

**TSG RAN Meeting #18**  
**New Orleans, US, 3 - 6 December, 2002**

**RP-020781**

**Title** CRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.104 & TS 25.141 on "FDD - GSM/PCS co-existence"  
**Source** TSG RAN WG4  
**Agenda Item** 7.4.3

| RAN4 Tdoc | Spec   | CR  | R | Cat | Rel   | Curr Ver | Title   | Work Item |
|-----------|--------|-----|---|-----|-------|----------|---|-----------|
| R4-021659 | 25.104 | 167 |   | F   | R99   | 3.10.0   | FDD GSM co-existence in the Same Geographic Area                | TEI       |
| R4-021658 | 25.104 | 149 | 1 | A   | Rel-4 | 4.5.0    | FDD GSM co-existence in the Same Geographic Area                | TEI       |
| R4-021448 | 25.104 | 153 |   | A   | Rel-5 | 5.4.0    | FDD GSM co-existence in the Same Geographic Area                | TEI       |
| R4-021449 | 25.104 | 150 |   | F   | Rel-5 | 5.4.0    | FDD GSM 850 / PCS 1900 co-existence in the Same Geographic Area | TEI5      |
| R4-021661 | 25.141 | 264 |   | F   | R99   | 3.11.0   | FDD GSM co-existence in the Same Geographic Area                | TEI       |
| R4-021660 | 25.141 | 250 | 1 | A   | Rel-4 | 4.6.0    | FDD GSM co-existence in the Same Geographic Area                | TEI       |
| R4-021451 | 25.141 | 252 |   | A   | Rel-5 | 5.4.0    | FDD GSM co-existence in the Same Geographic Area                | TEI       |
| R4-021452 | 25.141 | 251 |   | F   | Rel-5 | 5.4.0    | FDD GSM 850 / PCS 1900 co-existence in the Same Geographic Area | TEI5      |

## CHANGE REQUEST

⌘ **25.104 CR 149** ⌘ rev **1** ⌘ Current version: **4.5.0** ⌘

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

|                        |   |                 |   |
|------------------------|---|-----------------|---|
| <b>Title:</b>          | ⌘ FDD – GSM co-existence in the Same Geographic Area                          |                 |   |
| <b>Source:</b>         | ⌘ RAN WG4   |                 |   |
| <b>Work item code:</b> | ⌘ TEI   | <b>Date:</b>    | ⌘ 26/11/2002                              |
| <b>Category:</b>       | ⌘ A   | <b>Release:</b> | ⌘ Rel-4                                   |
|                        | Use <u>one</u> of the following categories:                                   |                 | Use <u>one</u> of the following releases: |
|                        | <b>F</b> (correction)   |                 | 2 (GSM Phase 2)                           |
|                        | <b>A</b> (corresponds to a correction in an earlier release)                  |                 | R96 (Release 1996)                        |
|                        | <b>B</b> (addition of feature),   |                 | R97 (Release 1997)                        |
|                        | <b>C</b> (functional modification of feature)                                 |                 | R98 (Release 1998)                        |
|                        | <b>D</b> (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)                         |

|                                      |   |
|--------------------------------------|---|
| <b>Reason for change:</b>            | ⌘ Requirements to protect GSM BTS receiver (UL band) in case where FDD and GSM is deployed in the Same Geographic Area are missing.   |
| <b>Summary of change:</b>            | ⌘ Requirements for FDD to protect GSM BTS receiver in case of deployment in the Same Geographic Area is introduced.<br><br>Requirement of -61dBm/100kHz is derived from the already existing co-location requirement of -98dBm/100kHz, whereas co-location is based on 30dB MCL between FDD and GSM. For co-existence 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).               |
| <b>Consequences if not approved:</b> | ⌘ Co-existence of FDD and GSM in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of FDD and GSM is not possible as it is possible for other systems.<br><br><b>Isolated Impact Analysis:</b><br>GSM network performance could be affected by to high FDD Spurious Emission if this CR is not approved.<br>Approval of this CR would not affect FDD implementation behaving like indicated in the CR. |

|                          |                                     |   |   |   |                          |                                     |                           |   |
|--------------------------|-------------------------------------|---|---|---|--------------------------|-------------------------------------|---------------------------|---|
| <b>Clauses affected:</b> | ⌘ 4.3, 6.3.3.1.1, 6.3.4.1.1         |   |   |   |                          |                                     |                           |   |
| <b>Other specs</b>       | ⌘                                   | <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications | ⌘ |
| Y                        | N                                   |   |   |   |                          |                                     |                           |   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> |   |   |   |                          |                                     |                           |   |

|                        |                                     |   |           |
|------------------------|-------------------------------------|---|-----------|
| <b>affected:</b>       | <input checked="" type="checkbox"/> | Test specifications   | TS 25.141 |
|                        | <input checked="" type="checkbox"/> | O&M Specifications  |           |
| <b>Other comments:</b> | ⌘                                   | Equivalent CRs in other Releases: CR167r1 cat. F to 25.104 v3.10.0, CR153r1 cat. A to 25.104 v5.4.0 |           |

**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 25.104 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.   |
| 5.3           | Tx-Rx Frequency Separation   | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.  |
| 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.  |
| 6.6.2.3       | Protection outside a licensee's frequency block                    | This requirement is applicable if protection is required outside a licensee's frequency block.  |
| 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.  |
| 6.6.3.3.1     | 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.   |
| 6.6.3.3.2     | 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.  |
| 6.6.3.4.1     | 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.  |
| 6.6.3.4.2     | 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.  |
| 6.6.3.5       | Co-existence with PHS  | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.  |
| 6.6.3.6       | Co-existence with services in adjacent frequency bands             | This requirement may be applied for the protection in bands adjacent to 2110-2170 MHz, as defined in sub-clause 5.2(a) and 1930-1990 MHz, as defined in sub-clause 5.2(b) in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.6.3.7.1     | Co-existence with UTRA TDD - Operation in the same geographic area | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.   |
| 6.6.3.7.2     | Co-existence with UTRA TDD - Co-located base stations              | This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.  |
| 7.4.2         | Adjacent Channel Selectivity Co-location with UTRA-TDD             | This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and UTRA-TDD 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.  |
| 7.5.2         | Blocking characteristics Co-location with GSM900 and/or DCS 1800   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900/DCS1800 BS are co-located.   |
| 7.5.3         | Blocking characteristics Co-location with UTRA TDD                 | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and UTRA TDD BS are co-located.  |

## - Next Section Changed –

## 6.6.3.3 Co-existence with GSM 900

## 6.6.3.3.1 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.

## 6.6.3.3.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.11: 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 - 960 MHz | -57 dBm       | 100 kHz               |      |

## 6.6.3.3.2 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.

## 6.6.3.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.12: 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               |      |

## 6.6.3.4 Co-existence with DCS 1800

## 6.6.3.4.1 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.

## 6.6.3.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.13: 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               |      |

#### 6.6.3.4.2 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.

##### 6.6.3.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.14: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| <b>Band</b>     | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------|----------------------|------------------------------|-------------|
| 1710 - 1785 MHz | -98 dBm              | 100 kHz                      |             |

CR-Form-v7

## CHANGE REQUEST

⌘ **25.104 CR 150** ⌘ rev  ⌘ Current version: **5.4.0** ⌘

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

|                        |  |                           |   |
|------------------------|--|---------------------------|---|
| <b>Title:</b>          | ⌘ FDD – GSM 850 / PCS 1900 co-existence in the Same Geographic Area                            |                           |   |
| <b>Source:</b>         | ⌘ RAN WG4  |                           |   |
| <b>Work item code:</b> | ⌘ TEI5   | <b>Date:</b>              | ⌘ 26/11/2002                              |
| <b>Category:</b>       | ⌘ <b>F</b>   | <b>Release:</b>           | ⌘ Rel-5                                   |
|                        | Use <u>one</u> of the following categories:  |                           | Use <u>one</u> of the following releases: |
|                        | <b>F</b> (correction)  | <b>2</b> (GSM Phase 2)    |   |
|                        | <b>A</b> (corresponds to a correction in an earlier release)                                   | <b>R96</b> (Release 1996) |   |
|                        | <b>B</b> (addition of feature),  | <b>R97</b> (Release 1997) |   |
|                        | <b>C</b> (functional modification of feature)  | <b>R98</b> (Release 1998) |   |
|                        | <b>D</b> (editorial modification)  | <b>R99</b> (Release 1999) |   |
|                        | Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> . |                           | <b>Rel-4</b> (Release 4)                  |
|                        |  |                           | <b>Rel-5</b> (Release 5)                  |
|                        |  |                           | <b>Rel-6</b> (Release 6)                  |

|                                      |  |
|--------------------------------------|--|
| <b>Reason for change:</b>            | ⌘ Requirements to protect GSM 850 and PCS 1900 BS receiver (UL band) in case where FDD and GSM 850 and/or PCS 1900 is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ Requirements for FDD to protect GSM 850 and PCS 1900 BTS receiver in case of deployment in the Same Geographic Area is introduced.<br><br>Requirement of –61dBm/100kHz is derived from the already existing co-location requirement of –98dBm/100kHz, whereas co-location is based on 30dB MCL between FDD and GSM 850 and/or PCS 1900. For co-existence 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). |
| <b>Consequences if not approved:</b> | ⌘ Co-existence of FDD and GSM 850/PCS 1900 in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of FDD and GSM 850/PCS1900 is not possible as it is possible for other systems.   |

|                              |   |   |   |  |   |   |  |  |   |                           |             |
|------------------------------|---|---|---|--|---|---|--|--|---|---------------------------|-------------|
| <b>Clauses affected:</b>     | ⌘ 4.3, 6.6.3.10, 6.6.3.11   |   |   |  |   |   |  |  |   |                           |             |
| <b>Other specs affected:</b> | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> | Y | N |  | X | X |  |  | X | Other core specifications | ⌘ TS 25.141 |
|                              | Y   | N |   |  |   |   |  |  |   |                           |             |
|                              |   | X |   |  |   |   |  |  |   |                           |             |
| X                            |   |   |   |  |   |   |  |  |   |                           |             |
|                              | X   |   |   |  |   |   |  |  |   |                           |             |
| Test specifications          |   |   |   |  |   |   |  |  |   |                           |             |
| O&M Specifications           |   |   |   |  |   |   |  |  |   |                           |             |
| <b>Other comments:</b>       | ⌘   |   |   |  |   |   |  |  |   |                           |             |



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## 4.3 Regional requirements

Some requirements in TS 25.104 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.   |
| 5.3           | Tx-Rx Frequency Separation  | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.  |
| 5.4           | Channel arrangement   | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.  |
| 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.  |
| 6.6.2.3       | Protection outside a licensee's frequency block                                     | This requirement is applicable if protection is required outside a licensee's frequency block.  |
| 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.  |
| 6.6.3.3.1     | Co-existence with GSM900 -Operation in the same geographic area                     | This requirement may be applied for the protection of GSM 900 MS in geographic areas in which both GSM 900 and UTRA are deployed.   |
| 6.6.3.3.2     | 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.  |
| 6.6.3.4.1     | Co-existence with DCS1800 -Operation in the same geographic area                    | This requirement may be applied for the protection of DCS 1800 MS in geographic areas in which both DCS 1800 and UTRA are deployed.   |
| 6.6.3.4.2     | 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.  |
| 6.6.3.5       | Co-existence with PHS   | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.  |
| 6.6.3.6       | Co-existence with services in adjacent frequency bands                              | This requirement may be applied for the protection in bands adjacent to the downlink bands as defined in clause 5.2 in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.6.3.7.1     | Co-existence with UTRA TDD - Operation in the same geographic area                  | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.   |
| 6.6.3.7.2     | Co-existence with UTRA TDD - Co-located base stations                               | This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.  |
| 6.6.3.8.1     | Co-existence with UTRA in frequency band III -Operation in the same geographic area | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.                                    |
| 6.6.3.8.2     | Co-existence with UTRA in frequency band III - Co-located base stations             | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.   |

|                        |   |  |
|------------------------|---|--|
| 6.6.3.9.1              | Co-existence with UTRA in frequency band I -Operation in the same geographic area | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.   |
| 6.6.3.9.2              | Co-existence with UTRA in frequency band I -<br>Co-located base stations          | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| <u>6.6.3.10.1</u>      | <u>Co-existence with PCS1900 -Operation in the same geographic area</u>           | <u>This requirement may be applied for the protection of PCS 1900 BTS receivers in geographic areas in which both PCS 1900 and UTRA are deployed.</u>  |
| 6.6.3.10.4<br><u>2</u> | Co-existence with PCS1900 -<br>Co-located base stations                           | This requirement may be applied for the protection of PCS 1900 BTS receivers when PCS 1900 BTS and UTRA BS are co-located.   |
| <u>6.6.3.11.1</u>      | <u>Co-existence with GSM850 -Operation in the same geographic area</u>            | <u>This requirement may be applied for the protection of GSM 850 MS and GSM 850 BTS receivers in geographic areas in which both GSM 850 and UTRA are deployed.</u>   |
| 6.6.3.11.4<br><u>2</u> | Co-existence with GSM850 -<br>Co-located base stations                            | This requirement may be applied for the protection of GSM 850 BTS receivers when GSM 850 BTS and UTRA BS are co-located.   |
| 7.4.2                  | Adjacent Channel Selectivity Co-location with UTRA-TDD                            | This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and UTRA-TDD 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.   |
| 7.5.2                  | Blocking characteristics Co-location with GSM900, DCS 1800, PCS1900 and/or UTRA   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900, DCS1800, PCS1900, GSM850 and/or UTRA BS (operating in different frequency bands) are co-located. |
| 7.5.3                  | Blocking characteristics Co-location with UTRA TDD                                | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and UTRA TDD BS are co-located.   |
| 7.6                    | Intermodulation characteristics   | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.   |
| 7.7                    | Spurious emissions  | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.   |
|                        | HSDPA*  | The portion of HSDPA(High Speed Downlink Packet Access) is not applicable to ARIB standards by the time when ARIB is prepared to transpose.  |

Note \*: HSDPA: This regional requirement should be reviewed to check its necessity every TSG RAN meeting.

- Next section changed -

## 6.6.3.10 Co-existence with PCS1900

### 6.6.3.10.1 Operation in the same geographic area

This requirement may be applied for the protection of PCS 1900 BS receiver in geographic areas in which both PCS 1900 and UTRA BS operating in the frequency band II are deployed.

## 6.6.3.10.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table X.XX: BS Spurious emissions limits for BS in geographic coverage area of PCS 1900 BS**

| <u>Operating Band</u> | <u>Band</u>     | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| II                    | 1850 - 1910 MHz | -61 dBm              | 100 kHz                      |             |

## 6.6.3.10.42 Co-located base stations

This requirement may be applied for the protection of PCS1900 BS receivers when UTRA BS operating in frequency band II and PCS1900 BS are co-located.

## 6.6.3.10.42.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.23: BS Spurious emissions limits for BS co-located with PCS1900 BS**

| <u>Operating Band</u> | <u>Band</u>     | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| II                    | 1850 – 1910 MHz | -98 dBm              | 100 kHz                      |             |

## 6.6.3.11 Co-existence with GSM850

## 6.6.3.11.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 850 MS and GSM 850 BS receiver in geographic areas in which both GSM 850 and UTRA BS operating in the frequency band II are deployed.

## 6.6.3.11.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table X.XX: BS Spurious emissions limits for BS in geographic coverage area of GSM 850**

| <u>Operating Band</u> | <u>Band</u>   | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|---------------|----------------------|------------------------------|-------------|
| II                    | 824 - 849 MHz | -61 dBm              | 100 kHz                      |             |
| II                    | 869 – 894 MHz | -57 dBm              | 100 kHz                      |             |

## 6.6.3.11.42 Co-located base stations

This requirement may be applied for the protection of GSM850 BS receivers when UTRA BS operating in frequency band II and GSM850 BS are co-located.

## 6.6.3.11.42.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.24: BS Spurious emissions limits for BS co-located with GSM850 BS**

| <u>Operating Band</u> | <u>Band</u>   | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|---------------|----------------------|------------------------------|-------------|
| II                    | 824 - 849 MHz | -98 dBm              | 100 kHz                      |             |

## CHANGE REQUEST

⌘ **25.104 CR 153** ⌘ rev      ⌘ Current version: **5.4.0** ⌘

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

|                        |   |  |
|------------------------|---|--|
| <b>Title:</b>          | ⌘ | FDD – GSM co-existence in the Same Geographic Area   |
| <b>Source:</b>         | ⌘ | RAN WG4  |
| <b>Work item code:</b> | ⌘ | TEI  |
|                        |   | <b>Date:</b> ⌘ 26/11/2002  |
| <b>Category:</b>       | ⌘ | <b>A</b>   |
|                        |   | Use <u>one</u> of the following categories:  |
|                        |   | <b>F</b> (correction)  |
|                        |   | <b>A</b> (corresponds to a correction in an earlier release)                                   |
|                        |   | <b>B</b> (addition of feature),  |
|                        |   | <b>C</b> (functional modification of feature)  |
|                        |   | <b>D</b> (editorial modification)  |
|                        |   | Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> . |
|                        |   | <b>Release:</b> ⌘ Rel-5  |
|                        |   | 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)  |

|                                      |   |  |
|--------------------------------------|---|--|
| <b>Reason for change:</b>            | ⌘ | Requirements to protect GSM BTS receiver (UL band) in case where FDD and GSM is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ | Requirements for FDD to protect GSM BTS receiver in case of deployment in the Same Geographic Area is introduced.  |
|                                      |   | Requirement of -61dBm/100kHz is derived from the already existing co-location requirement of -98dBm/100kHz, whereas co-location is based on 30dB MCL between FDD and GSM. For co-existence 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). |
| <b>Consequences if not approved:</b> | ⌘ | Co-existence of FDD and GSM in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of FDD and GSM is not possible as it is possible for other systems.  |
|                                      |   | <b>Isolated Impact Analysis:</b><br>GSM network performance could be affected by to high FDD Spurious Emission if this CR is not approved.<br>Approval of this CR would not affect FDD implementation behaving like indicated in the CR.   |

|                          |   |  |   |   |  |   |
|--------------------------|---|--|---|---|--|---|
| <b>Clauses affected:</b> | ⌘ | 4.3, 6.3.3.1.1, 6.3.4.1.1  |   |   |  |   |
| <b>Other specs</b>       | ⌘ | <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ | Y | N |  | X |
| Y                        | N |  |   |   |  |   |
|                          | X |  |   |   |  |   |

|                        |                                     |   |           |
|------------------------|-------------------------------------|---|-----------|
| <b>affected:</b>       | <input checked="" type="checkbox"/> | Test specifications   | TS 25.141 |
|                        | <input checked="" type="checkbox"/> | O&M Specifications  |           |
| <b>Other comments:</b> | ⌘                                   | Equivalent CRs in other Releases: CR167 cat. F to 25.104 v3.10.0, CR149 cat. A to 25.104 v4.5.0 |           |

### 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 25.104 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.   |
| 5.3           | Tx-Rx Frequency Separation  | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.  |
| 5.4           | Channel arrangement   | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.  |
| 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.  |
| 6.6.2.3       | Protection outside a licensee's frequency block                                     | This requirement is applicable if protection is required outside a licensee's frequency block.  |
| 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.  |
| 6.6.3.3.1     | 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.   |
| 6.6.3.3.2     | 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.  |
| 6.6.3.4.1     | 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.  |
| 6.6.3.4.2     | 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.  |
| 6.6.3.5       | Co-existence with PHS   | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.  |
| 6.6.3.6       | Co-.existence with services in adjacent frequency bands                             | This requirement may be applied for the protection in bands adjacent to the downlink bands as defined in clause 5.2 in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.6.3.7.1     | Co-existence with UTRA TDD - Operation in the same geographic area                  | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.   |
| 6.6.3.7.2     | Co-existence with UTRA TDD - Co-located base stations                               | This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.  |
| 6.6.3.8.1     | Co-existence with UTRA in frequency band III -Operation in the same geographic area | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.                                    |

|            |   |  |
|------------|---|--|
| 6.6.3.8.2  | Co-existence with UTRA in frequency band III - Co-located base stations           | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| 6.6.3.9.1  | Co-existence with UTRA in frequency band I -Operation in the same geographic area | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.   |
| 6.6.3.9.2  | Co-existence with UTRA in frequency band I - Co-located base stations             | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| 6.6.3.10.1 | Co-existence with PCS1900 - Co-located base stations                              | This requirement may be applied for the protection of PCS 1900 BTS receivers when PCS 1900 BTS and UTRA BS are co-located.   |
| 6.6.3.11.1 | Co-existence with GSM850 - Co-located base stations                               | This requirement may be applied for the protection of GSM 850 BTS receivers when GSM 850 BTS and UTRA BS are co-located.   |
| 7.4.2      | Adjacent Channel Selectivity Co-location with UTRA-TDD                            | This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and UTRA-TDD 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.   |
| 7.5.2      | Blocking characteristics Co-location with GSM900, DCS 1800, PCS1900 and/or UTRA   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900, DCS1800, PCS1900, GSM850 and/or UTRA BS (operating in different frequency bands) are co-located. |
| 7.5.3      | Blocking characteristics Co-location with UTRA TDD                                | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and UTRA TDD BS are co-located.   |
| 7.6        | Intermodulation characteristics   | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.   |
| 7.7        | Spurious emissions  | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.   |
|            | HSDPA*  | The portion of HSDPA(High Speed Downlink Packet Access) is not applicable to ARIB standards by the time when ARIB is prepared to transpose.  |

Note \*: HSDPA: This regional requirement should be reviewed to check its necessity every TSG RAN meeting.

- Next Section changed -

### 6.6.3.3 Co-existence with GSM 900

#### 6.6.3.3.1 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.



## 6.6.3.3.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.11: 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 - 960 MHz | -57 dBm       | 100 kHz               |      |

## 6.6.3.3.2 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.

## 6.6.3.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.12: 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               |      |

## 6.6.3.4 Co-existence with DCS 1800

## 6.6.3.4.1 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.

## 6.6.3.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.13: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS and DCS 1800 BTS receiver**

| Operating Band | Band                   | Maximum Level  | Measurement Bandwidth | Note |
|----------------|------------------------|----------------|-----------------------|------|
| I              | 1805 - 1880 MHz        | -47 dBm        | 100 kHz               |      |
| I              | <u>1710 – 1785 MHz</u> | <u>-61 dBm</u> | <u>100 kHz</u>        |      |
| III            | <u>1710 – 1785 MHz</u> | <u>-61 dBm</u> | <u>100 kHz</u>        |      |

## 6.6.3.4.2 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.

## 6.6.3.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.14: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| <b>Operating Band</b> | <b>Band</b>     | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| I                     | 1710 - 1785 MHz | -98 dBm              | 100 kHz                      |             |
| III                   | 1710 – 1785 MHz | -98 dBm              | 100 kHz                      |             |

## CHANGE REQUEST

⌘ **25.104 CR 167** ⌘ rev      ⌘ Current version: **3.10.0** ⌘

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

|                        |   |   |
|------------------------|---|---|
| <b>Title:</b>          | ⌘ | FDD – GSM co-existence in the Same Geographic Area  |
| <b>Source:</b>         | ⌘ | RAN WG4   |
| <b>Work item code:</b> | ⌘ | TEI   |
|                        |   | <b>Date:</b> ⌘ 26/11/2002   |
| <b>Category:</b>       | ⌘ | F   |
|                        |   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>A</b> (correction)<br/>                     (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),<br/>                     (addition of feature),</p> <p><b>C</b> (functional modification of feature)<br/>                     (functional modification of feature)</p> <p><b>D</b> (editorial modification)<br/>                     (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)<br/>                     R96 (Release 1996)<br/>                     R97 (Release 1997)<br/>                     R98 (Release 1998)<br/>                     R99 (Release 1999)<br/>                     Rel-4 (Release 4)<br/>                     Rel-5 (Release 5)<br/>                     Rel-6 (Release 6)</p> </div> </div> |
|                        |   | <b>Release:</b> ⌘ R99   |

|                                      |   |  |
|--------------------------------------|---|--|
| <b>Reason for change:</b>            | ⌘ | Requirements to protect GSM BTS receiver (UL band) in case where FDD and GSM is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ | <p>Requirements for FDD to protect GSM BTS receiver in case of deployment in the Same Geographic Area is introduced.</p> <p>Requirement of -61dBm/100kHz is derived from the already existing co-location requirement of -98dBm/100kHz, whereas co-location is based on 30dB MCL between FDD and GSM. For co-existence 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).</p>   |
| <b>Consequences if not approved:</b> | ⌘ | <p>Co-existence of FDD and GSM in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of FDD and GSM is not possible as it is possible for other systems.</p> <p><b>Isolated Impact Analysis:</b><br/>                     GSM network performance could be affected by to high FDD Spurious Emission if this CR is not approved.<br/>                     Approval of this CR would not affect FDD implementation behaving like indicated in the CR.</p> |

|                          |   |  |   |   |  |   |
|--------------------------|---|--|---|---|--|---|
| <b>Clauses affected:</b> | ⌘ | 4.3, 6.3.3.1.1, 6.3.4.1.1  |   |   |  |   |
| <b>Other specs</b>       | ⌘ | <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Y</td> <td style="border: 1px solid black; padding: 2px;">N</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;"> </td> <td style="border: 1px solid black; padding: 2px;">X</td> </tr> </table> Other core specifications ⌘ | Y | N |  | X |
| Y                        | N |  |   |   |  |   |
|                          | X |  |   |   |  |   |

|                        |                                     |  |           |
|------------------------|-------------------------------------|--|-----------|
| <b>affected:</b>       | <input checked="" type="checkbox"/> | Test specifications  | TS 25.141 |
|                        | <input checked="" type="checkbox"/> | O&M Specifications   |           |
| <b>Other comments:</b> | ⌘                                   | Equivalent CRs in other Releases: CR149 cat. A to 25.104 v4.5.0, CR153 cat. A to 25.104 v5.4.0 |           |

### 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 25.104 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.   |
| 5.3           | Tx-Rx Frequency Separation   | The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.  |
| 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.  |
| 6.6.2.3       | Protection outside a licensee's frequency block                    | This requirement is applicable if protection is required outside a licensee's frequency block.  |
| 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.  |
| 6.6.3.3.1     | 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.   |
| 6.6.3.3.2     | 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.  |
| 6.6.3.4.1     | 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.  |
| 6.6.3.4.2     | 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.  |
| 6.6.3.5       | Co-existence with PHS  | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.  |
| 6.6.3.6       | Co-existence with services in adjacent frequency bands             | This requirement may be applied for the protection in bands adjacent to 2110-2170 MHz, as defined in sub-clause 5.2(a) and 1930-1990 MHz, as defined in sub-clause 5.2(b) in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.6.3.7.1     | Co-existence with UTRA TDD - Operation in the same geographic area | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.   |
| 6.6.3.7.2     | Co-existence with UTRA TDD - Co-located base stations              | This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.  |
| 7.4.2         | Adjacent Channel Selectivity Co-location with UTRA-TDD             | This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and UTRA-TDD 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.  |
| 7.5.2         | Blocking characteristics Co-location with GSM900 and/or DCS 1800   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900/DCS1800 BS are co-located.   |
| 7.5.3         | Blocking characteristics Co-location with UTRA TDD                 | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and UTRA TDD BS are co-located.  |

## - Next Section Changed –

## 6.6.3.3 Co-existence with GSM 900

## 6.6.3.3.1 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.

## 6.6.3.3.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.11: 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 - 960 MHz | -57 dBm       | 100 kHz               |      |

## 6.6.3.3.2 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.

## 6.6.3.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.12: 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               |      |

## 6.6.3.4 Co-existence with DCS 1800

## 6.6.3.4.1 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.

## 6.6.3.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.13: 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               |      |

#### 6.6.3.4.2 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.

##### 6.6.3.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.14: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| <b>Band</b>     | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------|----------------------|------------------------------|-------------|
| 1710 - 1785 MHz | -98 dBm              | 100 kHz                      |             |



## CHANGE REQUEST

⌘ **25.141 CR 250** ⌘ 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

|                        |   |                 |   |
|------------------------|---|-----------------|---|
| <b>Title:</b>          | ⌘ FDD – GSM co-existence in the Same Geographic Area                          |                 |   |
| <b>Source:</b>         | ⌘ RAN WG4   |                 |   |
| <b>Work item code:</b> | ⌘ TEI   | <b>Date:</b>    | ⌘ 26/11/2002                              |
| <b>Category:</b>       | ⌘ <b>A</b>  | <b>Release:</b> | ⌘ Rel-4                                   |
|                        | Use <u>one</u> of the following categories:                                   |                 | Use <u>one</u> of the following releases: |
|                        | <b>F</b> (correction)   |                 | 2 (GSM Phase 2)                           |
|                        | <b>A</b> (corresponds to a correction in an earlier release)                  |                 | R96 (Release 1996)                        |
|                        | <b>B</b> (addition of feature),   |                 | R97 (Release 1997)                        |
|                        | <b>C</b> (functional modification of feature)                                 |                 | R98 (Release 1998)                        |
|                        | <b>D</b> (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)                         |

|                                      |  |
|--------------------------------------|--|
| <b>Reason for change:</b>            | ⌘ Requirements to protect GSM BTS receiver (UL band) in case where FDD and GSM is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ Requirements for FDD to protect GSM BTS receiver in case of deployment in the Same Geographic Area is introduced.  |
| <b>Consequences if not approved:</b> | ⌘ Co-existence of FDD and GSM in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications.<br>A generic co-existence analysis of FDD and GSM is not possible as it is possible for other systems.<br><br><b>Isolated Impact Analysis:</b><br>GSM network performance could be affected by to high FDD Spurious Emission if this CR is not approved.<br>Approval of this CR would not affect FDD implementation behaving like indicated in the CR. |

|                              |  |   |   |   |  |  |   |  |   |                           |             |
|------------------------------|--|---|---|---|--|--|---|--|---|---------------------------|-------------|
| <b>Clauses affected:</b>     | ⌘ 4.7, 6.5.3.4.4, 6.5.3.4.5, 6.5.3.7.4, 6.5.3.7.5  |   |   |   |  |  |   |  |   |                           |             |
| <b>Other specs affected:</b> | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">X</td> </tr> </table> | Y | N | X |  |  | X |  | X | Other core specifications | ⌘ TS 25.104 |
|                              | Y  | N |   |   |  |  |   |  |   |                           |             |
|                              | X  |   |   |   |  |  |   |  |   |                           |             |
|                              | X  |   |   |   |  |  |   |  |   |                           |             |
|                              | X  |   |   |   |  |  |   |  |   |                           |             |
|                              | Test specifications  |   |   |   |  |  |   |  |   |                           |             |
|                              | O&M Specifications   |   |   |   |  |  |   |  |   |                           |             |
| <b>Other comments:</b>       | ⌘ Equivalent CRs in other Releases: CR264r1 cat. F to 25.141 v3.11.0, CR252r1 cat. A to 25.141 v5.4.0  |   |   |   |  |  |   |  |   |                           |             |

### **How to create CRs using this form:**

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- 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.

## 4.7 Regional requirements

Some requirements in TS 25.141 may only apply in certain regions. Table 4.4 lists all requirements that may be applied differently in different regions.

Table 4.4: List of regional requirements

| Subclause number | Requirement  | Comments  |
|------------------|--|---|
| 3.4.1            | Frequency bands  | Some bands may be applied regionally.   |
| 3.4.2            | Tx-Rx Frequency Separation   | The requirement is applied according to what frequency bands in subclause 3.4.1 that are supported by the BS.   |
| 6.2.1.2          | Base station 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 4.4.1.   |
| 6.5.2.1          | Spectrum emission mask   | The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.  |
| 6.5.3.4.1        | 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.  |
| 6.5.3.4.2        | 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.  |
| 6.5.3.4.4.1      | 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.   |
| 6.5.3.4.4.2      | 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.  |
| 6.5.3.4.5.1      | 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.  |
| 6.5.3.4.5.2      | 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.  |
| 6.5.3.4.6        | Co-existence with PHS  | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.  |
| 6.5.3.4.7        | Co-existence with services in adjacent frequency bands             | This requirement may be applied for the protection in bands adjacent to 2110-2170 MHz, as defined in subclause 3.4.1(a) and 1930-1990 MHz, as defined in subclause 3.4.1(b) in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.5.3.4.8.1      | Co-existence with UTRA TDD – Operation in the same geographic area | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.   |
| 6.5.3.4.8.2      | Co-existence with UTRA TDD – Co-located base stations              | This requirement may be applied for the protection of UTRA-TDD 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 3.4.1 that are supported by the BS.   |
| 7.5              | Blocking characteristics   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900/DCS1800 BS are co-located.   |

- Next Section Changed -

## 6.5.3.4.4 Co-existence with GSM 900

## 6.5.3.4.4.1 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.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

## 6.5.3.4.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.27: BS Spurious emissions limits for BS in geographic coverage area of GSM 900**

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

## 6.5.3.4.4.2 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.

## 6.5.3.4.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.28: BS Spurious emissions limits for protection of the BTS receiver**

| Band               | Maximum Level | Measurement Bandwidth | Note |
|--------------------|---------------|-----------------------|------|
| 876 MHz to 915 MHz | -98 dBm       | 100 kHz               |      |

## 6.5.3.4.5 Co-existence with DCS 1800

## 6.5.3.4.5.1 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.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

## 6.5.3.4.5.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.29: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800**

| Band                   | Maximum Level | Measurement Bandwidth | Note |
|------------------------|---------------|-----------------------|------|
| 1710 MHz to 1785 MHz   | -61 dBm       | 100 kHz               |      |
| 1 805 MHz to 1 880 MHz | -47 dBm       | 100 kHz               |      |

6.5.3.4.5.2 Co-located basestations

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

6.5.3.4.5.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.30: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| Band                   | Maximum Level | Measurement Bandwidth | Note |
|------------------------|---------------|-----------------------|------|
| 1 710 MHz to 1 785 MHz | -98 dBm       | 100 kHz               |      |

- Next Section Changed –

6.5.3.7.4 Co-existence with GSM 900

6.5.3.7.4.1 Operation in the same geographic area

**Table 6.38: BS Spurious emissions limits for BS in geographic coverage area of GSM 900**

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

6.5.3.7.4.2 Co-located base stations

**Table 6.39: BS Spurious emissions limits for protection of the BTS receiver**

| Band               | Maximum Level | Measurement Bandwidth | Note |
|--------------------|---------------|-----------------------|------|
| 876 MHz to 915 MHz | -98 dBm       | 100 kHz               |      |

6.5.3.7.5 Co-existence with DCS 1800

6.5.3.7.5.1 Operation in the same geographic area

**Table 6.40: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800**

| Band                   | Maximum Level | Measurement Bandwidth | Note |
|------------------------|---------------|-----------------------|------|
| 1710 MHz to 1785 MHz   | -61 dBm       | 100 kHz               |      |
| 1 805 MHz to 1 880 MHz | -47 dBm       | 100 kHz               |      |

## 6.5.3.7.5.2 Co-located base stations

**Table 6.41: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| <b>Band</b>            | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|------------------------|----------------------|------------------------------|-------------|
| 1 710 MHz to 1 785 MHz | -98 dBm              | 100 kHz                      |             |

## CHANGE REQUEST

⌘ **25.141 CR 251** ⌘ rev  ⌘ Current version: **5.4.0** ⌘

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

|                        |  |                 |   |
|------------------------|--|-----------------|---|
| <b>Title:</b>          | ⌘ FDD – GSM 850 / PCS 1900 co-existence in the Same Geographic Area                            |                 |   |
| <b>Source:</b>         | ⌘ RAN WG4  |                 |   |
| <b>Work item code:</b> | ⌘ TEI5   | <b>Date:</b>    | ⌘ 26/11/2002                              |
| <b>Category:</b>       | ⌘ <b>F</b>   | <b>Release:</b> | ⌘ Rel-5                                   |
|                        | Use <u>one</u> of the following categories:  |                 | Use <u>one</u> of the following releases: |
|                        | <b>F</b> (correction)  | R96             | (GSM Phase 2)                             |
|                        | <b>A</b> (corresponds to a correction in an earlier release)                                   | R97             | (Release 1996)                            |
|                        | <b>B</b> (addition of feature),  | R98             | (Release 1997)                            |
|                        | <b>C</b> (functional modification of feature)  | R99             | (Release 1998)                            |
|                        | <b>D</b> (editorial modification)  | Rel-4           | (Release 1999)                            |
|                        | Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> . | Rel-5           | (Release 4)                               |
|                        |  | Rel-6           | (Release 5)                               |
|                        |  |                 | (Release 6)                               |

|                                      |  |
|--------------------------------------|--|
| <b>Reason for change:</b>            | ⌘ Requirements to protect GSM 850 and PCS 1900 BS receiver (UL band) in case where FDD and GSM 850 and/or PCS 1900 is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ Requirements for FDD to protect GSM 850 and PCS 1900 BTS receiver in case of deployment in the Same Geographic Area is introduced.   |
| <b>Consequences if not approved:</b> | ⌘ Co-existence of FDD and GSM 850/PCS 1900 in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications. A generic co-existence analysis of FDD and GSM 850/PCS1900 is not possible as it is possible for other systems. |

|                              |  |                     |   |   |  |  |   |  |   |                           |             |
|------------------------------|--|---------------------|---|---|--|--|---|--|---|---------------------------|-------------|
| <b>Clauses affected:</b>     | ⌘ 4.7, 6.5.3.4.11, 6.5.3.4.12, 6.5.3.7.11, 6.5.3.7.12  |                     |   |   |  |  |   |  |   |                           |             |
| <b>Other specs affected:</b> | <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">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> | Y                   | N | X |  |  | X |  | X | Other core specifications | ⌘ TS 25.104 |
| Y                            | N  |                     |   |   |  |  |   |  |   |                           |             |
| X                            |  |                     |   |   |  |  |   |  |   |                           |             |
|                              | X  |                     |   |   |  |  |   |  |   |                           |             |
|                              | X  |                     |   |   |  |  |   |  |   |                           |             |
|                              |  | Test specifications |   |   |  |  |   |  |   |                           |             |
|                              |  | O&M Specifications  |   |   |  |  |   |  |   |                           |             |
| <b>Other comments:</b>       | ⌘  |                     |   |   |  |  |   |  |   |                           |             |

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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.

## 4.7 Regional requirements

Some requirements in TS 25.141 may only apply in certain regions. Table 4.4 lists all requirements that may be applied differently in different regions.

Table 4.4: List of regional requirements

| Subclause number | Requirement   | Comments   |
|------------------|---|--|
| 3.4.1            | Frequency bands   | Some bands may be applied regionally.  |
| 3.4.2            | Tx-Rx Frequency Separation  | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 3.5.             | Channel arrangement   | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 6.2.1.2          | Base station 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 4.4.1.                    |
| 6.5.2.1          | Spectrum emission mask  | The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.   |
| 6.5.3.4.1        | 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- [4], are applied.  |
| 6.5.3.4.2        | 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- [4], are applied.  |
| 6.5.3.4.4.1      | Co-existence with GSM900 – Operation in the same geographic area                    | This requirement may be applied for the protection of GSM 900 MS in geographic areas in which both GSM 900 and UTRA are deployed.  |
| 6.5.3.4.4.2      | 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.   |
| 6.5.3.4.5.1      | Co-existence with DCS1800 – Operation in the same geographic area                   | This requirement may be applied for the protection of DCS 1800 MS in geographic areas in which both DCS 1800 and UTRA are deployed.  |
| 6.5.3.4.5.2      | 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.   |
| 6.5.3.4.6        | Co-existence with PHS   | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.   |
| 6.5.3.4.7        | Co-existence with services in adjacent frequency bands                              | This requirement may be applied for the protection in bands adjacent to the downlink band as defined in clause 3.4.1 in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.5.3.4.8.1      | Co-existence with UTRA TDD – Operation in the same geographic area                  | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.  |
| 6.5.3.4.8.2      | Co-existence with UTRA TDD – Co-located base stations                               | This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.   |
| 6.5.3.4.9.1      | Co-existence with UTRA in frequency band III -Operation in the same geographic area | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.                                     |
| 6.5.3.4.9.2      | Co-existence with UTRA in frequency band III - Co-located base stations             | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| 6.5.3.4.10.1     | Co-existence with UTRA in frequency band I -Operation in the same geographic area   | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.                                     |
| 6.5.3.4.10.2     | Co-existence with UTRA in frequency band I - Co-located base stations               | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| 6.5.3.4.11.1     | Co-existence with PCS1900 -Operation in the same geographic area                    | This requirement may be applied for the protection of PCS 1900 BTS receivers in geographic areas in which both PCS 1900 and UTRA are deployed.   |
| 6.5.3.4.11.42    | Co-existence with PCS1900 -   | This requirement may be applied for the protection   |

|                      |  |  |
|----------------------|--|--|
|                      | Co-located base stations   | of PCS 1900 BTS receivers when PCS 1900 BTS and UTRA BS are co-located.  |
| <u>6.5.3.4.12.1</u>  | <u>Co-existence with GSM850 -Operation in the same geographic area</u> | <u>This requirement may be applied for the protection of GSM 850 MS and GSM 850 BTS receivers in geographic areas in which both GSM 850 and UTRA are deployed.</u>                             |
| <u>6.5.3.4.12.42</u> | Co-existence with GSM 850 - Co-located base stations                   | This requirement may be applied for the protection of GSM 850 BTS receivers when GSM 850 BTS and UTRA BS are co-located.   |
| 7.5                  | Blocking characteristic  | The requirement is applied according to what frequency bands include 3.4.1 that are supported by the BS.   |
| 7.5                  | Blocking characteristics   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900, GSM850, PCS 1900 and BS operating in the /DCS1800 band (GSM or UTRA) are co-located. |
| 7.6                  | Intermodulation characteristics  | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 7.7                  | Spurious emissions   | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
|                      | HSDPA*   | The portion of HSDPA(High Speed Downlink Packet Access) is not applicable to ARIB standards by the time when ARIB is prepared to transpose.  |

Note: HSDPA\*: This regional requirement should be reviewed to check its necessity every TSG RAN meeting.

- Next Section Changed -

6.5.3.4.11 Co-existence with PCS1900

6.5.3.4.11.1 Operation in the same geographic area

This requirement may be applied for the protection of PCS 1900 BS receiver in geographic areas in which both PCS 1900 and UTRA BS operating in the frequency band II are deployed.

6.5.3.4.11.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table X.XX: BS Spurious emissions limits for BS in geographic coverage area of PCS 1900 BS**

| <u>Operating Band</u> | <u>Band</u>     | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| II                    | 1850 - 1910 MHz | -61 dBm              | 100 kHz                      |             |

6.5.3.4.11.42 Co-located base stations

This requirement may be applied for the protection of PCS1900 BS receivers when UTRA BS operating in frequency band II and PCS1900 BS are co-located.

6.5.3.4.11.42.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.34E: BS Spurious emissions limits for BS co-located with PCS1900 BS**

| <b>Operating Band</b> | <b>Band</b>     | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| II                    | 1850 – 1910 MHz | -98 dBm              | 100 kHz                      |             |

6.5.3.4.12 Co-existence with GSM850

6.5.3.4.12.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 850 MS and GSM 850 BS receiver in geographic areas in which both GSM 850 and UTRA BS operating in the frequency band II are deployed.

6.5.3.4.12.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table X.XX: BS Spurious emissions limits for BS in geographic coverage area of GSM 850**

| <b>Operating Band</b> | <b>Band</b>   | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------------|---------------|----------------------|------------------------------|-------------|
| II                    | 824 - 849 MHz | -61 dBm              | 100 kHz                      |             |
| II                    | 869 – 894 MHz | -57 dBm              | 100 kHz                      |             |

6.5.3.4.12.4<sub>2</sub> Co-located base stations

This requirement may be applied for the protection of GSM850 BS receivers when UTRA BS operating in frequency band II and GSM850 BS are co-located.

6.5.3.4.12.4<sub>2</sub>.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.34F: BS Spurious emissions limits for BS co-located with GSM850 BS**

| <b>Operating Band</b> | <b>Band</b>   | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------------|---------------|----------------------|------------------------------|-------------|
| II                    | 824 - 849 MHz | -98 dBm              | 100 kHz                      |             |

- Next Section Changed -

6.5.3.7.11 Co-existence with PCS1900

6.5.3.7.11.1 Operation in the same geographic area

**Table X.XX: BS Spurious emissions limits for BS in geographic coverage area of PCS 1900 BS**

| <b>Operating Band</b> | <b>Band</b>     | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| II                    | 1850 - 1910 MHz | -61 dBm              | 100 kHz                      |             |

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.5.3.7.11.4~~2~~ Co-located base stations

**Table 6.50: BS Spurious emissions limits for BS co-located with PCS1900 BS**

| <u>Operating Band</u> | <u>Band</u>     | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|-----------------|----------------------|------------------------------|-------------|
| II                    | 1850 – 1910 MHz | -98 dBm              | 100 kHz                      |             |

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.5.3.7.12 Co-existence with GSM850

6.5.3.7.12.1 Operation in the same geographic area

**Table X.XX: BS Spurious emissions limits for BS in geographic coverage area of GSM 850**

| <u>Operating Band</u> | <u>Band</u>   | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|---------------|----------------------|------------------------------|-------------|
| II                    | 824 - 849 MHz | -61 dBm              | 100 kHz                      |             |
| II                    | 869 – 894 MHz | -57 dBm              | 100 kHz                      |             |

6.5.3.7.12.4~~2~~ Co-located base stations

**Table 6.51: BS Spurious emissions limits for BS co-located with GSM850 BS**

| <u>Operating Band</u> | <u>Band</u>   | <u>Maximum Level</u> | <u>Measurement Bandwidth</u> | <u>Note</u> |
|-----------------------|---------------|----------------------|------------------------------|-------------|
| II                    | 824 – 849 MHz | -98 dBm              | 100 kHz                      |             |

## CHANGE REQUEST

⌘ **25.141 CR 252** ⌘ rev  ⌘ Current version: **5.4.0** ⌘

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

|                        |  |                 |   |
|------------------------|--|-----------------|---|
| <b>Title:</b>          | ⌘ FDD – GSM co-existence in the Same Geographic Area   |                 |   |
| <b>Source:</b>         | ⌘ RAN WG4  |                 |   |
| <b>Work item code:</b> | ⌘ TEI  | <b>Date:</b>    | ⌘ 26/11/2002                              |
| <b>Category:</b>       | ⌘ <b>A</b>   | <b>Release:</b> | ⌘ Rel-5                                   |
|                        | Use <u>one</u> of the following categories:  |                 | Use <u>one</u> of the following releases: |
|                        | <b>F</b> (correction)  | 2               | (GSM Phase 2)                             |
|                        | <b>A</b> (corresponds to a correction in an earlier release)                                   | R96             | (Release 1996)                            |
|                        | <b>B</b> (addition of feature),  | R97             | (Release 1997)                            |
|                        | <b>C</b> (functional modification of feature)  | R98             | (Release 1998)                            |
|                        | <b>D</b> (editorial modification)  | R99             | (Release 1999)                            |
|                        | Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> . |                 | Rel-4 (Release 4)                         |
|                        |  |                 | Rel-5 (Release 5)                         |
|                        |  |                 | Rel-6 (Release 6)                         |

|                                      |  |
|--------------------------------------|--|
| <b>Reason for change:</b>            | ⌘ Requirements to protect GSM BTS receiver (UL band) in case where FDD and GSM is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ Requirements for FDD to protect GSM BTS receiver in case of deployment in the Same Geographic Area is introduced.  |
| <b>Consequences if not approved:</b> | ⌘ Co-existence of FDD and GSM in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications.<br>A generic co-existence analysis of FDD and GSM is not possible as it is possible for other systems.<br><br><b>Isolated Impact Analysis:</b><br>GSM network performance could be affected by to high FDD Spurious Emission if this CR is not approved.<br>Approval of this CR would not affect FDD implementation behaving like indicated in the CR. |

|                              |   |   |   |   |  |  |   |  |   |             |  |
|------------------------------|---|---|---|---|--|--|---|--|---|-------------|--|
| <b>Clauses affected:</b>     | ⌘ 4.7, 6.5.3.4.4, 6.5.3.4.5, 6.5.3.7.4, 6.5.3.7.5   |   |   |   |  |  |   |  |   |             |  |
| <b>Other specs affected:</b> | <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">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<br>Test specifications<br>O&M Specifications | Y | N | X |  |  | X |  | X | ⌘ TS 25.104 |  |
| Y                            | N   |   |   |   |  |  |   |  |   |             |  |
| X                            |   |   |   |   |  |  |   |  |   |             |  |
|                              | X   |   |   |   |  |  |   |  |   |             |  |
|                              | X   |   |   |   |  |  |   |  |   |             |  |
| <b>Other comments:</b>       | ⌘ Equivalent CRs in other Releases: CR264 cat. F to 25.141 v3.11.0, CR250 cat. A to 25.141 v4.6.0   |   |   |   |  |  |   |  |   |             |  |

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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.



## 4.7 Regional requirements

Some requirements in TS 25.141 may only apply in certain regions. Table 4.4 lists all requirements that may be applied differently in different regions.

Table 4.4: List of regional requirements

| Subclause number | Requirement   | Comments   |
|------------------|---|--|
| 3.4.1            | Frequency bands   | Some bands may be applied regionally.  |
| 3.4.2            | Tx-Rx Frequency Separation  | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 3.5.             | Channel arrangement   | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 6.2.1.2          | Base station 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 4.4.1.                    |
| 6.5.2.1          | Spectrum emission mask  | The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.   |
| 6.5.3.4.1        | 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- [4], are applied.  |
| 6.5.3.4.2        | 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- [4], are applied.  |
| 6.5.3.4.4.1      | 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.  |
| 6.5.3.4.4.2      | 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.   |
| 6.5.3.4.5.1      | 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.   |
| 6.5.3.4.5.2      | 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.   |
| 6.5.3.4.6        | Co-existence with PHS   | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.   |
| 6.5.3.4.7        | Co-existence with services in adjacent frequency bands                              | This requirement may be applied for the protection in bands adjacent to the downlink band as defined in clause 3.4.1 in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.5.3.4.8.1      | Co-existence with UTRA TDD – Operation in the same geographic area                  | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.  |
| 6.5.3.4.8.2      | Co-existence with UTRA TDD – Co-located base stations                               | This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.   |
| 6.5.3.4.9.1      | Co-existence with UTRA in frequency band III -Operation in the same geographic area | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.                                     |
| 6.5.3.4.9.2      | Co-existence with UTRA in frequency band III - Co-located base stations             | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| 6.5.3.4.10.1     | Co-existence with UTRA in frequency band I -Operation in the same geographic area   | This requirement may be applied for the protection of UTRA UE in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.                                     |
| 6.5.3.4.10.2     | Co-existence with UTRA in frequency band I - Co-located base stations               | This requirement may be applied for the protection of UTRA BTS receivers in frequency band I when UTRA BS in frequency band I and III are co-located.  |
| 6.5.3.4.11.1     | Co-existence with PCS1900 - Co-located base stations                                | This requirement may be applied for the protection of PCS 1900 BTS receivers when PCS 1900 BTS   |

|              |  |  |
|--------------|--|--|
|              |  | and UTRA BS are co-located.  |
| 6.5.3.4.12.1 | Co-existence with GSM 850 - Co-located base stations | This requirement may be applied for the protection of GSM 850 BTS receivers when GSM 850 BTS and UTRA BS are co-located.   |
| 7.5          | Blocking characteristic                              | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 7.5          | Blocking characteristics                             | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900, GSM850, PCS 1900 and BS operating in the /DCS1800 band (GSM or UTRA) are co-located. |
| 7.6          | Intermodulation characteristics                      | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
| 7.7          | Spurious emissions                                   | The requirement is applied according to what frequency bands in clause 3.4.1 that are supported by the BS.   |
|              | HSDPA*   | The portion of HSDPA(High Speed Downlink Packet Access) is not applicable to ARIB standards by the time when ARIB is prepared to transpose.  |

Note: HSDPA\*: This regional requirement should be reviewed to check its necessity every TSG RAN meeting.

**- Next Section Changed -**

**6.5.3.4.4 Co-existence with GSM 900**

**6.5.3.4.4.1 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.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

**6.5.3.4.4.1.1 Minimum Requirement**

The power of any spurious emission shall not exceed.

**Table 6.27: BS Spurious emissions limits for BS in geographic coverage area of GSM 900**

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

**6.5.3.4.4.2 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.

**6.5.3.4.4.2.1 Minimum Requirement**

The power of any spurious emission shall not exceed.

**Table 6.28: BS Spurious emissions limits for protection of the BTS receiver**

| Band               | Maximum Level | Measurement Bandwidth | Note |
|--------------------|---------------|-----------------------|------|
| 876 MHz to 915 MHz | -98 dBm       | 100 kHz               |      |

#### 6.5.3.4.5 Co-existence with DCS 1800

##### 6.5.3.4.5.1 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.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

##### 6.5.3.4.5.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.29: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800**

| Operating Band | Band                   | Maximum Level | Measurement Bandwidth | Note |
|----------------|------------------------|---------------|-----------------------|------|
| I              | 1 805 MHz to 1 880 MHz | -47 dBm       | 100 kHz               |      |
| I              | 1 710 MHz to 1 785 MHz | -61 dBm       | 100 kHz               |      |
| III            | 1 710 MHz to 1 785 MHz | -61 dBm       | 100 kHz               |      |

#### 6.5.3.4.5.2 Co-located basestations

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

##### 6.5.3.4.5.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.30: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| Operating Band | Band                   | Maximum Level | Measurement Bandwidth | Note |
|----------------|------------------------|---------------|-----------------------|------|
| I              | 1 710 MHz to 1 785 MHz | -98 dBm       | 100 kHz               |      |
| III            | 1 710 MHz to 1 785 MHz | -98 dBm       | 100 kHz               |      |

- Next Section Changed -

## 6.5.3.7.4 Co-existence with GSM 900

## 6.5.3.7.4.1 Operation in the same geographic area

**Table 6.38: BS Spurious emissions limits for BS in geographic coverage area of GSM 900**

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

## 6.5.3.7.4.2 Co-located base stations

**Table 6.39: BS Spurious emissions limits for protection of the BTS receiver**

| Band               | Maximum Level | Measurement Bandwidth | Note |
|--------------------|---------------|-----------------------|------|
| 876 MHz to 915 MHz | -98 dBm       | 100 kHz               |      |

## 6.5.3.7.5 Co-existence with DCS 1800

## 6.5.3.7.5.1 Operation in the same geographic area

**Table 6.40: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800**

| Operating Band | Band                   | Maximum Level | Measurement Bandwidth | Note |
|----------------|------------------------|---------------|-----------------------|------|
| I              | 1 805 MHz to 1 880 MHz | -47 dBm       | 100 kHz               |      |
| I              | 1 710 MHz to 1 785 MHz | -61 dBm       | 100 kHz               |      |
| III            | 1 710 MHz to 1 785 MHz | -61 dBm       | 100 kHz               |      |

## 6.5.3.7.5.2 Co-located base stations

**Table 6.41: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| Operating Band | Band                   | Maximum Level | Measurement Bandwidth | Note |
|----------------|------------------------|---------------|-----------------------|------|
| I              | 1 710 MHz to 1 785 MHz | -98 dBm       | 100 kHz               |      |
| III            | 1 710 MHz to 1 785 MHz | -98 dBm       | 100 kHz               |      |

## CHANGE REQUEST

⌘ **25.141 CR 264** ⌘ rev      ⌘ Current version: **3.11.0** ⌘

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

|                        |   |                 |   |
|------------------------|---|-----------------|---|
| <b>Title:</b>          | ⌘ FDD – GSM co-existence in the Same Geographic Area                          |                 |   |
| <b>Source:</b>         | ⌘ RAN WG4   |                 |   |
| <b>Work item code:</b> | ⌘ TEI   | <b>Date:</b>    | ⌘ 26/11/2002                              |
| <b>Category:</b>       | ⌘ <b>F</b>  | <b>Release:</b> | ⌘ R99                                     |
|                        | Use <u>one</u> of the following categories:                                   |                 | Use <u>one</u> of the following releases: |
|                        | <b>F</b> (correction)   | R96             | 2 (GSM Phase 2)                           |
|                        | <b>A</b> (corresponds to a correction in an earlier release)                  | R97             | (Release 1996)                            |
|                        | <b>B</b> (addition of feature),   | R98             | (Release 1997)                            |
|                        | <b>C</b> (functional modification of feature)                                 | R99             | (Release 1998)                            |
|                        | <b>D</b> (editorial modification)   | Rel-4           | (Release 1999)                            |
|                        | Detailed explanations of the above categories can be found in 3GPP TR 21.900. | Rel-5           | (Release 4)                               |
|                        |   | Rel-6           | (Release 5)                               |
|                        |   |                 | (Release 6)                               |

|                                      |  |
|--------------------------------------|--|
| <b>Reason for change:</b>            | ⌘ Requirements to protect GSM BTS receiver (UL band) in case where FDD and GSM is deployed in the Same Geographic Area are missing.  |
| <b>Summary of change:</b>            | ⌘ Requirements for FDD to protect GSM BTS receiver in case of deployment in the Same Geographic Area is introduced.  |
| <b>Consequences if not approved:</b> | ⌘ Co-existence of FDD and GSM in the Same Geographic Area can not be guaranteed based on the requirements in 3GPP specifications.<br>A generic co-existence analysis of FDD and GSM is not possible as it is possible for other systems.<br><br><b>Isolated Impact Analysis:</b><br>GSM network performance could be affected by to high FDD Spurious Emission if this CR is not approved.<br>Approval of this CR would not affect FDD implementation behaving like indicated in the CR. |

|                              |  |                     |   |   |  |  |   |  |   |                           |             |
|------------------------------|--|---------------------|---|---|--|--|---|--|---|---------------------------|-------------|
| <b>Clauses affected:</b>     | ⌘ 4.7, 6.5.3.4.4, 6.5.3.4.5, 6.5.3.7.4, 6.5.3.7.5  |                     |   |   |  |  |   |  |   |                           |             |
| <b>Other specs affected:</b> | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">X</td> </tr> </table> | Y                   | N | X |  |  | X |  | X | Other core specifications | ⌘ TS 25.104 |
|                              | Y  | N                   |   |   |  |  |   |  |   |                           |             |
|                              | X  |                     |   |   |  |  |   |  |   |                           |             |
|                              | X  |                     |   |   |  |  |   |  |   |                           |             |
|                              | X  |                     |   |   |  |  |   |  |   |                           |             |
|                              |  | Test specifications |   |   |  |  |   |  |   |                           |             |
|                              |  | O&M Specifications  |   |   |  |  |   |  |   |                           |             |
| <b>Other comments:</b>       | ⌘ Equivalent CRs in other Releases: CR250 cat. A to 25.141 v4.6.0, CR252 cat. A to 25.141 v5.4.0   |                     |   |   |  |  |   |  |   |                           |             |

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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.

## 4.7 Regional requirements

Some requirements in TS 25.141 may only apply in certain regions. Table 4.4 lists all requirements that may be applied differently in different regions.



Table 4.4: List of regional requirements

| Subclause number | Requirement  | Comments  |
|------------------|--|---|
| 3.4.1            | Frequency bands  | Some bands may be applied regionally.   |
| 3.4.2            | Tx-Rx Frequency Separation   | The requirement is applied according to what frequency bands in subclause 3.4.1 that are supported by the BS.   |
| 6.2.1.2          | Base station 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 4.4.1.   |
| 6.5.2.1          | Spectrum emission mask   | The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.  |
| 6.5.3.4.1        | 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 [4], are applied.  |
| 6.5.3.4.2        | 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 [4], are applied.  |
| 6.5.3.4.4.1      | 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.   |
| 6.5.3.4.4.2      | 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.  |
| 6.5.3.4.5.1      | 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.  |
| 6.5.3.4.5.2      | 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.  |
| 6.5.3.4.6        | Co-existence with PHS  | This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.  |
| 6.5.3.4.7        | Co-existence with services in adjacent frequency bands             | This requirement may be applied for the protection in bands adjacent to 2110-2170 MHz, as defined in subclause 3.4.1(a) and 1930-1990 MHz, as defined in subclause 3.4.1(b) in geographic areas in which both an adjacent band service and UTRA are deployed. |
| 6.5.3.4.8.1      | Co-existence with UTRA TDD – Operation in the same geographic area | This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.   |
| 6.5.3.4.8.2      | Co-existence with UTRA TDD – Co-located base stations              | This requirement may be applied for the protection of UTRA-TDD 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 3.4.1 that are supported by the BS.   |
| 7.5              | Blocking characteristics   | This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900/DCS1800 BS are co-located.   |

- Next Section Changed -

## 6.5.3.4.4 Co-existence with GSM 900

## 6.5.3.4.4.1 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.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

## 6.5.3.4.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.27: BS Spurious emissions limits for BS in geographic coverage area of GSM 900**

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

## 6.5.3.4.4.2 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.

## 6.5.3.4.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.28: BS Spurious emissions limits for protection of the BTS receiver**

| Band               | Maximum Level | Measurement Bandwidth | Note |
|--------------------|---------------|-----------------------|------|
| 876 MHz to 915 MHz | -98 dBm       | 100 kHz               |      |

## 6.5.3.4.5 Co-existence with DCS 1800

## 6.5.3.4.5.1 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.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

## 6.5.3.4.5.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

**Table 6.29: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800**

| Band                   | Maximum Level | Measurement Bandwidth | Note |
|------------------------|---------------|-----------------------|------|
| 1710 MHz to 1785 MHz   | -61 dBm       | 100 kHz               |      |
| 1 805 MHz to 1 880 MHz | -47 dBm       | 100 kHz               |      |

6.5.3.4.5.2 Co-located basestations

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

6.5.3.4.5.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

**Table 6.30: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| Band                   | Maximum Level | Measurement Bandwidth | Note |
|------------------------|---------------|-----------------------|------|
| 1 710 MHz to 1 785 MHz | -98 dBm       | 100 kHz               |      |

- Next Section Changed –

6.5.3.7.4 Co-existence with GSM 900

6.5.3.7.4.1 Operation in the same geographic area

**Table 6.38: BS Spurious emissions limits for BS in geographic coverage area of GSM 900**

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

6.5.3.7.4.2 Co-located base stations

**Table 6.39: BS Spurious emissions limits for protection of the BTS receiver**

| Band               | Maximum Level | Measurement Bandwidth | Note |
|--------------------|---------------|-----------------------|------|
| 876 MHz to 915 MHz | -98 dBm       | 100 kHz               |      |

6.5.3.7.5 Co-existence with DCS 1800

6.5.3.7.5.1 Operation in the same geographic area

**Table 6.40: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800**

| Band                   | Maximum Level | Measurement Bandwidth | Note |
|------------------------|---------------|-----------------------|------|
| 1710 MHz to 1785 MHz   | -61 dBm       | 100 kHz               |      |
| 1 805 MHz to 1 880 MHz | -47 dBm       | 100 kHz               |      |

## 6.5.3.7.5.2 Co-located base stations

**Table 6.41: BS Spurious emissions limits for BS co-located with DCS 1800 BTS**

| <b>Band</b>            | <b>Maximum Level</b> | <b>Measurement Bandwidth</b> | <b>Note</b> |
|------------------------|----------------------|------------------------------|-------------|
| 1 710 MHz to 1 785 MHz | -98 dBm              | 100 kHz                      |             |