

**3GPP TSG CN Plenary Meeting #12**  
**Stockholm, Sweden, 13<sup>th</sup> - 15<sup>th</sup> June 2001**

**Tdoc NP-010296**

**Source:** TSG CN WG4  
**Title:** CRs on R99 Work Item Multicall  
**Agenda item:** 7.18  
**Document for:** APPROVAL

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**Introduction:**

This document contains 6 CRs on R99 Work Item "Multicall", that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #12 for approval.

<b>Spec</b>	<b>CR</b>	<b>Rev</b>	<b>Doc-2nd-Level</b>	<b>Phase</b>	<b>Subject</b>	<b>Cat</b>	<b>Ver_C</b>
29.002	253	2	N4-010738	R99	Addition of radio resource list to the handover procedures	F	3.8.0
29.002	254	2	N4-010739	Rel-4	Addition of radio resource list to the handover procedures	A	4.3.0
29.002	282	1	N4-010740	R99	Introduction of selected Rab-id to the Process Access Signalling operation	F	3.8.0
29.002	283	1	N4-010741	Rel-4	Introduction of selected Rab-id to the Process Access Signalling operation	A	4.3.0
24.080	010	1	N4-010742	R99	Addition of the description for Multicall missing from 24.080	F	3.4.1
24.080	011	1	N4-010743	Rel-4	Addition of the description for Multicall missing from 24.080	A	4.0.0

## CHANGE REQUEST

⌘ **TS 24.080 CR 010** ⌘ rev **1** ⌘ Current version: **3.4.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition of the description for Multicall missing from 24.080		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ Multicall	<b>Date:</b>	⌘ 17.5.2001
<b>Category:</b>	⌘ <b>F</b> (Incorrectly implemented CR)	<b>Release:</b>	⌘ R99
<i>Use <u>one</u> of the following categories:</i>		<i>Use <u>one</u> of the following releases:</i>	
<b>F</b> (correction)		2 (GSM Phase 2)	
<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)	
<b>B</b> (Addition of feature),		R97 (Release 1997)	
<b>C</b> (Functional modification of feature)		R98 (Release 1998)	
<b>D</b> (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)	

<b>Reason for change:</b>	⌘ Previously accepted CR (003) for 24.080 version 3.1-0 has not been implemented.
<b>Summary of change:</b>	⌘
<b>Consequences if not approved:</b>	⌘

<b>Clauses affected:</b>	⌘ 4.4.2
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘
	<input type="checkbox"/> Test specifications
	<input type="checkbox"/> O&M Specifications
<b>Other comments:</b>	⌘ The original CR (Tdoc NP-000119) was approved in CN#7 (13-15 March 2000)

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at:  
[http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

## 4.4.2 ASN.1 data types

This subclause provides an ASN.1 module defining the abstract data types in operations and errors specification. Only data types which are specific for this specification are defined. All other data types are imported from MAP together with the import of operations and errors.

```

SS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Access (2) modules (3)
    ss-DataTypes (2) version3 (3)}

DEFINITIONS

IMPLICIT TAGS ::=

BEGIN

-- exports all data types defined in this module

IMPORTS

SS-Code
FROM MAP-SS-Code {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-SS-Code (15) version3 (3)}

-- imports MAP-SS-DataTypes
SS-Status, USSD-DataCodingScheme, USSD-String, CCBS-Feature
-- USSD-DataCodingScheme, USSD-String were introduced because of CNAP.
FROM MAP-SS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-SS-DataTypes (14) version4 (4)}

CUG-Index
FROM MAP-MS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-MS-DataTypes (11) version3 (3)}

maxSignalInfoLength,
ISDN-AddressString,
ISDN-SubaddressString,
AlertingPattern,
LCSClientExternalID
FROM MAP-CommonDataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-CommonDataTypes (18) version4 (4)}

LocationType,
LCSClientName,
LCS-QoS,
Horizontal-Accuracy,
ResponseTime,
Ext-GeographicalInformation
FROM MAP-LCS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0)
    gsm-Network (1) modules (3) map-LCS-DataTypes (25) version5 (5)}

;

-- data types definition

SS-UserData ::= IA5String (SIZE (1.. maxSignalInfoLength))

NotifySS-Arg ::= SEQUENCE{
    ss-Code [1] SS-Code OPTIONAL,
    ss-Status [4] SS-Status OPTIONAL,
    ss-Notification [5] SS-Notification OPTIONAL,
    callIsWaiting-Indicator [14] NULL OPTIONAL,
    callOnHold-Indicator [15] CallOnHold-Indicator OPTIONAL,
    mpty-Indicator [16] NULL OPTIONAL,
    cug-Index [17] CUG-Index OPTIONAL,
    clirSuppressionRejected [18] NULL OPTIONAL,
    ... ,
    ect-Indicator [19] ECT-Indicator OPTIONAL,
    nameIndicator [20] NameIndicator OPTIONAL,
    ccbs-Feature [21] CCBS-Feature OPTIONAL,
    alertingPattern [22] AlertingPattern OPTIONAL,
    multicall-Indicator [23] Multicall-Indicator OPTIONAL }

-- The nameIndicator is defined because of CNAP.

```

```

Multicall-Indicator ::= ENUMERATED {
    Nbr_SNexceeded (0),
    Nbr_Userexceeded (1)}

```

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

#### 4.4.3.47 multicall-Indicator

The multicall-Indicator identifier refers to the indication given to the mobile station that the number of active bearers has exceeded the maximum number.

## 4.5 Operations and errors implementation

For the actual implementation of supplementary services, operations and errors have to be defined by value. The following ASN.1 module, imports operation types from the ASN.1 module described in subclause 4.2 and operation and error types from MAP. It defines operations by allocating operations and errors a local value. For the involved operations and errors the same local values as in MAP are allocated.

```

SS-Protocol {
    ccitt identified-organization (4) etsi (0) mobileDomain (0)
    gsm-Access (2) modules (3) ss-Protocol (3) version6 (6)}

DEFINITIONS ::=

BEGIN

IMPORTS

-- imports operation types

-- imports operation type from MAP-MobileServiceOperations
ForwardCheckSS-Indication
FROM MAP-MobileServiceOperations {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-MobileServiceOperations (5) version6 (6)}

-- imports operation types from MAP-SupplementaryServiceOperations
RegisterSS, EraseSS, ActivateSS, DeactivateSS, InterrogateSS, RegisterPassword, GetPassword,
ProcessUnstructuredSS-Request, UnstructuredSS-Request, UnstructuredSS-Notify, EraseCC-Entry
FROM MAP-SupplementaryServiceOperations {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-SupplementaryServiceOperations (8) version6 (6)}

-- imports operation types from SS-Operations
ProcessUnstructuredSS-Data, NotifySS, ForwardChargeAdvice, BuildMPTY, HoldMPTY, RetrieveMPTY,
SplitMPTY, ExplicitCT, ForwardCUG-Info, AccessRegisterCCEntry, CallDeflection, UserUserService,
LCS-LocationNotification, LCS-MOLR
FROM SS-Operations {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Access (2) modules (3)
    ss-Operations (0) version6 (6)}

-- imports error types

-- imports error types from MAP-Errors
UnknownSubscriber, BearerServiceNotProvisioned, TeleserviceNotProvisioned,
IllegalSS-Operation, SS-ErrorStatus, SS-NotAvailable, SS-SubscriptionViolation,
SS-Incompatibility, SystemFailure, DataMissing, UnexpectedDataValue, PW-RegistrationFailure,
NegativePW-Check, FacilityNotSupported, CallBarred, NumberOfPW-AttemptsViolation,
AbsentSubscriber, IllegalSubscriber, IllegalEquipment, USSD-Busy, UnknownAlphabet,
ShortTermDenial, LongTermDenial, ForwardingViolation, ForwardingFailed, PositionMethodFailure
FROM MAP-Errors {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-Errors (10) version6 (6)}

-- imports error types from SS-Errors
ResourcesNotAvailable, MaxNumberOfMPTY-ParticipantsExceeded,
InvalidDeflectedToNumber, SpecialServiceCode, DeflectionToServedSubscriber,
RejectedByNetwork, RejectedByUser

```

```
FROM SS-Errors {
  ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Access (2) modules (3)
  ss-Errors (1) version6 (6)}
;

-- allocation of local values to operations

registerSS RegisterSS ::= localValue 10
eraseSS EraseSS ::= localValue 11
activateSS ActivateSS ::= localValue 12
deactivateSS DeactivateSS ::= localValue 13
interrogateSS InterrogateSS ::= localValue 14
notifySS NotifySS ::= localValue 16
registerPassword RegisterPassword ::= localValue 17
getPassword GetPassword ::= localValue 18
processUnstructuredSS-Data ProcessUnstructuredSS-Data ::= localValue 19
forwardCheckSS-Indication ForwardCheckSS-Indication ::= localValue 38
processUnstructuredSS-Request ProcessUnstructuredSS-Request ::= localValue 59
unstructuredSS-Request UnstructuredSS-Request ::= localValue 60
unstructuredSS-Notify UnstructuredSS-Notify ::= localValue 61
eraseCCEnter EraseCC-Entry ::= localValue 77
callDeflection CallDeflection ::= localValue 117
userService UserUserService ::= localValue 118
accessRegisterCCEnter AccessRegisterCCEnter ::= localValue 119
forwardCUG-Info ForwardCUG-Info ::= localValue 120
splitMPTY SplitMPTY ::= localValue 121
retrieveMPTY RetrieveMPTY ::= localValue 122
holdMPTY HoldMPTY ::= localValue 123
buildMPTY BuildMPTY ::= localValue 124
forwardChargeAdvice ForwardChargeAdvice ::= localValue 125
explicitCT ExplicitCT ::= localValue 126
lcs-LocationNotification LCS-LocationNotification ::= localValue 116
lcs-MOLR LCS-MOLR ::= localValue 115

-- allocation of local values to errors

unknownSubscriber UnknownSubscriber ::= localValue 1
illegalSubscriber IllegalSubscriber ::= localValue 9
bearerServiceNotProvisioned BearerServiceNotProvisioned ::= localValue 10
teleserviceNotProvisioned TeleserviceNotProvisioned ::= localValue 11
illegalEquipment IllegalEquipment ::= localValue 12
callBarred CallBarred ::= localValue 13
illegalSS-Operation IllegalSS-Operation ::= localValue 16
ss-ErrorStatus SS-ErrorStatus ::= localValue 17
ss-NotAvailable SS-NotAvailable ::= localValue 18
ss-SubscriptionViolation SS-SubscriptionViolation ::= localValue 19
ss-Incompatibility SS-Incompatibility ::= localValue 20
facilityNotSupported FacilityNotSupported ::= localValue 21
absentSubscriber AbsentSubscriber ::= localValue 27
shortTermDenial ShortTermDenial ::= localValue 29
longTermDenial LongTermDenial ::= localValue 30
systemFailure SystemFailure ::= localValue 34
dataMissing DataMissing ::= localValue 35
unexpectedDataValue UnexpectedDataValue ::= localValue 36
pw-RegistrationFailure PW-RegistrationFailure ::= localValue 37
negativePW-Check NegativePW-Check ::= localValue 38
numberOfPW-AttemptsViolation NumberOfPW-AttemptsViolation ::= localValue 43
positionMethodFailure PositionMethodFailure ::= localValue 54
unknownAlphabet UnknownAlphabet ::= localValue 71
ussd-Busy USSD-Busy ::= localValue 72
nbr-SbExceeded Nbr-SbExceeded ::= localValue 120
rejectedByUser RejectedByUser ::= localValue 121
rejectedByNetwork RejectedByNetwork ::= localValue 122
deflectionToServedSubscriber DeflectionToServedSubscriber ::= localValue 123
specialServiceCode SpecialServiceCode ::= localValue 124
invalidDeflectedToNumber InvalidDeflectedToNumber ::= localValue 125
maxNumberOfMPTY-ParticipantsExceeded MaxNumberOfMPTY-ParticipantsExceeded ::= localValue 126
resourcesNotAvailable ResourcesNotAvailable ::= localValue 127

END
```

## CHANGE REQUEST

⌘ **TS 24.080 CR 011** ⌘ rev **1** ⌘ Current version: **4.0.0** ⌘

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**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition of the description for Multicall missing from 24.080		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ Multicall	<b>Date:</b>	⌘ 17.5.2001
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ REL-4
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 TR 21.900.		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)	

<b>Reason for change:</b>	⌘ Previously accepted CR (003) for 24.080 version 3.1-0 has not been implemented.		
<b>Summary of change:</b>	⌘		
<b>Consequences if not approved:</b>	⌘		

<b>Clauses affected:</b>	⌘ 4.4.2		
<b>Other specs affected:</b>	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
<b>Other comments:</b>	⌘ The original CR (Tdoc NP-000119) was approved in CN#7 (13-15 March 2000)		

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## 4.4.2 ASN.1 data types

This subclause provides an ASN.1 module defining the abstract data types in operations and errors specification. Only data types which are specific for this specification are defined. All other data types are imported from MAP together with the import of operations and errors.

```

SS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Access (2) modules (3)
    ss-DataTypes (2) version3 (3)}

DEFINITIONS

IMPLICIT TAGS ::=

BEGIN

-- exports all data types defined in this module

IMPORTS

SS-Code
FROM MAP-SS-Code {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-SS-Code (15) version3 (3)}

-- imports MAP-SS-DataTypes
SS-Status, USSD-DataCodingScheme, USSD-String, CCBS-Feature
-- USSD-DataCodingScheme, USSD-String were introduced because of CNAP.
FROM MAP-SS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-SS-DataTypes (14) version4 (4)}

CUG-Index
FROM MAP-MS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-MS-DataTypes (11) version3 (3)}

maxSignalInfoLength,
ISDN-AddressString,
ISDN-SubaddressString,
AlertingPattern,
LCSClientExternalID
FROM MAP-CommonDataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-CommonDataTypes (18) version4 (4)}

LocationType,
LCSClientName,
LCS-QoS,
Horizontal-Accuracy,
ResponseTime,
Ext-GeographicalInformation
FROM MAP-LCS-DataTypes {
    ccitt identified-organization (4) etsi (0) mobileDomain (0)
    gsm-Network (1) modules (3) map-LCS-DataTypes (25) version5 (5)}

;

-- data types definition

SS-UserData ::= IA5String (SIZE (1.. maxSignalInfoLength))

NotifySS-Arg ::= SEQUENCE{
    ss-Code [1] SS-Code OPTIONAL,
    ss-Status [4] SS-Status OPTIONAL,
    ss-Notification [5] SS-Notification OPTIONAL,
    callIsWaiting-Indicator [14] NULL OPTIONAL,
    callOnHold-Indicator [15] CallOnHold-Indicator OPTIONAL,
    mpty-Indicator [16] NULL OPTIONAL,
    cug-Index [17] CUG-Index OPTIONAL,
    clirSuppressionRejected [18] NULL OPTIONAL,
    ... ,
    ect-Indicator [19] ECT-Indicator OPTIONAL,
    nameIndicator [20] NameIndicator OPTIONAL,
    ccbs-Feature [21] CCBS-Feature OPTIONAL,
    alertingPattern [22] AlertingPattern OPTIONAL,
    multicall-Indicator [23] Multicall-Indicator OPTIONAL }

-- The nameIndicator is defined because of CNAP.

```

```

Multicall-Indicator ::= ENUMERATED {
    Nbr_SNexceeded (0),
    Nbr_Userexceeded (1)}

```

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

#### 4.4.3.47 multicall-Indicator

The multicall-Indicator identifier refers to the indication given to the mobile station that the number of active bearers has exceeded the maximum number.

## 4.5 Operations and errors implementation

For the actual implementation of supplementary services, operations and errors have to be defined by value. The following ASN.1 module, imports operation types from the ASN.1 module described in subclause 4.2 and operation and error types from MAP. It defines operations by allocating operations and errors a local value. For the involved operations and errors the same local values as in MAP are allocated.

```

SS-Protocol {
    ccitt identified-organization (4) etsi (0) mobileDomain (0)
    gsm-Access (2) modules (3) ss-Protocol (3) version6 (6)}

DEFINITIONS ::=

BEGIN

IMPORTS

-- imports operation types

-- imports operation type from MAP-MobileServiceOperations
ForwardCheckSS-Indication
FROM MAP-MobileServiceOperations {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-MobileServiceOperations (5) version6 (6)}

-- imports operation types from MAP-SupplementaryServiceOperations
RegisterSS, EraseSS, ActivateSS, DeactivateSS, InterrogateSS, RegisterPassword, GetPassword,
ProcessUnstructuredSS-Request, UnstructuredSS-Request, UnstructuredSS-Notify, EraseCC-Entry
FROM MAP-SupplementaryServiceOperations {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-SupplementaryServiceOperations (8) version6 (6)}

-- imports operation types from SS-Operations
ProcessUnstructuredSS-Data, NotifySS, ForwardChargeAdvice, BuildMPTY, HoldMPTY, RetrieveMPTY,
SplitMPTY, ExplicitCT, ForwardCUG-Info, AccessRegisterCCEntry, CallDeflection, UserUserService,
LCS-LocationNotification, LCS-MOLR
FROM SS-Operations {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Access (2) modules (3)
    ss-Operations (0) version6 (6)}

-- imports error types

-- imports error types from MAP-Errors
UnknownSubscriber, BearerServiceNotProvisioned, TeleserviceNotProvisioned,
IllegalSS-Operation, SS-ErrorStatus, SS-NotAvailable, SS-SubscriptionViolation,
SS-Incompatibility, SystemFailure, DataMissing, UnexpectedDataValue, PW-RegistrationFailure,
NegativePW-Check, FacilityNotSupported, CallBarred, NumberOfPW-AttemptsViolation,
AbsentSubscriber, IllegalSubscriber, IllegalEquipment, USSD-Busy, UnknownAlphabet,
ShortTermDenial, LongTermDenial, ForwardingViolation, ForwardingFailed, PositionMethodFailure
FROM MAP-Errors {
    ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
    map-Errors (10) version6 (6)}

-- imports error types from SS-Errors
ResourcesNotAvailable, MaxNumberOfMPTY-ParticipantsExceeded,
InvalidDeflectedToNumber, SpecialServiceCode, DeflectionToServedSubscriber,
RejectedByNetwork, RejectedByUser

```



```
FROM SS-Errors {
  ccitt identified-organization (4) etsi (0) mobileDomain (0) gsm-Access (2) modules (3)
  ss-Errors (1) version6 (6)}
;

-- allocation of local values to operations

registerSS RegisterSS ::= localValue 10
eraseSS EraseSS ::= localValue 11
activateSS ActivateSS ::= localValue 12
deactivateSS DeactivateSS ::= localValue 13
interrogateSS InterrogateSS ::= localValue 14
notifySS NotifySS ::= localValue 16
registerPassword RegisterPassword ::= localValue 17
getPassword GetPassword ::= localValue 18
processUnstructuredSS-Data ProcessUnstructuredSS-Data ::= localValue 19
forwardCheckSS-Indication ForwardCheckSS-Indication ::= localValue 38
processUnstructuredSS-Request ProcessUnstructuredSS-Request ::= localValue 59
unstructuredSS-Request UnstructuredSS-Request ::= localValue 60
unstructuredSS-Notify UnstructuredSS-Notify ::= localValue 61
eraseCCEnter EraseCC-Entry ::= localValue 77
callDeflection CallDeflection ::= localValue 117
userService UserUserService ::= localValue 118
accessRegisterCCEnter AccessRegisterCCEnter ::= localValue 119
forwardCUG-Info ForwardCUG-Info ::= localValue 120
splitMPTY SplitMPTY ::= localValue 121
retrieveMPTY RetrieveMPTY ::= localValue 122
holdMPTY HoldMPTY ::= localValue 123
buildMPTY BuildMPTY ::= localValue 124
forwardChargeAdvice ForwardChargeAdvice ::= localValue 125
explicitCT ExplicitCT ::= localValue 126
lcs-LocationNotification LCS-LocationNotification ::= localValue 116
lcs-MOLR LCS-MOLR ::= localValue 115

-- allocation of local values to errors

unknownSubscriber UnknownSubscriber ::= localValue 1
illegalSubscriber IllegalSubscriber ::= localValue 9
bearerServiceNotProvisioned BearerServiceNotProvisioned ::= localValue 10
teleserviceNotProvisioned TeleserviceNotProvisioned ::= localValue 11
illegalEquipment IllegalEquipment ::= localValue 12
callBarred CallBarred ::= localValue 13
illegalSS-Operation IllegalSS-Operation ::= localValue 16
ss-ErrorStatus SS-ErrorStatus ::= localValue 17
ss-NotAvailable SS-NotAvailable ::= localValue 18
ss-SubscriptionViolation SS-SubscriptionViolation ::= localValue 19
ss-Incompatibility SS-Incompatibility ::= localValue 20
facilityNotSupported FacilityNotSupported ::= localValue 21
absentSubscriber AbsentSubscriber ::= localValue 27
shortTermDenial ShortTermDenial ::= localValue 29
longTermDenial LongTermDenial ::= localValue 30
systemFailure SystemFailure ::= localValue 34
dataMissing DataMissing ::= localValue 35
unexpectedDataValue UnexpectedDataValue ::= localValue 36
pw-RegistrationFailure PW-RegistrationFailure ::= localValue 37
negativePW-Check NegativePW-Check ::= localValue 38
numberOfPW-AttemptsViolation NumberOfPW-AttemptsViolation ::= localValue 43
positionMethodFailure PositionMethodFailure ::= localValue 54
unknownAlphabet UnknownAlphabet ::= localValue 71
ussd-Busy USSD-Busy ::= localValue 72
| nbr-SbExceeded Nbr-SbExceeded ::= localValue 120
rejectedByUser RejectedByUser ::= localValue 121
rejectedByNetwork RejectedByNetwork ::= localValue 122
deflectionToServedSubscriber DeflectionToServedSubscriber ::= localValue 123
specialServiceCode SpecialServiceCode ::= localValue 124
invalidDeflectedToNumber InvalidDeflectedToNumber ::= localValue 125
maxNumberOfMPTY-ParticipantsExceeded MaxNumberOfMPTY-ParticipantsExceeded ::= localValue 126
resourcesNotAvailable ResourcesNotAvailable ::= localValue 127

END
```

## CHANGE REQUEST

⌘ **29.002 CR** **253** ⌘ rev **2** ⌘ Current version: **3.8.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition of radio resource list to the handover procedures		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ Multicall	<b>Date:</b>	⌘ 17.5.2001
<b>Category:</b>	⌘ <b>F</b> (Essential Correction)	<b>Release:</b>	⌘ R99
	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 TR 21.900.		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The radio resource list is needed to handover procedure for Multicall. MSC-A has to be able to transfer the associated channel type for all reserved radio access bearers to MSC-B.
<b>Summary of change:</b>	⌘
<b>Consequences if not approved:</b>	⌘ MSC-B does not have channel type information of all radio access bearers thus preventing intersystem handover to GSM.

<b>Clauses affected:</b>	⌘ 7.6, 8.4, 17.7	
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘
<b>Other comments:</b>	⌘	

## 7.6 Definition of parameters

Following is an alphabetic list of parameters used in the common MAP-services in subclause 7.3:

Application context name	7.3.1	Refuse reason	7.3.1
Destination address	7.3.1	Release method	7.3.2
Destination reference	7.3.1	Responding address	7.3.1
Diagnostic information	7.3.4	Result	7.3.1
Originating address	7.3.1	Source	7.3.5
Originating reference	7.3.1	Specific information	7.3.1/7.3.2/7.3.4
Problem diagnostic	7.3.6	User reason	7.3.4
Provider reason	7.3.5		

Following is an alphabetic list of parameters contained in this clause:

Absent Subscriber Diagnostic SM	7.6.8.9	Invoke Id	7.6.1.1
Access connection status	7.6.9.3	ISDN Bearer Capability	7.6.3.41
		IST Alert Timer	7.6.3.66
		IST Information Withdrawn	7.6.3.68
		IST Support Indicator	7.6.3.69
Access signalling information	7.6.9.5	Kc	7.6.7.4
Additional Absent Subscriber Diagnostic SM	7.6.8.12	Linked Id	7.6.1.2
Additional number	7.6.2.46	LMSI	7.6.2.16
Additional signal info	7.6.9.10	Location Information	7.6.2.30
Additional SM Delivery Outcome	7.6.8.11		
Age Indicator	7.6.3.72	Location update type	7.6.9.6
		Long Forwarded-to Number	7.6.2.22A
		Long FTN Supported	7.6.2.22B
Alert Reason	7.6.8.8	Lower Layer Compatibility	7.6.3.42
		LSA Information	7.6.3.56
		LSA Information Withdraw	7.6.3.58
		MC Information	7.6.4.48
		MC Subscription Data	7.6.4.47
Alert Reason Indicator	7.6.8.10	Mobile Not Reachable Reason	7.6.3.51
Alerting Pattern	7.6.3.44	Modification request for CSI	7.6.3.81
All GPRS Data	7.6.3.53	Modification request for SS Information	7.6.3.82
All Information Sent	7.6.1.5	More Messages To Send	7.6.8.7
AN-apdu	7.6.9.1		
APN	7.6.2.42	MS ISDN	7.6.2.17
Authentication set list	7.6.7.1	MSC number	7.6.2.11
B-subscriber Address	7.6.2.36	MSIsdn-Alert	7.6.2.29
		Multicall Bearer Information	7.6.2.52
		Multiple Bearer Requested	7.6.2.53
		Multiple Bearer Not Supported	7.6.2.54
B subscriber Number	7.6.2.48	MWD status	7.6.8.3
		NbrUser	7.6.4.45
B subscriber subaddress	7.6.2.49	Network Access Mode	7.6.3.50
Basic Service Group	7.6.4.40	Network node number	7.6.2.43
Bearer service	7.6.4.38	Network resources	7.6.10.1
		Network signal information	7.6.9.8
Call Barring Data	7.6.3.83	New password	7.6.4.20
Call barring feature	7.6.4.19	No reply condition timer	7.6.4.7
Call barring information	7.6.4.18	North American Equal Access preferred Carrier Id	7.6.2.34
		Number Portability Status	7.6.5.14
Call Direction	7.6.5.8	ODB Data	7.6.3.85
Call Forwarding Data	7.6.3.84	ODB General Data	7.6.3.9
Call Info	7.6.9.9	ODB HPLMN Specific Data	7.6.3.10
Call reference	7.6.5.1		
Call Termination Indicator	7.6.3.67	OMC Id	7.6.2.18
Called number	7.6.2.24	Originally dialled number	7.6.2.26
Calling number	7.6.2.25	Originating entity number	7.6.2.10
CAMEL Subscription Info	7.6.3.78	Override Category	7.6.4.4
CAMEL Subscription Info Withdraw	7.6.3.38	P-TMSI	7.6.2.47
Cancellation Type	7.6.3.52	PDP-Address	7.6.2.45
Category	7.6.3.1	PDP-Context identifier	7.6.3.55
CCBS Feature	7.6.5.8		
CCBS Request State	7.6.4.49	PDP-Type	7.6.2.44
Channel Type	7.6.5.9	Pre-paging supported	7.6.5.15
Chosen Channel	7.6.5.10	Previous location area Id	7.6.2.4
Ciphering mode	7.6.7.7	Protocol Id	7.6.9.7
Cksn	7.6.7.5	Provider error	7.6.1.3
CLI Restriction	7.6.4.5	QoS-Subscribed	7.6.3.47
CM service type	7.6.9.2	Radio Resource Information	7.6.6.10
		<u>Radio Resource List</u>	<u>7.6.6.10A</u>
Complete Data List Included	7.6.3.54	Rand	7.6.7.2
CS Allocation Retention priority	7.6.3.87		
CUG feature	7.6.3.26	Regional Subscription Data	7.6.3.11
CUG index	7.6.3.25	Regional Subscription Response	7.6.3.12
		Relocation Number List	7.6.2.19A
CUG info	7.6.3.22	Requested Info	7.6.3.31
CUG interlock	7.6.3.24	Requested Subscription Info	7.6.3.86
CUG Outgoing Access indicator	7.6.3.8	Roaming number	7.6.2.19

CUG subscription	7.6.3.23	Roaming Restricted In SGSN Due To Unsupported Feature	7.6.3.49
CUG Subscription Flag	7.6.3.37	Roaming Restriction Due To Unsupported Feature	7.6.3.13
Current location area Id	7.6.2.6	Current Security Context	7.6.7.8
Current password	7.6.4.21	Selected RAB ID	7.6.2.56
eMLPP Information	7.6.4.41	Service centre address	7.6.2.27
Encryption Information	7.6.6.9	Serving Cell Id	7.6.2.37
Equipment status	7.6.3.2	SGSN address	7.6.2.39
Extensible Basic Service Group	7.6.3.5	SGSN CAMEL Subscription Info	7.6.3.75
Extensible Bearer service	7.6.3.3	SGSN number	7.6.2.38
Extensible Call barring feature	7.6.3.21	SIWF Number	7.6.2.35
Extensible Call barring information	7.6.3.20	SoLSA Support Indicator	7.6.3.57
Extensible Call barring information for CSE	7.6.3.79	SM Delivery Outcome	7.6.8.6
Extensible Forwarding feature	7.6.3.16	SM-RP-DA	7.6.8.1
Extensible Forwarding info	7.6.3.15	SM-RP-MTI	7.6.8.16
Extensible Forwarding information for CSE	7.6.3.80	SM-RP-OA	7.6.8.2
Extensible Forwarding Options	7.6.3.18	SM-RP-PRI	7.6.8.5
Extensible No reply condition timer	7.6.3.19	SM-RP-SMEA	7.6.8.17
Extensible QoS-Subscribed	7.6.3.74	SM-RP-UI	7.6.8.4
Extensible SS-Data	7.6.3.29	Sres	7.6.7.3
Extensible SS-Info	7.6.3.14	SS-Code	7.6.4.1
Extensible SS-Status	7.6.3.17	SS-Data	7.6.4.3
Extensible Teleservice	7.6.3.4	SS-Event	7.6.4.42
External Signal Information	7.6.9.4	SS-Event-Data	7.6.4.43
Failure Cause	7.6.7.9	SS-Info	7.6.4.24
Forwarded-to number	7.6.2.22	SS-Status	7.6.4.2
Forwarded-to subaddress	7.6.2.23	Stored location area Id	7.6.2.5
Forwarding feature	7.6.4.16	Subscriber State	7.6.3.30
Forwarding information	7.6.4.15	Subscriber Status	7.6.3.7
Forwarding Options	7.6.4.6	Super-Charger Supported in HLR	7.6.3.70
GGSN address	7.6.2.40	Super-Charger Supported in Serving Network Entity	7.6.3.71
GGSN number	7.6.2.41	Supported CAMEL Phases in VLR	7.6.3.36
GMSC CAMEL Subscription Info	7.6.3.34	Supported CAMEL Phases in SGSN	7.6.3.36A
GPRS enhancements support indicator	7.6.3.73	Suppress T-CSI	7.6.3.33
GPRS Node Indicator	7.6.8.14	Suppression of Announcement	7.6.3.32
GPRS Subscription Data	7.6.3.46	Target cell Id	7.6.2.8
GPRS Subscription Data Withdraw	7.6.3.45	Target location area Id	7.6.2.7
GPRS Support Indicator	7.6.8.15	Target RNC Id	7.6.2.8A
Group Id	7.6.2.33	Target MSC number	7.6.2.12
GSM bearer capability	7.6.3.6	Teleservice	7.6.4.39
Guidance information	7.6.4.22	TMSI	7.6.2.2
Handover number	7.6.2.21	Trace reference	7.6.10.2
High Layer Compatibility	7.6.3.43	Trace type	7.6.10.3
HLR Id	7.6.2.15	User error	7.6.1.4
HLR number	7.6.2.13	USSD Data Coding Scheme	7.6.4.36
HO-Number Not Required	7.6.6.7	USSD String	7.6.4.37
IMEI	7.6.2.3	UU Data	7.6.5.12
IMSI	7.6.2.1	UUS CF Interaction	7.6.5.13
Integrity Protection Information	7.6.6.8	VBS Data	7.6.3.40
Inter CUG options	7.6.3.27	VGCS Data	7.6.3.39
Intra CUG restrictions	7.6.3.28	VLR CAMEL Subscription Info	7.6.3.35
		VLR number	7.6.2.14
		VPLMN address allowed	7.6.3.48
		Zone Code	7.6.2.28

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

## 7.6.6 Radio parameters

### 7.6.6.1 - 7.6.6.6 Void

### 7.6.6.7 HO-Number Not Required

This parameter indicates that no handover or relocation number allocation is necessary.

### 7.6.6.8 Integrity Protection Information

This parameter refers to the Integrity Protection Information element defined in 3G TS 25.413.

### 7.6.6.9 Encryption Information

This parameter refers to the Encryption Information element defined in 3G TS 25.413.

### 7.6.6.10 Radio Resource Information

This parameter refers to the Channel Type information element defined in GSM 08.08.

### 7.6.6.10A Radio Resource List

This parameter refers to list of RAB-id's and their associated Channel Type information elements defined in GSM 08.08.

### 7.6.6.11 Key Status

This parameter refers to the Key Status element defined in 3G TS 25.413.

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

## 8.4.1 MAP\_PREPARE\_HANDBER service

### 8.4.1.1 Definition

This service is used between MSC-A and MSC-B (E-interface) when a call is to be handed over or relocated from MSC-A to MSC-B.

The MAP\_PREPARE\_HANDBER service is a confirmed service using the primitives from table 8.4/1.

### 8.4.1.2 Service primitives

**Table 8.4/1: MAP\_PREPARE\_HANDBER**

Parameter name	Request	Indication	Response	Confirm
Invoke Id	M	M(=)	M(=)	M(=)
Target Cell Id	C	C(=)		
Target RNC Id	C	C(=)		
HO-NumberNotRequired	C	C(=)		
IMSI	C	C(=)		
Integrity Protection Information	C	C(=)		
Encryption Information	C	C(=)		
Radio Resource Information	C	C(=)		
AN-APDU	C	C(=)	C	C(=)
<u>Radio Resource List</u>	<u>C</u>	<u>C(=)</u>		
Handover Number			C	C(=)

Relocation Number List			C	C(=)
Multicall Bearer Information			C	C(=)
Multiple Bearer Requested	C	C(=)		
Multiple Bearer Not Supported			C	C(=)
User error			C	C(=)
Provider error				O

### 8.4.1.3 Parameter use

#### Invoke Id

For definition of this parameter see subclause 7.6.1.

#### Target Cell Id

For definition of this parameter see subclause 7.6.2. This parameter is only included if the service is not in an ongoing transaction. This parameter shall also be excluded if the service is a part of the Inter-MSC SRNS Relocation procedure or the inter-system handover GSM to UMTS procedure described in 3G TS 23.009.

#### Target RNC Id

For definition of this parameter see subclause 7.6.2. This parameter shall be included if the service is a part of the Inter-MSC SRNS Relocation procedure described in 3G TS 23.009.

#### HO-Number Not Required

For definition of this parameter see subclause 7.6.6.

#### IMSI

For definition of this parameter see subclause 7.6.2. This UMTS parameter shall be included if:

- it is available and
- if the access network protocol is BSSAP and
- there is an indication that the MS also supports UMTS.

#### Integrity Protection Information

For definition of this parameter see subclause 7.6.6. This UMTS parameter shall be included if available and if the access network protocol is BSSAP.

#### Encryption Information

For definition of this parameter see subclause 7.6.6. This UMTS parameter shall be included if available and if the access network protocol is BSSAP.

#### Radio Resource Information

For definition of this parameter see subclause 7.6.6. This GSM parameter shall be included if the access network protocol is RANAP and there is an indication that the UE also supports GSM. If the parameter Radio Resource List is sent, the parameter Radio Resource Information shall not be sent.

#### AN-APDU

For definition of this parameter see subclause 7.6.9.

#### Radio Resource List

For definition of this parameter see subclause 7.6.6. This parameter shall be included if the access network protocol is RANAP and there is an indication that the UE also supports GSM. This parameter shall be sent when MSC-A requests multiple bearers to MSC-B. If the parameter Radio Resource Information is sent, the parameter Radio Resource List shall not be sent.

#### Handover Number

For definition of this parameter see subclause 7.6.2. This parameter shall be returned at handover, unless the parameter HO-NumberNotRequired is sent. If the parameter Handover Number is returned, the parameter Relocation Number List shall not be returned.

#### Relocation Number List

For definition of this parameter see subclause 7.6.2. This parameter shall be returned at relocation, unless the parameter HO-NumberNotRequired is sent. If the parameter Relocation Number List is returned, the parameter Handover Number shall not be returned.

#### Multicall Bearer Information

For a definition of this parameter see subclause 7.6.2.

#### Multiple Bearer Requested

For a definition of this parameter see subclause 7.6.2. This parameter shall be sent when MSC-A requests multiple bearers to MSC-B.

#### Multiple Bearer Not Supported

For a definition of this parameter see subclause 7.6.2. This parameter shall be returned at relocation when MSC-B receives Multiple Bearer Requested parameter and MSC-B does not support multiple bearers.

#### User error

For definition of this parameter see subclause 7.6.1. The following errors defined in subclause 7.6.1 may be used, depending on the nature of the fault:

- No handover number available.
- Target cell outside group call area;
- System failure.
- Unexpected data value.
- Data Missing.

#### Provider error

See definition of provider errors in subclause 7.6.1.

<b>**** NEXT MODIFIED SECTION ****</b>
--

## 17.7 MAP constants and data types

### 17.7.1 Mobile Service data types

....



<b>PrepareHO-Arg</b> ::= [3] SEQUENCE {		
targetCellId	[0] GlobalCellId	OPTIONAL,
ho-NumberNotRequired	NULL	OPTIONAL,
targetRNCId	[1] RNCId	OPTIONAL,
an-APDU	[2] AccessNetworkSignalInfo	OPTIONAL,
multipleBearerRequested	[3] NULL	OPTIONAL,
imsi	[4] IMSI	OPTIONAL,
integrityProtectionInfo	[5] IntegrityProtectionInformation	OPTIONAL,
encryptionInfo	[6] EncryptionInformation	OPTIONAL,
radioResourceInformation	[7] RadioResourceInformation	OPTIONAL,
radioResourceList	[9] RadioResourceList	OPTIONAL,
extensionContainer	[8] ExtensionContainer	OPTIONAL,
...}		

<b>RadioResourceList</b> ::= SEQUENCE SIZE (2.. maxNumOfRadioResources) OF RadioResource
---

<b>RadioResource</b> ::= SEQUENCE {	
radioResourceInformation	RadioResourceInformation,
rab-Id	RAB-Id,
-- RAB Identity is needed to relate the radio resources with the radio access bearers.	
...}	

<b>maxNumOfRadioResources</b> INTEGER ::= 7
---

## CHANGE REQUEST

⌘ **29.002 CR** **254** ⌘ rev **2** ⌘ Current version: **4.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘	Addition of radio resource list to the handover procedures		
<b>Source:</b>	⌘	CN4		
<b>Work item code:</b>	⌘	Multicall	<b>Date:</b>	⌘ 17.5.2001
<b>Category:</b>	⌘	<b>A</b>	<b>Release:</b>	⌘ REL-4
		<p style="margin: 0;"><i>Use <u>one</u> of the following categories:</i></p> <p style="margin: 0;"><b>F</b> (correction)</p> <p style="margin: 0;"><b>A</b> (corresponds to a correction in an earlier release)</p> <p style="margin: 0;"><b>B</b> (Addition of feature),</p> <p style="margin: 0;"><b>C</b> (Functional modification of feature)</p> <p style="margin: 0;"><b>D</b> (Editorial modification)</p> <p style="margin: 0; font-size: small;">Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		
		<p style="margin: 0;"><i>Use <u>one</u> of the following releases:</i></p> <p style="margin: 0;"><b>2</b> (GSM Phase 2)</p> <p style="margin: 0;"><b>R96</b> (Release 1996)</p> <p style="margin: 0;"><b>R97</b> (Release 1997)</p> <p style="margin: 0;"><b>R98</b> (Release 1998)</p> <p style="margin: 0;"><b>R99</b> (Release 1999)</p> <p style="margin: 0;"><b>REL-4</b> (Release 4)</p> <p style="margin: 0;"><b>REL-5</b> (Release 5)</p>		

<b>Reason for change:</b>	⌘	The radio resource list is needed to handover procedure for Multicall. MSC-A has to be able to transfer the associated channel type for all reserved radio access bearers to MSC-B.		
<b>Summary of change:</b>	⌘			
<b>Consequences if not approved:</b>	⌘	MSC-B does not have channel type information of all radio access bearers thus preventing intersystem handover to GSM.		

<b>Clauses affected:</b>	⌘	2, 7.6, 8.4, 17.7		
<b>Other specs affected:</b>	⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
<b>Other comments:</b>	⌘	All references to GSM 08.08 should be checked from the 3G TS 29.002 specification and changed to references to 3G TS 48.008.		

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## 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] 3G TS 21.905: "3G Vocabulary".
- [2] GSM 02.01: "Digital cellular telecommunications system (Phase 2+); Principles of telecommunication services supported by a GSM Public Land Mobile Network (PLMN)".
- [3] 3G TS 22.002: "Bearer Services Supported by a GSM Public Land Mobile Network (PLMN)".
- [4] GSM 02.03: "Digital cellular telecommunications system (Phase 2+); Teleservices Supported by a GSM Public Land Mobile Network (PLMN)".
- [5] 3G TS 22.004: "General on Supplementary Services".
- [6] GSM 02.09: "Digital cellular telecommunications system (Phase 2+); Security aspects".
- [7] 3G TS 22.016: "International Mobile station Equipment Identities (IMEI)".
- [8] 3G TS 22.041: "Operator Determined Barring".
- [9] 3G TS 22.081: "Line identification supplementary services - Stage 1".
- [10] 3G TS 22.082: "Call Forwarding (CF) supplementary services - Stage 1".
- [11] 3G TS 22.083: "Call Waiting (CW) and Call Hold (HOLD) Supplementary Services - Stage 1".
- [12] 3G TS 22.084: "Multi Party (MPTY) Supplementary Services - Stage 1".
- [13] 3G TS 22.085: "Closed User Group (CUG) supplementary services - Stage 1".
- [14] 3G TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1".
- [15] 3G TS 22.088: "Call Barring (CB) supplementary services - Stage 1".
- [16] 3G TS 22.090: "Unstructured Supplementary Service Data (USSD); - Stage 1".
- [17] 3G TS 23.003: "Numbering, addressing and identification".
- [18] GSM 03.04: "Digital cellular telecommunications system (Phase 2+); Signalling requirements relating to routing of calls to mobile subscribers".
- [19] 3G TS 23.007: "Restoration procedures".
- [20] 3G TS 23.008: "Organisation of subscriber data".
- [21] 3G TS 23.009: "Handover procedures".
- [22] 3G TS 23.011: "Technical realization of Supplementary Services - General Aspects".
- [23] 3G TS 23.012: "Location registration procedures".
- [24] GSM 03.20: "Digital cellular telecommunications system (Phase 2+); Security related network functions".
- [25] 3G TS 23.038: "Alphabets and language".
- [26] 3G TS 23.040: "Technical realization of the Short Message Service (SMS) Point to Point (PP)".

- [26a] GSM 03.71: "Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Functional Description; Stage 2".
- [27] 3G TS 23.081: "Line Identification Supplementary Services - Stage 2".
- [28] 3G TS 23.082: "Call Forwarding (CF) Supplementary Services - Stage 2".
- [29] 3G TS 23.083: "Call Waiting (CW) and Call Hold (HOLD) Supplementary Services - Stage 2".
- [30] 3G TS 23.084: "Multi Party (MPTY) Supplementary Services - Stage 2".
- [31] 3G TS 23.085: "Closed User Group (CUG) Supplementary Services - Stage 2".
- [32] 3G TS 23.086: "Advice of Charge (AoC) Supplementary Services - Stage 2".
- [33] 3G TS 23.088: "Call Barring (CB) Supplementary Services - Stage 2".
- [34] 3G TS 23.090: "Unstructured Supplementary Services Data (USSD) - Stage 2".
- [35] 3G TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols - Stage 3".
- [36] 3G TS 24.010: "Mobile radio interface layer 3 Supplementary Services specification - General aspects".
- [37] 3G TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
- [37a] GSM 04.71: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 location services specification".
- [38] 3G TS 24.080: "Mobile radio interface layer 3 supplementary services specification - Formats and coding".
- [39] 3G TS 24.081: "Line identification supplementary services - Stage 3".
- [40] 3G TS 24.082: "Call Forwarding (CF) Supplementary Services - Stage 3".
- [41] 3G TS 24.083: "Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 3".
- [42] 3G TS 24.084: "Multi Party (MPTY) Supplementary Services - Stage 3".
- [43] 3G TS 24.085: "Closed User Group (CUG) Supplementary Services - Stage 3".
- [44] 3G TS 24.086: "Advice of Charge (AoC) Supplementary Services - Stage 3".
- [45] 3G TS 24.088: "Call Barring (CB) Supplementary Services - Stage 3".
- [46] 3G TS 24.090: "Unstructured Supplementary Services Data - Stage 3".
- [47] GSM 08.02: "Digital cellular telecommunications system (Phase 2+); Base Station System - Mobile-services Switching Centre (BSS - MSC) interface principles".
- [48] GSM 08.06: "Digital cellular telecommunications system (Phase 2+); Signalling transport mechanism specification for the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".
- [49] ~~3G TS 48.008~~ GSM 08.08: "Digital cellular telecommunications system (Phase 2+); Mobile Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".
- ~~[49a] GSM 08.08: "Digital cellular telecommunications system (Phase 2+); Mobile Switching Centre - Base Station System (MSC - BSS) interface Layer 3 specification".~~
- [49a1] GSM 08.31: "Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Serving Mobile Location Centre (SMLC) – Serving Mobile Location Centre (SMLC); SMLC Peer Protocol (SMLCPP)".
- [49b] GSM 08.71: "Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Serving Mobile Location Centre - Base Station System (SMLC - BSS) interface Layer 3 specification".

- [50] GSM 09.01: "Digital cellular telecommunications system (Phase 2+); General network interworking scenarios".
- [51] 3G TS 29.002: "Mobile Application Part (MAP) specification".
- [52] GSM 09.03: "Digital cellular telecommunications system (Phase 2+); Signalling requirements on interworking between the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN) and the Public Land Mobile Network (PLMN)".
- [53] GSM 09.04: "Digital cellular telecommunications system (Phase 2+); Interworking between the Public Land Mobile Network (PLMN) and the Circuit Switched Public Data Network (CSPDN)".
- [54] GSM 09.05: "Digital cellular telecommunications system (Phase 2+); Interworking between the Public Land Mobile Network (PLMN) and the Packet Switched Public Data Network (PSPDN) for Packet Assembly/Disassembly facility (PAD) access".
- [55] 3G TS 29.006: "Interworking between a Public Land Mobile Network (PLMN) and a Packet Switched Public Data Network/Integrated Services Digital Network (PSPDN/ISDN) for the support of Packet Switched data transmission services".
- [56] 3G TS 29.007: "Digital cellular telecommunications system (Phase 2+); General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".
- [57] GSM 09.08: "Digital cellular telecommunications system (Phase 2+); Application of the Base Station System Application Part (BSSAP) on the E-interface".
- [58] 3G TS 29.010: "Information element mapping between Mobile Station - Base Station System and BSS - Mobile-services Switching Centre (MS - BSS - MSC) Signalling procedures and the Mobile Application Part (MAP)".
- [59] 3G TS 29.011: "Signalling interworking for Supplementary Services".
- [59a] GSM 09.31: "Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Base Station System Application Part LCS Extension (BSSAP-LE)".
- [60] GSM 09.90: "Digital cellular telecommunications system (Phase 2+); Interworking between Phase 1 infrastructure and Phase 2 Mobile Stations (MS)".
- [61] GSM 12.08: "Digital cellular telecommunications system (Phase 2); Subscriber and Equipment Trace".
- [62] ETS 300 102-1 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3 specifications for basic call control".
- [63] ETS 300 136 (1992): "Integrated Services Digital Network (ISDN); Closed User Group (CUG) supplementary service description".
- [64] ETS 300 138 (1992): "Integrated Services Digital Network (ISDN); Closed User Group (CUG) supplementary service Digital Subscriber Signalling System No.one (DSS1) protocol".
- [65] ETS 300 287: "Integrated Services Digital Network (ISDN); Signalling System No.7; Transaction Capabilities (TC) version 2".
- [66] ETR 060: "Signalling Protocols and Switching (SPS); Guide-lines for using Abstract Syntax Notation One (ASN.1) in telecommunication application protocols".
- [67] ITU-T Recommendation E.164: "Numbering plan for the ISDN era".
- [68] ITU-T Recommendation E.212: "Identification plan for land mobile stations".
- [69] ITU-T Recommendation E.213: "Telephone and ISDN numbering plan for land mobile stations".
- [70] ITU-T Recommendation E.214: "Structuring of the land mobile global title for the signalling connection control part".
- [71] CCITT Recommendation Q.699: "Interworking between the Digital Subscriber Signalling System Layer 3 protocol and the Signalling System No.7 ISDN User part".

- [72] ITU-T Recommendation Q.711: "Specifications of Signalling System No.7; Functional description of the Signalling Connection Control Part".
- [73] ITU-T Recommendation Q.712: "Definition and function of SCCP messages".
- [74] ITU-T Recommendation Q.713: "Specifications of Signalling System No.7; SCCP formats and codes".
- [75] ITU-T Recommendation Q.714: "Specifications of Signalling System No.7; Signalling Connection Control Part procedures".
- [76] ITU-T Recommendation Q.716: "Specifications of Signalling System No.7; Signalling connection control part (SCCP) performances".
- [77] ITU-T Recommendation Q.721 (1988): "Specifications of Signalling System No.7; Functional description of the Signalling System No.7 Telephone user part".
- [78] ITU-T Recommendation Q.722 (1988): "Specifications of Signalling System No.7; General function of Telephone messages and signals".
- [79] ITU-T Recommendation Q.723 (1988): "Specifications of Signalling System No.7; Formats and codes".
- [80] ITU-T Recommendation Q.724 (1988): "Specifications of Signalling System No.7; Signalling procedures".
- [81] ITU-T Recommendation Q.725 (1988): "Specifications of Signalling System No.7; Signalling performance in the telephone application".
- [82] ITU-T Recommendation Q.761 (1988): "Specifications of Signalling System No.7; Functional description of the ISDN user part of Signalling System No.7".
- [83] ITU-T Recommendation Q.762 (1988): "Specifications of Signalling System No.7; General function of messages and signals".
- [84] ITU-T Recommendation Q.763 (1988): "Specifications of Signalling System No.7; Formats and codes".
- [85] ITU-T Recommendation Q.764 (1988): "Specifications of Signalling System No.7; Signalling procedures".
- [86] ITU-T Recommendation Q.767: "Specifications of Signalling System No.7; Application of the ISDN user part of CCITT signalling System No.7 for international ISDN interconnections".
- [87] ITU-T Recommendation Q.771: "Specifications of Signalling System No.7; Functional description of transaction capabilities".
- [88] ITU-T Recommendation Q.772: "Specifications of Signalling System No.7; Transaction capabilities information element definitions".
- [89] ITU-T Recommendation Q.773: "Specifications of Signalling System No.7; Transaction capabilities formats and encoding".
- [90] ITU-T Recommendation Q.774: "Specifications of Signalling System No.7; Transaction capabilities procedures".
- [91] ITU-T Recommendation Q.775: "Specifications of Signalling System No.7; Guide-lines for using transaction capabilities".
- [92] ITU-T Recommendation X.200: "Reference Model of Open systems interconnection for CCITT Applications".
- [93] ITU-T Recommendation X.208 (1988): "Specification of Abstract Syntax Notation One (ASN.1)".
- [94] ITU-T Recommendation X.209 (1988): "Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)".

- [95] ITU-T Recommendation X.210: "Open systems interconnection layer service definition conventions".
- [97] 3G TS 23.018: "Basic Call Handling".
- [98] 3G TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2".
- [99] 3G TS 23.079: "Support of Optimal Routeing (SOR) - Stage 2".
- [100] GSM 03.68: "Digital cellular telecommunications system (Phase 2+); - Stage 2".
- [101] GSM 03.69: "Digital cellular telecommunications system (Phase 2+); - Stage 2".
- [102] ANSI T1.113: "Signaling System No. 7 (SS7) - ISDN User Part".
- [103] 3G TS 23.054 "Shared Inter Working Function (SIWF) - Stage 2".
- [104] 3G TS 23.060: "General Packet Radio Service (GPRS) Description; Stage 2".
- [105] 3G TS 29.060: "General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface".
- [106] 3G TS 29.018: "General Packet Radio Service (GPRS); Serving GPRS Support Node (SGSN) - Visitors Location Register (VLR); Gs interface layer 3 specification".
- [107] 3G TS 23.093: "Technical Realization of Completion of Calls to Busy Subscriber (CCBS); Stage 2".
- [108] 3G TS 23.066: "Support of Mobile Number Portability (MNP); Technical Realisation Stage 2".
- [109] ANSI T1.112 (1996): "Telecommunication – Signalling No. 7 - Signaling Connection Control Part (SCCP)".
- [110] 3G TS 23.116: "Super-Charger Technical Realisation; Stage 2."
- [111] ITU-T Recommendation Q.711: "Specifications of Signalling System No.7; Signalling System No. 7 – Functional Description of the Signalling Connection Control Part".
- [112] ITU-T Recommendation Q.712: "Specifications of Signalling System No.7; Signalling System No. 7 – Definition and Function of SCCP Messages".
- [113] ITU-T Recommendation Q.713: "Specifications of Signalling System No.7; Signalling System No. 7 – SCCP formats and codes".
- [114] ITU-T Recommendation Q.714: "Specifications of Signalling System No.7; Signalling System No. 7 – Signalling Connection Control Part Procedures".
- [115] ITU-T Recommendation Q.716: "Specifications of Signalling System No.7; Signalling System No. 7 – Signalling Connection Control Part (SCCP) Performance".
- [116] ITU-T Q.850, May 1998: "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN User Part".
- [117] 3G TS 22.135: "Multicall; Service description; Stage 1".
- [118] 3G TS 23.135: "Multicall supplementary service; Stage 2".
- [119] 3G TS 24.135: "Multicall supplementary service; Stage 3".
- [120] 3G TS 25.413: "UTRAN Iu Interface RANAP Signalling".

## 7.6 Definition of parameters

Following is an alphabetic list of parameters used in the common MAP-services in subclause 7.3:

Application context name	7.3.1	Refuse reason	7.3.1
Destination address	7.3.1	Release method	7.3.2
Destination reference	7.3.1	Responding address	7.3.1
Diagnostic information	7.3.4	Result	7.3.1
Originating address	7.3.1	Source	7.3.5
Originating reference	7.3.1	Specific information	7.3.1/7.3.2/7.3.4
Problem diagnostic	7.3.6	User reason	7.3.4
Provider reason	7.3.5		

Following is an alphabetic list of parameters contained in this clause:

Absent Subscriber Diagnostic SM	7.6.8.9	Invoke Id	7.6.1.1
Access connection status	7.6.9.3	ISDN Bearer Capability	7.6.3.41
		IST Alert Timer	7.6.3.66
		IST Information Withdrawn	7.6.3.68
		IST Support Indicator	7.6.3.69
Access signalling information	7.6.9.5	Kc	7.6.7.4
Additional Absent Subscriber Diagnostic SM	7.6.8.12	Linked Id	7.6.1.2
Additional number	7.6.2.46	LMSI	7.6.2.16
Additional signal info	7.6.9.10	Location Information	7.6.2.30
Additional SM Delivery Outcome	7.6.8.11		
Age Indicator	7.6.3.72	Location update type	7.6.9.6
		Long Forwarded-to Number	7.6.2.22A
		Long FTN Supported	7.6.2.22B
Alert Reason	7.6.8.8	Lower Layer Compatibility	7.6.3.42
		LSA Information	7.6.3.56
		LSA Information Withdraw	7.6.3.58
		MC Information	7.6.4.48
		MC Subscription Data	7.6.4.47
Alert Reason Indicator	7.6.8.10	Mobile Not Reachable Reason	7.6.3.51
Alerting Pattern	7.6.3.44	Modification request for CSI	7.6.3.81
All GPRS Data	7.6.3.53	Modification request for SS Information	7.6.3.82
All Information Sent	7.6.1.5	More Messages To Send	7.6.8.7
AN-apdu	7.6.9.1		
APN	7.6.2.42	MS ISDN	7.6.2.17
Authentication set list	7.6.7.1	MSC number	7.6.2.11
B-subscriber Address	7.6.2.36	MSISdn-Alert	7.6.2.29
		Multicall Bearer Information	7.6.2.52
		Multiple Bearer Requested	7.6.2.53
		Multiple Bearer Not Supported	7.6.2.54
B subscriber Number	7.6.2.48	MWD status	7.6.8.3
		NbrUser	7.6.4.45
B subscriber subaddress	7.6.2.49	Network Access Mode	7.6.3.50
Basic Service Group	7.6.4.40	Network node number	7.6.2.43
Bearer service	7.6.4.38	Network resources	7.6.10.1
		Network signal information	7.6.9.8
Call Barring Data	7.6.3.83	New password	7.6.4.20
Call barring feature	7.6.4.19	No reply condition timer	7.6.4.7
Call barring information	7.6.4.18	North American Equal Access preferred Carrier Id	7.6.2.34
		Number Portability Status	7.6.5.14
Call Direction	7.6.5.8	ODB Data	7.6.3.85
Call Forwarding Data	7.6.3.84	ODB General Data	7.6.3.9
Call Info	7.6.9.9	ODB HPLMN Specific Data	7.6.3.10
Call reference	7.6.5.1		
Call Termination Indicator	7.6.3.67	OMC Id	7.6.2.18
Called number	7.6.2.24	Originally dialled number	7.6.2.26
Calling number	7.6.2.25	Originating entity number	7.6.2.10
CAMEL Subscription Info	7.6.3.78	Override Category	7.6.4.4
CAMEL Subscription Info Withdraw	7.6.3.38	P-TMSI	7.6.2.47
Cancellation Type	7.6.3.52	PDP-Address	7.6.2.45
Category	7.6.3.1	PDP-Context identifier	7.6.3.55
CCBS Feature	7.6.5.8		
CCBS Request State	7.6.4.49	PDP-Type	7.6.2.44
Channel Type	7.6.5.9	Pre-paging supported	7.6.5.15
Chosen Channel	7.6.5.10		



Ciphering mode	7.6.7.7	Previous location area Id	7.6.2.4
Cksn	7.6.7.5	Protocol Id	7.6.9.7
CLI Restriction	7.6.4.5	Provider error	7.6.1.3
CM service type	7.6.9.2	QoS-Subscribed	7.6.3.47
		Radio Resource Information	7.6.6.10
		<u>Radio Resource List</u>	<u>7.6.6.10A</u>
Complete Data List Included	7.6.3.54	Rand	7.6.7.2
CS Allocation Retention priority	7.6.3.87		
CUG feature	7.6.3.26	Regional Subscription Data	7.6.3.11
CUG index	7.6.3.25	Regional Subscription Response	7.6.3.12
		Relocation Number List	7.6.2.19A
CUG info	7.6.3.22	Requested Info	7.6.3.31
CUG interlock	7.6.3.24	Requested Subscription Info	7.6.3.86
CUG Outgoing Access indicator	7.6.3.8	Roaming number	7.6.2.19
CUG subscription	7.6.3.23	Roaming Restricted In SGSN Due To Unsupported Feature	7.6.3.49
		Roaming Restriction Due To Unsupported Feature	7.6.3.13
CUG Subscription Flag	7.6.3.37	Current Security Context	7.6.7.8
		Selected RAB ID	7.6.2.56
Current location area Id	7.6.2.6	Service centre address	7.6.2.27
Current password	7.6.4.21	Serving Cell Id	7.6.2.37
eMLPP Information	7.6.4.41	SGSN address	7.6.2.39
Encryption Information	7.6.6.9		
Equipment status	7.6.3.2	SGSN CAMEL Subscription Info	7.6.3.75
Extensible Basic Service Group	7.6.3.5	SGSN number	7.6.2.38
Extensible Bearer service	7.6.3.3	SIWF Number	7.6.2.35
		SoLSA Support Indicator	7.6.3.57
Extensible Call barring feature	7.6.3.21	SM Delivery Outcome	7.6.8.6
Extensible Call barring information	7.6.3.20	SM-RP-DA	7.6.8.1
Extensible Call barring information for CSE	7.6.3.79	SM-RP-MTI	7.6.8.16
Extensible Forwarding feature	7.6.3.16	SM-RP-OA	7.6.8.2
Extensible Forwarding info	7.6.3.15	SM-RP-PRI	7.6.8.5
Extensible Forwarding information for CSE	7.6.3.80	SM-RP-SMEA	7.6.8.17
Extensible Forwarding Options	7.6.3.18	SM-RP-UI	7.6.8.4
Extensible No reply condition timer	7.6.3.19	Sres	7.6.7.3
Extensible QoS-Subscribed	7.6.3.74	SS-Code	7.6.4.1
Extensible SS-Data	7.6.3.29	SS-Data	7.6.4.3
Extensible SS-Info	7.6.3.14	SS-Event	7.6.4.42
Extensible SS-Status	7.6.3.17	SS-Event-Data	7.6.4.43
Extensible Teleservice	7.6.3.4	SS-Info	7.6.4.24
External Signal Information	7.6.9.4	SS-Status	7.6.4.2
Failure Cause	7.6.7.9		
Forwarded-to number	7.6.2.22	Stored location area Id	7.6.2.5
Forwarded-to subaddress	7.6.2.23	Subscriber State	7.6.3.30
Forwarding feature	7.6.4.16	Subscriber Status	7.6.3.7
Forwarding information	7.6.4.15	Super-Charger Supported in HLR	7.6.3.70
Forwarding Options	7.6.4.6	Super-Charger Supported in Serving Network Entity	7.6.3.71
		Supported CAMEL Phases in VLR	7.6.3.36
GGSN address	7.6.2.40	Supported CAMEL Phases in SGSN	7.6.3.36A
GGSN number	7.6.2.41	Suppress T-CSI	7.6.3.33
GMSC CAMEL Subscription Info	7.6.3.34	Suppression of Announcement	7.6.3.32
GPRS enhancements support indicator	7.6.3.73	Target cell Id	7.6.2.8
GPRS Node Indicator	7.6.8.14	Target location area Id	7.6.2.7
GPRS Subscription Data	7.6.3.46	Target RNC Id	7.6.2.8A
		Target MSC number	7.6.2.12
GPRS Subscription Data Withdraw	7.6.3.45	Teleservice	7.6.4.39
GPRS Support Indicator	7.6.8.15	TMSI	7.6.2.2
Group Id	7.6.2.33	Trace reference	7.6.10.2
GSM bearer capability	7.6.3.6	Trace type	7.6.10.3
Guidance information	7.6.4.22	User error	7.6.1.4
Handover number	7.6.2.21	USSD Data Coding Scheme	7.6.4.36
High Layer Compatibility	7.6.3.43	USSD String	7.6.4.37
HLR Id	7.6.2.15	UU Data	7.6.5.12
HLR number	7.6.2.13	UUS CF Interaction	7.6.5.13
HO-Number Not Required	7.6.6.7	VBS Data	7.6.3.40
IMEI	7.6.2.3	VGCS Data	7.6.3.39
IMSI	7.6.2.1		
Integrity Protection Information	7.6.6.8	VLR CAMEL Subscription Info	7.6.3.35
Inter CUG options	7.6.3.27		

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

## 7.6.6 Radio parameters

7.6.6.1 - 7.6.6.6 Void

### 7.6.6.7 HO-Number Not Required

This parameter indicates that no handover or relocation number allocation is necessary.

### 7.6.6.8 Integrity Protection Information

This parameter refers to the Integrity Protection Information element defined in 3G TS 25.413.

### 7.6.6.9 Encryption Information

This parameter refers to the Encryption Information element defined in 3G TS 25.413.

### 7.6.6.10 Radio Resource Information

This parameter refers to the Channel Type information element defined in GSM 08.08.

#### 7.6.6.10A Radio Resource List

This parameter refers to list of RAB-id's and their associated Channel Type information elements defined in 3G TS 48.008.

### 7.6.6.11 Key Status

This parameter refers to the Key Status element defined in 3G TS 25.413.

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

## 8.4.1 MAP\_PREPARE\_HANDOVER service

### 8.4.1.1 Definition

This service is used between MSC-A and MSC-B (E-interface) when a call is to be handed over or relocated from MSC-A to MSC-B.

The MAP\_PREPARE\_HANDOVER service is a confirmed service using the primitives from table 8.4/1.

### 8.4.1.2 Service primitives

**Table 8.4/1: MAP\_PREPARE\_HANDOVER**

Parameter name	Request	Indication	Response	Confirm
----------------	---------	------------	----------	---------

Invoke Id	M	M(=)	M(=)	M(=)
Target Cell Id	C	C(=)		
Target RNC Id	C	C(=)		
HO-NumberNotRequired	C	C(=)		
IMSI	C	C(=)		
Integrity Protection Information	C	C(=)		
Encryption Information	C	C(=)		
Radio Resource Information	C	C(=)		
AN-APDU	C	C(=)	C	C(=)
<u>Radio Resource List</u>	<u>C</u>	<u>C(=)</u>		
Handover Number			C	C(=)
Relocation Number List			C	C(=)
Multicall Bearer Information			C	C(=)
Multiple Bearer Requested	C	C(=)		
Multiple Bearer Not Supported			C	C(=)
User error			C	C(=)
Provider error				O

### 8.4.1.3 Parameter use

#### Invoke Id

For definition of this parameter see subclause 7.6.1.

#### Target Cell Id

For definition of this parameter see subclause 7.6.2. This parameter is only included if the service is not in an ongoing transaction. This parameter shall also be excluded if the service is a part of the Inter-MSC SRNS Relocation procedure or the inter-system handover GSM to UMTS procedure described in 3G TS 23.009.

#### Target RNC Id

For definition of this parameter see subclause 7.6.2. This parameter shall be included if the service is a part of the Inter-MSC SRNS Relocation procedure described in 3G TS 23.009.

#### HO-Number Not Required

For definition of this parameter see subclause 7.6.6.

#### IMSI

For definition of this parameter see subclause 7.6.2. This UMTS parameter shall be included if:

- it is available and
- if the access network protocol is BSSAP and
- there is an indication that the MS also supports UMTS.

#### Integrity Protection Information

For definition of this parameter see subclause 7.6.6. This UMTS parameter shall be included if available and if the access network protocol is BSSAP.

#### Encryption Information

For definition of this parameter see subclause 7.6.6. This UMTS parameter shall be included if available and if the access network protocol is BSSAP.

#### Radio Resource Information

For definition of this parameter see subclause 7.6.6. This GSM parameter shall be included if the access network protocol is RANAP and there is an indication that the UE also supports GSM. If the parameter Radio Resource List is sent, the parameter Radio Resource Information shall not be sent.

#### AN-APDU

For definition of this parameter see subclause 7.6.9.

#### Radio Resource List

For definition of this parameter see subclause 7.6.6. This parameter shall be included if the access network protocol is RANAP and there is an indication that the UE also supports GSM. This parameter shall be sent when MSC-A requests multiple bearers to MSC-B. If the parameter Radio Resource Information is sent, the parameter Radio Resource List shall not be sent.

#### Handover Number

For definition of this parameter see subclause 7.6.2. This parameter shall be returned at handover, unless the parameter HO-NumberNotRequired is sent. If the parameter Handover Number is returned, the parameter Relocation Number List shall not be returned.

#### Relocation Number List

For definition of this parameter see subclause 7.6.2. This parameter shall be returned at relocation, unless the parameter HO-NumberNotRequired is sent. If the parameter Relocation Number List is returned, the parameter Handover Number shall not be returned.

#### Multicall Bearer Information

For a definition of this parameter see subclause 7.6.2.

#### Multiple Bearer Requested

For a definition of this parameter see subclause 7.6.2. This parameter shall be sent when MSC-A requests multiple bearers to MSC-B.

#### Multiple Bearer Not Supported

For a definition of this parameter see subclause 7.6.2. This parameter shall be returned at relocation when MSC-B receives Multiple Bearer Requested parameter and MSC-B does not support multiple bearers.

#### User error

For definition of this parameter see subclause 7.6.1. The following errors defined in subclause 7.6.1 may be used, depending on the nature of the fault:

- No handover number available.
- Target cell outside group call area;
- System failure.
- Unexpected data value.
- Data Missing.

#### Provider error

See definition of provider errors in subclause 7.6.1.

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

## 17.7 MAP constants and data types

### 17.7.1 Mobile Service data types

....

<b>PrepareHO-Arg</b> ::= [3] SEQUENCE {		
targetCellId	[0] GlobalCellId	OPTIONAL,
ho-NumberNotRequired	NULL	OPTIONAL,
targetRNCId	[1] RNCId	OPTIONAL,
an-APDU	[2] AccessNetworkSignalInfo	OPTIONAL,
multipleBearerRequested	[3] NULL	OPTIONAL,
imsi	[4] IMSI	OPTIONAL,
integrityProtectionInfo	[5] IntegrityProtectionInformation	OPTIONAL,
encryptionInfo	[6] EncryptionInformation	OPTIONAL,
radioResourceInformation	[7] RadioResourceInformation	OPTIONAL,
radioResourceList	[9] RadioResourceList	OPTIONAL,
extensionContainer	[8] ExtensionContainer	OPTIONAL,
...}		

<b>RadioResourceList</b> ::= SEQUENCE SIZE (2.. maxNumOfRadioResources) OF RadioResource
---

<b>RadioResource</b> ::= SEQUENCE {	
radioResourceInformation	RadioResourceInformation,
rab-Id	RAB-Id,
-- RAB Identity is needed to relate the radio resources with the radio access bearers.	
...}	

<b>maxNumOfRadioResources</b> INTEGER ::= 7
---

## CHANGE REQUEST

⌘ **29.002** CR **282** ⌘ rev **1** ⌘ Current version: **3.8.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Introduction of selected Rab-id to the Process Access Signalling operation		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ Multicall	<b>Date:</b>	⌘ 17.5.2001
<b>Category:</b>	⌘ <b>F</b> (Essential correction)	<b>Release:</b>	⌘ R99
<i>Use <u>one</u> of the following categories:</i>		<i>Use <u>one</u> of the following releases:</i>	
<b>F</b> (correction)		2 (GSM Phase 2)	
<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)	
<b>B</b> (Addition of feature),		R97 (Release 1997)	
<b>C</b> (Functional modification of feature)		R98 (Release 1998)	
<b>D</b> (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)	

<b>Reason for change:</b>	⌘ MSC-B shall inform MSC-A what RAB it has kept during intra-MSC handover from UMTS to GSM in case of multiple bearers were used.
<b>Summary of change:</b>	⌘
<b>Consequences if not approved:</b>	⌘ MSC-A does not know what bearer has been selected after intra-MSC handover from UMTS to GSM.

<b>Clauses affected:</b>	⌘ 8.4, 17.7
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
<b>Other comments:</b>	⌘

## 8.4.3 MAP\_PROCESS\_ACCESS\_SIGNALLING service

### 8.4.3.1 Definition

This service is used between MSC-B and MSC-A (E-interface) to pass information received on the A-interface or Iu-interface in MSC-B to MSC-A.

The MAP\_PROCESS\_ACCESS\_SIGNALLING service is a non-confirmed service using the primitives from table 8.4/3.

### 8.4.3.2 Service primitives

**Table 8.4/3: MAP\_PROCESS\_ACCESS\_SIGNALLING**

Parameter name	Request	Indication
Invoke Id	M	M(=)
AN-APDU	M	M(=)
Selected RAB id	C	C(=)

### 8.4.3.3 Parameter use

#### Invoke Id

For definition of this parameter see subclause 7.6.1.

#### AN-APDU

For definition of this parameter see subclause 7.6.9.

#### Selected RAB ID

The selected radio access bearer that was kept at subsequent intra-MSC handover from UMTS to GSM after multiple bearers were used.

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

## 17.7 MAP constants and data types

### 17.7.1 Mobile Service data types

....

```
ProcessAccessSignalling-Arg ::= [3] SEQUENCE {
  an-APDU                AccessNetworkSignalInfo,
  selectedRab-Id         [1] RAB-Id                OPTIONAL,
  extensionContainer     [0] ExtensionContainer     OPTIONAL,
  ... }
```

## CHANGE REQUEST

⌘ **29.002 CR 283** ⌘ rev **1** ⌘ Current version: **4.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘	Introduction of selected Rab-id to the Process Access Signalling operation	
<b>Source:</b>	⌘	CN4	
<b>Work item code:</b>	⌘	Multicall	<b>Date:</b> ⌘ 17.5.2001
<b>Category:</b>	⌘	<b>A</b>	<b>Release:</b> ⌘ REL-4
		<p><i>Use <u>one</u> of the following categories:</i></p> <p><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)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)  <b>R96</b> (Release 1996)  <b>R97</b> (Release 1997)  <b>R98</b> (Release 1998)  <b>R99</b> (Release 1999)  <b>REL-4</b> (Release 4)  <b>REL-5</b> (Release 5)</p>

<b>Reason for change:</b>	⌘	MSC-B shall inform MSC-A what RAB it has kept during intra-MSC handover from UMTS to GSM in case of multiple bearers were used.	
<b>Summary of change:</b>	⌘		
<b>Consequences if not approved:</b>	⌘	MSC-A does not know what bearer has been selected after intra-MSC handover from UMTS to GSM.	

<b>Clauses affected:</b>	⌘	8.4, 17.7	
<b>Other specs affected:</b>	⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘
<b>Other comments:</b>	⌘		



## 8.4.3 MAP\_PROCESS\_ACCESS\_SIGNALLING service

### 8.4.3.1 Definition

This service is used between MSC-B and MSC-A (E-interface) to pass information received on the A-interface or Iu-interface in MSC-B to MSC-A.

The MAP\_PROCESS\_ACCESS\_SIGNALLING service is a non-confirmed service using the primitives from table 8.4/3.

### 8.4.3.2 Service primitives

**Table 8.4/3: MAP\_PROCESS\_ACCESS\_SIGNALLING**

Parameter name	Request	Indication
Invoke Id	M	M(=)
AN-APDU	M	M(=)
Selected RAB id	C	C(=)

### 8.4.3.3 Parameter use

#### Invoke Id

For definition of this parameter see subclause 7.6.1.

#### AN-APDU

For definition of this parameter see subclause 7.6.9.

#### Selected RAB ID

The selected radio access bearer that was kept at subsequent intra-MSC handover from UMTS to GSM after multiple bearers were used.

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

## 17.7 MAP constants and data types

### 17.7.1 Mobile Service data types

....

```
ProcessAccessSignalling-Arg ::= [3] SEQUENCE {
  an-APDU                AccessNetworkSignalInfo,
  selectedRab-Id         [1] RAB-Id                OPTIONAL,
  extensionContainer     [0] ExtensionContainer     OPTIONAL,
  ... }
```