3GPP TSG_CN **Tdoc NP-000302**
Plenary Meeting #8, Dusseldorf, Germany
21st – 23rd June 2000.

Source: **TSG_N WG4**

Title: **Corrective CRs to 3G Work Item "Technical Enhancement and Improvements"**

Agenda item: **6.6.4**

Document for: **APPROVAL**

Introduction:

This document contains **"x"** Corrective CRs on **Work Item "Technical Enhancement and Improvements",** that have been agreed by **TSG_N WG4,** and are forwarded to **TSG_N Plenary** meeting #8 for approval.

TDoc	SPEC	CR	REV	PHAS	VERS	SUBJECT	CAT	NEW_VERS
N4-000402	03.03	A046		R96	5.3.0	Hexa IMEI	A	5.4.0
N4-000404	03.03	A048		R97	6.5.0	Hexa IMEI	A	6.6.0
N4-000405	03.03	A049		R98	7.4.0	Hexa IMEI	A	7.5.0
N4-000389	03.03	A050		R97	6.5.0	Use of 3 Digit MNCs in GTP for Release 97	F	6.6.0
N4-000212	09.02	A288		Ph2	4.18.0	Correction of version handling at dialogue establishment	F	4.19.0
N4-000213	09.02	A289		R96	5.14.1	Correction of version handling at dialogue establishment	A	5.15.0
N4-000214	09.02	A290		R97	6.7.0	Correction of version handling at dialogue establishment	A	6.8.0
N4-000215	09.02	A291		R98	7.4.0	Correction of version handling at dialogue establishment	A	7.5.0
N4-000218	09.02	A292		R97	6.7.0	Correction of errors in SDL for Macro Receive_Open_Ind	F	6.8.0
N4-000219	09.02	A293		R98	7.4.0	Correction of errors in SDL for Macro Receive_Open_Ind	A	7.5.0
N4-000370	09.02	A300		Ph2	4.18.0	Correction to the description of MAP-Forward-Short-Message	F	4.19.0
N4-000371	09.02	A301		R96	5.14.1	Correction to the description of MAP-MO-Forward-Short-	A	5.15.0
N4-000372	09.02	A302		R97	6.7.0	Correction to the description of MAP-MO-Forward-Short-	A	6.8.0
N4-000373	09.02	A303		R98	7.4.0	Correction to the description of MAP-MO-Forward-Short-	A	7.5.0
N4-000095	09.60	A084	1	R98	7.4.0	Encoding of spare IMSI Digits	F	7.5.0
N4-000263	09.60	A085		R97	6.7.0	Use of 3 Digit MNCs in GTP for R'97	F	6.8.0
N4-000406	23.003	020	3	R99	3.4.1	Hexa IMEI	A	3.5.0
N4-000390	23.081	002		R99	3.0.1	Enhanced handling of presentation indicators for CLIP	F	3.1.0
N4-000400	24.081	001		R99	3.0.0	Cause of no CLI indication	F	3.1.0
N4-000211	29.002	132		R99	3.4.0	Correction of version handling at dialogue establishment	A	3.5.0
N4-000357	29.002	133	1	R99	3.4.0	Various corrections and/or cleanup to 29.002	F	3.5.0
N4-000217	29.002	134		R99	3.4.0	Correction of errors in SDL for Macro Receive_Open_Ind	A	3.5.0
N4-000374	29.002	149		R99	3.4.0	Correction to the description of MAP-MO-Forward-Short-	A	3.5.0
N4-000096	29.060	086	1	R99	3.4.0	Encoding of spare IMSI Digits	A	3.5.0
N4-000034	29.060	088		R99	3.4.0	Possible cause codes for Relocation Cancel Response	F	3.5.0

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22-26 May 2000
Rotenburg, Germany

Document *N4-000402*
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

03.03	**CR**	**A046**	Current Version:	5.3.0

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

For submission to:	CN#08	For approval	X	strategic		*(for SMG*
list expected approval meeting # here ↑		for information		non-strategic	X	*use only)*

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	X	UTRAN / Radio		Core Network	X

Source:	N4			**Date:**	30.05.00	
Subject:	Hexa IMEI					
Work item:	TEI					
Category:	F	Correction		**Release:**	Phase 2	
	A	Corresponds to a correction in an earlier release	X		Release 96	X
(only one category	B	Addition of feature			Release 97	
Shall be marked	C	Functional modification of feature			Release 98	
With an X)	D	Editorial modification			Release 99	
					Release 00	

Reason for change:

The current IMEI structure is proposed to be changed to use hexadecimal coding instead of current BCD. The usage of "F" in hexadecimal IMEI is restricted, because in the case of emergency call without SIM-card, the IMEI is used as calling party number. The calling party number is used in ISUP and according to ISUP specifications (Q.762, Q.763, and Q.764), "F" is not allowed in calling party number.

The change is proposed in 3GPP TSG-CN,TSG-S, TSG-T and TSG-R to allow 11.4 million mobile terminals to be produced with one Type Approval Code. The current restriction for one million units per TAC is already a problem in the GSM terminal manufacturing and can only be predicted to worsen in the future.

Change to use hexadecimal coding is most simple since it does not affect to existing message lengths in GSM air interface and network interfaces.

The proposal is to have certain deadline, after which all networks support hexadecimal coded IMEI. This should take care of the compability issues between hexadecimal and decimal coded IMEI. The feasibility of the whole hexadecimal IMEI scheme will be decided in coming TSG-CN and TSG-SA plenaries.

Clauses affected: 6.2.1, 6.2.2

Other specs affected:	Other 3G core specifications		→ List of CRs:	
	Other GSM core specifications	X	→ List of CRs:	04.08, 02.16
	MS test specifications		→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	

Other comments:	

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

6.2.1 Composition of IMEI

The International Mobile station Equipment Identity (IMEI) is composed as shown in figure 10.

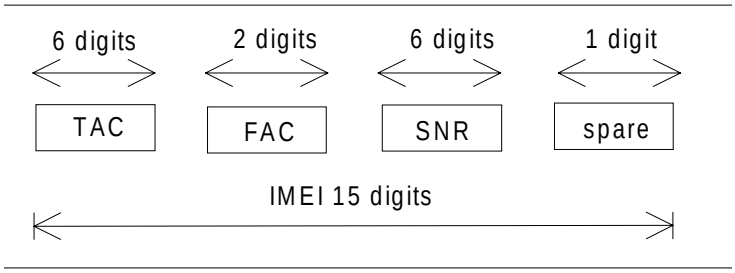

Figure 10: Structure of IMEI

The IMEI is composed of the following elements (each element shall consist of hexadecimal digits excluding the digit 'F' due to ISUP restrictions i.e. values (0-E) are allowed only):

- Type Approval Code (TAC). Its length is 6 digits;
- Final Assembly Code (FAC) identifies the place of manufacture/final assembly. Its length is 2 digits;
- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC and FAC. Its length is 6 digits.
- Spare digit: this digit shall be zero, when transmitted by the MS.

The security requirements of the IMEI are defined in TS GSM 02.16.

6.2.2 Composition of IMEISV

The International Mobile station Equipment Identity and Software Version Number (IMEISV) is composed as shown in figure 11.

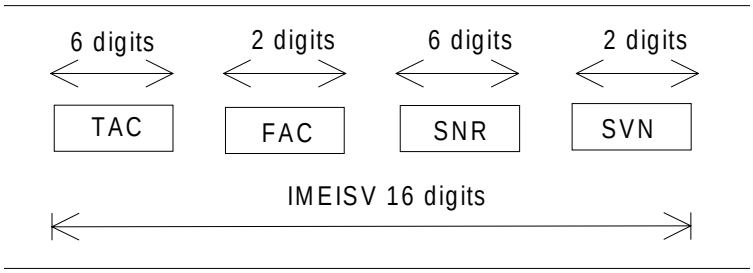

Figure 11: Structure of IMEISV

The IMEISV is composed of the following elements (each element shall consist of hexadecimal digits excluding the digit 'F' due to ISUP restrictions i.e. values (0-E) are allowed only):

- Type Approval Code (TAC). Its length is 6 digits;
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- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC and FAC. Its length is 6 digits.
- Software Version Number (SVN) identifies the software version number of the mobile equipment. Its length is 2 digits.

Regarding updates of the IMEISV: the TAC, FAC and SNR shall be protected against change after the ME's final production process, i.e. only the SVN part of the IMEISV can be modified (see GSM 02.16).

6.3 Allocation principles

The Type Approval Code (TAC) is issued by a central body.

The place of final assembly (FAC) is encoded by the manufacturer.

Manufacturers shall allocate individual serial numbers (SNR) in a sequential order.

For a given ME, the combination of TAC, FAC and SNR used in the IMEI shall duplicate the combination of TAC, FAC and SNR used in the IMEISV.

The Software Version Number is allocated by the manufacturer after authorization by the type approval authority. SVN value 99 is reserved for future use.

The IMEI digit values have restrictions which are modified at cut-off date. Before the CUT-OFF DATE (TBD) only bcd coded values (0-9) are allowed. After CUT-OFF DATE (TBD) IMEI digits may have hexadecimal values excluding the digit 'F' i.e. values (0-E) are allowed.

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CHANGE REQUEST

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03.03	**CR**	**A048**	Current Version:	6.5.0

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

For submission to:	CN#08	For approval	X	strategic		*(for SMG*
list expected approval meeting # here ↑		for information		non-strategic	X	*use only)*

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	X	UTRAN / Radio		Core Network	X

Source:	N4			**Date:**	30.05.00	
Subject:	Hexa IMEI					
Work item:	TEI					
Category:	F	Correction		**Release:**	Phase 2	
	A	Corresponds to a correction in an earlier release	X		Release 96	
(only one category	B	Addition of feature			Release 97	X
Shall be marked	C	Functional modification of feature			Release 98	
With an X)	D	Editorial modification			Release 99	
					Release 00	

Reason for change:

The current IMEI structure is proposed to be changed to use hexadecimal coding instead of current BCD. The usage of "F" in hexadecimal IMEI is restricted, because in the case of emergency call without SIM-card, the IMEI is used as calling party number. The calling party number is used in ISUP and according to ISUP specifications (Q.762, Q.763, and Q.764), "F" is not allowed in calling party number.

The change is proposed in 3GPP TSG-CN,TSG-S, TSG-T and TSG-R to allow 11.4 million mobile terminals to be produced with one Type Approval Code. The current restriction for one million units per TAC is already a problem in the GSM terminal manufacturing and can only be predicted to worsen in the future.

Change to use hexadecimal coding is most simple since it does not affect to existing message lengths in GSM air interface and network interfaces.

The proposal is to have certain deadline, after which all networks support hexadecimal coded IMEI. This should take care of the compability issues between hexadecimal and decimal coded IMEI. The feasibility of the whole hexadecimal IMEI scheme will be decided in coming TSG-CN and TSG-SA plenaries.

Clauses affected: 6.2.1, 6.2.2

Other specs affected:	Other 3G core specifications		→ List of CRs:	
	Other GSM core specifications	X	→ List of CRs:	04.08, 02.16
	MS test specifications		→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	

Other comments:	

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

6.2.1 Composition of IMEI

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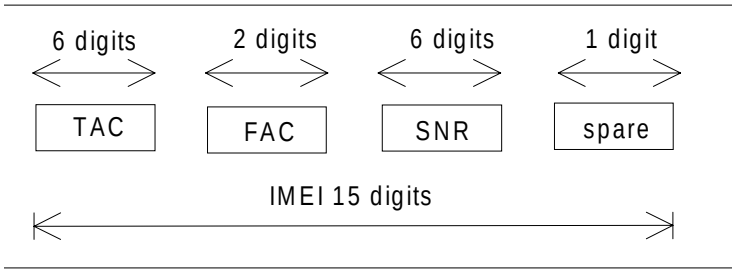

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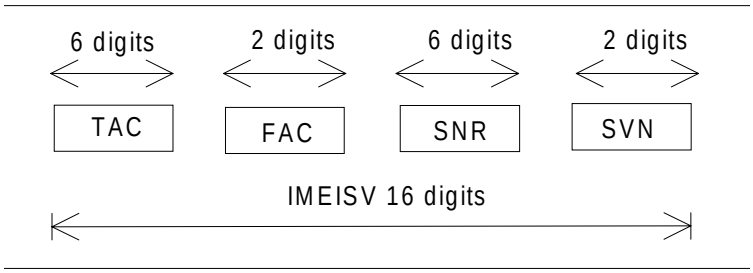
The security requirements of the IMEI are defined in TS GSM 02.16.

6.2.2 Composition of IMEISV

The International Mobile station Equipment Identity and Software Version Number (IMEISV) is composed as shown in figure 11.



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Regarding updates of the IMEISV: the TAC, FAC and SNR shall be protected against change after the ME's final production process, i.e. only the SVN part of the IMEISV can be modified (see GSM 02.16).

6.3 Allocation principles

The Type Approval Code (TAC) is issued by a central body.

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Manufacturers shall allocate individual serial numbers (SNR) in a sequential order.

For a given ME, the combination of TAC, FAC and SNR used in the IMEI shall duplicate the combination of TAC, FAC and SNR used in the IMEISV.

The Software Version Number is allocated by the manufacturer after authorization by the type approval authority. SVN value 99 is reserved for future use.

The IMEI digit values have restrictions which are modified at cut-off date. Before the CUT-OFF DATE (TBD) only bcd coded values (0-9) are allowed. After CUT-OFF DATE (TBD) IMEI digits may have hexadecimal values excluding the digit 'F' i.e. values (0-E) are allowed.

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N4-000405

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03.03	**CR**	**A049**	Current Version:	7.4.0

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

For submission to:	CN#08	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	X	UTRAN / Radio		Core Network	X

Source: N4 **Date:** 30.05.00

Subject: Hexa IMEI

Work item: TEI

Category: *(only one category Shall be marked With an X)*

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

Reason for change:

The current IMEI structure is proposed to be changed to use hexadecimal coding instead of current BCD. The usage of "F" in hexadecimal IMEI is restricted, because in the case of emergency call without SIM-card, the IMEI is used as calling party number. The calling party number is used in ISUP and according to ISUP specifications (Q.762, Q.763, and Q.764), "F" is not allowed in calling party number.

The change is proposed in 3GPP TSG-CN,TSG-S, TSG-T and TSG-R to allow 11.4 million mobile terminals to be produced with one Type Approval Code. The current restriction for one million units per TAC is already a problem in the GSM terminal manufacturing and can only be predicted to worsen in the future.

Change to use hexadecimal coding is most simple since it does not affect to existing message lengths in GSM air interface and network interfaces.

The proposal is to have certain deadline, after which all networks support hexadecimal coded IMEI. This should take care of the compability issues between hexadecimal and decimal coded IMEI. The feasibility of the whole hexadecimal IMEI scheme will be decided in coming TSG-CN and TSG-SA plenaries.

Clauses affected: 6.2.1, 6.2.2

Other specs affected:	Other 3G core specifications		→ List of CRs:	
	Other GSM core specifications	X	→ List of CRs:	04.08, 02.16
	MS test specifications		→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	
Other comments:				


help.doc

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

6.2.1 Composition of IMEI

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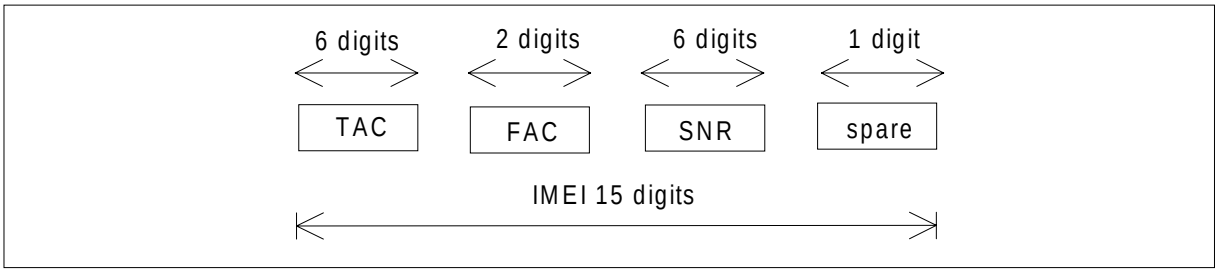

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The IMEI is composed of the following elements (each element shall consist of hexadecimal digits excluding the digit 'F' due to ISUP restrictions i.e. values (0-E) are allowed only):

- Type Approval Code (TAC). Its length is of 6 digits;
- Final Assembly Code (FAC) identifies the place of manufacture/final assembly. Its length is of 2 digits;
- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC and FAC. Its length is of 6 digits.
- Spare digit: this digit shall be zero, when transmitted by the MS.

The security requirements of the IMEI are defined in TS GSM 02.16.

6.2.2 Composition of IMEISV

The International Mobile station Equipment Identity and Software Version Number (IMEISV) is composed as shown in figure 11.

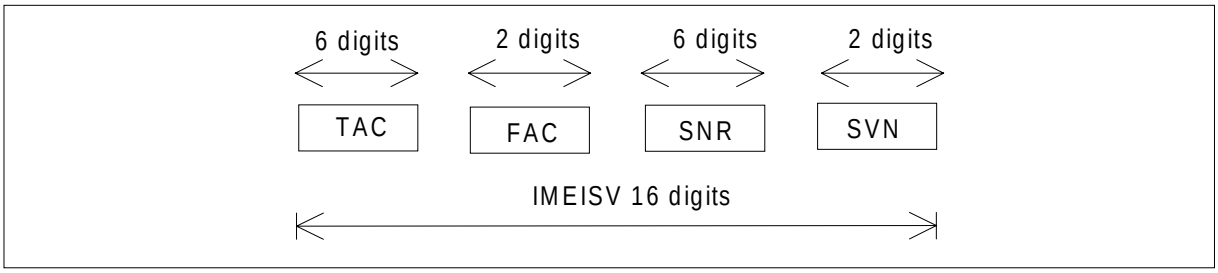

Figure 11: Structure of IMEISV

The IMEISV is composed of the following elements (each element shall consist of hexadecimal digits excluding the digit 'F' due to ISUP restrictions i.e. values (0-E) are allowed only):

- Type Approval Code (TAC). Its length is of 6 digits;
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- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC and FAC. Its length is of 6 digits.
- Software Version Number (SVN) identifies the software version number of the mobile equipment. Its length is of 2 digits.

Regarding updates of the IMEISV: the TAC, FAC and SNR shall be protected against change after the ME's final production process; i.e. only the SVN part of the IMEISV can be modified (see TS GSM 02.16).

6.3 Allocation principles

A central body issues the Type Approval Code (TAC).

The manufacturer encodes the place of final assembly (FAC).

Manufacturers shall allocate individual serial numbers (SNR) in a sequential order.

For a given ME, the combination of TAC, FAC and SNR used in the IMEI shall duplicate the combination of TAC, FAC and SNR used in the IMEISV.

The manufacturer allocates the Software Version Number after authorisation by the type approval authority. SVN value 99 is reserved for future use.

The IMEI digit values have restrictions which are modified at cut-off date. Before the CUT-OFF DATE (TBD) only bcd coded values (0-9) are allowed. After CUT-OFF DATE (TBD) IMEI digits may have hexadecimal values excluding the digit ‘F’ i.e. values (0-E) are allowed.

3GPP TSG-CN WG4

Rotenburg a.d. Fulda, Hessen, Germany, 22-26 May 2000

Document N4-000389

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

CHANGE REQUEST

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03.03	CR	A050	Current Version:	6.5.0

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

For submission to: CN#8 *list expected approval meeting # here ↑*	for approval	X	strategic		*(for SMG use only)*
	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: N4 **Date:** 30 May 2000

Subject: Use of 3 Digit MNCs in GTP for R'97

Work item: TEI

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

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

Reason for change:
Category C1:
For harmonisation with PCS 1900, the optional ability to use a 3-digit MNC in the TID, the IMSI and the RAI information elements has been added to R'98. If this change isn't introduced R'97/R'98 interworking problems will occur.

Clauses affected: 2.2

Other specs affected:

Other 3G core specifications		→ List of CRs:	
Other GSM core specifications	X	→ List of CRs:	CR 09.60-A085
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

2.2 Composition of IMSI

IMSI is composed as shown in figure 1.

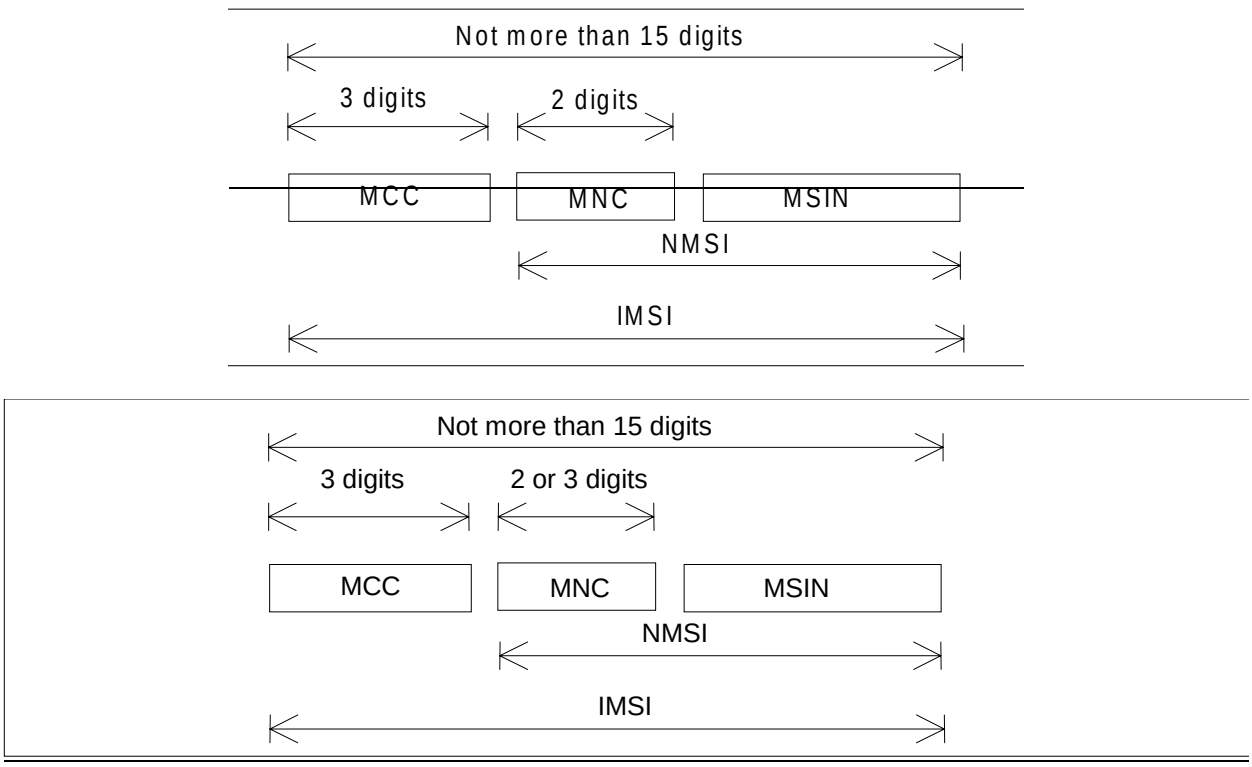

Figure 1: Structure of IMSI

IMSI is composed of three parts:

i) Mobile Country Code (MCC) consisting of three digits. The MCC identifies uniquely the country of domicile of the mobile subscriber;

ii) Mobile Network Code (MNC) consisting of two or three digits for GSM applications. The MNC identifies the home GSM PLMN of the mobile subscriber;

iii) Mobile Subscriber Identification Number (MSIN) identifying the mobile subscriber within a GSM PLMN.

The National Mobile Subscriber Identity (NMSI) consists of the Mobile Network Code and the Mobile Subscriber Identification Number.

NOTE: Three digit MNC is for use with GPRS only.

3GPP TSG CN WG4 Meeting #2
Rotenburg, Germany, 22-26 May 2000

Document N4-000212
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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09.02	CR	A288	Current Version:	4.18.0

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

For submission to:	CN#08	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: (U)SIM [ ] ME [ ] UTRAN / Radio [ ] Core Network [X]
(at least one should be marked with an X)

Source: N4 **Date:** 2000-05-10

Subject: Correction of version handling at dialogue establishment

Work item: TEI

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

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

Reason for change:

Category: C1

Subclause 15.2.4.1 currently indicates that a MAP-CLOSE Confirm primitive is sent in response to the MAP-OPEN request when the dialogue is refused. A MAP-CLOSE, however, is not sent when the dialogue is to be refused, a MAP-OPEN Confirm is sent with the result set to "Dialogue_refused" (refer to Macro Receive_Open_Ind).

Clauses affected: 15.2.4.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:


help.doc

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

15.2.4 Version handling at dialogue establishment

Unless explicitly indicated in subsequent subclauses, the following principles regarding version handling procedures at dialogue establishment are applied by the MAP-user:

15.2.4.1 Behaviour at the initiating side

When a MAP user signalling procedure has to be executed, the MAP-user issues a MAP-OPEN request primitive with an appropriate application-context-name. If several names are supported (i.e. several versions) a suitable one is selected using the procedures described in clause 3.

If a MAP-~~CLOSE~~ OPEN Confirm primitive to a MAP-OPEN request with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one context. This is informally represented in the SDL diagrams by a task symbol indicating "Perform V1 procedure".

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***Document* N4-000213**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

09.02	CR	A289	Current Version:	5.14.0

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

For submission to: CN#08	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: N4 **Date:** 2000-05-10

Subject: Correction of version handling at dialogue establishment

Work item: TEI

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

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

Reason for change:

Category: C1

Subclause 15.2.4.1 currently indicates that a MAP-CLOSE Confirm primitive is sent in response to the MAP-OPEN request when the dialogue is refused. A MAP-CLOSE, however, is not sent when the dialogue is to be refused, a MAP-OPEN Confirm is sent with the result set to "Dialogue_refused" (refer to Macro Receive_Open_Ind).

Clauses affected: 15.2.4.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

15.2.4 Version handling at dialogue establishment

Unless explicitly indicated in subsequent subclauses, the following principles regarding version handling procedures at dialogue establishment are applied by the MAP-user:

15.2.4.1 Behaviour at the initiating side

When a MAP user signalling procedure has to be executed, the MAP-user issues a MAP-OPEN request primitive with an appropriate application-context-name. If several names are supported (i.e. several versions) a suitable one is selected using the procedures described in clause 3.

If version 2 is selected and a MAP ~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one context. This is informally represented in the SDL diagrams by a task symbol indicating "Perform Vr procedure".

If version 3 is selected and a MAP ~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one or version two context. This is informally represented in the SDL diagrams by task symbols indicating "Perform Vr procedure"~~-~~.

3GPP TSG CN WG4 Meeting #2
Rotenburg, Germany, 22-26 May 2000

Document N4-000214
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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09.02	CR	A290	Current Version:	6.7.0

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

For submission to:	CN#08	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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: N4 **Date:** 2000-04-10

Subject: Correction of version handling at dialogue establishment

Work item: TEI

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

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

Reason for change:

Category: C1

Subclause 18.2.4.1 currently indicates that a MAP-CLOSE Confirm primitive is sent in response to the MAP-OPEN request when the dialogue is refused. A MAP-CLOSE, however, is not sent when the dialogue is to be refused, a MAP-OPEN Confirm is sent with the result set to "Dialogue_refused" (refer to Macro Receive_Open_Ind).

Clauses affected: 18.2.4

Other specs affected:

Other 3G core specifications		→ List of CRs:	
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:


help.doc

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

18.2.4 Version handling at dialogue establishment

Unless explicitly indicated in subsequent subclauses, the following principles regarding version handling procedures at dialogue establishment are applied by the MAP-user:

18.2.4.1 Behaviour at the initiating side

When a MAP user signalling procedure has to be executed, the MAP-user issues a MAP-OPEN request primitive with an appropriate application-context-name. If several names are supported (i.e. several versions) a suitable one is selected using the procedures described in clause 5.

If version 2 is selected and a MAP ~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one context. This is informally represented in the SDL diagrams by a task symbol indicating "Perform Vr procedure".

If version 3 is selected and a MAP ~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one or version two context. This is informally represented in the SDL diagrams by task symbols indicating "Perform Vr procedure"~~-~~.

3GPP TSG CN WG4 Meeting #2
Rotenburg, Germany, 22-26 May 2000

Document N4-000215
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

09.02	CR	A291	Current Version:	7.4.0

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

For submission to: CN#08	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: N4 **Date:** 2000-04-10

Subject: Correction of version handling at dialogue establishment

Work item: TEI

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

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

Reason for change:

Category: C1

Subclause 18.2.4.1 currently indicates that a MAP-CLOSE Confirm primitive is sent in response to the MAP-OPEN request when the dialogue is refused. A MAP-CLOSE, however, is not sent when the dialogue is to be refused, a MAP-OPEN Confirm is sent with the result set to "Dialogue_refused" (refer to Macro Receive_Open_Ind).

In addition, this CR adds text to support version 4 ACs to the dialogue establishment.

Clauses affected: 18.2.4

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:


help.doc

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

18.2.4 Version handling at dialogue establishment

Unless explicitly indicated in subsequent subclauses, the following principles regarding version handling procedures at dialogue establishment are applied by the MAP-user:

18.2.4.1 Behaviour at the initiating side

When a MAP user signalling procedure has to be executed, the MAP-user issues a MAP-OPEN request primitive with an appropriate application-context-name. If several names are supported (i.e. several versions) a suitable one is selected using the procedures described in clause 5.

If version 2 is selected and a MAP-~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one context. This is informally represented in the SDL diagrams by a task symbol indicating "Perform Vr procedure".

If version 3 is selected and a MAP-~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one or version two context. This is informally represented in the SDL diagrams by task symbols indicating "Perform Vr procedure".

If version 4 is selected and a MAP-OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one, version two or version three context. This is informally represented in the SDL diagrams by task symbols indicating "Perform Vr procedure".

18.2.4.2 Behaviour at the responding side

On receipt of a MAP-OPEN indication primitive, the MAP-User analyses the application-context-name.

If it refers to a version one context, the associated V1 procedure is executed; if it refers to a version two context, the associated V2 procedure is executed~~,~~; if it refers to a version three context, the associated V3 procedure is executed, otherwise the associated ~~V3~~ V4 procedure is executed.

3GPP TSG CN SWG4 Meeting #2
Rotenburg, Germany, 22-26 May 2000

Document N4-000218
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

09.02	CR	A292	Current Version:	6.7.0

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

For submission to:	CN#08	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: N4 **Date:** 2000-05-08

Subject: Correction of errors in Figure 25.1/1: Macro Receive_Open_Ind

Work item: TEI

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

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

Reason for change:

Category: C1

The SDL in Figure 25.1/1 contains an error that would cause serious problems if not corrected. The text describing the macro is correct, but the SDL is supposed to take precedence over the text.

Clauses affected: 25.1.2

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

25.1.1 Macro Receive_Open_Ind

This macro is used by a MAP service-user procedure when a peer entity requests opening of a dialogue.

If the application context received in the MAP-OPEN indication primitive indicates a context name of the MAP version one context set, the macro takes the Vr exit..

If an application-context different from version 1 is received, the presence of MAP_OPEN information is checked. If no MAP_OPEN information has been received, the MAP_OPEN response with:

- Result set to Dialogue Accepted; and
- Application Context Name set to the received value,

is returned

If the received version (Vr) is the one described in this version of MAP, the macro takes the OK exit, otherwise it takes the Vr exit..

If MAP_OPEN information is received, the macro "CHECK_REFERENCE" is called in order to check whether the received values for Destination Reference and Originating Reference correspond with the requirements of the received application-context-name. The outcome of this check is an error, the MAP_OPEN response with:

- Result set to Dialogue Refused;
- Refuse Reason set to Invalid Destination Reference or Invalid Originating Reference;
- Application Context Name set to the highest version supported,

is returned and the macro takes the error exit.

If the data values received for Destination Reference and Originating Reference are accepted for the associated application-context-name it is checked whether the Destination Reference is known if this check is required by the process that calls the macro.

If the Destination Reference (e.g. a subscribers IMSI) is unknown, the MAP_OPEN response with

- Result set to Dialogue Refused;
- Refuse Reason set to Invalid Destination Reference;
- Application Context Name set to the highest version supported,

is returned and the macro takes the error exit.

Else, if the Destination Reference is accepted or if no check is required, the MAP_OPEN response with

- Result set to Dialogue Accepted; and
- Application Context Name set to the received value,

is returned and

If the received version (Vr) is the one described in this version of MAP, the macro takes the OK exit, otherwise it takes the Vr exit.

25.1.2 Macro Receive_Open_Cnf

This macro is used by a user procedure after it requested opening of a dialogue towards a peer entity.

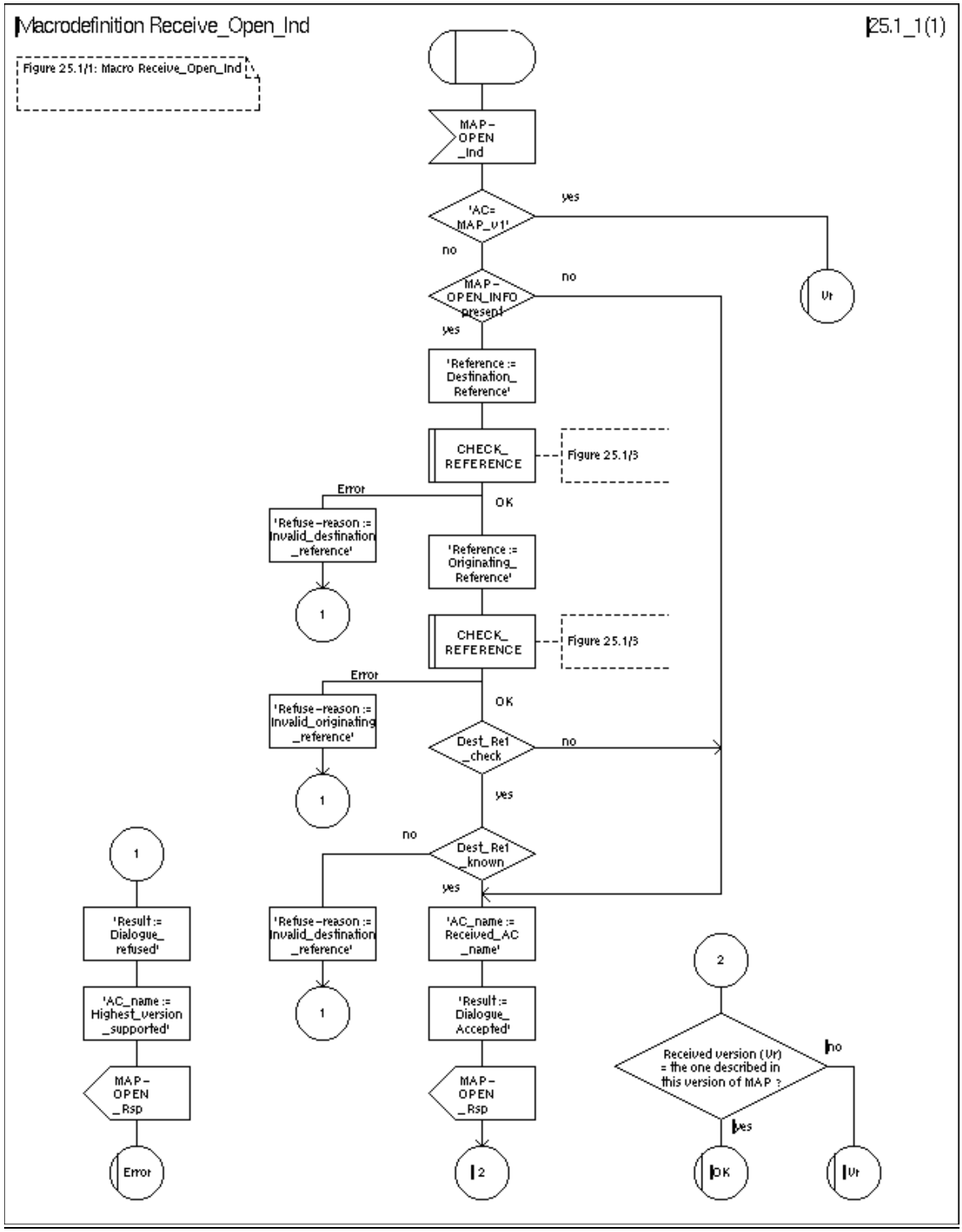
On receipt of a MAP_OPEN Confirmation with a "Result" parameter indicating "Dialogue Accepted", the macro takes the OK exit.

If the "Result" parameter indicates "Dialogue Refused", the "Refuse-reason" parameter is examined. If the "Refuse-reason" parameter indicates "Potential Version Incompatibility", the macro terminates in a way that causes restart of the dialogue by using the version 1 protocol.

If the "Refuse-reason" parameter indicates "Application Context Not Supported" and if the received Application Context Name indicates "Version Vr" (Vr < Vn), the macro terminates in a way that causes restart of the dialogue by using the version Vr protocol. Otherwise, the macro takes the Error exit.

If the "Refuse-reason" parameter indicates neither "Potential Version Incompatibility" nor "Application Context Not Supported", the macro takes the Error exit.

If a MAP_U_ABORT, a MAP_P_ABORT or a MAP_NOTICE Indication is received, the macro takes the Error exit.



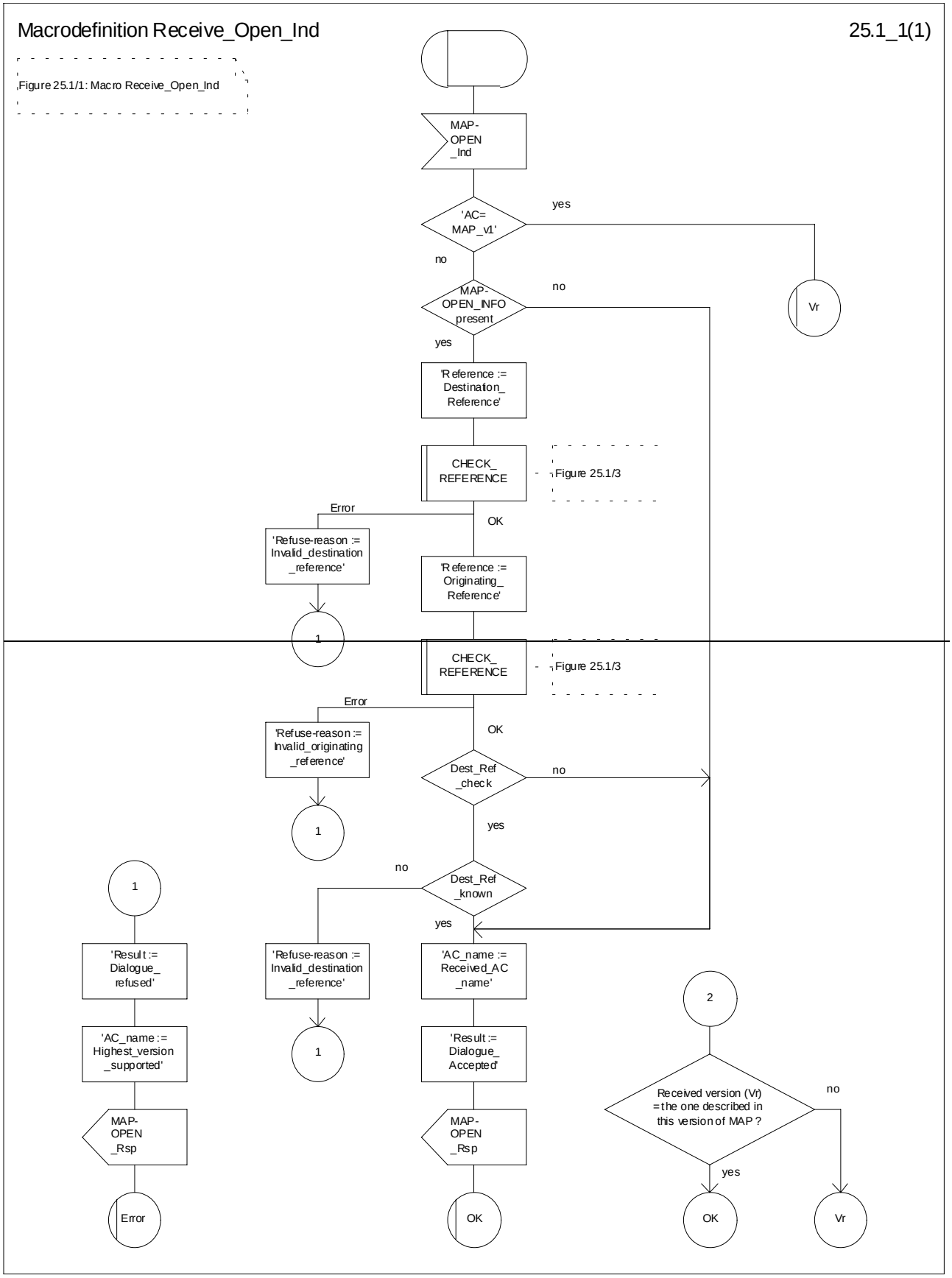


Figure 25.1/1: Macro Receive_Open_Ind

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Rotenburg, Germany, 22-26 May 2000

Document N4-000219
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

09.02	CR	A293	Current Version:	7.4.0

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

For submission to:	CN#08	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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: N4 **Date:** 2000-05-08

Subject: Correction of errors in Figure 25.1/1: Macro Receive_Open_Ind

Work item: TEI

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

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

Reason for change:

Category: C1

The SDL in Figure 25.1/1 contains an error that would cause serious problems if not corrected. The text describing the macro is correct, but the SDL is supposed to take precedence over the text.

Clauses affected: 25.1.2

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

25.1.1 Macro Receive_Open_Ind

This macro is used by a MAP service-user procedure when a peer entity requests opening of a dialogue.

If the application context received in the MAP-OPEN indication primitive indicates a context name of the MAP version one context set, the macro takes the Vr exit..

If an application-context different from version 1 is received, the presence of MAP_OPEN information is checked. If no MAP_OPEN information has been received, the MAP_OPEN response with:

- Result set to Dialogue Accepted; and
- Application Context Name set to the received value,

is returned

If the received version (Vr) is the one described in this version of MAP, the macro takes the OK exit, otherwise it takes the Vr exit..

If MAP_OPEN information is received, the macro "CHECK_REFERENCE" is called in order to check whether the received values for Destination Reference and Originating Reference correspond with the requirements of the received application-context-name. The outcome of this check is an error, the MAP_OPEN response with:

- Result set to Dialogue Refused;
- Refuse Reason set to Invalid Destination Reference or Invalid Originating Reference;
- Application Context Name set to the highest version supported,

is returned and the macro takes the error exit.

If the data values received for Destination Reference and Originating Reference are accepted for the associated application-context-name it is checked whether the Destination Reference is known if this check is required by the process that calls the macro.

If the Destination Reference (e.g. a subscribers IMSI) is unknown, the MAP_OPEN response with

- Result set to Dialogue Refused;
- Refuse Reason set to Invalid Destination Reference;
- Application Context Name set to the highest version supported,

is returned and the macro takes the error exit.

Else, if the Destination Reference is accepted or if no check is required, the MAP_OPEN response with

- Result set to Dialogue Accepted; and
- Application Context Name set to the received value,

is returned and

If the received version (Vr) is the one described in this version of MAP, the macro takes the OK exit, otherwise it takes the Vr exit.

25.1.2 Macro Receive_Open_Cnf

This macro is used by a user procedure after it requested opening of a dialogue towards a peer entity.

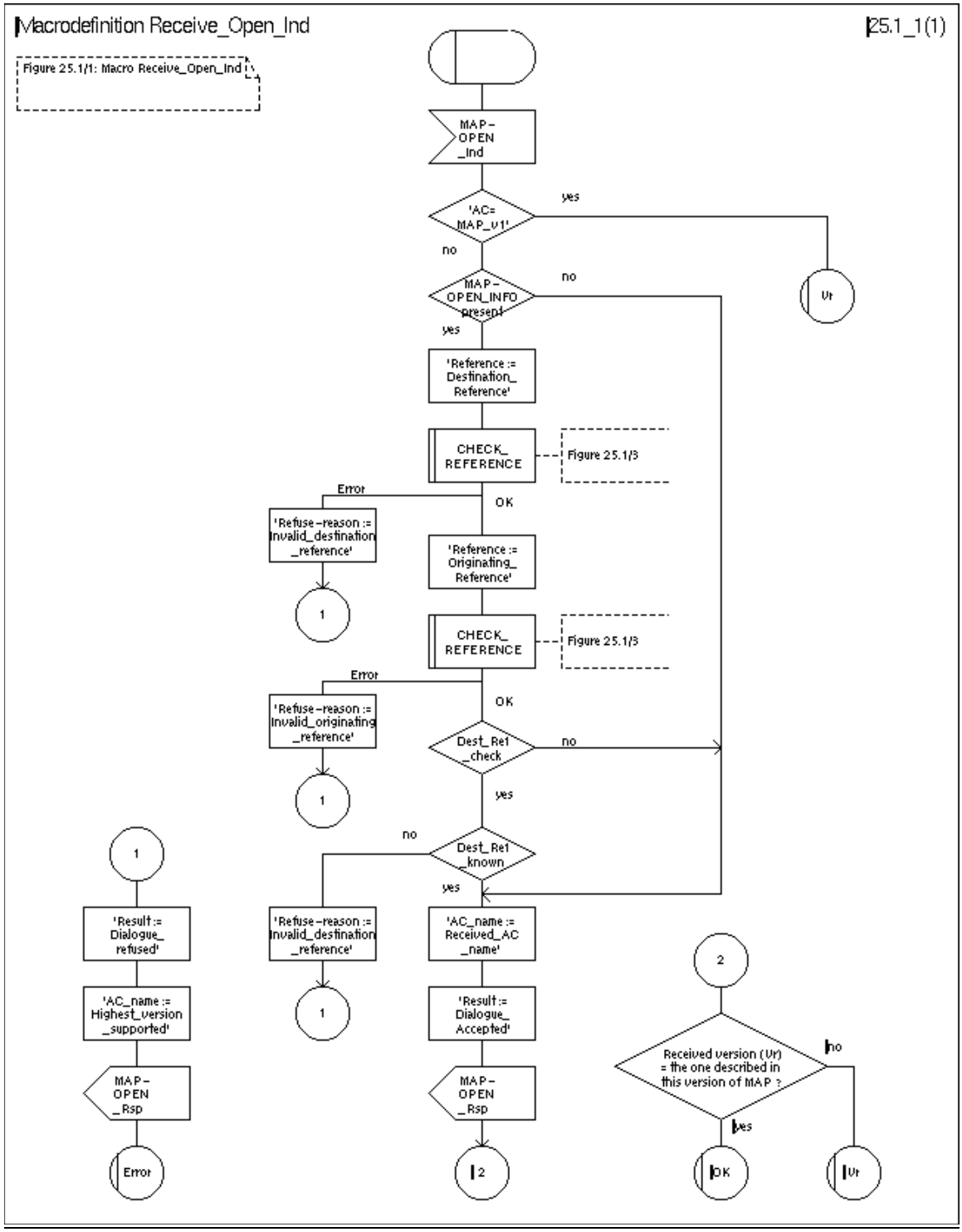
On receipt of a MAP_OPEN Confirmation with a "Result" parameter indicating "Dialogue Accepted", the macro takes the OK exit.

If the "Result" parameter indicates "Dialogue Refused", the "Refuse-reason" parameter is examined. If the "Refuse-reason" parameter indicates "Potential Version Incompatibility", the macro terminates in a way that causes restart of the dialogue by using the version 1 protocol.

If the "Refuse-reason" parameter indicates "Application Context Not Supported" and if the received Application Context Name indicates "Version Vr" (Vr < Vn), the macro terminates in a way that causes restart of the dialogue by using the version Vr protocol. Otherwise, the macro takes the Error exit.

If the "Refuse-reason" parameter indicates neither "Potential Version Incompatibility" nor "Application Context Not Supported", the macro takes the Error exit.

If a MAP_U_ABORT, a MAP_P_ABORT or a MAP_NOTICE Indication is received, the macro takes the Error exit.



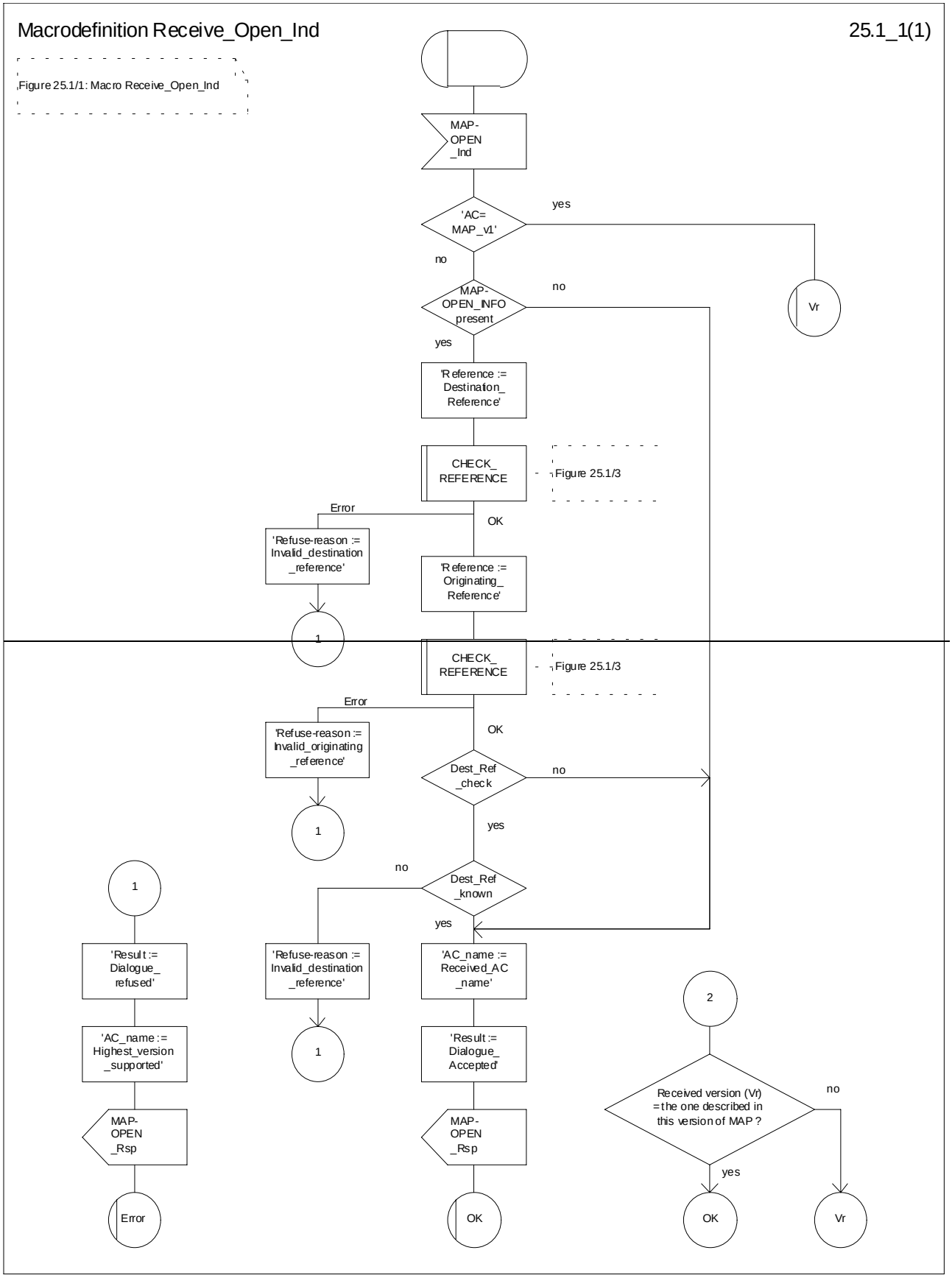


Figure 25.1/1: Macro Receive_Open_Ind

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Rotenburg a.d Fulda, Germany, 22-26 May 2000

Document N4-000370
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

09.02	CR	A300	Current Version:	4.18.0

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

For submission to:	CN#08	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: N4 **Date:** 25.05.2000

Subject: Correction to the description of MAP-Forward-Short-Message service

Work item: TEI

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

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

Reason for change: The current description of the MAP-Forward-Short-Message service indicates that it is used between the GMSC and the serving MSC for both MO and MT short messages. However, this service is actually used between the serving MSC and the SMS IWMSC for MO short messages.

Clauses affected: 10.2.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

10.2 MAP-FORWARD-SHORT-MESSAGE service

10.2.1 Definition

This service is used between the gateway MSC and the ~~servicing~~ serving MSC to forward ~~mobile originated or~~ mobile terminated short messages and between the serving MSC and the SMS Interworking MSC to forward mobile originated short messages.

The MAP-FORWARD-SHORT-MESSAGE service is a confirmed service using the service primitives given in table 10.2/1.

3GPP TSG CN WG 4 #2
Rotenburg a.d Fulda, Germany, 22-26 May 2000

***Document* N4-000371**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

09.02	CR	A301	Current Version:	5.14.1

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

For submission to:	CN#08	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: N4 **Date:** 25.05.2000

Subject: Correction to the description of MAP-MO-Forward-Short-Message service

Work item: TEI

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

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

Reason for change: The current description of the MAP-MO-Forward-Short-Message service indicates that it is used between the serving MSC and the gateway MSC. However, this service is actually used between the serving MSC and the SMS IWMSC.

Clauses affected: 10.2.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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: The modifications proposed are in substance the same as those in CR 09.02-A300 for Phase 2. However this CR cannot be strictly regarded as "mirror CR" since the modified service is new in Release 96.


help.doc

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

10.2 MAP-MO-FORWARD-SHORT-MESSAGE service

10.2.1 Definition

This service is used between the serving MSC and the ~~gateway~~ SMS Interworking MSC to forward mobile originated short messages.

The MAP-MO-FORWARD-SHORT-MESSAGE service is a confirmed service using the service primitives given in table 10.2/1.

3GPP TSG CN WG 4 #2
Rotenburg a.d Fulda, Germany, 22-26 May 2000

***Document* N4-000372**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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09.02	CR	A302	Current Version:	6.7.0

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

For submission to:	CN#08	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: N4 **Date:** 25.05.2000

Subject: Correction to the description of MAP-MO-Forward-Short-Message service

Work item: TEI

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

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

Reason for change: Mirror CR to 09.02-301

Clauses affected: 12.2.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

12.2 MAP-MO-FORWARD-SHORT-MESSAGE service

12.2.1 Definition

This service is used between the serving MSC or the SGSN and the ~~gateway~~ SMS Interworking MSC to forward mobile originated short messages.

The MAP-MO-FORWARD-SHORT-MESSAGE service is a confirmed service using the service primitives given in table 12.2/1.

3GPP TSG CN WG 4 #2
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Document N4-000373
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CHANGE REQUEST

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09.02	CR	A303	Current Version:	7.4.0

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

For submission to:	CN#08	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: N4 **Date:** 25.05.2000

Subject: Correction to the description of MAP-MO-Forward-Short-Message service

Work item: TEI

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

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

Reason for change: Mirror CR to 09.02-A301

Clauses affected: 12.2.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

12.2 MAP-MO-FORWARD-SHORT-MESSAGE service

12.2.1 Definition

This service is used between the serving MSC or the SGSN and the ~~gateway~~ SMS Interworking MSC to forward mobile originated short messages.

The MAP-MO-FORWARD-SHORT-MESSAGE service is a confirmed service using the service primitives given in table 12.2/1.

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Charleston, USA, 27-31 Macrh 2000

Document N4-000095
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CHANGE REQUEST

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09.60	**CR**	**A084r1**	Current Version:	7.4.0

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

For submission to: CN#08 *list expected approval meeting # here ↑*	for approval	X	strategic		*(for SMG use only)*
	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: N4 **Date:** 28 March 2000

Subject: Encoding of spare IMSI Digits

Work item: TEI

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

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

Reason for change:
Category C1:

Change request 29.060-058r1 modified the IMSI information elements to allow 3 digit MNCs but in the process removed the encoding of unused IMSI digits. Furthermore, the encoding is provided in TS 24.008 since the IMSI is defined as variable length.

Clauses affected: 6, 7.9.2

Other specs affected:

Other 3G core specifications		→ List of CRs:	
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:	

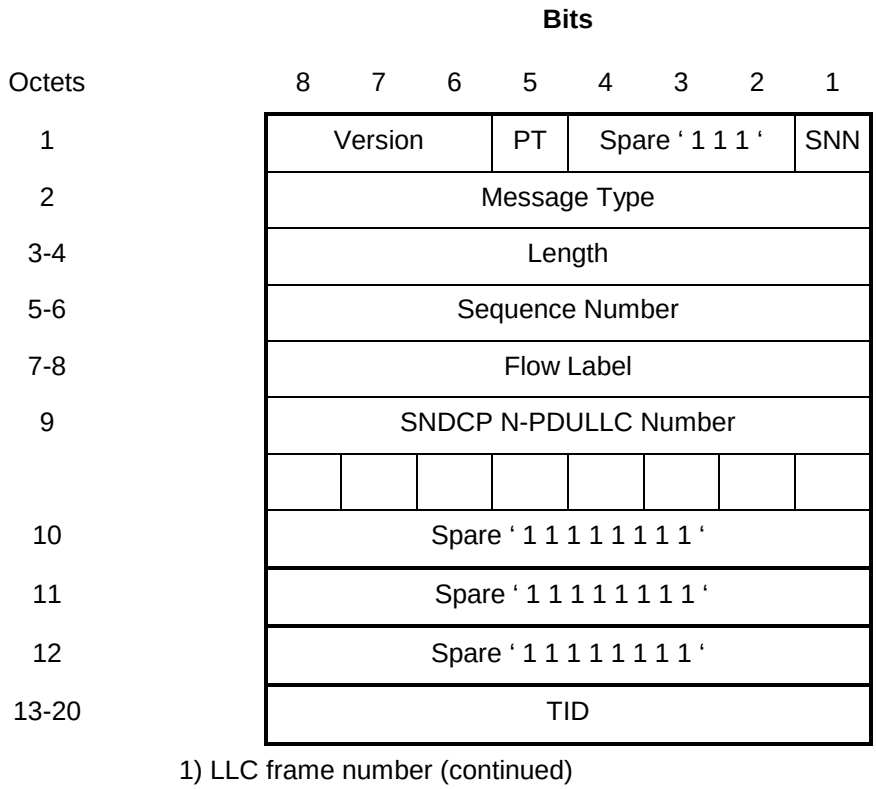
Other comments:

6 GTP header

The GTP header shall be a fixed format 20-octet header used for all GTP messages.

- Version bits: If the PT bit is ‘1’ (indicating a GTP message), the Version shall be set to 0 to indicate this, the first version of GTP. For the treatment of other versions, see section 10.1.1, "Different GTP versions".
- PT (Protocol Type) bit indicates whether the message is a GTP message (when PT is ‘1’) or a GTP’ message (when PT is ‘0’). GTP is described in this document and the GTP’ protocol in GSM 12.15. Note that the interpretation of the header fields may be different in GTP’ than in GTP.
- Spare ‘1’: These unused bits shall be set to ‘1’ by the sending side and shall not be evaluated by the receiving side.
- SNN is a flag indicating if SNDCP N-PDU Number is included or not.
- Message Type indicates the type of GTP message.
- Length indicates the length in octets of the GTP message (G-PDU), excluding the GTP header. Bit 8 of octet 3 is the most significant bit and bit 1 of octet 4 is the least significant bit of the length field.
- Sequence Number is a transaction identity for signalling messages and an increasing sequence number for tunnelled T-PDUs.
- SNDCP N-PDU Number is used at the Inter SGSN Routeing Area Update procedure to co-ordinate the data transmission between the MS and SGSN.
- TID is the tunnel identifier that points out MM and PDP contexts (see Figure 3: Tunnel ID (TID) format).
- The flow label identifies unambiguously a GTP flow.

All fields in the GTP header shall always be present but the content of the fields differs depending on if the header is used for signalling messages (see the sub-section Usage of the GTP Header in the section Signalling Plane) or T-PDUs (see the sub-section Usage of the GTP Header in the section Transmission Plane).



1) LLC frame number (continued)

Figure 2: Outline of GTP header

Bits								
Octets	8	7	6	5	4	3	2	1
	IMSI digit 2				IMSI digit 1			
	IMSI digit 4				IMSI digit 3			
	IMSI digit 6				IMSI digit 5			
	IMSI digit 8				IMSI digit 7			
	IMSI digit 10				IMSI digit 9			
	IMSI digit 12				IMSI digit 11			
	IMSI digit 14				IMSI digit 13			
	NSAPI				IMSI digit 15			

The IMSI is defined in GSM 03.03 (and includes MCC, MNC and MSIN). IMSI digits that are not used shall be coded as binary '1 1 1 1'.

NOTE 1: For Anonymous Access, the MSIN part of the IMSI shall be replaced by a number assigned by the particular PLMN. The assigned number shall not collide with any MSIN used in the PLMN and shall be unique within the PLMN.

Figure 3: Tunnel ID (TID) format

7.9.2 International Mobile Subscriber Identity (IMSI)

The IMSI shall be the subscriber identity of the MS. The IMSI is defined in GSM 03.03.

Bits								
Octets	8	7	6	5	4	3	2	1
1	Type = 2 (Decimal)							
2 - 9	IMSI							

Figure 9: IMSI information element

The encoding of the IMSI information element is defined in GSM 04.08. IMSI digits that are not used shall be coded as binary '1 1 1 1'.

3GPP TSG-CN WG4
Rotenburg a.d. Fulda, Hessen, Germany, 22-26 May 2000

Document N4-000263
e.g. for 3GPP use the format TP-99xxx
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CHANGE REQUEST

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09.60	**CR**	**A085**	Current Version:	6.7.0

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

For submission to: CN#08	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: N4 **Date:** 3 May 2000

Subject: Use of 3 Digit MNCs in GTP for R'97

Work item: TEI

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

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

Reason for change:
Category C1:

For harmonisation with PCS 1900, the optional ability to use a 3-digit MNC in the TID, the IMSI and the RAI information elements has been added to R'98. If this change isn't introduced R'97/R'98 interworking problems will occur.

Clauses affected: 6, 7.9.2, 7.9.3

Other specs affected:

Other 3G core specifications		→ List of CRs:
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:

6 GTP header

The GTP header shall be a fixed format 20-octet header used for all GTP messages.

- Version shall be set to 0 to indicate this, the first version of GTP. For the treatment of other versions, see section 10.1.1, "Different GTP versions".
- Spare '1': These unused bits shall be set to '1' by the sending side and shall not be evaluated by the receiving side.
- SNN is a flag indicating if SNDCP N-PDU Number is included or not.
- Message Type indicates the type of GTP message.
- Length indicates the length in octets of the GTP message (G-PDU), excluding the GTP header. Bit 8 of octet 3 is the most significant bit and bit 1 of octet 4 is the least significant bit of the length field.
- Sequence Number is a transaction identity for signalling messages and an increasing sequence number for tunnelled T-PDUs.
- SNDCP N-PDU Number is used at the Inter SGSN Routeing Area Update procedure to co-ordinate the data transmission between the MS and SGSN.
- TID is the tunnel identifier that points out MM and PDP contexts (see Figure 3: Tunnel ID (TID) format).
- The flow label identifies unambiguously a GTP flow.

All fields in the GTP header shall always be present but the content of the fields differs depending on if the header is used for signalling messages (see the sub-section Usage of the GTP Header in the section Signalling Plane) or T-PDUs (see the sub-section Usage of the GTP Header in the section Transmission Plane).

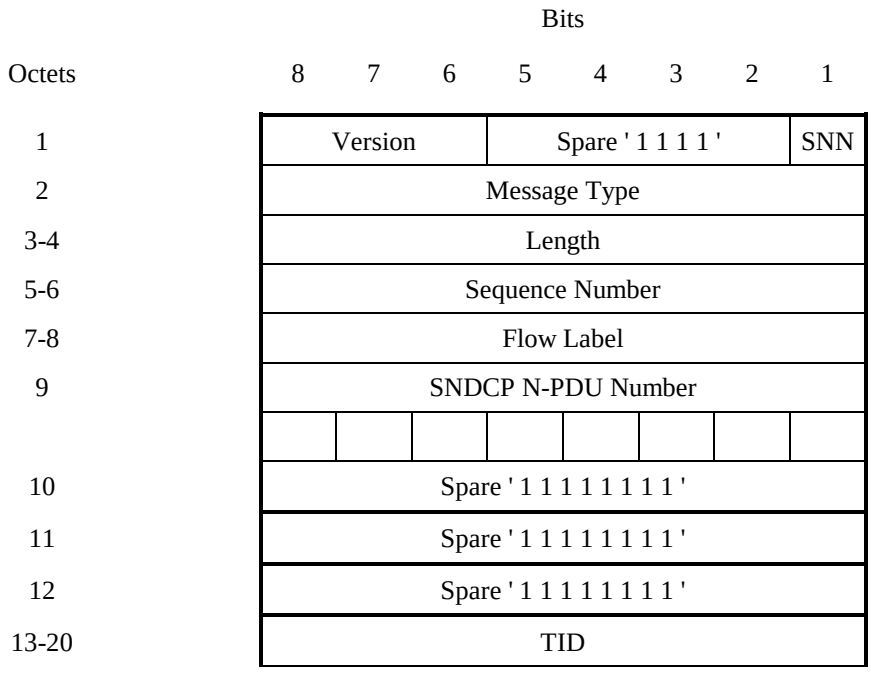

Figure 2: Outline of GTP header

Octets	Bits 8	7	6	5	4	3	2	1
1	MCC digit 2				MCC digit 1			
2	MNC digit 1				MCC digit 3			
3	MSIN digit 1				MNC digit 2			
4	MSIN digit 3				MSIN digit 2			
5	MSIN digit 5				MSIN digit 4			
6	MSIN digit 7				MSIN digit 6			
7	MSIN digit 9				MSIN digit 8			
8	NSAPI				MSIN digit 10			

Octets	Bits 8	7	6	5	4	3	2	1
	IMSI digit 2				IMSI digit 1			
	IMSI digit 4				IMSI digit 3			
	IMSI digit 6				IMSI digit 5			
	IMSI digit 8				IMSI digit 7			
	IMSI digit 10				IMSI digit 9			
	IMSI digit 12				IMSI digit 11			
	IMSI digit 14				IMSI digit 13			
	NSAPI				IMSI digit 15			

The IMSI is defined in GSM 03.03 (and includes MCC, MNC and MSIN). IMSI digits that are not used shall be coded as '1111' or F(HEX).

NOTE 1: ~~The MCC, MNC and MSIN are parts of the IMSI defined in GSM 03.03.~~ For Anonymous Access, the MSIN part of the IMSI shall be replaced by a number assigned by the particular PLMN. The assigned number shall not collide with any MSIN used in the PLMN and shall be unique within the PLMN.

~~NOTE 2: MSIN digits not used shall be set to F (HEX).~~

Figure 3: Tunnel ID (TID) format

7.9.2 International Mobile Subscriber Identity (IMSI)

The IMSI shall be the subscriber identity of the MS. The IMSI is defined in GSM 03.03.

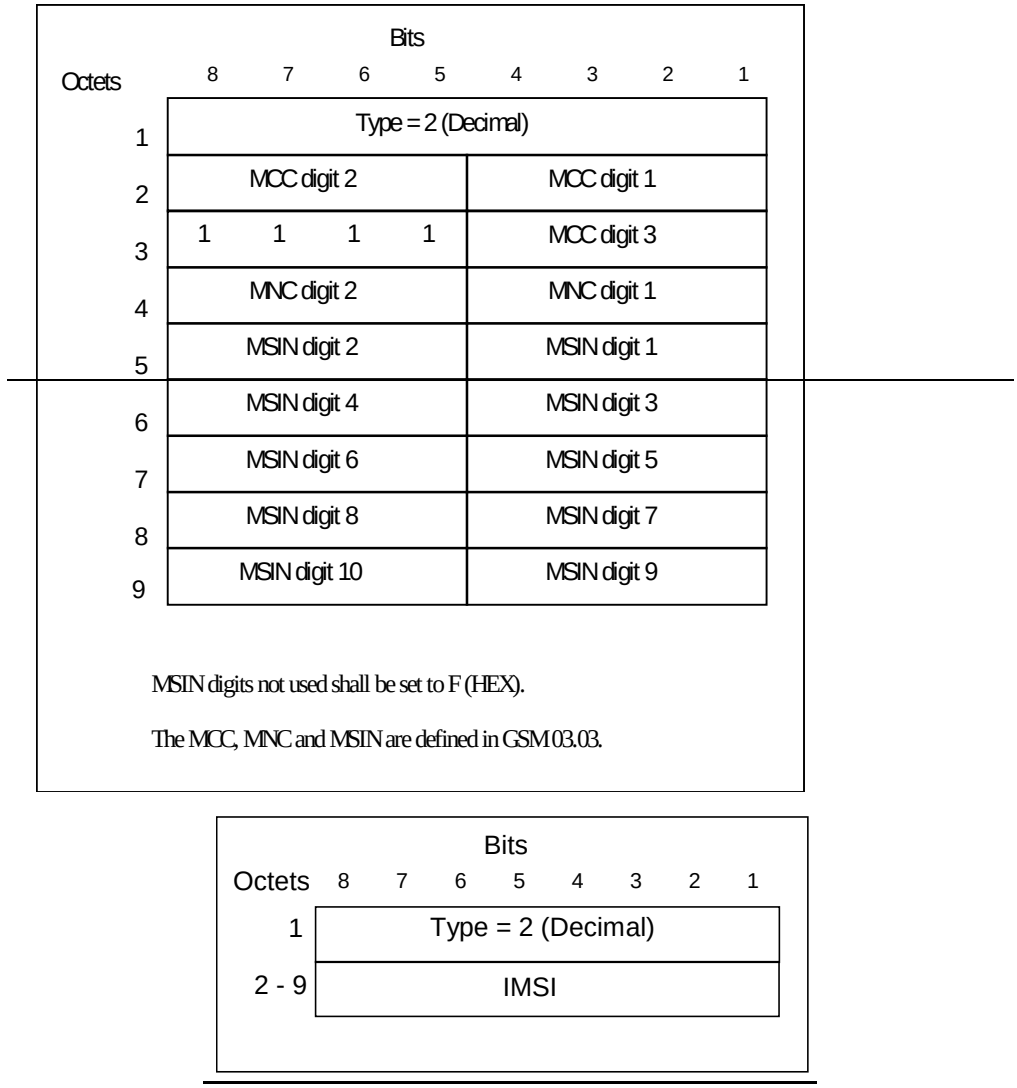

Figure 9: IMSI information element

The encoding of the IMSI information element is defined in GSM 04.08. IMSI digits that are not used shall be coded as '1 1 1 1' or F(HEX).

7.9.3 Routeing Area Identity (RAI)

The RAI information element is given by:

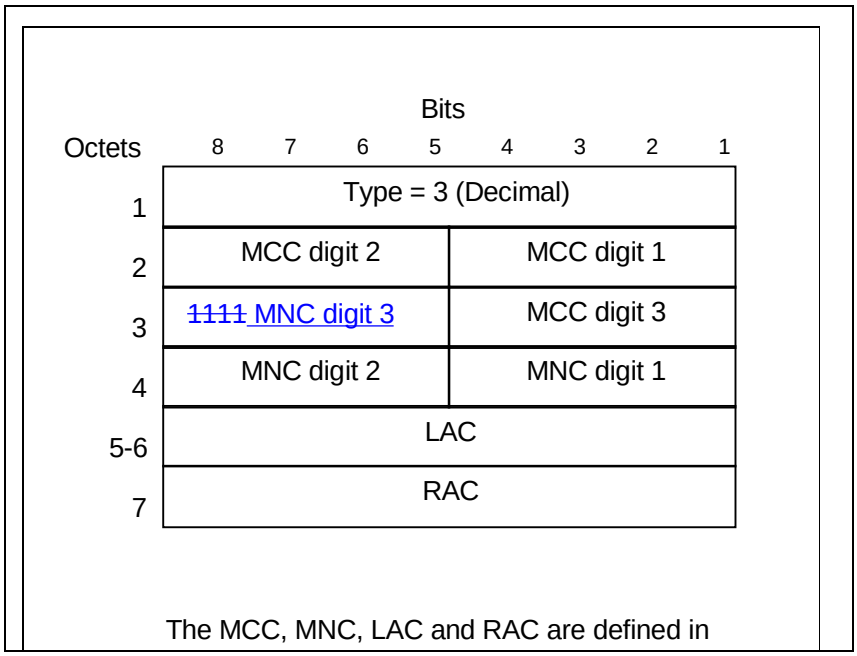

Figure 10: RAI information element

If an administration decides to include only two digits in the MNC, then bits 5 to 8 of octet 3 are coded as "1111".

3GPP TSG-CN WG4
22-26 May 2000
Rotenburg, Germany

Document *N4-000406*
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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23.003	**CR**	**020r3**	Current Version:	3.4.0

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

For submission to:	CN#08	For approval	X	strategic		*(for SMG*
list expected approval meeting # here ↑		for information		non-strategic	X	*use only)*

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	X	UTRAN / Radio		Core Network	X

Source: N4 **Date:** 30.05.00

Subject: Hexa IMEI

Work item: TEI

Category: *(only one category Shall be marked With an X)*

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

Reason for change:

The current IMEI structure is proposed to be changed to use hexadecimal coding instead of current BCD. The usage of "F" in hexadecimal IMEI is restricted, because in the case of emergency call without SIM-card, the IMEI is used as calling party number. The calling party number is used in ISUP and according to ISUP specifications (Q.762, Q.763, and Q.764), "F" is not allowed in calling party number.

The change is proposed in 3GPP TSG-CN,TSG-S, TSG-T and TSG-R to allow 11.4 million mobile terminals to be produced with one Type Approval Code. The current restriction for one million units per TAC is already a problem in the GSM terminal manufacturing and can only be predicted to worsen in the future.

Change to use hexadecimal coding is most simple since it does not affect to existing message lengths in GSM air interface and network interfaces.

This CR also moves the Annex A from 22.016 to 23.003, because S1 felt that the Annex is too detailed for S1 specification. The Annex is also modified to include the use of hexadecimal coding.

The proposal is to have certain deadline, after which all networks support hexadecimal coded IMEI. This should take care of the compability issues between hexadecimal and decimal coded IMEI. The feasibility of the whole hexadecimal IMEI scheme will be decided in coming TSG-CN and TSG-SA plenaries.

Clauses affected: 6.2.1, 6.2.2, New Annex A

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	24.008, 22.016, 25.331
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:	

help.doc

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

6.2.1 Composition of IMEI

The composition of the IMEI shall be such that each individual mobile station equipment can be separately identified.

Information is contained in the IMEI by which the PLMN, after requesting it, can immediately decide whether or not to accept calls made by means of this equipment.

Secondly, the IMEI shall directly or indirectly contain all information which is necessary for the network operator to make relations through its administrative system to trace the equipment to its origin of production.

The IMEI (14 digits) is complemented by a check digit. The check digit is not part of the digits transmitted at IMEI check occasions, as described below. The Check Digit shall avoid manual transmission errors, e.g. when customers register stolen MEs at the operators customer care desk. The Check Digit is defined according to modified Luhn formula, as defined in annex A.

NOTE: The Check Digit is not applied to the Software Version Number.

The International Mobile station Equipment Identity (IMEI) is composed as shown in figure 10.

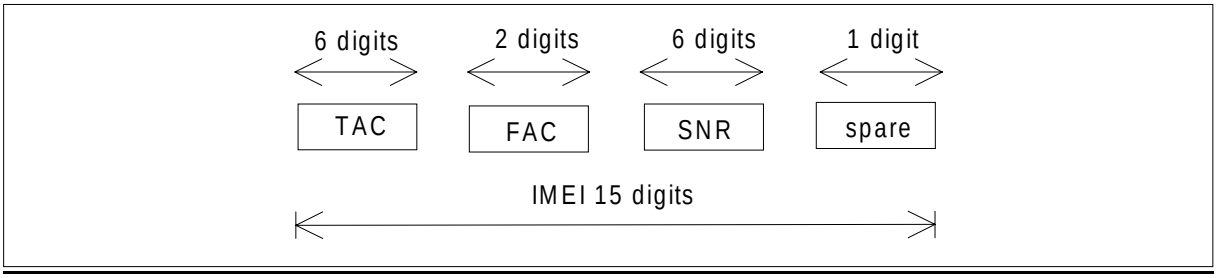


Figure 10: Structure of IMEI

The IMEI is composed of the following elements (each element shall consist of hexadecimal digits excluding the digit 'F' due to ISUP restrictions i.e. values (0-E) are allowed only):

- Type Approval Code (TAC). Its length is 6 digits;
- Final Assembly Code (FAC) identifies the place of manufacture/final assembly. Its length is 2 digits;
- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC and FAC. Its length is 6 digits;
- Spare digit: this digit shall be zero, when transmitted by the MS.

The security requirements of the IMEI are defined in 3G TS 22.016.

6.2.2 Composition of IMEISV

The International Mobile station Equipment Identity and Software Version Number (IMEISV) is composed as shown in figure 11.

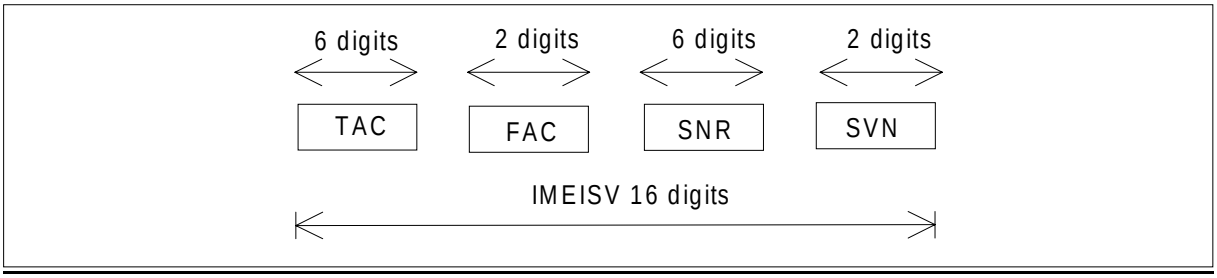


Figure 11: Structure of IMEISV

The IMEISV is composed of the following elements (each element shall consist of hexadecimal digits excluding the digit 'F' due to ISUP restrictions i.e. values (0-E) are allowed only):

- Type Approval Code (TAC). Its length is 6 digits;
- Final Assembly Code (FAC) identifies the place of manufacture/final assembly. Its length is 2 digits;
- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC and FAC. Its length is 6 digits.
- Software Version Number (SVN) identifies the software version number of the mobile equipment. Its length is 2 digits.

Regarding updates of the IMEISV: the TAC, FAC and SNR shall be protected against change after the ME's final production process; i.e. only the SVN part of the IMEISV can be modified (see 3G TS 22.016).

6.3 Allocation principles

The Type Approval Code (TAC) is issued by a central body.

The place of final assembly (FAC) is encoded by the manufacturer.

Manufacturers shall allocate individual serial numbers (SNR) in a sequential order.

For a given ME, the combination of TAC, FAC and SNR used in the IMEI shall duplicate the combination of TAC, FAC and SNR used in the IMEISV.

The Software Version Number is allocated by the manufacturer after authorization by the type approval authority. SVN value 99 is reserved for future use.

The IMEI digit values have restrictions which are modified at cut-off date. Before the CUT-OFF DATE (TBD) only bcd coded values (0-9) are allowed. After CUT-OFF DATE (TBD) IMEI digits may have hexadecimal values excluding the digit 'F' i.e. values (0-E) are allowed.

Annex A (normative): IMEI Check Digit computation

A.1 Representation of IMEI

The International Mobile station Equipment Identity and Software Version Number (IMEISV), is a 16 digit hexadecimal number composed of four distinct elements:

- a 6 digit Type Approval Code (TAC);
- a 2 digit Final Assembly Code (FAC);
- a 6 digit Serial Number (SNR); and
- a 2 digit Software Version Number (SVN).

The IMEISV is formed by concatenating these four elements as illustrated below:

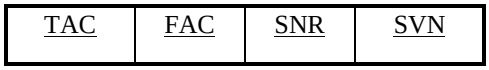


Figure A.1: Composition of the IMEISV

The IMEI is complemented by a check digit as defined in section 3. The Luhn Check Digit (CD) is computed on the 14 most significant decimal converted hexadecimal digits of the IMEISV, that is on the value obtained by ignoring the SVN digits. Note that this slightly modified Luhn check is compatible with the previously employed algorithm, since if none of the digits is >9, the algorithm is reduced to the ISO/IEC 7812.

The method for computing the Luhn check is defined in Annex B of the International Standard "Identification cards - Numbering system and registration procedure for issuer identifiers" (ISO/IEC 7812) [3].

In order to specify precisely how the CD is computed for the IMEI, it is necessary to label the individual digits of the IMEISV, excluding the SVN. This is done as follows:

The (14 most significant) digits of the IMEISV are labelled D14 D13 ... D1, where:

- TAC = D14 D13 ... D9 (with D9 the least significant digit of TAC);
- FAC = D8 D7 (with D7 the least significant digit of FAC); and
- SNR = D6 D5 ... D1 (with D1 the least significant digit of SNR).

Note: Even though all digits D1… D14 are changed to use hexadecimal coding, this has no effect to the previously assigned values of all fields when the fields were using BCD coding. The same code values can still be used for the previously assigned codes. The hexadecimal coding allows more codes to be used for all fields. Especially this applies to the SNR field, which has number space of 2^24 = 16,777,216 units – with BCD coding the number space is 1,000,000 units.

A.2 Computation of CD for an IMEI

Computation of CD from the IMEI proceeds as follows:

Step 1: Double the values of the odd labelled digits D1, D3, D5 ... D13 of the IMEI. Convert the result to decimal numbers.

Step 2: Add together the individual decimal digits of all the seven numbers obtained in Step 1, and then add this sum to the sum of all the even labelled hexadecimal to decimal converted digits D2, D4, D6 ... D14 of the IMEI.

Step 3: If the number obtained in Step 2 ends in 0, then set CD to be 0. If the number obtained in Step 2 does not end in 0, then set CD to be that number subtracted from the next higher decimal number which does end in 0.

A.3 Example of computation

IMEI (14 most significant digits):

TAC						FAC		SNR					
D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1
2	6	0	5	3	1	7	9	3	1	D	3	E	3

Step 1:

2	6	0	5	3	1	7	9	3	8	13	3	14	3
	x2		x2		x2		x2		X2		x2		x2
	12		10		2		18		16		6		6

Step 2:

2 + 1 + 2 + 0 + 1 + 0 + 3 + 2 + 7 + 1 + 8 + 3 + 1 + 6 + 1 +3 + 6 + 1 +4 + 6 = 58

Step 3:

CD = 60 - 58 = 2

3GPP TSG-CN WG4
Rotenburg GERMANY
22-26 May 2000

Document ***N4-000390***
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

23.081	**CR**	**002**	Current Version:	3.0.0

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

For submission to:	CN#08	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	X	UTRAN / Radio		Core Network	X

Source: N4 **Date:** 06.06.00

Subject: Enhanced handling of presentation indicators for CLIP

Work item: TEI

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

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

Reason for change:

The problem of interactions of the CLIP service with procedures for ACR have been identified in several committees. Currently there is only one value of the presentation indicator "presentation restricted" which does not give a qualifier whether the Line Identification is restricted on subscribers A request or due to other reasons (e.g. operator specifc reasons).

In ISUP v4 this problem is solved by utilising the reserved value of the presentation indicator ("11") as "presentation restricted by network".

Furthermore the TTC solution of the "Cause of No ID" parameter is introduced.

Clauses affected: 0.1, 0.2.1.2, 0.2.2, 1.2, 1.3, 2.2, 2.3, 3.3, 4.3, AnnexA

Other specs affected:

Other 3G core specifications		→ List of CRs:	24.081, 24.008
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 Modification* *****

0.1 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.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] ~~GSM 01.04: "Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms".~~3G TS 23.011~~GSM 03.11~~: "~~Digital cellular telecommunications system (Phase 2+);~~ Technical realization of supplementary services – General Aspects".

[2] 3G TS 23.018 : “Basic Call Handling; Technical realization”.

[3] 3G TR 21.905 : “Technical Specification Group Services and System Aspects; Vocabulary for 3GPP Specifications”.

***** *Next Modification* *****

0.2.1.2 Definition of presentation and screening indicators

In addition to, or instead of, the line identity or additional line identity, the network may send a presentation indicator (PI) together with a Cause of no CLI (CoNC) and/or a screening indicator (SI) ~~or additional screening indicator (aSI)~~ to the MS as follows:

- Presentation Indicator:
  a) Presentation allowed;
  b) Presentation restricted;
  c) Number not available.
- If the Presentation Indicator indicates "presentation restricted" the Cause of no CLI may give a diagnostic:
  a) Unavailable;

b) Rejected by user;

c) Interaction with other services;

d) Coin line/ Pay phone.

- Screening indicator~~/additional Screening indicator~~:

  a) User provided, verified and passed;

  b) User provided, not screened;

  c) network provided.

The screening indicator ~~or additional screening indicator~~ applies to the ISDN/MSISDN or the number given as additional line identity respectively.

0.2.2 Abbreviations

Abbreviations used in the present document are listed in ~~GSM 01.04~~ 3G TR 21.905.

****** Next Modification ******

1.2 Functions and information flows

The following Mobile Additional Functions have been identified for the PLMN:

MAF001

Determination of the calling line identification presentation subscription

The ability of a PLMN component to determine whether the supplementary service is provisioned for the mobile subscriber. See figure 1.2.

Location: VLR.

MAF002

Determination of the calling party number for offering to the called party

The ability of a PLMN component to determine and to forward the calling line identity and related indications to the called party. See figure 1.3.

Location: destination MSC.

The information flow is shown in figure 1.94.

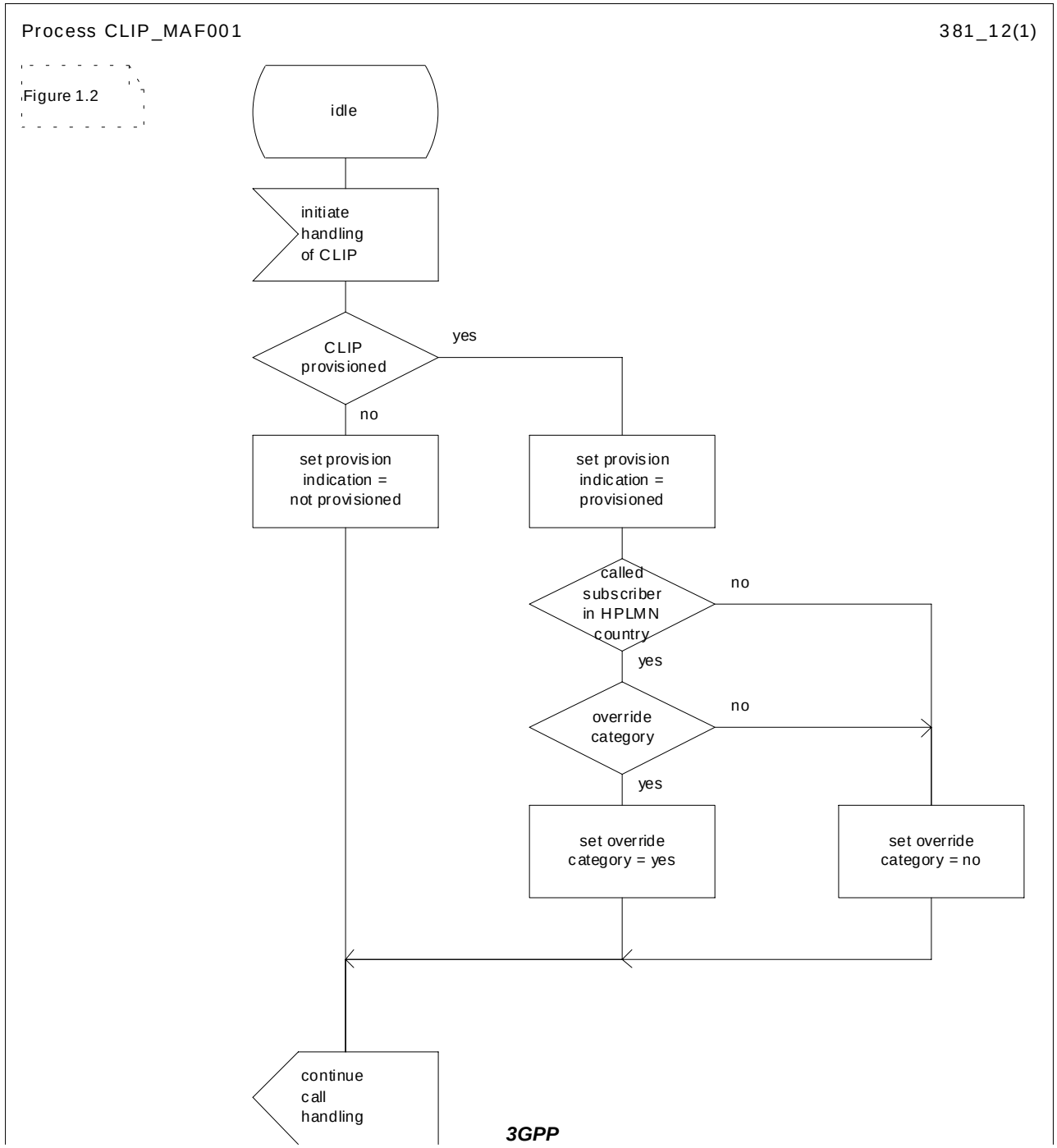
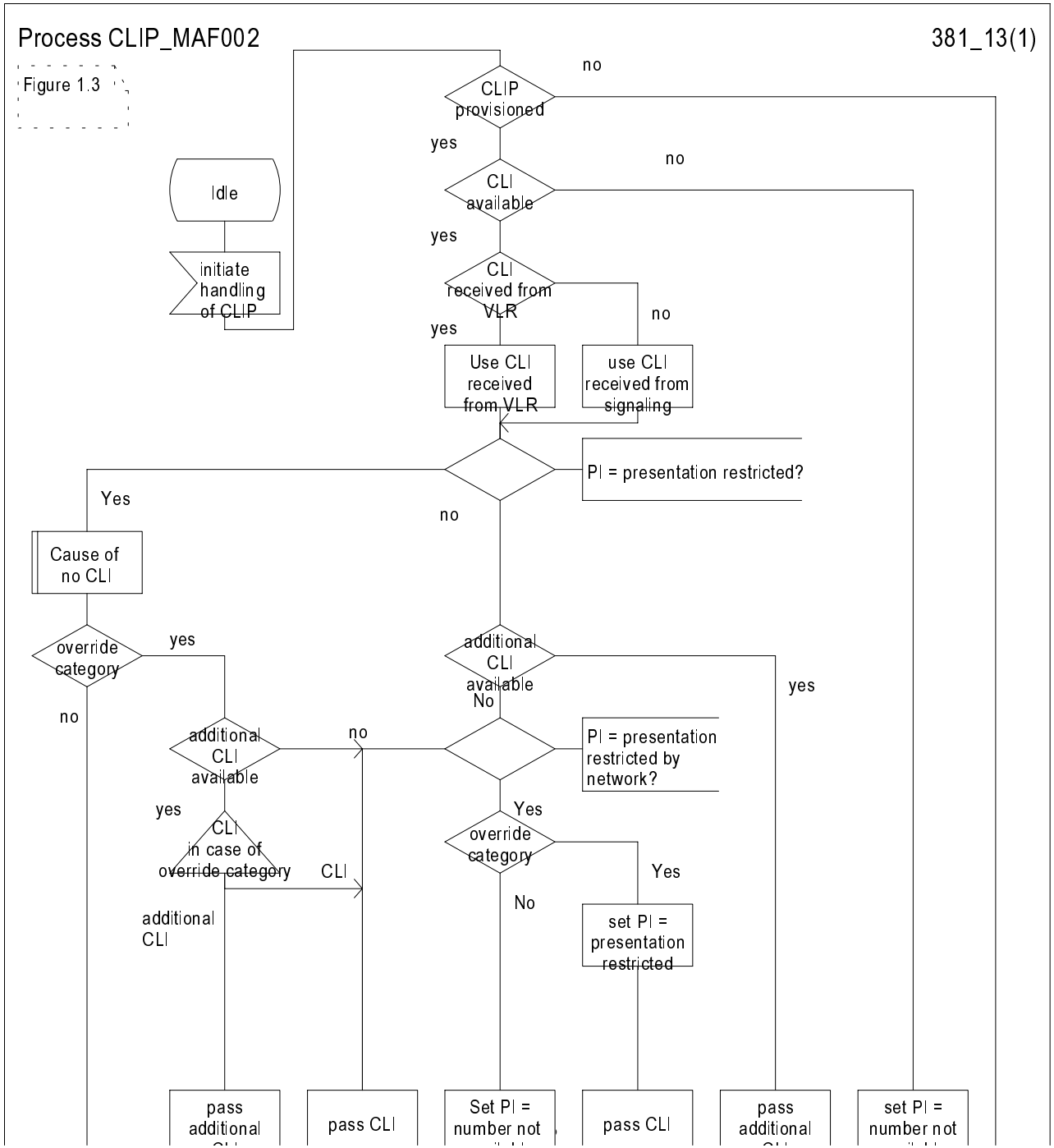

Process CLIP_MAF001
381_12(1)
Figure 1.2
idle
initiate handling of CLIP
CLIP provisioned
yes
no
set provision indication = not provisioned
set provision indication = provisioned
called subscriber in HPLMN country
no
yes
override category
no
yes
set override category = yes
set override category = no
continue call handling
3GPP

Figure 1.2: MAF001 Determination of calling line identification presentation subscription (VLR)


Process CLIP_MAF002
381_13(1)
Figure 1.3
Idle
initiate handling of CLIP
CLIP provisioned
no
yes
CLI available
no
yes
CLI received from VLR
no
yes
Use CLI received from VLR
use CLI received from signaling
PI = presentation restricted?
Yes
no
Cause of no CLI
override category
yes
no
additional CLI available
yes
No
additional CLI available
no
PI = presentation restricted by network?
yes
CLI in case of override category
CLI
Yes
override category
Yes
No
additional CLI
set PI = presentation restricted
pass additional
pass CLI
Set PI = number not
pass CLI
pass additional
set PI = number not

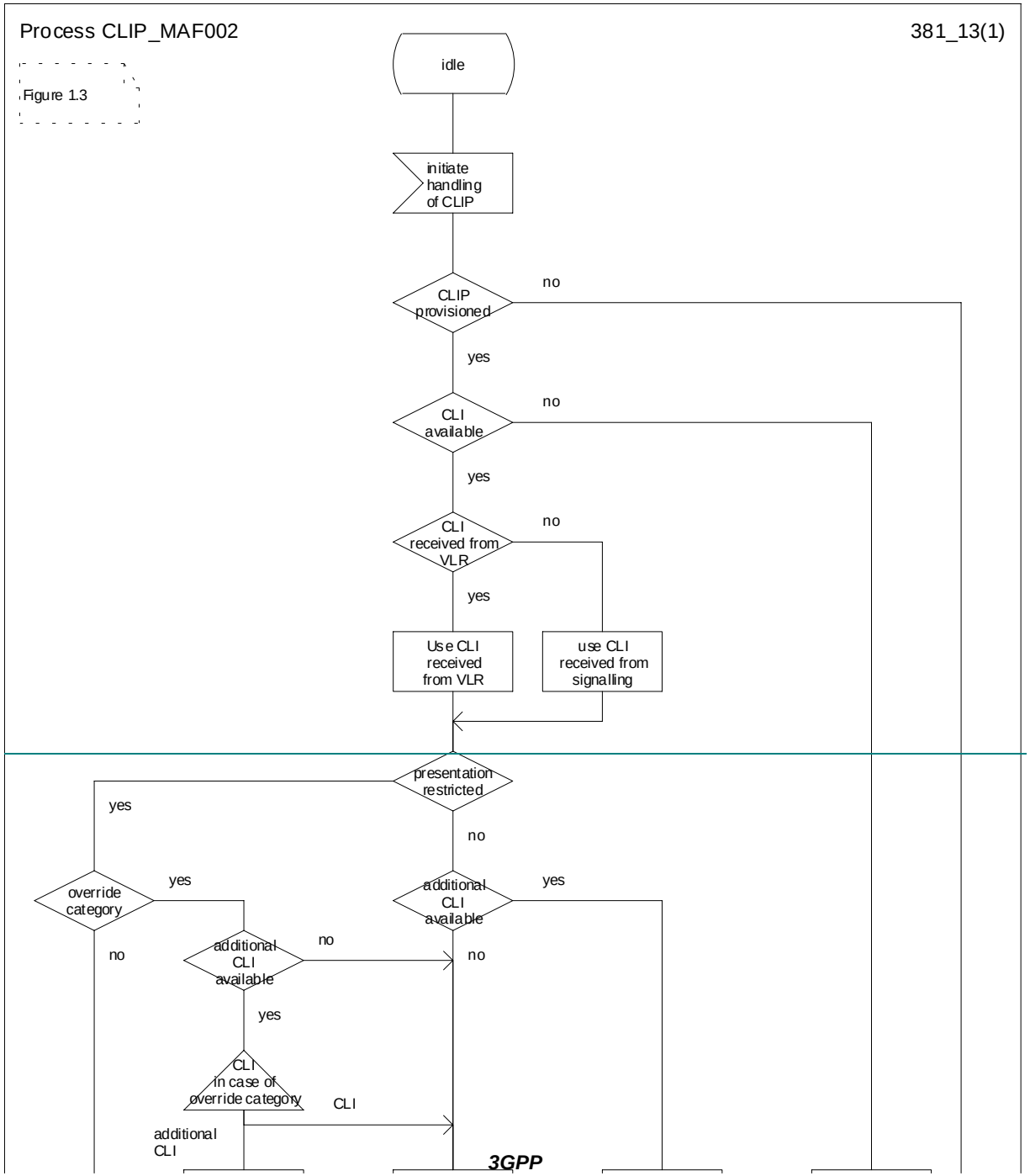

Process CLIP_MAF002
381_13(1)
Figure 1.3
idle
initiate handling of CLIP
CLIP provisioned
no
yes
CLI available
no
yes
CLI received from VLR
no
yes
Use CLI received from VLR
use CLI received from signalling
presentation restricted
yes
no
override category
yes
no
additional CLI available
yes
no
additional CLI available
no
yes
CLI in case of override category
CLI
additional CLI
3GPP

Figure 1.3: MAF002 Determination of the information for offering to the called party (destination MSC)

Procedure Cause_of_no_CLI 1(1)

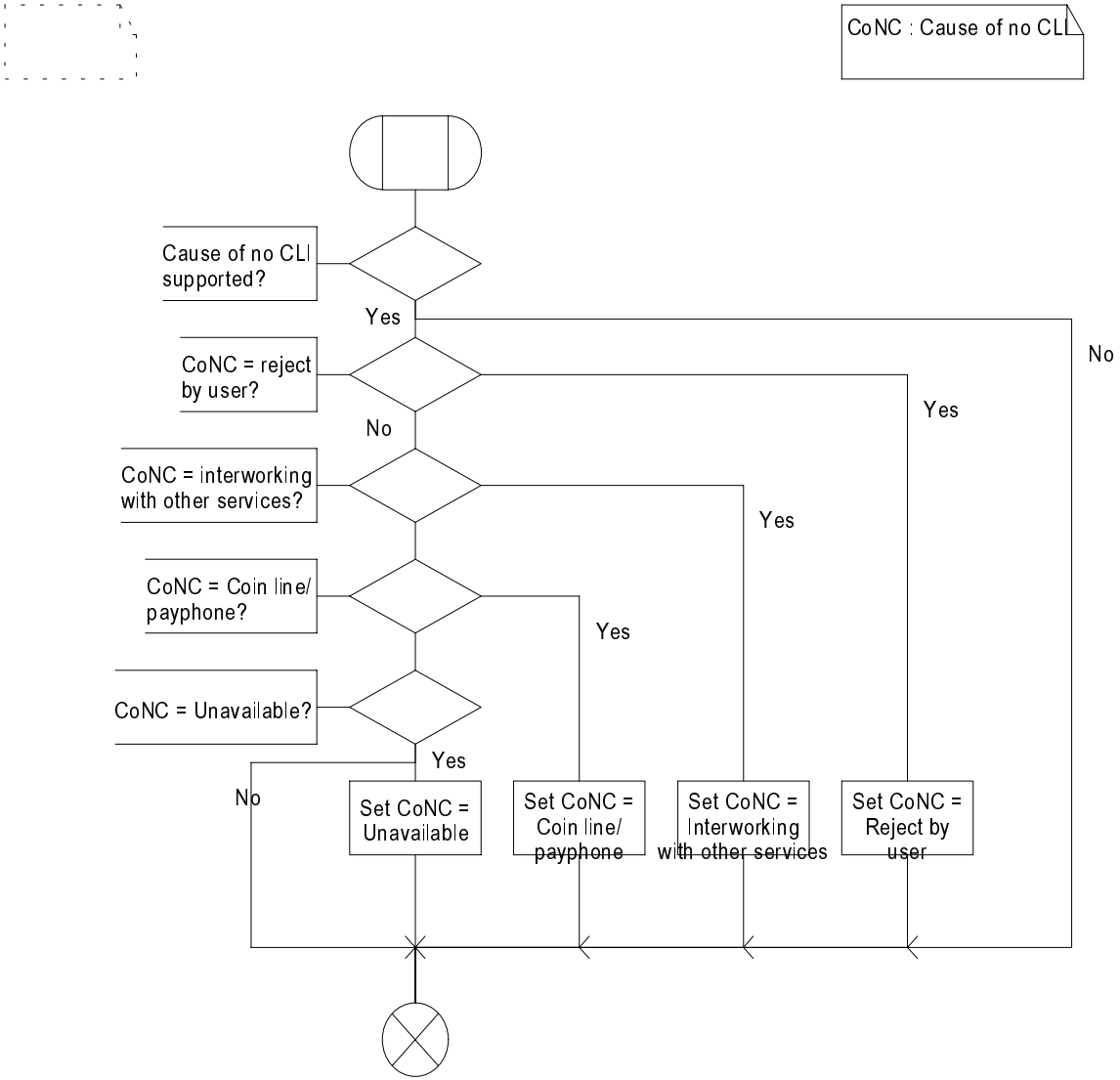


Figure 1.4: Procedure Cause_of_no_CLI

Procedure CLI_MT_GMSC 1(1)

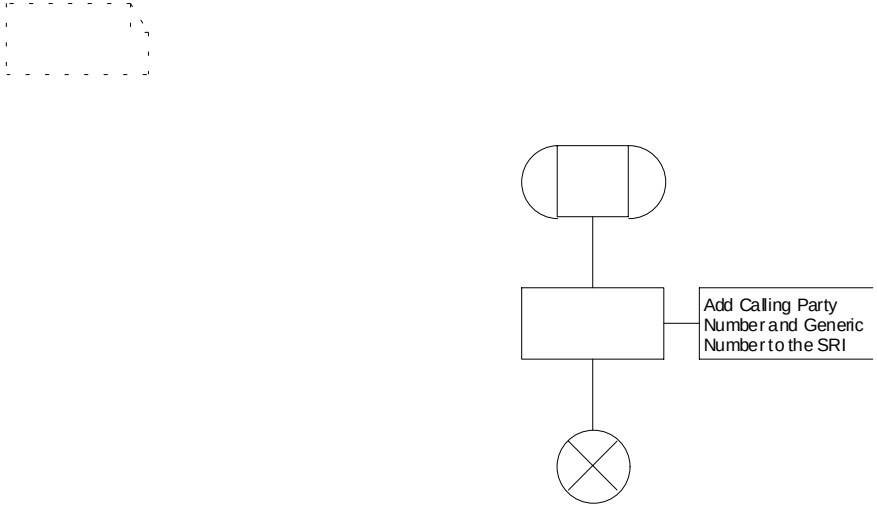


Figure 1.54 Addition of line identification information to Send Routeing Info message.

Procedure CLI_HLR_Set_CLI 1(1)

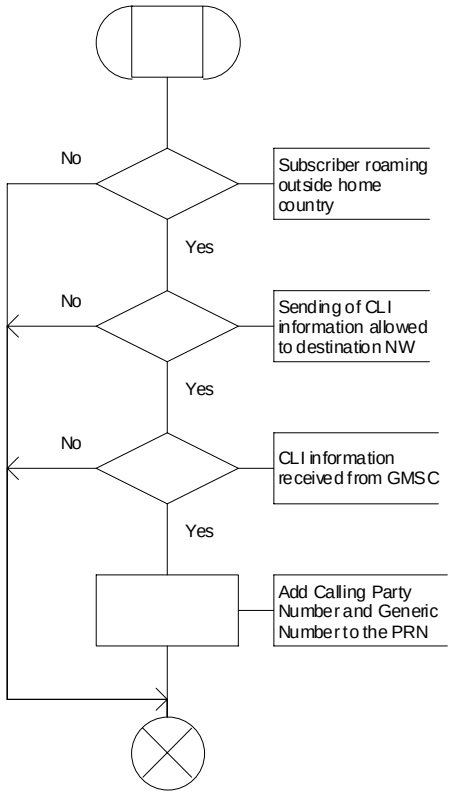


Figure 1.~~5~~6 Addition of line identification information to Provide Roaming Number message.

Procedure CLI_PRN_VLR 1(1)

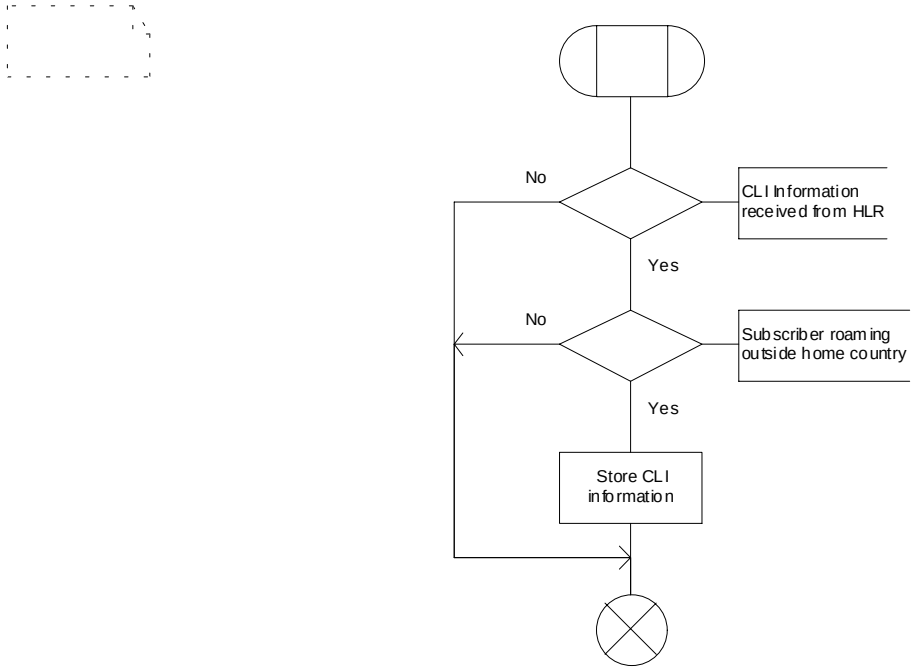


Figure 1.76 Storing of Line Identification in destination VLR

Procedure CLI_ICH_VLR_Add_CLI 1(1)

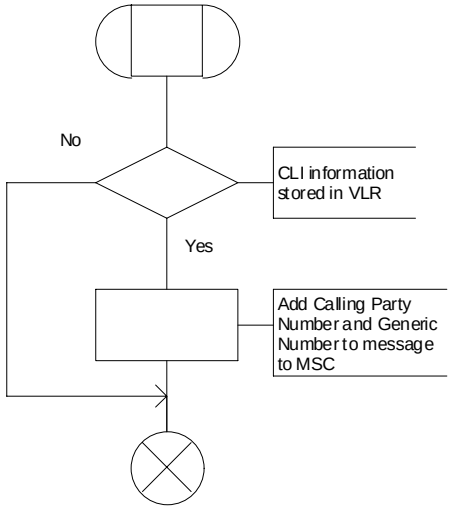
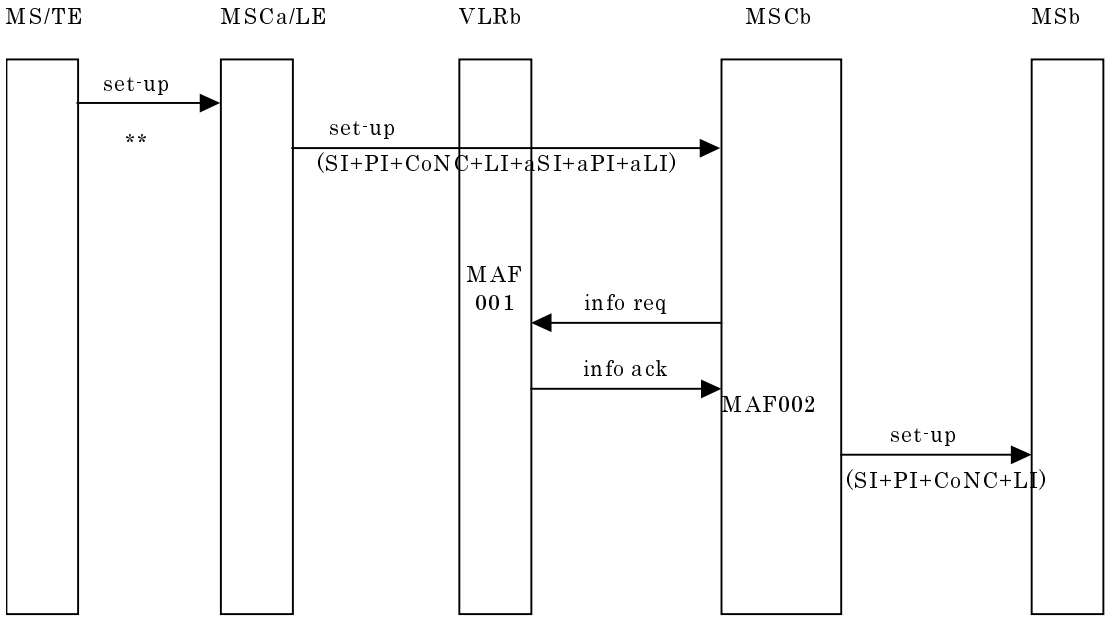
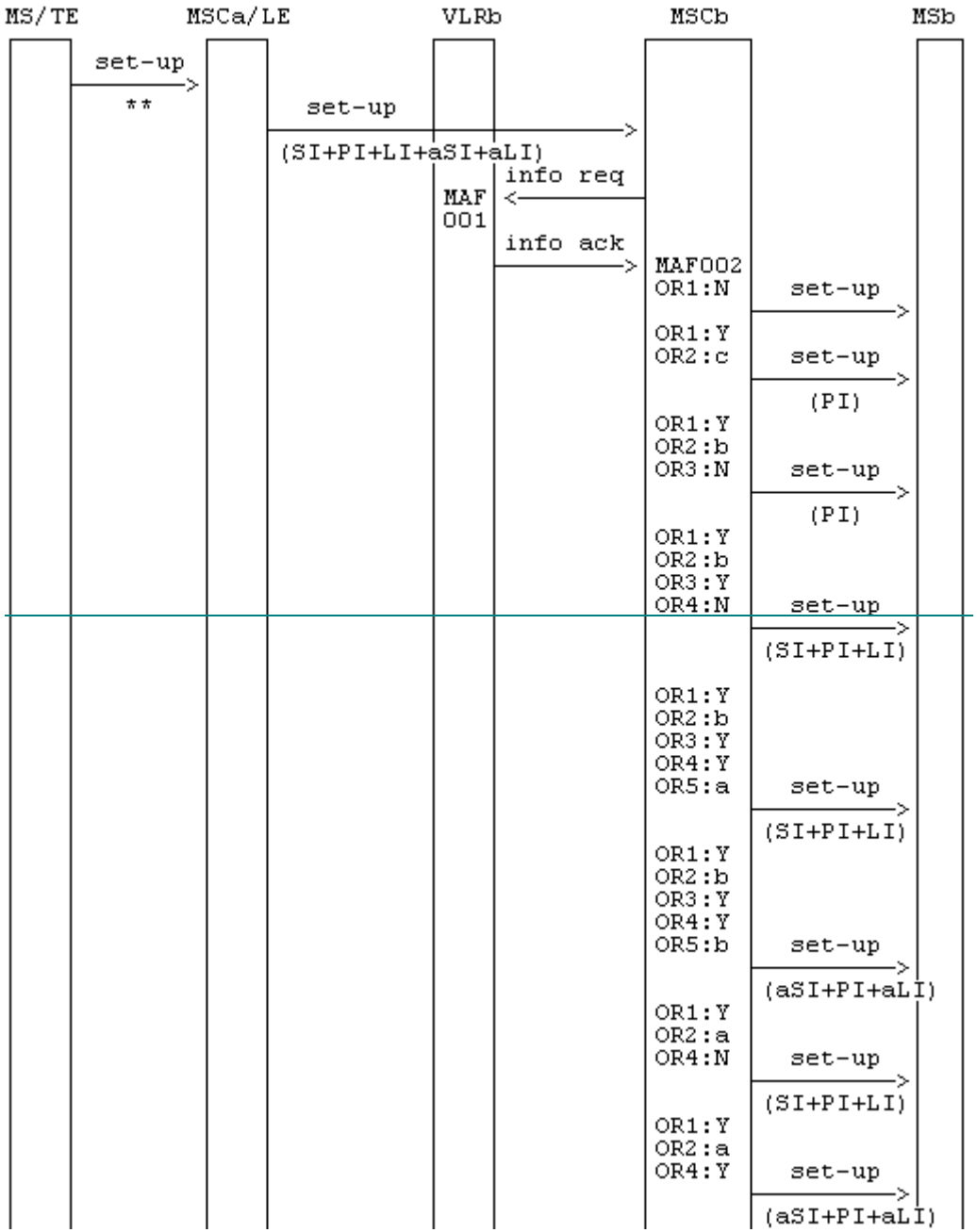
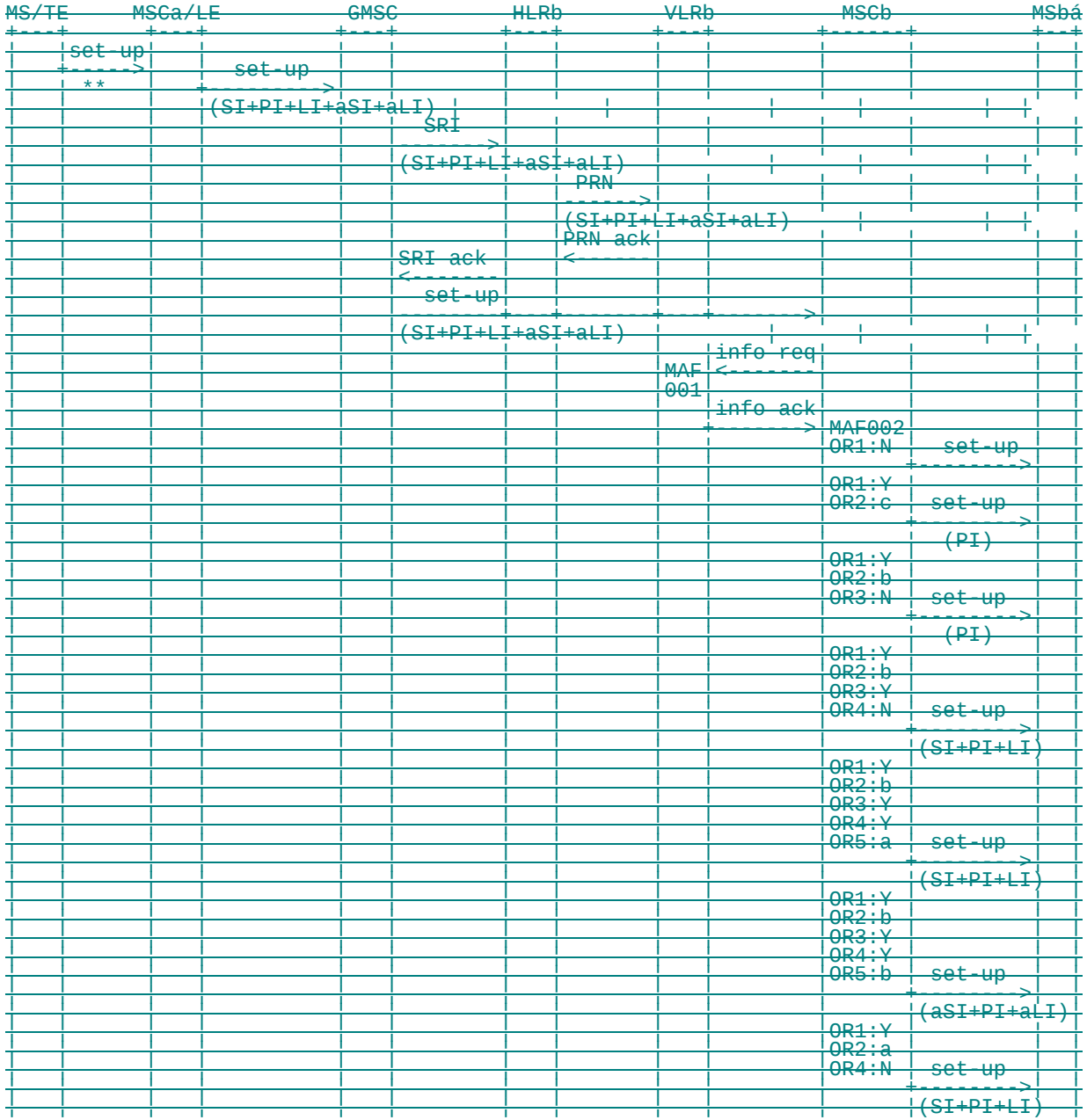
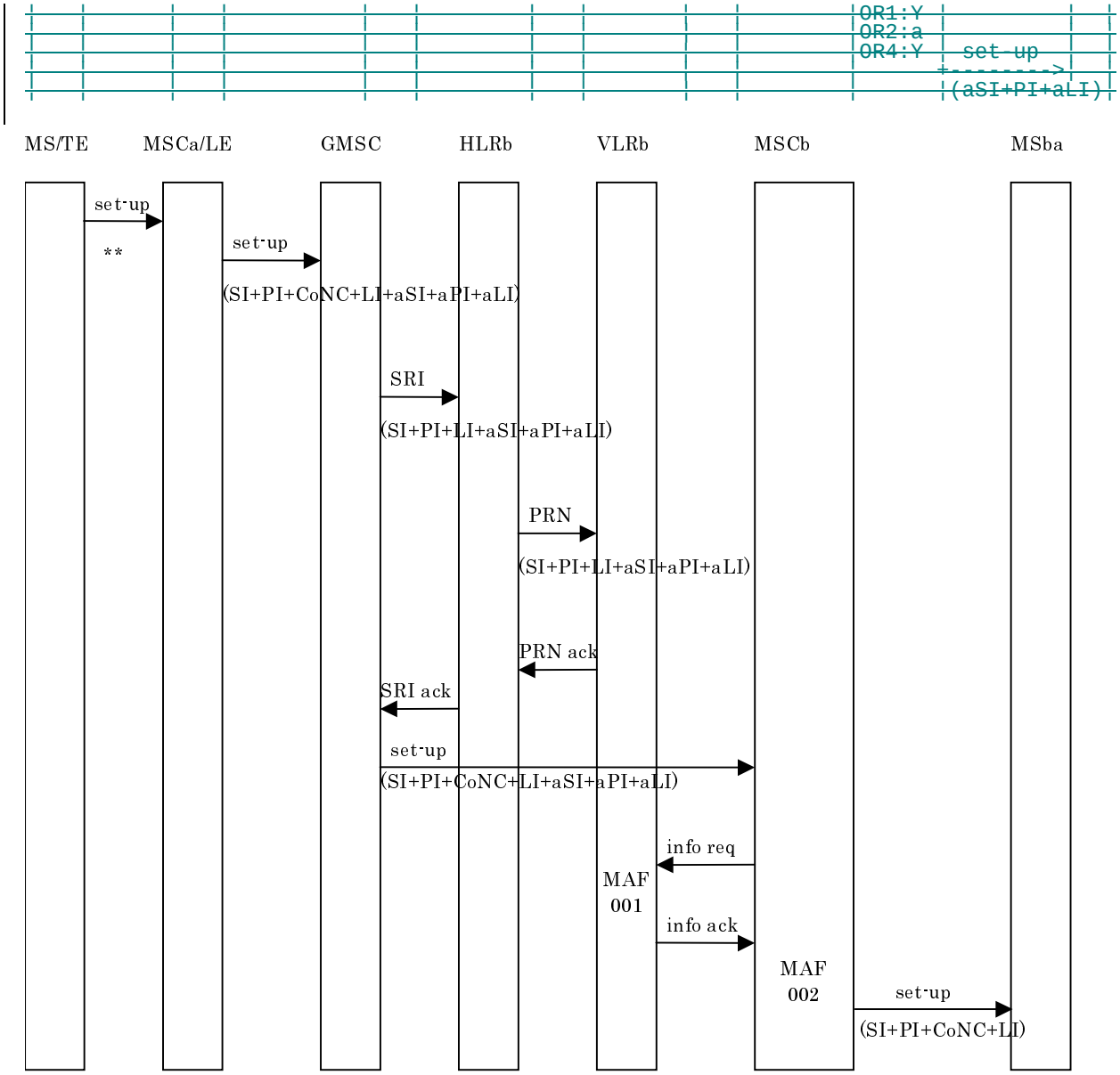


Figure 1.8~~7~~ Addition of line identification information to Complete Call/Process Call Waiting message.


MS/TE
MSCa/LE
VLRb
MSCb
MSb
set-up
**
set-up
(SI+PI+CoNC+LI+aSI+aPI+aLI)
MAF
001
info req
info ack
MAF002
set-up
(SI+PI+CoNC+LI)


MS/TE
MSCa/LE
VLRb
MSCb
MSb
set-up
**
set-up
(SI+PI+LI+aSI+aLI)
info req
MAF
001
info ack
MAF002
OR1:N
set-up
OR1:Y
OR2:c
set-up
(PI)
OR1:Y
OR2:b
OR3:N
set-up
(PI)
OR1:Y
OR2:b
OR3:Y
OR4:N
set-up
(SI+PI+LI)
OR1:Y
OR2:b
OR3:Y
OR4:Y
OR5:a
set-up
(SI+PI+LI)
OR1:Y
OR2:b
OR3:Y
OR4:Y
OR5:b
set-up
(aSI+PI+aLI)
OR1:Y
OR2:a
OR4:N
set-up
(SI+PI+LI)
OR1:Y
OR2:a
OR4:Y
set-up
(aSI+PI+aLI)


MS/TE
MSCa/LE
GMSC
HLRb
VLRb
MSCb
MSbá
set-up
**
set-up
(SI+PI+LI+aSI+aLI)
SRI
(SI+PI+LI+aSI+aLI)
PRN
(SI+PI+LI+aSI+aLI)
PRN ack
SRI ack
set-up
(SI+PI+LI+aSI+aLI)
info req
MAF 001
info ack
MAF002
OR1:N
set-up
OR1:Y
OR2:c
set-up
(PI)
OR1:Y
OR2:b
OR3:N
set-up
(PI)
OR1:Y
OR2:b
OR3:Y
OR4:N
set-up
(SI+PI+LI)
OR1:Y
OR2:b
OR3:Y
OR4:Y
OR5:a
set-up
(SI+PI+LI)
OR1:Y
OR2:b
OR3:Y
OR4:Y
OR5:b
set-up
(aSI+PI+aLI)
OR1:Y
OR2:a
OR4:N
set-up
(SI+PI+LI)


OR1:Y
OR2:a
OR4:Y
set-up
(aSI+PI+aLI)
MS/TE
MSCa/LE
GMSC
HLRb
VLRb
MSCb
MSba
set-up
**
set-up
(SI+PI+CoNC+LI+aSI+aPI+aLI)
SRI
(SI+PI+LI+aSI+aPI+aLI)
PRN
(SI+PI+LI+aSI+aPI+aLI)
PRN ack
SRI ack
set-up
(SI+PI+CoNC+LI+aSI+aPI+aLI)
info req
MAF
001
info ack
MAF
002
set-up
(SI+PI+CoNC+LI)

~~NOTE: OR1: CLIP provisioned Y: yes N: no~~
~~OR2: Presentation Indicator Value a: allowed~~
~~b: restricted~~
~~c: not available~~
~~OR3: Override category~~
~~OR4: additional line identity available Y: yes N: no~~
~~OR5: CLI in case of override category a: LI b: aLI~~
**: A subaddress may be received from the originating MS or the TE
info: information SI: screening indicator aSI: additional screening indicator
req: request PI: presentation indicator CoNC: cause of no CLI
aPI: additional presentation indicator
ack: acknowledge LI: line identity aLI: additional line identity

NOTE: For mapping rules of CLI parameters refer to Annex A.

Figure 1.94: Information flow for calling line identification presentation: mobile station or fixed terminal to mobile station

1.2.1 Optional capability to carry calling line identification

When GMSC is performing Send Routing Info query it may pass calling line identification to the HLRb. The calling line identification shall be in international format. If the HLRb receives calling line identification within Send Routing Info it may pass unmodified calling line identification within Provide Roaming Number to the VLRb. HLR shall not pass calling line identification in the HPLMN nor in the case where sending of the CLI information is explicitly denied to the destination network..

If MSCb receives calling line identification only from signalling it shall use that parameter for presentation purposes i.e. normal handling as described in the previous subclause applies.

If MSCb receives Cause of no CLI from signalling it shall be sent to the VLRb by Send Info for Incoming Call query.

If MSCb receives calling line identification and/or Cause of no CLI from VLRb and it supports the feature it shall use that parameter for presentation purposes. In this case calling line identification is stored in the VLRb and when the setup message is processed the handling described in the previous subclause is done using the stored calling line identification.

1.2.2 Information elements used in the messages

Table 1.2.2.1: Information elements used in messages

Information Element	Logical Information element name	Information element Required	Information element description
Calling Party Number	SI PI LI	M M M	Calling Party Number contains screening indicator (SI), presentation indicator (PI) and line identity (LI) as mandatory information.
Generic Number	aSI aPI aLI	M M M	Generic Number contains additional screening indicator (aSI), additional presentation indicator (aPI) and additional line identity (aLI) as mandatory information.
Cause of no CLI	unavailable reject by user interaction with other service coin line/payphone	M M M M	Cause of no CLI contains detailed Cause of no CLI (unavailable, reject by user, interaction with other service, coin line/payphone) as mandatory information.

1.2.3 Parameters in Send Routeing Info and Provide Roaming Number for CLI

Table 1.2.3.1: Messages between GMSC and HLR

Message	Message sender	Information element name	Information element Required	Information element description
Send Routeing Info	GMSC	-	-	Refer to 3G TS 23.018 ~~GSM 03.18~~.
		Calling Party Number	C	In addition: The information element is present if GMSC received calling party number from originating network; otherwise it shall be absent.
		Generic Number	C	The information element is present if GMSC received calling party number from originating network; otherwise it shall be absent.

Table 1.2.3.2: Messages between HLR and VLR

Message	Message sender	Information element name	Information element Required	Information element description
Provide Roaming Number	HLR	-	-	Refer to 3G TS 23.018~~GSM 03.18~~. In addition:
		Calling Party Number	C	The information element is present if HLR received calling party number from GMSC and MS B is outside of home country; otherwise it shall be absent.
		Generic Number	C	The information element is present if HLR received calling party number from GMSC and MS B is outside of home country; otherwise it shall be absent.

1.2.4 Messages between MSC and VLR in destination network

Table 1.2.4.1: Messages between MSC and VLR

Message	Message sender	Information element name	Information element Required	Information element description
Complete Call	VLR	-	-	Refer to 3G TS 23.018~~GSM 03.18~~. In addition:
		Calling Party Number	C	The information element is present if it is stored in VLR; otherwise it shall be absent.
		Generic Number	C	The information element is present if it is stored in VLR; otherwise it shall be absent.
		Cause of no CLI	C	The information element is present if it is stored in VLR; otherwise it shall be absent.
Process Call Waiting	VLR	-	-	Refer to 3G TS 23.018~~GSM 03.18~~. In addition:
		Calling Party Number	C	The information element is present if it is stored in VLR; otherwise it shall be absent.
		Generic Number	C	The information element is present if it is stored in VLR; otherwise it shall be absent.
		Cause of no CLI	C	The information element is present if it is stored in VLR; otherwise it shall be absent.
Send Info for Incoming Call	MSC	-	-	Refer to 3G TS 23.018.
		Cause of no CLI	C	In addition: The information element is present if MSC received Cause of no CLI; otherwise it shall be absent.

1.3 Information stored in the HLR

CLIP may have the following logical states (refer to 3G TS 23.011~~GSM 03.11~~ for an explanation of the notation):

Provisioning State **Registration State** **Activation State** **HLR Induction State**

(Not Provisioned, Not Applicable, Not Active, Not Induced)

(Provisioned, Not Applicable, Active and Operative, Not Induced)

The HLR shall store the logical state of CLIP (which shall be one of the valid states listed above) on a per subscriber basis.

The HLR shall also store the subscription option "override category" on a per subscriber basis.

This parameter takes one of the following values:

- yes;
- no.

***** *Next Modification* *****

2.2 Functions and information flows

The following Mobile Additional Functions have been identified for the PLMN:

MAF003

Determination of the calling line identification restriction subscription

The ability of a PLMN component to determine whether the supplementary service is provisioned for the mobile subscriber. See figure 2.4.

Location: VLR.

MAF004

Determination of the calling party number for offering to the called party

The ability of a PLMN component to determine and to forward the calling line identity and related indications to the called party. See figure 2.5.

Location: originating MSC.

The information flows are shown in figures 2.6 to 2.9.

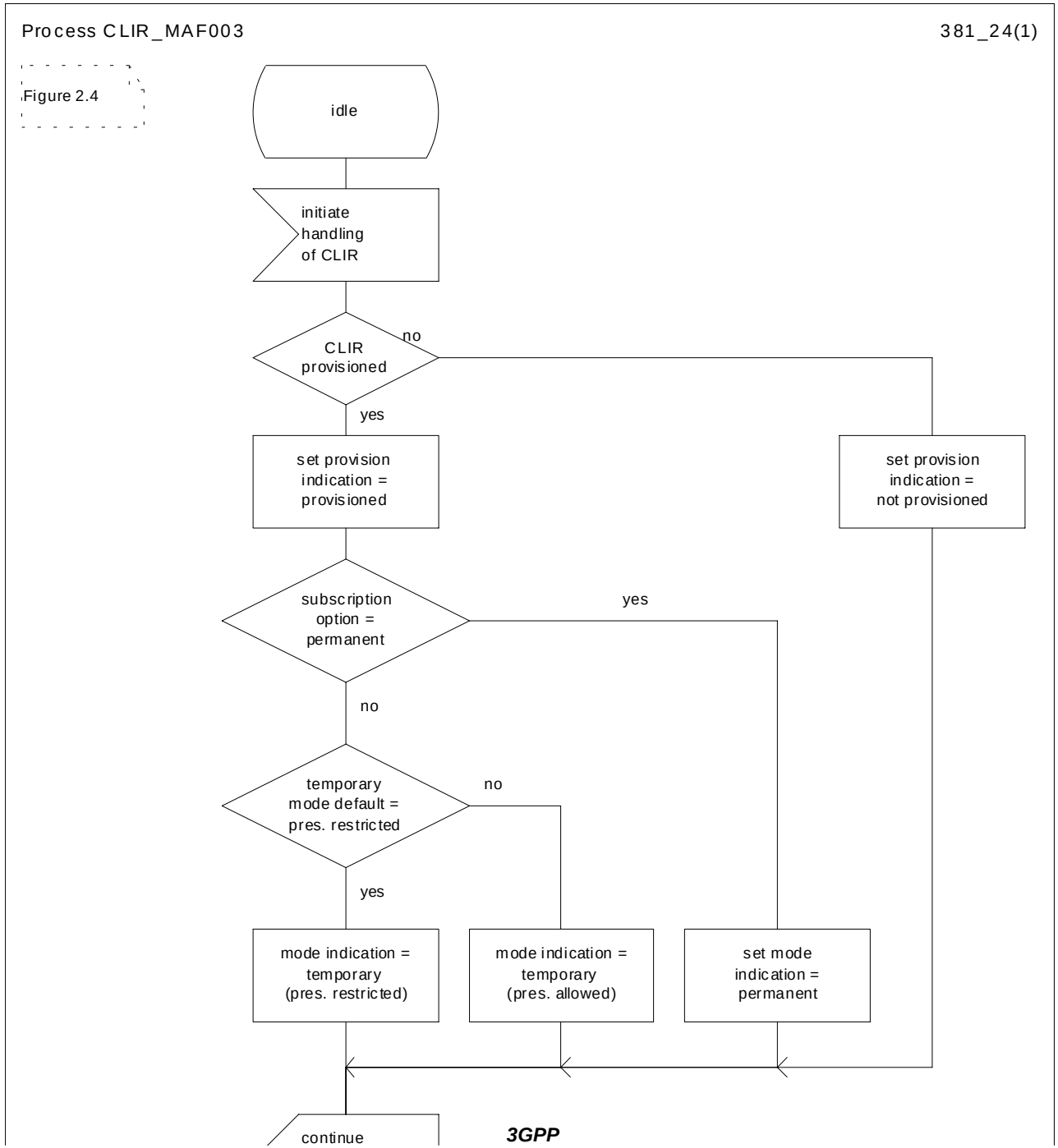
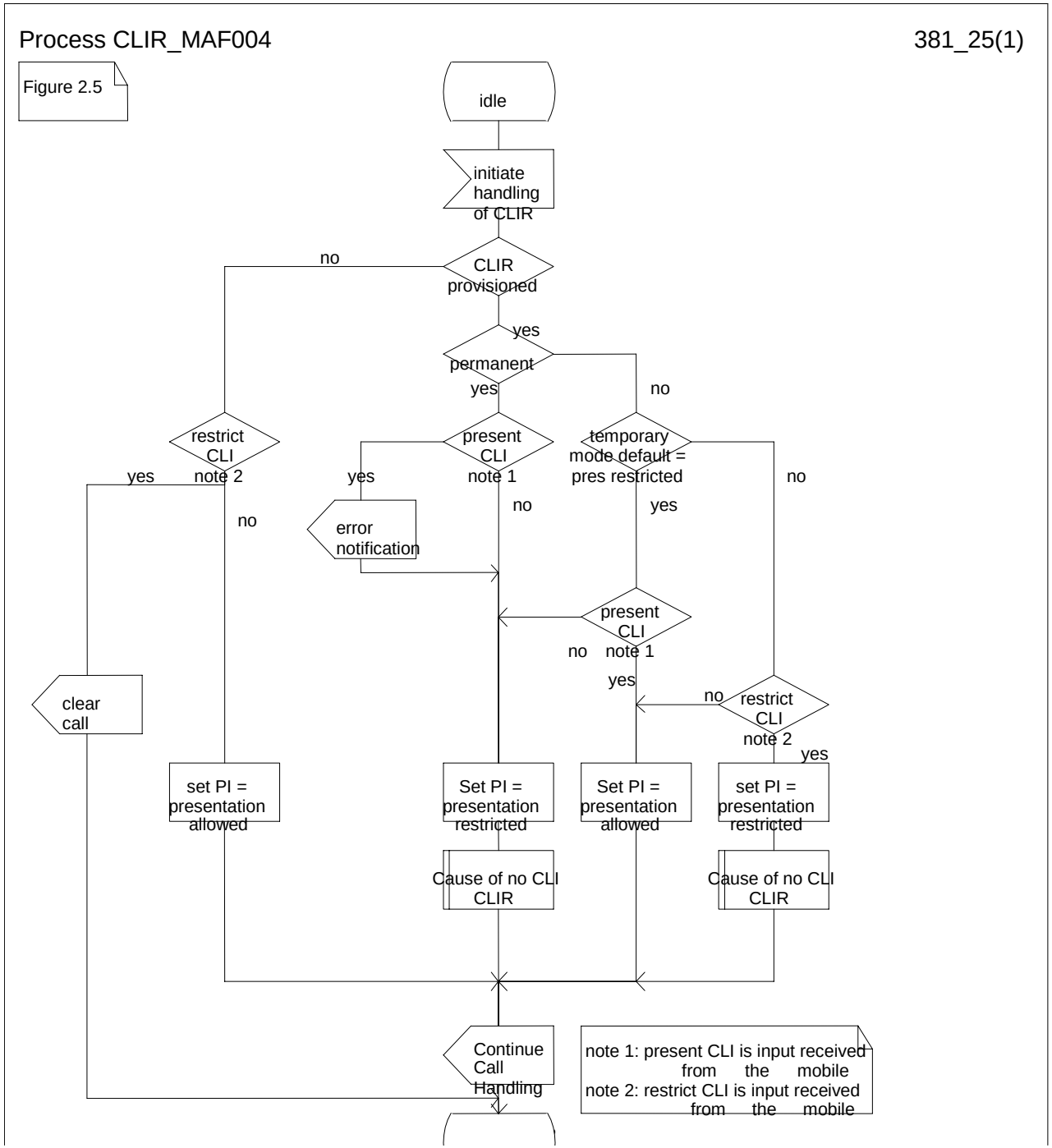

Process CLIR_MAF003
381_24(1)
Figure 2.4
idle
initiate handling of CLIR
CLIR provisioned
no
yes
set provision indication = provisioned
set provision indication = not provisioned
subscription option = permanent
yes
no
temporary mode default = pres. restricted
no
yes
mode indication = temporary (pres. restricted)
mode indication = temporary (pres. allowed)
set mode indication = permanent
continue
3GPP

Figure 2.4: MAF003 Determination of calling line identification restriction subscription (VLR)


Process CLIR_MAF004
381_25(1)
Figure 2.5
idle
initiate handling of CLIR
CLIR provisioned
no
yes
permanent
yes
no
restrict CLI
yes
note 2
no
present CLI
note 1
yes
no
error notification
temporary mode default = pres restricted
yes
no
present CLI
note 1
no
yes
clear call
restrict CLI
note 2
no
yes
set PI = presentation allowed
Set PI = presentation restricted
Set PI = presentation allowed
set PI = presentation restricted
Cause of no CLI CLIR
Cause of no CLI CLIR
Continue Call Handling
note 1: present CLI is input received from the mobile
note 2: restrict CLI is input received from the mobile

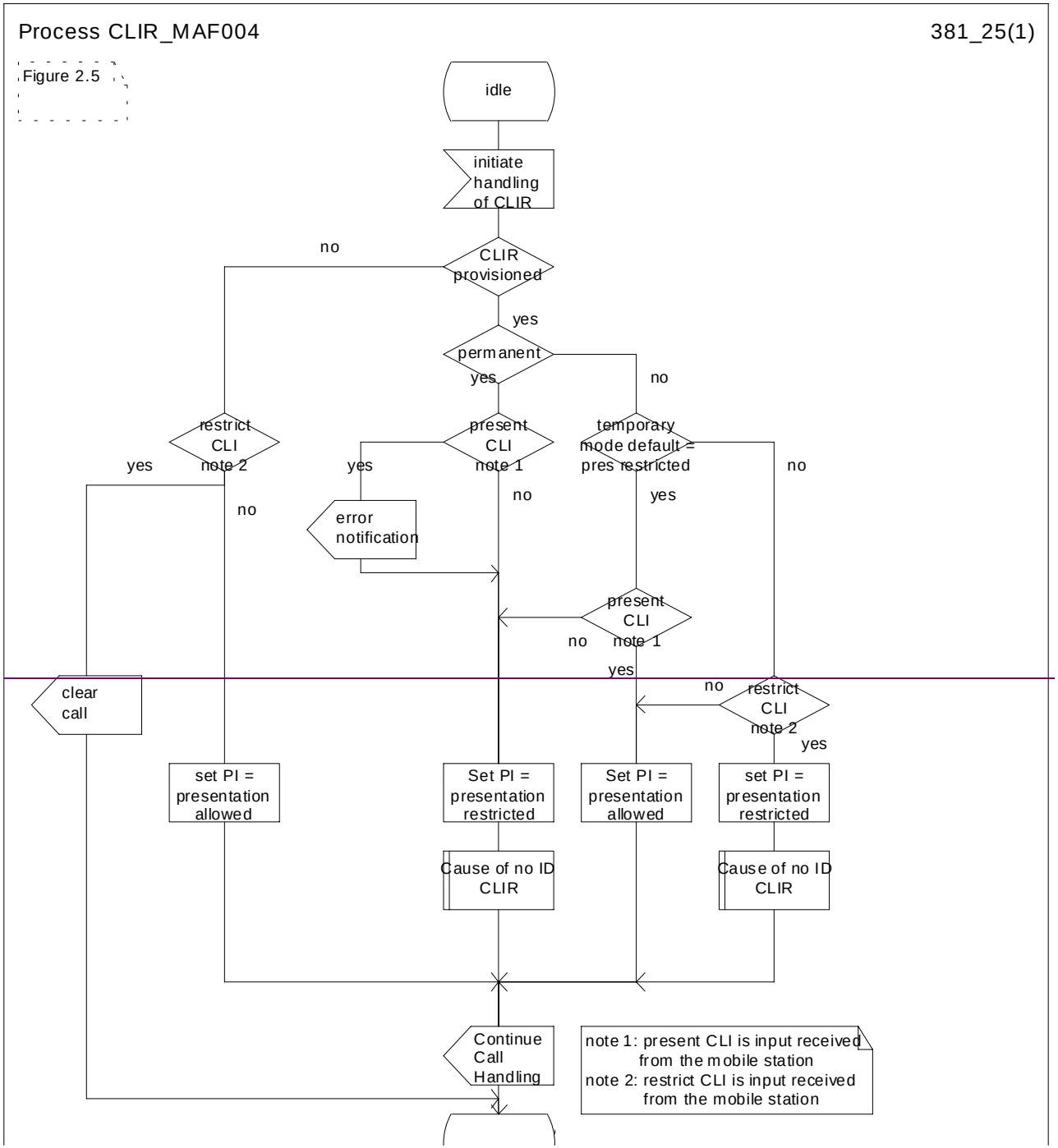

Process CLIR_MAF004
381_25(1)
Figure 2.5
idle
initiate handling of CLIR
CLIR provisioned
no
yes
permanent
yes
no
restrict CLI note 2
present CLI note 1
temporary mode default = pres restricted
yes
no
yes
no
yes
no
error notification
present CLI note 1
no
yes
clear call
no
restrict CLI note 2
yes
set PI = presentation allowed
Set PI = presentation restricted
Set PI = presentation allowed
set PI = presentation restricted
Cause of no ID CLIR
Cause of no ID CLIR
Continue Call Handling
note 1: present CLI is input received from the mobile station
note 2: restrict CLI is input received from the mobile station

Figure 2.5: MAF004 Determination of the presentation indicator (originating MSC)

Procedure Cause_of_no_CLI_CLIR 1(1)

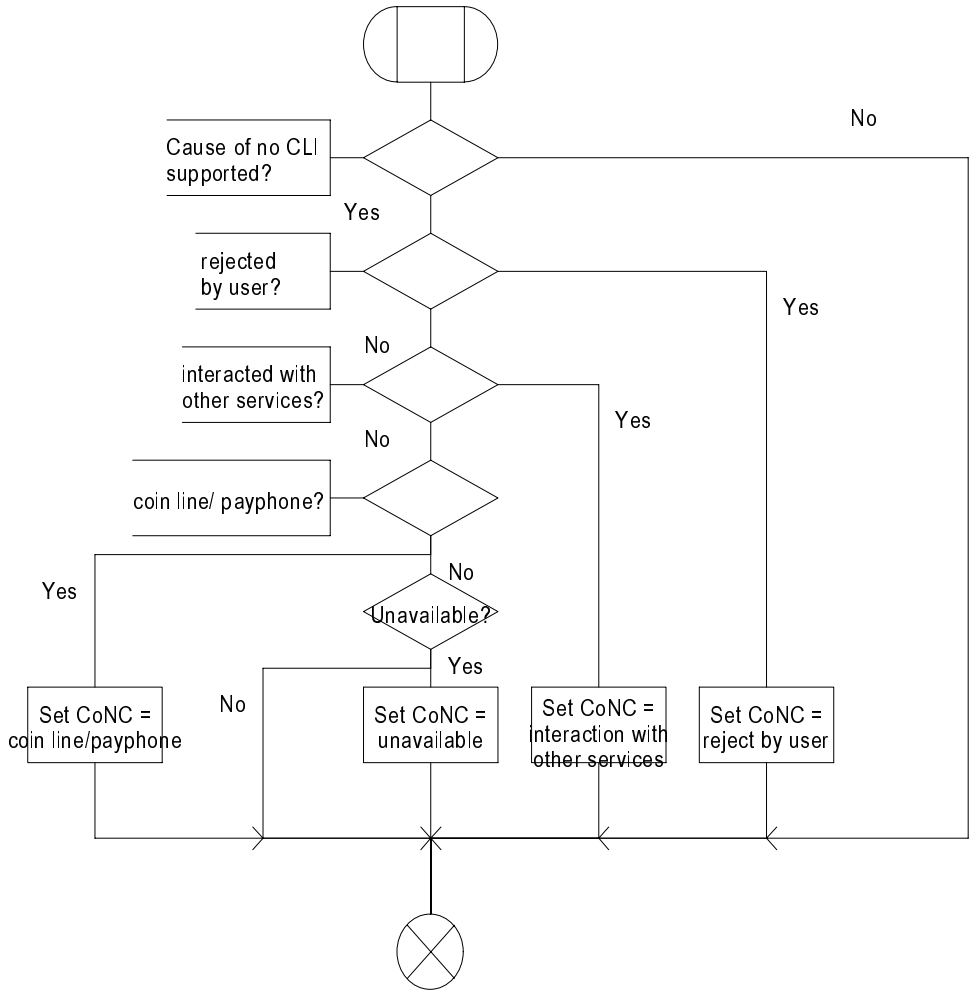
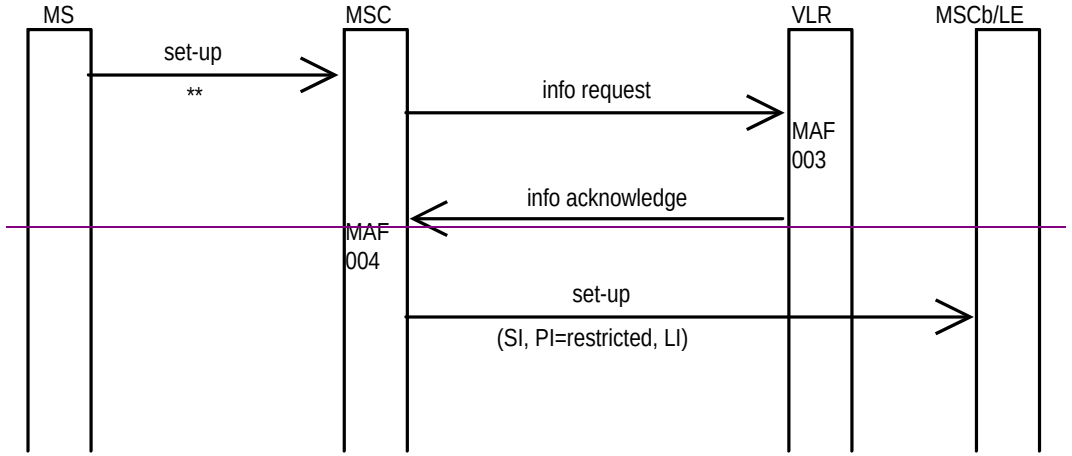
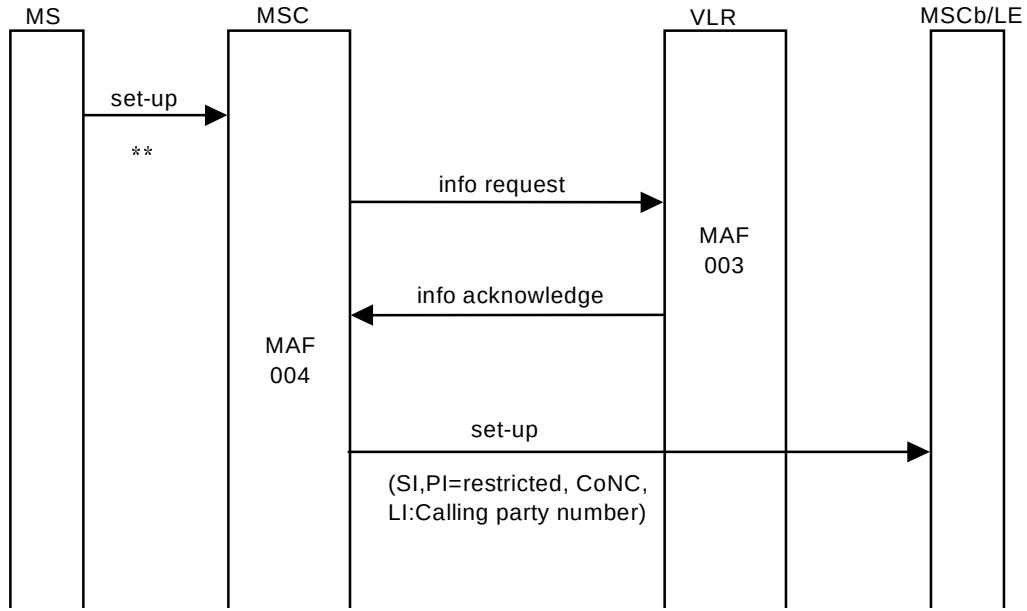


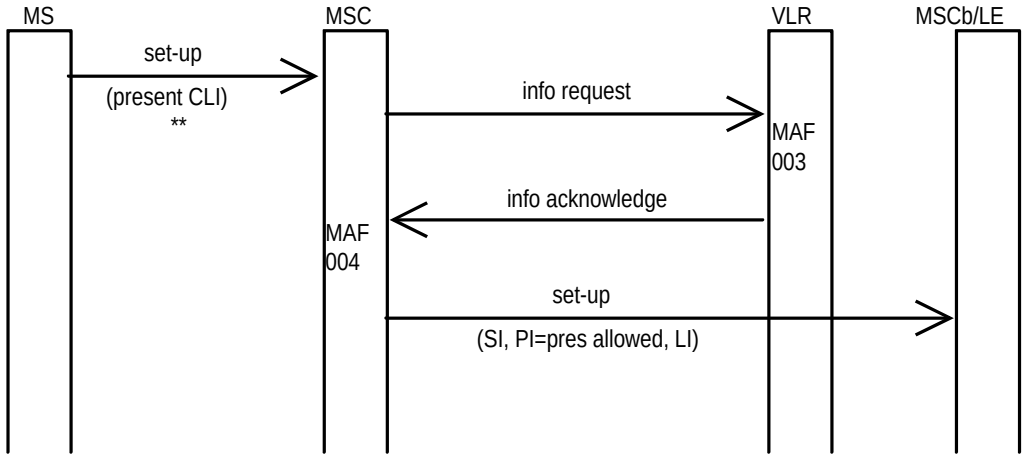
Figure 2.6: Procedure Cause_of_no_CLI_CLIR


MS
MSC
VLR
MSCb/LE
set-up
**
info request
MAF
003
info acknowledge
MAF
004
set-up
(SI, PI=restricted, LI)


MS
MSC
VLR
MSCb/LE
set-up
**
info request
MAF
003
info acknowledge
MAF
004
set-up
(SI,PI=restricted, CoNC,
LI:Calling party number)

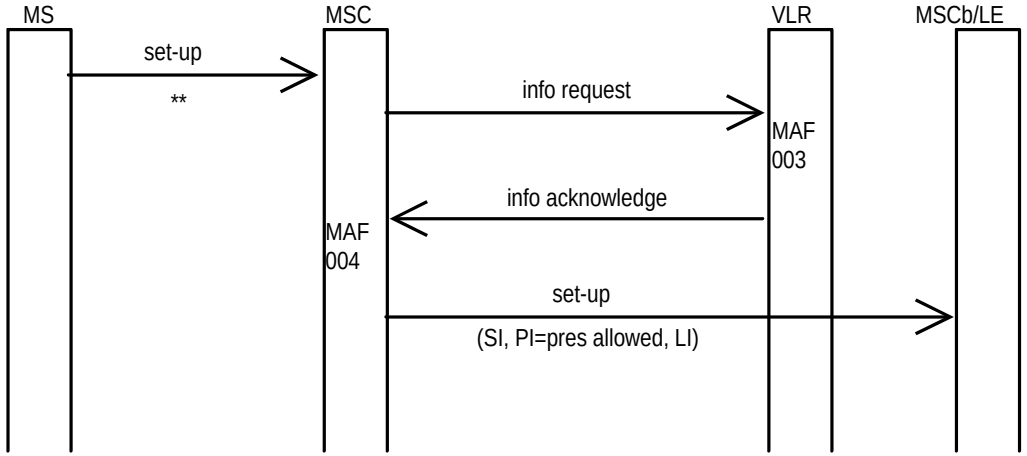
NOTE: **: A subaddress may be received from the MS
SI: screening indicator
PI: presentation indicator
LI: line identity

Figure 2.76: Information flow for calling line identification restriction in permanent or temporary mode with the default value "presentation restricted"



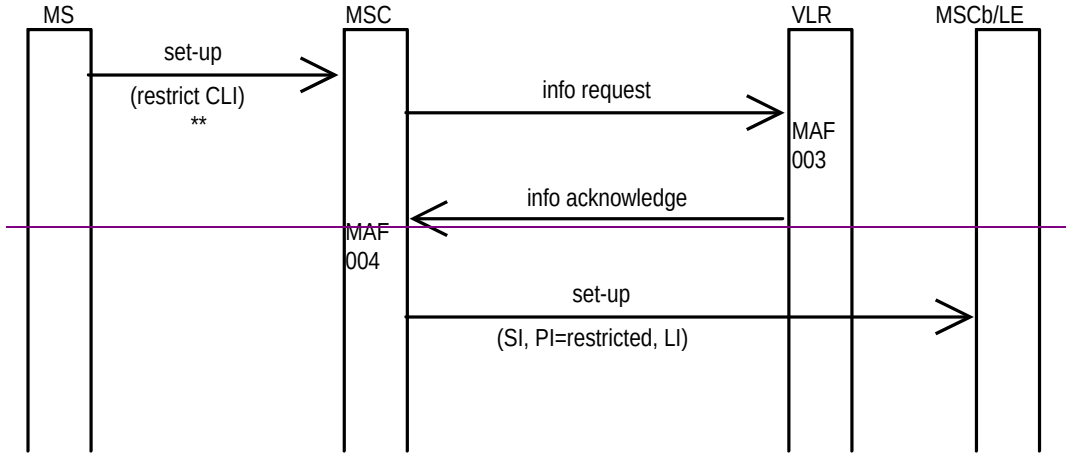
NOTE: **: A subaddress may be received from the MS
SI: screening indicator
PI: presentation indicator
LI: line identity
CLI: calling line identity

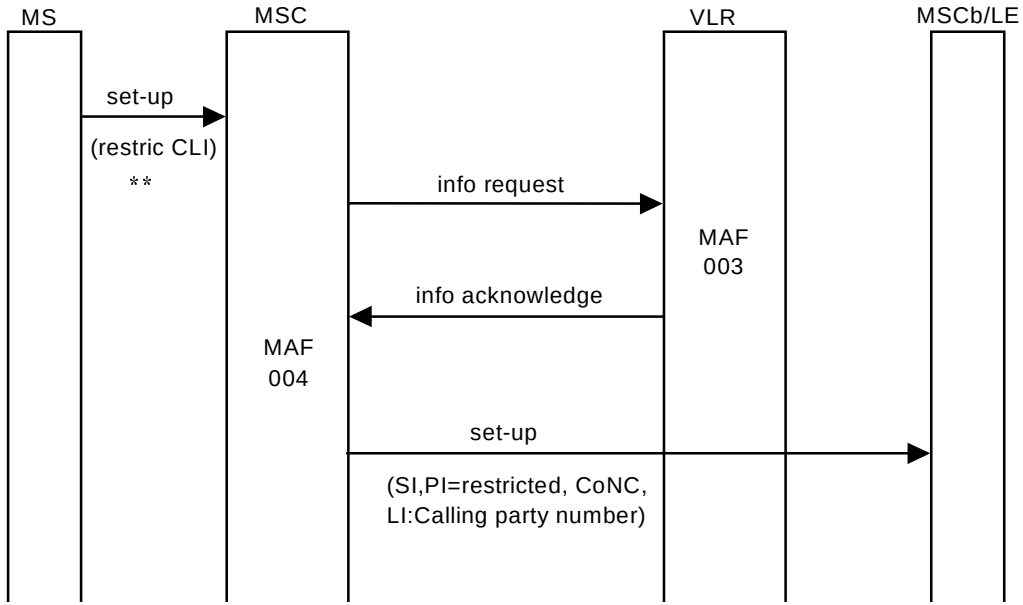
Figure 2.87: Information flow for allowing presentation of the CLI when CLIR is provisioned in temporary mode with default value "presentation restricted"



NOTE: **: A subaddress may be received from the MS
SI: screening indicator
PI: presentation indicator
LI: line identity

Figure 2.98: Information flow for calling line identification restriction in temporary mode with default value "presentation allowed"


MS
MSC
VLR
MSCb/LE
set-up
(restrict CLI)
**
info request
MAF
003
info acknowledge
MAF
004
set-up
(SI, PI=restricted, LI)


MS
MSC
VLR
MSCb/LE
set-up
(restric CLI)
**
info request
MAF
003
info acknowledge
MAF
004
set-up
(SI,PI=restricted, CoNC,
LI:Calling party number)

NOTE: **: A subaddress may be received from the MS
SI: screening indicator
PI: presentation indicator
LI: line identity
CLI: calling line identity

Figure 2.10~~9~~: Information flow for restricting presentation of CLI when CLIR is provisioned in temporary mode with default value "presentation allowed"

2.3 Information stored in the HLR

CLIR may have the following logical states (refer to 3G TS 23.011~~GSM 03.11~~ for an explanation of the notation):

Provisioning State	**Registration State**	**Activation State**	**HLR Induction State**
(Not Provisioned,	Not Applicable,	Not Active,	Not Induced)
(Provisioned,	Not Applicable,	Active and Operative,	Not Induced)

The HLR shall store the logical state of CLIR (which shall be one of the valid states listed above) on a per subscriber basis.

The HLR shall also store the subscription option "presentation mode" on a per subscriber basis.

This parameter takes one of the following values:

- permanent;
- temporary (presentation restricted);
- temporary (presentation allowed).

****** Next Modification ******

3.3 Information stored in the HLR

COLP may have the following logical states (refer to 3G TS 23.011~~GSM 03.11~~ for an explanation of the notation):

Provisioning State	Registration State	Activation State	HLR Induction State
(Not Provisioned,	Not Applicable,	Not Active,	Not Induced)
(Provisioned,	Not Applicable,	Active and Operative,	Not Induced)

The HLR shall store the logical state of COLP (which shall be one of the valid states listed above) on a per subscriber basis.

The HLR shall also store the subscription option "override category" on a per subscriber basis.

This parameter takes one of the following values:

- yes;
- no.

****** Next Modification ******

4.3 Information stored in the HLR

COLR may have the following logical states (refer to 3G TS 23.011~~GSM 03.11~~ for an explanation of the notation):

Provisioning State	Registration State	Activation State	HLR Induction State
(Not Provisioned,	Not Applicable,	Not Active,	Not Induced)
(Provisioned,	Not Applicable,	Active and Operative,	Not Induced)

The HLR shall store the logical state of COLR (which shall be one of the valid states listed above) on a per subscriber basis.

****** Next Modification ******

Annex A:
Mapping of CLI (Informative)

This annex defines the mapping rules of CLI parameters received via the NW-NW interface to CLI parameters to be sent to the MS.

	Information received over the NW-NW interface					**Information sent to the MS**		
	presentation indicator	line identity	additional presentation indicator	additional line identity	Cause of No CLI	presentation indicator	line identity	Cause of No CLI
CLIP not provisioned	*	*	*	*	*	-	-	-
CLIP provisioned without override category	-	-	-	-	-	not available	-	-
	not available	-	-	-	-	not available	-	-
	allowed	digits	-	-	-	allowed	digits of line identity	-
	allowed	digits	+	digits	-	allowed	digits of additional line identity	-
	restricted	digits	*	*	-	restricted	-	-
	restricted	digits	*	*	unavailable	restricted	-	unavailable
	restricted	digits	*	*	reject by user	restricted	-	reject by user
	restricted	digits	*	*	interaction with other service	restricted	-	interaction with other service
	restricted	digits	*	*	payphone	restricted	-	payphone
	restricted by network	digits	-	-	-	not available	-	-
	restricted by network	digits	allowed	digits	-	allowed	digits of additional line identity	-

	Information received over the NW-NW interface					Information sent to the MS		
	presentation indicator	line identity	additional presentation indicator	additional line identity	Cause of No CLI	presentation indicator	line identity	Cause of No CLI
CLIP provisioned with override category	-	-	-	-	-	not available	-	-
	not available	-	-	-	-	not available	-	-
	allowed	digits	-	-	-	allowed	digits of line identity	-
	allowed	digits	+	digits	-	allowed	digits of additional line identity	-
	restricted	digits	-	-	-	restricted	digits of line identity	-
	restricted	digits	+	digits	-	restricted	NOTE 1	-
	restricted	digits	+	digits	unavailable	restricted	NOTE 1	unavailable
	restricted	digits	+	digits	reject by user	restricted	NOTE 1	reject by user
	restricted	digits	+	digits	interaction with other service	restricted	NOTE 1	interaction with other service
	restricted	digits	+	digits	payphone	restricted	NOTE 1	payphone
	restricted	digits	-	-	unavailable	restricted	digits of line identity	unavailable
	restricted	digits	-	-	reject by user	restricted	digits of line identity	reject by user
	restricted	digits	-	-	interaction with other service	restricted	digits of line identity	interaction with other service
	restricted	digits	-	-	payphone	restricted	digits of line identity	payphone
	restricted by network	digits	-	-	-	restricted	digits of line identity	-
	restricted by network	digits	allowed	digits	-	allowed	digits of additional line identity	-

- parameter not present
* parameter absent or present, if present it may have any value
+ parameter present, it may have any value

NOTE 1: Network Option to send either digits of the line identity or digits of additional line identity applies.

3GPP/SMG TSG-CN WG4 Meeting #2
Rotenburg, Germany, 22 May – 26 May 2000

Document N4-000400
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

24.081	CR	001	Current Version:	3.0.0

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

For submission to:	TSG CN #08	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	X	UTRAN / Radio		Core Network	X

Source: N4 **Date:** 2000-06-06

Subject: Cause of no CLI indication.

Work item: TEI

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

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

Reason for change: The correction allows to indicate different reasons due to which the CLI is not presented to the B party.This is a requirement from TTC.

Clauses affected: 0, 0.1, 0.2, 1.1, 2.3

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	23.081, 24.008
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:

3G TS 24.081 V3.0.0 (1999-05)

Technical Specification

3rd Generation Partnership Project; Technical Specification Group Core Network; Line identification supplementary services - Stage 3 (3G TS 24.081 version 3.0.0)

Reference
DTS/TSGN-0024081U

Keywords
3GPP, CN

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Contents

Foreword

This Technical Specification has been produced by the 3GPP.

This TS specifies the procedures used at the radio interface for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of line identification supplementary services within the 3GPP system.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version 3.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the specification;

0 Scope

The present document specifies the procedures used at the radio interface for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of line identification supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010 GSM 04.10 the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 GSM 04.80 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.040 GSM 02.04 and TS 22.08x GSM 02.8x and TS 22.09x-series GSM 02.9x series. TS 22.081 GSM 02.81 is related specially to line identification supplementary services.

Technical realization of supplementary services is described in TS 23.011 GSM 03.11 and TS 23.08x GSM 03.8x and TS 23.09x-series GSM 03.9x series. TS 23.081 GSM 03.81 is related specially to line identification supplementary services.

The procedures for Call Control, Mobility Management and Radio Resource management at the layer 3 radio interface are defined in TS 24.007 GSM 04.07 , and GSM 04.08 and 3G TS 24.008.

The following supplementary services belong to the line identification supplementary services and are described in the present document:

- Calling line identification presentation (CLIP) (clause 1);
- Calling line identification restriction (CLIR) (clause 2);
- Connected line identification presentation (COLP) (clause 3);
- Connected line identification restriction (COLR) (clause 4).

0.1 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.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] GSM 01.02: "Digital cellular telecommunications system (Phase 2+); General description of a GSM Public Land Mobile Network (PLMN)".

[2] TS 22.004 GSM 02.04: " Digital cellular telecommunications system (Phase 2+); General on supplementary services".

[3] TS 22.081 GSM 02.81: " Digital cellular telecommunications system (Phase 2+); Line identification supplementary services - Stage 1".

[4] TS 22.082 GSM 02.82: " Digital cellular telecommunications system (Phase 2+); Call Forwarding (CF) supplementary services - Stage 1".

[5] TS 22.083 GSM 02.83: " Digital cellular telecommunications system (Phase 2+); Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 1".

[6] TS 22.084GSM 02.84: "Digital cellular telecommunications system (Phase 2+); MultiParty (MPTY) supplementary services - Stage 1".

[7] TS 22.085GSM 02.85: "Digital cellular telecommunications system (Phase 2+); Closed User Group (CUG) supplementary services - Stage 1".

[8] TS 22.086GSM 02.86: "Digital cellular telecommunications system (Phase 2+); Advice of Charge (AoC) supplementary services - Stage 1".

[9] TS 22.088GSM 02.88: "Digital cellular telecommunications system (Phase 2+); Call Barring (CB) supplementary services - Stage 1".

[10] TS 22.090GSM 02.90: "Digital cellular telecommunications system (Phase 2+); Unstructured Supplementary Service Data (USSD) - Stage 1".

[11] TS 23.011GSM 03.11: "Digital cellular telecommunications system (Phase 2+); Technical realization of supplementary services".

[12] TS 23.081GSM 03.81: "Digital cellular telecommunications system (Phase 2+); Line identification supplementary services - Stage 2".

[13] TS 23.082GSM 03.82: "Digital cellular telecommunications system (Phase 2+); Call Forwarding (CF) supplementary services - Stage 2".

[14] TS 23.083GSM 03.83: "Digital cellular telecommunications system (Phase 2+); Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 2".

[15] TS 23.084GSM 03.84: "Digital cellular telecommunications system (Phase 2+); MultiParty (MPTY) supplementary services - Stage 2".

[16] TS 23.085GSM 03.85: "Digital cellular telecommunications system (Phase 2+); Closed User Group (CUG) supplementary services - Stage 2".

[17] TS 23.086GSM 03.86: "Digital cellular telecommunications system (Phase 2+); Advice of Charge (AoC) supplementary services - Stage 2".

[18] TS 23.088GSM 03.88: "Digital cellular telecommunications system (Phase 2+); Call Barring (CB) supplementary services - Stage 2".

[19] TS 23.090GSM 03.90: "Digital cellular telecommunications system (Phase 2+); Unstructured supplementary services operation - Stage 2".

[20] TS 24.007GSM 04.07: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface signalling layer 3; General aspects".

[21] TS 24.008GSM 04.08: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification".

[22] TS 24.010GSM 04.10: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3; Supplementary services specification; General aspects".

[23] [23] TS 24.080GSM 04.80: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 supplementary services specification; Formats and coding".

3G TS 24.008: " Mobile radio interface layer 3 specification ;Core Network Protocols - Stage 3".

0.2 Abbreviations

Abbreviations used in the present document are listed in GSM 01.04 and 3G TR 21.905..

1 Calling Line Identification Presentation (CLIP)

1.1 Normal operation

The calling line identity consists of a calling party BCD number and optionally, a calling party subaddress and/or a cause of no CLI.

The calling party BCD number information element is made up of a number of information units as indicated in GSM 04.083G TS 24.008.

In addition to or instead of the calling party's digits, the subscriber may be given the following information:

- screening indicator;
- presentation indicator.

Indicator values are given in GSM 04.083G TS 24.008.

The calling party subaddress information element is made up of a number of information units as indicated in GSM 04.083G TS 24.008.

The cause of no CLI information element is made up of a detailed cause of no CLIid as indicated in 3G TS 24.008.

A called mobile subscriber subscribing to calling line identification presentation service receives the call with the information indicated above, see figure 1.1.

MSb Network

SETUP

<----------

Calling party BCD number (screening indicator, presentation indicator, calling party digits),
Calling party subaddress, Cause of No CLI

NOTE: The calling party subaddress is passed to MSb if it is received from the originating network.

Figure 1.1: Notification by the network to the called mobile subscriber

When the calling line identity is not available, the presentation indicator which is given to the called mobile subscriber takes the value of "number not available".

1.2 Interrogation

Status Check

The mobile subscriber can request the status of the supplementary service and be informed if the service is provided to him.

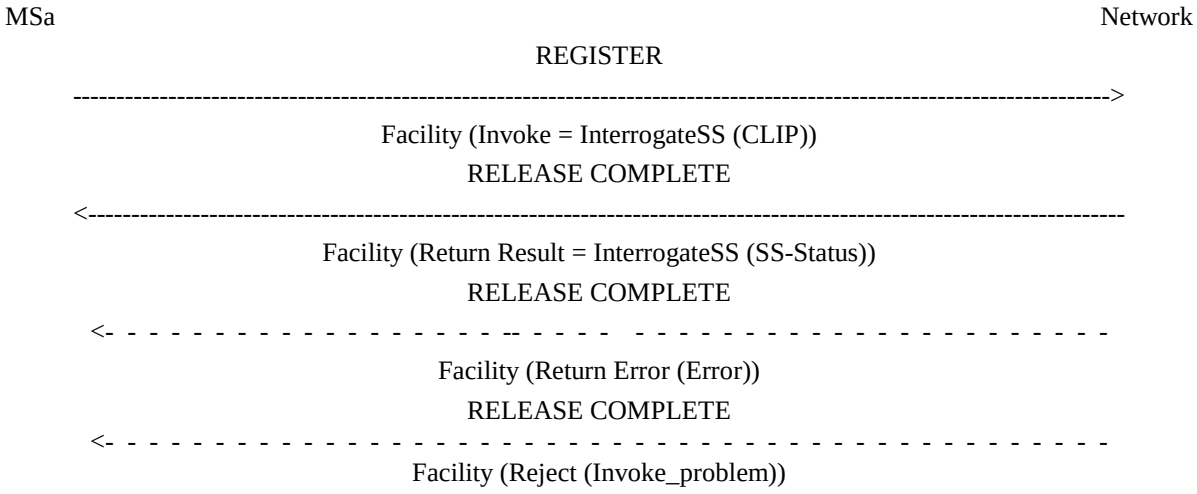


Figure 1.2: Interrogation of calling line identification presentation

1.3 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service calling line identification presentation are not applicable.

2 Calling Line Identification Restriction (CLIR)

2.1 Normal Operation

When calling line identification restriction is applicable, the originating network provides the destination network with a notification that the calling party's ISDN number, with possible additional address information, is not allowed to be presented to the called party.

If the called mobile user subscribes to calling line identification presentation and the calling party has calling line identification restriction applied, the called mobile party shall receive the presentation indicator showing "presentation restricted" in the calling party BCD field of the SETUP message, see figure 1.1. In this case, the calling party's number (digits) will not be sent towards the called subscriber.

2.2 Requesting presentation of CLI

When the CLIR presentation mode is temporary (presentation restricted), it is possible for the subscriber to present his CLI on a per call basis. The MS shall send a CLIR suppression information element to the network.

If the subscriber tries to override CLIR (i.e. requests that the CLI is displayed), when he has subscribed to permanent mode a NotifySS shall be sent to the MS in order to inform that the override has not been performed and the call set-up shall continue.

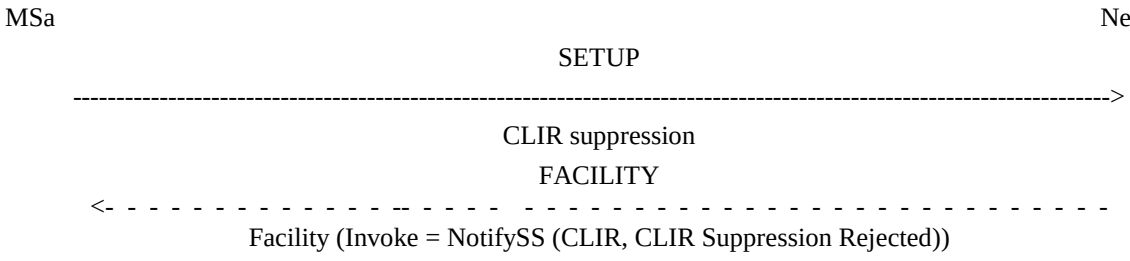


Figure 2.1: Requesting presentation of CLI

2.3 Requesting restriction of CLI presentation

When the CLIR presentation mode is temporary (presentation allowed), it is possible for the subscriber to restrict the CLI on a per call basis. The MS shall send a CLIR invocation information element to the network.

If the subscriber has not subscribed to CLIR and tries to invoke CLIR (i.e. requests that the CLI is not displayed), the SETUP shall be rejected. The MS and the network shall act in accordance with ~~GSM 04.08~~3G TS 24.008 ~~-~~network initiated call clearing procedure, see figure 2.2.

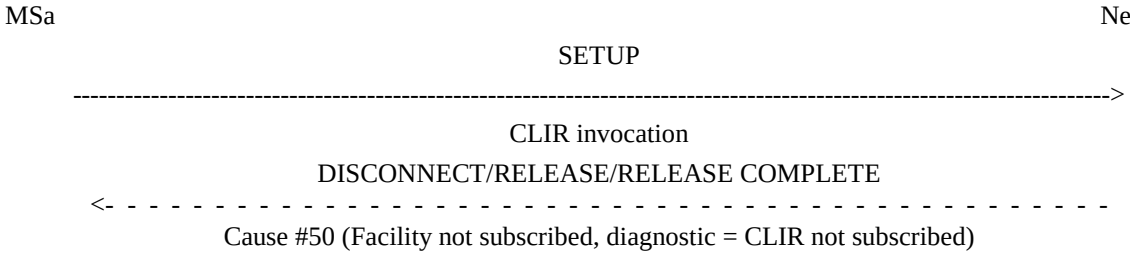


Figure 2.2: Requesting restriction of CLI presentation

2.4 Interrogation

Data request

The mobile subscriber can request the data of the supplementary service.

If the service is not provisioned the network shall sent a return result including the SS-Status parameter.

If the service is provisioned the network shall sent a return result including the SS-Status and the CLI Restriction Option parameters.

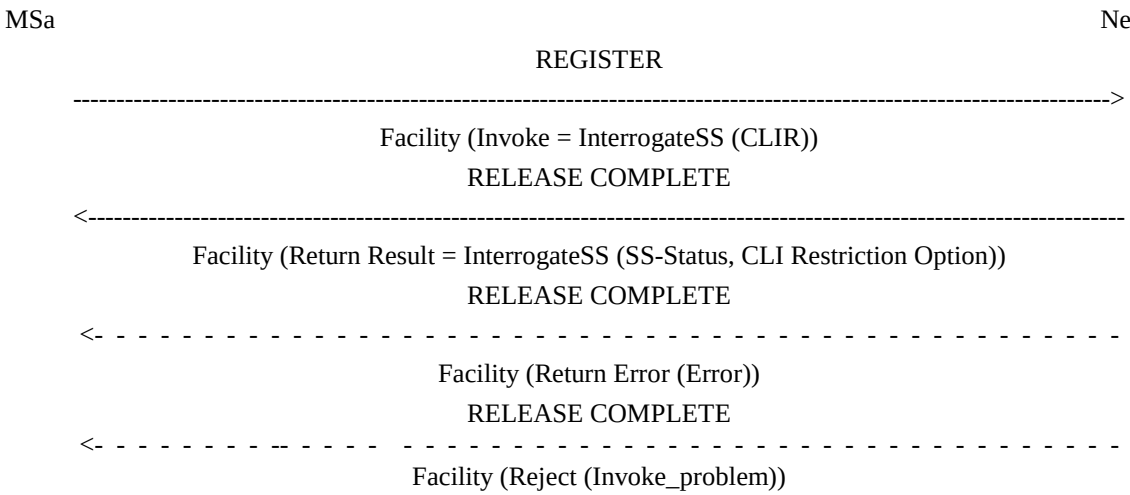


Figure 2.3: Interrogation of calling line identification restriction

2.5 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service calling line identification restriction are not applicable.

3 Connected Line Identification Presentation (COLP)

3.1 Normal operation

The connected line identity consists of a connected number and optionally, a connected subaddress.

The connected number is made up of a number of information units as indicated in TS 24.008GSM 04.08.

In addition to or instead of the connected number digits, the subscriber may be given the following information:

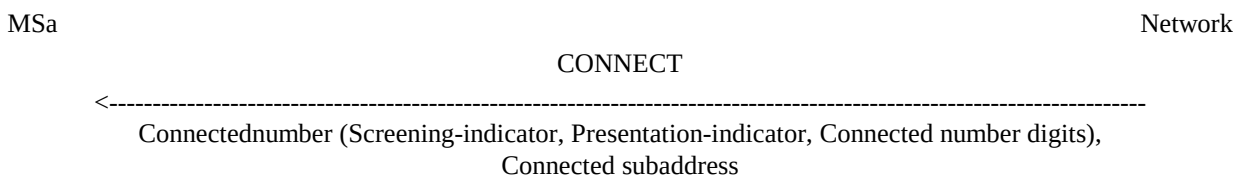
- screening indicator;
- presentation indicator.

Indicator values are given in TS 24.008GSM 04.08.

In the call set-up phase the calling mobile subscriber receives the information at the end of the call set-up.

The connected subaddress information element is made up of a number of information units as indicated in TS 24.008GSM 04.08.

A calling mobile subscriber subscribing to connected line identification presentation receives a message with the information indicated above, see figure 3.1.



NOTE: The connected subaddress is passed to MSa if it is received from the terminating network.

Figure 3.1: Notification by the network to the calling mobile subscriber

When the connected line identity is not available (due to interworking or presentation restrictions), appropriate indication information is given to the calling mobile subscriber.

3.2 Interrogation

Status Check

The mobile subscriber can request the status of the supplementary service and be informed if the service is provided to him.

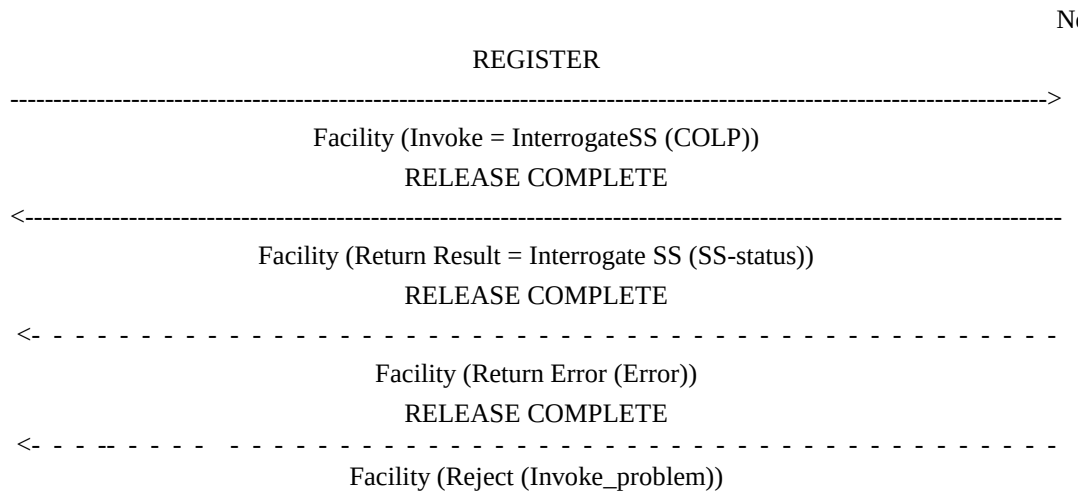


Figure 3.2: Interrogation of connected line identification presentation

3.3 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service connected line identification presentation is not applicable.

4 Connected Line Identification Restriction (COLR)

4.1 Normal operation

When connected line identification restriction is applicable the destination network provides the originating network with a notification that the connected party's ISDN number, with possible additional address information, is not allowed to be presented to the calling party.

If the calling mobile user subscribes to connected line identification presentation and the connected party has connected line identification restriction applied, the calling mobile party shall receive the presentation indicator showing "presentation restricted", see figure 3.1. In this case, the connected number will not be sent towards the calling subscriber.

4.2 Interrogation

Status Check

The mobile subscriber can request the status of the supplementary service and be informed if the service is provided to him.

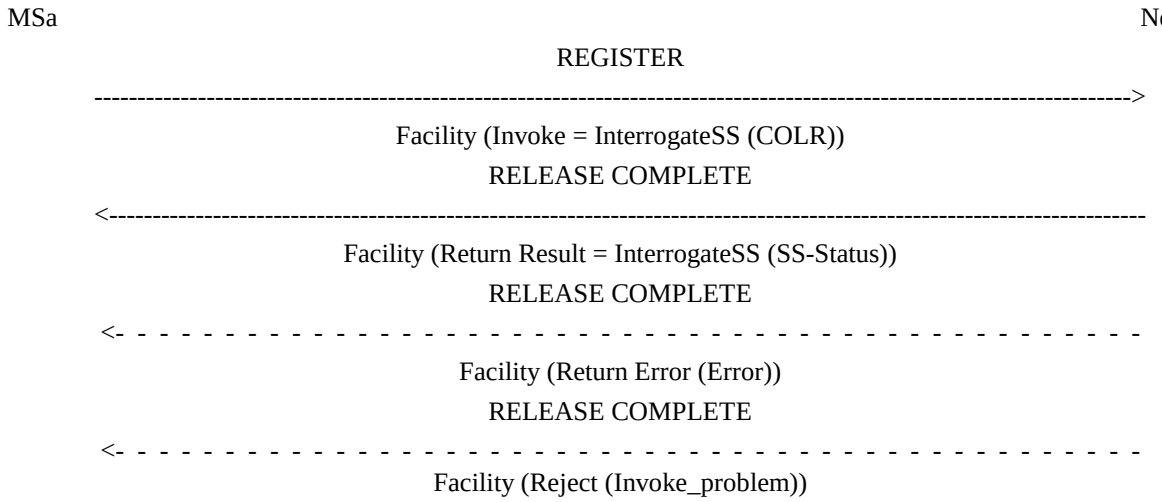


Figure 4.1: Interrogation of connected line identification restriction

4.3 Activation, deactivation, registration and erasure

Activation, deactivation, registration and erasure of the supplementary service connected line identification restriction are not applicable.

Annex A:
Change history

Change history						
TSG CN#	**Spec**	**Version**	**CR**	**<Phase>**	**New Version**	**Subject/Comment**
Apr 1999	GSM 04.81	6.0.0				Transferred to 3GPP CN1
CN#03	24.081				3.0.0	Approved at CN#03

History

Document history		
V3.0.0	May 1999	Approved at TSGN #3. Under TSG TSG CN Change Control.

3GPP TSG CN WG4 Meeting #2
Rotenburg, Germany, 22-26 May 2000

***Document* N4-000211**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

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	132	Current Version:	3.4.0

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

For submission to: CN#08	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: (U)SIM [ ] ME [ ] UTRAN / Radio [ ] Core Network [X]
(at least one should be marked with an X)

Source: N4 **Date:** 2000-04-10

Subject: Correction of version handling at dialogue establishment

Work item: TEI

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

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

Reason for change:
Subclause 18.2.4.1 currently indicates that a MAP-CLOSE Confirm primitive is sent in response to the MAP-OPEN request when the dialogue is refused. A MAP-CLOSE, however, is not sent when the dialogue is to be refused, a MAP-OPEN Confirm is sent with the result set to "Dialogue_refused" (refer to Macro Receive_Open_Ind).

In addition, this CR adds text to support version 4 ACs to the dialogue establishment.

Clauses affected: 18.2.4

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

18.2.4 Version handling at dialogue establishment

Unless explicitly indicated in subsequent subclauses, the following principles regarding version handling procedures at dialogue establishment are applied by the MAP-user:

18.2.4.1 Behaviour at the initiating side

When a MAP user signalling procedure has to be executed, the MAP-user issues a MAP-OPEN request primitive with an appropriate application-context-name. If several names are supported (i.e. several versions) a suitable one is selected using the procedures described in clause 5.

If version 2 is selected and a MAP-~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one context. This is informally represented in the SDL diagrams by a task symbol indicating "Perform Vr procedure".

If version 3 is selected and a MAP-~~CLOSE~~ OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one or version two context. This is informally represented in the SDL diagrams by task symbols indicating "Perform Vr procedure".

If version 4 is selected and a MAP-OPEN Confirm primitive in response to the MAP-OPEN request is received with a result parameter set to "refused" and a diagnostic parameter indicating "application-context-not-supported" or "potential incompatibility problem", the MAP-User issues a new MAP-OPEN request primitive with the equivalent version one, version two or version three context. This is informally represented in the SDL diagrams by task symbols indicating "Perform Vr procedure".

18.2.4.2 Behaviour at the responding side

On receipt of a MAP-OPEN indication primitive, the MAP-User analyses the application-context-name.

If it refers to a version one context, the associated V1 procedure is executed; if it refers to a version two context, the associated V2 procedure is executed~~,~~; if it refers to a version three context, the associated V3 procedure is executed, otherwise the associated ~~V3~~ V4 procedure is executed.

3GPP TSG CN WG 4 Meeting #2
Rotenburg, Germany, 22-26 May 2000

Document N4-000357
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

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	133r1	Current Version:	3.4.0

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

For submission to:	CN#08	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: N4 **Date:** 2000-04-20

Subject: Various corrections and/or cleanup to 29.002

Work item: TEI

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

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

Reason for change: There are still many small errors in 29.002. Many of these errors have been around for many years. This CR attempts to fix a few of these errors.

Clauses affected: 7.6.1.4, 8.1.2.2, 8.2.2.3, 8.11.1.1, 8.11.2.1, 21.2.5

Other specs Affected:

Other 3G core specifications		→ List of CRs:
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:

Details of changes:

Subclause 7.6.1.4 User Error, bullet i): The formatting for this section is wrong making it impossible to distinguish the detailed error codes from the others.

Subclause 8.1.2.2-3: MSC Address changed to MSC number to match the definition given in 7.6.2. This is consistent with the use of this parameter in other parts of the document.

Subclause 8.11.1.1 and 8.11.2.1: It was not stated whether these services were confirmed or unconfirmed. A sentence was added to clarify that these were confirmed services.

Subclause 21.2.5: The text was corrected to match the corresponding SDL.


help.doc

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

Next Change

7.6.1.4 User error

(…)

i) ~~i)~~ Location services problem:

- Unauthorized Requesting Network
- Unauthorized LCS Client with detailed reasons as follows:
  - Unauthorized Privacy Class
  - Unauthorized Call Unrelated External Client
  - Unauthorized Call Related External Client
- Privacy override not applicable
- Position method failure with detailed reasons as follows:
  - Congestion
  - Insufficient resources
  - Insufficient Measurement Data
  - Inconsistent Measurement Data
  - Location procedure not completed
  - QoS not attainable
- Unknown or unreachable LCS Client

~~- Unauthorized Requesting Network~~

~~- Unauthorized LCS Client with detailed reason as follows~~

~~- Unauthorzied Privacy Class~~

~~- Unauthoized Call Unrelated External Client~~

~~- Unauthorized Call Related External Client~~

~~- Privacy override not applicable~~

~~- Position method failure with detailed reason as follows:~~

~~- Congestion~~

~~- Insufficient resources~~

~~- Insufficient Measurement Data~~

~~- Inconsistent Measurement Data~~

~~- Location procedure not completed~~

~~- Location procedure not supported by target MS~~

~~- QoS not attainable~~

~~- Unknown or unreachable LCS Client~~

Next Change

8.1.2.2 Service primitives

Parameter name	Request	Indication	Response	Confirm
Invoke Id	M	M(=)	M(=)	M(=)
IMSI	M	M(=)		
MSC Address	M	M(=)		
VLR number	M	M(=)		
LMSI	U	C(=)		
Supported CAMEL Phases	C	C(=)		
SoLSA Support Indicator	C	C(=)		
IST Support Indicator	C	C(=)		
Super-Charger Supported in Serving Network Entity	C	C(=)		
Long FTN Supported	C	C(=)		
HLR number			C	C(=)
User error			C	C(=)
Provider error				O

Table 8.1/2: MAP_UPDATE_LOCATION

8.1.2.3 Parameter definitions and use

Invoke Id

See definition in subclause 7.6.1.

IMSI

See definition in subclause 7.6.2.

MSC Address

See definition for MSC number in subclause 7.6.2. The MSC address is used for short message delivery only and for each incoming call set-up attempt the MSRN will be requested from the VLR.

VLR number

See definition in subclause 7.6.2.

(…)

Next Change

8.11.1 MAP-ANY-TIME-INTERROGATION service

8.11.1.1 Definition

This service is used by the gsmSCF, to request information (e.g. subscriber state and location) from the HLR or the GMLC at any time.

When this service is used to the HLR, the subscriber state or location may be requested.
When this service is used to the GMLC, only the location may be requested.

The MAP-ANY-TIME-INTERROGATION service is a confirmed service using the service primitives defined in table 8.11/1.

8.11.1.2 Service primitives

Table 8.11/1: Any_Time_Interrogation

Parameter name	Request	Indication	Response	Confirm
Invoke id	M	M(=)	M(=)	M(=)
Requested Info	M	M(=)		
gsmSCF-Address	M	M(=)		
IMSI	C	C(=)		
MSISDN	C	C(=)		
Location Information			C	C(=)
Subscriber State			C	C(=)
User error			C	C(=)
Provider error				O

Next Change

8.11.2 MAP-PROVIDE-SUBSCRIBER-Info service

8.11.2.1 Definition

This service is used to request information (e.g. subscriber state and location) from the VLR at any time.

The MAP-PROVIDE-SUBSCRIBER-Info service is a confirmed service using the primitives defined in table 8.11/2.

8.11.2.2 Service primitives

Table 8.11/2: Provide_Subscriber_Information

Parameter name	Request	Indication	Response	Confirm
Invoke id	M	M(=)	M(=)	M(=)
Requested Info	M	M(=)		
IMSI	M	M(=)		
LMSI	U	O		
Location Information			C	C(=)
Subscriber State			C	C(=)
User error			C	C(=)
Provider error				O

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Document N4-000217
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CHANGE REQUEST

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29.002	CR	134	Current Version:	3.4.0

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

For submission to: CN#08	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: N4 **Date:** 2000-05-08

Subject: Correction of errors in Figure 25.1/1: Macro Receive_Open_Ind

Work item: TEI

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

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

Reason for change: The SDL in Figure 25.1/1 contains an error that would cause serious problems if not corrected. The text describing the macro is correct, but the SDL is supposed to take precedence over the text.

Clauses affected: 25.1.2

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

help.doc

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

25.1.1 Macro Receive_Open_Ind

This macro is used by a MAP service-user procedure when a peer entity requests opening of a dialogue.

If the application context received in the MAP-OPEN indication primitive indicates a context name of the MAP version one context set, the macro takes the Vr exit..

If an application-context different from version 1 is received, the presence of MAP_OPEN information is checked. If no MAP_OPEN information has been received, the MAP_OPEN response with:

- Result set to Dialogue Accepted; and
- Application Context Name set to the received value,

is returned

If the received version (Vr) is the one described in this version of MAP, the macro takes the OK exit, otherwise it takes the Vr exit..

If MAP_OPEN information is received, the macro "CHECK_REFERENCE" is called in order to check whether the received values for Destination Reference and Originating Reference correspond with the requirements of the received application-context-name. The outcome of this check is an error, the MAP_OPEN response with:

- Result set to Dialogue Refused;
- Refuse Reason set to Invalid Destination Reference or Invalid Originating Reference;
- Application Context Name set to the highest version supported,

is returned and the macro takes the error exit.

If the data values received for Destination Reference and Originating Reference are accepted for the associated application-context-name it is checked whether the Destination Reference is known if this check is required by the process that calls the macro.

If the Destination Reference (e.g. a subscribers IMSI) is unknown, the MAP_OPEN response with

- Result set to Dialogue Refused;
- Refuse Reason set to Invalid Destination Reference;
- Application Context Name set to the highest version supported,

is returned and the macro takes the error exit.

Else, if the Destination Reference is accepted or if no check is required, the MAP_OPEN response with

- Result set to Dialogue Accepted; and
- Application Context Name set to the received value,

is returned and

If the received version (Vr) is the one described in this version of MAP, the macro takes the OK exit, otherwise it takes the Vr exit.

25.1.2 Macro Receive_Open_Cnf

This macro is used by a user procedure after it requested opening of a dialogue towards a peer entity.

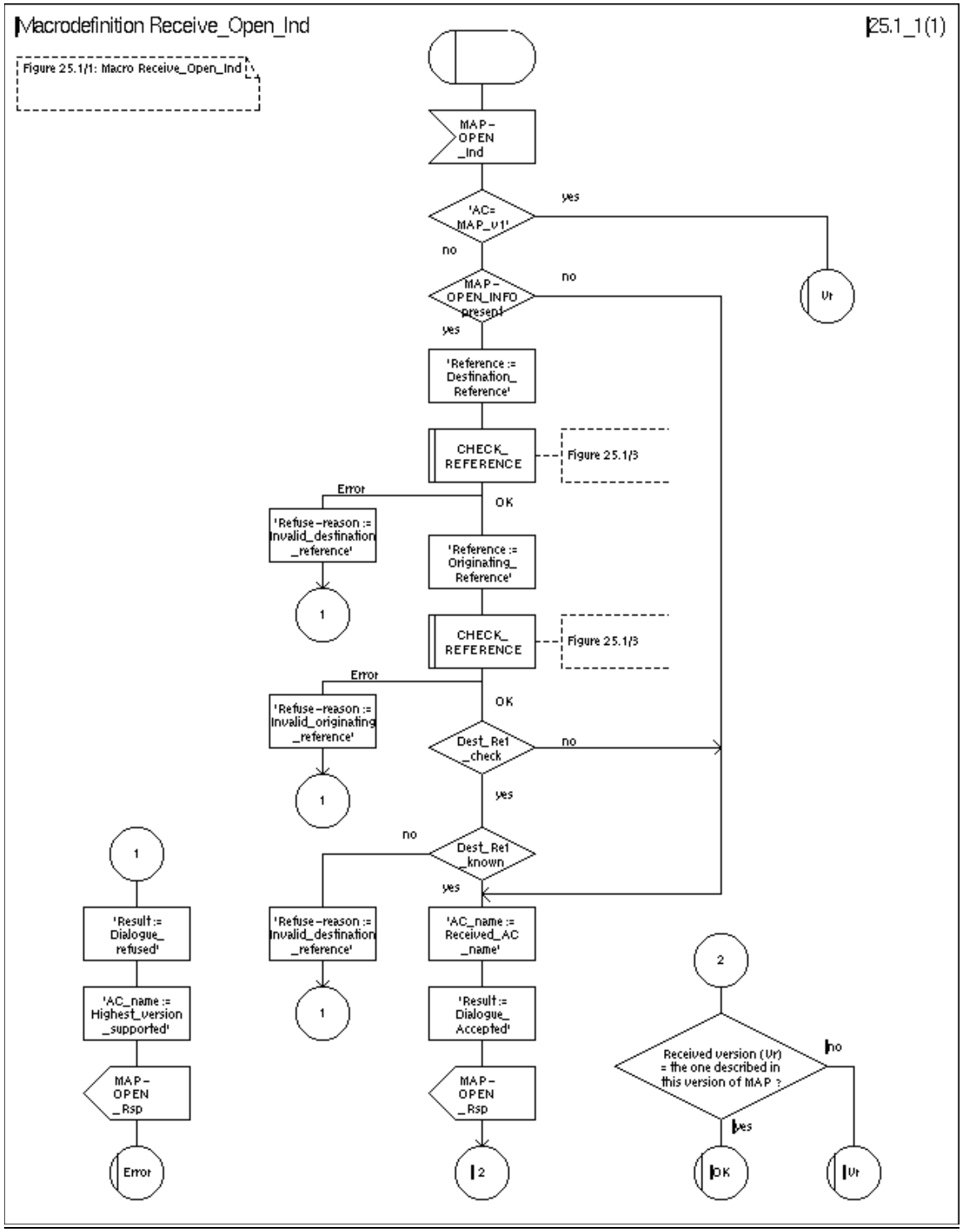
On receipt of a MAP_OPEN Confirmation with a "Result" parameter indicating "Dialogue Accepted", the macro takes the OK exit.

If the "Result" parameter indicates "Dialogue Refused", the "Refuse-reason" parameter is examined. If the "Refuse-reason" parameter indicates "Potential Version Incompatibility", the macro terminates in a way that causes restart of the dialogue by using the version 1 protocol.

If the "Refuse-reason" parameter indicates "Application Context Not Supported" and if the received Application Context Name indicates "Version Vr" (Vr < Vn), the macro terminates in a way that causes restart of the dialogue by using the version Vr protocol. Otherwise, the macro takes the Error exit.

If the "Refuse-reason" parameter indicates neither "Potential Version Incompatibility" nor "Application Context Not Supported", the macro takes the Error exit.

If a MAP_U_ABORT, a MAP_P_ABORT or a MAP_NOTICE Indication is received, the macro takes the Error exit.



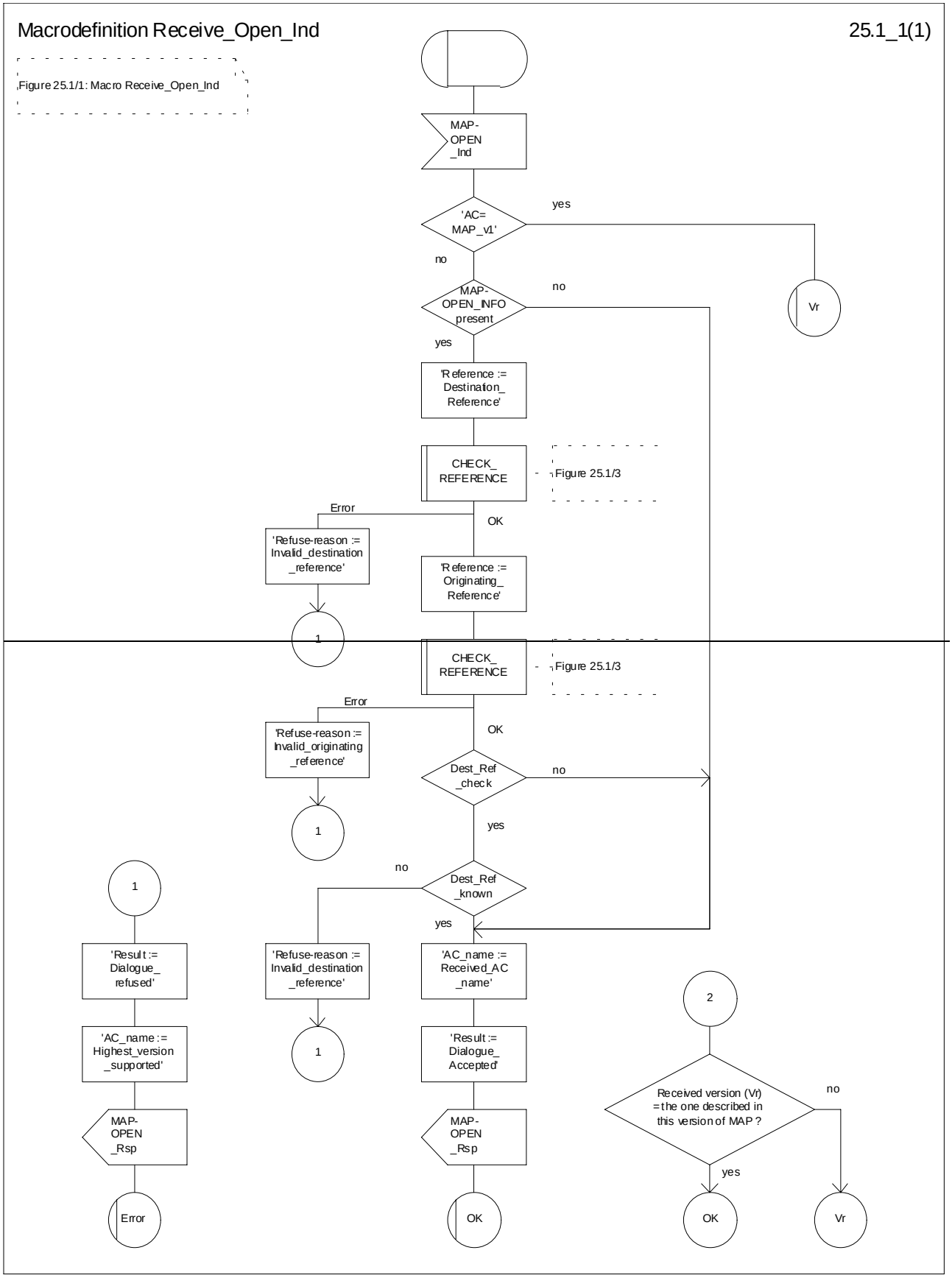


Figure 25.1/1: Macro Receive_Open_Ind

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Rotenburg a.d Fulda, Germany, 22-26 May 2000

Document N4-000374
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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	149	Current Version:	3.4.0

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

For submission to:	CN#08	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: N4 **Date:** 25.05.2000

Subject: Correction to the description of MAP-MO-Forward-Short-Message service

Work item: TEI

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

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

Reason for change: Mirror CR to 09.02-A301

Clauses affected: 12.2.1

Other specs affected:

Other 3G core specifications		→ List of CRs:
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:

help.doc

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

12.2 MAP-MO-FORWARD-SHORT-MESSAGE service

12.2.1 Definition

This service is used between the serving MSC or the SGSN and the ~~gateway~~ SMS Interworking MSC to forward mobile originated short messages.

The MAP-MO-FORWARD-SHORT-MESSAGE service is a confirmed service using the service primitives given in table 12.2/1.

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Charleston, USA, 27-31 March 2000

Document N4-000096
e.g. for 3GPP use the format TP-99xxx
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CHANGE REQUEST

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

29.060	**CR**	**086r1**	Current Version:	3.4.0

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

For submission to: CN#08 *list expected approval meeting # here ↑*	for approval	X	strategic		*(for SMG use only)*
	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: N4 **Date:** 28 March 2000

Subject: Encoding of spare IMSI Digits

Work item: TEI

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

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

Reason for change:

Category C1:

At the Kista meeting a change request was approved that modified the IMSI IE to allow 3 digit MNCs by including a reference to TS 24.008 but in the process accidentally removed the encoding of unused IMSI digits. The encoding of unused IMSI digits is not provided in TS 24.008 since the IMSI is defined as variable length whereas in TS 29.060 the IMSI IE is fixed length parameter.

Therefore, this change request proposes to re-introduce the encoding of the unused IMSI digits.

Clauses affected: 7.7.2

Other specs affected:

Other 3G core specifications		→ List of CRs:	
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:

7.7.2 International Mobile Subscriber Identity (IMSI)

The IMSI shall be the subscriber identity of the MS. The IMSI is defined in TS 23.003.

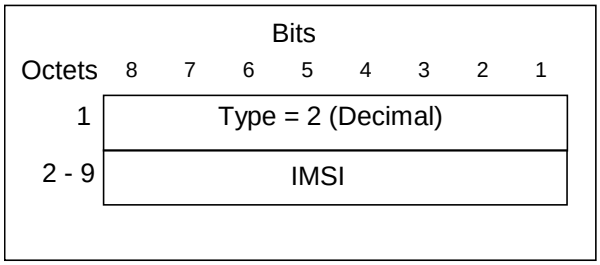

Figure 10: IMSI information element

The encoding of the IMSI information element is defined in TS 24.008. IMSI digits that are not used shall be coded as binary "1 1 1 1".

3GPP TSG-CN WG4 Meeting #1
Charleston, USA, 27-31 March 2000

Document N4-000034
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

29.060	CR	088	Current Version:	3.4.0

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

For submission to:	CN#08	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: N4 **Date:** March 21st 2000

Subject: Possible cause codes for Relocation Cancel Response

Work item: TEI

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

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

Reason for change: Currently the list of possible cause values for the Relocation Cancel Response message only contains one value: 'Request Accepted'. A number of reject cause codes needs to be added.

Clauses affected:

Other specs affected:

Other 3G core specifications		→ List of CRs:	
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:

7.5.10 Relocation Cancel Response

The Relocation Cancel Response message is sent from the new SGSN to the old SGSN when the relocation procedure has been cancelled in the new SGSN. This message is used as the response to the Relocation Cancel Request message.

Possible Cause values is:

- 'Request Accepted'
- 'IMSI not known'
- 'Mandatory IE incorrect'
- 'Mandatory IE missing'
- 'Optional IE incorrect'
- 'Invalid message format'
- 'Version not supported'

The optional Private Extension contains vendor or operator specific information.

Table 36: Information elements in a Relocation Cancel Response

Information element	Presence requirement	Reference
Cause	Mandatory	7.7.1
Private Extension	Optional	7.7.26