – 1880MHz	-47 dBm	100 kHz	

6.6.3.3.2 Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

6.6.3.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.15: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

Band	Maximum Level	Measurement Bandwidth	Note
1710 – 1785 MHz	-98 dBm	100 kHz	

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CHANGE REQUEST

| ⌘ | **25.105** CR **147** | ⌘**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 **X**   Core Network ☐

Title: ⌘	TDD-GSM co-existence in the same geographic area	
Source: ⌘	RAN WG4	
Work item code:⌘	TEI; LCRTDD-RF	*Date:* ⌘ 05/03/2003
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)*
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  2   (GSM Phase 2)
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  R97   (Release 1997)
  R98   (Release 1998)
  R99   (Release 1999)
  Rel-4   (Release 4)
  Rel-5   (Release 5)
  Rel-6   (Release 6)

Reason for change: ⌘	Spurious emission requirements to protect the GSM BTS receiver in case where TDD and GSM is deployed in the same geographic area are missing.
Summary of change:⌘	Spurious emission requirements for TDD to protect GSM BTS receiver in case of deployment in the same geographic area are introduced. The requirement of –61dBm/100kHz is derived from the already existing co-location requirement of –98dBm/100kHz, based on 30dB MCL between TDD and GSM. For co-excistence in the same geographic area the approved scenario of TR 25.942 with an MCL of 67dB is used (- 98dBm/100kHz + 37dB (=67dB – 30dB) = -61dBm/100kHz).
Consequences if not approved: ⌘	Co-existence of TDD and GSM in the same geographic area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of TDD and GSM is not possible as it is possible for other systems. **Isolated Impact Analysis:** GSM network performance could be affected by to high TDD Spurious Emission if this CR is not approved. Approval of this CR would not affect TDD implementation behaving like indicated in the CR.

Clauses affected: ⌘	4.3; 6.6.3.2.1; 6.6.3.3.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
	X		Test specifications	25.142

	X	O&M Specifications	
Other comments: ⌘			
		Equivalent CRs in other Releases: CR145 cat. F to 25.105 v3.12.0, CR146 cat. A to 25.105 v4.6.0	

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4.3 Regional requirements

Some requirements in TS 25.105 may only apply in certain regions. Table 4.1 lists all requirements that may be applied differently in different regions.

Table 4.1: List of regional requirements.

Clause number	Requirement	Comments
5.2	Frequency bands	Some bands may be applied regionally.
6.2.1	Base station maximum output power	In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the range of conditions defined as normal.
6.6.2.1	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [1], are applied.
6.6.3.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [1], are applied.
6.6.3.2.1	Co-existence with GSM900 – Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA are deployed.
6.6.3.2.2	Co-existence with GSM900 – Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.
6.6.3.3.1	Co-existence with DCS1800 – Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA are deployed.
6.6.3.3.2	Co-existence with DCS1800 – Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.
6.6.3.4.1	Co-existence with UTRA FDD – Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.4.2	Co-existence with UTRA FDD – Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.5.1	Blocking characteristic Co-location with GSM900 and/or DCS 1800	This requirement may be applied for the protection of UTRA TDD BS receivers when UTRA TDD BS and GSM 900/DCS1800 BS are co-located.

--- Next changed section ---

6.6.3.2 Co-existence with GSM 900

6.6.3.2.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

6.6.3.2.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.12: BS Spurious emissions limits for BS in geographic coverage area of GSM 900 MS and GSM 900 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915 MHz	–61 dBm	100 kHz	
921 – 960MHz	-57 dBm	100 kHz	

6.6.3.2.2   Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

6.6.3.2.2.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.13: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915 MHz	–98 dBm	100 kHz	

6.6.3.3   Co-existence with DCS 1800

6.6.3.3.1   Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

6.6.3.3.1.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.14: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS and DCS 1800 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1710 – 1785 MHz	-61 dBm	100 kHz	
1805 – 1880MHz	-47 dBm	100 kHz	

6.6.3.3.2   Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

6.6.3.3.2.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.15: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

Band	Maximum Level	Measurement Bandwidth	Note
1710 – 1785 MHz	-98 dBm	100 kHz	

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CHANGE REQUEST

⌘	**25.142** CR **156**	⌘ **rev**		⌘ Current version:	**3.12.0** ⌘

*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 **X**   Core Network ☐

Title: ⌘	TDD-GSM co-existence in the same geographic area		
Source: ⌘	RAN WG4		
Work item code: ⌘	TEI	***Date:*** ⌘	05/03/2003
Category: ⌘ **F**		***Release:*** ⌘	R99

Use <u>one</u> 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 <u>one</u> 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: ⌘	Spurious emission requirements to protect the GSM BTS receiver in case where TDD and GSM is deployed in the same geographic area are missing.
Summary of change: ⌘	Spurious emission requirements for TDD to protect GSM BTS receiver in case of deployment in the same geographic area are introduced.
Consequences if not approved: ⌘	Co-existence of TDD and GSM in the same geographic area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of TDD and GSM is not possible as it is possible for other systems. **Isolated Impact Analysis:** GSM network performance could be affected by to high TDD Spurious Emission if this CR is not approved. Approval of this CR would not affect TDD implementation behaving like indicated in the CR.

Clauses affected: ⌘	5.17; 6.6.3.2.2.1; 6.6.3.2.3.1

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

Other comments: ⌘	Equivalent CRs in other Releases: CR157 cat. A to 25.142 v4.7.0, CR158 cat. A to 25.142 v5.3.0

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:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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.

5.17 Regional requirements

Some requirements in this specification may only apply in certain regions. Table 5.12 lists all requirements that may be applied differently in different regions.

Table 5.12: List of regional requirements

Subclause number	Requirement	Comments
4.2	Frequency bands	Some bands may be applied regionally.
6.2.2	Maximum output power	In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the ranges defined for the Normal test environment in subclause 5.8.1
6.6.2.1.	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.2.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [6], are applied.
6.6.3.2.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [6], are applied.
6.6.3.2.2.1	Co-existence with GSM900 – Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA are deployed.
6.6.3.2.2.2	Co-existence with GSM900 – Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.
6.6.3.2.3.1	Co-existence with DCS1800 – Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA are deployed.
6.6.3.2.3.2	Co-existence with DCS1800 – Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.
6.6.3.2.4.1	Co-existence with UTRA FDD – Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.2.4.2	Co-existence with UTRA FDD – Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in subclause 4.2 that are supported by the BS.
7.5	Blocking characteristics	This requirement may be applied for the protection of UTRA TDD BS receivers when UTRA TDD BS and GSM 900/DCS1800 BS are co-located.

--- Next changed section ---

6.6.3.2.2 Co-existence with GSM 900

6.6.3.2.2.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

The power of any spurious emission shall not exceed the maximum level given in Table 6.31.

Table 6.31: BS Spurious emissions limits for BS in geographic coverage area of GSM 900 MS and GSM 900 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
876 MHz – 915 MHz	–61 dBm	100 kHz	
921 MHz – 960 MHz	-57 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.2.1.1.

6.6.3.2.2.2   Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

The power of any spurious emission shall not exceed the maximum level given in table 6.32.

Table 6.32: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
876 MHz – 915 MHz	–98 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.2.2.1.

6.6.3.2.3   Co-existence with DCS 1800

6.6.3.2.3.1   Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

The power of any spurious emission shall not exceed the maximum level given in table 6.33.

Table 6.33: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS and DCS 1800 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
1710 MHz – 1785 MHz	-61 dBm	100 kHz	
1805 MHz – 1880 MHz	-47 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.3.1.1.

6.6.3.2.3.2   Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

The power of any spurious emission shall not exceed the maximum level given in table 6.34.

Table 6.34: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

Band	Maximum level	Measurement bandwidth	Note
1710 MHz – 1785 MHz	-98 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.3.3.1.

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.142** CR **157** | ⌘**rev** | | ⌘ | Current version: | **4.7.0** | ⌘ |

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 **X** Core Network ☐

Title: ⌘	TDD-GSM co-existence in the same geographic area	
Source: ⌘	RAN WG4	
Work item code:⌘	TEI; LCRTDD-RF	*Date:* ⌘ 05/03/2003
Category: ⌘ **A**		*Release:* ⌘ Rel-4

Use <u>one</u> 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 <u>one</u> 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: ⌘	Spurious emission requirements to protect the GSM BTS receiver in case where TDD and GSM is deployed in the same geographic area are missing.
Summary of change:⌘	Spurious emission requirements for TDD to protect GSM BTS receiver in case of deployment in the same geographic area are introduced.
Consequences if not approved: ⌘	Co-existence of TDD and GSM in the same geographic area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of TDD and GSM is not possible as it is possible for other systems. **Isolated Impact Analysis:** GSM network performance could be affected by to high TDD Spurious Emission if this CR is not approved. Approval of this CR would not affect TDD implementation behaving like indicated in the CR.

Clauses affected: ⌘	5.17; 6.6.3.2.2.1; 6.6.3.2.3.1

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

Other comments: ⌘	Equivalent CRs in other Releases: CR156 cat. F to 25.142 v3.12.0, CR158 cat. A to 25.142 v5.3.0

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:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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.

5.17   Regional requirements

Some requirements in this specification may only apply in certain regions. Table 5.12 lists all requirements that may be applied differently in different regions.

Table 5.12: List of regional requirements

Subclause number	Requirement	Comments
4.2	Frequency bands	Some bands may be applied regionally.
6.2.2	Maximum output power	In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the ranges defined for the Normal test environment in subclause 5.8.1
6.6.2.1.	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.2.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [6], are applied.
6.6.3.2.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [6], are applied.
6.6.3.2.2.1	Co-existence with GSM900 – Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA are deployed.
6.6.3.2.2.2	Co-existence with GSM900 – Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.
6.6.3.2.3.1	Co-existence with DCS1800 – Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA are deployed.
6.6.3.2.3.2	Co-existence with DCS1800 – Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.
6.6.3.2.4.1	Co-existence with UTRA FDD – Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.2.4.2	Co-existence with UTRA FDD – Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in subclause 4.2 that are supported by the BS.
7.5	Blocking characteristics	This requirement may be applied for the protection of UTRA TDD BS receivers when UTRA TDD BS and GSM 900/DCS1800 BS are co-located.

--- Next changed section ---

6.6.3.2.2   Co-existence with GSM 900

6.6.3.2.2.1   Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

The power of any spurious emission shall not exceed the maximum level given in Table 6.31.

**Table 6.31: BS Spurious emissions limits for BS in geographic coverage area of
GSM 900 MS and GSM 900 BTS receiver**

Band	Maximum level	Measurement bandwidth	Note
876 MHz – 915 MHz	–61 dBm	100 kHz	
921 MHz – 960 MHz	-57 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.2.1.1.

6.6.3.2.2.2   Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

The power of any spurious emission shall not exceed the maximum level given in table 6.32.

Table 6.32: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
876 MHz – 915 MHz	–98 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.2.2.1.

6.6.3.2.3   Co-existence with DCS 1800

6.6.3.2.3.1   Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

The power of any spurious emission shall not exceed the maximum level given in table 6.33.

**Table 6.33: BS Spurious emissions limits for BS in geographic coverage area of
DCS 1800 MS and DCS 1800 BTS receiver**

Band	Maximum level	Measurement bandwidth	Note
1710 MHz – 1785 MHz	-61 dBm	100 kHz	
1805 MHz – 1880 MHz	-47 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.3.1.1.

6.6.3.2.3.2   Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

The power of any spurious emission shall not exceed the maximum level given in table 6.34.

Table 6.34: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

Band	Maximum level	Measurement bandwidth	Note
1710 MHz – 1785 MHz	-98 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.3.2.1.

CR-Form-v7

CHANGE REQUEST

⌘   **25.142** CR **158**   ⌘**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 **X** Core Network ☐

Title: ⌘	TDD-GSM co-existence in the same geographic area		
Source: ⌘	RAN WG4		
Work item code:⌘	TEI;LCRTDD-RF	***Date:*** ⌘	05/03/2003
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: ⌘	Spurious emission requirements to protect the GSM BTS receiver in case where TDD and GSM is deployed in the same geographic area are missing.
Summary of change: ⌘	Spurious emission requirements for TDD to protect GSM BTS receiver in case of deployment in the same geographic area are introduced.
Consequences if not approved: ⌘	Co-existence of TDD and GSM in the same geographic area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of TDD and GSM is not possible as it is possible for other systems. **Isolated Impact Analysis:** GSM network performance could be affected by to high TDD Spurious Emission if this CR is not approved. Approval of this CR would not affect TDD implementation behaving like indicated in the CR.

Clauses affected: ⌘	5.17; 6.6.3.2.2.1; 6.6.3.2.3.1

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

Other comments: ⌘	
	Equivalent CRs in other Releases: CR156 cat. F to 25.142 v3.12.0, CR157 cat. A to 25.142 v4.7.0

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5.17   Regional requirements

Some requirements in this specification may only apply in certain regions. Table 5.12 lists all requirements that may be applied differently in different regions.

Table 5.12: List of regional requirements

Subclause number	Requirement	Comments
4.2	Frequency bands	Some bands may be applied regionally.
6.2.2	Maximum output power	In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the ranges defined for the Normal test environment in subclause 5.8.1
6.6.2.1.	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.2.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [6], are applied.
6.6.3.2.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [6], are applied.
6.6.3.2.2.1	Co-existence with GSM900 – Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA are deployed.
6.6.3.2.2.2	Co-existence with GSM900 – Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.
6.6.3.2.3.1	Co-existence with DCS1800 – Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA are deployed.
6.6.3.2.3.2	Co-existence with DCS1800 – Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.
6.6.3.2.4.1	Co-existence with UTRA FDD – Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.2.4.2	Co-existence with UTRA FDD – Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in subclause 4.2 that are supported by the BS.
7.5	Blocking characteristics	This requirement may be applied for the protection of UTRA TDD BS receivers when UTRA TDD BS and GSM 900/DCS1800 BS are co-located.

--- Next changed section ---

6.6.3.2.2   Co-existence with GSM 900

6.6.3.2.2.1   Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

The power of any spurious emission shall not exceed the maximum level given in Table 6.31.

Table 6.31: BS Spurious emissions limits for BS in geographic coverage area of GSM 900 MS and GSM 900 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
876 MHz – 915 MHz	–61 dBm	100 kHz	
921 MHz – 960 MHz	-57 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.2.1.1.

6.6.3.2.2.2   Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

The power of any spurious emission shall not exceed the maximum level given in table 6.32.

Table 6.32: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
876 MHz – 915 MHz	–98 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.2.2.1.

6.6.3.2.3   Co-existence with DCS 1800

6.6.3.2.3.1   Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

The power of any spurious emission shall not exceed the maximum level given in table 6.33.

Table 6.33: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS and DCS 1800 BTS receiver

Band	Maximum level	Measurement bandwidth	Note
1710 MHz – 1785 MHz	-61 dBm	100 kHz	
1805 MHz – 1880 MHz	-47 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.3.1.1.

6.6.3.2.3.2   Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

The power of any spurious emission shall not exceed the maximum level given in table 6.34.

Table 6.34: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

Band	Maximum level	Measurement bandwidth	Note
1710 MHz – 1785 MHz	-98 dBm	100 kHz	

The normative reference for this requirement is TS 25.105 [1] subclause 6.6.3.3.2.1.