

TSG RAN Meeting #20
Hämeenlinna, Finland, 3 - 6 June, 2003

RP-030327

Title CRs (Rel-5 only) to TS 25.425 and 25.435 on Clarification of Capacity Allocation Interval Definition
Source TSG RAN WG3
Agenda Item 7.3.6

| RAN3 Tdoc | Spec | curr. Vers. | new Vers. | REL | CR | Rev | Cat | Title | Work item |
|-----------|--------|-------------|-----------|-------|-----|-----|-----|--|--------------|
| R3-030916 | 25.425 | 5.4.0 | 5.5.0 | REL-5 | 062 | 1 | F | Clarification of Capacity Allocation Interval Definition | HSDPA-lublur |
| R3-030917 | 25.435 | 5.4.0 | 5.5.0 | REL-5 | 101 | 1 | F | Clarification of Capacity Allocation Interval Definition | HSDPA-lublur |

CHANGE REQUEST

25.425 CR 062 # rev 1 # 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

| | | | |
|------------------------|--|-----------------|---|
| Title: | # Clarification of Capacity Allocation Interval Definition | | |
| Source: | # RAN WG3 | | |
| Work item code: | # HSDPA-lublur | Date: | # 19/05/2003 |
| Category: | # F | Release: | # Rel-5 |
| | 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) |

| | |
|--------------------------------------|--|
| Reason for change: | # Rev1: Wording for the interpretation of the value 0 for an Interval. |
| | Rev0: The control frame HS-DSCH CAPACITY ALLOCATION contains an IE <i>HS-DSCH Interval</i> and analogously the control frame CAPACITY ALLOCATION an IE <i>Interval</i> . The definition of the IE <i>Interval</i> or IE <i>HS-DSCH Interval</i> leaves room for several different interpretations, which may lead to interoperability issues. |
| | More specifically: |
| | - It is not clear what a value zero of such an interval means. One interpretation is that a value of zero is equivalent to forbid the usage of granted credits another that it is equivalent to allow the usage of the credits in exactly one data frame to be sent immediately after reception of an allocation. Both interpretations are not very sensible leading to a common opinion in RAN3 that it has been forgotten to exclude the value 0 from the value range and it is assumed that careful implementations would avoid the use of such a value with dubious meaning. |
| | - It is not clear when such an interval starts. One interpretation is that an interval starts immediately after reception of an allocation another that it starts with the first transmission of a data frame starting to consume the credits granted for this interval. Discussion in RAN3 has shown that the first interpretation is considered as the most natural one. |
| Summary of change: | # It has been clarified that a value zero should not be used for <i>HS-DSCH Interval</i> IE and <i>Interval</i> IE. In case such a value is received from an implementation not confirming to this version of the specification it is clarified that no credits shall be used. It has also been clarified that an interval starts immediately after reception of an allocation. |
| Consequences if not approved: | # If not approved the slight possibility remains that two implementations choose different interpretations as outlined above. This could lead to cases that DRNC |

might receive data despite its assumption that no credits are outstanding or that a SRNC might interpret an allocation as granting nothing where the DRNC intended to grant a single transmission.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has isolate impact towards the previous version. Because it provides a correction to a function where the specification was not sufficiently explicit. The CR would not affect implementations behaving like indicated in the CR. It would affect implementations supporting the corrected functionality otherwise. This CR has an impact from the functional point of view. The impact can be considered isolated because the change affects one system function namely the capacity allocation.

Impact assessment towards the previous release of the specification:

This CR has isolate impact towards the previous version. Because it provides a correction to a function where the specification was not sufficiently explicit. The CR would not affect implementations behaving like indicated in the CR. It would affect implementations supporting the corrected functionality otherwise. This CR has an impact from the functional point of view. The impact can be considered isolated because the change affects one system function namely the capacity allocation.

Clauses affected: ⌘ 6.3.3.3.4, 6.3.3.6.4

| | | | | |
|------------------------------|-------------------------------------|-------------------------------------|---------------------------|----------------------------|
| Other specs affected: | <input type="checkbox"/> | <input type="checkbox"/> | Other core specifications | ⌘ CR101r1 TS 25.435 v5.4.0 |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| | <input type="checkbox"/> | <input checked="" type="checkbox"/> | O&M Specifications | |

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.

... Text omitted ...

6.3.3.3.4 Interval

Description: The value of this field indicates the time interval during which the *Credits-IE* granted in the DSCH CAPACITY ALLOCATION Control Frame may be used. [The first interval starts immediately after reception of the DSCH CAPACITY ALLOCATION control frame, subsequent intervals start immediately after the previous interval has elapsed.](#) This value is only applied to the DSCH transport channel.

Value range: {0-2550 ms}. [Value 0 shall be interpreted that none of the credits shall be used.](#)

Granularity: 10ms.

Field Length: 8 bits.

... Text omitted ...

6.3.3.6.4 HS-DSCH Interval

Description: The value of this field indicates the time interval during which the *HS-DSCH Credits IE* granted in the HS-DSCH CAPACITY ALLOCATION Control Frame may be used. [The first interval starts immediately after reception of the HS-DSCH CAPACITY ALLOCATION control frame, subsequent intervals start immediately after the previous interval has elapsed.](#) This value is only applied to the HS-DSCH transport channel.

Value range: Refer to subclause 6.3.3.3.4.

Granularity: Refer to subclause 6.3.3.3.4.

Field Length: Refer to subclause 6.3.3.3.4.

... Text omitted ...

CHANGE REQUEST

25.435 CR 101 # rev 1 # 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

| | | | |
|------------------------|--|-----------------|---|
| Title: | # Clarification of Capacity Allocation Interval Definition | | |
| Source: | # RAN WG3 | | |
| Work item code: | # HSDPA-lublur | Date: | # 19/05/2003 |
| Category: | # F | Release: | # Rel-5 |
| | Use <i>one</i> of the following categories: | | Use <i>one</i> 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) |

| | |
|---------------------------|--|
| Reason for change: | # Rev1: Wording for the interpretation of the value 0 for an Interval. |
| | Rev0: The control frame HS-DSCH CAPACITY ALLOCATION contains an IE <i>HS-DSCH Interval</i> . The definition of IE <i>HS-DSCH Interval</i> leaves room for several different interpretations, which may lead to interoperability issues. |
| | More specifically: |
| | - It is not clear what a value zero of such an interval means. One interpretation is that a value of zero is equivalent to forbid the usage of granted credits another that it is equivalent to allow the usage of the credits in exactly one data frame to be sent immediately after reception of an allocation. Both interpretations are not very sensible leading to a common opinion in RAN3 that it has been forgotten to exclude the value 0 from the value range and it is assumed that careful implementations would avoid the use of such a value with dubious meaning. |
| | - It is not clear when such an interval starts. One interpretation is that an interval starts immediately after reception of an allocation another that it starts with the first transmission of a data frame starting to consume the credits granted for this interval. Discussion in RAN3 has shown that the first interpretation is considered as the most natural one. |
| Summary of change: | # It has been clarified that a value zero should not be used for <i>HS-DSCH Interval</i> IE. In case such a value is received from an implementation not confirming to this version of the specification it is clarified that no credits shall be used. It has also been clarified that an interval starts immediately after reception of an allocation. |

Consequences if not approved: ☼ If not approved the slight possibility remains that two implementations choose different interpretations as outlined above. This could lead to cases that Node B might receive data despite its assumption that no credits are outstanding or that a CRNC might interpret an allocation as granting nothing where the Node B intended to grant a single transmission.

Impact Analysis:
 Impact assessment towards the previous version of the specification (same release):
 This CR has isolate impact towards the previous version. Because it provides a correction to a function where the specification was not sufficiently explicit. The CR would not affect implementations behaving like indicated in the CR. It would affect implementations supporting the corrected functionality otherwise. This CR has an impact from the functional point of view. The impact can be considered isolated because the change affects one system function namely the capacity allocation.

Impact assessment towards the previous release of the specification:
 This CR has isolate impact towards the previous version. Because it provides a correction to a function where the specification was not sufficiently explicit. The CR would not affect implementations behaving like indicated in the CR. It would affect implementations supporting the corrected functionality otherwise. This CR has an impact from the functional point of view. The impact can be considered isolated because the change affects one system function namely the capacity allocation.

Clauses affected: ☼ 6.3.3.11.4

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

☼ CR062r1 TS 25.425 v5.4.0

Other comments: ☼

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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.

... Text omitted ...

6.3.3.11.4 HS-DSCH Interval

Description: The value of this field indicates the time interval during which the *HS-DSCH Credits* granted in the HS-DSCH CAPACITY ALLOCATION Control Frame may be used. The first interval starts immediately after reception of the DSCH CAPACITY ALLOCATION control frame, subsequent intervals start immediately after the previous interval has elapsed. This value is only applied to the HS-DSCH transport channel.

Value range: {0-2550 ms}. Value 0 shall be interpreted that none of the credits shall be used.

Granularity: 10ms.

Field Length: 8 bits.

... Text omitted ...