3GPP TSG-CT Meeting #28
Quebec, 1-3 June 2005

CP-050139

Agenda Item: 9.24

Source: CT6

Title: Rel-6 CRs and mirror CRs

Document for: Approval

This document contains the following change requests that are agreed by 3GPP TSG CT WG6 and forwarded to 3GPP TSG CT plenary for approval:

Table of TEI6 CRs

CT doc	CT6 Doc	Spec	CR	Rev	Rel	Title	Source	Cat	WI	Agenda	Status
CP-050139	C6-050342	31.102	283		Rel-6	Clarification of the use of SPN	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050369	31.102	271		Rel-6	Essential correction of the 'hidden key' coding	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050370	31.102	272		Rel-7	Essential correction of the 'hidden key' coding	CT6	A	TEI6	11.3.1	Agreed
CP-050139	C6-050371	31.102	284		Rel-6	Added EF_ARR under DF_TELECOM	MCC	F	TEI6	11.3.1	Agreed
CP-050139	C6-050372	31.102	285		Rel-7	Added EF_ARR under DF_TELECOM	MCC	A	TEI6	11.3.1	Agreed
CP-050139	C6-050373	31.102	279		Rel-6	Modifications regarding WLAN	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050374	31.102	280		Rel-7	Modifications regarding WLAN	CT6	A	TEI6	11.3.1	Agreed
CP-050139	C6-050375	31.102	281		Rel-6	Alignment of MBMS procedures with TS 33.246	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050376	31.102	282		Rel-7	Alignment of MBMS procedures with TS 33.246	CT6	A	TEI6	11.3.1	Agreed
CP-050139	C6-050394	31.121	068		Rel-6	Introduction of BCD number/ SSC content extension tests	CT6	B	TEI6	14.1.1	Agreed
CP-050139	C6-050396	31.121	072		Rel-6	Introduction of ACL tests	CT6	B	TEI6	14.1.1	Agreed
CP-050139	C6-050403	31.102	286		Rel-6	Number of stored MSKs	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050404	31.102	287		Rel-7	Number of stored MSKs	CT6	A	TEI6	11.3.1	Agreed
CP-050139	C6-050405	31.102	269	1	Rel-6	Clarification on ADM access condition	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050422	31.130	010		Rel-6	Align paragraph numbering between 31.130 and TS 102 241	CT6	F	TEI6	12.3.1	Agreed
CP-050139	C6-050423	31.130	012		Rel-6	Delete version and author info from the Java source code	CT6	F	TEI6	12.3.1	Agreed
CP-050139	C6-050436	31.121	073		Rel-6	Introduction of SDN tests	CT6	B	TEI6	14.1.1	Agreed
CP-050139	C6-050443	31.111	143		Rel-6	Correction to incomplete references	CT6	F	TEI6	12.1.1	Agreed
CP-050139	C6-050445	31.130	011		Rel-7	Align paragraph numbering between 31.130 and TS 102 241	CT6	A	TEI6	12.3.1	Agreed
CP-050139	C6-050446	31.130	013		Rel-7	Delete version and author info from the Java source code	CT6	A	TEI6	12.3.1	Agreed
CP-050139	C6-050447	31.116	010		Rel-6	Introduction of an explicit description of the ISIM RFM mechanism	CT6	B	TEI6	13.1	Agreed
CP-050139	C6-050452	31.121	074		Rel-6	Introduction of phonebook selection/ local phonebook handling tests	CT6	B	TEI6	14.1.1	Agreed
CP-050139	C6-050472	31.111	145		Rel-6	Addition of missing values in Proactive commands versus possible Terminal response	CT6	F	TEI6	12.1.1	Agreed
CP-050139	C6-050473	31.111	146		Rel-6	Clarification for SMS PP Data Download	CT6	F	TEI6	12.1.1	Agreed
CP-050139	C6-050478	31.102	289		Rel-7	Essential correction of phonebook support	CT6	A	TEI6	11.3.1	Agreed
CP-050139	C6-050479	31.102	288		Rel-6	Essential correction of phonebook support	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050482	31.102	290		Rel-6	Corrections to eMLPP and AAeM	CT6	F	TEI6	11.3.1	Agreed
CP-050139	C6-050483	31.102	291		Rel-7	Corrections to eMLPP and AAeM	CT6	A	TEI6	11.3.1	Agreed

3GPP TSG CT WG6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

TDoc *C6-050342*
(revised from T3-050081)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **283** ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Clarification of the use of SPN
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	29/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Alignment with SA1 specifications, see LS in C6-050289 / S1-050533. It is not clear which name – the "registered PLMN name" or/and the "service provider name"– shall be displayed in regard to the "display conditions" specified for EF(SPN) by the USIM issuer, i.e. the mobile network operator.
Summary of change:	⌘	Replaced the terms "required" and "not required" in the description of the "Display Condition" by "shall be displayed…" or "shall not be displayed...". Added a table in a note summarizing what is the expected PLMN display.
Consequences if not approved:	⌘	Misalignment with SA1 specifications. Inconsistent implementations across handsets.

Clauses affected:	⌘	4.2.12

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		TS 22.101, see S1-050518
			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	Equivalent CR needed for Rel-7

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.2.12 EF_{SPN} (Service Provider Name)

This EF contains the service provider name and appropriate requirements for the display by the ME.

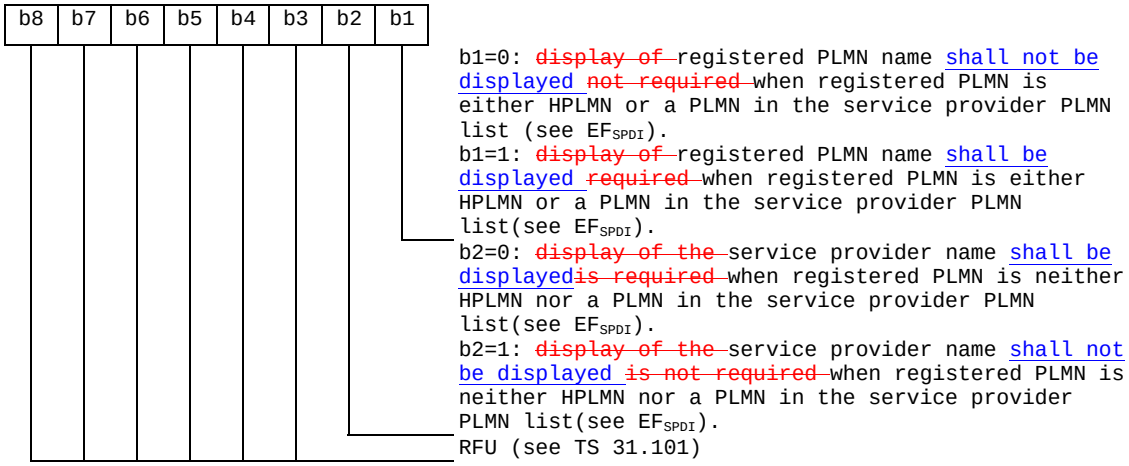
Identifier: '6F46'	Structure: transparent	Optional
File Size: 17 bytes	Update activity: low	

Access Conditions:

READ	ALWAYS
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Display Condition	M	1 byte
2 to 17	Service Provider Name	M	16 bytes

- Display Condition
  Contents: display condition for the service provider name in respect to the registered PLMN (see TS 22.101[24]).
  Coding:



- Service Provider Name
  Contents:
  service provider string

  Coding:
  the string shall use:
  - either the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The string shall be left justified. Unused bytes shall be set to 'FF'.
  - or one of the UCS2 code options defined in the annex of TS 31.101 [11].

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

Tdoc ⌘C6-050369
(revised from C6-050215 and C6-050249)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **271** ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Essential corrections of the phonebook (access to mapped filed & "hidden key" coding)
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	The coding of EF(hiddenkey) is not sufficiently described. A 3G ME shall neither access EF_{ADN} nor EF_{EXT1} nor EF_{CCP1} under MF\$DF_{TELECOM}$, it's already specified for EF_{ADN} but not EF_{EXT1} nor EF_{CCP1}
Summary of change:	⌘	Clarified the order of the digits in EF(hiddenkey) Clarified that a 3G ME shall not access EF_{EXT1} nor EF_{CCP1} under MF\$DF_{TELECOM}$.
Consequences if not approved:	⌘	Critical interoperability problems of the phonebook; for instance some entries entered with one ME would not be accessible with another ME

Clauses affected:	⌘	4.2.42			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	A CR on 31.121 would be desirable
		N: X			
		Y: X	Test specifications		
		N: X	O&M Specifications		
Other comments:	⌘	Equivalent CR needed for further releases			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.2.42 $EF_{Hiddenkey}$ (Key for hidden phone book entries)

This EF contains the hidden key that has to be verified by the ME in order to display the phone book entries that are marked as hidden. The hidden key can consist of 4 to 8 digits.

Identifier: '6FC3'	Structure: transparent	Optional
File size: 4 bytes	Update activity: low	
Access Conditions: READ PIN UPDATE PIN DEACTIVATE ADM ACTIVATE ADM		

Bytes	Description	M/O	Length
1 to 4	Hidden Key	M	4 bytes

- Hidden Key.
  Coding:
  - the hidden key is coded on 4 bytes using BCD coding. The minimum number of digits is 4. Unused digits are padded with 'F'.

NOTE 1: Digits are not swapped, i.e. for instance the key "1234" is coded as '12 34 FF FF'.

NOTE 2: The phone book entries marked as hidden are not scrambled by means of the hidden key. They are stored in plain text in the phone book.

4.5 Contents of EFs at the TELECOM level

The EFs in the Dedicated File $DF_{TELECOM}$ contain service related information.

4.5.1 EF_{ADN} (Abbreviated dialling numbers)

In case of a present GSM application on the UICC the first EF_{ADN} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F3A') to $DF_{TELECOM}$ to ensure backwards compatibility.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{ADN} under $DF_{PHONEBOOK.}$

4.5.2 EF_{EXT1} (Extension1)

In case of a present GSM application on the UICC the first EF_{EXT1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4A') to $DF_{TELECOM}$ to ensure backwards compatibility.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{EXT1} under $DF_{PHONEBOOK.}$

4.5.3 EF_{ECCP} (Extended Capability Configuration Parameter)

In case of a present GSM application on the UICC the first EF_{CCP1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4F') to $DF_{TELECOM}$ to ensure backwards compatibility. There shall not be any EF_{CCP} (with a file-id of '6F3D') under $DF_{TELECOM}$ because otherwise a GSM terminal could create inconsistencies within the phonebook.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{CCP1} under $DF_{PHONEBOOK.}$

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

Tdoc ⌘C6-050370
(equivalent to C6-050369)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **272** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Essential correction of the phonebook (access to mapped filed & "hidden key" coding)
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	27/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	The coding of EF(hiddenkey) is not sufficiently described. A 3G ME shall neither access EF_{ADN} nor EF_{EXT1} nor EF_{CCP1} under $MF\backslash DF_{TELECOM}$, it's already specified for EF_{ADN} but not EF_{EXT1} nor EF_{CCP1}
Summary of change:	⌘	Clarified the order of the digits in EF(hiddenkey) Clarified that a 3G ME shall not access EF_{EXT1} nor EF_{CCP1} under $MF\backslash DF_{TELECOM}$.
Consequences if not approved:	⌘	Critical interoperability problems of the phonebook; for instance some entries entered with one ME would not be accessible with another ME

Clauses affected:	⌘	4.2.42			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	A CR on 31.121 would be desirable
		N: X			
		Y: X	Test specifications		
		N: X	O&M Specifications		
Other comments:	⌘				

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4.2.42 $EF_{Hiddenkey}$ (Key for hidden phone book entries)

This EF contains the hidden key that has to be verified by the ME in order to display the phone book entries that are marked as hidden. The hidden key can consist of 4 to 8 digits.

Identifier: '6FC3'	Structure: transparent	Optional
File size: 4 bytes	Update activity: low	
Access Conditions: READ PIN UPDATE PIN DEACTIVATE ADM ACTIVATE ADM		

Bytes	Description	M/O	Length
1 to 4	Hidden Key	M	4 bytes

- Hidden Key.
  Coding:
  - the hidden key is coded on 4 bytes using BCD coding. The minimum number of digits is 4. Unused digits are padded with 'F'.

NOTE 1: Digits are not swapped, i.e. for instance the key "1234" is coded as '12 34 FF FF'.

NOTE 2: The phone book entries marked as hidden are not scrambled by means of the hidden key. They are stored in plain text in the phone book.

4.5 Contents of EFs at the TELECOM level

The EFs in the Dedicated File $DF_{TELECOM}$ contain service related information.

4.5.1 EF_{ADN} (Abbreviated dialling numbers)

In case of a present GSM application on the UICC the first EF_{ADN} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F3A') to $DF_{TELECOM}$ to ensure backwards compatibility.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{ADN} under $DF_{PHONEBOOK.}$

4.5.2 EF_{EXT1} (Extension1)

In case of a present GSM application on the UICC the first EF_{EXT1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4A') to $DF_{TELECOM}$ to ensure backwards compatibility.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{EXT1} under $DF_{PHONEBOOK.}$

4.5.3 EF_{ECCP} (Extended Capability Configuration Parameter)

In case of a present GSM application on the UICC the first EF_{CCP1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4F') to $DF_{TELECOM}$ to ensure backwards compatibility. There shall not be any EF_{CCP} (with a file-id of '6F3D') under $DF_{TELECOM}$ because otherwise a GSM terminal could create inconsistencies within the phonebook.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{CCP1} under $DF_{PHONEBOOK.}$

3GPP TSG CT WG6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

Tdoc ⌘ C6-050371
Revised C6-050251

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **284** ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Added EF_ARR under DF_TELECOM
Source:	⌘	MCC
Work item code:	⌘	TEI-6
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
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Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	The description of EF_{ARR} (Access Rule Reference) under $DF_{TELECOM}$ is missed in the current specification due to an incorrect CR implementation by the MCC. The description of EF_{ARR} is available in the previous releases (R99 – Rel-5).
Summary of change:	⌘	Added the description of EF_{ARR} (Access Rule Reference) under $DF_{TELECOM}$
Consequences if not approved:	⌘	The description of EF_{ARR} (Access Rule Reference) under $DF_{TELECOM}$ is missed in the specification. If it is not implemented in the specification it could lead to backwards compatibility problems.

Clauses affected:	⌘	4.5.X (added)

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

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downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5 Contents of EFs at the TELECOM level

The EFs in the Dedicated File $DF_{TELECOM}$ contain service related information.

4.5.1 EF_{ADN} (Abbreviated dialling numbers)

In case of a present GSM application on the UICC the first EF_{ADN} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F3A') to $DF_{TELECOM}$ to ensure backwards compatibility.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{ADN} under $DF_{PHONEBOOK}$.

4.5.2 EF_{EXT1} (Extension1)

In case of a present GSM application on the UICC the first EF_{EXT1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4A') to $DF_{TELECOM}$ to ensure backwards compatibility.

4.5.3 EF_{ECCP} (Extended Capability Configuration Parameter)

In case of a present GSM application on the UICC the first EF_{CCP1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4F') to $DF_{TELECOM}$ to ensure backwards compatibility. There shall not be any EF_{CCP} (with a file-id of '6F3D') under $DF_{TELECOM}$ because otherwise a GSM terminal could create inconsistencies within the phonebook.

4.5.4 EF_{SUME} (SetUpMenu Elements)

This File is defined in TS 102 222[39], and has the file identifier '6F54'.

4.5.X EF_{ARR} (Access Rule Reference)

This EF contains the access rules for files located under the $DF_{TELECOM}$ in the UICC. If the security attribute tag '8B' is indicated in the FCP it contains a reference to a record in this file.

Structure of EF_{ARR} at $DF_{Telecom}$-level

Identifier: '6F06'	Structure: Linear fixed	Mandatory
Record length: X bytes	Update activity: low	

Access Conditions:

READ	ALW
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to X	Access Rule TLV data objects	M	X bytes

This EF contains one or more records containing access rule information according to the reference to expanded format as defined in ISO/IEC 7816-4 [20]. Each record represents an access rule. Unused bytes in the record are set to 'FF'.

If the card cannot access EF_{ARR}, any attempt to access a file with access rules indicated in this EF_{ARR} shall not be granted.

3GPP TSG CT WG6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

Tdoc ⌘ C6-050372
Revised C6-050252

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **285** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Added EF_ARR under DF_TELECOM
Source:	⌘	MCC
Work item code:	⌘	TEI-7
Date:	⌘	27/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	The description of EF_{ARR} (Access Rule Reference) under $DF_{TELECOM}$ is missed in the current specification due to an incorrect CR implementation by the MCC. The description of EF_{ARR} is available in the previous releases (R99 – Rel-5).
Summary of change:	⌘	Added the description of EF_{ARR} (Access Rule Reference) under $DF_{TELECOM}$
Consequences if not approved:	⌘	The description of EF_{ARR} (Access Rule Reference) under $DF_{TELECOM}$ is missed in the specification. If it is not implemented in the specification it could lead to backwards compatibility problems.

Clauses affected:	⌘	4.5.X (added)

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5 Contents of EFs at the TELECOM level

The EFs in the Dedicated File $DF_{TELECOM}$ contain service related information.

4.5.1 EF_{ADN} (Abbreviated dialling numbers)

In case of a present GSM application on the UICC the first EF_{ADN} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F3A') to $DF_{TELECOM}$ to ensure backwards compatibility.

A 3G ME shall not access this file. The information is accessible for a 3G ME in EF_{ADN} under $DF_{PHONEBOOK}$.

4.5.2 EF_{EXT1} (Extension1)

In case of a present GSM application on the UICC the first EF_{EXT1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4A') to $DF_{TELECOM}$ to ensure backwards compatibility.

4.5.3 EF_{ECCP} (Extended Capability Configuration Parameter)

In case of a present GSM application on the UICC the first EF_{CCP1} (i.e. reflected by the first record in EF_{PBR}) of the $DF_{PHONEBOOK}$ is mapped (with an identifier equal to '6F4F') to $DF_{TELECOM}$ to ensure backwards compatibility. There shall not be any EF_{CCP} (with a file-id of '6F3D') under $DF_{TELECOM}$ because otherwise a GSM terminal could create inconsistencies within the phonebook.

4.5.4 EF_{SUME} (SetUpMenu Elements)

This File is defined in TS 102 222[39], and has the file identifier '6F54'.

4.5.X EF_{ARR} (Access Rule Reference)

This EF contains the access rules for files located under the $DF_{TELECOM}$ in the UICC. If the security attribute tag '8B' is indicated in the FCP it contains a reference to a record in this file.

Structure of EF_{ARR} at $DF_{Telecom}$-level

Identifier: '6F06'	Structure: Linear fixed	Mandatory
Record length: X bytes	Update activity: low	

Access Conditions:

READ	ALW
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to X	Access Rule TLV data objects	M	X bytes

This EF contains one or more records containing access rule information according to the reference to expanded format as defined in ISO/IEC 7816-4 [20]. Each record represents an access rule. Unused bytes in the record are set to 'FF'.

If the card cannot access EF_{ARR}, any attempt to access a file with access rules indicated in this EF_{ARR} shall not be granted.

3GPP TSG CT WG6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

Tdoc ⌘ C6-050373
Revised C6-050257

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **279** ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Modifications regarding WLAN
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	• The abbreviations regarding WLAN are incomplete • Several references and descriptions of the WLAN files are incomplete. • The mimimum number of PLMN entries in WLAN files should be – regarding TS 24.234 – 10 entries, not as specified in TS 31.102 - 8 entries.
Summary of change:	⌘	• Abbreviations regarding WLAN completed • Added the complete references and completed the description of WLAN files. • Modified minimum number of PLMN entries from 8 to 10
Consequences if not approved:	⌘	The descriptions for WLAN are incomplete. TS 31.102 is inconsistence regarding the requirements specified in TS 23.234.

Clauses affected:	⌘	3.3; 4.4.5; 4.5.1.1; 4.4.5.2; 4.4.5.3; 4.4.5.4; 4.4.5.5; 5.6.1; 5.6.2; 5.6.3.

Other specs Affected:	Y	N		
⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	

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Below is a brief summary:

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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GPP	3rd Generation Partnership Project
AC	Access Condition
ACL	APN Control List
ADF	Application Dedicated File
AID	Application IDentifier
AK	Anonymity key
ALW	ALWays
AMF	Authentication Management Field
AoC	Advice of Charge
APN	Access Point Name
ASN.1	Abstract Syntax Notation One
AuC	Authentication Centre
AUTN	Authentication token
BDN	Barred Dialling Number
BER-TLV	Basic Encoding Rule - TLV
B-TID	Bootstrapping Transaction IDentifier
CCP	Capability Configuration Parameter
CK	Cipher key
CLI	Calling Line Identifier
CNL	Co-operative Network List
CPBCCH	COMPACT Packet BCCH
CS	Circuit switched
DCK	Depersonalisation Control Keys
DF	Dedicated File
DO	Data Object
EF	Elementary File
FCP	File Control Parameters
FFS	For Further Study
GSM	Global System for Mobile communications
HE	Home Environment
ICC	Integrated Circuit Card
ICI	Incoming Call Information
ICT	Incoming Call Timer
ID	IDentifier
IEI	Information Element Identifier
IK	Integrity key
IMSI	International Mobile Subscriber Identity
K	USIM Individual key
K_C	Cryptographic key used by the cipher A5
KSI	Key Set Identifier
LI	Language Indication
LSB	Least Significant Bit
MAC	Message authentication code
MAC-A	MAC used for authentication and key agreement
MAC-I	MAC used for data integrity of signalling messages
MBMS	Multimedia Broadcast/Multicast Service
MCC	Mobile Country Code
MExE	Mobile Execution Environment
MF	Master File
MGV-F	MTK Generation and Validation Function
MIKEY	Multimedia Internet KEYing
MM	Multimedia Message
MMI	Man Machine Interface
MMS	Multimedia Messaging Service
MNC	Mobile Network Code
MODE	Indication packet switched/circuit switched mode
MSB	Most Significant Bit

MSK	MBMS Service Key
MTK	MBMS Traffic Key
MUK	MBMS User Key
NEV	NEVer
NPI	Numbering Plan Identifier
OCI	Outgoing Call Information
OCT	Outgoing Call Timer
PBID	Phonebook Identifier
PIN	Personal Identification Number
PL	Preferred Languages
PS	Packet switched
PS_DO	PIN Status Data Object
RAND	Random challenge
$RAND_{MS}$	Random challenge stored in the USIM
RES	User response
RFU	Reserved for Future Use
RST	Reset
SDN	Service dialling number
SE	Security Environment
SEQs	Sequence number for MGV-F
SEQp	Sequence number for MGV-F stored in the USIM
SFI	Short EF Identifier
SGSN	Serving GPRS Support Node
SN	Serving Network
SQN	Sequence number
SRES	Signed RESponse calculated by a USIM
SW	Status Word
TLV	Tag Length Value
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
VLR	Visitor Location Register
WLAN	Wireless Local Area Network
WSID	WLAN Specific Identifier
XRES	Expected user RESponse

[…]

4.4.5 Contents of files at the DF WLAN level

This clause describes the additional files that are used for WLAN purposes.

DF_{WLAN} shall be present at the ADF_{USIM} level if either of the services nº59, nº60, nº61, nº62, nº63 or nº66 are "available"~~allocated~~ in the corresponding EF_{UST} (USIM Service Table).

4.4.5.1 EF_{Pseudo} (Pseudonym)

This EF contains a temporary user identifier (pseudonym) for subscriber identification. Pseudonyms may be provided as part of a previous authentication sequence. Pseudonyms are used as defined in TS 24.234 [40]. This file shall be present if service nº59 is "available"~~allocated~~ in EF_{UST}.

Identifier: '4F41'	Structure: Transparent	Optional
SFI : '01'		
File size: Y bytes (Y≥n+2)	Update activity: high	

Access Conditions:

READ	PIN
UPDATE	PIN
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to 2	Pseudonym Length	M	2 bytes
3 to n+2	Pseudonym	M	n bytes

-Pseudonym Length

Contents:

- this byte gives the number of bytes of the following data item containing the Pseudonym value.

Coding:

- unsigned length coded on 2 bytes

- Pseudonym.

Contents:

- Pseudonym to be used as the username part of the NAI

Coding:

- As described for the user portion of the NAI in TS 33.234 [41]. Unused bytes shall be set to 'FF' and shall not be considered as a part of the value.

4.4.5.2 $EF_{UPLMNWLAN}$ (User controlled PLMN selector for WLAN Access)

This EF contains the coding for preferred PLMNs to be used for WLAN PLMN Selection. This information is determined by the user and defines the preferred PLMNs of the user in priority order. The first PLMN entry~~record~~ indicates the highest priority and the nth PLMN entry~~record~~ indicates the lowest. It shall be possible to store at least the number of PLMNs specified in TS 24.234 [40].This file shall be present if service nº60 is ~~allocated~~"available" in EF_{UST}.

Identifier: '4F42'	Structure: transparent	Optional
SFI: '02'		
File size: 3n (where n ≥108)	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	PIN
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to 3	1st PLMN (highest priority)	M	3 bytes
4 to 6	2nd PLMN	M	3 bytes
:	:		
2822 to 2430	108th PLMN	M	3 bytes
3125 to 2733	119th PLMN	O	3 bytes
:	:		
(3n-2) to 3n	Nth PLMN (lowest priority)	O	3 bytes

- PLMN

Contents:

- Mobile Country Code (MCC) followed by the Mobile Network Code (MNC).

Coding:

- according to TS 24.008 [9].

4.4.5.3 $EF_{OPLMNWLAN}$ (Operator controlled PLMN selector for WLAN Access)

This EF contains the coding for operator preferred PLMNs to be used for WLAN PLMN Selection. This information is determined by the operator and defines the operator preferred PLMNs in priority order. The first PLMN entry~~record~~ indicates the highest priority and the nth PLMN entry~~record~~ indicates the lowest. It shall be possible to store at least the number of PLMNs specified in TS 24.234 [40]. This file shall be present if service nº61 is ~~allocated~~"available" in EF_{UST}.

Identifier: '4F43'	Structure: transparent	Optional
SFI: '03'		
File size: 3n (where n ≥~~8~~10)	Update activity: low	
Access Conditions: READ PIN UPDATE ADM DEACTIVATE ADM ACTIVATE ADM		

Bytes	Description	M/O	Length
1 to 3	1st PLMN (highest priority)	M	3 bytes
4 to 6	2nd PLMN	M	3 bytes
:	:		
28~~22~~ to ~~24~~30	10~~8~~th PLMN	M	3 bytes
31~~25~~ to ~~27~~33	11~~9~~th PLMN	O	3 bytes
:	:		
(3n-2) to 3n	Nth PLMN (lowest priority)	O	3 bytes

- PLMN
  Contents:
  - Mobile Country Code (MCC) followed by the Mobile Network Code (MNC).
  Coding:
  - according to TS 24.008 [9].

4.4.5.4 EF_{UWSIDL} (User controlled WLAN Specific IDentifier List)

This file contains the user preferred list of WLAN specific identifier (WSID) for WLAN selection in priority order. The first record indicates the highest priority and the nth record indicates the lowest. This file is used for WLAN selection and shall store a list of at least the number of WSIDs specified~~as described~~ in TS 24.234 [40]. This file shall be present if service nº62 is ~~allocated~~"available" in EF_{UST}.

Identifier: '4F44'	Structure: linear fixed	Optional
SFI: '04'		
Record size: X+1 bytes	Update activity: low	
Access Conditions: READ PIN UPDATE PIN DEACTIVATE ADM ACTIVATE ADM		

Bytes	Description	M/O	Length
1	Length of WSID	M	1 bytes
2 to X + 1	WSID~~value~~	M	X bytes

-Length of WSID:

Contents:

- this byte gives the number of bytes of the following data item containing the WSID. ~~value.~~

Coding:

- unsigned length coded on one byte

-WSID ~~Value~~:

Contents:

- WLAN specific identifier (WSID) as defined in ~~3GPP~~ TS 24.234 [40].

Coding:

- binary. Unused bytes shall be set to 'FF' and not used either as a part of the value or for length calculation.

4.4.5.5 EF_{OWSIDL} (Operator controlled WLAN Specific IDentifierList)

This file contains the operator preferred list of WLAN specific identifier (WSID) for WLAN selection in priority order. The first record indicates the highest priority and the n^{th} record indicates the lowest. This file is used for WLAN selection and shall store a list of at least the number of WSIDs specified in TS 24.234 ~~as described in~~ [40]. This file shall be present if service nº63 is "available" ~~allocated~~ in EF_{UST}.

Identifier: '4F45'	Structure: linear fixed	Optional
SFI: '05'		
Record size: X + 1 bytes	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Length of WSID	M	1 bytes
2 to X + 1	WSID ~~value~~	M	X bytes

-Length of WSID:

Contents:

- this byte gives the number of bytes of the following data item containing the WSID. ~~value.~~

Coding:

- unsigned length coded on one byte

-WSID ~~Value~~ :

Contents:

- WLAN specific identifier (WSID) as defined in ~~3GPP~~ TS 24.234 [40].

Coding:

- binary. Unused bytes shall be set to 'FF' and not used either as a part of the value or for length calculation.

4.4.5.6 EF_{WRI} (WLAN Reauthentication Identity)

This EF contains a list of parameters linked to a re-authentication identity to be used in fast re-authentication. Re-authentication identities and related parameters (Master Key and Counter Value) are provided as part of a previous authentication sequence. This file shall be present if service nº66 is "available" ~~allocated~~ in EF_{UST}.

Identifier: '4F46'	Structure: Transparent	Optional
SFI: '06'		
File size: n bytes (n≥J+K+L+6)	Update activity: high	

Access Conditions:

READ	PIN
UPDATE	PIN
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Reauthentication Identity Tag '80'	M	1 byte
2	Re-authentication Identity Length	M	1 byte
3-J+2	Re-authentication Identity Value	M	J bytes
J+3	Master Key Tag '81'	M	1 byte
J+4	Master Key Length	M	1 byte
J+5-J+K+4	Master Key Value	M	K bytes
J+K+5	Counter Tag '82'	M	1 byte
J+K+6	Counter Length	M	1 byte
J+K+7-J+K+L+6	Counter Value	M	L bytes

- Reauthentication Identity
  Contents:
  - Re-authentication identity TLV to be used as the username part of the NAI.

  Coding:
  Tag '80'
  Unsigned length on 1 byte
  Value: As described for the user portion of the NAI in TS 33.234 [41]. Unused bytes shall be set to 'FF' and shall not be considered as a part of the value.

- Master Key
  Contents:
  - Master Key TLV.

  Coding:
  Tag '81'
  Unsigned length on 1 byte
  Value: As described in TS 33.234 [41].

- Counter
  Contents:
  - Counter TLV

  Coding:
  Tag '82'
  Unsigned length on 1 byte
  Value: As described in TS 33.234 [41].

[…]

5.6 WLAN related procedures

5.6.1 WLAN Selection related Procedures

Requirement~~Prerequisite~~: service n°62 or n°63 "~~"~~available"~~"~~

The ME shall read the User and Operator controlled WSIDs from the corresponding list files (i.e. EF_{UWSIDL} and EF_{OWSIDL} to perform WLAN selection procedures as described in TS 24.234 [40].

The user may change the User controlled WSIDs.

5.6.2 WLAN PLMN Selection related procedures

Requirement~~Prerequisite~~: service n°60 or nº61 "available"

The ME shall read the User controlled PLMN selector and/or Operator controlled PLMN selector in $EF_{PLMNWLAN}$ and $EF_{OPLMNWLAN}$ respectively for WLAN PLMN Selection procedures as described in TS 24.234 [40].

The user may change the User controlled PLMN selector for WLAN.

5.6.3 WLAN access authentication related procedures

Requirement~~Prerequisite~~: service n°59 "available"

When the ME tries a full authentication, it shall inspect if a valid p~~P~~seudonym is available in $EF_{Pseudo.}$ and use it as the user name portion of the NAI for WLAN access authentication following the procedures described in TS 24.234 [40].

The ME shall manage pseudonyms as defined in TS 24.234 [40].

5.6.4 WLAN access re-authentication related procedures

Requirement: service n°66 "available"

When the ME tries a fast re-authentication, it shall inspect if a valid reauthentication identity is available in EF_{WRI} and use it as the user name portion of the NAI for WLAN access re-authentication following the procedures described in TS 24.234 [40].

The ME shall manage re-authentiction identities, Master Key and counter values as described in TS 24.234 [40].

3GPP TSG CT WG6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

Tdoc ⌘ C6-050374
Revised C6-050258

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **280** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Modifications regarding WLAN
Source:	⌘	CT6
Work item code:	⌘	TEI-7
Date:	⌘	28/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 *(GSM Phase 2)*
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Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change:	⌘	• The abbreviations regarding WLAN are incomplete • Several references and descriptions of the WLAN files are incomplete. • The mimimum number of PLMN entries in WLAN files should be – regarding TS 24.234 – 10 entries, not as specified in TS 31.102 - 8 entries.
Summary of change:	⌘	• Abbreviations regarding WLAN completed • Added the complete references and completed the description of WLAN files. • Modified minimum number of PLMN entries from 8 to 10
Consequences if not approved:	⌘	The descriptions for WLAN are incomplete. TS 31.102 is inconsistence regarding the requirements specified in TS 23.234.

Clauses affected:	⌘	3.3; 4.4.5; 4.5.1.1; 4.4.5.2; 4.4.5.3; 4.4.5.4; 4.4.5.5; 5.6.1; 5.6.2; 5.6.3.

Other specs Affected:	Y	N		
⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

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ADF	Application Dedicated File
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AUTN	Authentication token
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B-TID	Bootstrapping Transaction IDentifier
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CK	Cipher key
CLI	Calling Line Identifier
CNL	Co-operative Network List
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DCK	Depersonalisation Control Keys
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DO	Data Object
EF	Elementary File
FCP	File Control Parameters
FFS	For Further Study
GSM	Global System for Mobile communications
HE	Home Environment
ICC	Integrated Circuit Card
ICI	Incoming Call Information
ICT	Incoming Call Timer
ID	IDentifier
IEI	Information Element Identifier
IK	Integrity key
IMSI	International Mobile Subscriber Identity
K	USIM Individual key
K_C	Cryptographic key used by the cipher A5
KSI	Key Set Identifier
LI	Language Indication
LSB	Least Significant Bit
MAC	Message authentication code
MAC-A	MAC used for authentication and key agreement
MAC-I	MAC used for data integrity of signalling messages
MBMS	Multimedia Broadcast/Multicast Service
MCC	Mobile Country Code
MExE	Mobile Execution Environment
MF	Master File
MGV-F	MTK Generation and Validation Function
MIKEY	Multimedia Internet KEYing
MM	Multimedia Message
MMI	Man Machine Interface
MMS	Multimedia Messaging Service
MNC	Mobile Network Code
MODE	Indication packet switched/circuit switched mode
MSB	Most Significant Bit

MSK	MBMS Service Key
MTK	MBMS Traffic Key
MUK	MBMS User Key
NEV	NEVer
NPI	Numbering Plan Identifier
OCI	Outgoing Call Information
OCT	Outgoing Call Timer
PBID	Phonebook Identifier
PIN	Personal Identification Number
PL	Preferred Languages
PS	Packet switched
PS_DO	PIN Status Data Object
RAND	Random challenge
$RAND_{MS}$	Random challenge stored in the USIM
RES	User response
RFU	Reserved for Future Use
RST	Reset
SDN	Service dialling number
SE	Security Environment
SEQs	Sequence number for MGV-F
SEQp	Sequence number for MGV-F stored in the USIM
SFI	Short EF Identifier
SGSN	Serving GPRS Support Node
SN	Serving Network
SQN	Sequence number
SRES	Signed RESponse calculated by a USIM
SW	Status Word
TLV	Tag Length Value
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
VLR	Visitor Location Register
WLAN	Wireless Local Area Network
WSID	WLAN Specific Identifier
XRES	Expected user RESponse

[…]

4.4.5 Contents of files at the DF WLAN level

This clause describes the additional files that are used for WLAN purposes.

DF_{WLAN} shall be present at the ADF_{USIM} level if either of the services nº59, nº60, nº61, nº62, nº63 or nº66 are "available"~~allocated~~ in the corresponding EF_{UST} (USIM Service Table).

4.4.5.1 EF_{Pseudo} (Pseudonym)

This EF contains a temporary user identifier (pseudonym) for subscriber identification. Pseudonyms may be provided as part of a previous authentication sequence. Pseudonyms are used as defined in TS 24.234 [40]. This file shall be present if service nº59 is "available"~~allocated~~ in EF_{UST}.

Identifier: '4F41'	Structure: Transparent	Optional
SFI : '01'		
File size: Y bytes (Y≥n+2)	Update activity: high	

Access Conditions:

READ	PIN
UPDATE	PIN
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to 2	Pseudonym Length	M	2 bytes
3 to n+2	Pseudonym	M	n bytes

-Pseudonym Length

Contents:

- this byte gives the number of bytes of the following data item containing the Pseudonym value.

Coding:

- unsigned length coded on 2 bytes

- Pseudonym.

Contents:

-Pseudonym to be used as the username part of the NAI

Coding:

- As described for the user portion of the NAI in in TS 33.234 [41]. Unused bytes shall be set to 'FF' and shall not be considered as a part of the value.

4.4.5.2 $EF_{UPLMNWLAN}$ (User controlled PLMN selector for WLAN Access)

This EF contains the coding for preferred PLMNs to be used for WLAN PLMN Selection. This information is determined by the user and defines the preferred PLMNs of the user in priority order. The first PLMN entry ~~record~~ indicates the highest priority and the n^{th} PLMN entry ~~record~~ indicates the lowest. It shall be possible to store at least the number of PLMNs specified in TS 24.234 [40]. This file shall be present if service nº60 is ~~allocated~~"available" in EF_{UST}.

Identifier: '4F42'	Structure: transparent	Optional
SFI: '02'		
File size: 3n (where n ≥10~~8~~)	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	PIN
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to 3	1^{st} PLMN (highest priority)	M	3 bytes
4 to 6	2^{nd} PLMN	M	3 bytes
:	:		
28~~22~~ to ~~24~~30	10~~8~~th PLMN	M	3 bytes
31~~25~~ to ~~27~~33	11~~9~~th PLMN	O	3 bytes
:	:		
(3n-2) to 3n	N^{th} PLMN (lowest priority)	O	3 bytes

- PLMN

Contents:

- Mobile Country Code (MCC) followed by the Mobile Network Code (MNC).

Coding:
- according to TS 24.008 [9].

4.4.5.3 $EF_{OPLMNWLAN}$ (Operator controlled PLMN selector for WLAN Access)

This EF contains the coding for operator preferred PLMNs to be used for WLAN PLMN Selection. This information is determined by the operator and defines the operator preferred PLMNs in priority order. The first PLMN entry ~~record~~ indicates the highest priority and the nth PLMN entry ~~record~~ indicates the lowest. It shall be possible to store at least the number of PLMNs specified in TS 24.234 [40]. This file shall be present if service nº61 is ~~allocated~~"available" in EF_{UST}.

Identifier: '4F43'	Structure: transparent	Optional
SFI: '03'		
File size: 3n (where n ≥10~~8~~)	Update activity: low	
Access Conditions: READ PIN UPDATE ADM DEACTIVATE ADM ACTIVATE ADM		

Bytes	Description	M/O	Length
1 to 3	1st PLMN (highest priority)	M	3 bytes
4 to 6	2nd PLMN	M	3 bytes
:	:		
28~~22~~ to ~~24~~30	10~~8~~th PLMN	M	3 bytes
31~~25~~ to ~~27~~33	11~~9~~th PLMN	O	3 bytes
:	:		
(3n-2) to 3n	Nth PLMN (lowest priority)	O	3 bytes

- PLMN
  Contents:
  - Mobile Country Code (MCC) followed by the Mobile Network Code (MNC).
  Coding:
  - according to TS 24.008 [9].

4.4.5.4 EF_{UWSIDL} (User controlled WLAN Specific IDentifier List)

This file contains the user preferred list of WLAN specific identifier (WSID) for WLAN selection in priority order. The first record indicates the highest priority and the nth record indicates the lowest. This file is used for WLAN selection and shall store a list of at least the number of WSIDs specified ~~as described~~ in TS 24.234 [40]. This file shall be present if service nº62 is ~~allocated~~"available" in EF_{UST}.

Identifier: '4F44'	Structure: linear fixed	Optional
SFI: '04'		
Record size: X+1 bytes	Update activity: low	
Access Conditions: READ PIN UPDATE PIN DEACTIVATE ADM ACTIVATE ADM		

Bytes	Description	M/O	Length
1	Length of WSID	M	1 bytes
2 to X + 1	WSID ~~value~~	M	X bytes

-Length of WSID:

Contents:

- this byte gives the number of bytes of the following data item containing the WSID. ~~value.~~

Coding:

- unsigned length coded on one byte

-WSID: ~~Value~~

Contents:

- WLAN specific identifier (WSID) as defined in ~~3GPP~~ TS 24.234 [40].

Coding:

- binary. Unused bytes shall be set to 'FF' and not used either as a part of the value or for length calculation.

4.4.5.5 EF_{OWSIDL} (Operator controlled WLAN Specific IDentifierList)

This file contains the operator preferred list of WLAN specific identifier (WSID) for WLAN selection in priority order. The first record indicates the highest priority and the n^{th} record indicates the lowest. This file is used for WLAN selection and shall store a list of at least the number of WSIDs specified in TS 24.234 ~~as described in~~ [40]. This file shall be present if service nº63 is "available" ~~allocated~~ in EF_{UST}.

Identifier: '4F45'	Structure: linear fixed		Optional
SFI: '05'			
Record size: X + 1 bytes		Update activity: low	
Access Conditions: READ PIN UPDATE ADM DEACTIVATE ADM ACTIVATE ADM			
Bytes	Description	M/O	Length
1	Length of WSID	M	1 bytes
2 to X + 1	WSID ~~value~~	M	X bytes

-Length of WSID:

Contents:

- this byte gives the number of bytes of the following data item containing the WSID. ~~value.~~

Coding:

- unsigned length coded on one byte

-WSID: ~~Value~~

Contents:

- WLAN specific identifier (WSID) as defined in ~~3GPP~~ TS 24.234 [40].

Coding:

- binary. Unused bytes shall be set to 'FF' and not used either as a part of the value or for length calculation.

4.4.5.6 EF_{WRI} (WLAN Reauthentication Identity)

This EF contains a list of parameters linked to a re-authentication identity to be used in fast re-authentication. Re-authentication identities and related parameters (Master Key and Counter Value) are provided as part of a previous authentication sequence. This file shall be present if service nº66 is "available" ~~allocated~~ in EF_{UST}.

Identifier: '4F46'	Structure: Transparent	Optional
SFI: '06'		
File size: n bytes (n≥J+K+L+6)	Update activity: high	

Access Conditions:

READ	PIN
UPDATE	PIN
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Reauthentication Identity Tag '80'	M	1 byte
2	Re-authentication Identity Length	M	1 byte
3-J+2	Re-authentication Identity Value	M	J bytes
J+3	Master Key Tag '81'	M	1 byte
J+4	Master Key Length	M	1 byte
J+5-J+K+4	Master Key Value	M	K bytes
J+K+5	Counter Tag '82'	M	1 byte
J+K+6	Counter Length	M	1 byte
J+K+7-J+K+L+6	Counter Value	M	L bytes

- Reauthentication Identity
  Contents:
  - Re-authentication identity TLV to be used as the username part of the NAI.

  Coding:
  Tag '80'
  Unsigned length on 1 byte
  Value: As described for the user portion of the NAI in TS 33.234 [41]. Unused bytes shall be set to 'FF' and shall not be considered as a part of the value.

- Master Key
  Contents:
  - Master Key TLV.

  Coding:
  Tag '81'
  Unsigned length on 1 byte
  Value: As described in TS 33.234 [41].

- Counter
  Contents:
  - Counter TLV

  Coding:
  Tag '82'
  Unsigned length on 1 byte
  Value: As described in TS 33.234 [41].

[…]

5.6 WLAN related procedures

5.6.1 WLAN Selection related Procedures

Requirement~~Prerequisite~~: service n°62 or n°63 "~~"~~available"~~"~~

The ME shall read the User and Operator controlled WSIDs from the corresponding list files (i.e. EF_{UWSIDL} and EF_{OWSIDL} to perform WLAN selection procedures as described in TS 24.234 [40].

The user may change the User controlled WSIDs.

5.6.2 WLAN PLMN Selection related procedures

Requirement~~Prerequisite~~: service n°60 or nº61 "available"

The ME shall read the User controlled PLMN selector and/or Operator controlled PLMN selector in $EF_{PLMNWLAN}$ and $EF_{OPLMNWLAN}$ respectively for WLAN PLMN Selection procedures as described in TS 24.234 [40].

The user may change the User controlled PLMN selector for WLAN.

5.6.3 WLAN access authentication related procedures

Requirement~~Prerequisite~~: service n°59 "available"

When the ME tries a full authentication, it shall inspect if a valid Pseudonym is available in $EF_{Pseudo.}$ and use it as the user name portion of the NAI for WLAN access authentication following the procedures described in TS 24.234 [40].

The ME shall manage pseudonyms as defined in TS 24.234 [40].

5.6.4 WLAN access re-authentication related procedures

Requirement: service n°66 "available"

When the ME tries a fast re-authentication, it shall inspect if a valid reauthentication identity is available in EF_{WRI} and use it as the user name portion of the NAI for WLAN access re-authentication following the procedures described in TS 24.234 [40].

The ME shall manage re-authentiction identities, Master Key and counter values as described in TS 24.234 [40].

3GPP TSG-CT6 #35
Cancun, Mexico, 25-29 April 2005

C6-050375

CR-Form-v7.1

CHANGE REQUEST

⌘ **31 102** **CR** 281 ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Alignment of MBMS procedures with TS 33.246
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	During SP#27 meeting, TSG SA has approved several CRs that impact the MBMS functionality specified in TS 31.102. The following changes has been applied to TS 33.246: ➢ The two procedures 'MSK Update' and 'MSK verification' are combined into one procedure. ➢ The UE behavior when receiving a normal MIKEY push message with an old (still valid) MUK-ID has been changed. In fact, the UE shall now handle the MIKEY push message in a similar way as the push solicited pull message. ➢ The terminology used in section 7.1.1.6 of TS 31.102 was aligned with TS 33.246 i.e. "last used MUK" is replaced by "last successfully used MUK" and "current MUK" is replaced by "last generated MUK". ➢ SEQs has been renamed to SEQl (l = lower). ➢ The notion of invalidated MSK has been introduced. An MSK is considered as invalidated when SEQl is greater than SEQu (u = upper).
Summary of change:	⌘	The changes described above are reflected in TS 31.102
Consequences if not approved:	⌘	Discrepancies between TS 33.246 rel-6 and TS 31.102 rel-6.

Clauses affected:	⌘	3.3, 7.1.1, 7.1.1.6, 7.1.1.7, 7.1.1.8, 7.1.2.5

Other specs affected:	⌘	Y	N	
			X	Other core specifications
			X	Test specifications
			X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GPP	3rd Generation Partnership Project
AC	Access Condition
ACL	APN Control List
ADF	Application Dedicated File
AID	Application IDentifier
AK	Anonymity key
ALW	ALWays
AMF	Authentication Management Field
AoC	Advice of Charge
APN	Access Point Name
ASN.1	Abstract Syntax Notation One
AuC	Authentication Centre
AUTN	Authentication token
BDN	Barred Dialling Number
BER-TLV	Basic Encoding Rule - TLV
B-TID	Bootstrapping Transaction IDentifier
CCP	Capability Configuration Parameter
CK	Cipher key
CLI	Calling Line Identifier
CNL	Co-operative Network List
CPBCCH	COMPACT Packet BCCH
CS	Circuit switched
DCK	Depersonalisation Control Keys
DF	Dedicated File
DO	Data Object
EF	Elementary File
FCP	File Control Parameters
FFS	For Further Study
GSM	Global System for Mobile communications
HE	Home Environment
ICC	Integrated Circuit Card
ICI	Incoming Call Information
ICT	Incoming Call Timer
ID	IDentifier
IEI	Information Element Identifier
IK	Integrity key
IMSI	International Mobile Subscriber Identity
K	USIM Individual key
K_C	Cryptographic key used by the cipher A5
KSI	Key Set Identifier
LI	Language Indication
LSB	Least Significant Bit
MAC	Message authentication code
MAC-A	MAC used for authentication and key agreement
MAC-I	MAC used for data integrity of signalling messages
MBMS	Multimedia Broadcast/Multicast Service
MCC	Mobile Country Code
MExE	Mobile Execution Environment
MF	Master File
MGV-F	MTK Generation and Validation Function
MIKEY	Multimedia Internet KEYing
MM	Multimedia Message
MMI	Man Machine Interface
MMS	Multimedia Messaging Service
MNC	Mobile Network Code

MODE	Indication packet switched/circuit switched mode
MSB	Most Significant Bit
MSK	MBMS Service Key
MTK	MBMS Traffic Key
MUK	MBMS User Key
NEV	NEVer
NPI	Numbering Plan Identifier
OCI	Outgoing Call Information
OCT	Outgoing Call Timer
PBID	Phonebook Identifier
PIN	Personal Identification Number
PL	Preferred Languages
PS	Packet switched
PS_DO	PIN Status Data Object
RAND	Random challenge
$RAND_{MS}$	Random challenge stored in the USIM
RES	User response
RFU	Reserved for Future Use
RST	Reset
SDN	Service dialling number
SE	Security Environment
~~SEQs~~	~~Sequence number for MGV-F~~
SEQp	Sequence number for MGV-F stored in the USIM
SFI	Short EF Identifier
SGSN	Serving GPRS Support Node
SN	Serving Network
SQN	Sequence number
SRES	Signed RESponse calculated by a USIM
SW	Status Word
TLV	Tag Length Value
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
VLR	Visitor Location Register
XRES	Expected user RESponse

7.1.1 Command description

The function can be used in several different contexts:

- a 3G security context, when 3G authentication vectors (RAND, XRES, CK, IK, AUTN) are available (i.e. the UE is located in the UTRAN, or in a GSM radio access network which is connected to a 3G or 3G capable VLR/SGSN), or
- a GSM security context, when GSM authentication data are available only (i.e. the UE is located in the GSM radio access network which is connected to a non-3G capable VLR/SGSN)
- a VGCS/VBS security context, when VGCS/VBS authentication data is available
- a GBA_U security context, when a GBA bootstrapping procedure is requested
- a MBMS security context, when a MBMS security procedure is requested

The function is used in GSM or 3G security context during the procedure for authenticating the USIM to its HE and vice versa. In addition, a cipher key and an integrity key are calculated. For the execution of the command the USIM uses the subscriber authentication key K, which is stored in the USIM.

The function is used in VGCS/VBS security context during the procedure for retrieving the VGCS/VBS Short Term Key (VSTK) used by the terminal in establishing VGCS/VBS calls.

The function is used in GBA security context in two different modes:

a) Bootstrapping Mode: during the procedure for ~~muthual~~mutual authenticating of the USIM and the Bootstrapping Server Function (BSF) and for deriving bootstrapped key material from the AKA run.

b) NAF Derivation Mode: during the procedure for deriving Network Application Function (NAF) specific keys from previous bootstrapped key material.

The function is used in MBMS security context in two~~three~~ different modes:

a) MSK Update Mode: during the procedure for updating an MBMS Service Key (MSK).

b) ~~MSK Verification Mode: during the procedure for computing the MSK Verification Message previously requested by an MSK update message.~~

~~c)~~ MTK Generation Mode: during the procedure for retrieving the MBMS Traffic Key (MTK) used by the terminal to decrypt MBMS data.

The function is related to a particular USIM and shall not be executable unless the USIM application has been selected and activated, and the current directory is the USIM ADF or any subdirectory under this ADF and a successful PIN verification procedure has been performed (see clause 5).

7.1.1.6 MBMS security context (MSK Update Mode)

The USIM receives the MIKEY packet containing an MSK update message. First, the USIM uses the MUK ID to identify the Ks_int_NAF corresponding with a previous bootstrapping procedure.

The USIM shall check if a new NAF derivation procedure involving the received NAF_ID in the MIKEY message has been performed. In such a case, the USIM shall store the last bootstrapped Ks_int_NAF as the ~~current~~ last generated MUK and update EF_{MUK} as follows:

- If a record with the received NAF_ID (included in the MUK ID: see TS 33.246 [43]) value is already present, then the MUK ID is stored in the corresponding field of this record, and the associated Time Stamp Counter (TS) field is reset. Additionally, the USIM internally stores the last successfully used MUK (i.e. MUK that was used during the last successful MSK update procedure), along with its MUK ID for further use (e.g. to detect Key freshness failure).

- If a record with the received NAF_ ID does not exist, the USIM uses an empty record to include the MUK ID, and reset the associated TS field.

If the received MUK ID does not correspond to the ~~current~~ last generated MUK (i.e. last bootstrapped MUK) then the USIM proceeds as follows:

- If the received MUK ID corresponds to the last successfully used MUK ~~and if the received MIKEY message corresponds to a push solicited pull procedure~~ then the USIM uses this MUK to verify the integrity of the message. If the verification is unsuccessful, the USIM abandons the function and returns the status word '9862' (Authentication error, incorrect MAC). If the verification is successful, the USIM abandons the function and returns the status word '9865' (the BM-SC shall be notified to retrieve the latest Ks_int_NAF: see TS 33.246 [43]). In this case, the USIM shall not return a MIKEY verification message.

- Otherwise, this is considered as a bootstrapping failure (incorrect MUK) and the USIM abandons the function. The status word ‘6A88’ (Referenced data not found) is returned.

Otherwise, if the received MUK ID corresponds to the ~~current~~ last generated MUK, the USIM uses the MUK value for MSK validation and derivation functions as described in TS 33.246 [43]. If the validation is unsuccessful, the status word '9862' (Authentication error, incorrect MAC) is returned and the USIM abandons the function.

After a successful MSK Update procedure the USIM stores the received MSK and updates EF_{MSK} as follows:

- If a record with the received Key Domain ID and Key Group part (i.e. Key Group part of the MSK ID) already exists, the 2nd ~~-~~MSK ID and the associated TS shall be replaced by the 1st MSK ID and the associated TS. Then the new MSK ID is stored as the 1st MSK ID and the associated TS is reset.

- If a record with the received Key Domain ID and Key Group part does not exist, the USIM uses an empty record to include those values. The received MSK ID is stored as the 1st MSK ID and the associated TS is reset. The 2nd MSK ID and the associated TS are set to 'FF FF'.

NOTE: The policy of replacing Key Domain records when no more empty records are available in EF_{MSK} is HE specific. (e.g. delete Groups from visited Key Domains first)

Then, the USIM stores the Time Stamp field (retrieved from the MIKEY message) in its corresponding field under EF_{MUK}.

The USIM stores internally the last successfully used MUK along with its MUK ID for further use. This MUK may be used beyond its GBA validity (i.e. after the derivation of a new Ks_int_NAF resulting from a new bootstrap procedure) to verify the integrity of ~~the first~~a MIKEY message in order to detect a synchronization failure ~~of a push solicited pull procedure~~. This may occur if the last derived Ks_int_NAF did not reach the BM-SC.

NOTE: The MSK is not necessarily updated in the message, since a MSK transport message can be sent e.g. to update the Key Validity data.

Finally, if the V-bit in the HDR field of the received MIKEY message is set then the USIM shall produce a MSK Verification Message as described in TS 33.246 [43]. In this case the command response is the MIKEY verification message.

Input:

- MIKEY message

Output:

- MIKEY message

or

- None

7.1.1.7 ~~MBMS security context (MSK Verification Mode)~~Void

~~USIM operations in MBMS security context are supported if service n°69 is "available".~~

~~The USIM receives the NAF_ID and MIKEY packet containing an MIKEY verification message, with an empty MAC field.~~

~~First, the USIM tests if the given MUK ID corresponds to a stored MUK ID in EF_{MUK} and if the Time Stamp field in the given MKEY message corresponds with the stored Time Stamp Counter (TS) in EF_{MUK}.~~

~~If any of these verifications fails, this is considered as a Verification failure and the USIM abandons the function. The status word '6985' (Conditions of use not satisfied) is returned.~~

~~Otherwise, the USIM computes the MAC value as defined in TS 33.246 [43] and sends back the complete MIKEY verification message.~~

~~Input:~~

~~NAF_ID, MIKEY message~~

~~Output:~~

~~MIKEY message~~

7.1.1.8 MBMS security context (MTK Generation Mode)

USIM operations in MBMS security context are supported if service n°69 is "available".

The USIM receives the MIKEY message containing an MBMS MTK and a Salt key (if Salt key is available). First, the USIM retrieves the MSK with the Key Domain ID and the MSK ID given by the Extension payload of the MIKEY message (as described in TS 33.246 [43]).

If the needed MSK does not exist, this is considered as a MSK failure and the USIM abandons the function. The status word '6A88' (Referenced data not found) is returned.

If the key validity data of the MSK indicates an invalidated MSK (i.e. SEQl is greater than SEQu) then the USIM returns the status word '6985' (Conditions of use not satisfied) and abandons the function. SEQl and SEQu are defined in TS 33.246 [43].

Otherwise, the USIM performs the MBMS Generation and Validation Function (MGV-F) as described in TS 33.246 [43] using MSK.

If the USIM detects that the given MTK ID is invalid, this is considered as a SEQp freshness failure and the USIM abandons the function. The status word '9865' (Key freshness failure) is returned.

If the integrity validation of the MIKEY message is unsuccessful, the USIM abandons the function and returns the status word '9862' (Authentication error, incorrect MAC).

After successful MGV_F procedure the USIM stores the Time Stamp field (retrieved from the MIKEY message) as the Time Stamp Counter (TS) associated with the involved MSK under EF_{MSK}

The USIM also stores MTK ID (retrieved from the MIKEY message) as the SEQl~~s~~ associated with MSK.

Then, the USIM returns MTK and Salt key (if Salt key is available).

Input:

- MIKEY message

Output:

- MTK and Salt (if available)

7.1.2.5 MBMS security context (All Modes)

Byte(s)	Description	Length
1	MBMS Security Context Mode	1
2	Length of MIKEY message (L1)	1
3 to (L1+2)	MIKEY message	L1
~~(L1+3)~~	~~Length of NAF_ID (L2) (see note1)~~	~~1~~
~~(L1+4) to (L1+L2+3)~~	~~NAF_ID (see note1)~~	~~L2~~
~~NOTE 1: Parameter present if and only if in MSK Verification Mode.~~		

Parameter MBMS Security Context Mode specifies the MBMS mode in which MBMS security procedure is performed as follows:

Coding of MBMS Security Context Mode

Coding	Meaning
'01'	MSK Update Mode
~~'02~~	~~MSK Verification Mode~~
'02'~~3~~"	MTK Generation Mode

Response parameters/data, MBMS security context (MSK ~~Verification~~ Update Mode), command successful:

Byte(s)	Description	Length
1	"Successful MBMS operation" tag = 'DB' (see note 1)	1
2	Length of MIKEY (L) (see note 1)	1
3 to (L+2)	MIKEY message (see note 1)	L
NOTE 1: Parameter present if a MIKEY verification message is returned.		

Response parameters/data, MBMS security context (MTK Generation Mode), command successful:

Byte(s)	Description	Length
1	"Successful MBMS operation" tag = 'DB'	1
2	Length of MTK and Salt (if Salt key is available) (L)	1
3 to (L+2)	MTK || Salt (if available)	L

The coding of parameters is described in TS 33.246 [43].

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Cancun, Mexico, 25-29 April 2005

C6-050376

CR-Form-v7.1

CHANGE REQUEST

⌘ **31 102** **CR** 282 ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Alignment of MBMS procedures with TS 33.246
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	28/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	During SP#27 meeting, TSG SA has approved several CRs that impact the MBMS functionality specified in TS 31.102. The following changes has been applied to TS 33.246: ➢ The two procedures 'MSK Update' and 'MSK verification' are combined into one procedure. ➢ The UE behavior when receiving a normal MIKEY push message with an old (still valid) MUK-ID has been changed. In fact, the UE shall now handle the MIKEY push message in a similar way as the push solicited pull message. ➢ The terminology used in section 7.1.1.6 of TS 31.102 was aligned with TS 33.246 i.e. "last used MUK" is replaced by "last successfully used MUK" and "current MUK" is replaced by "last generated MUK". ➢ SEQs has been renamed to SEQl (l = lower). ➢ The notion of invalidated MSK has been introduced. An MSK is considered as invalidated when SEQl is greater than SEQu (u = upper).
Summary of change:	⌘	The changes described above are reflected in TS 31.102
Consequences if not approved:	⌘	Discrepancies between TS 33.246 rel-6 and TS 31.102 rel-6.

Clauses affected:	⌘	3.3, 7.1.1, 7.1.1.6, 7.1.1.7, 7.1.1.8, 7.1.2.5

Other specs affected:	⌘	Y	N	
			X	Other core specifications
			X	Test specifications
			X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GPP	3rd Generation Partnership Project
AC	Access Condition
ACL	APN Control List
ADF	Application Dedicated File
AID	Application IDentifier
AK	Anonymity key
ALW	ALWays
AMF	Authentication Management Field
AoC	Advice of Charge
APN	Access Point Name
ASN.1	Abstract Syntax Notation One
AuC	Authentication Centre
AUTN	Authentication token
BDN	Barred Dialling Number
BER-TLV	Basic Encoding Rule - TLV
B-TID	Bootstrapping Transaction IDentifier
CCP	Capability Configuration Parameter
CK	Cipher key
CLI	Calling Line Identifier
CNL	Co-operative Network List
CPBCCH	COMPACT Packet BCCH
CS	Circuit switched
DCK	Depersonalisation Control Keys
DF	Dedicated File
DO	Data Object
EF	Elementary File
FCP	File Control Parameters
FFS	For Further Study
GSM	Global System for Mobile communications
HE	Home Environment
ICC	Integrated Circuit Card
ICI	Incoming Call Information
ICT	Incoming Call Timer
ID	IDentifier
IEI	Information Element Identifier
IK	Integrity key
IMSI	International Mobile Subscriber Identity
K	USIM Individual key
K_C	Cryptographic key used by the cipher A5
KSI	Key Set Identifier
LI	Language Indication
LSB	Least Significant Bit
MAC	Message authentication code
MAC-A	MAC used for authentication and key agreement
MAC-I	MAC used for data integrity of signalling messages
MBMS	Multimedia Broadcast/Multicast Service
MCC	Mobile Country Code
MExE	Mobile Execution Environment
MF	Master File
MGV-F	MTK Generation and Validation Function
MIKEY	Multimedia Internet KEYing
MM	Multimedia Message
MMI	Man Machine Interface
MMS	Multimedia Messaging Service
MNC	Mobile Network Code

MODE	Indication packet switched/circuit switched mode
MSB	Most Significant Bit
MSK	MBMS Service Key
MTK	MBMS Traffic Key
MUK	MBMS User Key
NEV	NEVer
NPI	Numbering Plan Identifier
OCI	Outgoing Call Information
OCT	Outgoing Call Timer
PBID	Phonebook Identifier
PIN	Personal Identification Number
PL	Preferred Languages
PS	Packet switched
PS_DO	PIN Status Data Object
RAND	Random challenge
$RAND_{MS}$	Random challenge stored in the USIM
RES	User response
RFU	Reserved for Future Use
RST	Reset
SDN	Service dialling number
SE	Security Environment
~~SEQs~~	~~Sequence number for MGV-F~~
SEQp	Sequence number for MGV-F stored in the USIM
SFI	Short EF Identifier
SGSN	Serving GPRS Support Node
SN	Serving Network
SQN	Sequence number
SRES	Signed RESponse calculated by a USIM
SW	Status Word
TLV	Tag Length Value
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
VLR	Visitor Location Register
XRES	Expected user RESponse

7.1.1 Command description

The function can be used in several different contexts:

- a 3G security context, when 3G authentication vectors (RAND, XRES, CK, IK, AUTN) are available (i.e. the UE is located in the UTRAN, or in a GSM radio access network which is connected to a 3G or 3G capable VLR/SGSN), or
- a GSM security context, when GSM authentication data are available only (i.e. the UE is located in the GSM radio access network which is connected to a non-3G capable VLR/SGSN)
- a VGCS/VBS security context, when VGCS/VBS authentication data is available
- a GBA_U security context, when a GBA bootstrapping procedure is requested
- a MBMS security context, when a MBMS security procedure is requested

The function is used in GSM or 3G security context during the procedure for authenticating the USIM to its HE and vice versa. In addition, a cipher key and an integrity key are calculated. For the execution of the command the USIM uses the subscriber authentication key K, which is stored in the USIM.

The function is used in VGCS/VBS security context during the procedure for retrieving the VGCS/VBS Short Term Key (VSTK) used by the terminal in establishing VGCS/VBS calls.

The function is used in GBA security context in two different modes:

a) Bootstrapping Mode: during the procedure for ~~muthual~~mutual authenticating of the USIM and the Bootstrapping Server Function (BSF) and for deriving bootstrapped key material from the AKA run.

b) NAF Derivation Mode: during the procedure for deriving Network Application Function (NAF) specific keys from previous bootstrapped key material.

The function is used in MBMS security context in two~~three~~ different modes:

a) MSK Update Mode: during the procedure for updating an MBMS Service Key (MSK).

b) ~~MSK Verification Mode: during the procedure for computing the MSK Verification Message previously requested by an MSK update message.~~

~~c)~~ MTK Generation Mode: during the procedure for retrieving the MBMS Traffic Key (MTK) used by the terminal to decrypt MBMS data.

The function is related to a particular USIM and shall not be executable unless the USIM application has been selected and activated, and the current directory is the USIM ADF or any subdirectory under this ADF and a successful PIN verification procedure has been performed (see clause 5).

7.1.1.6 MBMS security context (MSK Update Mode)

The USIM receives the MIKEY packet containing an MSK update message. First, the USIM uses the MUK ID to identify the Ks_int_NAF corresponding with a previous bootstrapping procedure.

The USIM shall check if a new NAF derivation procedure involving the received NAF_ID in the MIKEY message has been performed. In such a case, the USIM shall store the last bootstrapped Ks_int_NAF as the ~~current~~ last generated MUK and update EF_{MUK} as follows:

- If a record with the received NAF_ID (included in the MUK ID: see TS 33.246 [43]) value is already present, then the MUK ID is stored in the corresponding field of this record, and the associated Time Stamp Counter (TS) field is reset. Additionally, the USIM internally stores the last successfully used MUK (i.e. MUK that was used during the last successful MSK update procedure), along with its MUK ID for further use (e.g. to detect Key freshness failure).

- If a record with the received NAF_ ID does not exist, the USIM uses an empty record to include the MUK ID, and reset the associated TS field.

If the received MUK ID does not correspond to the ~~current~~ last generated MUK (i.e. last bootstrapped MUK) then the USIM proceeds as follows:

- If the received MUK ID corresponds to the last successfully used MUK ~~and if the received MIKEY message corresponds to a push solicited pull procedure~~ then the USIM uses this MUK to verify the integrity of the message. If the verification is unsuccessful, the USIM abandons the function and returns the status word '9862' (Authentication error, incorrect MAC). If the verification is successful, the USIM abandons the function and returns the status word '9865' (the BM-SC shall be notified to retrieve the latest Ks_int_NAF: see TS 33.246 [43]). In this case, the USIM shall not return a MIKEY verification message.

- Otherwise, this is considered as a bootstrapping failure (incorrect MUK) and the USIM abandons the function. The status word ‘6A88’ (Referenced data not found) is returned.

Otherwise, if the received MUK ID corresponds to the ~~current~~ last generated MUK, the USIM uses the MUK value for MSK validation and derivation functions as described in TS 33.246 [43]. If the validation is unsuccessful, the status word '9862' (Authentication error, incorrect MAC) is returned and the USIM abandons the function.

After a successful MSK Update procedure the USIM stores the received MSK and updates EF_{MSK} as follows:

- If a record with the received Key Domain ID and Key Group part (i.e. Key Group part of the MSK ID) already exists, the 2nd ~~-~~MSK ID and the associated TS shall be replaced by the 1st MSK ID and the associated TS. Then the new MSK ID is stored as the 1st MSK ID and the associated TS is reset.

- If a record with the received Key Domain ID and Key Group part does not exist, the USIM uses an empty record to include those values. The received MSK ID is stored as the 1st MSK ID and the associated TS is reset. The 2nd MSK ID and the associated TS are set to 'FF FF'.

NOTE: The policy of replacing Key Domain records when no more empty records are available in EF_{MSK} is HE specific. (e.g. delete Groups from visited Key Domains first)

Then, the USIM stores the Time Stamp field (retrieved from the MIKEY message) in its corresponding field under EF_{MUK}.

The USIM stores internally the last successfully used MUK along with its MUK ID for further use. This MUK may be used beyond its GBA validity (i.e. after the derivation of a new Ks_int_NAF resulting from a new bootstrap procedure) to verify the integrity of ~~the first~~a MIKEY message in order to detect a synchronization failure ~~of a push solicited pull procedure~~. This may occur if the last derived Ks_int_NAF did not reach the BM-SC.

NOTE: The MSK is not necessarily updated in the message, since a MSK transport message can be sent e.g. to update the Key Validity data.

Finally, if the V-bit in the HDR field of the received MIKEY message is set then the USIM shall produce a MSK Verification Message as described in TS 33.246 [43]. In this case the command response is the MIKEY verification message.

Input:

- MIKEY message

Output:

- MIKEY message

or

- None

7.1.1.7 ~~MBMS security context (MSK Verification Mode)~~Void

~~USIM operations in MBMS security context are supported if service n°69 is "available".~~

~~The USIM receives the NAF_ID and MIKEY packet containing an MIKEY verification message, with an empty MAC field.~~

~~First, the USIM tests if the given MUK ID corresponds to a stored MUK ID in EF_{MUK} and if the Time Stamp field in the given MKEY message corresponds with the stored Time Stamp Counter (TS) in EF_{MUK}.~~

~~If any of these verifications fails, this is considered as a Verification failure and the USIM abandons the function. The status word '6985' (Conditions of use not satisfied) is returned.~~

~~Otherwise, the USIM computes the MAC value as defined in TS 33.246 [43] and sends back the complete MIKEY verification message.~~

~~Input:~~

~~NAF_ID, MIKEY message~~

~~Output:~~

~~MIKEY message~~

7.1.1.8 MBMS security context (MTK Generation Mode)

USIM operations in MBMS security context are supported if service n°69 is "available".

The USIM receives the MIKEY message containing an MBMS MTK and a Salt key (if Salt key is available). First, the USIM retrieves the MSK with the Key Domain ID and the MSK ID given by the Extension payload of the MIKEY message (as described in TS 33.246 [43]).

If the needed MSK does not exist, this is considered as a MSK failure and the USIM abandons the function. The status word '6A88' (Referenced data not found) is returned.

If the key validity data of the MSK indicates an invalidated MSK (i.e. SEQl is greater than SEQu) then the USIM returns the status word '6985' (Conditions of use not satisfied) and abandons the function. SEQl and SEQu are defined in TS 33.246 [43].

Otherwise, the USIM performs the MBMS Generation and Validation Function (MGV-F) as described in TS 33.246 [43] using MSK.

If the USIM detects that the given MTK ID is invalid, this is considered as a SEQp freshness failure and the USIM abandons the function. The status word '9865' (Key freshness failure) is returned.

If the integrity validation of the MIKEY message is unsuccessful, the USIM abandons the function and returns the status word '9862' (Authentication error, incorrect MAC).

After successful MGV_F procedure the USIM stores the Time Stamp field (retrieved from the MIKEY message) as the Time Stamp Counter (TS) associated with the involved MSK under EF_{MSK}

The USIM also stores MTK ID (retrieved from the MIKEY message) as the SEQl~~s~~ associated with MSK.

Then, the USIM returns MTK and Salt key (if Salt key is available).

Input:

- MIKEY message

Output:

- MTK and Salt (if available)

7.1.2.5 MBMS security context (All Modes)

Byte(s)	Description	Length
1	MBMS Security Context Mode	1
2	Length of MIKEY message (L1)	1
3 to (L1+2)	MIKEY message	L1
~~(L1+3)~~	~~Length of NAF_ID (L2) (see note1)~~	~~1~~
~~(L1+4) to (L1+L2+3)~~	~~NAF_ID (see note1)~~	~~L2~~
~~NOTE 1: Parameter present if and only if in MSK Verification Mode.~~		

Parameter MBMS Security Context Mode specifies the MBMS mode in which MBMS security procedure is performed as follows:

Coding of MBMS Security Context Mode

Coding	Meaning
'01'	MSK Update Mode
~~'02~~	~~MSK Verification Mode~~
'02'~~3~~"	MTK Generation Mode

Response parameters/data, MBMS security context (MSK ~~Verification~~ Update Mode), command successful:

Byte(s)	Description	Length
1	"Successful MBMS operation" tag = 'DB' (see note 1)	1
2	Length of MIKEY (L) (see note 1)	1
3 to (L+2)	MIKEY message (see note 1)	L
NOTE 1: Parameter present if a MIKEY verification message is returned.		

Response parameters/data, MBMS security context (MTK Generation Mode), command successful:

Byte(s)	Description	Length
1	"Successful MBMS operation" tag = 'DB'	1
2	Length of MTK and Salt (if Salt key is available) (L)	1
3 to (L+2)	MTK || Salt (if available)	L

The coding of parameters is described in TS 33.246 [43].

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

C6-050394

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.121** **CR** **068** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR 31.121 Rel-5: Introduction of BCD number/ SSC content extension tests
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	27/04/2005
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Phonebook tests in TS 31.121 are insufficient to ensure correct BCD number/ SSC content extension support
Summary of change:	⌘	Test for BCD number/ SSC content extension support created
Consequences if not approved:	⌘	Phonebook tests in TS 31.121 are insufficient to ensure correct BCD number/ SSC content extension support

Clauses affected:	⌘	8.1

Other specs affected: ⌘

Y	N	
	X	Other core specifications
	X	Test specifications
	X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:
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Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1 Phone book procedures

[..]

8.1.2 Update of the Phonebook Synchronisation Counter (PSC)

[..]

8.1.x Phonebook content handling

8.1.x.y.1 Handling of BCD number/ SSC content extension

8.1.x.y.1 Definition and applicability

The length of BCD number/SSC contents in EF_{ADN} byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself.

This test applies to all terminals supporting the global phonebook.

8.1.x.y.2 Conformance requirement

The terminal shall support the BCD number/ SSC extension for EF_{ADN} as defined in 3GPP TS 31.102[4], subclauses 4.4.2.3 and 4.4.2.4.

Reference:

- 3GPP TS 31.102[4], subclauses 4.4.2.3 and 4.4.2.4.

8.1.x.y.3 Test purpose

1) To verify that the terminal is able to read and update BCD numbers/ SSC content with and without extension correctly in EF_{ADN} and EF_{EXT1}.

8.1.x.y.4 Method of test

8.1.x.y.4.1 Initial conditions

The terminal is connected to the USIM Simulator.

The default USIM is used with the following exceptions:

Only the global phonebook is present.

The global phonebook shall contain:

EF_{PBR} (Phonebook reference file)

Logically: Only EF_{ADN} and EF_{EXT1} are present in the local phonebook.

EF_{ADN} (Abbreviated dialling numbers)

Logically:

10 records, each record non-empty and unique. Unless otherwise stated, the ADN records shall not use extendend BCD numbers/SSC strings.

Record 1:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact001";
	Length of BCD number:	11;
	TON and NPI:	Telephony and International;
	Dialled number:	"00112233445566778899";
	CCI:	None;
	Ext1:	01.

Record 1:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	31	FF	…	FF	0B

	B34	B35	B36	B37	B38	B39	B40	B41	B42	B43	B44	B45	B46
	91	00	11	22	33	44	55	66	77	88	99	FF	01

Record 2:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact002";
	Length of BCD number:	11;
	TON and NPI:	Telephony and International;
	Dialled number:	"01234567890123456789";
	CCI:	None;
	Ext1:	None.

Record 2:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	32	FF	…	FF	0B

	B34	B35	B36	B37	B38	B39	B40	B41	B42	B43	B44	B45	B46
	91	10	32	54	76	98	10	32	54	76	98	FF	FF

Record 3:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact003";
	Length of BCD number:	11;
	TON and NPI:	Telephony and International;
	Dialled number:	"99887766554433221100";
	CCI:	None;
	Ext1:	02.

Record 3:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	33	FF	…	FF	0B

	B34	B35	B36	B37	B38	B39	B40	B41	B42	B43	B44	B45	B46
	91	99	88	77	66	55	44	33	22	11	00	FF	02

Record 4:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact004";
	Length of BCD number:	9;

	TON and NPI:	Telephony and International;
	Dialled number:	"1212121212121212";
	CCI:	None;
	Ext1:	"FF".

Record 4:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	...	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	34	FF	...	FF	09

	B34	B35	B36	B37	B38	B39	B40	B41	B42	B43	B44	B45	B46
	91	21	21	21	21	21	21	21	21	FF	FF	FF	FF

Record 7:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact007";
	Length of BCD number:	3;
	TON and NPI:	Telephony and International;
	Dialled number:	"678";
	CCI:	None;
	Ext1:	"FF".

Record 7:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	...	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	37	FF	...	FF	03

	B34	B35	B36	B37	B38	B39	B40	B41	B42	B43	B44	B45	B46
	91	76	F8	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

EF_{EXT1} (Extension 1)

Logically: 4 records

Record 1:	Record type:	Additional data
	Extension data:	"01234567890123456789";
	Identifier:	"FF".

Record 1:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
Hex	02	0A	10	32	54	76	98	10	32	54	76	98	FF

Record 2:	Record type:	Additional data
	Extension data:	"99887766554433221100";
	Identifier:	"FF".

Record 2:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
Hex	02	0A	99	88	77	66	55	44	33	22	11	00	03

Record 3:	Record type:	Additional data
	Extension data:	"11p12345";
	Identifier:	"FF".

Record 3:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
Hex	02	04	11	1C	32	54	FF	FF	FF	FF	FF	FF	FF

Record 4: Record type: "FF"
Extension data: empty;
Identifier: "FF".

Record 4:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
Hex	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

8.1.x.y.4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall use a MMI dependent procedure to select the global phonebook.

c) The user shall change the BCD number of the entry "Contact002" in record 2 of EF_{ADN} to "22446622446622446600777888999"

d) The user shall extend the BCD number of the entry "Contact007" in record 2 of EF_{ADN} to "01234567890123456789777888999"

e) The user shall delete the phonbook entry "Contact001".

f) The user shall set the BCD number of the entry "Contact002" in record 2 of EF_{ADN} to "22446622446600"

g) The user shall create the new phonebook entry "NewContact" with the BCD number "12345678901234567890123456789012345678901234567890123456789012".

h) The user shall delete the phonbook entry "Contact003".

i) The terminal is switched off.

8.1.x.y.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application.

2) After step b) the terminal shall have selected the global phonebook and shall have read EF_{PBR} in the global phonebook.

3) After step c) the record 2 of EF_{ADN} shall contain "22446622446622446600" as BCD number and "04" as extension record identifier. Record 4 of EF_{EXT1} shall contain "Additional data" as record type, the BCD number extension "777888999" and "FF" as identifier to indicate the end of the chain.

4) After step d) the terminal shall have taken action to prevent storage of the extended BCD number, e.g. by giving an indication to the user or not allowing to enter the extended number. EF_{EXT1} shall have not been updated and the extension record identifier of record 7 in EF_{ADN} shall remain as "FF".

5) After step e) record 1 of EF_{ADN} and EF_{EXT1} shall be empty.

6) After step f) record 4 of EF_{EXT1} shall be empty and the record used for storing the entry with the alpha identifier "Contact002" of EF_{ADN} shall contain the BCD number "22446622446600" and the extension record identifier "FF".

7) After step g) a record of EF_{ADN} shall contain "NewContact" as alpha identifier, "12345678901234567890" as BCD number and shall use an extension record identifier unequal to "FF".

The EF_{EXT1} record which was indicated in the EF_{ADN} record used in this case shall contain "Additional data" as record type, "12345678901234567890" as BCD number and an extension record identifier unequal to "FF",

while the EF_{EXT1} record used to continue the chain inside EF_{EXT1} shall contain "Additional data" as record type, "123456789012" as BCD number and "FF" as extension record identifier.

8) After step h) record 3 of EF_{ADN} and the related records of EF_{EXT1} shall be empty.

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

C6-050396

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.121** **CR** **072** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR 31.121 Rel-5: Introduction of ACL tests
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	29/04/2005
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	3GPP TS 31.121 does not contain tests for the USIM service "Access Point Name Control List (ACL)" to verify that the terminal handles the ACL service correctly
Summary of change:	⌘	Introduction of ACL tests into 3GPP TS 31.121
Consequences if not approved:	⌘	No tests available to verify that the terminal handles the ACL service provided by the USIM correctly

Clauses affected:	⌘	2, New clause			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] ISO/IEC 7816-1 (1998): "Identification cards - Integrated circuit(s) cards with contacts - Part 1: Physical characteristics".

[2] ISO/IEC 7816-6 (1996): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".

[3] 3GPP TS 23.038: "Alphabets and language-specific information".

[4] 3GPP TS 31.102: "Characteristics of the USIM application".

[5] ETSI TS 102 221 Release 99: "UICC-Terminal interface; Physical and logical characteristics".

[6] 3GPP TS 22.011: "Service accessibility".

[7] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[8] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)".

[9] 3GPP TS 23.086: "Advice of Charge (AoC) Supplementary Service - Stage 2".

[10] 3GPP TS 24.086: "Advice of Charge (AoC) Supplementary Service - Stage 3".

[11] 3GPP TS 22.101: "Service aspects; Service principles".

[12] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".

[13] 3GPP TS 23.040: " Technical realization of the Short Message Service (SMS)".

[14] 3GPP TS 23.003: "Numbering, Addressing and Identification".

[15] GSM 04.18: "Mobile radio interface layer 3 specification; Radio Resource Control Protocol".

[16] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core Network protocols; Stage 3".

[17] 3GPP TS 24.080: "Mobile radio Layer 3 supplementary service specification; Formats and coding".

[18] 3GPP TS 22.086: "Advice of Charge (AoC) supplementary services; Stage 1".

[19] 3GPP TS 21.111: "USIM and IC card requirements".

[20] 3GPP TS 25.331 "Radio Resource Control (RRC); Protocol Specification"

[21] 3GPP TS 34.108 "Common test environments for User Equipment (UE) conformance testing"

[22] 3GPP TS 51.010-1 "Mobile Station (MS) conformance specification; Part1: Conformance specification"

[xx] 3GPP TS 23.060 "General Packet Radio Service (GPRS); Service description; Stage 2"

8 Subscription independent tests

[..]

x USIM service handling

x.y Access Point Name Control List handling

x.y.1 Access Point Name Control List handling for terminals supporting ACL

x.y.1.1 Definition and applicability

This EF_{ACL} contains the list of allowed APNs (Access Point Names).When the APN Control List service is enabled, the ME shall check that the entire APN of any PDP context is listed in EF_{ACL} before requesting this PDP context activation from the network. If the APN is not present in EF_{ACL}, the ME shall not request the corresponding PDP context activation from the network.

This test applies to terminals supporting ACL.

x.y.1.2 Conformance requirement

The terminal shall support the APN Control List service as defined in 3GPP TS 31.102[4], subclauses 5.1.1.2 and 5.3.14.

Reference:

- 3GPP TS 31.102[4], subclauses 4.2.8, 4.2.48, 5.1.1.2 and 5.3.14;
- 3GPP TS 23.060[xx], subclause 9.2.

x.y.1.3 Test purpose

1) To verify that the terminal takes into account the status of the APN Control List service as indicated in EF_{UST} and EF_{EST}.

2) To verify that the terminal checks that the entire APN of any PDP context is listed in EF_{ACL} before requesting this PDP context activation from the network if the ACL service is enabled.

3) To verify that the terminal does not request the corresponding PDP context activation from the network if the ACL service is enabled and the APN is not present in EF_{ACL}.

x.y.1.4 Method of test

x.y.1.4.1 Initial conditions

The terminal is connected to the USIM Simulator and the (U)SS.

The default USIM is used with the following exceptions:

The APN Control List (ACL) shall be allocated and activated in the USIM Service Table and enabled in the Enabled Service Table.

EF_{ACL} shall be present with the following values:

EF_{ACL} (Access Point Control List)

Logically:	Number of APNs:	3
	1st APN:	test.test
	2nd APN:	3gpp.test
	3rd APN:	2gpp.test

Byte:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Coding:	03	DD	0A	04	74	65	73	74	04	74	65	73
	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24
	74	DD	0A	04	33	67	70	70	04	74	65	73
	B25	B26	B27	B28	B29	B30	B31	B32	B33	B34	B35	B36
	74	DD	0A	04	32	67	70	70	04	74	65	73
	B37											
	74											

x.y.1.4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall request a PDP context activation to "1gpp.test".

c) The user shall request a PDP context activation to "3gpp.test".

d) The user shall deactivate the PDP context.

e) The user shall disable the APN Control List service. When prompted to enter PIN2, the user shall present the correct PIN2 value.

f) The user shall request a PDP context activation to "1gpp.test".

g) The user shall switch off the terminal (to deactivate the PDP context) and shall switch the terminal on again.

h) The user shall enable the APN Control List service. When prompted to enter PIN2, the user shall present the correct PIN2 value.

i) The user shall request a PDP context activation to "1ppp.net".

j) The terminal is switched off and on.

k) The user shall add the APN "1ppp.net" to the APN Control List. When prompted to enter PIN2, the user shall present the correct PIN2 value.

l) The user shall request a PDP context activation to "1ppp.net".

m) The user shall switch off the terminal (to deactivate the PDP context).

x.y.1.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application, shall have read the status of the ACL service in EF_{UST} and EF_{EST} and be in updated idle mode on the (U)SS.

2) The terminal shall have not requested a PDP context activation in step b).

3) After step c) the PDP context shall have been activated.

4) After step d) the PDP context shall have been deactivated.

5) After step e) the APN Control List service shall have been set to disabled in EF_{EST}.

6) After step f) the PDP context shall have been activated.

7) After step g) the PDP context shall have been deactivated.

8) After step h) the APN Control List service shall have been set to enabled in EF_{EST}.

9) The terminal shall not have requested a PDP context activation in step i).

10) After step k) the APN "1ppp.net" shall have been added to the APN Control List in EF_{ACL}.

11) After step l) the PDP context shall have been activated.

x.y.2 Network provided APN handling for terminals supporting ACL

x.y.2.1 Definition and applicability

This EF_{ACL} contains the list of allowed APNs (Access Point Names).When the APN Control List service is enabled, the ME shall check that the entire APN of any PDP context is listed in EF_{ACL} before requesting this PDP context activation from the network. If the APN is not present in EF_{ACL}, the ME shall not request the corresponding PDP context activation from the network.

In the case that the APN Control List is enabled and no APN is indicated in the PDP context request, indicating that a network provided APN is to be used, then the ME shall only request the PDP context activation if "network provided APN" is contained within EF_{ACL}.

This test applies to terminals supporting ACL.

x.y.2.2 Conformance requirement

The terminal shall support the APN Control List service as defined in 3GPP TS 31.102[4], subclauses 5.1.1.2 and 5.3.14.

Reference:

- 3GPP TS 31.102[4], subclauses 4.2.8, 4.2.48, 5.1.1.2 and 5.3.14;
- 3GPP TS 23.060[xx], subclause 9.2.

x.y.2.3 Test purpose

1) To verify that if ACL is enabled and if no APN is indicated in the PDP context the terminal request the PDP context activation only if "network provided APN" is contained within EF_{ACL}.

2) To verify that the user is able to set an APN in EF_{ACL} entry to the value "network provided APN".

3) To verify that the minimum set of APN entries in EF_{ACL} is ensured when the user deletes APN entries.

x.y.2.4 Method of test

x.y.2.4.1 Initial conditions

The terminal is connected to the USIM Simulator and the (U)SS.

The default USIM is used with the following exceptions:

The APN Control List (ACL) shall be allocated and activated in the USIM Service Table and enabled in the Enabled Service Table.

EF_{ACL} shall be present with the following values:

EF_{ACL} (Access Point Control List)

Logically:	Number of APNs:	3
	1st APN:	test.test
	2nd APN:	3gpp.test
	3rd APN:	2gpp.test

Byte:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Coding:	03	DD	0A	04	74	65	73	74	04	74	65	73
	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24
	74	DD	0A	04	33	67	70	70	04	74	65	73
	B25	B26	B27	B28	B29	B30	B31	B32	B33	B34	B35	B36
	74	DD	0A	04	32	67	70	70	04	74	65	73
	B37											
	74											

x.y.2.4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall add "network provided APN" to the APN Control List in EF_{ACL} by using a MMI dependent option in the terminal. When prompted to enter PIN2, the user shall present the correct PIN2 value.

c) The user shall request a PDP context activation to "3gpp.test".

d) The user shall deactivate the PDP context.

e) The user shall request a PDP context activation without indicating an APN.

f) The user shall deactivate the PDP context.

g) The user shall delete "network provided APN" from the APN Control List in EF_{ACL} by using a MMI dependent option in the terminal. When prompted to enter PIN2, the user shall present the correct PIN2 value.

h) The user shall request a PDP context activation to "3gpp.test".

i) The user shall deactivate the PDP context.

j) The user shall request a PDP context activation without indicating an APN.

k) The user shall try to delete all APNs from the APN Control List in EF_{ACL} by using a MMI dependent option in the terminal. When the terminal indicates that at least one APN entry shall remain, the user shall set this entry to "network provided APN". When prompted to enter PIN2, the user shall present the correct PIN2 value.

l) The user shall switch off the terminal.

x.y.2.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application, shall have read the status of the ACL service in EF_{UST} and EF_{EST} and be in updated idle mode on the (U)SS.

2) After step b) EF_{ACL} shall contain an entry for "network provided APN".

3) After step c) the PDP context shall have been activated.

4) After step d) the PDP context shall have been deactivated.

5) After step e) the PDP context shall have been activated.

6) After step f) the PDP context shall have been deactivated.

7) After step g) EF_{ACL} shall not contain an entry for "network provided APN".

8) After step h) the PDP context shall have been activated.

9) After step i) the PDP context shall have been deactivated.

10) The terminal shall have not requested a PDP context activation in step j).

11) After step k) EF_{ACL} shall contain one APN entry with the value "network provided APN" and the corresponding number of APNs in EF_{ACL} shall be 1.

x.y.3 Access Point Name Control List handling for terminals not supporting ACL

x.y.3.1 Definition and applicability

This EF_{ACL} contains the list of allowed APNs (Access Point Names).When the APN Control List service is enabled, the ME shall check that the entire APN of any PDP context is listed in EF_{ACL} before requesting this PDP context activation from the network. If the APN is not present in EF_{ACL}, the ME shall not request the corresponding PDP context activation from the network.

If ACL is enabled, a ME which does not support ACL shall not send any APN to the network.

This test applies to terminals not supporting ACL.

x.y.3.2 Conformance requirement

An ME which does not support ACL shall not send any APN to the network if ACL is enabled.

Reference:

- 3GPP TS 31.102[4], 5.1.1.2.

x.y.3.3 Test purpose

To verify that if ACL is enabled, a ME which does not support ACL, does not send any APN to the network to request a PDP context activation.

x.y.3.4 Method of test

x.y.3.4.1 Initial conditions

The terminal is connected to the USIM Simulator and the (U)SS.

The default USIM is used with the following exceptions:

The APN Control List (ACL) shall be allocated and activated in the USIM Service Table and enabled in the Enabled Service Table.

EF_{ACL} shall be present with the following values:

EF_{ACL} (Access Point Control List)

Logically:	Number of APNs:	3
	1st APN:	test.test
	2nd APN:	3gpp.test
	3rd APN:	2gpp.test

Byte:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Coding:	03	DD	0A	04	74	65	73	74	04	74	65	73
	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24
	74	DD	0A	04	33	67	70	70	04	74	65	73
	B25	B26	B27	B28	B29	B30	B31	B32	B33	B34	B35	B36
	74	DD	0A	04	32	67	70	70	04	74	65	73
	B37											
	74											

x.x.3.4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall request a PDP context activation to "3gpp.test".

c) The terminal shall be switched off.

x.y.3.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application, shall have read the status of the ACL service in EF_{UST} and EF_{EST} and be in updated idle mode on the (U)SS.

2) The terminal shall not have sent any APN to the network in step b).

3GPP TSG-CT6 #35
Cancun, Mexico, 25-29 April 2005

C6-050403

CR-Form-v7.1

CHANGE REQUEST

⌘ **31 102** **CR** 286 ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Number of stored MSKs
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	During the SA3#36 meeting, it was suggested in S3-050128 to increase the number of stored MSK per Key Domain ID/Key Group ID from 2 to 16. Although this proposal was not adopted for release 6, it was noted that the maximum number of stored MSKs could be upgraded in future releases. To avoid future backward compatible issues a mechanism to indicate the number of stored Key IDs shall be defined.
Summary of change:	⌘	- Introduce a byte in the record structure of EF_{MSK} (MBMS Service Keys List) to indicate the number of stored MSK IDs and corresponding Time Stamp within a record. - Editorial corrections
Consequences if not approved:	⌘	No possible future evolution of the number of stored MSKs per record.

Clauses affected:	⌘	4.2.80, 7.1.1.3, 7.1.1.5, 7.1.1.6

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.2.80 EF_{MSK} (MBMS Service Keys List)

A record of this EF contains the list of MBMS Service Keys (MSK) and associated parameters, which are related to an MBMS Key Domain. There are up to two MSKs per Key Domain ID/Key Group ID pair, where the Key Group ID is the Key Group part of the MSK ID as defined in TS 33.246 [43]. Two 4 byte MSK IDs stored within a record have the same value for the 2 byte Key Group part. This file shall be present if the MBMS security service (service number 69) is allocated in EF_{UST} (USIM Service Table).

Identifier: '6FD7'	Structure: linear fixed	Optional
Record length: ~~19~~ 8n+4 bytes	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to 3	Key Domain ID	M	3 bytes
4	Number of stored MSK IDs and corresponding TS	M	1 byte
5~~4~~ to 8~~7~~	1st MSK ID	M	4 bytes
9~~8~~ to 12~~1~~	1st Time Stamp Counter (TS)	M	4 bytes
13~~2~~ to 16~~5~~	2nd MSK ID	M	4 bytes
17~~6~~ to 20~~19~~	2nd Time Stamp Counter (TS)	M	4 bytes
8(n-1)+5 to 8n	nth MSK ID	O (See Note)	4 bytes
8n+1 to 8n+4	nth Time Stamp Counter (TS)	C (See Note)	4 bytes

Note: In the current version of the specification, these bytes are RFU.

- Key Domain ID:
  Content: Identifier of the Domain of the BM-SC providing MBMS Service
  Coding: As defined in TS 33.246 [43]

- Number of stored MSK IDs and corresponding TS:
  Content: Number of stored MSK IDs and corresponding Time Stamp counter (TS) within the record, as defined in TS 33.246 [43]. This number shall not exceed the maximum limit of MSK IDs fixed in TS 33.246 [43] (e.g if the maximum number of MSK IDs is 2, then this byte may only take the following values: '00', '01', '02').
  Coding: binary.

- MSK ID:
  Content: Identifier of MBMS Service Key (MSK) within a particular Key Domain.
  Coding: As defined in TS 33.246 [43]

- Time Stamp Counter (TS)
  Content: Counter for MIKEY replay protection in MTK delivery. Each counter is associated with a particular MSK.
  Coding: As defined in TS 33.246 [43]

Any unused bytes shall be set to 'FF'.

7.1.1.3 VGCS/VBS security context

USIM operation in a VGCS/VBS security context is supported if Service n°64 or Service n°65 are "available".

The USIM computes the Short Term Key (VSTK) associated with a particular VGCS/VBS Group Identifier (Group_Id). For this computation, the USIM uses the Voice Group (for VGCS) or Broadcast Group (for VBS) Key

(V_Ki) identified by their respective Group_Id and Master Group Key Identifier (VK_Id). The USIM retrieves the Group_Id and the service flag (VGCS or VBS) from the received Voice Service Identifier (VService_Id).

NOTE: The Group_Id has a variable length according to TS 43.068 [~~xx~~46].

The USIM shall first search if the Group_Id corresponds to a stored VGCS Group Identifier in EF_{VGCS} or a stored VBS Group Identifier in EF_{VBS}.

Then, the USIM shall retrieve the V_Ki corresponding to the given Group_Id and VK_Id.

Then the USIM uses V_Ki and VSTK_RAND as input parameters for the A8_V key derivation function (as defined in 3GPP TS 43.020 [44]) in order to compute and returns VSTK.

Input:

- VService_Id, VK_Id, VSTK_RAND

Output:

- VSTK.

7.1.1.5 GBA security context (NAF Derivation Mode)

USIM operations in GBA security context are supported if service n°68 is "available".

The USIM receives the NAF_ID and IMPI.

The USIM performs Ks_ext_NAF and Ks_int_NAF derivation as defined in TS 33.220 [42] using the key material from the previous GBA_U bootstrapping procedure.

If no key material is available this is considered as a GBA Bootstrapping failure and the USIM abandons the function. The status word '6985' (Conditions of use not satisfied) is returned.

Otherwise, the USIM stores Ks_int_NAF and associated B-TID together with NAF_ID. The Ks_int_NAF keys related to other NAF_IDs, which are already stored in the USIM, shall not be affected. The USIM updates EF_{GBANL} as follows:

- If a record with the given NAF_ID already exists, the USIM updates the B-TID field of this record with the B-TID value associated to the GBA_U bootstrapped key involved in this GBA_U NAF derivation procedure.
- ~~—~~If a record with the given NAF_ID does not exist, the USIM uses an empty record to store the NAF_ID and the B-TID value associated to the GBA_U bootstrapped key involved in this GBA_U NAF Derivation procedure.

  NOTE: According to TS 33.220 [42], the USIM can contain several Ks_int_NAF together with the associated B-TID and NAF_ID, but there is at most one pair of Ks_int_NAF and associated B-TID stored per NAF_ID.

Then, the USIM returns Ks_ext_NAF.

Input:

- NAF_ID, IMPI

Output:

- Ks_ext_NAF

[…]

7.1.1.6 MBMS security context (MSK Update Mode)

The USIM receives the MIKEY packet containing an MSK update message. First, the USIM uses the MUK ID to identify the Ks_int_NAF corresponding with a previous bootstrapping procedure.

The USIM shall check if a new NAF derivation procedure involving the received NAF_ID in the MIKEY message has been performed. In such a case, the USIM shall store the last bootstrapped Ks_int_NAF as the current MUK and update EF_{MUK} as follows:

- If a record with the received NAF_ID (included in the MUK ID: see TS 33.246 [43]) value is already present, then the MUK ID is stored in the corresponding field of this record, and the associated Time Stamp Counter (TS) field is reset. Additionally, the USIM internally stores the last used MUK (i.e. MUK that was used during the last successful MSK update procedure), along with its MUK ID for further use (e.g. to detect Key freshness failure).

- If a record with the received NAF_ ID does not exist, the USIM uses an empty record to include the MUK ID, and reset the associated TS field.

If the received MUK ID does not correspond to the current MUK (i.e. last bootstrapped MUK) then the USIM proceeds as follows:

- If the received MUK ID corresponds to the last used MUK and if the received MIKEY message corresponds to a push solicited pull procedure then the USIM uses this MUK to verify the integrity of the message. If the verification is unsuccessful, the USIM abandons the function and returns the status word '9862' (Authentication error, incorrect MAC). If the verification is successful, the USIM abandons the function and returns the status word '9865' (the BM-SC shall be notified to retrieve the latest Ks_int_NAF: see TS 33.246 [43]).

- Otherwise, this is considered as a bootstrapping failure (incorrect MUK) and the USIM abandons the function. The status word ‘6A88’ (Referenced data not found) is returned.

Otherwise, if the received MUK ID corresponds to the current MUK, the USIM uses the MUK value for MSK validation and derivation functions as described in TS 33.246 [43]. If the validation is unsuccessful, the status word '9862' (Authentication error, incorrect MAC) is returned and the USIM abandons the function.

After a successful MSK Update procedure the USIM stores the received MSK and updates EF_{MSK} as follows:

- If a record with the received Key Domain ID and Key Group part (i.e. Key Group part of the MSK ID) already exists, the 2nd -MSK ID and the associated TS shall be replaced by the 1st MSK ID and the associated TS. Then the new MSK ID is stored as the 1st MSK ID and the associated TS is reset. The number of stored MSK IDs and corresponding TS shall be set to '02'.

- If a record with the received Key Domain ID and Key Group part does not exist, the USIM uses an empty record to include those values. The received MSK ID is stored as the 1st MSK ID and the associated TS is reset. The 2nd MSK ID and the associated TS are set to 'FF FF'. The number of stored MSK IDs and corresponding TS shall be set to '01'.

NOTE: The policy of replacing Key Domain records when no more empty records are available in EF_{MSK} is HE specific. (e.g. delete Groups from visited Key Domains first)

Then, the USIM stores the Time Stamp field (retrieved from the MIKEY message) in its corresponding field under EF_{MUK}.

The USIM stores internally the last used MUK along with its MUK ID for further use. This MUK may be used beyond its GBA validity (i.e. after the derivation of a new Ks_int_NAF resulting from a new bootstrap procedure) to verify the integrity of the first MIKEY message in order to detect a synchronization failure of a push solicited pull procedure. This may occur if the last derived Ks_int_NAF did not reach the BM-SC.

NOTE: The MSK is not necessarily updated in the message, since a MSK transport message can be sent e.g. to update the Key Validity data.

Input:

- MIKEY message

Output:

- None

3GPP TSG-CT6 #35
Cancun, Mexico, 25-29 April 2005

C6-050404

CR-Form-v7.1

CHANGE REQUEST

⌘ **31 102** **CR** 287 ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Number of stored MSKs
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	28/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	During the SA3#36 meeting, it was suggested in S3-050128 to increase the number of stored MSK per Key Domain ID/Key Group ID from 2 to 16. Although this proposal was not adopted for release 6, it was noted that the maximum number of stored MSKs could be upgraded in future releases. To avoid future backward compatible issues a mechanism to indicate the number of stored Key IDs shall be defined.
Summary of change:	⌘	- Introduce a byte in the record structure of EF_{MSK} (MBMS Service Keys List) to indicate the number of stored MSK IDs and corresponding Time Stamp within a record. - Editorial corrections
Consequences if not approved:	⌘	No possible future evolution of the number of stored MSKs per record.

Clauses affected:	⌘	4.2.80, 7.1.1.3, 7.1.1.5

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.2.80 EF_{MSK} (MBMS Service Keys List)

A record of this EF contains the list of MBMS Service Keys (MSK) and associated parameters, which are related to an MBMS Key Domain. There are up to two MSKs per Key Domain ID/Key Group ID pair, where the Key Group ID is the Key Group part of the MSK ID as defined in TS 33.246 [43]. Two 4 byte MSK IDs stored within a record have the same value for the 2 byte Key Group part. This file shall be present if the MBMS security service (service number 69) is allocated in EF_{UST} (USIM Service Table).

Identifier: '6FD7'	Structure: linear fixed	Optional
Record length: ~~19~~ 8n+4 bytes	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1 to 3	Key Domain ID	M	3 bytes
4	Number of stored MSK IDs and corresponding TS	M	1 byte
5~~4~~ to 8~~7~~	1st MSK ID	M	4 bytes
9~~8~~ to 12~~1~~	1st Time Stamp Counter (TS)	M	4 bytes
13~~2~~ to 16~~5~~	2nd MSK ID	M	4 bytes
17~~6~~ to 20~~19~~	2nd Time Stamp Counter (TS)	M	4 bytes
8(n-1)+5 to 8n	nth MSK ID	O (See Note)	4 bytes
8n+1 to 8n+4	nth Time Stamp Counter (TS)	C (See Note)	4 bytes

Note: In the current version of the specification, these bytes are RFU.

- Key Domain ID:
  Content: Identifier of the Domain of the BM-SC providing MBMS Service
  Coding: As defined in TS 33.246 [43]

- Number of stored MSK IDs and corresponding TS:
  Content: Number of stored MSK IDs and corresponding Time Stamp counter (TS) within the record, as defined in TS 33.246 [43]. This number shall not exceed the maximum limit of MSK IDs fixed in TS 33.246 [43] (e.g if the maximum number of MSK IDs is 2, then this byte may only take the following values: '00', '01', '02').
  Coding: binary.

- MSK ID:
  Content: Identifier of MBMS Service Key (MSK) within a particular Key Domain.
  Coding: As defined in TS 33.246 [43]

- Time Stamp Counter (TS)
  Content: Counter for MIKEY replay protection in MTK delivery. Each counter is associated with a particular MSK.
  Coding: As defined in TS 33.246 [43]

Any unused bytes shall be set to 'FF'.

7.1.1.3 VGCS/VBS security context

USIM operation in a VGCS/VBS security context is supported if Service n°64 or Service n°65 are "available".

The USIM computes the Short Term Key (VSTK) associated with a particular VGCS/VBS Group Identifier (Group_Id). For this computation, the USIM uses the Voice Group (for VGCS) or Broadcast Group (for VBS) Key

(V_Ki) identified by their respective Group_Id and Master Group Key Identifier (VK_Id). The USIM retrieves the Group_Id and the service flag (VGCS or VBS) from the received Voice Service Identifier (VService_Id).

NOTE: The Group_Id has a variable length according to TS 43.068 [~~xx~~46].

The USIM shall first search if the Group_Id corresponds to a stored VGCS Group Identifier in EF_{VGCS} or a stored VBS Group Identifier in EF_{VBS}.

Then, the USIM shall retrieve the V_Ki corresponding to the given Group_Id and VK_Id.

Then the USIM uses V_Ki and VSTK_RAND as input parameters for the A8_V key derivation function (as defined in 3GPP TS 43.020 [44]) in order to compute and returns VSTK.

Input:

- VService_Id, VK_Id, VSTK_RAND

Output:

- VSTK.

7.1.1.5 GBA security context (NAF Derivation Mode)

USIM operations in GBA security context are supported if service n°68 is "available".

The USIM receives the NAF_ID and IMPI.

The USIM performs Ks_ext_NAF and Ks_int_NAF derivation as defined in TS 33.220 [42] using the key material from the previous GBA_U bootstrapping procedure.

If no key material is available this is considered as a GBA Bootstrapping failure and the USIM abandons the function. The status word '6985' (Conditions of use not satisfied) is returned.

Otherwise, the USIM stores Ks_int_NAF and associated B-TID together with NAF_ID. The Ks_int_NAF keys related to other NAF_IDs, which are already stored in the USIM, shall not be affected. The USIM updates EF_{GBANL} as follows:

- If a record with the given NAF_ID already exists, the USIM updates the B-TID field of this record with the B-TID value associated to the GBA_U bootstrapped key involved in this GBA_U NAF derivation procedure.
- ~~—~~If a record with the given NAF_ID does not exist, the USIM uses an empty record to store the NAF_ID and the B-TID value associated to the GBA_U bootstrapped key involved in this GBA_U NAF Derivation procedure.

  NOTE: According to TS 33.220 [42], the USIM can contain several Ks_int_NAF together with the associated B-TID and NAF_ID, but there is at most one pair of Ks_int_NAF and associated B-TID stored per NAF_ID.

Then, the USIM returns Ks_ext_NAF.

Input:

- NAF_ID, IMPI

Output:

- Ks_ext_NAF

[…]

7.1.1.6 MBMS security context (MSK Update Mode)

The USIM receives the MIKEY packet containing an MSK update message. First, the USIM uses the MUK ID to identify the Ks_int_NAF corresponding with a previous bootstrapping procedure.

The USIM shall check if a new NAF derivation procedure involving the received NAF_ID in the MIKEY message has been performed. In such a case, the USIM shall store the last bootstrapped Ks_int_NAF as the current MUK and update EF_{MUK} as follows:

- If a record with the received NAF_ID (included in the MUK ID: see TS 33.246 [43]) value is already present, then the MUK ID is stored in the corresponding field of this record, and the associated Time Stamp Counter (TS) field is reset. Additionally, the USIM internally stores the last used MUK (i.e. MUK that was used during the last successful MSK update procedure), along with its MUK ID for further use (e.g. to detect Key freshness failure).

- If a record with the received NAF_ ID does not exist, the USIM uses an empty record to include the MUK ID, and reset the associated TS field.

If the received MUK ID does not correspond to the current MUK (i.e. last bootstrapped MUK) then the USIM proceeds as follows:

- If the received MUK ID corresponds to the last used MUK and if the received MIKEY message corresponds to a push solicited pull procedure then the USIM uses this MUK to verify the integrity of the message. If the verification is unsuccessful, the USIM abandons the function and returns the status word '9862' (Authentication error, incorrect MAC). If the verification is successful, the USIM abandons the function and returns the status word '9865' (the BM-SC shall be notified to retrieve the latest Ks_int_NAF: see TS 33.246 [43]).

- Otherwise, this is considered as a bootstrapping failure (incorrect MUK) and the USIM abandons the function. The status word ‘6A88’ (Referenced data not found) is returned.

Otherwise, if the received MUK ID corresponds to the current MUK, the USIM uses the MUK value for MSK validation and derivation functions as described in TS 33.246 [43]. If the validation is unsuccessful, the status word '9862' (Authentication error, incorrect MAC) is returned and the USIM abandons the function.

After a successful MSK Update procedure the USIM stores the received MSK and updates EF_{MSK} as follows:

- If a record with the received Key Domain ID and Key Group part (i.e. Key Group part of the MSK ID) already exists, the 2nd -MSK ID and the associated TS shall be replaced by the 1st MSK ID and the associated TS. Then the new MSK ID is stored as the 1st MSK ID and the associated TS is reset. The number of stored MSK IDs and corresponding TS shall be set to '02'.

- If a record with the received Key Domain ID and Key Group part does not exist, the USIM uses an empty record to include those values. The received MSK ID is stored as the 1st MSK ID and the associated TS is reset. The 2nd MSK ID and the associated TS are set to 'FF FF'. The number of stored MSK IDs and corresponding TS shall be set to '01'.

NOTE: The policy of replacing Key Domain records when no more empty records are available in EF_{MSK} is HE specific. (e.g. delete Groups from visited Key Domains first)

Then, the USIM stores the Time Stamp field (retrieved from the MIKEY message) in its corresponding field under EF_{MUK}.

The USIM stores internally the last used MUK along with its MUK ID for further use. This MUK may be used beyond its GBA validity (i.e. after the derivation of a new Ks_int_NAF resulting from a new bootstrap procedure) to verify the integrity of the first MIKEY message in order to detect a synchronization failure of a push solicited pull procedure. This may occur if the last derived Ks_int_NAF did not reach the BM-SC.

NOTE: The MSK is not necessarily updated in the message, since a MSK transport message can be sent e.g. to update the Key Validity data.

Input:

- MIKEY message

Output:

- None

3GPP TSG CT6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

C6-050405

CR-Form-v7.1

CHANGE REQUEST

⌘ **31 102** **CR** 269 ⌘ **rev** **1** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Clarification on ADM access condition
Source:	⌘	CT6
Work item code:	⌘	TEI-7
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	Whereas in 51.011, the value for ADM is clearly specified : **The definition of access condition ADM does not preclude the administrative authority from using ALW, CHV1, CHV2 and NEV if required.** the definition in 31.102 is not so clear and may lead to misinterpretation.
Summary of change:	⌘	Align the definition of ADM with the one in 51.011 Add definition for PIN/ADM
Consequences if not approved:	⌘	

Clauses affected:	⌘	3.1			
		Y	**N**		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3.1 Definitions

For the purposes of the present document, the following definition applies.

ADM: access condition to an EF which is under the control of the authority which creates this file.

Allocation of these levels and the respective requirements for their fulfilment are the responsibility of the appropriate administrative authority

The definition of access condition ADM does not preclude the administrative authority from using ALW, PIN, PIN2 and NEV if required.

A terminal does not need to evaluate access conditions indicated as ADM in the present document.

PIN/ADM: A terminal is required to evaluate the access condition and verify it in order to access the EF if the access condition is set to PIN or PIN2.

EHPLMN: represents the Equivalent HPLMNs for network selection purposes. The usage of EHPLMNs is defined in TS 23.122 [31].

[…]

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

Tdoc ⌘ C6-050422

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.130** **CR** **010** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Allign paragraph numbering between 31.130 and TS 102 241
Source:	⌘	CT6
Work item code:	⌘	T.E.I.
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Make it easy to read 31.130 and TS 102 241 in parallel
Summary of change:	⌘	• Move the orginal content of 6.1 to paragraph 6.0, rename 6.1 to Applet triggering and refer to TS 102 241 • Insert paragraph 4.0 to avoid hanging paragraph
Consequences if not approved:	⌘	Difficult to understand the two related specification TS 102 241 and 31.130 together.

Clauses affected:	⌘	4.0, 6, 6.0, 6.1

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4 Description

4.0 Overview

This API is an extension to the TS 102 241 [2] "UICC API for Java Card™" and requires the implementation of this specification.

The classes and interfaces described in this specification inherit functionality from the classes and interfaces specified in the "UICC API for Java Card™".

The (U)SAT Framework described in this specification is an extension of the CAT Runtime Environment defined in TS 102 241 [2].

6 (U)SAT Framework

6.0 Overview

The (U)SIM toolkit API consists of the *uicc.usim.toolkit* package for toolkit features defined in TS 31.111[7] and TS 51.014[8], and is based on the *uicc.toolkit* package defined in TS 102 241[2].

~~6.1 Overview~~

~~The (U)SIM toolkit API consists of the *uicc.usim.toolkit* package for toolkit features defined in TS 31.111[7] and TS 51.014[8], and is based on the *uicc.toolkit* package defined in TS 102 241[2].~~

6.1 Applet triggering

See TS 102 241[2].

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Cancun, Mexico, 26-29 April 2005

Tdoc ⌘ C6-050423

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.130** **CR** **012** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Delete version and author info from the Java source code
Source:	⌘	CT6
Work item code:	⌘	T.E.I.
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	REL-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Upon request from the T3 plenary delete all the author and version information from the Java source code
Summary of change:	⌘	Delete @author and @version information from Java source code
Consequences if not approved:	⌘	Lead to missunderstanding to which version of the specification the Java source file belongs

Clauses affected:	⌘	Annex_A_Java

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Package uicc.usim.access

- **SIMConstants**

```
/**
 * The <b>SIMConstants interface</b> hold all the constants defined in 3GPP TS 51.011
 *
 * @version    2.0.0
 * @author     3GPP TSG-T WG3
 */
public interface SIMConstants {
…
```

- **USIMConstants**

```
/**
 * The <b>USIMConstants interface</b> hold all the constants defined in 3GPP TS 31.102
 *
 * @author     3GPP TSG-T WG3
 */
public interface USIMConstants {
…
```

package uicc.usim.toolkit

- **ToolkitConstants**

```
/**
 *  <code>ToolkitConstants</code> encapsulates constants related to the USAT Toolkit applets.
 *
 * @version    6.2.0
 * @author     3GPP T3 API
 */
public interface ToolkitConstants extends uicc.toolkit.ToolkitConstants {
...
```

- **USATEnvelopeHandler**

```
/**
 * The USATEnvelopeHandler interface contains basic methods to handle the <b>SMS Envelope
 * </b>data field. This interface will be used by the Toolkit applet in order to
 * have access to the current SMS Envelope information. No constructor is available
 * for the Toolkit applet.
 *
 * @author     T3 SWG API
 * @see        uicc.toolkit.EnvelopeHandler
 */
public interface USATEnvelopeHandler extends uicc.toolkit.EnvelopeHandler {
…
```

- **USATEnvelopeHandlerSystem**

```
/**
 * The <code>USATEnvelopeHandlerSystem</code> class provides the means to retrieve an instance of
 * an Object implementing the <code>USATEnvelopeHandler</code> interface.<p>
 *
 *
 * @version    2.0.0
 * @author     3GPP T3 API
 * @see USATEnvelopeHandler
 */
public final class USATEnvelopeHandlerSystem {
…
```

- **USATTerminalProfile**

```
/**
 * The <code>USATTerminalProfile</code> interface contains constants for the Terminal Profile
according to TS 51.014 and to TS 31.111
 *
 * @author     3GPP T3
 * @see uicc.toolkit.TerminalProfile
 */
```

```
public interface USATTerminalProfile {
…
```

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

C6-050436

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.121** **CR** **073** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR 31.121 Rel-5: Introduction of SDN tests
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	29/04/2005
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	TS 31.121 doesn't contain SDN tests
Summary of change:	⌘	Tests for SDN created
Consequences if not approved:	⌘	Correct support of SDN not ensured

Clauses affected:	⌘	New clause			
		Y	**N**		
Other specs Affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
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Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8 Subscription independent tests

[..]

x USIM service handling

x.z Service Dialling Numbers handling

x.z.1 Definition and applicability

The Service Dialling Numbers feature allows for the storage of numbers related to services offered by the network operator/service provider in the SIM/USIM (e.g. customer care). The user can use these telephone numbers to make outgoing calls, but the access for updating of the numbers shall be under the control of the operator.

This test applies to all terminals supporting SDN.

x.z.2 Conformance requirement

The terminal shall support the Service Dialling Numbers service as defined in 3GPP TS 31.102[4], subclauses 4.2.8 and 4.2.29.

Reference:

- 3GPP TS 31.102[4], subclauses 4.2.8, 4.2.29 and 4.2.31;
- 3GPP TS 22.101[11], subclause A.23.

x.z.3 Test purpose

1) To verify that the terminal takes into account the status of the Service Dialling Numbers service as indicated in EF_{UST}.

2) To verify that the user can use the Service Dialling Numbers to make outgoing calls.

3) To verify that the terminal is able to handle SDNs with an extended dialling number string.

4) To verify that the terminal is able to handle an empty alpha identifier in EF_{SDN}.

5) To verify that the terminal is able to handle an alpha identifier of maximum length in EF_{SDN}.

x.z.4 Method of test

x.z.4.1 Initial conditions

The terminal is connected to the USIM Simulator and the (U)SS.

The default USIM is used with the following exceptions:

The Service Dialling Numbers (SDN) shall be allocated and activated in the USIM Service Table.

EF_{SDN} shall be present with the following values:

EF_{SDN} (Service Dialling Numbers)

Logically:

6 records, 1 record shall be empty. Unless otherwise stated, the SDN records shall not use extendend BCD numbers/SSC strings. Access to update EF_{SDN} shall be granted by usage of ADM1 only.

Record 1:	Length of alpha identifier:	241 characters;
	Alpha identifier:	"Hotline00112233445566778 8ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz0123456789";
	Length of BCD number:	5;
	TON and NPI:	Telephony and International;
	Dialled number:	"22223333";
	CCI:	None;
	Ext3:	"FF".

Record 1:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…
Hex	48	6F	74	6C	69	6E	65	30	30	31	…	…

	B241	B242	B243	B244	B245	B246	B247	B248	B249	B250	B251	B252
	39	05	91	22	22	33	33	FF	FF	FF	FF	FF

	B253	B254	B255
	FF	FF	FF

Record 2:	Length of alpha identifier:	241 characters;
	Alpha identifier:	"Hotline002";
	Length of BCD number:	5;
	TON and NPI:	Telephony and International;
	Dialled number:	"44554455";
	CCI:	None;
	Ext3:	"FF".

Record 2:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…
Hex	48	6F	74	6C	69	6E	65	30	30	32	FF	…

	B241	B242	B243	B244	B245	B246	B247	B248	B249	B250	B251	B252
	FF	05	91	44	55	44	55	FF	FF	FF	FF	FF

	B253	B254	B255
	FF	FF	FF

Record 3:	Length of alpha identifier:	241 characters;
	Alpha identifier:	"Hotline003";
	Length of BCD number:	11;
	TON and NPI:	Telephony and International;
	Dialled number:	"01234567890123456789";
	CCI:	None;
	Ext3:	"01".

Record 3:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…
Hex	48	6F	74	6C	69	6E	65	30	30	33	FF	…

	B241	B242	B243	B244	B245	B246	B247	B248	B249	B250	B251	B252
	FF	0B	91	10	32	54	76	98	10	32	54	76

	B253	B254	B255
	98	FF	01

Record 4:	Length of alpha identifier:	241 characters;
	Alpha identifier:	empty;
	Length of BCD number:	03;
	TON and NPI:	Telephony and International;
	Dialled number:	"007";
	CCI:	None;
	Ext3:	"FF".

Record 4:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…
Hex	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	…

	B241	B242	B243	B244	B245	B246	B247	B248	B249	B250	B251	B252
	FF	03	91	00	F7	FF	FF	FF	FF	FF	FF	FF

	B253	B254	B255
	FF	FF	FF

Record 5:	Length of alpha identifier:	241 characters;
	Alpha identifier:	empty;
	Length of BCD number:	3;
	TON and NPI:	Telephony and International;
	Dialled number:	"008";
	CCI:	None;
	Ext3:	"FF".

Record 5:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…
Hex	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	…

	B241	B242	B243	B244	B245	B246	B247	B248	B249	B250	B251	B252
	FF	03	91	00	F8	FF	FF	FF	FF	FF	FF	FF

	B253	B254	B255
	FF	FF	FF

EF_{EXT3} (Extension 3)

Logically: 5 records, 4 records empty. Access to update EF_{EXT3} shall be granted by usage of ADM1 only.

Record 1:	Record type:	Additional data
	Extension data:	"012345";
	Identifier:	"FF".

Record 1:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
Hex	02	03	10	32	54	FF	FF	FF	FF	FF	FF	FF	FF

x.z.4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall use an MMI dependent procedure to set up a call to the dialling number associated with the alpha identifier "Hotline00112233445566778ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789abcdefghijklmnopqrstuvwxyz0123456789" in record 1 of EF_{SDN}.

c) The user shall end the call.

d) The user shall use an MMI dependent procedure to set up a call to the dialling number associated with the "Hotline003" in record 3 of EF_{SDN}.

e) The user shall end the call.

f) The user shall use an MMI dependent procedure to select and to set up a call to the dialling number "+007" stored in record 3 of EF_{SDN}.

g) The user shall end the call and switch the terminal off.

x.z.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application and shall have read the status of the SDN service in EF_{UST}.

2) After step b) the terminal shall have read record 1 of EF_{SDN} and a call to "+22223333" shall have been established.

3) After step c) the call shall have been terminated.

4) After step d) the terminal shall have read record 3 of EF_{SDN} and record 1 of EF_{EXT1} and a call to "+012345678901234567890123456789012345" shall have been established.

5) After step e) the call shall have been terminated.

6) After step f) the terminal shall have read record 4 of EF_{SDN} and a call to "+007" shall have been established.

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Cancum, Mexico, 26th – 30th April 2005

Tdoc ⌘ C6-050443

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **143** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Correction to incomplete references
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	When previous CRs were implemented, the references were not updated
Summary of change:	⌘	Replacing all xx's and w's with correct references and clause numbers
Consequences if not approved:	⌘	Incomplete and misleading document.

Clauses affected:	⌘	6.6.15, 7.7.2, 8.74 & 8.76			
Other specs affected:	⌘	**Y**	**N**	Other core specifications	⌘
		[ ]	[ ]	Test specifications	
		[ ]	[ ]	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.6.15 PROVIDE LOCAL INFORMATION

Description	Clause	M/O/C	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device Identities	8.7	M	Y	B
UTRAN Measurement Qualifier	8.~~xx~~73	C	Y	C

UTRAN Measurement Qualifier: This data object applies when the Command Qualifier in Command details is set to indicate "Network Measurement results". It shall be included to indicate to the ME that "Network Measurement Results for a UTRAN" is required. It shall be excluded to indicate to the ME that "Network Measurement Results for a GERAN" is required. It shall only be included/excluded if the ME has indicated that it supports the implied access technology via the respective Terminal Profile setting.

7.7 MMS Transfer Status

7.7.1 Procedure

If the service "MMS transfer" is allocated and activated in the USIM Service Table (see 3GPP TS 31.102 [14]), then the ME shall follow the procedure below (if class "j" is supported).

- when the ME is asked by the UICC to submit a multimedia message, and after the message has been submitted by the ME to the network, the ME receives a "MM1_submit.RES" message (see 3GPP TS 23.140 [40]) from the network. Then the ME shall send this "MM1_submit.RES" message to the UICC using the ENVELOPE (MMS Transfer Status) immediately upon it's reception;

- when the ME is asked by the UICC to retrieve a multimedia message, then the ME shall store the "MM1_retrieve.RES" message (see 3GPP TS 23.140 [40]) in the UICC upon it's reception. Upon the completion of the storage, the ME shall notify it to the UICC using the ENVELOPE (MMS Transfer Status). The ME shall neither display the message nor alert the user;

- if the UICC responds with '93 00', the ME shall consider that the ENVELOPE (MMS Transfer Status) has not been successfully transferred to the UICC. The ME may retry the same command.

7.7.2 Structure of ENVELOPE (MMS Transfer Status)

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data.

Description	Clause	M/O/C	Min	Length
MMS data download tag	9.1	M	Y	1
Length (A+B+C+D)	-	M	Y	1
Device identities	8.7	M	Y	A
MMS Transfer File	8.18	M	Y	B
Multimedia Message Identifier	8.~~xx~~75	C	N	C
Multimedia Message Transfer Status	8.~~vv~~76	C	N	D

Device identities: the terminal shall set the device identities to:

source: network;

destination: UICC.

MMS Transfer File: is the path of the MMS Reception File or the MMS Submission File.

Multimedia Message Identifier: is the identifier of the Multimedia Message within the MMS Transfer File. This Identifier is mandatory in case the MMS Transfer File is able to store several MMs

Multimedia Message Transfer Status: this data object shall contain:

either the status of the submission of a Multimedia Message. It consists of the "MM1_submit.RES" message described in TS 23.140 [40].

Or shall not be present in the case of a retrieval.

NOTE: The UICC is able to identify if the envelope corresponds to a previous submit or retrieve MMS by using the MMS Tranfer File and the Multimedia Message Identifier that shall be the same between both commands.

Response parameters/data: if a request for a delivery report is included in the "MM1_retrieve.RES" message (see 3GPP TS 23.140 [40]), Response parameter/data may contain this delivery report. It consists in the "MM1_acknowledgement.REQ" message described in TS 23.140 [40].

8.74 Multimedia Message Reference

This clause applies if class "j" is supported.

Byte(s)	Description	Length
1	Multimedia Message Reference tag	1
2	Length (X)	1
3	Multimedia Message Reference	X

Multimedia Message Reference:

Contents:

This contains Multimedia Message Reference used to retrieve the MM from the network.

Coding:

The Multimedia Message Reference is the " MM1_retrieve.REQ", see TS 23.140 [~~xx~~40] for further details.

8.75 Multimedia Message Identifier

This clause applies if class "j" is supported.

Byte(s)	Description	Length
1	Multimedia Message Identifier tag	1
2	Length (X)	1
3	Multimedia Message Identifier	X

Identifier of Multimedia Message:

Contents:

This contains Multimedia Message Identifier to be used to retrieve a Multimedia Message. This identifier is mandatory in case the MMS Reception or Submission file can store several MMs.

Coding:

The Multimedia Message identifier is coded in hexadecimal.

8.76 Multimedia Message Transfer status

This clause applies if class "j" is supported.

Byte(s)	Description	Length
1	Multimedia Message Transfer Status tag	1
2	Length (X)	1
3 to 3+X	Multimedia Message Transfer Status	X

Contents:

The Multimedia Message Transfer Status is response from the network to a multimedia message submission request.

Coding:

See "MM1_submit.RES" message described in TS 23.140 [~~xx~~40].

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CHANGE REQUEST

⌘ **31.130** **CR** **011** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Allign paragraph numbering between 31.130 and TS 102 241
Source:	⌘	CT6
Work item code:	⌘	T.E.I.
Date:	⌘	29/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Make it easy to read 31.130 and TS 102 241 in parallel
Summary of change:	⌘	• Move the orginal content of 6.1 to paragraph 6.0, rename 6.1 to Applet triggering and refer to TS 102 241 • Insert paragraph 4.0 to avoid hanging paragraph
Consequences if not approved:	⌘	Difficult to understand the two related specification TS 102 241 and 31.130 together.

Clauses affected:	⌘	4.0, 6, 6.0, 6.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4 Description

4.0 Overview

This API is an extension to the TS 102 241 [2] "UICC API for Java Card™" and requires the implementation of this specification.

The classes and interfaces described in this specification inherit functionality from the classes and interfaces specified in the "UICC API for Java Card™".

The (U)SAT Framework described in this specification is an extension of the CAT Runtime Environment defined in TS 102 241 [2].

6 (U)SAT Framework

6.0 Overview

The (U)SIM toolkit API consists of the *uicc.usim.toolkit* package for toolkit features defined in TS 31.111[7] and TS 51.014[8], and is based on the *uicc.toolkit* package defined in TS 102 241[2].

~~6.1 Overview~~

~~The (U)SIM toolkit API consists of the *uicc.usim.toolkit* package for toolkit features defined in TS 31.111[7] and TS 51.014[8], and is based on the *uicc.toolkit* package defined in TS 102 241[2].~~

6.1 Applet triggering

See TS 102 241[2].

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Tdoc ⌘ C6-050446

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CHANGE REQUEST

⌘ **31.130** **CR** **013** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Delete version and author info from the Java source code
Source:	⌘	CT6
Work item code:	⌘	T.E.I.
Date:	⌘	29/04/2005
Category:	⌘	**A**
Release:	⌘	REL-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Upon request from the T3 plenary delete all the author and version information from the Java source code
Summary of change:	⌘	Delete @author and @version information from Java source code
Consequences if not approved:	⌘	Lead to missunderstanding to which version of the specification the Java source file belongs

Clauses affected:	⌘	Annex_A_Java

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Package uicc.usim.access

- **SIMConstants**

```
/**
 * The <b>SIMConstants interface</b> hold all the constants defined in 3GPP TS 51.011
 *
 * @version    2.0.0
 * @author     3GPP TSG-T WG3
 */
public interface SIMConstants {
…
```

- **USIMConstants**

```
/**
 * The <b>USIMConstants interface</b> hold all the constants defined in 3GPP TS 31.102
 *
 * @author     3GPP TSG-T WG3
 */
public interface USIMConstants {
…
```

package uicc.usim.toolkit

- **ToolkitConstants**

```
/**
 *  <code>ToolkitConstants</code> encapsulates constants related to the USAT Toolkit applets.
 *
 * @version    6.2.0
 * @author     3GPP T3 API
 */
public interface ToolkitConstants extends uicc.toolkit.ToolkitConstants {
...
```

- **USATEnvelopeHandler**

```
/**
 * The USATEnvelopeHandler interface contains basic methods to handle the <b>SMS Envelope
 * </b>data field. This interface will be used by the Toolkit applet in order to
 * have access to the current SMS Envelope information. No constructor is available
 * for the Toolkit applet.
 *
 * @author     T3 SWG API
 * @see        uicc.toolkit.EnvelopeHandler
 */
public interface USATEnvelopeHandler extends uicc.toolkit.EnvelopeHandler {
…
```

- **USATEnvelopeHandlerSystem**

```
/**
 * The <code>USATEnvelopeHandlerSystem</code> class provides the means to retrieve an instance of
 * an Object implementing the <code>USATEnvelopeHandler</code> interface.<p>
 *
 *
 * @version    2.0.0
 * @author     3GPP T3 API
 * @see USATEnvelopeHandler
 */
public final class USATEnvelopeHandlerSystem {
…
```

- **USATTerminalProfile**

```
/**
 * The <code>USATTerminalProfile</code> interface contains constants for the Terminal Profile
according to TS 51.014 and to TS 31.111
 *
 * @author     3GPP T3
 * @see uicc.toolkit.TerminalProfile
 */
```

```
public interface USATTerminalProfile {
…
```

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Cancun, Mexico, 25-29 April 2005

C6-050447

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CHANGE REQUEST

⌘ **31.116** **CR** 010 ⌘ **rev** **-** ⌘ Current version: **6.7.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Introduction of an explicit description of the ISIM RFM mechanism
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	28/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Section 13.1.1 of TS 22.101 reads like this: "It shall be possible to update ISIM specific information via the air interface, in a secure manner". Furthermore Annex A of TS 31.103, which is entitled "EF changes via Data Download or CAT applications", reflects the fact that it should be possible to perform ISIM Remote File Management (RFM). Although ISIM RFM could be performed using ADF Remote File Management as defined in TS 102.226, it is highly desirable to cite the ISIM in TS 31.116 to confirm the 3GPP working assumptions highlighted above.
Summary of change:	⌘	Include explicit descriptions of the ISIM RFM mechanism
Consequences if not approved:	⌘	The reader of TS 31.116 may be misled by the absence of an explicit reference to the ISIM RFM and may conclude that RFM is only limited to USIM/SIM.

Clauses affected:	⌘	1, 2, 4.1, 4.2, 5.x (new)

Other specs affected: ⌘

Y	N	
	X	Other core specifications
	X	Test specifications
	X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1 Scope

The present document defines the remote management of files and applets on the SIM/USIM/ISIM.

It describes the APDU format for remote management.

Furthermore the document specifies:

- a set of commands coded according to this APDU structure and used in the remote file management on the SIM/USIM/ISIM specified in 3GPP TS 51.011 [1], 3GPP TS 31.101 [2], ~~and~~ 3GPP TS 31.102 [3], 3GPP TS 31.103 [xx].

- a set of commands coded according to this APDU structure and used in the remote applet management on the SIM/USIM. This is based on TS 102 226 [4].

The remote APDU structure for SIM/USIM/ISIM applications shall comply with the one defined in TS 102 226 [4]. The present document only contains additional requirements or explicit limitations for SIM/USIM/ISIM applications.

2 References

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

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 51.011 Release 4: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM-ME) interface".

[2] 3GPP TS 31.101: "UICC-Terminal Interface; Physical and Logical Characteristics".

[3] 3GPP TS 31.102: "Characteristics of the USIM Application".

[4] ETSI TS 102 226 Release 6: "Smart Cards; Remote APDU structure for UICC based applications".

[5] ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".

[xx] 3GPP TS 31.103: "Characteristics of the IP Multimedia Services Identity Module (ISIM) application".

4 Remote APDU Format

4.1 Remote command coding

The SIM/USIM/ISIM Remote command coding shall comply with the Remote command coding of TS 102 226 [4].

4.2 Response coding

The SIM/USIM/ISIM Response coding shall comply with the Response coding of TS 102 226 [4], added features are defined below.

5.x ISIM Remote File Management

ISIM Remote File Management shall comply with TS 102 226 [4].

The standardised commands are listed in TS 102 226 [4].

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26-29 April 2005

C6-050452

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.121** **CR** **074** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	CR 31.121 Rel-5: Introduction of phonebook selection/ local phonebook handling tests
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	29/04/2005
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Phonebook tests in TS 31.121 are insufficient to ensure correct local phonebook and phonebook selection support
Summary of change:	⌘	Tests for phonebook selection and local phonebook support created
Consequences if not approved:	⌘	Phonebook tests in TS 31.121 are insufficient to ensure local phonebook and phonebook selection support

Clauses affected:	⌘	8.1

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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Below is a brief summary:

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1 Phone book procedures

[..]

8.1.2 Update of the Phonebook Synchronisation Counter (PSC)

[..]

8.1.x Phonebook selection

8.1.x.1 Definition and applicability

The UICC may contain a global phonebook, or application specific phonebooks, or both in parallel. When both phonebook types co-exist, they are independent and no data is shared. In this case, it shall be possible for the user to select which phonebook the user would like to access.

This test applies to all terminals supporting both local and global phonebook.

8.1.x.2 Conformance requirement

The terminal shall support the global and the application specific phonebooks as defined in 3GPP TS 31.102[4], subclause 4.4.2.

Reference:

- 3GPP TS 31.102[4], subclause 4.4.2.

8.1.x.3 Test purpose

1) To verify that the terminal offers a possibility to select which phonebook the user would like to select if both, the global and the local phonebook, co-exist.

2) To verify that the data contained in the local phonebook can be read and updated correctly.

3) To verify that the data contained in the global phonebook can be read and updated correctly.

8.1.x.4 Method of test

8.1.x.4.1 Initial conditions

The terminal is connected to the USIM Simulator.

The default USIM is used with the following exceptions:

The local and the global phonebook are both present.

The local phonebook shall contain:

EF_{PBR} (Phonebook reference file)

Logically: Only EF_{ADN} and EF_{EXT1} are present in the local phonebook.

EF_{ADN} (Abbreviated dialling numbers)

Logically: 10 records, each record non-empty and unique.

Record 4:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact004";
	Length of BCD number:	"03";
	TON and NPI:	Telephony and International;
	Dialled number:	004;
	CCI:	None;
	Ext1:	None.

Record 4:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	34	FF	…	FF	03

B34	B35	B36	B37	B38	B39	…	B46
91	00	F4	FF	FF	FF	…	FF

Record 5:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact005";
	Length of BCD number:	"03";
	TON and NPI:	Telephony and International;
	Dialled number:	1234;
	CCI:	None;
	Ext1:	None.

Record 5:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	35	FF	…	FF	03

B34	B35	B36	B37	B38	B39	…	B46
91	21	43	FF	FF	FF	…	FF

The global phonebook shall contain:

EF_{PBR} (Phonebook reference file)

Logically: Only EF_{ADN} is present in the global phonebook.

EF_{ADN} (Abbreviated dialling numbers)

Logically: 8 records, records 3 and 6 empty, each non-empty record unique.

Record 1:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact001";
	Length of BCD number:	"03";
	TON and NPI:	Telephony and International;
	Dialled number:	001;
	CCI:	None;
	Ext1:	None.

Record 1:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	31	FF	…	FF	03

	B34	B35	B36	B37	B38	B39	…	B46
	91	00	F1	FF	FF	FF	…	FF

Record 2: Length of alpha identifier: 32 characters;
Alpha identifier: "Contact002";
Length of BCD number: "03";
TON and NPI: Telephony and International;
Dialled number: 002;
CCI: None;
Ext1: None.

Record 2:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	32	FF	…	FF	03

	B34	B35	B36	B37	B38	B39	…	B46
	91	00	F2	FF	FF	FF	…	FF

Record 4: Length of alpha identifier: 32 characters;
Alpha identifier: "Contact004";
Length of BCD number: "03";
TON and NPI: Telephony and International;
Dialled number: 0041;
CCI: None;
Ext1: None.

Record 4:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	34	FF	…	FF	03

	B34	B35	B36	B37	B38	B39	…	B46
	91	00	14	FF	FF	FF	…	FF

Record 5: Length of alpha identifier: 32 characters;
Alpha identifier: "Contact005";
Length of BCD number: "03";
TON and NPI: Telephony and International;
Dialled number: 1234;
CCI: None;
Ext1: None.

Record 5:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	35	FF	…	FF	03

	B34	B35	B36	B37	B38	B39	…	B46
	91	21	43	FF	FF	FF	…	FF

Record 7: Length of alpha identifier: 32 characters;
Alpha identifier: "Contact007";
Length of BCD number: "03";
TON and NPI: Telephony and International;
Dialled number: 007;
CCI: None;

Ext1: None.

Record 7:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	37	FF	…	FF	03

	B34	B35	B36	B37	B38	B39	…	B46
	91	00	F7	FF	FF	FF	…	FF

Record 8: Length of alphanumeric identifier: 32 characters;
Alpha identifier: "Contact008";
Length of BCD number: "03";
TON and NPI: Telephony and International;
Dialled number: 008;
CCI: None;
Ext1: None.

Record 8:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	38	FF	…	FF	03

	B34	B35	B36	B37	B38	B39	…	B46
	91	00	F8	FF	FF	FF	…	FF

8.1.x.4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall use a MMI dependent procedure to select the global phonebook.

c) The global phonebook record no. 5 (alpha identifier: "Contact005") and the associacted dialling number shall be read by the user.

d) The dialling number of the global phonebook record no. 5 (alpha identifier: "Contact005") shall be set to "+1122330".

e) A new entry with the values "Contact006" as alpha identifier and "+9876543210" as associated dialling number shall be added to the global phonebook.

f) The user shall use a MMI dependent procedure to select the local phonebook.

g) The local phonebook record no. 5 (alpha identifier: "Contact005") and the associacted dialling number shall be read by the user.

h) The dialling number of the local phonebook record no. 5 (alpha identifier: "Contact005") shall be set to "+11223345".

i) The user shall try to add a new entry with the values "Contact007" as alpha identifier and "+007" as associated dialling number to the local phonebook.

j) The user shall delete the entry "Contact004" from the local phonebook.

k) The user shall add a new entry with the values "Contact007" as alpha identifier and "+007" as associated dialling number to the local phonebook.

l) The user shall use a MMI dependent procedure to select the global phonebook.

m) The user shall delete the entry "Contact007" from the global phonebook.

n) The terminal is switched off.

8.1.x.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application, shall have read the status of the local Phonebook in EF_{UST}.

2) After step b) the terminal shall have selected the global phonebook and shall have read EF_{PBR} in the global phonebook.

3) After step c) the terminal shall have read record no. 5 of EF_{ADN} of the global phonebook and shall have presented the alpha identifier "Contact005" and the dialling number "+1234" to the user.

4) After step d) EF_{ADN} in the global phonebook shall contain a record with the alpha identifier "Contact005" with the new dialling number "+1122330" and the terminal shall have given an indication to the user that the phonebook update has been performed successfully.

5) After step e) a new record shall have been added to EF_{ADN} in the global phonebook with the alpha identifier "Contact006" and the dialling number string "+9876543210".

6) After step f) the terminal shall have selected the local phonebook and shall have read EF_{PBR} in the local phonebook.

7) After step g) the terminal shall have read record no. 5 of EF_{ADN} of the local phonebook and shall have presented the alpha identifier "Contact005" and the dialling number "+1234" to the user.

8) After step h) EF_{ADN} in the local phonebook shall contain the a record with the alpha identifier "Conatct005" and with new dialling number "+11223345" and the terminal shall have given an indication to the user that the phonebook update has been performed successfully.

9) After step i) the terminal shall have given an indication that update of the local phonebook can't be performed. EF_{ADN} shall have not been updated.

10) After step j) the record no. 4 in the local phonebook shall be empty and the terminal shall have indicated that the deletion of the phonebook entry was performed successfully.

11) After step k) a new record shall have been added to EF_{ADN} in the local phonebook with the alpha identifier "Contact007" and the dialling number string "+007"

12) After step l) the terminal shall have selected the global phonebook and shall have read EF_{PBR} in the global phonebook.

13) After step m) the record no. 7 in the global phonebook shall be empty and the terminal shall have indicated that the deletion of the phonebook entry was performed successfully.

8.1.y Local Phonebook handling

8.1.y.1 Definition and applicability

The UICC may contain a global phonebook, or application specific phonebooks, or both in parallel.

This test applies to all terminals supporting the local phonebook.

8.1.y.2 Conformance requirement

The terminal shall support the local phonebook as defined in 3GPP TS 31.102[4], subclause 4.4.2.

Reference:

- 3GPP TS 31.102[4], subclause 4.4.2.

8.1.y.3 Test purpose

1) To verify that the terminal supports the local phonebook without existence of the global phonebook.

2) To verify that the data contained in the local phonebook can be read and updated correctly.

8.1.y.4 Method of test

8.1.y 4.1 Initial conditions

The terminal is connected to the USIM Simulator.

The default USIM is used with the following exceptions:

The local phonebook is present, the global phonebook is not present.

The local phonebook shall contain:

EF_{PBR} (Phonebook reference file)

Logically: Only EF_{ADN} and EF_{EXT1} are present in the local phonebook.

EF_{ADN} (Abbreviated dialling numbers)

Logically: 10 records, each record non-empty and unique.

Record 4:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact004";
	Length of BCD number:	"03";
	TON and NPI:	Telephony and International;
	Dialled number:	004;
	CCI:	None;
	Ext1:	None.

Record 4:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	34	FF	…	FF	03

B34	B35	B36	B37	B38	B39	…	B46
91	00	F4	FF	FF	FF	…	FF

Record 5:	Length of alpha identifier:	32 characters;
	Alpha identifier:	"Contact005";
	Length of BCD number:	"03";
	TON and NPI:	Telephony and International;
	Dialled number:	1234;
	CCI:	None;
	Ext1:	None.

Record 5:

Coding:	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	…	B32	B33
Hex	43	6F	6E	74	61	63	74	30	30	35	FF	…	FF	03

B34	B35	B36	B37	B38	B39	…	B46
91	21	43	FF	FF	FF	…	FF

8.1.y 4.2 Procedure

a) The terminal is switched on and the USIM application shall be activated.

b) The user shall use a MMI dependent procedure to select the phonebook on the USIM (local phonebook).

c) The local phonebook record no. 5 (alpha identifier: "Contact005") and the associacted dialling number shall be read by the user.

d) The dialling number of the local phonebook record no. 5 (alpha identifier: "Contact005") shall be set to "+11223345" and the alpha identifier shall be changed to " Contact8901234567890123456789012".

e) The user shall try to add a new entry with the values "Contact007" as alpha identifier and "+007" as associated dialling number to the local phonebook.

f) The user shall delete the entry "Contact004" from the local phonebook.

g) The user shall add a new entry with the values "Contact007" as alpha identifier and "+007" as associated dialling number to the local phonebook.

h) The terminal is switched off.

8.1.y.5 Acceptance criteria

1) After step a) the terminal shall have activated the USIM application, shall have read the status of the local Phonebook in EF_{UST}.

2) After step b) the terminal shall have selected the local phonebook and shall have read EF_{PBR} in the local phonebook.

3) After step c) the terminal shall have read record no. 5 of EF_{ADN} of the local phonebook and shall have presented the alpha identifier "Contact005" and the dialling number "+1234" to the user.

4) After step d) EF_{ADN} in the local phonebook shall contain a record with the new alpha identifier "Contact8901234567890123456789012" and the dialling number "+11223345" and the terminal shall have given an indication to the user that the phonebook update has been performed successfully.

5) After step e) the terminal shall have given an indication that update of the local phonebook can't be performed. EF_{ADN} shall have not been updated.

6) After step f) the record no. 4 in the local phonebook shall be empty and the terminal shall have indicated that the deletion of the phonebook entry was performed successfully.

7) After step g) a new record shall have been added to EF_{ADN} in the local phonebook with the alpha identifier "Contact007" and the dialling number string "+007"

3GPP TSG-CT6 Meeting #35
Cancun, Mexico, 26.-29.05.2005

Tdoc ⌘C6-050472

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **145** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Addition of missing values in Proactive commands versus possible Terminal response
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	The table for Proactive commands versus possible Terminal response has been recently reformated, but some information is still missing for the MMS related commands.
Summary of change:	⌘	The missing information is added in the table.
Consequences if not approved:	⌘	The commands will not be able to be implemented correctly due to missing information.

Clauses affected:	⌘	6.11

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

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Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.11 Proactive commands versus possible Terminal response

Table 6.1 shows for each proactive command the possible terminal response returned (marked by a "●" character), in addition to those defined in TS 102 223 [32].

Table 6.1: Proactive commands versus possible terminal response

		PROACTIVE COMMAND								
		SET UP CALL	SEND SS	SEND USSD	SEND SMS	RETRIEVE MM	SUBMIT MM	DISPLAY MM		
TERMINAL RESPONSE		'10'	'11'	'12'	'13'	'60'	'61'	'62'		
00	Command performed successfully	●	●	●		●	●	●		
01	Command performed with partial comprehension	●	●	●		●	●	●		
02	Command performed, with missing information	●	●	●		●	●	●		
03	REFRESH performed with additional EFs read									
04	Command performed successfully, but requested icon could not be displayed	●	●	●						
05	Command performed, but modified by call control by USIM	●		●						
06	Command performed successfully, limited service									
07	Command performed with modification									
08	REFRESH performed but indicated USIM was not active									
09	Command performed successfully, tone not played									
10	Proactive UICC session terminated by the user	●						●		
11	Backward move in the proactive UICC session requested by the user									
12	No response from user									
13	Help information required by the user									
14	USSD or SS Transaction terminated by user	●	●	●						
20	ME currently unable to process command	●	●	●		●	●	●		
21	Network currently unable to process command	●	●	●		●	●			
22	User did not accept the proactive command	●					●			
23	User cleared down call before connection or network release	●								
24	Action in contradiction with the current timer state									
25	Interaction with call control by USIM, temporary problem	●	●	●						
26	Launch browser generic error									
27	MMS Temporary Problem					●	●	●		
30	Command beyond MEs capabilities	●	●	●		●	●	●		
31	Command type not understood by ME	●	●	●		●	●	●		
32	Command data not understood by ME	●	●	●		●	●	●		
33	Command number not known by ME	●	●	●		●	●	●		
34	SS Return Error	●	●							
35	SMS RPERROR				●					
36	Error, required values are missing	●	●	●		●	●	●		
37	USSD return error			●						
38	Multiple Card command error									
39	Interaction with call/SM control by USIM, permanent problem	●	●	●	●					
3A	Bearer Independent Protocol error									
3B	Access Technology unable to process command									
3C	Frames error	●								
3D	MMS Error					●	●	●		

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Cancun, Mexico, 26 – 29 May 2005

Tdoc ⌘C6-050473

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** 146 ⌘**rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Clarification for SMS_PP_Download
Source:	⌘	CT6
Work item code:	⌘	TEI
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	The Address field of the ENVELOPE (SMS PP DOWNLOAD) has recently been updated from optional to mandatory. This could create backward compatibility issue if a release 6 card considering this field as mandatory is introduce into a terminal still considering this field as optional. If the terminal does not send the address field, the card will not consider the command as a correct one. This should be clarified in the description of the address field, with a warning to avoid the card to wait for this field.
Summary of change:	⌘	The address field is set to a not minimal element, and a note is added to warn people implementing this feature.
Consequences if not approved:	⌘	Possible backward compatibility issue

Clauses affected:	⌘	7.1.1.2

Other specs affected: ⌘	Y	N		⌘
			Other core specifications	
			Test specifications	
			O&M Specifications	

Other comments: ⌘

How to create CRs using this form:

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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

7.1.1 SMS-PP data download

7.1.1.1 Procedure

If the service "data download via SMS Point-to-point" is allocated and activated in the UICC Service Table (see 3GPP TS 31.101 [13]), then the ME shall follow the procedure below:

- when the ME receives a Short Message with:
  - protocol identifier = SIM data download; and
  - data coding scheme = class 2 message; or
- when the ME receives a Short Message with:
  - protocol identifier=ANSI-136 R-DATA (see 3GPP TS 23.040 [7]); and
  - data coding scheme = class 2 message, and the ME chooses not to handle the message (e.g. MEs not supporting EGPRS over TIA/EIA-136 do not need to handle the message).
- then the ME shall pass the message transparently to the UICC using the ENVELOPE (SMS-PP DOWNLOAD) command as defined below;
- the ME shall not display the message, or alert the user of a short message waiting;
- the ME shall wait for an acknowledgement from the UICC;
- if the UICC responds with '90 00', the ME shall acknowledge the receipt of the short message to the network using an RP-ACKmessage. The response data from the UICC will be supplied by the ME in the TP-User-Data element of the RP-ACK message it will send back to the network (see 3GPP TS 23.040 [5] and 3GPP TS 24.011 [10]). The values of protocol identifier and data coding scheme in RP-ACK shall be as in the original message;
- if the UICC responds with '93 00', the ME shall either retry the command or send back an RP-ERROR message to the network with the TP-FCS value indicating 'SIM Application Toolkit Busy' (see 3GPP TS 23.040 [5]).
- If the UICC responds with '6F XX', the ME shall send back an RP-ERROR message to the network with the TP-FCS value indicating "UICC data download error". The values of protocol identifier and data coding scheme in RP-ERROR shall be as in the original message;

NOTE: The preferred way for a USAT application to indicate a Data Download error is by using the specific code '62 XX' or '63 XX' as described in the following bullet point.

- if the UICC responds with '62 XX' or '63 XX', the ME shall acknowledge the receipt of the short message to the network using an RP-ERROR message. The response data from the UICC will be supplied by the ME in the TP-User-Data element of the RP-ERROR message it will send back to the network (see 3GPP TS 23.040 [5] and 3GPP TS 24.011 [10]). The values of protocol identifier and data coding scheme in RP-ERROR shall be as in the original message. The value of the TP-FCS element of the RP-ERROR shall be "SIM data download error".

If the service "data download via SMS-PP" is not available in the UICC Service Table, and the ME receives a Short Message with the protocol identifier = SIM data download and data coding scheme = class 2 message, then the ME shall store the message in EF_{SMS} in accordance with 3GPP TS 31.102 [14].

7.1.1.2 Structure of ENVELOPE (SMS-PP DOWNLOAD)

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data.

Description	Clause	M/O/C	Min	Length
SMS-PP download tag	9.1	M	Y	1
Length (A+B+C)	-	M	Y	1 or 2
Device identities	8.7	M	Y	A
Address	8.1	M	~~Y~~N (see note)	B
SMS TPDU (SMS-DELIVER)	8.13	M	Y	C
Note: The UICC shall be able to manage the situation when the address field is not present, in order to ensure backwards compatibility with previous releases of this specification.				

- Device identities: the ME shall set the device identities to:
  - source: Network;
  - destination: UICC.
- Address: The address data object holds the RP_Originating_Address of the Service Centre (TS-Service-Centre-Address), as defined in 3GPP TS 24.011 [10].

Response parameters/data.

It is permissible for the UICC not to provide response data. If the UICC provides response data, the following data is returned.

Byte(s)	Description	Length
1-X (X≤128)	UICC Acknowledgement	X

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CHANGE REQUEST

⌘ **31.102** **CR** **289** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR 31.102 Rel-7: Essential correction of phonebook support
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	29/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	TS 31.102 is unclear about phonebook support being mandatory or optional, though a mandatory requirement exists to allow the user to choose the phonebook he wants to access if application specific and global phonebooks co-exist on the UICC.
Summary of change:	⌘	Clause 4.4.2 corrected to ensure necessary phonebook support
Consequences if not approved:	⌘	Mandatory requirement in TS 31.102 can not be fulfilled if global and application specific phonebook support is not ensured

Clauses affected:	⌘	4.4.2

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:
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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.4.2 Contents of files at the DF PHONEBOOK level

The UICC may contain a global phonebook, or application specific phonebooks, or both in parallel. When both phonebook types co-exist, they are independent and no data is shared. In this case, it shall be possible for the user to select which phonebook the user would like to access. To achieve this, the terminal shall support the global and the application specific phonebooks.

[..]

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CHANGE REQUEST

⌘ **31.102** **CR** **288** ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR 31.102 Rel-7: Essential correction of phonebook support
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	29/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
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Use one of the following releases:

Ph2	*(GSM Phase 2)*
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R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	TS 31.102 is unclear about phonebook support being mandatory or optional, though a mandatory requirement exists to allow the user to choose the phonebook he wants to access if application specific and global phonebooks co-exist on the UICC.
Summary of change:	⌘	Clause 4.4.2 corrected to ensure necessary phonebook support
Consequences if not approved:	⌘	Mandatory requirement in TS 31.102 can not be fulfilled if global and application specific phonebook support is not ensured

Clauses affected:	⌘	4.4.2

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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4.4.2 Contents of files at the DF PHONEBOOK level

The UICC may contain a global phonebook, or application specific phonebooks, or both in parallel. When both phonebook types co-exist, they are independent and no data is shared. In this case, it shall be possible for the user to select which phonebook the user would like to access. To achieve this, the terminal shall support the global and the application specific phonebooks.

[..]

3GPP TSG CT WG6 Meeting #35
Cancun, Mexico, 26th – 29th April 2005

Tdoc ⌘ C6-050482

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **290** ⌘ **rev** **-** ⌘ Current version: **6.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Corrections to eMLPP and AAeM
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	29/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
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Use one of the following releases:

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R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Service n°24 (=eMLPP) and Service n°25 (=AAeM) are defined as two services within USIM service table. The service n°25 which is required for AAeM is missed in section 5.3.11 of the susbscription related procedures.
Summary of change:	⌘	Added new section named “Automatic Answer for eMLPP” Added required service n°25 which is needed for request and update AAeM.
Consequences if not approved:	⌘	Misinterpretation of services eMLPP and AAeM.

Clauses affected:	⌘	5.3.11; 5.3.XX (New)

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

5.3.11 Enhanced multi level precedence and pre-emption service

Requirement: Service n°24 "available".

~~Enhanced Multi Level Precedence and Pre-amption.~~

Request: The ME performs the reading procedure with EF_{eMLPP}.

5.3.XX Automatic Answer for~~on~~ eMLPP ~~service.~~

Requirement: Service n°25 "available"

Request: The ME performs the reading procedure with EF_{AAeM}.

Update: The ME performs the updating procedure with EF_{AAeM}.

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Tdoc ⌘ C6-050483

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.102** **CR** **291** ⌘ **rev** **-** ⌘ Current version: **7.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Corrections to eMLPP and AAeM
Source:	⌘	CT6
Work item code:	⌘	TEI-6
Date:	⌘	29/04/2005
Category:	⌘	**A**
Release:	⌘	Rel-7

Use one of the following categories:
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Use one of the following releases:
Ph2 (GSM Phase 2)
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R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	Service n°24 (=eMLPP) and Service n°25 (=AAeM) are defined as two services within USIM service table. The service n°25 which is required for AAeM is missed in section 5.3.11 of the susbscription related procedures.
Summary of change:	⌘	Added new section named “Automatic Answer for eMLPP” Added required service n°25 which is needed for request and update AAeM.
Consequences if not approved:	⌘	Misinterpretation of services eMLPP and AAeM.

Clauses affected:	⌘	5.3.11; 5.3.XX (New)

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
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5.3.11 Enhanced multi level precedence and pre-emption service

Requirement: Service n°24 "available".

~~Enhanced Multi Level Precedence and Pre-amption.~~

Request: The ME performs the reading procedure with EF_{eMLPP}.

5.3.XX Automatic Answer for~~on~~ eMLPP ~~service.~~

Requirement: Service n°25 "available"

Request: The ME performs the reading procedure with EF_{AAeM}.

Update: The ME performs the updating procedure with EF_{AAeM}.