3GPP TSG-T (Terminals) Meeting #16
Marco Island, USA   4 – 6 June 2002

Tdoc TP-020119

Source: T3

Title: Change Requests to TR 31.900 SIM-USIM interworking

Document for: Approval

This document contains several change requests as follows:

T3 Doc	TR	CR	Rel	Cat	Subject
T3-020333	31.900	006	5	F	Extension of Annex C - SIM/USIM file mapping table
T3-020419	31.900	007	5	D	FDN and BDN interworking mechanism between GSM and 3G
T3-020420	31.900	008	5	D	Health warning concerning possibly different file IDs in SIM and USIM

CR-Form-v4

CHANGE REQUEST

⌘   **TR 31.900 CR 006** ⌘ ev **-** ⌘ Current version: **5.0.0** ⌘

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

Title: ⌘	Extension of Annex C - SIM/USIM file mapping table	
Source: ⌘	T3	
Work item code: ⌘	UICC1	***Date:*** ⌘ 22.05.02
Category: ⌘ **F**		***Release:*** ⌘ REL-5

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)*

Reason for change: ⌘	Annex C – SIM/USIM file mapping table – does not take into account new REL-4 and REL-5 data fields that can be mapped between the SIM and USIM applications on a UICC.
Summary of change: ⌘	The file mapping table is extended by 9 files that can be mapped.
Consequences if not approved: ⌘	The table is incomplete.

Clauses affected: ⌘	Annex C
Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments: ⌘	

Annex C:
SIM/USIM file mapping table

The following table lists all SIM and USIM files that can be mapped in a UICC. It should be noted that most files are optional and these files are not necessarily present in the SIM or USIM application. Files not mentioned do not have a corresponding file in both applications. Mapping with multiple USIMs is not considered.

SIM Application DF / EF	USIM Application DF / EF	Mapping possible	
		single subscription UICC	double subscription UICC
GSM / IMSI	USIM / IMSI	yes	no
GSM / HPLMN	USIM / HPLMN	yes	yes, 1)
GSM / ACM	USIM / ACM	yes	yes, 1)
GSM / ACMmax	USIM / ACMmax	yes	yes, 1)
GSM / PUCT	USIM / PUCT	yes	yes, 1)
GSM / GID1	USIM / GID1	yes	yes, 1)
GSM / GID2	USIM / GID2	yes	yes, 1)
GSM / SPN	USIM / SPN	yes	yes, 1)
GSM / CBMI	USIM / CBMI	yes	
GSM / CBMIR	USIM / CBMIR	yes	
GSM / CBMID	USIM / CBMID	yes	yes, 1)
GSM / ACC	USIM / ACC	yes	no
GSM / FPLMN	USIM / FPLMN	yes	yes, 1)
GSM / LOCI	USIM / LOCI	yes	
GSM / LOCIGPRS	USIM / PSLOCI	yes	
GSM / AD	USIM / AD	yes	
GSM / eMLPP	USIM / eMLPP	yes	yes, 1)
GSM / AAeM	USIM / AAeM	yes	yes, 1)
GSM / DCK	USIM / DCK	yes	yes, 1)
GSM / CNL	USIM / CNL	yes	yes, 1)
GSM / PLMNwACT	USIM / PLMNwACT	yes	
GSM / OPLMNwACT	USIM / OPLMNwACT	yes	yes, 1)
GSM / HPLMNwACT	USIM / HPLMNwACT	yes, 3)	
GSM / RPLMNACT	USIM / RPLMNACT	no	
GSM / SUME	TELECOM / SUME	yes	
GSM / Kc	USIM / GSM / Kc	yes	no
GSM / KcGPRS	USIM / GSM / KcGPRS	yes	no
GSM / CPBCCH	USIM / GSM / CPBCCH	yes	
GSM / INVSCAN	USIM / GSM / INVSCAN	yes	yes, 1)
GSM / PNN	USIM / PNN	yes	yes, 1)
GSM / OPL	USIM / OPL	yes	yes, 1)
GSM / MBDN	USIM / MBDN	yes	no
GSM / EXT6	USIM / EXT6	yes	no
GSM / MBI	USIM / MBI	yes	no
GSM / MWIS	USIM / MWIS	yes	no
GSM / CFIS	USIM / CFIS	yes	no
GSM / EXT7	USIM / EXT7	yes	no
GSM / SPDI	USIM / SPDI	yes	yes, 1)
TELECOM / SMS	USIM / SMS	yes	
TELECOM / SMSP	USIM / SMSP	yes	yes, 1)
TELECOM / SMSS	USIM / SMSS	yes	
TELECOM / SMSR	USIM / SMSR	yes	
TELECOM / SDN	USIM / SDN	yes	yes, 1)
TELECOM / FDN	USIM / FDN	yes	
TELECOM / BDN	USIM / BDN	yes	
TELECOM / CMI	USIM / CMI	yes	
TELECOM / MSISDN	USIM / MSISDN	yes	no
TELECOM / EXT2	USIM / EXT2	yes	
TELECOM / EXT3	USIM / EXT3	yes	yes, 1)
TELECOM / EXT4	USIM / EXT4	yes	
TELECOM / ADN	... / PHONEBOOK / ADN	yes, required, 2)	
TELECOM / EXT1	... / PHONEBOOK / EXT1	yes, required, 2)	

TELECOM / ECCP	... / PHONEBOOK / CCP1	yes, required, 2)	
GSM / MEXE / all files	USIM / MEXE / all files	yes	yes, 1)
GSM / SoLSA / all files	USIM / SoLSA / all files	yes	yes, 1)

Note: 1) No mapping, if subscription specific differences are required
  2) SIM file to be mapped with related USIM file either in DF PHONEBOOK under DF USIM or in DF PHONEBOOK under DF TELECOM
  3) Only if the same settings apply to 2G and 3G operation			

CR-Form-v5.1

CHANGE REQUEST

| ⌘ | **31.900** CR **007** | ⌘**rev** | **-** | ⌘ | Current version: | **5.0.0** | ⌘ |

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

Title: ⌘	FDN and BDN interworking mechanism between GSM and 3G	
Source: ⌘	T3	
Work item code: ⌘	UICC1	***Date:*** ⌘ 24 May 2002
Category: ⌘ **D**		***Release:*** ⌘ REL-5

Use <u>one</u> 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 <u>TR 21.900</u>.

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   R98 *(Release 1998)*
   R99 *(Release 1999)*
   REL-4 *(Release 4)*
   REL-5 *(Release 5)*

Reason for change: ⌘	The synchronization mechanism for FDN and BDN interworking between SIM and USIM is not precisely described. This may result in inconsistant behavior between USIM from different manufacturers.
Summary of change: ⌘	Clearly precise the activation conditions and limitations of the FDN and BDN interworking mechanisms.
Consequences if not approved: ⌘	USIM from different card manufacturers will not be interoperable.

Clauses affected: ⌘	7.7

Other specs affected: ⌘	☐ Other core specifications ⌘	
	☐ Test specifications	
	☐ O&M Specifications	

Other comments: ⌘	

7.7   Enabling/disabling procedures for dialling numbers

Enabling/disabling procedures of restricted dialling numbers services (e.g. FDN or BDN) are different between SIM and USIM. In fact, simply mapping the files associated with such services between the SIM and USIM will not ensure consistent behaviour in GSM and 3G modes, and can actually allow the user to bypass the associated security by switching the UICC between a 2G and a 3G terminal. ThereforeNevertheless, if a dialling number file (e.g. EF_{FDN} or EF_{BDN}) is mapped between a SIM and a USIM, the corresponding enabling/disabling procedures shouldcan also be linked.

When an enabling/disabling procedure is shared between a SIM and a USIM, This means that the enabling/disabling of a restricted dialling numbers service in one mode (SIM or USIM) is reflected in the other mode (respectively USIM or SIM);. i.e. any modification of the activation status of such service (e.g. FDN or BDN) for the USIM in EF_{EST} should affect the validation status of the file associated with this service (e.g. EF_{ADN} or EF_{BDN} respectively) for the SIM accordingly, and vice-versa.

The linking mechanism can only apply if the initial conditions are consistent for interworking, i.e. if the associated service (e.g. FDN or BDN) is available in the USIM Service Table (EF_{UST}) and allocated and activated in the SIM Service Table (EF_{SST}).

Note: If the status of a restricted dialling numbers service is modified Over The Air in the SIM or USIM Service Table (EF_{SST} or EF_{UST}), the linking mechanism may not be able to maintain the synchronization of the service status between SIM and USIM.

CR-Form-v4

CHANGE REQUEST

⌘   **TR 31.900 CR 008**   ⌘ ev **-** ⌘   Current version: **5.0.0** ⌘

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

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

Title: ⌘	Health warning concerning possibly different file IDs in SIM and USIM	
Source: ⌘	T3	
Work item code: ⌘	UICC1	***Date:*** ⌘ 22.05.02
Category: ⌘ **D**		***Release:*** ⌘ REL-5

Use <u>one</u> of the following categories:
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   R98   *(Release 1998)*
   R99   *(Release 1999)*
   REL-4   *(Release 4)*
   REL-5   *(Release 5)*

Reason for change: ⌘	File identifiers may differ between SIM and USIM, e.g. for EF_{EXT4}. This has to be taken into account when files are to be linked.
Summary of change: ⌘	A sentence is added to generally warn about these situations.
Consequences if not approved: ⌘	Implementors may not be aware of different file IDs, leading to incorrect SIM or USIM implementations when these files are linked.

Clauses affected: ⌘	7.2

Other specs affected: ⌘	☐ 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/3G_Specs/CRs.htm. Below is a brief summary:

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

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

7.2 File mapping

When comparing the file structure of a SIM in TS 11.11 [7] / TS 51.011 [8] with that of a USIM in 3G TS 31.102 [2] it strikes that many not only have the same name and file identifier (although under different DFs) but are entirely equal by size and content parameters. This generally allows for memory efficient implementation of a SIM together with a USIM as these files can be shared by both applications, i.e. necessary storage capacity is only required once. Further, shared files speed up the pre-personalization process as they save valuable programming time.

Therefore files should be mapped as far as possible, i.e. in all cases where basic properties are equal and identical contents do not conflict with the access by either a 2G or a 3G ME or with intended subscription differences when separate IMSIs are used (cases 1 or 2 in section 7.1). Mapping is not possible, when the content is clearly subscription dependent like in case of IMSI, Kc, KcGPRS or MSISDN in a double subscription UICC.

Annex C gives an overview on the SIM and USIM files that potentially can be mapped. A case by case decision should be conducted by the network operator / card manufacturer for each UICC implementation. Caution: It should be noted that file identifiers may differ between the SIM and USIM applications, while all other file properties are exactly the same, e.g. for EF_{EXT4}.