3GPP TSG_CN#6 **NP-99495**
Nice, France
13th – 15th December 1999

Agenda item:

Source: **TSG_N WG2**

Title: **CRs to 3G TS 29.002 (Work Item Long Forwarded to Number)**

Introduction:

This document contains **1** CR on **Work Item Long Forwarded to Number** agreed by **TSG_N WG2** and forwarded to **TSG_N Plenary** meeting #6 for approval.

TDoc	Spec	CR	Rev	Ph.	Cat	Old v.	New v.	Subject
N2-99J17	29.002	066	1	R99	B	3.2.0	3.3.0	Addition of FtN-Address String

3GPP TSG-N2 #12
Phoenix, USA
15th – 19th November 1999

Tdoc 3GPP N2-99J17

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

29.002	CR	066r1	Current Version:	3.2.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG CN#06	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic	X	

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

Source: TSG N2 **Date:** 17/11/1999

Subject: Addition of FtN-AddressString

Work item: Long Forwarded-to Numbers

Category: *(only one category shall be marked with an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature	X		Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: SMG1 agreed a CR to GSM 02.82 (now 3G TS 22.082) to allow the registration of forwarded-to numbers up to 28 digits long. This requires changes to MAP.

Clauses affected: 7.6.2.22, 7.6.2.x (new), 7.6.4.16, 8.8.1.3, 17.1.6, 17.2.2.18, 17.3.2.19, 17.3.3, 17.7.1, 17.7.3, 17.7.4, 17.7.8

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	23.082, 24.082
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

****** First Modified Section ******

7.6.2.22 Forwarded-to number

This parameter refers to the address to which a call is to be forwarded. ~~This may include a~~A subaddress may be appended. For subscribers having an originating CAMEL Phase 2 subscription this address need not be in ~~non-~~E.164 international format.

****** Next Modified Section ******

7.6.2.x Long forwarded-to number

This parameter refers to the address to which a call is to be forwarded. A subaddress may be appended. This address need not be in E.164 international format.

****** Next Modified Section ******

7.6.4.16 Forwarding feature

This parameter applies to each combination of call forwarding service and Basic Service Group and contains the following information, as required:

- Basic Service Group (see subclause 7.6.4.40);
- SS-Status (see subclause 7.6.4.2);
- forwarded-to number (see subclause 7.6.2.22);
- forwarded-to subaddress (see subclause 7.6.2.23);
- forwarding options (see subclause 7.6.4.6);
- no reply condition timer (see subclause 7.6.4.7);
- long forwarded-to number (see subclause 7.6.2.x).

If a number is required to define the forwarded to destination then:

- If the VLR supports long forwarded-to numbers then the long forwarded-to number shall be present. The long forwarded-to number shall take precedence over the forwarded-to number;
- If the VLR does not support long forwarded-to numbers then the forwarded-to number shall be present and the long forwarded-to number shall be absent.

****** Next Modified Section ******

8.8.1 MAP-INSERT-SUBSCRIBER-DATA service

8.8.1.3 Parameter use

.

.

.

Forwarding information List

A list of Extensible Forwarding information parameters (Extensible Forwarding information is defined in subclause 7.6). It includes Call Forwarding services either at location updating or at restoration or when they are changed. Each Extensible Forwarding information parameter shall be treated independently of all other parameters in the primitive.

The Extensible Forwarding information shall include the SS-Code for an individual call forwarding supplementary service. The Extensible Forwarding information shall contain one or more Extensible Forwarding Features (Extensible Forwarding Feature is defined in subclause 7.6).

The Extensible Forwarding Feature may include an Extensible Basic Service Group. This shall be interpreted according to the rules in subclause 8.8.1.4.

The Extensible Forwarding Feature shall contain an Extensible SS-Status parameter.

If the Extensible SS-Status indicates that call forwarding is registered then (except for call forwarding unconditional) the Extensible Forwarding Feature shall contain a ~~forwarded-to~~ number to define the forwarded-to destination and, if available, the forwarded-to subaddress.

-In other states the forwarded-to number and, if applicable, the forwarded-to subaddress shall not be included. For call forwarding unconditional the forwarded-to number and, if applicable, the forwarded-to subaddress shall not be included. If the VLR does not receive a forwarded-to subaddress then it shall assume that a forwarded-to subaddress has not been registered.

The Extensible Forwarding Feature shall contain the extensible forwarding options (except for call forwarding unconditional where the extensible forwarding options shall not be included). Bits 3 and 4 of the extensible forwarding options shall be ignored by the VLR, and may be set to any value by the HLR.

For call forwarding on no reply: If the extensible SS-Status indicates that call forwarding is registered then the Extensible Forwarding Feature shall contain an extensible no reply condition timer. In other states the no reply condition timer shall not be included.

For call forwarding services other than call forwarding on no reply: The Extensible Forwarding Feature shall not contain a no reply condition timer.

If the VLR receives an Indication containing any Call Forwarding service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and discards the unsupported Call Forwarding service codes (no error is sent back). This parameter is used only by the VLR and if the SGSN receives this parameter it shall ignore it.

.

.

.

****** Next Modified Section ******

17.1.6 Application Contexts

The following informative table lists the latest versions of the Application Contexts used in this specification, with the operations used by them and, where applicable, whether or not the operation description is exactly the same as for previous versions. Information in sections 17.6 & 17.7 relates only to the ACs in this table.

AC Name	AC Version	Operations Used	Comments *
. . .	. . .	. . .	
networkFunctionalSsContext	v3~~2~~	registerSS eraseSS activateSS deactivateSS	

		registerPassword interrogateSS getPassword	
. . .	. . .	. . .	

NOTE (*): The syntax of the operations is not the same as in previous versions unless explicitly stated

****** Next Modified Section ******

17.2.2.18 Functional SS handling

This operation package includes the operations required for functional supplementary services procedures between VLR and HLR.

```
FunctionalSsPackage-v32 ::= OPERATION-PACKAGE
     -- Supplier is HLR if Consumer is VLR
     CONSUMER INVOKES {
          registerSS,
          eraseSS,
          activateSS,
          deactivateSS,
          registerPassword,
          interrogateSS}
     SUPPLIER INVOKES {
          getPassword}
```

The v1-equivalent and v2-equivalent packages can be determined according to the rules described in subclause 17.2.1.

****** Next Modified Section ******

17.3.2.19 Network functional SS handling

This application context is used for functional-like SS handling procedures between VLR and HLR.

```
networkFunctionalSsContext-v32 APPLICATION-CONTEXT
     -- Responder is HLR, Initiator is VLR
     INITIATOR CONSUMER OF {
          FunctionalSsPackage-v32}
::= {map-ac networkFunctionalSs(18) version32(32)}
```

The following application-context-name is assigned to the v2-equivalent application-context:

```
{map-ac networkFunctionalSs(18) version2(2)}
```

The v1-equivalent application-context is defined as follows:

```
networkFunctionalSsContext-v1 APPLICATION-CONTEXT
     -- Responder is HLR, Initiator is VLR
     INITIATOR CONSUMER OF {
          FunctionalSsPackage-v1,
          UnstructuredSsPackage-v1,
          BindingPackage-v1}
::= {map-ac networkFunctionalSs(18) version1(1)}
```

1 ****** Next Modified Section ******

17.3.3 ASN.1 Module for application-context-names

2 .
.

```
.

networkFunctionalSsContext-v32  OBJECT IDENTIFIER ::=
     {map-ac networkFunctionalSs(18) version32(32)}
.
.
.

-- The following Object Identifiers are reserved for application-
-- contexts existing in previous versions of the protocol
```

-- AC Name & Version	Object Identifier	
--		
-- networkLocUpContext-v1	map-ac networkLocUp (1)	version1 (1)
-- networkLocUpContext-v2	map-ac networkLocUp (1)	version2 (2)
-- locationCancellationContext-v1	map-ac locationCancellation (2)	version1 (1)
-- locationCancellationContext-v2	map-ac locationCancellation (2)	version2 (2)
-- roamingNumberEnquiryContext-v1	map-ac roamingNumberEnquiry (3)	version1 (1)
-- roamingNumberEnquiryContext-v2	map-ac roamingNumberEnquiry (3)	version2 (2)
-- locationInfoRetrievalContext-v1	map-ac locationInfoRetrieval (5)	version1 (1)
-- locationInfoRetrievalContext-v2	map-ac locationInfoRetrieval (5)	version2 (2)
-- resetContext-v1	map-ac reset (10)	version1 (1)
-- handoverControlContext-v1	map-ac handoverControl (11)	version1 (1)
-- equipmentMngtContext-v1	map-ac equipmentMngt (13)	version1 (1)
-- infoRetrievalContext-v1	map-ac infoRetrieval (14)	version1 (1)
-- subscriberDataMngtContext-v1	map-ac subscriberDataMngt (16)	version1 (1)
-- subscriberDataMngtContext-v2	map-ac subscriberDataMngt (16)	version2 (2)
-- tracingContext-v1	map-ac tracing (17)	version1 (1)
-- tracingContext-v2	map-ac tracing (17)	version2 (2)
-- networkFunctionalSsContext-v1	*map-ac networkFunctionalSs (18)*	*version1 (1)*
-- networkFunctionalSsContext-v2	*map-ac networkFunctionalSs (18)*	*version2 (2)*
-- shortMsgGatewayContext-v1	map-ac shortMsgGateway (20)	version1 (1)
-- shortMsgGatewayContext-v2	map-ac shortMsgGateway (20)	version2 (2)
-- shortMsgRelayContext-v1	map-ac shortMsgRelay (21)	version1 (1)
-- shortMsgAlertContext-v1	map-ac shortMsgAlert (23)	version1 (1)
-- mwdMngtContext-v1	*map-ac mwdMngt (24)*	*version1 (1)*
-- mwdMngtContext-v2	map-ac mwdMngt (24)	version2 (2)
-- shortMsgMT-RelayContext-v2	map-ac shortMsgMT-Relay (25)	version2 (2)
-- msPurgingContext-v2	map-ac msPurging (27)	version2 (2)
-- callControlTransferContext-v3	map-ac callControlTransferContext (6)	version3 (3)

```
END
```

****** Next Modified Section ******

17.7.1 Mobile Service data types

```
.
.
.

FROM MAP-TS-Code {
   ccitt identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-TS-Code (19) version5 (5)}


   ISDN-AddressString,
   maxISDN-AddressLength,
   FtN-AddressString,
   ISDN-SubaddressString,
   ExternalSignalInfo,
   IMSI,
   HLR-List,
   LMSI,
   Identity,
   GlobalCellId,
   CellIdOrLAI,
   Ext-BasicServiceCode,
   NAEA-PreferredCI,
   EMLPP-Info,
   SubscriberIdentity,
   AgeOfLocationInformation,
   LCSClientExternalID,
   LCSClientInternalID
.
```

.
.

```
Ext-ForwFeature ::= SEQUENCE {
     basicService                         Ext-BasicServiceCode              OPTIONAL,
     ss-Status [4] Ext-SS-Status,
     forwardedToNumber                    [5] ISDN-AddressString            OPTIONAL,
     -- When this data type is sent from an HLR which supports CAMEL Phase 2
     -- to a VLR that supports CAMEL Phase 2 the VLR shall not check the
     -- format of the number
     forwardedToSubaddress                [8] ISDN-SubaddressString         OPTIONAL,
     forwardingOptions                    [6] Ext-ForwOptions               OPTIONAL,
     noReplyConditionTime                 [7] Ext-NoRepCondTime             OPTIONAL,
     extensionContainer                   [9] ExtensionContainer            OPTIONAL,
     ...,
     longForwardedToNumber                [10] FtN-AddressString            OPTIONAL
     }
```

.
.
.

****** Next Modified Section ******

17.7.3 Call handling data types

.
.
.

```
FROM MAP-SS-DataTypes {
   ccitt identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-SS-DataTypes (14) version5 (5)}

   ISDN-AddressString,
   ISDN-SubaddressString,
   ExternalSignalInfo,
   Ext-ExternalSignalInfo,
   FtN-AddressString,
   IMSI,
   LMSI,
   Ext-BasicServiceCode,
   AlertingPattern,
   NAEA-PreferredCI
```

.
.
.

```
ForwardingData ::= SEQUENCE {
     forwardedToNumber                    [5] ISDN-AddressString            OPTIONAL,
     -- When this datatype is sent from an HLR which supports CAMEL Phase 2
     -- to a GMSC which supports CAMEL Phase 2 the GMSC shall not check the
     -- format of the number
     forwardedToSubaddress                [4] ISDN-SubaddressString         OPTIONAL,
     forwardingOptions                    [6] ForwardingOptions             OPTIONAL,
     extensionContainer                   [7] ExtensionContainer            OPTIONAL,
     ...,
     longForwardedToNumber                [8]  FtN-AddressString            OPTIONAL
     }
```

.
.
.

****** Next Modified Section ******

17.7.4 Supplementary service data types

.
.
.

```
IMPORTS
   AddressString,
   ISDN-AddressString,
   ISDN-SubaddressString,
   FtN-AddressString,
   IMSI,
   BasicServiceCode,
   AlertingPattern,
   EMLPP-Priority,
   ExternalSignalInfo
.
.
.
```

```
ForwardingFeature ::= SEQUENCE {
    basicService                    BasicServiceCode                OPTIONAL,
    ss-Status [4] SS-Status         OPTIONAL,
    forwardedToNumber               [5] ISDNFtN-AddressString       OPTIONAL,
    forwardedToSubaddress           [8] ISDN-SubaddressString       OPTIONAL,
    forwardingOptions               [6] ForwardingOptions           OPTIONAL,
    noReplyConditionTime            [7] NoReplyConditionTime        OPTIONAL,
    ...}
```

```
.
.
.
```

****** Last Modified Section ******

17.7.8 Common data types

```
.
.
.

EXPORTS

   -- general data types and values
   AddressString,
   ISDN-AddressString,
   FtN-AddressString,
   maxISDN-AddressLength,
   ISDN-SubaddressString,
   ExternalSignalInfo,
   Ext-ExternalSignalInfo,
   SignalInfo,
   maxSignalInfoLength,
   AlertingPattern,

.
.
.
```

```
FtN-AddressString ::= AddressString (SIZE (1..maxFtN-AddressLength))
    -- This type is used to represent Forwarded-to Numbers.
```

```
maxFtN-AddressLength  INTEGER ::= 15
```

```
.
.
.
```

3GPP TSG_CN#6 **NP-99xxx**
Nice, France
13th – 15th December 1999

Agenda item:

Source: **TSG_N WG2**

Title: **CRs to 3G TS 29.002 (Work Item Long Forwarded to Number)**

Introduction:

This document contains **1** CR on **Work Item Long Forwarded to Number** agreed by **TSG_N WG2** and forwarded to **TSG_N Plenary** meeting #6 for approval.

TDoc	Spec	CR	Rev	Ph.	Cat	Old v.	New v.	Subject
N2-99J17	29.002	066	1	R99	B	3.2.0	3.3.0	Addition of FtN-Address String