

3GPP TSG-CN WG3 Meeting #30
Bangkok, Thailand, 27th - 31st October 2003.

N3-030828

Title: LS on Inter-network accounting for BS30 based services such as video telephony
Source: CN3
To: CN, SA

Contact Person:

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Attachments: **N3-030821** CR to TS 29.007 Backward signaling of service information between VMSC and GMSC for MTC
N3-030713 Discussion paper on inter-networking accounting for BS30 services

1. Overall Description:

CN3 has been requested by CN#21 to study the issue of Inter-network accounting for BS30 based services such as video telephony (cf. NP-030431 and SP-030527).

CN3 has reviewed two documents on that matter proposing solutions:

- **N3-030821**, a CR to TS 29.007 introducing backward signaling from the VMSC to the GMSC making use of the Access Transport parameter in the ISUP Answer message to carry the requested information,
- **N3-030713**, a discussion paper proposing a new parameter to be used for that purpose which has to be standardized by ITU-T.

Both papers have in common that the need for providing the requested information to the GMSC for accounting purposes is recognized as requested by SA1.

The first paper, N3-030821, was supported by a broad majority of delegates. However, one company expressed their reservations against this CR and argued that the CR would not follow the ITU-T principles of accounting in the originating network and would not allow for all interconnection cases. The CR was reviewed and considered technically correct for its limited scope.

The second paper, N3-030713, is proposing an ITU-T based solution to be established via appropriate changes to ITU-T Q.762, Q.763 and Q.764. Although CN3 supported this proposal as a longer-term solution it was felt by a majority of that group that this would run the risk of more time needed to get agreed and thus may not serve the need to have a short-term solution for mobile operators.

This LS is copied to SA since SA#21 has reserved their rights to decide on the release applicability.

2. Actions:

To CN and SA:

ACTION: CN3 kindly asks CN and SA to decide whether a short-term solution should be specified and whether a longer-term solution involving ITU-T should be specified.

3. Date of Next CN3 Meetings:

CN3#31

16-20 Feb 2004

Atlanta, Georgia, USA

CN3#32

10-14 May 2004

Zagreb, Croatia

CHANGE REQUEST

⌘ **29.007 CR 089** ⌘ rev **4** ⌘ Current version: **5.7.0** ⌘

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:	⌘ Backward signalling of service information between VMSC and GMSC for MTC		
Source:	⌘ T-Mobile, Siemens		
Work item code:	⌘ Circuit switched Bearer Services	Date:	⌘ 31/10/2003
Category:	⌘ F	Release:	⌘ Rel-5
	<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)	

Reason for change:	⌘ Information on used services for MTCs is visible at the VMSC after negotiation with the UE, but not necessarily at the GMSC. In order to perform service related functions at GMSC (e.g. accounting) this information has to be transferred from the VMSC to the GMSC and possibly moreover to the connected networks. The solution provided by this CR is: - to map the PLMN BC negotiated with the UE into an ISDN BC as it is the case for MOC (according to table 7A) and then - to transfer the ISDN BC, LLC together with possible HLC in the access transport IE of the ISUP answer message (ANM) from the VMSC to the GMSC.		
Summary of change:	⌘ See attached pages		
Consequences if not approved:	⌘ CN3 is requested by CN#21 and SA#21 to provide a solution for issues discussed in NP-030431.		

Clauses affected:	⌘ 9.2.2.1,9.2.2.2,10,10.2.2.2,10.2.2.4,10.2.2.5										
Other specs Affected:	<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> ⌘ Other core specifications ⌘ ⌘ Test specifications ⌘ ⌘ O&M Specifications ⌘	Y	N		X		X		X		
Y	N										
	X										
	X										
	X										

Other comments: ☹ CRs back to R99 required

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.

***** FIRST MODIFIED SECTION *****

9.2.2.1 Multi-numbering Scheme

In this scheme, the HPLMN will allocate a number of MSISDNs to a subscriber and associate with each of these numbers a Bearer Capability to identify a Bearer or a Teleservice. This Bearer Capability comprises a complete PLMN Bearer Capability (PLMN BC) information element with contents according to 3GPP TS 27.001 and coded as per 3GPP TS 24.008. In either case, when the HLR receives an interrogation relating to an incoming call (i.e. the MAP "Send Routing Information" procedure), it requests a roaming number (MSRN) from the VLR. This request will contain the PLMN BC reflecting the service associated with the called MSISDN, i.e. the PLMN BC is passed to the VLR within the MAP parameter "GSM Bearer Capability" of the message "Provide Roaming Number".

At the VMSC, when the incoming call arrives, the PLMN BC associated with the MSRN are retrieved from the VLR and sent to the UE at call set-up.

Where the PLMN specific parameter "connection element" contained in the retrieved PLMN BC-IE, indicates dual capabilities then the VMSC shall set it according to its capabilities/preferences. Additionally the parameters correlated to "connection element" shall be modified in accordance with 3GPP TS 27.001.

The same applies to the parameter modem type if "autobauding type 1" is indicated but the IWF does not support this feature. The parameter "data compression" may also be modified according to the capabilities of the IWF.

Where single capabilities are indicated then the VMSC shall use the requested values if it is able to support the service requested. If it is unable to support the requested service then it shall set them according to its capabilities/preferences.

Where the Compatibility Information is provided in a degree exhaustive to deduce a PLMN Basic Service (see application rules in subclause 10.2.2), then the VMSC in providing the PLMN BC IE in the setup message shall set the PLMN specific parameters to its capabilities/preferences.

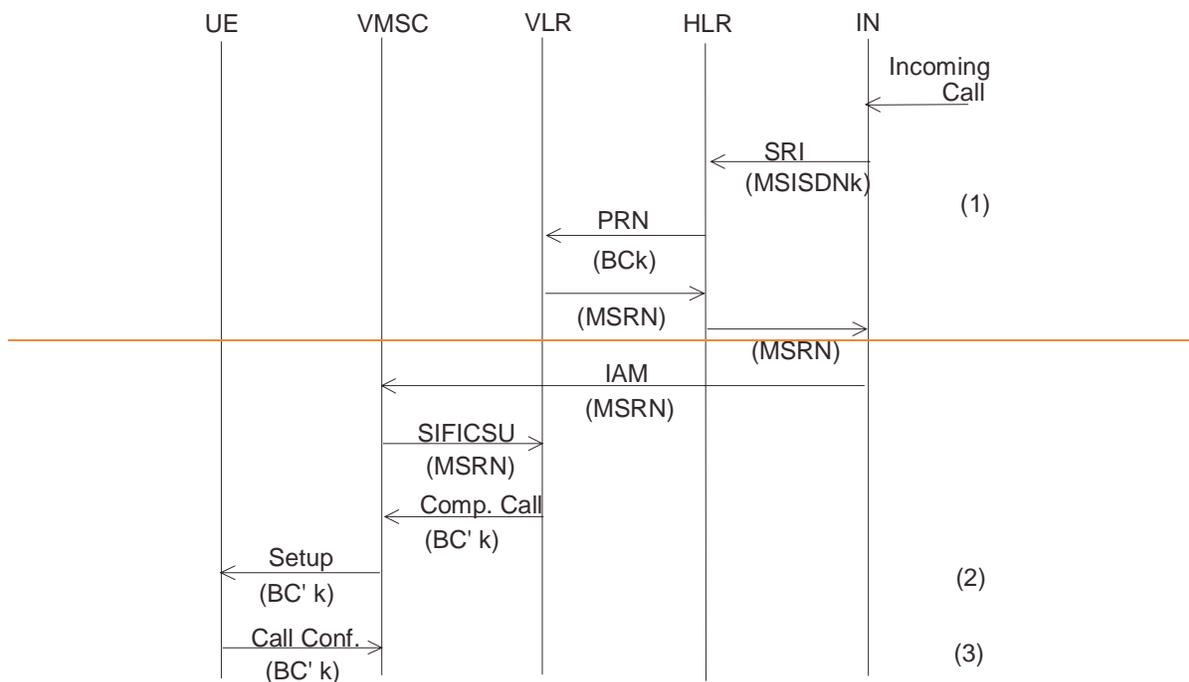
On receipt of a Set-up message containing the compatibility information, the UE will analyse the contents to decide whether the service can be supported (with or without modification, see 3GPP TS 27.001) and the call will be accepted or rejected as appropriate.

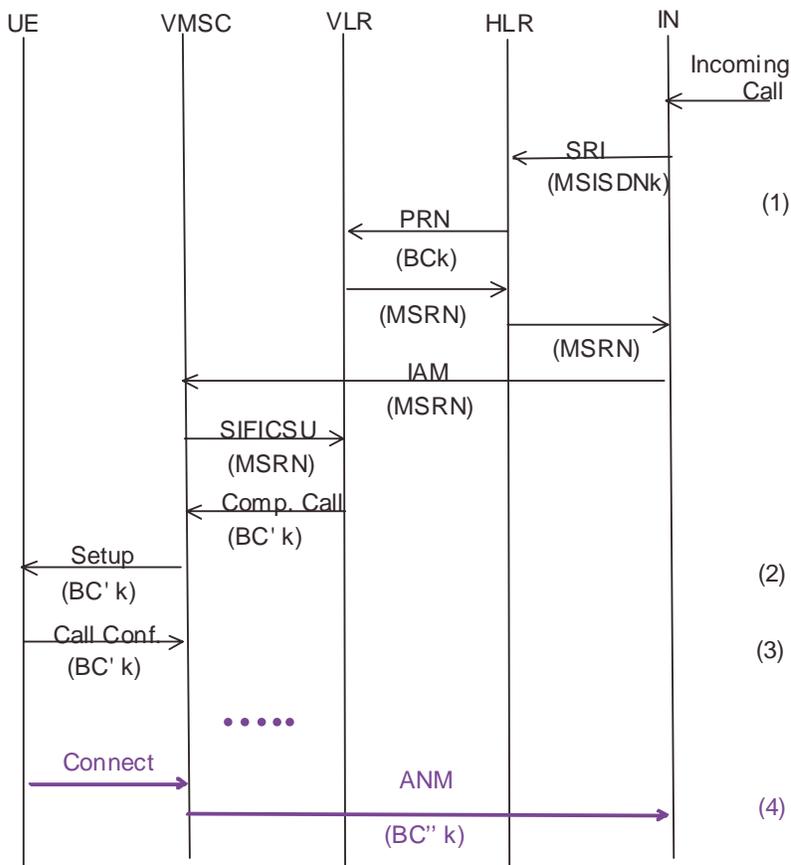
The UE may negotiate parameters with the MSC according to the rules defined in 3GPP TS 27.001. If the UE proposes to the network to modify the User Rate as well as the correlated parameters Modem Type and Intermediate Rate in the call confirmed message or if the UE proposes to the network to modify the Fixed Network User Rate and Other Modem Type parameters for multislot, 14.4kbit/s, EDGE and Iu Mode operations, the network may accept or release the call (see 3GPP TS 27.001).

This negotiation takes place by means of the UE reflecting back to the MSC a complete bearer capability information element in the call confirmed message, with the relevant parameters changed. If this does not take place (i.e. if there is no PLMN BC present in the call confirmed message), then the MSC will assume that the values originally transmitted to the UE are accepted with the following exceptions:

- If in A/Gb or GERAN Iu mode, the PLMN-BC sent with the set-up message contained the "fixed network user rate", "other modem type" and if applicable the "user initiated modification indicator" parameters and no multislot, 14.4 kbit/s, and/or EDGE related parameters (refer to 3GPP TS 27.001 and 24.008) are received in the PLMN-BC of the call confirmed message or no PLMN-BC is received, the MSC shall discard the "fixed network user rate", "other modem type" and "user initiated modification indicator" parameters - the MSC shall use the fall-back bearer service indicated by the remaining parameters of the PLMN-BC on a singleslot configuration (refer to 3GPP TS 48.020 and 3GPP TS 44.021) on the MSC/IWF-RAN link.
- On the other hand, if in A/Gb or GERAN Iu mode the PLMN-BC received with the call confirmed message contain(s) multislot, 14.4kbit/s or EDGE-related parameters the MSC shall apply on the MSC/IWF-RAN link a singleslot or multislot configuration according to the rules defined in 3GPP TS 44.021, 3GPP TS 48.020 and 3GPP TS 24.022. In case the UE signals an ACC containing TCH/F4.8 only and the network does not support TCH/F4.8 channel coding, then the MSC may act as if TCH/F9.6 were included in the ACC.
- If in UTRAN Iu mode the PLMN-BC sent with the set-up message contained the "fixed network user rate", "other modem type" and if applicable the "user initiated modification indicator" parameters, but no related parameters (refer to 3GPP TS 27.001 and 24.008) are received in the PLMN-BC of the call confirmed message or no PLMN-BC is received, the MSC shall release the call.

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.





NOTES: (1) The HLR translates the received MSISDN_ called address (MSISDNk) into the relevant bearer capability information (BCK).
 (2) Some parameters of BCK may be provided/modified according to the MSC's capabilities/preferences. See subclause 9.2.2.
 (3) In the "Call Confirmed" message, the UE may modify some parameters of the BC. See subclause 9.2.2.
 (4) The VMSC may map the PLMN BC (BC'k) into an ISDN BC (BC''k) according to the rules defined in table 7A.

Abbr.: SRI - Send Routing Information.
 PRN - Provide Roaming Number.
 MSRN - Mobile Station Roaming Number.
 IAM - Initial Address Message.
 SIFICSU - Send Information For Incoming Call Set Up.
ANM- Answer Message

Figure 2: Call Flow for a mobile terminated, PSTN originated call where the compatibility information provided are not exhaustive for deducing a PLMN Bearer Service; HLR uses multiple MSISDN numbers with corresponding BCs

***** NEXT MODIFIED SECTION *****

9.2.2.2 Single-numbering Scheme

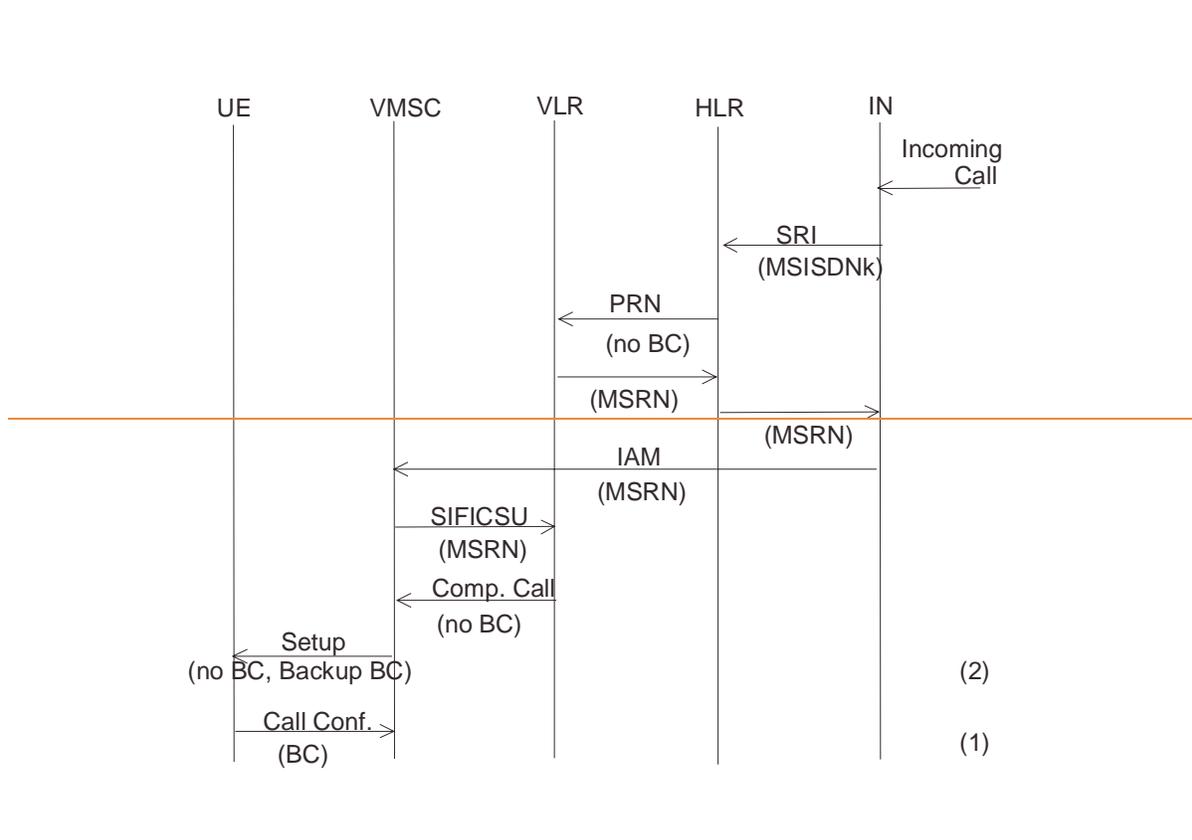
In the single-numbering scheme, the HPLMN will allocate one MSISDN to a subscriber, applicable to all services.

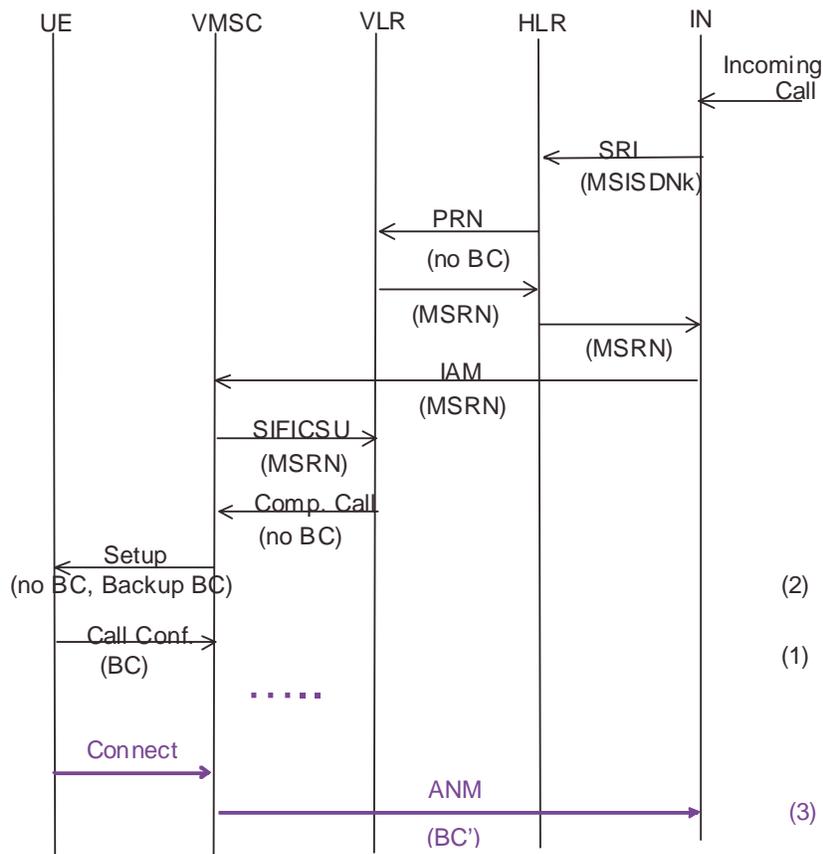
In this case, when the HLR receives an interrogation relating to an incoming call without compatibility information exhaustive for deducing a PLMN Basic Service (i.e. the MAP "Send Routing Information" procedure), the request to the VLR for a roaming number will not contain compatibility information i.e. a PLMN BC.

At the VLR, when the incoming call arrives, there is no PLMN BC associated with the MSRN and so the call set-up to the UE will not contain the PLMN BC information element. However, the VMSC may include all available information in the BACKUP BC information element of the call set-up message, see subclause 10.2.2.7.

In the case the PLMN was not able to provide a PLMN BC, the UE will return a complete single or dual PLMN BC in the Call Confirmed message, indicating the service required by the mobile subscriber. The VMSC will analyse this PLMN BC and optionally perform subscription checking (see 3GPP TS 22.001). If the requested PLMN BC can be supported the call is established, otherwise the call will be released.

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.





NOTE: (1) This BC is derived from information stored in the UE, according to its configuration. The UE may also use the information provided in the Backup BC.
 (2) The Backup BC may be included if the BC is missing.
 (3) The VMSC may map the PLMN BC (BC) into an ISDN BC (BC') according to the rules defined in table 7A
 (34) Abbreviations: see figure 2.

Figure 3: Call Flow for a mobile terminated, PSTN originated call where the compatibility information provided are not exhaustive for deducing a PLMN Bearer Service; HLR uses single MSISDN numbers (no corresponding BC stored). Per call MSRN allocation

***** NEXT MODIFIED SECTION *****

10 Interworking to the ISDN

The interworking to the ISDN is specified on the principle of the network supporting standardized associated signalling protocol as outlined in clause 6, i.e. DSS1 and ISUP. An ISDN not complying with this definition differs - for the purpose of the present document - in that it does not support the compatibility information to that degree necessary for deducing a PLMN Basic Service. These networks will find their reflection in the following where those implications are to be set out.

The calling address sent in a mobile originated call to the ISDN is always the basic MSISDN even if the ISDN user shall use a different MSISDN (multi numbering scheme, see 9.2.2 case a) for a mobile terminated call (call back) as only the basic MSISDN is available at the VLR (see 3GPP TS 29.002).

The scope of this clause is to describe the handling of the content of the Information Elements where "content" is understood to be the value of the parameter fields of the Information Elements, namely BC-IE, HLC and LLC, after the length indicator. For the transport of these Information Elements within the PLMN refer to 3GPP TS 29.002.

The handling of multislot, 14.4kbit/s, EDGE and Iu Mode related parameters of the call control signalling and the applicability of single- or multislot configurations (refer to 3GPP TS 48.020 and 3GPP TS 44.021) is the same as for the PSTN interworking cases.

~~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.~~

***** NEXT MODIFIED SECTION *****

10.2.2.2 Functions in GMSC

At call Set-up, the interrogating node passes in the "send routing information" to the HLR, the ISDN BC, LLC and HLC received in the initial address message. The coding of these parameters shall comply with Q.931 (05/98). For MT calls, and for backward compatibility purposes only, the mapping of the modem type according to ETS 300-102-1 (12/90) shall also be accepted, see note 12 of table 7B.

The information possibly signaled backwards from the VMSC to the GMSC contained in the access transport parameter of the Answer message (ANM) can be used to perform service related functions (e.g. accounting) at the GMSC.

***** NEXT MODIFIED SECTION *****

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.

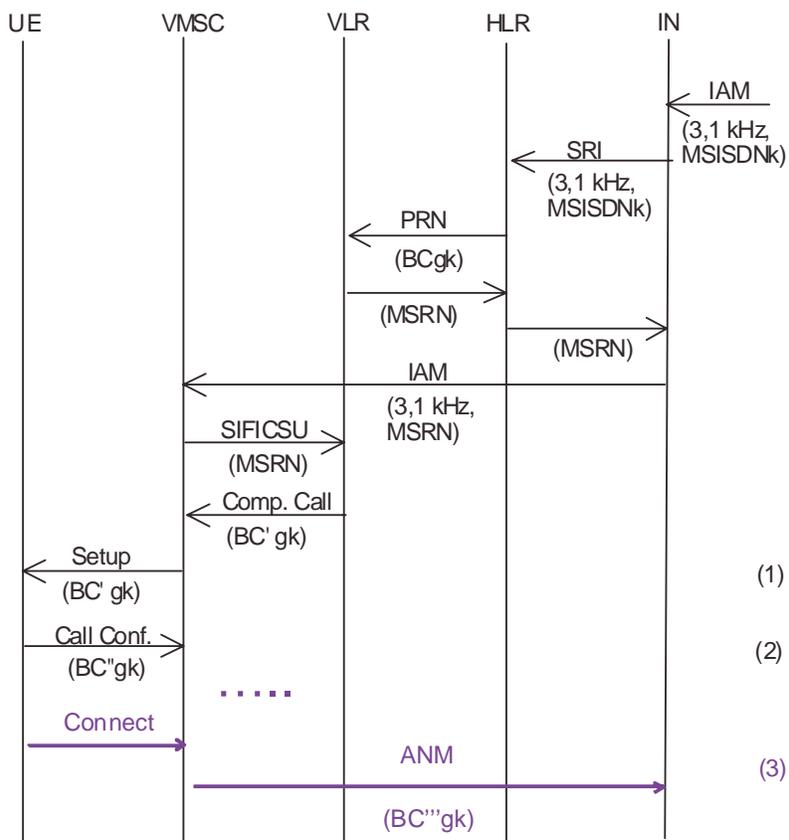
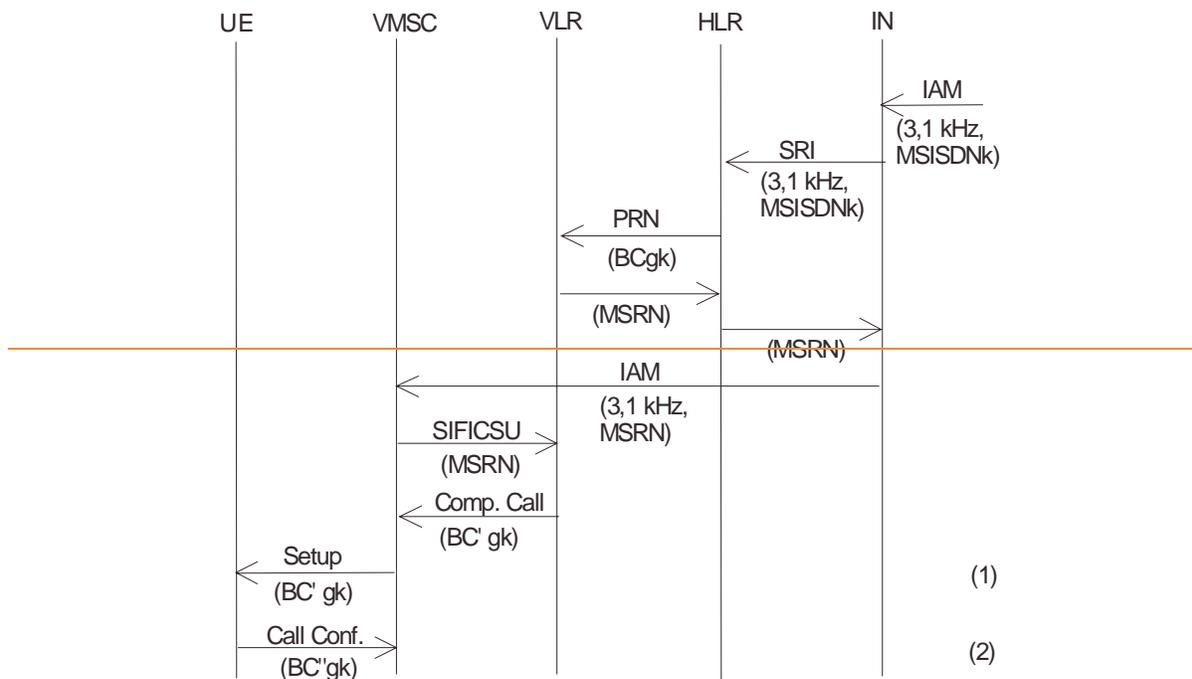
The mapping between PLMN and ISDN BCs is shown in table 7.

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.

***** NEXT MODIFIED SECTION *****

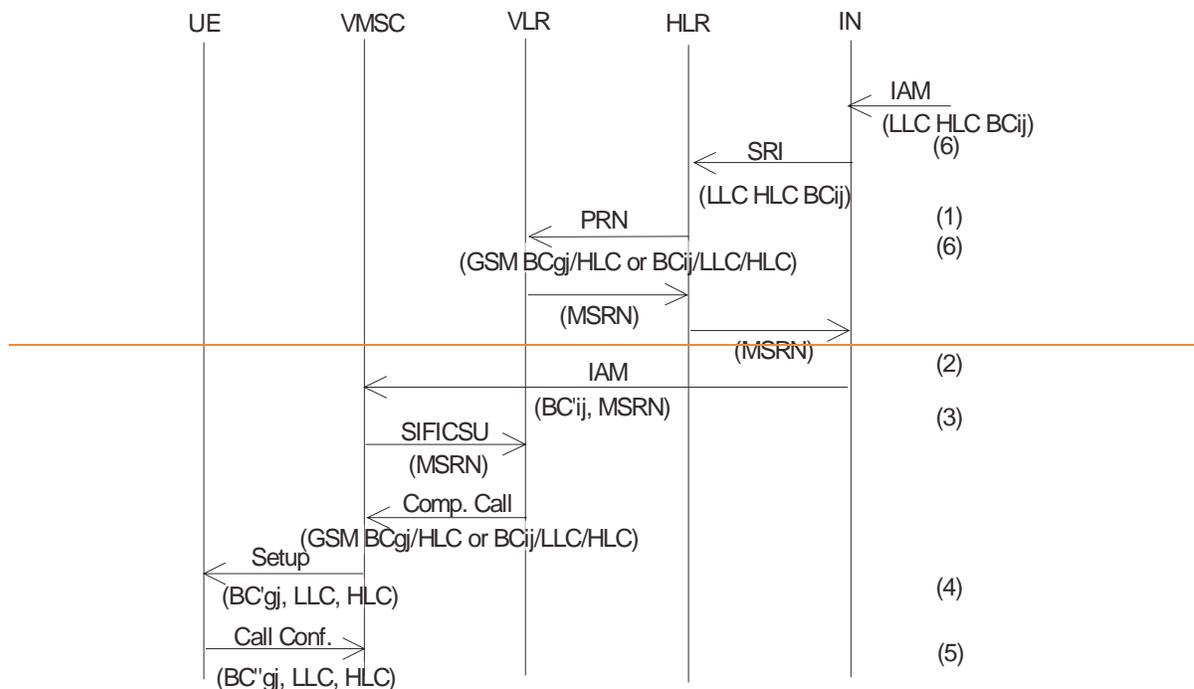
10.2.2.5 Call Flows

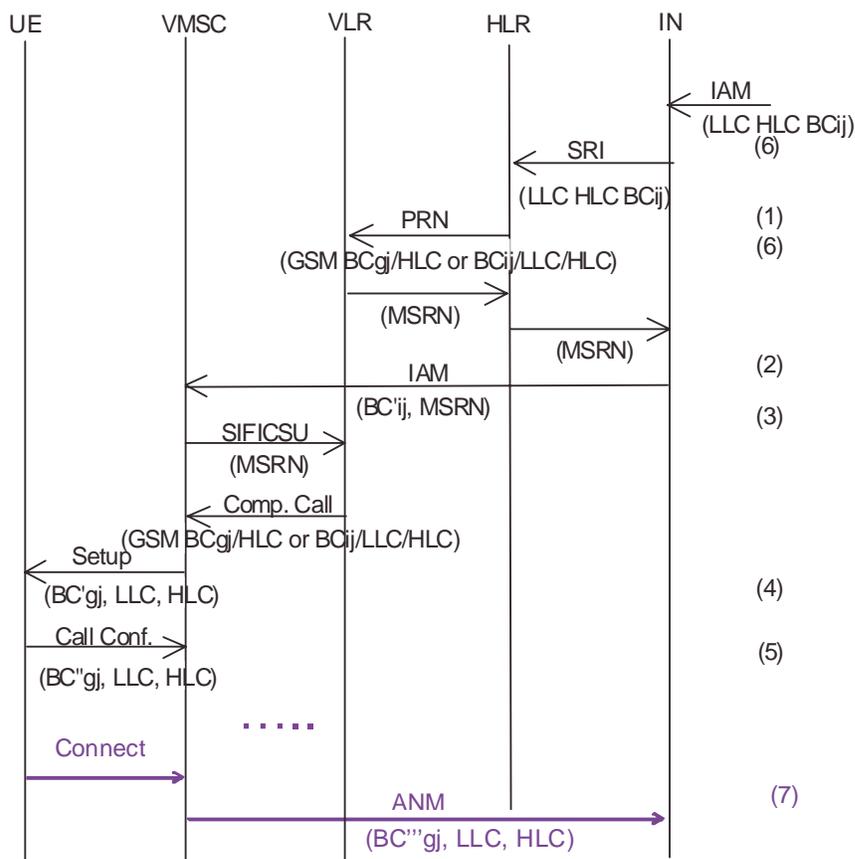


Abbreviations: see figure 2.

- NOTE: (1) Some parameters of BCgk may be provided/modified according to the MSC's capabilities/preferences. See subclause 9.2.2.
 (2) In the "Call Confirm" message, the UE may modify some parameters of the PLMN BC. See subclause 9.2.2.
 (3) The VMSC may map the PLMN BC (BC'gk) into an ISDN BC (BC''gk) according to the rules defined in table 7A
 (4) Abbreviations: see figure 2.

Figure 8: Call Flow for a mobile terminated, ISDN originated call where compatibility information provided are not exhaustive for deducing a PLMN Bearer Service, but Information Transfer Capability = 3,1 kHz audio, no modem type and no HLC IE indicating facsimile group 3 HLR stores PLMN BC against MSISDN number multi-numbering scheme





- NOTES:
- (1) BCij denotes ISDN BC*; BCgj is the corresponding PLMN BC.
 - (2) Assumes signalling capabilities permit the transfer of BC between IN and VMSC. If this is not the case, the VLR uses the stored BC/LLC/HLC.
 - (3) BC'ij denotes BCij as maybe modified by intervening networks.
 - (4) Some parameters of BCgk may be provided/modified according to the MSC's capabilities/preferences. See subclause 9.2.2.
 - (5) In the "Call Confirm" message, the UE may modify some parameters of the BC. See subclause 9.2.2.
 - (6) For details on how the BC, HLC, and LLC are transported, refer to 3GPP TS 29.002.
 - * HLC and LLC refers to ISDN values.
 - (7) The VMSC may map the PLMN BC (BC'gj,LLC,HLC) into an ISDN BC (BC''gj,LLC,HLC) according to the rules defined in table 7A
 - (78) Abbreviations: see figure 2.

Figure 9: Call Flow for a mobile terminated, ISDN originated call where compatibility information provided are sufficient information to deduce a PLMN Bearer Service or Information Transfer Capability = 3,1 kHz audio with HLC IE indicating facsimile group 3

Source: Ericsson
Title: Discussion Paper On Internetwork accounting for BS 30 services
Agenda item: 10.10
Document for: INFORMATION AND APPROVAL

Background

There is an ongoing discussion how to provide the internetwork accounting for CS services that require more bandwidth than the present CS speech service requires. This discussion paper deals with three different items for this issue.

Basic requirement

If a standardisation effort shall be made regarding a feature we think it is essential that the solution shall cover the most important traffic cases. Regarding accounting issues we think that the following three traffic cases shall be supported.

- 1) Direct interconnection between the network where the GMSC is and the network where VMSC is.
- 2) Interconnection between the network where the GMSC is and the network where VMSC is via other operators network (national or international).
- 3) Direct interconnection between fixed operator and mobile operator.
- 4) Interconnection between a fixed network where the caller is and mobile network where the called is via other operators network (national or international).

It is also important to bear in mind that the charge imposed on the calling subscriber is affected by the accounting rate.

Information exchange

With the requirements outlined above. The following capability shall be supported

- 1) It shall be possible to send Information from the VMSC towards the preceding network when it is clear that more resources are required on the radio infrastructure than for a CS speech call.
- 2) The information shall be possible to transfer through intermediate networks (international or national transit networks). If it shall affect also charging, it means that it need to be transported to the charging point for the calling subscriber. This means originating MSC or fixed local exchange.
- 3) The information shall be possible to be captured in nodes where accounting and charging record are created.
- 4) The information element must in a form that is understood in all networks. PLMN-BC cannot be used)

Signalling solutions

A number of proposals may be envisaged.

- 1) Use of Access transport parameters: This is not possible since this information is not looked at in the network.
- 2) A new Application context, using the application transport mechanism, requires at least standardisation in ITU of a new application context identifier. See section 3.82 ITU-T Q.763 specification. In addition it requires a specification of a new user of an application transport mechanism, similar to what is done for BICC.

- 3) The use of bits, marked for national use, in the optional backward call indicators. This proposal can only be used in traffic case 1 mentioned above. In addition, it also means that the two interconnected PLMNs cannot use this bits for other purposes. At least in our implementations we are using this bits to control through connection, control timer supervision and last party release. In addition two bits are already occupied in the ANSI spec T1.113.
- 4) Specify a new parameter. This require that the work is progressed in ITU. We prefer this solution, since this will give a greater acceptance of the proposal. In theory it also means that all traffic case outlined above will be possible.

Strategy

To be able to get through this type of proposal in ITU-SG 11 there are two type of agreements needed.

- 1) The requirements are agreed.
- 2) The specification text to be put in Q.762, Q.763 and Q.764.

If the functional requirement are agreed to be a part of release 6 it is possible to bring in CRs in TS 29.007 either after

- the next time ITU SG 11 meeting is in March 2004.
- the following meeting in end 2004/begining 2005.

It does not mean that it will be published at that date. However, it will be mature enough to base CRs on.

We therefore propose that contributions are produced between CN3 #30 and CN 3 #31 with the objective to be submitted by one of the 3GPP members to the SG 11 meeting starting at 1 of March 2004.