

<h2 style="margin: 0;">CHANGE REQUEST</h2>		<small>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</small>
<b>3G25.212</b>	<b>CR</b>	<b>024</b>
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>		<small>↑ CR number as allocated by MCC support team</small>
For submission to: <input style="width: 100px;" type="text"/>	for approval <input checked="" type="checkbox"/>	Current Version: <input style="width: 100px;" type="text" value="3.0.0"/>
<small>list expected approval meeting # here ↑</small>	for information <input type="checkbox"/>	strategic <input type="checkbox"/> (for SMG use only)
		non-strategic <input type="checkbox"/>

Form: CR cover sheet, version 2 for 3GPP and SMG    The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM     ME     UTRAN / Radio     Core Network   
(at least one should be marked with an X)

**Source:**     **Date:**

**Subject:**

**Work item:**

<b>Category:</b>	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	<b>Release:</b>	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
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(only one category shall be marked with an X)

**Reason for change:**

**Clauses affected:**

<b>Other specs affected:</b>	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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**Other comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

## 4.2.7.2.1 Determination of rate matching parameters for fixed positions of TrCHs

First an intermediate calculation variable  $N_{i,*}$  is calculated for all transport channels  $i$  by the following formula:

$$N_{i,*} = \frac{1}{F_i} \cdot \max_{l \in TFS(i)} N_{i,l}^{TTI}$$

The computation of the  $\Delta N_{i,l}^{TTI}$  parameters is then performed in for all TrCH  $i$  and all TF  $l$  by the following formula, where  $\Delta N_{i,*}$  is derived from  $N_{i,*}$  by the formula given at section 4.2.7:

$$\text{EMBED } \Delta N_{max} = F_i \cdot \Delta N_{i,*}$$

If  $\text{EMBED } \Delta N_{max} = 0$  then, for TrCH  $i$ , the output data of the rate matching is the same as the input data and the rate matching algorithm of section 4.2.7.4 does not need to be executed. In this case we have :

$$\forall l \in TFS(i) \Delta N_{i,l}^{TTI} = 0$$

Otherwise, for determining  $e_{ini}$ ,  $e_{plus}$ ,  $e_{minus}$ , and  $N$  the following parameters are needed:

For convolutional codes,

$$\text{EMBED } \Delta N = \Delta N_{max}$$

$$a=2$$

$$N_{max} = \max_{l \in TFS(i)} N_{il}^{TTI}$$

For each transmission time interval of TrCH  $i$  with TF  $l$ , the rate-matching pattern is calculated with the algorithm in section 4.2.7.4. The following parameters are used as input:

$$N = N_{il}^{TTI}$$

$$e_{ini} = N_{max}$$

$$e_{plus} = a \cdot N_{max}$$

$$e_{minus} = a \cdot |\Delta N|$$

Puncturing if  $\Delta N < 0$ , repetition otherwise. The values of  $\Delta N_{i,l}^{TTI}$  may be computed by counting repetitions or puncturing when the algorithm of section 4.2.7.4 is run.

For turbo codes, if repetition is to be performed, such as  $\Delta N_{max} > 0$  EMBED, parameters for turbo codes are the same as parameter for convolutional codes. If puncturing is to be performed, parameters are as follows.

$a=2$  for  $Y$  sequence,

$a=1$  for  $Y'$  sequence.

The  $X$  bits shall not be punctured.

$$\Delta N = \begin{cases} \lfloor \Delta N_{max} / 2 \rfloor & \text{for } Y \text{ sequence} \\ \lceil \Delta N_{max} / 2 \rceil & \text{for } Y' \text{ sequence} \end{cases} \quad \text{EMBED}$$

$$N_{max} = \max_{l \in TFS(i)} \lfloor N_{il}^{TTI} / 3 \rfloor$$

For each transmission time interval of TrCH  $i$  with TF  $l$ , the rate-matching pattern is calculated with the algorithm in section 4.2.7.4. The following parameters are used as input:

$$N = \lfloor N_{il}^{TTI} / 3 \rfloor$$

$$e_{ini} = N_{max}$$

$$e_{plus} = a \cdot N_{max}$$

$$e_{minus} = a \cdot |\Delta N|$$

Puncturing if  $\Delta N < 0$ , repetition otherwise.

The values of  $\Delta N_{i,l}^{TTI}$  may be computed by counting repetitions or puncturing when the algorithm of section 4.2.7.4 is run.

