

TSG-RAN Meeting #18
New-Orleans, USA, 03 - 06 December 2002

RP-020715

Title: CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.302

Source: TSG-RAN WG2

Agenda item: 7.2.3

| Doc-1st- | Status- | Spec | CR | Rev | Phase | Subject | Cat | Versio | Versio |
|-----------------|----------------|-------------|-----------|------------|--------------|---|------------|---------------|---------------|
| R2-023041 | agreed | 25.302 | 132 | - | R99 | Two realisations of an empty transport format | F | 3.14.0 | 3.15.0 |
| R2-023042 | agreed | 25.302 | 133 | - | Rel-4 | Two realisations of an empty transport format | A | 4.6.0 | 4.7.0 |
| R2-023043 | agreed | 25.302 | 134 | - | Rel-5 | Two realisations of an empty transport format | A | 5.2.0 | 5.3.0 |

CHANGE REQUEST

25.302 CR 132 # rev - # Current version: 3.14.0

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

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|------------------------|--|-----------------|---|
| Title: | # Two realisations of an Empty Transport Format | | |
| Source: | # Philips | | |
| Work item code: | # TEI | Date: | # October 2002 |
| Category: | # F | Release: | # R99 |
| | <i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. | | <i>Use one of the following releases:</i> 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) |

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| Reason for change: | # 25.302 only covers one out of the two realisations of an Empty Transport Format, suggesting that there are only Empty Transport Formats, which always have a CRC. |
| Summary of change: | # Addition of text, which describes the realisation of an Empty Transport Format, where no CRC bits are added. |
| | Isolated Impact Analysis Correction is related to Downlink outer loop power control Supplementing Stage 2 description, where the specification was not sufficiently explicit. |
| Consequences if not approved: | # Mis-alignment between Stage 2 and Stage 3 descriptions concerning Transport Format characteristics related to Downlink Outer Loop Power Control. |

| | | | | | | | | | | | |
|------------------------------|---|---|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--|--|
| Clauses affected: | # 7.1.6, 11 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <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> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications # Test specifications # O&M Specifications # | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Y | N | | | | | | | | | | |
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| Other comments: | # | | | | | | | | | | |

How to create CRs using this form:

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

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

7.1.6 Transport Format

This is defined as a format offered by L1 to MAC (and vice versa) for the delivery of a Transport Block Set during a Transmission Time Interval on a Transport Channel. The Transport Format constitutes of two parts – one *dynamic* part and one *semi-static* part.

Attributes of the dynamic part are:

- Transport Block Size;
- Transport Block Set Size;
- Transmission Time Interval (optional dynamic attribute for TDD only);

Attributes of the semi-static part are:

- Transmission Time Interval (mandatory for FDD, optional for the dynamic part of TDD NRT bearers);
- error protection scheme to apply:
 - type of error protection, turbo code, convolutional code or no channel coding (TDD only);
 - coding rate;
 - static rate matching parameter;
- size of CRC.

In the following example, the Transmission Time Interval is seen as a semi-static part.

EXAMPLE:

Dynamic part: {320 bits, 640 bits}, Semi-static part: {10ms, convolutional coding only, static rate matching parameter = 1}.

An empty Transport Format is defined as a Transport Format that has Block Set Size equal to zero.

For the two realisations of an empty Transport Format see section 11.

[...]

11 Transport block transmission

Data exchange between MAC and the physical layer, is defined in terms of Transport Block Sets (TBS). On a Transport Channel, one Transport Block Set can be transmitted for every Transmission Time Interval. A TBS consists of one or several Transport Blocks which shall be numbered $1, \dots, m, \dots, M$ and is delivered in the order of the index m . A Transport Block is identical with a MAC PDU. A Transport Block (MAC PDU) is a bit string ordered from first to last, where the first and last bits are numbered 1 and A , respectively, where A is the number of bits of the Transport Block. In case of Transport Block size=0 bit and $M \neq 0$, only parity bits as given by the CRC size are sent and $A=0$. This case is one realisation of an empty Transport Format. The second realisation of an empty Transport Format is represented by $M=0$ (no transport block). In this case, no parity bits are transmitted for this Transport Format.

The bits of the m th Transport Block in a TBS, are denoted as a_{im1}, \dots, a_{imA} for a Transport Channel identified by an index i (cf. [3] and [4]).

CHANGE REQUEST

25.302 CR 133 # rev **-** # Current version: **4.6.0**

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

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

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|------------------------|--|-----------------|---|
| Title: | # Two realisations of an Empty Transport Format | | |
| Source: | # Philips | | |
| Work item code: | # TEI | Date: | # October 2002 |
| Category: | # A | Release: | # Rel-4 |
| | Use <u>one</u> of the following categories: | | Use <u>one</u> of the following releases: |
| | F (correction) | 2 | (GSM Phase 2) |
| | A (corresponds to a correction in an earlier release) | R96 | (Release 1996) |
| | B (addition of feature), | R97 | (Release 1997) |
| | C (functional modification of feature) | R98 | (Release 1998) |
| | D (editorial modification) | R99 | (Release 1999) |
| | Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | Rel-4 | (Release 4) |
| | | Rel-5 | (Release 5) |
| | | Rel-6 | (Release 6) |

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| Reason for change: | # 25.302 only covers one out of the two realisations of an Empty Transport Format, suggesting that there are only Empty Transport Formats, which always have a CRC. |
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| Clauses affected: | # 7.1.6, 11 | | | | | | | | | | |
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| Y | N | | | | | | | | | | |
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| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | |
| | | Test specifications | # | | | | | | | | |
| | | O&M Specifications | # | | | | | | | | |
| Other comments: | # | | | | | | | | | | |

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EXAMPLE:

Dynamic part: {320 bits, 640 bits}, Semi-static part: {10ms, convolutional coding only, static rate matching parameter = 1}.

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Data exchange between MAC and the physical layer, is defined in terms of Transport Block Sets (TBS). On a Transport Channel, one Transport Block Set can be transmitted for every Transmission Time Interval. A TBS consists of one or several Transport Blocks which shall be numbered $1, \dots, m, \dots, M$ and is delivered in the order of the index m . A Transport Block is identical with a MAC PDU. A Transport Block (MAC PDU) is a bit string ordered from first to last, where the first and last bits are numbered 1 and A , respectively, where A is the number of bits of the Transport Block. In case of Transport Block size=0 bit and $M \neq 0$, only parity bits as given by the CRC size are sent and $A=0$. This case is one realisation of an empty Transport Format. The second realisation of an empty Transport Format is represented by $M=0$ (no transport block). In this case, no parity bits are transmitted for this Transport Format.

The bits of the m th Transport Block in a TBS, are denoted as a_{im1}, \dots, a_{imA} for a Transport Channel identified by an index i (cf. [3] and [4]).

CHANGE REQUEST

25.302 CR 134 # rev - # Current version: 5.2.0

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

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|------------------------|--|---|----------------|
| Title: | # Two realisations of an Empty Transport Format | | |
| Source: | # Philips | | |
| Work item code: | # TEI | Date: | # October 2002 |
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This subclause applies to transport channel types other than HS-DSCH.

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