

**3GPP TSG-CN Meeting #23**  
**10th - 12th March 2004. Phoenix, USA.**

**NP-040082**

**Source:** TSG CN WG3  
**Title:** CRs to Rel-5 on Work Item TEI\_5  
**Agenda item:** 8.8  
**Document for:** APPROVAL

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**Introduction:**

This document contains 1 CR to **Rel-5 on Work Item TEI\_5**, that have been agreed by **TSG CN WG3**, and are forwarded to TSG CN Plenary for approval.

<b>WG_tdoc</b>	<b>Spec</b>	<b>CR</b>	<b>R</b>	<b>Cat</b>	<b>Title</b>	<b>Rel</b>	<b>C_Ver</b>
N3-040024	29.007	096		F	Signalling of LLC and HLC	Rel-5	5.8.0

## CHANGE REQUEST

⌘ **29.007 CR 096** ⌘ rev **-** ⌘ Current version: **5.8.0** ⌘

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>	⌘ Signalling of LLC and HLC		
<b>Source:</b>	⌘ TSG_CN WG3		
<b>Work item code:</b>	⌘ TEI_5	<b>Date:</b>	⌘ 03/02/2004
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-5
	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> .		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>	⌘ CR 29.007-053r3 on "Determining the basic service for MT calls" has included a new section for the rules in the VLR. With this CR also some statements for the rules in the VMSC have been changed. Main reason for the CR was an alignment between 29.007 and 23.018. The CR has also changed the sentence "LLC and HLC are sent with the PLMN BC in general to the UE at call set-up." into "In general, the LLC and HLC retrieved from the VLR are sent with the PLMN BC to the UE at call set-up." This restricts the behaviour of the VMSC. If the VMSC takes the ISDN-BC received from the GMSC and maps it to the PLMN BC, then it would also take LLC and HLC received from that link. The restriction is also not covered by 23.018. Therefore, this CR removes the restriction for the VMSC, included by CR 29.007-053r3.
<b>Summary of change:</b>	⌘ Removal of the restriction that LLC and HLC have to be received from the VLR.
<b>Consequences if not approved:</b>	⌘ Unnecessary restriction keeps in the standard.

<b>Clauses affected:</b>	⌘ 10.2.2.4										
<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;">⌘</td> <td style="text-align: center;">X</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 Test specifications O&M Specifications	⌘
Y	N										
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<b>Other comments:</b>	⌘										

### 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.

### 10.2.2.4 Functions in VMSC

When the incoming call arrives, the VMSC attempts to derive a PLMN basic service from the information received in the IAM, and requests information from the VLR to handle the call. In general, the LLC and HLC ~~retrieved from the VLR~~ are sent with the PLMN BC to the UE at call set-up. In particular, however the following rules apply:

- 1) If the Initial Address Message (IAM) contains no ISDN BC and no PLMN or ISDN BC/LLC/HLC was retrieved from the VLR, the call is handled as in subclause 9.2.2.2.
- 2) If there is no ISDN BC in the IAM but a PLMN or ISDN BC/LLC/HLC was retrieved from the VLR, the PLMN or ISDN BC/LLC/HLC retrieved from the VLR applies.
- 3) If there is an ISDN BC in the IAM with the ITC field set to "3,1 kHz audio" but without any associated modem type or indication of facsimile group 3 in the HLC, the PLMN or ISDN BC/LLC/HLC retrieved from the VLR is considered as applicable when it exists. If no PLMN or ISDN BC is retrieved from the VLR, the call is handled as in subclause 9.2.2.2.
- 4) If there is an ISDN BC in the IAM with the ITC field set to "unrestricted digital information" and the fields for the applicable user layer 1 protocol and user rate (except for the 64kbit/s case; see note 22 to table 7B) are available (either in the ISDN BC or ISDN LLC), or if 3,1 kHz audio and a modem type is indicated, this ISDN BC is applicable regardless of what has been retrieved from the VLR. In this case the ISDN BC shall be mapped to an appropriate PLMN BC (refer to table 7B).

As an exception to this the BC retrieved from the VLR is sent to the UE if one of the following applies:

If ITC = UDI/RDI and User Rate = 32 kbit/s /56 kbit/s and User information layer 1 protocol = V.110, I.460/X.30 and the BC retrieved from the VLR indicates FTM, PIAFS or Multimedia.

If ITC = 3,1 kHz audio and User Rate = 28,8 kbit/s and Modem Type = V.34 and the BC retrieved from the VLR indicates Multimedia.

- 5) If there is an ISDN BC in the IAM with the ITC field set to "3,1kHz audio" and there is an HLC indicating "facsimile group 3", the PLMN BC retrieved from the VLR is applicable when it exists. If a PLMN BC with the parameter "information transfer capability" set to "alternate speech/facsimile group 3, starting with speech" (i.e. TS 61) is retrieved from the VLR, this shall be mapped to two PLMN BC-IEs preceded by a repeat indicator, one representing speech, the other representing facsimile group 3.

For TS 61, the order in which the two PLMN BC-IEs are sent towards the UE in the setup message is a network option.

- 6) If there is an ISDN BC in the IAM with the ITC field set to "unrestricted digital information" but without applicable "user layer 1 protocol" and "user rate", etc. fields, in either the ISDN BC or the ISDN LLC, then the PLMN or ISDN BC/LLC retrieved from the VLR is applicable, if available, otherwise subclause 9.2.2.2 applies.
- 7) If there is an ISDN BC in the IAM with the ITC field set to "Speech" and this value differs from the ITC field of the BC retrieved from the VLR for this call, then the BC/LLC/HLC retrieved from the VLR is considered applicable. If no PLMN or ISDN BC is retrieved from the VLR, the call is handled as in subclause 9.2.2.2.

In all cases where the VMSC retrieves a PLMN BC from the VLR, the VMSC may add or modify PLMN-specific parameters in the PLMN BC, as described in subclause 9.2.2, before sending the PLMN BC IE towards the UE.

In all cases when no PLMN or ISDN BC is retrieved from the VLR and no ISDN Compatibility information allowing deduction of a PLMN Bearer Service is available, then no PLMN BC is inserted by the VMSC and subclause 9.2.2.2 applies.

The mapping between PLMN and ISDN BCs is shown in table 7.

The UE may negotiate parameters with the MSC according to the rules defined in 3GPP TS 27.001. If the UE proposes to the network to modify the User Rate as well as the correlated parameters Modem Type and Intermediate Rate in the call confirmed message, the network may accept or release the call (see 3GPP TS 27.001). For multislot, 14.4kbit/s, EDGE and Iu Mode operations, the UE may also propose to the network to modify the Fixed Network User Rate and Other Modem Type parameters (see 3GPP TS 27.001). In case a transparent service is used, the call shall be released. For a non-transparent service with flow control, the MSC/IWF shall use towards the fixed network the unmodified

"fixed network user rate" and shall use the "wanted air interface user rate" or the modified "fixed network user rate" towards the user equipment.

The VMSC may map the received PLMN BC into an ISDN BC according to the rules defined in table 7A. This ISDN BC can be transported together with possibly available LLC and HLC in the access transport parameter of the Answer message (ANM) according to ITU-T Q.763.