3GPP TSG-T (Terminals) Meeting #13
Beijing, China, 19 - 21 September, 2001

Tdoc TP-010202

Source: T3

Title: Change Requests on (U)SIM toolkit (TS 11.14 / TS 31.111)

Document for: Approval

This document contains change requests to TS 11.14 and TS 31.111 as agreed by T3.

T3 Doc	Spec	CR	Rel	Cat	Subject
T3-010601	11.14	A202	R99	B	Addition of TIA/EIA 136 byte to terminal profile
T3-010600	11.14	A203	R99	F	Alignment of 11.14 with 31.111 regarding interaction between FDN, SEND SMS and SEND SS
T3-010605	11.14	A204	R99	F	Alignment with 31.111
T3-010606	11.14	A205	R99	F	Corrections to OPEN CHANNEL commands
T3-010609	11.14	A206	R99	F	TLV object for the APN in the OPEN CHANNEL command
T3-010615	11.14	A207	R99	F	Corrections to SEND DATA commands and Channel Status Event
T3-010602	31.111	051	R99	B	Reservation of TIA/EIA 136 byte to terminal profile
T3-010603	31.111	052	Rel-4	B	Reservation of TIA/EIA 136 byte to terminal profile
T3-010607	31.111	053	R99	F	Corrections to OPEN CHANNEL commands
T3-010608	31.111	054	Rel-4	A	Corrections to OPEN CHANNEL commands
T3-010610	31.111	055	R99	F	TLV object for the APN in the OPEN CHANNEL command
T3-010611	31.111	056	Rel-4	A	TLV object for the APN in the OPEN CHANNEL command
T3-010616	31.111	057	R99	F	Corrections to SEND DATA commands and Channel Status Event
T3-010617	31.111	058	Rel-4	A	Corrections to SEND DATA commands and Channel Status Event

3GPP T3 (USIM) Meeting #20
Marseilles, France, 3 – 5 September 2001

Tdoc T3-010601

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A202** ⌘ rev **-** ⌘ Current version: **8.7.0** ⌘

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

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

Title:	⌘	Terminal Profile
Source:	⌘	T3
Work item code:	⌘	CAT
Date:	⌘	5 September 2001
Category:	⌘	B
Release:	⌘	*R99*

Use one of the following categories:
F *(essential 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:	⌘	Harmonising the Terminal Profile command defined in TIA/EIA-136-037 with the one defined in GSM 11.14 as requested by CAT Ad-Hoc in Tdoc SCPz010011.
Summary of change:	⌘	Addition of Protocol Version for TIA/EIA-136C to the Terminal Profile command
Consequences if not approved:	⌘	Two different Terminal Profiles need to be interpreted by the mobile

Clauses affected:	⌘	2, 5.2		
Other specs Affected:	⌘	[ ] Other core specifications [ ] Test specifications [ ] O&M Specifications	⌘	31.111 (R99 and Rel-4)
Other comments:	⌘			

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] not used

[2] 3GPP TS 01.04: ″Abbreviations and acronyms″.

[3] 3GPP TS 02.17: ″Subscriber Identity Modules (SIM) Functional characteristics″.

[4] 3GPP TS 02.30: ″Man-Machine Interface (MMI) of the Mobile Station (MS)″.

[5] 3GPP TS 23.038: ″Alphabets and language-specific information″.

[6] 3GPP TS 23.040: ″Technical realization of the Short Message Service (SMS) Point-to-Point (PP)″.

[7] 3GPP TS 23.041: ″Technical realization of Short Message Service Cell Broadcast (SMSCB)″.

[8] 3GPP TS 04.08: ″Mobile radio interface layer 3 specification″.

[9] 3GPP TS 24.011: ″Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface″.

[10] 3GPP TS 24.080: ″Mobile radio interface layer 3 supplementary services specification; Formats and coding″.

[11] not used

[12] not used

[13] GSM 09.91: ″Digital cellular telecommunications system; Interworking aspects of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface between Phase 1 and Phase 2″.

[14] Not used.

[15] CCITT Recommendation E.164: ″Numbering plan for the ISDN era″.

[16] ISO/IEC 7816-3 (1997): ″Identification cards - Integrated circuit(s) cards with contacts, Part 3: Electronic signals and transmission protocols″.

[17] ISO/IEC 7816-6 (1995): ″Identification cards - Integrated circuit(s) cards with contacts, Part 6 Inter-industry data elements″.

[18] 3GPP TS 02.40: ″Procedures for call progress indications″.

[19] 3GPP TS 02.07: ″Mobile Stations (MS) features″.

[20] 3GPP TS 11.11: ″Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface″.

[21] 3GPP TS 11.12: "Digital cellular telecommunications system (Phase 2); Specification of the 3 Volt Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

[22] 3GPP TS 03.22: "Functions related to Mobile Station (MS) in idle mode".

[23] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[24] 3GPP TS 03.48: "Security Mechanisms for the SIM application toolkit ".

[25] ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Inter-industry commands for interchange".

[26] 3GPP TS 22.042: "Network identity and timezone; Service description; Stage 1".

[27] 3GPP TS 27.007: "AT command set for GSM Mobile Equipment (ME)".

[28] 3GPP TS 03.22: "Functions related to Mobile Station (MS) in idle mode and group receive mode".

[29] ISO 639 (1988): "Code for the representation of names of languages".

[30] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS); Point-to-Point (PP)".

[31] 3GPP TS 22.002: "Digital cellular telecommunication system (Phase 2+); Bearer Services (BS) supported by a GSM Public Land Mobile Network (PLMN)".

[32] IETF RFC 1738: "Uniform Resource Locators (URL) : T. Berners-Lee, et al., December 1994.

[33] IETF RFC 768 "User Datagram Protocol (UDP)".

[34] IETF RFC 793 "Transmission Control Protocol (TCP)".

[35] TIA/EIA-136-123 "Third Generation Wireless – Digital Control Channel Layer 3, April 23, 2001"

5 Profile download

5.1 Procedure

The profile download instruction is sent by the ME to the SIM as part of the SIM initialization procedure. This procedure is specified in TS 11.11 [20]. In this procedure, the ME reads EF_{PHASE}. If EF_{PHASE} indicates that the SIM requires the ME to perform the profile download procedure, then the ME shall, after having performed the CHV1 verification procedure and before selecting EF_{IMSI} or EF_{LOCI}, send the TERMINAL PROFILE command, as specified below, to the SIM. The profile sent by the ME shall state the facilities relevant to SIM Application Toolkit that are supported by the ME.
This procedure is important, as it is by this that the SIM knows what the ME is capable of, and the SIM can then limit its instruction range accordingly. If no command is sent by the ME, the SIM shall assume that the ME does not support SIM Application Toolkit.

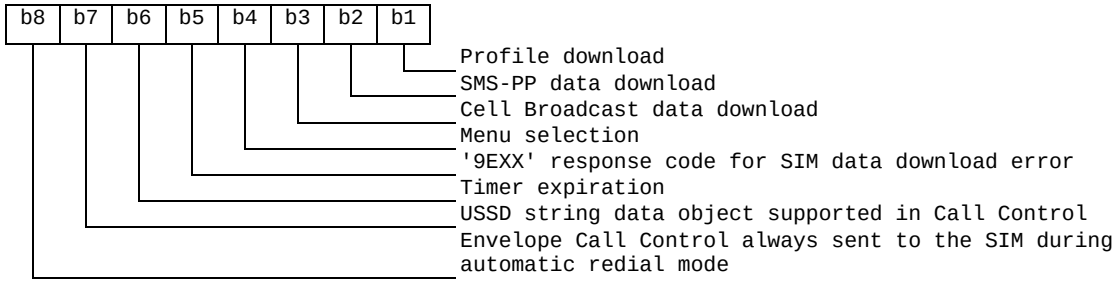
5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to SIM
The command header is specified in TS 11.11 [20].
Command parameters/data:

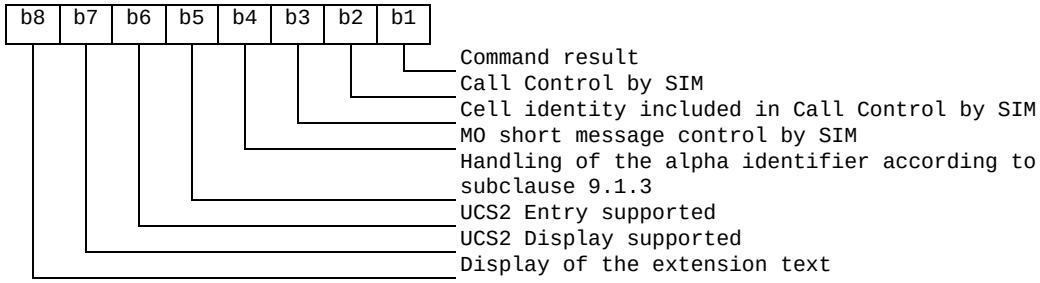
Description	Section	M/O	Length
Profile	-	M	lgth

- Profile:
  Contents: The list of SIM Application Toolkit facilities that are supported by the ME.
  Coding:
  1 bit is used to code each facility:
  bit = 1: facility supported by ME
  bit = 0: facility not supported by ME

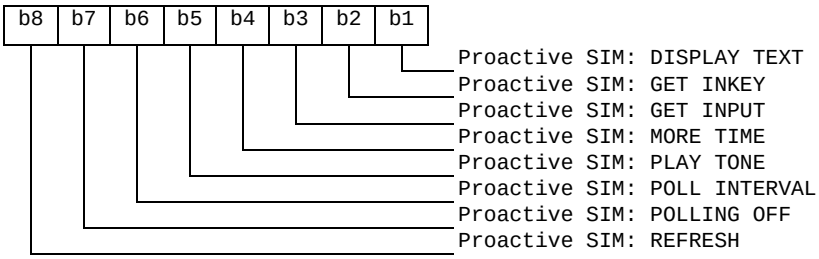
  First byte (Download):



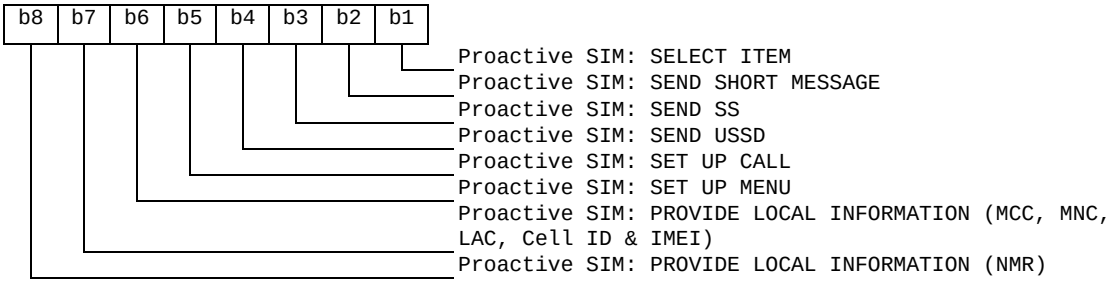
  Second byte (Other):



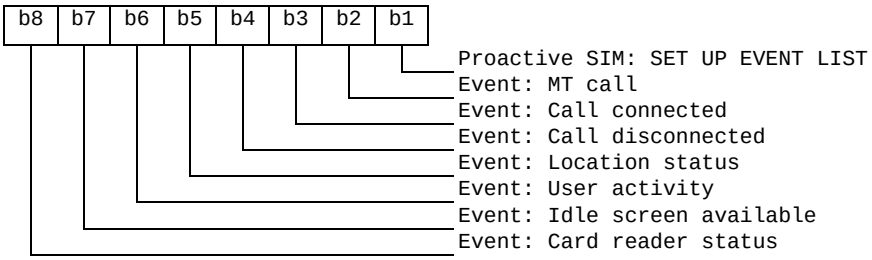
Third byte (Proactive SIM):



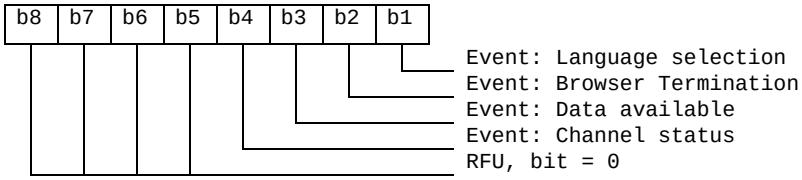
Fourth byte (Proactive SIM):



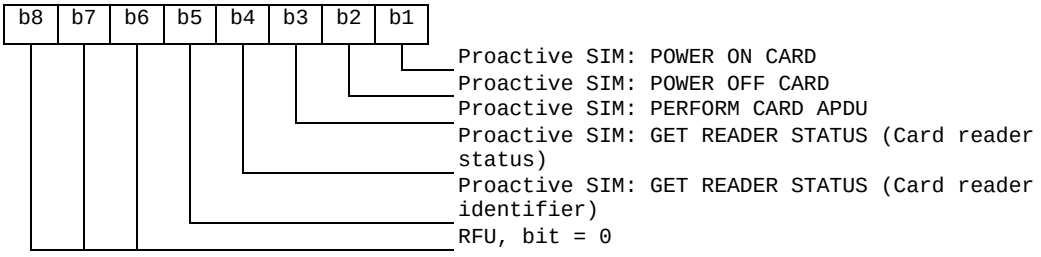
Fifth byte (Event driven information):



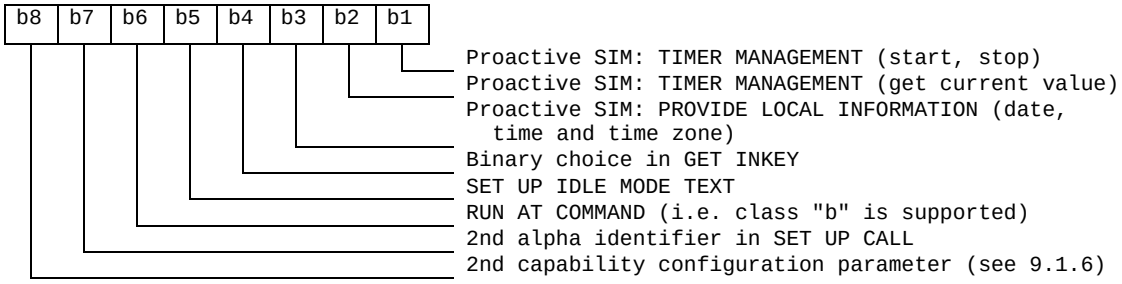
Sixth byte (Event driven information extensions):



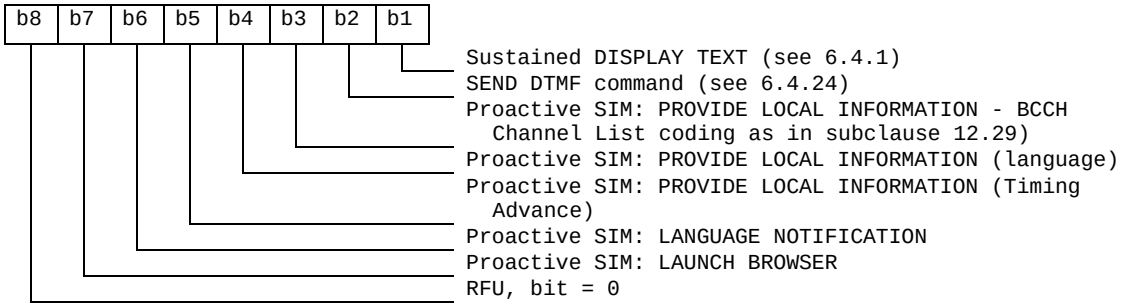
Seventh byte (Multiple card proactive commands) for class "a"



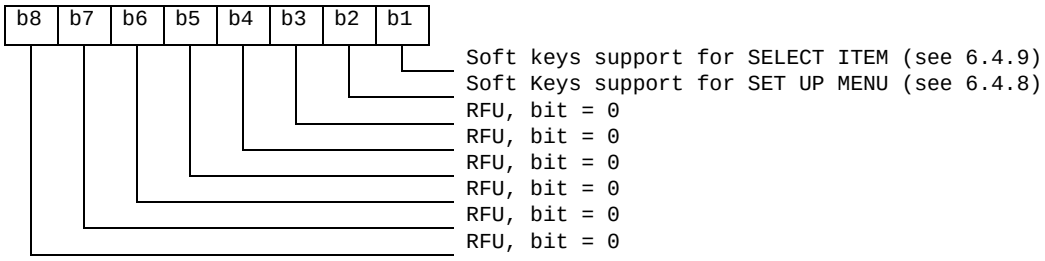
Eighth byte (Proactive SIM):



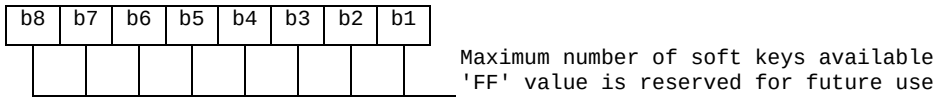
Ninth byte:



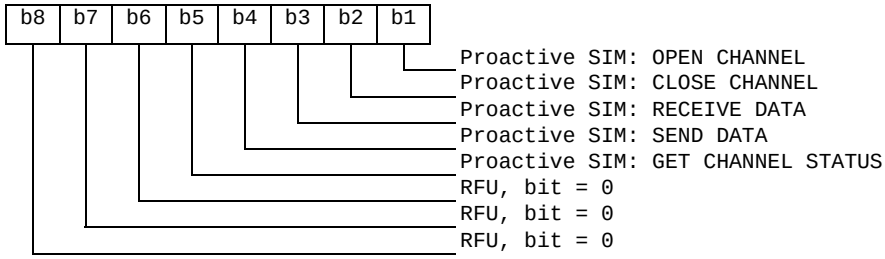
Tenth byte (Soft keys support):



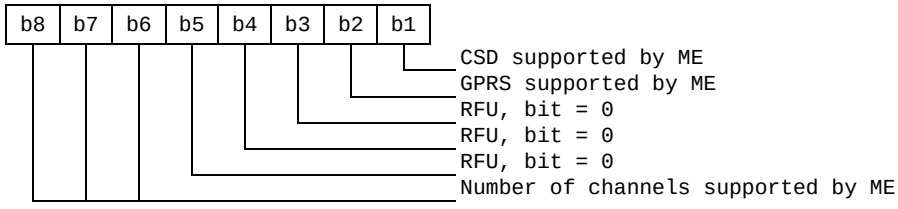
Eleventh byte (Soft keys information):



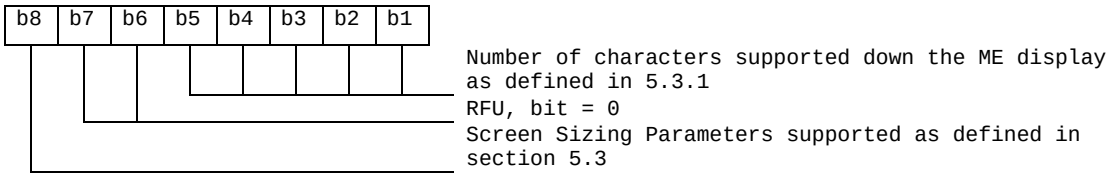
Twelfth byte (Bearer Independent protocol proactive commands (class "e"):



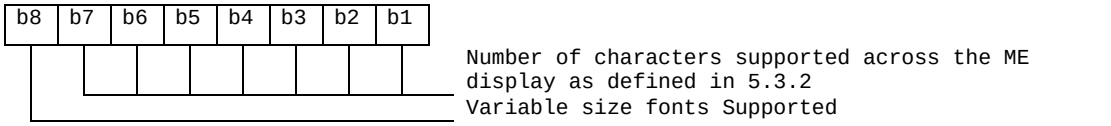
Thirteenth byte (Bearer Independent protocol supported bearers (class "e"):



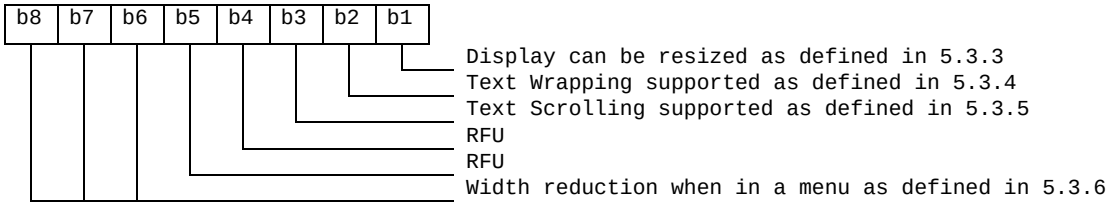
Fourteenth byte (Screen height):



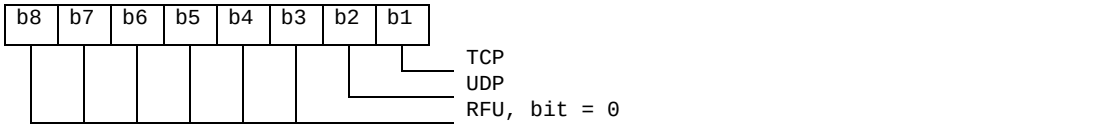
Fifteenth byte (Screen width):



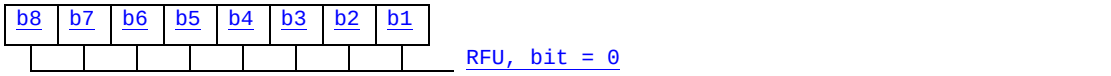
Sixteenth byte (Screen effects):



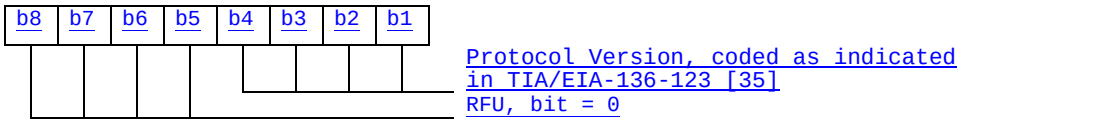
Seventeenth byte: (Bearer independent protocol supported transport interface) for class "e":



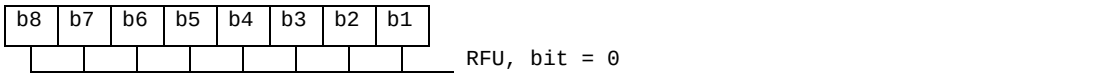
Eighteenth byte: (Reserved):



Nineteenth byte: (reserved for TIA/EIA-136 facilities):



Subsequent bytes:



RFU bits, and all bits of subsequent bytes, are reserved to indicate future facilities. A SIM supporting only the features of SIM Application Toolkit defined in the present document shall not check the value of RFU bits.

Response parameters/data: None.

3GPP T3 (USIM) Meeting #20
Marseille, France, 03 - 05 September, 2001

Tdoc T3-010600

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A203** ⌘ rev **-** ⌘ Current version: **8.7.0** ⌘

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

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

Title:	⌘	Alignment of 11.14 with 31.111 regarding interaction between FDN, SEND SMS and SEND SS
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 2001-09-03
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one of the following categories:
- ***F*** *(essential 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:	⌘	The definition of the interoperation of the Fixed Dialling Number service with the the SIM Application Toolkit SEND SHORT MESSAGE and SEND SS proactive SIM commands have not been translated from R99 31.111 into 11.14.
Summary of change:	⌘	This change includes the definition of the interoperation of the FDN service from 31.111 previously absent from 11.14.
Consequences if not approved:	⌘	Inconsistencies between 11.14 and 31.111 may hinder the interoperation between ME / UE and SIM / USIM.

Clauses affected:	⌘	6.4.10, 6.4.11
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

6.4.10 SEND SHORT MESSAGE

Two types are defined:

- a short message to be sent to the network in an SMS-SUBMIT message, or an SMS-COMMAND message, where the user data can be passed transparently;
- a short message to be sent to the network in an SMS-SUBMIT message where the text needs to be packed by the ME.

Where the text has been packed, the text string provided by the SIM shall not be longer than 160 characters. It shall use the SMS default 7-bit coded alphabet, packed into 8-bit octets, in accordance with TS 23.038 [5]. The data coding indication contained in the Data Coding Scheme byte shall be "default alphabet". The text length (which is part of the SMS TPDU) given by the SIM shall state the number of 7-bit characters in the text string. The command details shall indicate "packing not required".

…

If the Short Message TPDU is unsuccessfully received by the network (e.g. the reception of a CP-ERROR), the ME shall inform the SIM using TERMINAL RESPONSE (network currently unable to process command). If a null alpha identifier was provided by the SIM, the ME should not give any information to the user at the unsuccessful network reception.

The destination address and the SMSC address included in the SEND SHORT MESSAGE proactive command shall not be checked against those of the FDN list, even if the Fixed Dialling Number service is enabled.

6.4.11 SEND SS

~~Even if the Fixed Dialling Number service is enabled, the supplementary service control string included in the SEND SS proactive command shall not be checked against those of the FDN list.~~

Upon receiving this command, the ME shall decide if it is able to execute the command. Examples are given below, but the list is not exhaustive:

…

If the ME supports the Last Number Dialled service, the ME shall not store in EF_{LND} the supplementary service control string sent by the SIM in this command.

The supplementary service control string included in the SEND SS proactive command shall not be checked against those of the FDN list, even if the Fixed Dialling Number service is enabled.

3GPP T3 (USIM) Meeting #20
Marseille, France, 4-5 September, 2001

Tdoc T3-010605
Revision of T3-010504

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A204** ⌘ rev **-** ⌘ Current version: **8.7.0** ⌘

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

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

Title:	⌘	Alignment with 31.111
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
- ***F*** *(essential 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:	⌘	Alignment with 31.111: Part of the CR included in T3-010413 and approved applies also to 11.14. Alignment in the description of OPEN CHANNEL related to CS bearer command between 31.111 and 11.14
Summary of change:	⌘	Removal of 4 reasons for the occurrence of Channel Status Event. Correction of byte numbering and length for Browser Identity, URL, and Browser Termination Cause parameters. Addition of " Duration 1 shall be present if Duration 2 is present" in sections 6.6.27.1
Consequences if not approved:	⌘	Inconsistencies between 11.14 and 31.111

Clauses affected:	⌘	6.6.27.1, 11.11.1, 12.47, 12.48, 12.51
Other specs Affected:	⌘	[ ] Other core specifications [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

6.6.27 OPEN CHANNEL

6.6.27.1 OPEN CHANNEL related to a CS bearer

Description	Section	M/O	Min	Length
Proactive SIM command Tag	13.2	M	Y	1
Length (A+B+C+D+E+F+G+H+I+J+K+L+M+N+O)	-	M	Y	1 or 2
Command details	12.6	M	Y	A
Device identities	12.7	M	Y	B
Alpha identifier	12.2	O	N	C
Icon identifier	12.31	O	N	D
Address	12.1	M	Y	E
Subaddress	12.3	O	N	F
Duration 1	12.8	O	N	G
Duration 2	12.8	O	N	H
Bearer description	12.52	M	Y	I
Buffer size	12.55	M	Y	J
Other address (local address)	12.58	O	N	K
Text String (User login)	12.15	O	N	L
Text String (User password)	12.15	O	N	M
SIM/ME interface transport level	12.59	O	N	N
Data destination address	12.58	O	N	O

The Subaddress may be requested. If the subaddress is not present, the ME shall not provide a called party subaddress to the network.

Duration 1 indicates the duration of reconnection tries. If Duration 1 is not present, the SIM imposes no restrictions on the ME. Duration 1 shall be present if Duration 2 is present.

Duration 2 indicates the timeout value before the ME releases the link if there is no data exchanged on the link.If duration 2 is not present the link is never released automatically by the ME.

The local address parameter (see 12.58) provides information to the ME necessary to identify the local device (i.e. it provides an IP address). If local address length is null, dynamic local address is required. If parameter is not present, the mobile may use the mobile default local address configuration.

The ME may support a remote access login feature (e.g. PPP login). If supported by the ME, the SIM may provide 'User login' and 'User password' parameters which allow the ME to answer an access authentication challenge . If only one parameter is present, it is considered as the User Login and the ME shall use default Password configuration if any. If the parameters are not present, the ME shall use default Login/Password configuration if any. If no authentication challenge is requested, the user login and password parameters shall be ignored.

If the SIM/ME interface transport level is present in the command, then the ME shall provide the requested transport layer protocols under the channel and shall use this object containing a set of parameters required to make the transport connection. The data that is exchanged at the SIM/ME interface in the RECEIVE DATA/SEND DATA commands are SDUs. When the SAT application sends an SDU, the transport layer within the ME is in charge to add the transport header to the SDU in order to build the Transport-PDU. When the SAT application requests to receive an SDU, the transport layer within the ME is in charge to remove the transport header of the Transport-PDU, and to forward the SDU to the SAT. If the parameter is not present, the SIM/ME interface is the bearer level (serial link or packet link as defined in TS 27.007 [27]), and the SAT application is in charge of the network and transport layer.

The Data destination address is the end point destination address of sent data. This data destination address is requested when a SIM/ME interface transport is present, otherwise it is ignored. The data destination address is a data network address.

11.11 Channel status event

All subclauses under 11.11 apply only if class "e" is supported.

11.11.1 Procedure

If the Channel status event is part of the current event list (as set up by the last SET UP EVENT LIST command, see subclause 6.4.16), then, when the ME detects one of the following changes:

~~- the Tx channel buffer becomes empty, or~~
~~- the Tx channel buffer becomes full, or~~
~~- the Rx channel buffer becomes empty, or~~
~~- the Rx channel buffer becomes full, or~~
- a link is error, or
- a link is established, or
- any other error,

, the ME shall inform the SIM that this has occurred, by using the ENVELOPE (EVENT DOWNLOAD – Channel status) command as defined below.

[…]

12.47 Browser Identity

Byte(s)	Description	Length
1	Browser identity tag	1
2 ~~to (Y + 1)~~	Length (~~Y~~1)	~~Y~~1
~~(Y + 1) to (Y + 2~~ 3	Browser Identity	1

Coding :

00 = Default Browser shall be used.
Other values are RFU.

12.48 URL

Byte(s)	Description	Length
1	URL tag	1
2 to (Y+1)	Length (X)	Y
(Y+~~1~~2) to (Y+1 + X)	URL	X

A null URL shall be coded with Length = '00', and no Value part. In that case, the ME shall use the default URL.

Coding :

The data used for the URL shall be coded as defined in [32] on using the "SMS 7bits default alphabet" with bit 8 set to 0 ;

12.51 Browser Termination Cause

Byte(s)	Description	Length
1	Browser Termination Cause tag	1
2 ~~to (Y + 1)~~	Length (~~Y~~1)	~~Y~~1
~~(Y + 1) to (Y + 2~~3	Browser Termination Cause	1

Coding:

00 = User Termination.
01 = Error Termination.

3GPP T3 (USIM) Meeting #20
Marseille, France, 4-5 September, 2001

Tdoc T3-010606
Revision of T3-0101506

CR-Form-v3

CHANGE REQUEST

⌘ **11.14 CR A205** ⌘ rev **-** ⌘ Current version: **8.7.0** ⌘

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

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

Title:	⌘	Corrections to OPEN CHANNEL commands
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
- ***F*** *(essential 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:	⌘	In section 6.4.27.1, it is written "The SIM may request the use of an automatic reconnection mechanism according to TS 02.07 [19]. The SIM may also request an optional maximum duration for the reconnection mechanism". However there is no way for the card to explicitly ask for automatic reconnection without indicating the maximum duration for the reconnection.
Summary of change:	⌘	It is proposed to structure the OPEN CHANNEL as the SET UP CALL command, i.e. indicating in the Command Details parameter whether automatic reconnection is required.
Consequences if not approved:	⌘	The structure of the OPEN CHANNEL for CS domain command is not coherent with its description in section 6.4.27.1

Clauses affected:	⌘	12.6		
Other specs Affected:	⌘	[X] Other core specifications	⌘	31.111
		[ ] Test specifications		
		[ ] O&M Specifications		
Other comments:	⌘			

12.6 Command details

Byte(s)	Description	Length
1	Command details tag	1
2	Length = '03'	1
3	Command number	1
4	Type of command	1
5	Command Qualifier	1

- Command number

For contents and coding, see subclause 6.5.1.

- Type of command:

Contents: The Type of Command specifies the required interpretation of the data objects which follow, and the required ME procedure.

Coding:
See section 13.4
The ME shall respond to reserved values (i.e. values not listed) with the result "Command type not understood".

- Command Qualifier:

Contents: Qualifiers specific to the command.

Coding:
- REFRESH;
  '00' =SIM Initialization and Full File Change Notification;
  '01' = File Change Notification;
  '02' = SIM Initialization and File Change Notification;
  '03' = SIM Initialization;
  '04' = SIM Reset;
  '05' to 'FF' = reserved values.

[…]

- OPEN CHANNEL (if class "e" is supported)
  bit 1: 0 = on demand link establishment
  1 = immediate link establishment
  bit 2: 0 = no automatic reconnection
  1 = automatic reconnection
  bits 3~~2~~ to 8: = RFU

- CLOSE CHANNEL (if class "e" is supported)
  This byte is RFU.

[…]

3GPP T3 (USIM) Meeting #20
Marseille, 3-5 September 2001

Tdoc T3-010609
(revised from T3-010582)

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A206** ⌘ rev **-** ⌘ Current version: **8.7.0** ⌘

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

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

Title:	⌘	New TLV object for the APN in the OPEN CHANNEL command
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	REL-99

Use one of the following categories:
F *(essential 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:	⌘	The “URL” TLV object was wrongly used in the OPEN CHANNEL to store an APN, because URLs and APNs have different codings.
Summary of change:	⌘	The specification is aligned with ETSI TS 102223 (CAT), introducing the new “Network Access Name” TLV object, which will contain the APN.
Consequences if not approved:	⌘	Inconsistency of the specification

Clauses affected:	⌘	2, 6.6.27.2, 12.xx (new section), 13.3		
Other specs affected:	⌘	[X] Other core specifications	⌘	31.111 (R99 and REL-4)
		[ ] Test specifications		
		[ ] O&M Specifications		
Other comments:	⌘	The tag value ('47') is the one chosen in ETSI TS 102223		

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] ~~not used~~3GPP TS 23.003: "Numbering, addressing and identification"

6.6.27.2 OPEN CHANNEL related to GPRS

Description	Section	M/O	Min	Length
Proactive SIM command Tag	13.2	M	Y	1
Length (A+B+C+D+E+F+G+H+I+J)	-	M	Y	1 or 2
Command details	12.6	M	Y	A
Device identities	12.7	M	Y	B
Alpha identifier	12.2	O	N	C
Icon identifier	12.31	O	N	D
Bearer description	12.52	M	Y	E
Buffer size	12.55	M	Y	F
~~Access Point Name~~Network Access Name	12.~~48~~xx	O	N	G
Other address (local address)	12.58	O	N	H
SIM/ME interface transport level	12.59	O	N	I
Data destination address	12.58	O	N	J

The ~~Access Point~~ Network Access Name parameter may be requested. The ~~Access Point~~Network Access Name parameter ~~is~~contains an Access Point Name (APN)~~a URL (see 12.48) which provides information to the ME necessary to~~ identifying the Gateway GSN (GGSN) which provides interworking with an external packet data network. If the parameter is not present, the mobile may use the default Access Point Name in the mobile configuration or the default subscription value.

The local address parameter (see 12.58) provides information to the ME necessary to identify the local device. If the parameter is present and length is not null, it provides an IP address that identifies the SAT application in the address area applicable to the PDN. If local address length is null, dynamic local address allocation is required for the SAT application. If parameter is not present, the mobile may use the mobile default local address configuration.

If the SIM/ME interface transport level is present in the command, then the ME shall provide the requested transport layer protocols under the channel and shall use this object containing a set of parameters required to make the transport connection. The data that is exchanged at the SIM/ME interface in the RECEIVE DATA/SEND DATA commands are SDUs. When the SAT application sends an SDU, the transport layer within the ME is in charge to add the transport header to the SDU in order to build the Transport-PDU. When the SAT application requests to receive an SDU, the transport layer within the ME is in charge to remove the transport header of the Transport-PDU, and to forward the SDU to the SAT. If the parameter is not present, the SIM/ME interface is the bearer level (serial link or packet link as defined in TS 27.007 [27]) and the SAT application is in charge of the network and transport layer.

The Destination Address is the end point destination address of sent data. This data destination address is requested when a SIM/ME interface transport is present, otherwise it is ignored. The data destination address is a data network address (e.g. IP address).

12.xx Network Access Name

Byte(s)	Description	Length
1	Network Access Name tag	1
2	Length (X)	1
3 to 3+X-1	Network Access Name	X

- Content: The Network Access Name is used to identify the Gateway entity, which provides interworking with an external packet data network. For GPRS, the Network Access Name is an APN.

- Coding: As defined in TS 23.003 [1]

13.3 SIMPLE-TLV tags in both directions

8	7	6	5	4	3	2	1
CR	**Tag value**						

CR: Comprehension required for this object.

Unless otherwise stated, for SIMPLE-TLV data objects it is the responsibility of the SIM application and the ME to decide the value of the CR flag for each data object in a given command.

Handling of the CR flag at the receiving entity is described in subclause 6.10.

CR	**Value**
Comprehension required	1
Comprehension not required	0

Description	**Length of tag**	**Tag value, bits 1-7 (Range: '01' - '7E')**	**Tag (CR and Tag value)**
Command details tag	1	'01'	'01' or '81'
Device identity tag	1	'02'	'02' or '82'
Result tag	1	'03'	'03' or '83'
…			
Channel data tag class "e" only	1	'36'	'36' or 'B6'
Channel data length tag class "e" only	1	'37'	'37' or 'B7'
Channel status tag class "e" only	1	'38'	'38' or 'B8'
Buffer size tag class "e" only	1	'39'	'39' or 'B9'

Continued…..

Description	**Length of tag**	**Tag value, bits 1-7 (Range: '01' - '7E')**	**Tag (CR and Tag value)**
Card reader identifier tag class "a" only	1	'3A'	'3A' or 'BA'
Not used	1	'3B'	-
SIM/ME interface transport level class "e" only	1	'3C'	'3C' or 'BC'
Not used	1	'3D'	-
Other address (data destination address) class "e" only	1	'3E'	'3E' or 'BE'
Network Access Name	1	'47'	'47' or 'C7'
Reserved for TIA/EIA-136	1	'60'	'60' or 'E0'
Reserved for TIA/EIA-136	1	'61'	'61' or 'E1'

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Marseille, France, 4-5 September, 2001

Tdoc T3-010615
(revised version of T3-010505)

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A207** ⌘ rev **-** ⌘ Current version: **8.7.0** ⌘

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

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

Title:	⌘	Corrections to SEND DATA commands and Channel Status Event
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	5/9/2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(essential 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:	⌘	In the SEND DATA command, the Channel Data Length TLV is redundant with the length of the Channel Data TLV. The Channel Status event should only occur outside the execution of a proactive command – Terminal Response pair because it is then redundant with the Terminal Response. Channel Status Event (Link established) should then be removed because it always occurs after a successful OPEN CHANNEL (immediate) or a SEND DATA following an OPEN CHANNEL (on demand). In the result parameter, the use of the Additional Information for the Bearer Independent Protocol is not clear when performing SEND DATA.
Summary of change:	⌘	Removal of the Channel Data Length TLV from the SEND DATA command. In section 11.1, removal of "link is established" as reason for the occurrence of the Channel Status Event. Clarification on when the event should be sent by the ME. Additional Information for the Bearer Independent Protocol indicates "channel closed" when the link has been dropped or could not be established during the process of SEND DATA command. Additional Information for the Bearer Independent Protocol indicates "channel identifier not valid" when no channel is opened with this channel identifier.
Consequences if not approved:	⌘	Definition of a useless parameter for the SEND DATA command Useless redundancy between Channel Status Event and Terminal Response.

Clauses affected:	⌘	6.4.30, 6.6.30, 11.1, 12.54, Annex J

Other specs Affected:	⌘	X	Other core specifications	⌘ 31.111
			Test specifications	
			O&M Specifications	
Other comments:	⌘			

6.4.30 SEND DATA

This subclause applies only if class "e" is supported.

This command requests the ME to send data through a previously set up data channel corresponding to a dedicated Channel identifier. The SIM informs the ME if the data is :

- to be sent immediately;
- or to be stored in a Tx buffer. Then it is up to the ME to manage the data sending in order to use the bearer in an optimised way. To send the data stored in a Tx buffer, the ME shall be notified by a "send data immediately" and it shall consider the data presently and previously concatenated in its Tx buffer as one SDU, and send it in only one PDU. The Tx buffer shall then be emptied before returning the TERMINAL RESPONSE to the SIM and allowing new SIM sending.

Upon receiving this command, the ME shall either immediatly send data or store provided data into the Tx buffer corresponding to the Channel identifier. Examples are given below, but the list is not exhaustive:

- If the ME is unable to process the command:
  - If the command is rejected because the requested channel is already closed the ME informs the SIM using TERMINAL RESPONSE (Bearer Independent Protocol error – channel identifier not valid);
  - If the command is rejected because the ME could not establish the link (after OPEN CHANNEL (on demand)) or the link was dropped, the ME informs the SIM using TERMINAL RESPONSE (Bearer Independent Protocol error – channel closed);
  - If the command is rejected because the channel is temporarily unavailable the ME informs the SIM using TERMINAL RESPONSE (ME currently unable to process command);
  - If the requested number of bytes of empty space is not yet available in the buffer the ME informs the SIM using TERMINAL RESPONSE (Bearer Independent Protocol error);

- If the user has indicated the need to end the proactive SIM session, the ME informs the SIM using TERMINAL RESPONSE (Proactive SIM session terminated by the user).

6.6.30 SEND DATA

Description	Section	M/O	Min	Length
Proactive SIM command Tag	13.2	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Command details	12.6	M	Y	A
Device identities	12.7	M	Y	B
Alpha identifier	12.2	O	N	C
Icon identifier	12.31	O	N	D
~~Channel data length~~	~~12.54~~	~~M~~	~~Y~~	~~E~~
Channel data	12.53	M	Y	~~F~~E

[…]

11.11 Channel status event

All subclauses under 11.11 apply only if class "e" is supported.

11.11.1 Procedure

If the Channel status event is part of the current event list (as set up by the last SET UP EVENT LIST command, see subclause 6.4.16), then, when the ME detects one of the following changes:

- the Tx channel buffer becomes empty, or
- the Tx channel buffer becomes full, or
- the Rx channel buffer becomes empty, or
- the Rx channel buffer becomes full, or
- a link is error, or
- ~~a link is established, or~~
- any other error,

which is not resulting from the execution of a proactive command, the ME shall inform the SIM that this has occurred, by using the ENVELOPE (EVENT DOWNLOAD – Channel status) command as defined below.

12.54 Channel data length

This subclause applies only if class "e" is supported.

Byte(s)	Description	Length
1	Channel data length tag	1
2	Length (1)	1
3	Channel data length	1

The Channel data length codes :

- either the number of bytes that are available in a channel buffer (Tx or Rx buffers negotiated during OPEN CHANNEL) using TERMINAL RESPONSE. Since the Tx or Rx buffer size can be larger than 255 bytes, 'FF' means "more than 255 bytes are available".

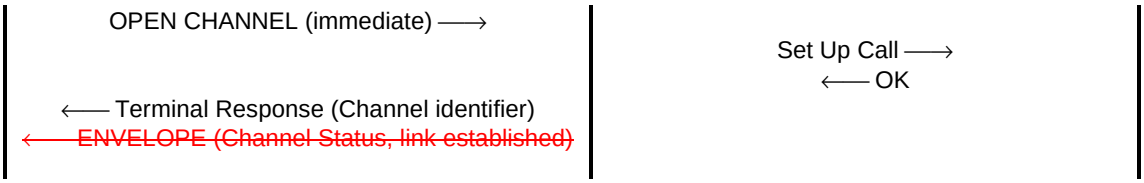
- or the number of bytes that are requested in a RECEIVE DATA ~~or transmitted in a SEND DATA~~ command.

Annex J (informative): Bearer independent protocol proactive command examples

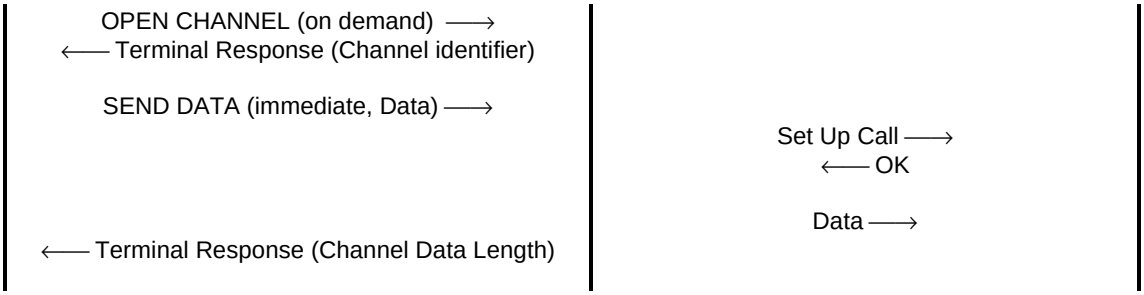
This annex applies only if class "e" is supported.

SIM	ME	Network

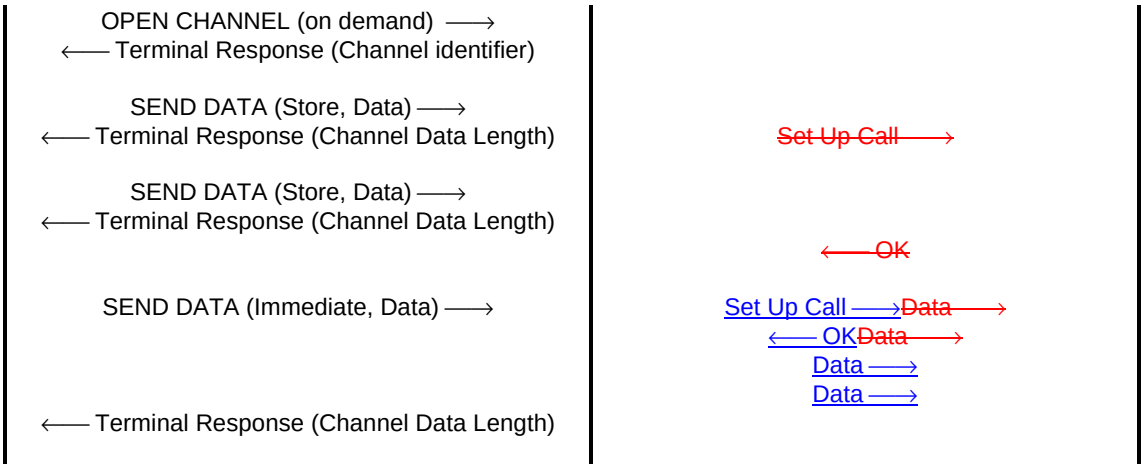
OPEN CHANNEL 'immediate link establishment'



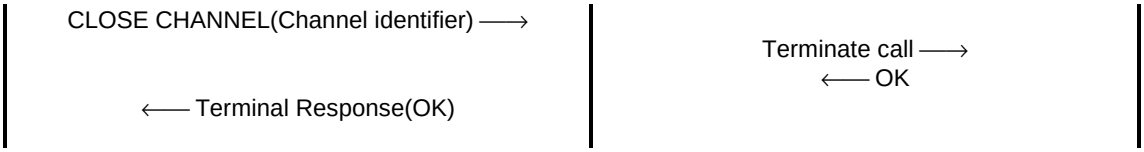
OPEN CHANNEL 'On demand link establishment' and SEND DATA 'immediately'



OPEN CHANNEL 'On demand link establishment' and SEND DATA 'Stored in Tx buffer'



CLOSE CHANNEL



RECEIVE DATA

		⟵ Data
	⟵ ENVELOPE (Data available)	
	RECEIVE DATA (Channel Data length) ⟶ ⟵ Terminal Response(Data<=Length)	

SEND DATA 'immediately'

	SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

SEND DATA 'Stored in Tx Buffer'

	SEND DATA (Store, Data) ⟶ ⟵ Terminal Response(Channel Data length)	
	SEND DATA (Store, Data) ⟶ ⟵ Terminal Response(Channel Data length)	
	SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

GET CHANNEL STATUS

	GET CHANNEL STATUS ⟶ ⟵ Terminal Response (Channel status)	1 Channel available

Example for GPRS bearer:

ICC	ME	SGSN

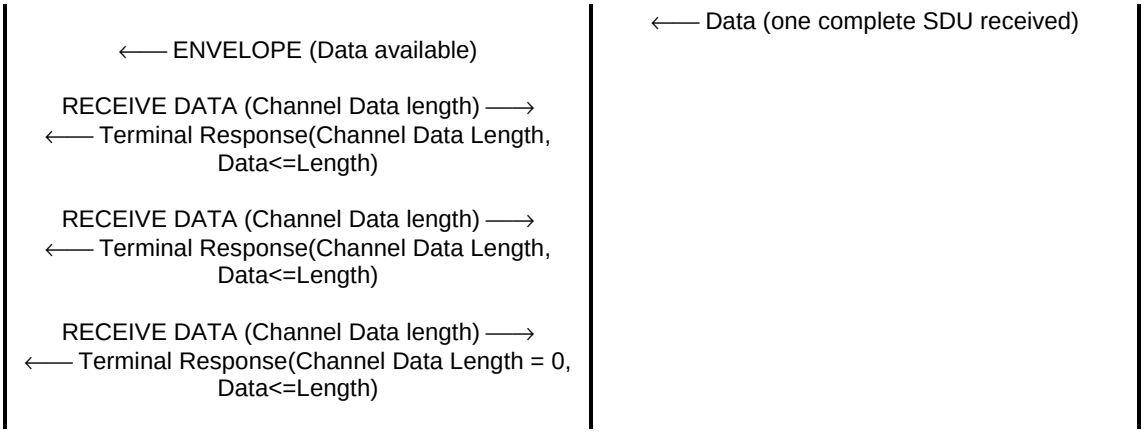
OPEN CHANNEL

	OPEN CHANNEL (immediate, Bearer description(bearer type=GPRS, QoS, PDP type=IP), Buffer size, APN, SIM/ME interface transport level (UDP, port *p*), data destination address)⟶	
		Attach request ⟶ ⟵ Attach accept
		Activate PDP context Request (Requested PDP address, QoS, APN, PDP Type ⟶
		⟵ Activate PDP context Accept (PDP address, negotiated QoS, PDP type)
	⟵ Terminal Response (Channel identifier, link established, no further information, buffer size) ~~⟵ ENVELOPE (Channel status event: Channel identifier, link established)~~	

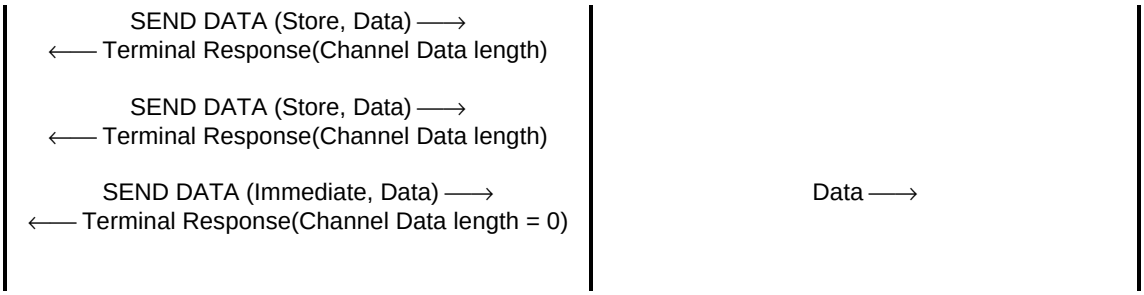
CLOSE CHANNEL

	CLOSE CHANNEL(Channel identifier) ⟶	
		Deactivate PDP context request ⟶ ⟵ Deactivate PDP context accept
	⟵ Terminal Response(OK)	

RECEIVE DATA



SEND DATA 'Stored in Tx Buffer'



GET CHANNEL STATUS

3GPP T3 (USIM) Meeting #20
Marseilles, France, 3 – 5 September 2001

Tdoc T3-010602

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **051** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘	Terminal Profile
Source:	⌘	T3
Work item code:	⌘	CAT
Date:	⌘	5 September 2001
Category:	⌘	B
Release:	⌘	*R99*

Use one of the following categories:
F *(essential 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:	⌘	Harmonising the Terminal Profile command defined in TIA/EIA-136-037 with the one defined in GSM 11.14 as requested by CAT Ad-Hoc in Tdoc SCPz010011.
Summary of change:	⌘	Addition of Protocol Version for TIA/EIA-136C to the Terminal Profile command
Consequences if not approved:	⌘	Two different Terminal Profiles need to be interpreted by the mobile

Clauses affected:	⌘	
Other specs Affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

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] 3GPP TS 22.002: "3rd Generation Partnership Project (3GPP); Bearer Services supported by a GSM PLMN".

[2] 3GPP TS 22.030: "3rd Generation Partnership Project (3GPP); Man-Machine Interface (MMI) of the Mobile Station (MS)".

[3] 3GPP TS 22.042: "3rd Generation Partnership Project (3GPP); Network identity and timezone (NITZ); Stage 1".

[4] 3GPP TS 23.038: "3rd Generation Partnership Project (3GPP); Alphabets and language-specific information".

[5] 3GPP TS 23.040: "3rd Generation Partnership Project (3GPP); Technical realization of the Short Message Service (SMS); Point-to-Point (PP)".

[6] 3GPP TS 23.041: "3rd Generation Partnership Project (3GPP); Technical realization of Short Message Service Cell Broadcast (SMSCB)".

[7] 3GPP TS 23.122: "3rd Generation Partnership Project (3GPP); Non Access Stratum functions related to Mobile Station (MS) in idle mode".

[8] 3GPP TS 24.007: "3rd Generation Partnership Project (3GPP); Mobile radio interface signalling layer 3; General aspects".

[9] 3GPP TS 24.008: "3rd Generation Partnership Project (3GPP); Mobile radio interface layer 3 specification".

[10] 3GPP TS 24.011: "3rd Generation Partnership Project (3GPP); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[11] 3GPP TS 24.080: "3rd Generation Partnership Project (3GPP); Mobile radio interface layer 3 supplementary services specification; Formats and coding".

[12] 3GPP TS 27.007: "3rd Generation Partnership Project (3GPP); AT command set for 3G User Equipment (UE)".

[13] 3GPP TS 31.101: "3rd Generation Partnership Project (3GPP); UICC / Terminal Interface; Physical and Logical Characteristics".

[14] 3GPP TS 31.102: "3rd Generation Partnership Project (3GPP); Characteristics of the USIM application".

[15] 3GPP TS 31.110: "3rd Generation Partnership Project (3GPP); Numbering system for telecommunication IC card applications".

[16] ISO/IEC 7816-3 (1997): "Identification cards - Integrated circuit(s) cards with contacts, Part 3: Electronic signals and transmission protocols".

[17] ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Inter-industry commands for interchange".

[18] ISO/IEC 7816-6 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 6 Inter-industry data elements".

[19] ISO 639 (1988): "Code for the representation of names of languages".

[20] 3GPP TS 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features".

[21] 3GPP TS 02.17: "Digital cellular telecommunications system (Phase 2+); Subscriber Identity Modules (SIM) Functional characteristics".

[22] 3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN) ".

[23] 3GPP TS 03.48: "Digital cellular telecommunications system (Phase 2+); Security Mechanisms for the SIM application toolkit ".

[24] IETF RFC 1738: "Uniform Resource Locators (URL) : T. Berners-Lee, et al., December 1994. ftp://ds.internic.net/rfc/rfc1738.txt

[25] IETF RFC 768 "User Datagram Protocol (UDP)"

[26] IETF RFC 793 "Transmission Control Protocol (TCP)"

[27] 3GPP TS 04.18: "Mobile Radio Interface - Layer 3 Specification RR part"

[28] Not used

[29] TIA/EIA-136-123 "Third Generation Wireless – Digital Control Channel Layer 3, April 23, 2001"

5 Profile download

5.1 Procedure

The profile download instruction is sent by the ME to the UICC as part of the UICC initialization procedure. This procedure is specified in TS 31.101 [13]. The profile sent by the ME shall state the facilities relevant to USAT that are supported by the ME.

This procedure is important, as it is by this that the UICC knows what the ME is capable of, and the UICC can then limit its instruction range accordingly. If no command is sent by the ME, the UICC shall assume that the ME does not support USAT.

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

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

Command parameters/data:

Description	Subclause	M/O/C	Length
Profile	-	M	lgth

- Profile:

  Contents: The list of USAT facilities that are supported by the ME.

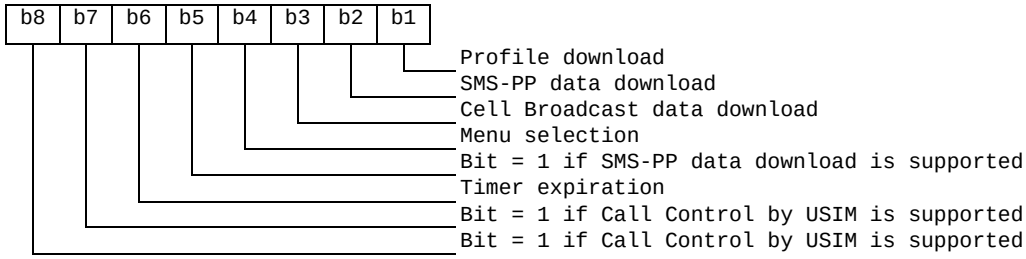
  Coding:

  1 bit is used to code each facility:

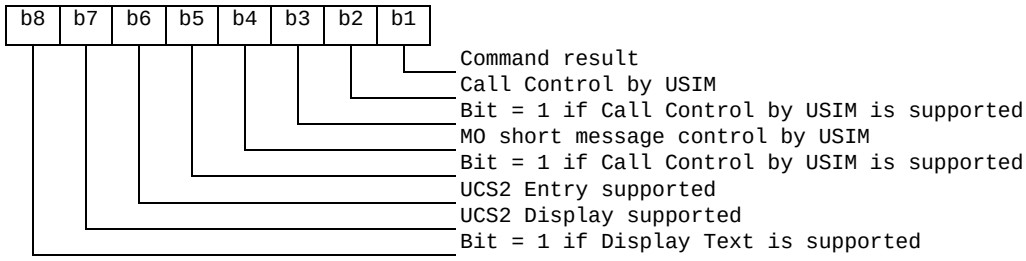
  bit = 1: facility supported by ME

  bit = 0: facility not supported by ME

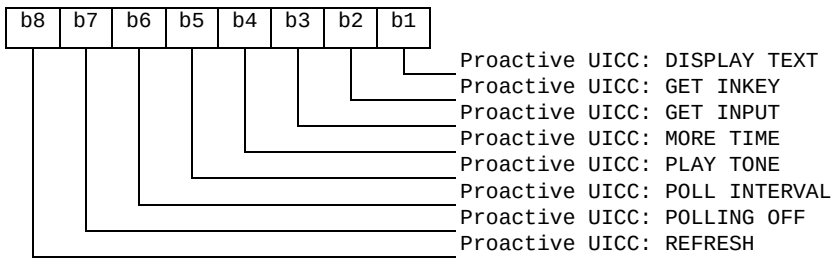
  First byte (Download):



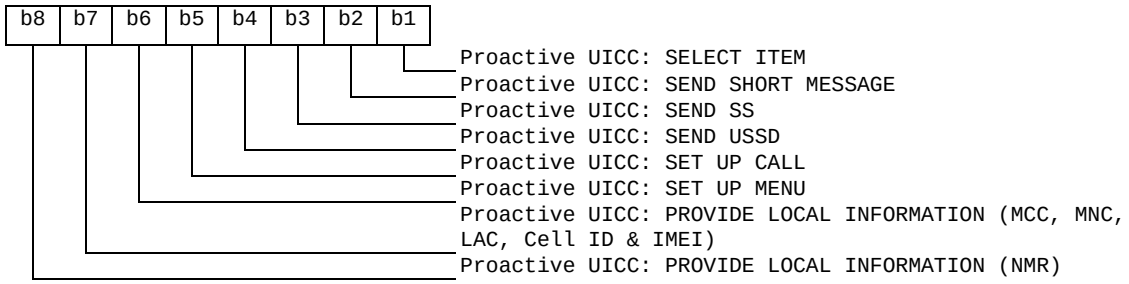
  Second byte (Other):



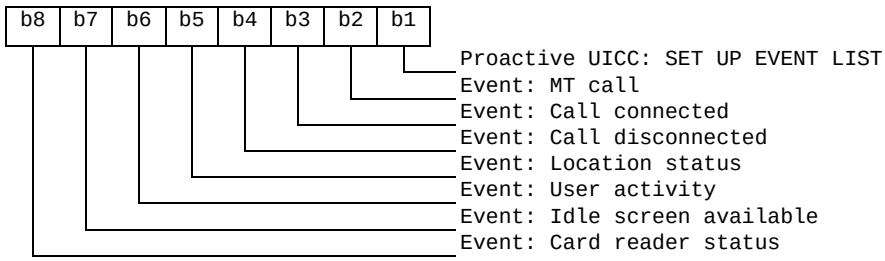
  Third byte (Proactive UICC):



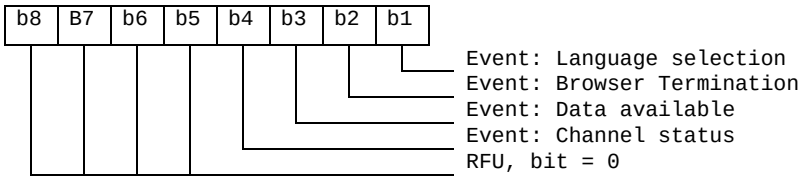
Fourth byte (Proactive UICC):



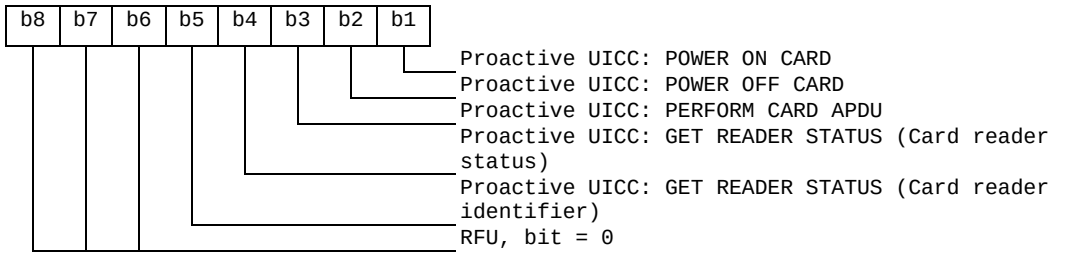
Fifth byte (Event driven information):



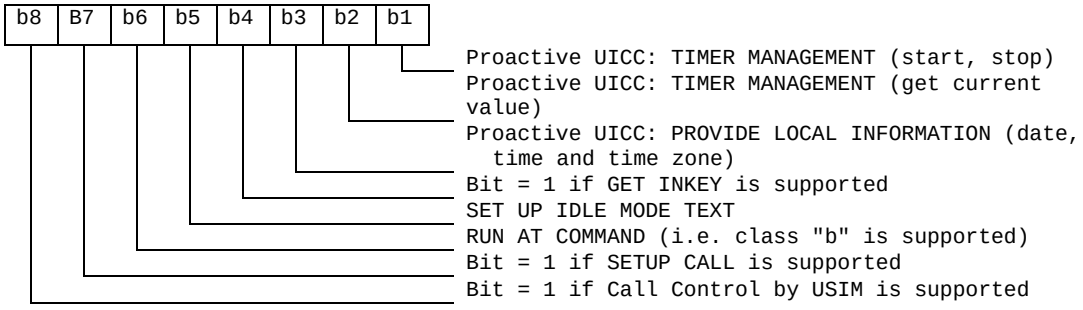
Sixth byte (Event driven information extensions):



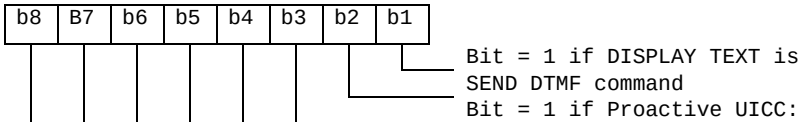
Seventh byte (Multiple card proactive commands) for class "a"

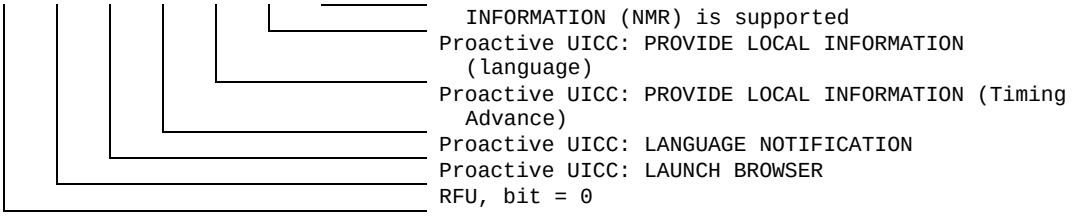


Eighth byte (Proactive UICC):

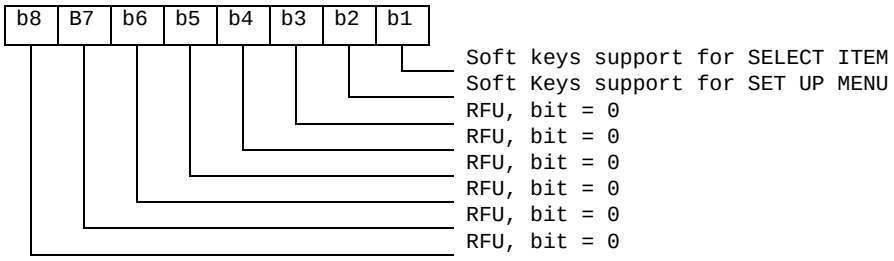


Ninth byte:

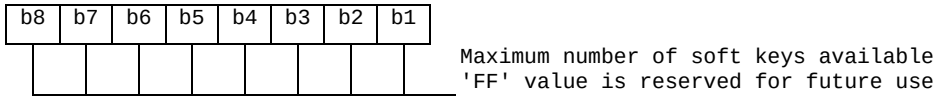




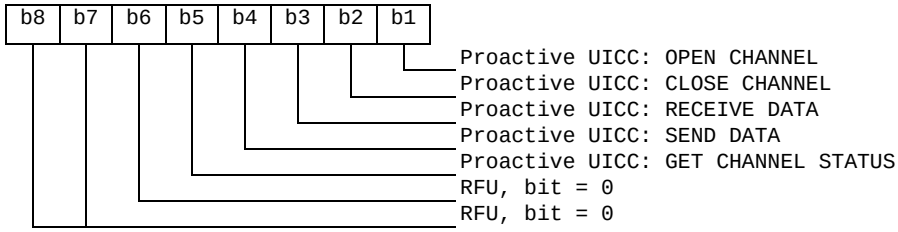
Tenth byte (Soft keys support) for class "d":



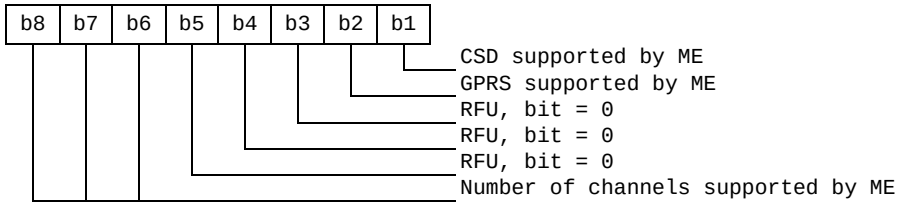
Eleventh byte: (Soft keys information)



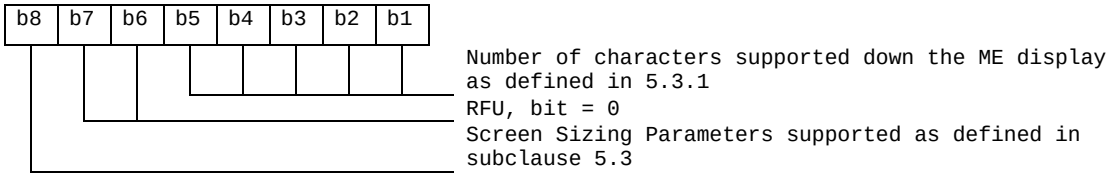
Twelfth byte: (Bearer independent protocol proactive commands) for class "e":



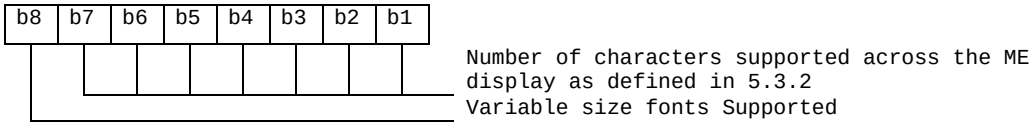
Thirteenth byte (Bearer Independent protocol supported bearers (class "e"):



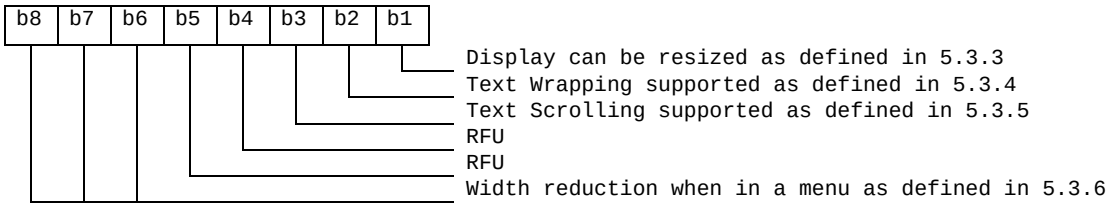
Fourteenth byte: (Screen height)



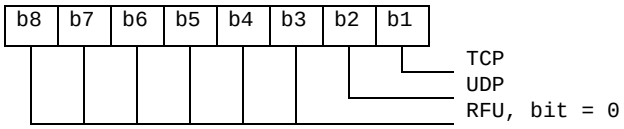
Fifteenth byte: (Screen width)



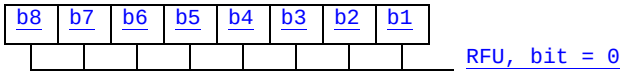
Sixteenth byte: (Screen effects)



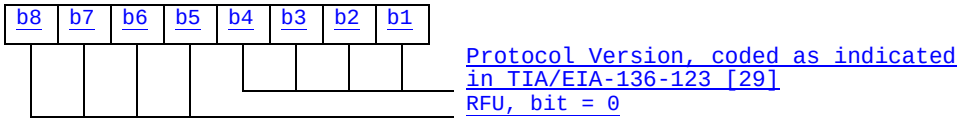
Seventeenth byte: (Bearer independent protocol supported transport interface) for class "e":



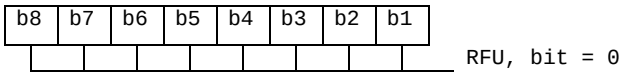
Eighteenth byte: (Reserved for future use):



Nineteenth byte: (reserved for TIA/EIA-136 facilities):



Subsequent bytes:



RFU bits, and all bits of subsequent bytes, are reserved to indicate future facilities. A SIM supporting only the features of SIM Application Toolkit defined here shall not check the value of RFU bits.

Response parameters/data: None.

3GPP T3 (USIM) Meeting #20
Marseilles, France, 3 – 5 September 2001

Tdoc T3-010603

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **052** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

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

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

Title:	⌘	Terminal Profile
Source:	⌘	T3
Work item code:	⌘	CAT
Date:	⌘	5 September 2001
Category:	⌘	B
Release:	⌘	*REL-4*

Use one of the following categories:
F *(essential 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:	⌘	Harmonising the Terminal Profile command defined in TIA/EIA-136-037 with the one defined in GSM 11.14 as requested by CAT Ad-Hoc in Tdoc SCPz010011.
Summary of change:	⌘	Addition of Protocol Version for TIA/EIA-136C to the Terminal Profile command
Consequences if not approved:	⌘	Two different Terminal Profiles need to be interpreted by the mobile

Clauses affected:	⌘	2, 5.2
Other specs Affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

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] 3GPP TS 22.002: "3rd Generation Partnership Project (3GPP); Bearer Services supported by a GSM PLMN".

[2] 3GPP TS 22.030: "3rd Generation Partnership Project (3GPP); Man-Machine Interface (MMI) of the Mobile Station (MS)".

[3] 3GPP TS 22.042: "3rd Generation Partnership Project (3GPP); Network identity and timezone (NITZ); Stage 1".

[4] 3GPP TS 23.038: "3rd Generation Partnership Project (3GPP); Alphabets and language-specific information".

[5] 3GPP TS 23.040: "3rd Generation Partnership Project (3GPP); Technical realization of the Short Message Service (SMS); Point-to-Point (PP)".

[6] 3GPP TS 23.041: "3rd Generation Partnership Project (3GPP); Technical realization of Short Message Service Cell Broadcast (SMSCB)".

[7] 3GPP TS 23.122: "3rd Generation Partnership Project (3GPP); Non Access Stratum functions related to Mobile Station (MS) in idle mode".

[8] 3GPP TS 24.007: "3rd Generation Partnership Project (3GPP); Mobile radio interface signalling layer 3; General aspects".

[9] 3GPP TS 24.008: "3rd Generation Partnership Project (3GPP); Mobile radio interface layer 3 specification".

[10] 3GPP TS 24.011: "3rd Generation Partnership Project (3GPP); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[11] 3GPP TS 24.080: "3rd Generation Partnership Project (3GPP); Mobile radio interface layer 3 supplementary services specification; Formats and coding".

[12] 3GPP TS 27.007: "3rd Generation Partnership Project (3GPP); AT command set for 3G User Equipment (UE)".

[13] 3GPP TS 31.101: "3rd Generation Partnership Project (3GPP); UICC / Terminal Interface; Physical and Logical Characteristics".

[14] 3GPP TS 31.102: "3rd Generation Partnership Project (3GPP); Characteristics of the USIM application".

[15] 3GPP TS 31.110: "3rd Generation Partnership Project (3GPP); Numbering system for telecommunication IC card applications".

[16] ISO/IEC 7816-3 (1997): "Identification cards - Integrated circuit(s) cards with contacts, Part 3: Electronic signals and transmission protocols".

[17] ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Inter-industry commands for interchange".

[18] ISO/IEC 7816-6 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 6 Inter-industry data elements".

[19] ISO 639 (1988): "Code for the representation of names of languages".

[20] 3GPP TS 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features".

[21] 3GPP TS 02.17: "Digital cellular telecommunications system (Phase 2+); Subscriber Identity Modules (SIM) Functional characteristics".

[22] 3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN) ".

[23] 3GPP TS 23.048: "Digital cellular telecommunications system (Phase 2+); Security Mechanisms for the SIM application toolkit ".

[24] IETF RFC 1738: "Uniform Resource Locators (URL) : T. Berners-Lee, et al., December 1994. ftp://ds.internic.net/rfc/rfc1738.txt

[25] IETF RFC 768 "User Datagram Protocol (UDP)"

[26] IETF RFC 793 "Transmission Control Protocol (TCP)"

[27] Specification of the Bluetooth system; Volume 2; Profiles of the Bluetooth system.

[28] 3GPP TS 44.018: "Mobile Radio Interface - Layer 3 Specification RR part"

[29] TIA/EIA-136-123 "Third Generation Wireless – Digital Control Channel Layer 3, April 23, 2001"

5 Profile download

5.1 Procedure

The profile download instruction is sent by the ME to the UICC as part of the UICC initialization procedure. This procedure is specified in TS 31.101 [13]. The profile sent by the ME shall state the facilities relevant to USAT that are supported by the ME.

This procedure is important, as it is by this that the UICC knows what the ME is capable of, and the UICC can then limit its instruction range accordingly. If no command is sent by the ME, the UICC shall assume that the ME does not support USAT.

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

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

Command parameters/data:

Description	Subclause	M/O/C	Length
Profile	-	M	lgth

- Profile:

  Contents: The list of USAT facilities that are supported by the ME.

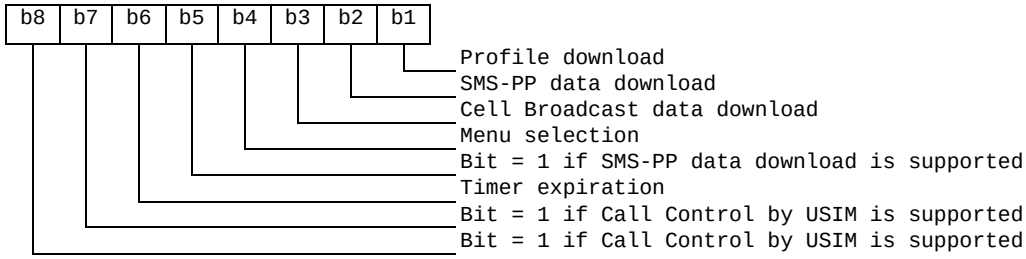
  Coding:

  1 bit is used to code each facility:

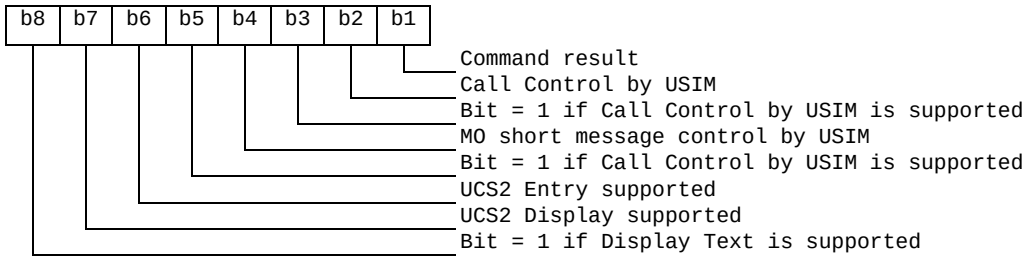
  bit = 1: facility supported by ME

  bit = 0: facility not supported by ME

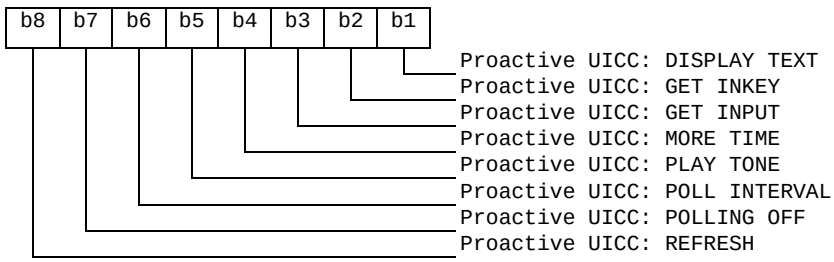
  First byte (Download):



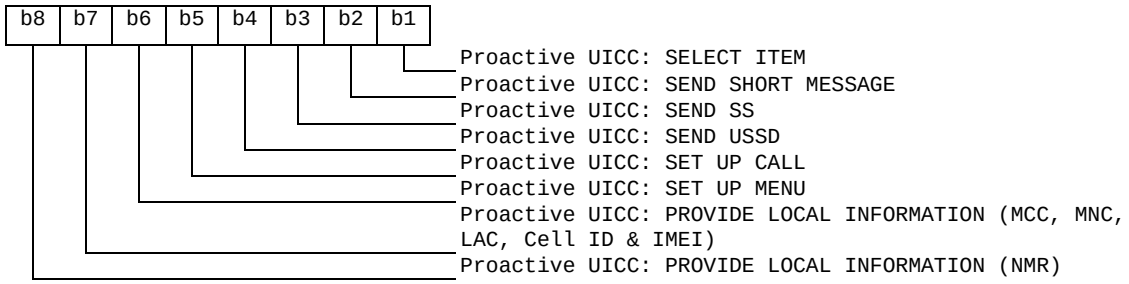
  Second byte (Other):



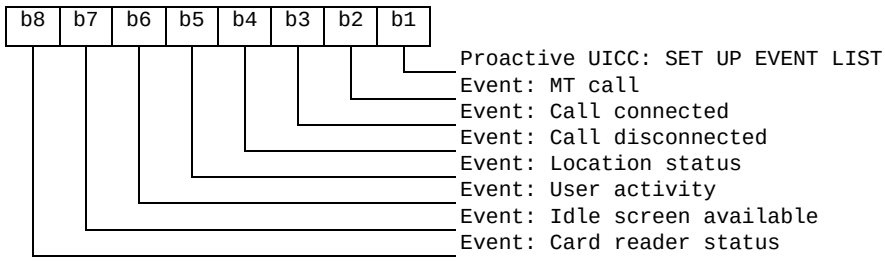
  Third byte (Proactive UICC):



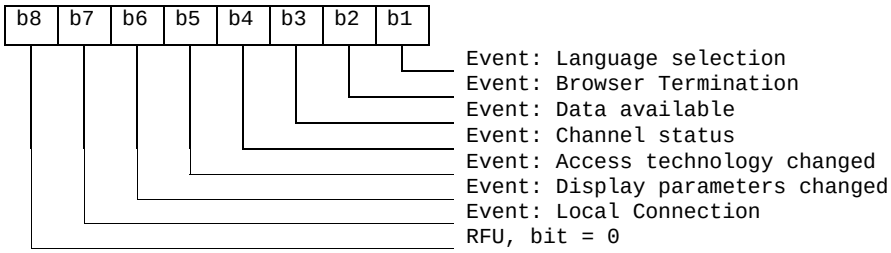
Fourth byte (Proactive UICC):



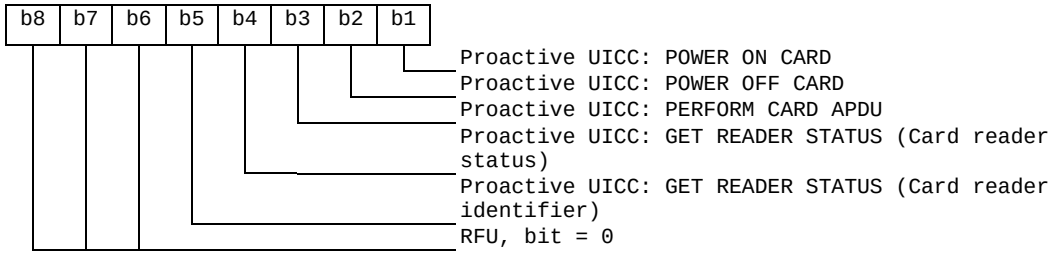
Fifth byte (Event driven information):



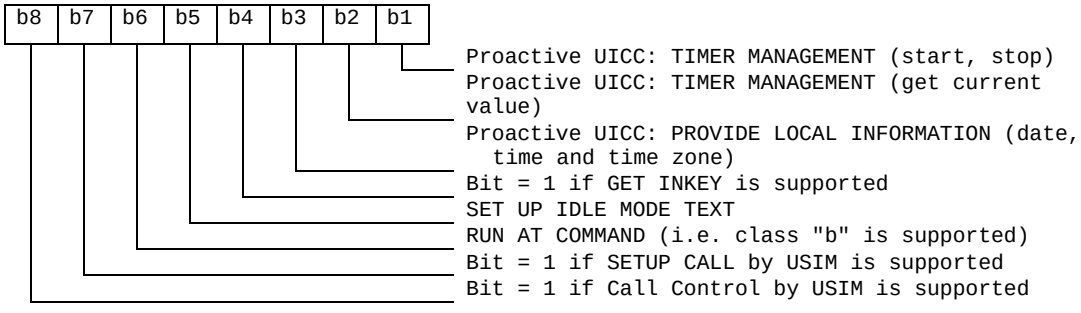
Sixth byte (Event driven information extensions):



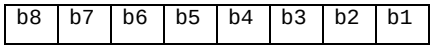
Seventh byte (Multiple card proactive commands) for class "a"

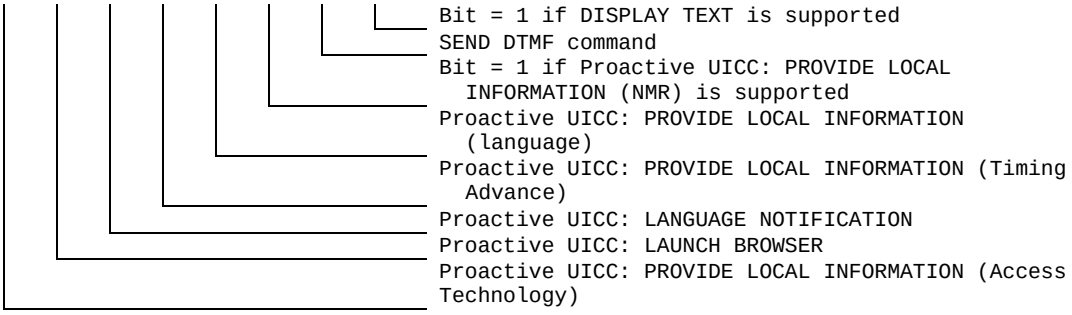


Eighth byte (Proactive UICC):

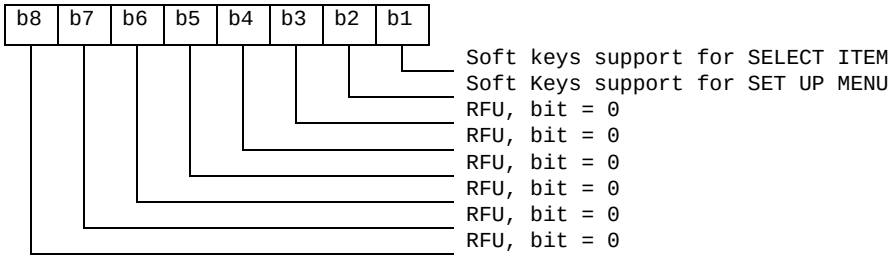


Ninth byte:

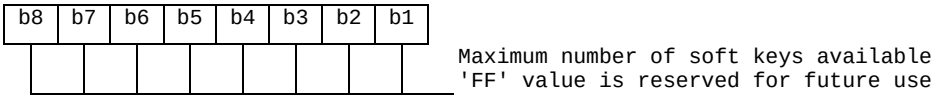




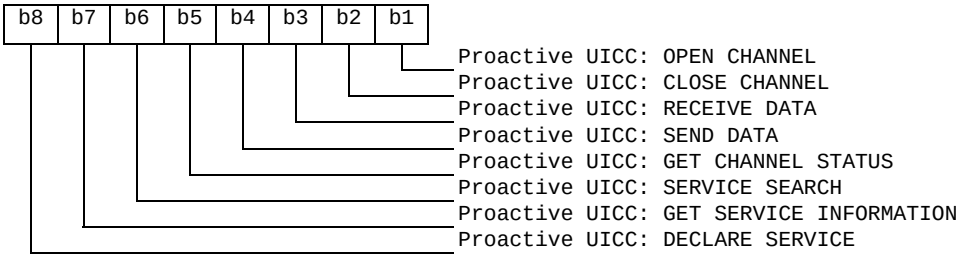
Tenth byte (Soft keys support) for class "d":



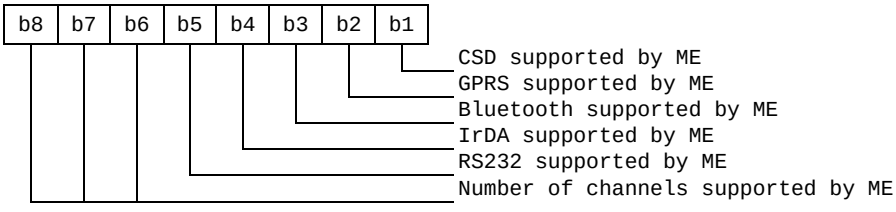
Eleventh byte: (Soft keys information)



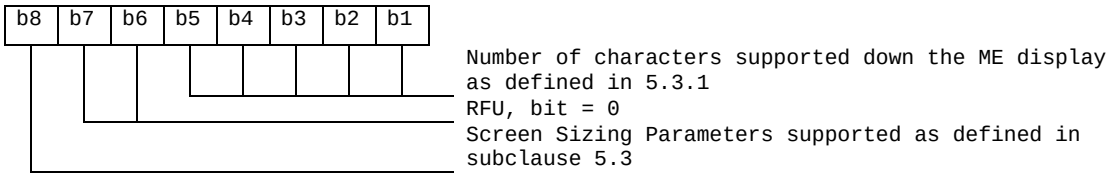
Twelfth byte:



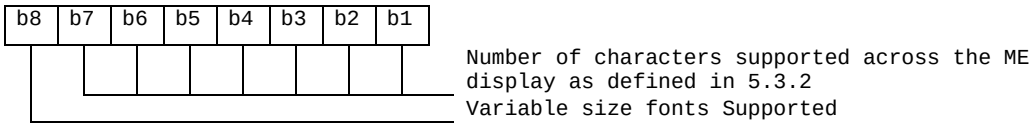
Thirteenth byte:



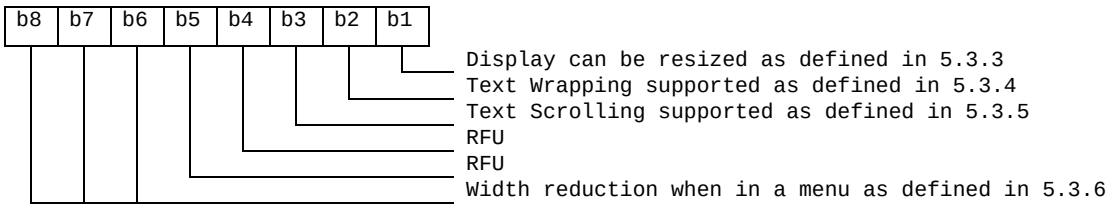
Fourteenth byte: (Screen height)



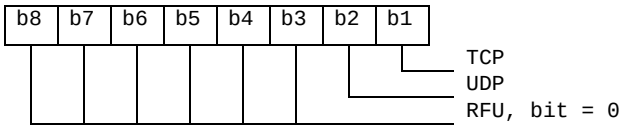
Fifteenth byte: (Screen width)



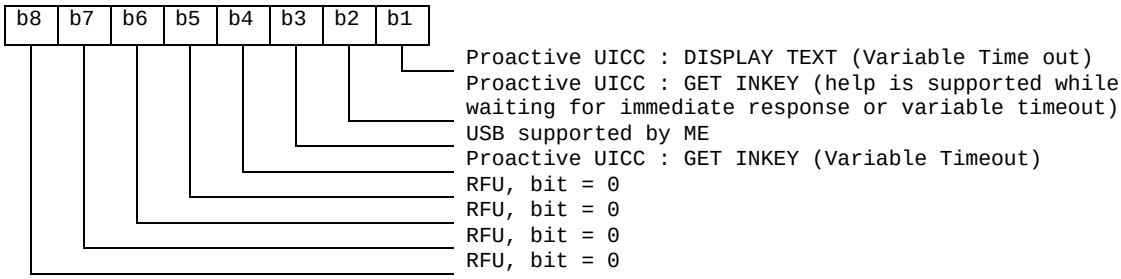
Sixteenth byte: (Screen effects)



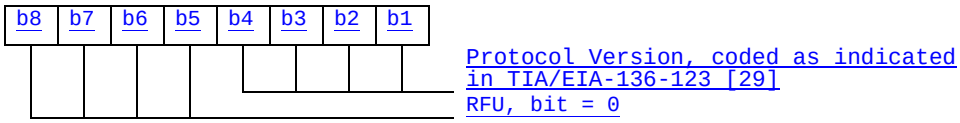
Seventeenth byte:



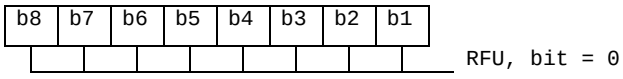
Eighteenth byte:



Nineteenth byte: (reserved for TIA/EIA-136 facilities):



Subsequent bytes:



RFU bits, and all bits of subsequent bytes, are reserved to indicate future facilities. A SIM supporting only the features of SIM Application Toolkit defined here shall not check the value of RFU bits.

Response parameters/data: None.

3GPP T3 (USIM) Meeting #20
Marseille, France, 4-5 September, 2001

Tdoc T3-010607
Revision of T3-010509

CR-Form-v3

CHANGE REQUEST

⌘ **31.111 CR 053** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘	Corrections of the OPEN CHANNEL commands
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
- ***F*** *(essential 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:	⌘	In section 6.4.27.1, it is written " The UICC may request the use of an automatic reconnection mechanism according to GSM 02.07 [20]. The UICC may also request an optional maximum duration for the reconnection mechanism ". However there is no way for the card to explicitly ask for automatic reconnection without indicating the maximum duration for the reconnection.
Summary of change:	⌘	It is proposed to structure the OPEN CHANNEL as the SET UP CALL command, i.e. indicating in the Command Details parameter whether automatic reconnection is required.
Consequences if not approved:	⌘	The structure of the OPEN CHANNEL for CS domain command is not coherent with its description in section 6.4.27.1

Clauses affected:	⌘	8.6		
Other specs Affected:	⌘	[X] Other core specifications	⌘	11.14
		[ ] Test specifications		
		[ ] O&M Specifications		
Other comments:	⌘			

8.6 Command details

Byte(s)	Description	Length
1	Command details tag	1
2	Length = '03'	1
3	Command number	1
4	Type of command	1
5	Command Qualifier	1

- Command number
  - for contents and coding, see subclause 6.5.1.
- Type of command:
  - contents: The Type of Command specifies the required interpretation of the data objects which follow, and the required ME procedure;
  - coding:
    - see subclause 9.4;
    - the ME shall respond to reserved values (i.e. values not listed) with the result "Command type not understood".
- Command Qualifier:
  - contents: Qualifiers specific to the command;
  - coding:
    - REFRESH:
      - '00' = USIM Initialization and Full File Change Notification;
      - '01' = File Change Notification;
      - '02' = USIM Initialization and File Change Notification;
      - '03' = USIM Initialization;
      - '04' = UICC Reset;
      - '05' = USIM Application Reset;
      - '06' = 3G Session Reset;
      - '07' to 'FF' = reserved values.

[…]

    - OPEN CHANNEL:
      - bit 1 : 0 = On demand link establishment;
        1 = Immediate link establishment.
      - bit 2: 0 = no automatic reconnection
        1 = automatic reconnection
      - bits 3~~2~~ to 8: = RFU.
    - CLOSE CHANNEL:

- this byte is RFU.

[…]

3GPP T3 (USIM) Meeting #20
Marseille, France, 4-5 September, 2001

Tdoc T3-010608
Revision of T3-010509

CR-Form-v3

CHANGE REQUEST

⌘ **31.111 CR 054** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘	Corrections of the OPEN CHANNEL commands
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
- ***F*** *(essential 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:	⌘	In section 6.4.27.1, it is written " The UICC may request the use of an automatic reconnection mechanism according to GSM 02.07 [20]. The UICC may also request an optional maximum duration for the reconnection mechanism ". However there is no way for the card to explicitly ask for automatic reconnection without indicating the maximum duration for the reconnection.
Summary of change:	⌘	It is proposed to structure the OPEN CHANNEL as the SET UP CALL command, i.e. indicating in the Command Details parameter whether automatic reconnection is required.
Consequences if not approved:	⌘	The structure of the OPEN CHANNEL for CS domain command is not coherent with its description in section 6.4.27.1

Clauses affected:	⌘	8.6		
Other specs Affected:	⌘	[X] Other core specifications	⌘	11.14
		[ ] Test specifications		
		[ ] O&M Specifications		
Other comments:	⌘			

8.6 Command details

Byte(s)	Description	Length
1	Command details tag	1
2	Length = '03'	1
3	Command number	1
4	Type of command	1
5	Command Qualifier	1

- Command number
  - for contents and coding, see subclause 6.5.1.
- Type of command:
  - contents: The Type of Command specifies the required interpretation of the data objects which follow, and the required ME procedure;
  - coding:
    - see subclause 9.4;
    - the ME shall respond to reserved values (i.e. values not listed) with the result "Command type not understood".
- Command Qualifier:
  - contents: Qualifiers specific to the command;
  - coding:
    - REFRESH:
      - '00' = USIM Initialization and Full File Change Notification;
      - '01' = File Change Notification;
      - '02' = USIM Initialization and File Change Notification;
      - '03' = USIM Initialization;
      - '04' = UICC Reset;
      - '05' = USIM Application Reset;
      - '06' = 3G Session Reset;
      - '07' to 'FF' = reserved values.

[…]

    - OPEN CHANNEL:
      - bit 1 : 0 = On demand link establishment;
        1 = Immediate link establishment.
      - bit 2: 0 = no automatic reconnection
        1 = automatic reconnection
      - bits 3~~2~~ to 8: = RFU.
    - CLOSE CHANNEL:

- this byte is RFU.

[…]

3GPP T3 (USIM) Meeting #20
Marseille, 3-5 September 2001

Tdoc T3-010610

CR-Form-v3

CHANGE REQUEST

⌘ **31.111 CR 055** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘	New TLV object for the APN in the OPEN CHANNEL command
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	REL-99

Use one of the following categories:
- ***F*** *(essential 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:	⌘	The “URL” TLV object was wrongly used in the OPEN CHANNEL to store an APN, because URLs and APNs have different codings.
Summary of change:	⌘	The specification is aligned with ETSI TS 102223 (CAT), introducing the new “Network Access Name” TLV object, which will contain the APN.
Consequences if not approved:	⌘	Inconsistency of the specification

Clauses affected:	⌘	2, 6.6.27.2, 8.xx (new section), 9.3		
Other specs affected:	⌘	[X] Other core specifications	⌘	31.111 REL-4, 11.14 R99
		[ ] Test specifications		
		[ ] O&M Specifications		
Other comments:	⌘	The tag value ('47') is the one chosen in ETSI TS 102223		

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] 3GPP TS 22.002: "3rd Generation Partnership Project (3GPP); Bearer Services supported by a GSM PLMN".

[2] 3GPP TS 22.030: "3rd Generation Partnership Project (3GPP); Man-Machine Interface (MMI) of the Mobile Station (MS)".

[3] 3GPP TS 22.042: "3rd Generation Partnership Project (3GPP); Network identity and timezone (NITZ); Stage 1".

...

[x] 3GPP TS 23.003: "3rd Generation Partnership Project (3GPP); Numbering, addressing and identification"

6.6.27.2 OPEN CHANNEL related to GPRS

Description	Subclause	M/O/C	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C+D+E+F+G+H+I+J)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device identities	8.7	M	Y	B
Alpha identifier	8.2	O	N	C
Icon identifier	8.31	O	N	D
Bearer description	8.52	M	Y	E
Buffer size	8.55	M	Y	F
~~Access Point Name~~ Network Access Name	8.~~48~~xx	O	N	G
Other address (local address)	8.58	O	N	H
SIM/ME interface transport level	8.59	O	N	I
Data destination address	8.58	C	Y	J

The ~~Access Point~~ Network Access Name parameter may be requested. The ~~Access Point~~Network Access Name parameter ~~is~~contains an Access Point Name (APN)~~a URL (see 8.48) which provides information to the ME necessary to~~ identifying the Gateway GSN (GGSN) which provides interworking with an external packet data network. If the parameter is not present, the mobile may use the default Access Point Name in the mobile configuration or the default subscription value.

The local address parameter (see 8.58) provides information to the ME necessary to identify the local device. If the parameter is present and length is not null, it provides an IP address that identifies the USAT application in the address area applicable to the PDN. If local address length is null, dynamic local address allocation is required for the SAT application. If parameter is not present, the mobile may use the mobile default local address configuration.

If the SIM/ME interface transport level is present in the command, then the ME shall provide the requested transport layer protocols under the channel and shall use this object containing a set of parameters required to make the transport connection. The data that is exchanged at the SIM/ME interface in the RECEIVE DATA/SEND DATA commands are SDUs. When the SAT application sends an SDU, the transport layer within the ME is in charge to add the transport header to the SDU in order to build the Transport-PDU. When the SAT application requests to receive an SDU, the transport layer within the ME is in charge to remove the transport header of the Transport-PDU, and to forward the SDU to the SAT. If the parameter is not present, the SIM/ME interface is the bearer level (serial link or packet link as defined in TS 27.007 [27]) and the SAT application is in charge of the network and transport layer.

The Destination Address is the end point destination address of sent data. This data destination address is requested when a SIM/ME interface transport is present, otherwise it is ignored. The data destination address is a data network address (e.g. IP address).

8.xx Network Access Name

Byte(s)	Description	Length
1	Network Access Name tag	1
2	Length (X)	1
3 to 3+X-1	Network Access Name	X

- Content: The Network Access Name is used to identify the Gateway entity, which provides interworking with an external packet data network. For GPRS, the Network Access Name is an APN.

- Coding: As defined in TS 23.003 [x]

9.3 SIMPLE-TLV tags in both directions

Description	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')	Tag (CR and Tag value)
Command details tag	1	'01'	'01' or '81'
Device identity tag	1	'02'	'02' or '82'
Result tag	1	'03'	'03' or '83'
...			
Channel data tag	1	'36'	'36' or 'B6'
Channel data length tag	1	'37'	'37' or 'B7'
Channel status tag	1	'38'	'38' or 'B8'
Buffer size tag	1	'39'	'39' or 'B9'

Continued…..

Description	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')	Tag (CR and Tag value)
Card reader identifier tag	1	'3A'	'3A' or 'BA'
not used	-	'3B'	-
USIM/ME interface transport level	1	'3C'	'3C' or 'BC'
not used	-	'3D'	-
Other address (data destination address)	1	'3E'	'3E' or 'BE'
Network Access Name	1	'47'	'47' or 'C7'
Reserved for TIA/EIA-136	1	'60'	'60' or 'E0'
Reserved for TIA/EIA-136	1	'61'	'61' or 'E1'

3GPP T3 (USIM) Meeting #20
Marseille, 3-5 September 2001

Tdoc T3-010611

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **056** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

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

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

Title:	⌘	New TLV object for the APN in the OPEN CHANNEL command
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	05/09/01
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(essential 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:	⌘	The “URL” TLV object was wrongly used in the OPEN CHANNEL to store an APN, because URLs and APNs have different codings.
Summary of change:	⌘	The specification is aligned with ETSI TS 102223 (CAT), introducing the new “Network Access Name” TLV object, which will contain the APN.
Consequences if not approved:	⌘	Inconsistency of the specification

Clauses affected:	⌘	2, 6.6.27.2, 8.xx (new section), 9.3		
Other specs affected:	⌘	[X] Other core specifications	⌘	31.111 R99, 11.14 R99
		[ ] Test specifications		
		[ ] O&M Specifications		
Other comments:	⌘	The tag value ('47') is the one chosen in ETSI TS 102223		

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] 3GPP TS 22.002: "3rd Generation Partnership Project (3GPP); Bearer Services supported by a GSM PLMN".

[2] 3GPP TS 22.030: "3rd Generation Partnership Project (3GPP); Man-Machine Interface (MMI) of the Mobile Station (MS)".

[3] 3GPP TS 22.042: "3rd Generation Partnership Project (3GPP); Network identity and timezone (NITZ); Stage 1".

...

[x] 3GPP TS 23.003: "3rd Generation Partnership Project (3GPP); Numbering, addressing and identification"

6.6.27.2 OPEN CHANNEL related to GPRS

Description	Subclause	M/O/C	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C+D+E+F+G+H+I+J)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device identities	8.7	M	Y	B
Alpha identifier	8.2	O	N	C
Icon identifier	8.31	O	N	D
Bearer description	8.52	M	Y	E
Buffer size	8.55	M	Y	F
~~Access Point Name~~ Network Access Name	8.~~48~~xx	O	N	G
Other address (local address)	8.58	O	N	H
SIM/ME interface transport level	8.59	O	N	I
Data destination address	8.58	C	Y	J

The ~~Access Point~~ Network Access Name parameter may be requested. The ~~Access Point~~Network Access Name parameter ~~is~~contains an Access Point Name (APN)~~a URL (see 8.48) which provides information to the ME necessary to~~ identifying the Gateway GSN (GGSN) which provides interworking with an external packet data network. If the parameter is not present, the mobile may use the default Access Point Name in the mobile configuration or the default subscription value.

The local address parameter (see 8.58) provides information to the ME necessary to identify the local device. If the parameter is present and length is not null, it provides an IP address that identifies the USAT application in the address area applicable to the PDN. If local address length is null, dynamic local address allocation is required for the SAT application. If parameter is not present, the mobile may use the mobile default local address configuration.

If the SIM/ME interface transport level is present in the command, then the ME shall provide the requested transport layer protocols under the channel and shall use this object containing a set of parameters required to make the transport connection. The data that is exchanged at the SIM/ME interface in the RECEIVE DATA/SEND DATA commands are SDUs. When the SAT application sends an SDU, the transport layer within the ME is in charge to add the transport header to the SDU in order to build the Transport-PDU. When the SAT application requests to receive an SDU, the transport layer within the ME is in charge to remove the transport header of the Transport-PDU, and to forward the SDU to the SAT. If the parameter is not present, the SIM/ME interface is the bearer level (serial link or packet link as defined in TS 27.007 [27]) and the SAT application is in charge of the network and transport layer.

The Destination Address is the end point destination address of sent data. This data destination address is requested when a SIM/ME interface transport is present, otherwise it is ignored. The data destination address is a data network address (e.g. IP address).

8.xx Network Access Name

Byte(s)	Description	Length
1	Network Access Name tag	1
2	Length (X)	1
3 to 3+X-1	Network Access Name	X

- Content: The Network Access Name is used to identify the Gateway entity, which provides interworking with an external packet data network. For GPRS, the Network Access Name is an APN.

- Coding: As defined in TS 23.003 [x]

9.3 SIMPLE-TLV tags in both directions

Description	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')	Tag (CR and Tag value)
Command details tag	1	'01'	'01' or '81'
Device identity tag	1	'02'	'02' or '82'
Result tag	1	'03'	'03' or '83'
...			
Channel data tag	1	'36'	'36' or 'B6'
Channel data length tag	1	'37'	'37' or 'B7'
Channel status tag	1	'38'	'38' or 'B8'
Buffer size tag	1	'39'	'39' or 'B9'

Continued…..

Description	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')	Tag (CR and Tag value)
Card reader identifier tag	1	'3A'	'3A' or 'BA'
not used	-	'3B'	-
USIM/ME interface transport level	1	'3C'	'3C' or 'BC'
not used	-	'3D'	-
Other address (data destination address)	1	'3E'	'3E' or 'BE'
Access Technology tag	1	'3F'	'3F' or 'BF'
Display parameters tag	1	'40'	'40' or 'C0'
Service Record	1	'41'	'41' or 'C1'
Device Filter	1	'42'	'42' or 'C2'
Service Search	1	'43'	'43' or 'C3'
Attribute information	1	'44'	'44' or 'C4'
Service Availability	1	'45'	'45' or 'C5'
Reserved for ETSI SCP	1	'46'	
Network Access Name	1	'47'	'47' or 'C7'
Reserved for TIA/EIA-136	1	'60'	'60' or 'E0'
Reserved for TIA/EIA-136	1	'61'	'61' or 'E1'

3GPP T3 (USIM) Meeting #20
Marseille, France, 3-5 September, 2001

Tdoc T3-010616
(revised version of T3-010508)

CR-Form-v3

CHANGE REQUEST

⌘ **31.111 CR 057** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘	Corrections of the SEND DATA commands and Channel Status Event
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	5/9/2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
- ***F*** *(essential 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:	⌘	In the SEND DATA command, the Channel Data Length TLV is redundant with the length of the Channel Data TLV. The Channel Status event should only occur outside the execution of a proactive command – Terminal Response pair because it is then redundant with the Terminal Response. Channel Status Event (Link established) should then be removed because it always occurs after a successful OPEN CHANNEL (immediate) or a SEND DATA following an OPEN CHANNEL (on demand). In the result parameter, the use of the Additional Information for the Bearer Independent Protocol is not clear when performing SEND DATA.
Summary of change:	⌘	Removal of the Channel Data Length TLV from the SEND DATA command. In section 7.5.11, removal of "link is established" as reason for the occurrence of the Channel Status Event. Clarification on when the event should be sent by the ME. Additional Information for the Bearer Independent Protocol indicates "channel closed" when the link has been dropped or could not be established during the process of SEND DATA command. Additional Information for the Bearer Independent Protocol indicates "channel identifier not valid" when no channel is opened with this channel identifier.
Consequences if not approved:	⌘	Definition of a useless parameter for the SEND DATA command Useless redundancy between Channel Status Event and Terminal Response.

Clauses affected:	⌘	6.4.30, 6.6.30, 7.5.11, 8.54, Annex I

Other specs Affected:	⌘	[X] Other core specifications [ ] Test specifications [ ] O&M Specifications	⌘	11.14
Other comments:	⌘			

6.4.30 SEND DATA

This subclause applies only if class "e" is supported.

This command requests the ME to send data through a previously set up data channel corresponding to a dedicated Channel identifier. The UICC informs the ME if the data is:

- to be sent immediately;
- or to be stored in a Tx buffer. Then it is up to the ME to manage the data sending in order to use the bearer in an optimised way. To send the data stored in a Tx buffer, the ME shall be notified by a "send data immediately" and it shall consider the data presently and previously concatenated in its Tx buffer as one SDU, and send it in only one PDU. The Tx buffer shall then be emptied before returning the TERMINAL RESPONSE to the UICC and allowing new UICC sending.

Upon receiving this command, the ME shall either immediatly send data or store provided data into the Tx buffer corresponding to the Channel identifier. Examples are given below, but the list is not exhaustive.

If the ME is unable to process the command:

- if the command is rejected because the requested channel is already closed the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error – channel identifier not valid);
- If the command is rejected because the ME could not establish the link (after OPEN CHANNEL (on demand)) or the link was dropped, the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error – channel closed);
- if the command is rejected because the channel is temporarily unavailable the ME informs the UICC using TERMINAL RESPONSE (ME currently unable to process command);
- if the requested number of bytes of empty space is not yet available in the buffer the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error);
- if the user has indicated the need to end the proactive UICC session, the ME informs the UICC using TERMINAL RESPONSE (Proactive UICC session terminated by the user).

6.6.30 SEND DATA

Description	Subclause	M/O	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device identities	8.7	M	Y	B
Alpha identifier	8.2	O	N	C
Icon identifier	8.31	O	N	D
~~Channel data length~~	~~8.54~~	~~M~~	~~Y~~	~~E~~
Channel data	8.53	M	Y	~~F~~E

[…]

7.5.11 Channel status event

The following subclauses apply only if class "e" is supported.

7.5.11.1 Procedure

If the Channel status event is part of the current event list (as set up by the last SET UP EVENT LIST command, see subclause 6.4.16), then, when the ME detects one of the following changes:

- a link is error; or

~~- a link is established; or~~

- any other error.

which is not resulting from the execution of a proactive command, ~~T~~the ME shall inform the UICC that this has occurred, by using the ENVELOPE (EVENT DOWNLOAD – Channel status) command as defined below.

8.54 Channel data length

Byte(s)	Description	Length
1	Channel data length tag	1
2	Length (1)	1
3	Channel data length	1

The Channel data length codes:

- either the number of bytes that are available in a channel buffer (Tx or Rx buffers negotiated during OPEN CHANNEL) using TERMINAL RESPONSE. Since the Tx or Rx buffer size can be larger than 255 bytes, 'FF' means "more than 255 bytes are available".

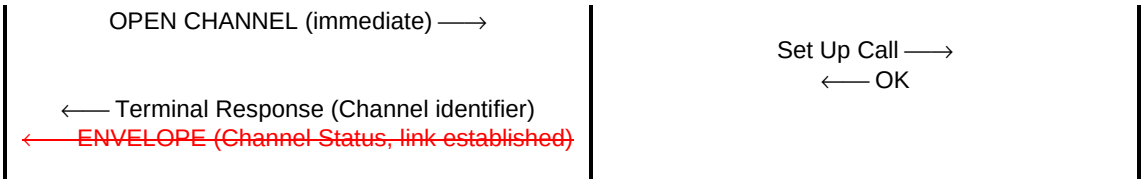
- or the number of bytes that are requested in a RECEIVE DATA ~~or transmitted in a SEND DATA~~ command.

Annex I (informative): Bearer independent protocol proactive command examples

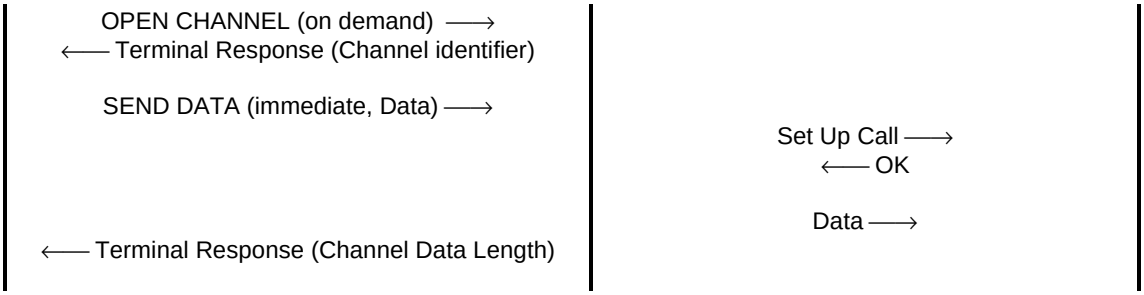
This annex applies only if class "e" is supported.

UICC	ME	Network

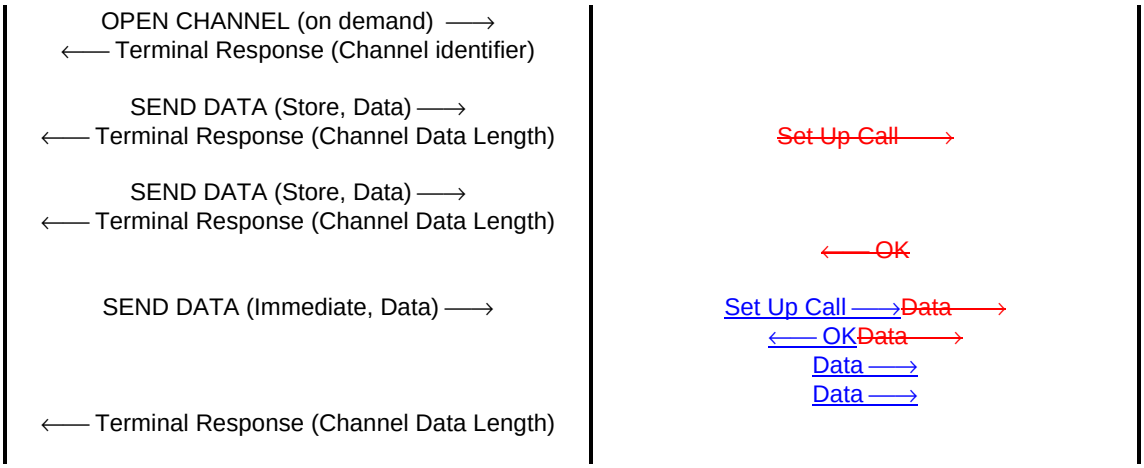
OPEN CHANNEL 'immediate link establishment'



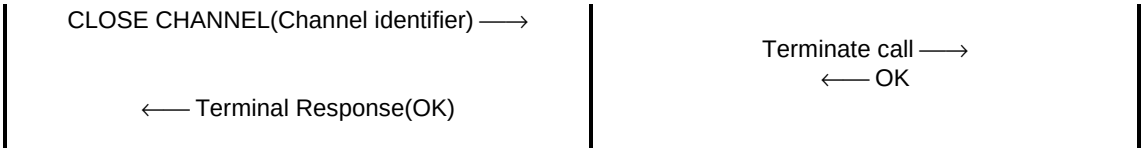
OPEN CHANNEL 'On demand link establishment' and SEND DATA 'immediately'



OPEN CHANNEL 'On demand link establishment' and SEND DATA 'Stored in Tx buffer'



CLOSE CHANNEL



RECEIVE DATA

	⟵ ENVELOPE (Data available)	⟵ Data
	RECEIVE DATA (Channel Data length) ⟶ ⟵ Terminal Response(Data<=Length)	

SEND DATA 'immediately'

	SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

SEND DATA 'Stored in Tx Buffer'

	SEND DATA (Store, Data) ⟶ ⟵ Terminal Response(Channel Data length)	
	SEND DATA (Store, Data) ⟶ ⟵ Terminal Response(Channel Data length)	
	SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

GET CHANNEL STATUS

	GET CHANNEL STATUS ⟶ ⟵ Terminal Response (Channel status)	1 Channel available

Example for GPRS bearer:

ICC	ME	SGSN

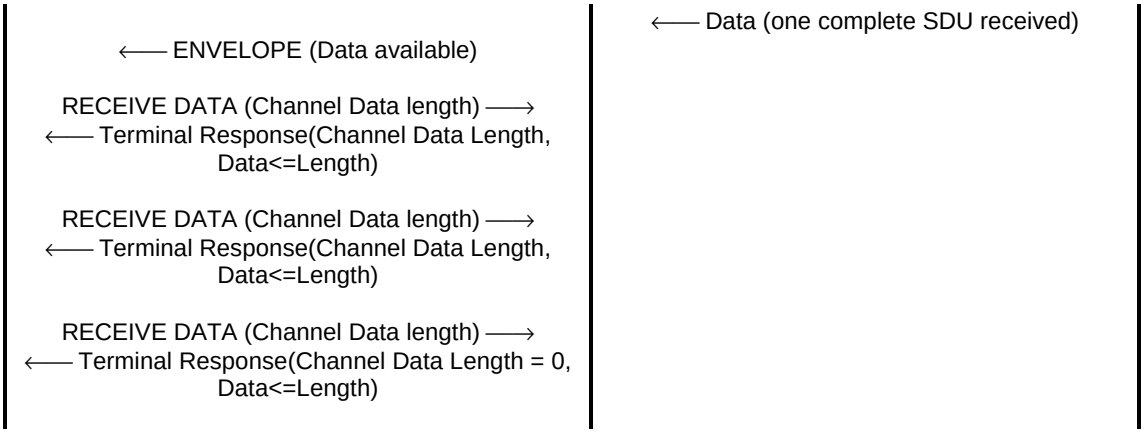
OPEN CHANNEL

	OPEN CHANNEL (immediate, Bearer description(bearer type=GPRS, QoS, PDP type=IP), Buffer size, APN, SIM/ME interface transport level (UDP, port *p*), data destination address)⟶	
		Attach request ⟶ ⟵ Attach accept
		Activate PDP context Request (Requested PDP address, QoS, APN, PDP Type ⟶
		⟵ Activate PDP context Accept (PDP address, negotiated QoS, PDP type)
	⟵ Terminal Response (Channel identifier, link established, no further information, buffer size) ~~⟵ ENVELOPE (Channel status event: Channel identifier, link established)~~	

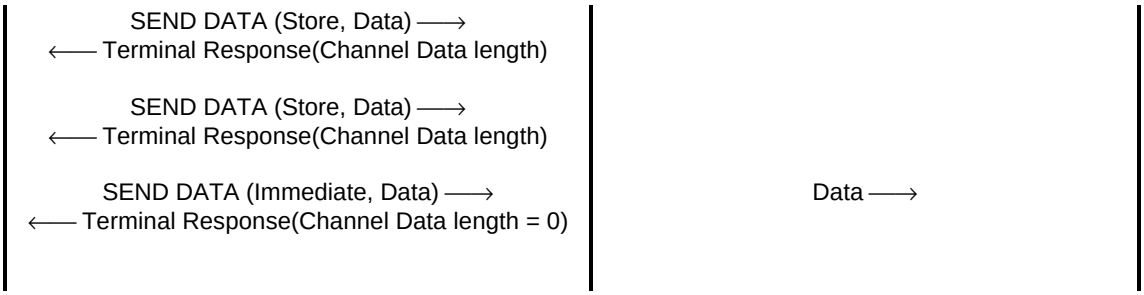
CLOSE CHANNEL

	CLOSE CHANNEL(Channel identifier) ⟶	Deactivate PDP context request ⟶ ⟵ Deactivate PDP context accept
	⟵ Terminal Response(OK)	

RECEIVE DATA



SEND DATA 'Stored in Tx Buffer'



GET CHANNEL STATUS

3GPP T3 (USIM) Meeting #20
Marseille, France, 3-5 September, 2001

Tdoc T3-010617
(revised version of T3-010508)

CR-Form-v3

CHANGE REQUEST

⌘ **31.111 CR 058** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

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

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

Title:	⌘	Corrections of the SEND DATA commands and Channel Status Event
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	5/9/2001
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(essential 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:	⌘	In the SEND DATA command, the Channel Data Length TLV is redundant with the length of the Channel Data TLV. The Channel Status event should only occur outside the execution of a proactive command – Terminal Response pair because it is then redundant with the Terminal Response. Channel Status Event (Link established) should then be removed because it always occurs after a successful OPEN CHANNEL (immediate) or a SEND DATA following an OPEN CHANNEL (on demand). In the result parameter, the use of the Additional Information for the Bearer Independent Protocol is not clear when performing SEND DATA.
Summary of change:	⌘	Removal of the Channel Data Length TLV from the SEND DATA command. In section 7.5.11, removal of "link is established" as reason for the occurrence of the Channel Status Event. Clarification on when the event should be sent by the ME. Additional Information for the Bearer Independent Protocol indicates "channel closed" when the link has been dropped or could not be established during the process of SEND DATA command. Additional Information for the Bearer Independent Protocol indicates "channel identifier not valid" when no channel is opened with this channel identifier.
Consequences if not approved:	⌘	Definition of a useless parameter for the SEND DATA command Useless redundancy between Channel Status Event and Terminal Response.

Clauses affected:	⌘	6.4.30, 6.6.30, 7.5.11, 8.54, Annex I

Other specs Affected:	⌘	[X] Other core specifications [ ] Test specifications [ ] O&M Specifications	⌘	11.14
Other comments:	⌘			

6.4.30 SEND DATA

This subclause applies only if class "e" is supported.

This command requests the ME to send data through a previously set up data channel corresponding to a dedicated Channel identifier. The UICC informs the ME if the data is:

- to be sent immediately;
- or to be stored in a Tx buffer. Then it is up to the ME to manage the data sending in order to use the bearer in an optimised way. To send the data stored in a Tx buffer, the ME shall be notified by a "send data immediately" and it shall consider the data presently and previously concatenated in its Tx buffer as one SDU, and send it in only one PDU. The Tx buffer shall then be emptied before returning the TERMINAL RESPONSE to the UICC and allowing new UICC sending.

Upon receiving this command, the ME shall either immediatly send data or store provided data into the Tx buffer corresponding to the Channel identifier. Examples are given below, but the list is not exhaustive.

If the ME is unable to process the command:

- if the command is rejected because the requested channel is already closed the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error – channel identifier not valid);
- If the command is rejected because the ME could not establish the link (after OPEN CHANNEL (on demand)) or the link was dropped, the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error – channel closed);
- if the command is rejected because the channel is temporarily unavailable the ME informs the UICC using TERMINAL RESPONSE (ME currently unable to process command);
- if the requested number of bytes of empty space is not yet available in the buffer the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error);
- if the user has indicated the need to end the proactive UICC session, the ME informs the UICC using TERMINAL RESPONSE (Proactive UICC session terminated by the user).

6.6.30 SEND DATA

Description	Subclause	M/O	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device identities	8.7	M	Y	B
Alpha identifier	8.2	O	N	C
Icon identifier	8.31	O	N	D
~~Channel data length~~	~~8.54~~	~~M~~	~~Y~~	~~E~~
Channel data	8.53	M	Y	~~F~~E

[…]

7.5.11 Channel status event

The following subclauses apply only if class "e" is supported.

7.5.11.1 Procedure

If the Channel status event is part of the current event list (as set up by the last SET UP EVENT LIST command, see subclause 6.4.16), then, when the ME detects one of the following changes:

- a link is error; or

~~- a link is established; or~~

- any other error.

which is not resulting from the execution of a proactive command, ~~T~~the ME shall inform the UICC that this has occurred, by using the ENVELOPE (EVENT DOWNLOAD – Channel status) command as defined below.

8.54 Channel data length

Byte(s)	Description	Length
1	Channel data length tag	1
2	Length (1)	1
3	Channel data length	1

The Channel data length codes:

- either the number of bytes that are available in a channel buffer (Tx or Rx buffers negotiated during OPEN CHANNEL) using TERMINAL RESPONSE. Since the Tx or Rx buffer size can be larger than 255 bytes, 'FF' means "more than 255 bytes are available".

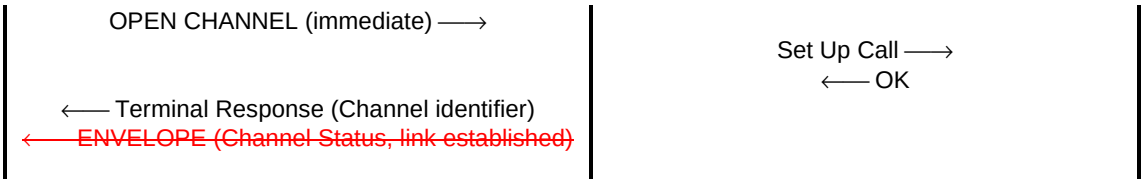
- or the number of bytes that are requested in a RECEIVE DATA ~~or transmitted in a SEND DATA~~ command.

Annex I (informative): Bearer independent protocol proactive command examples

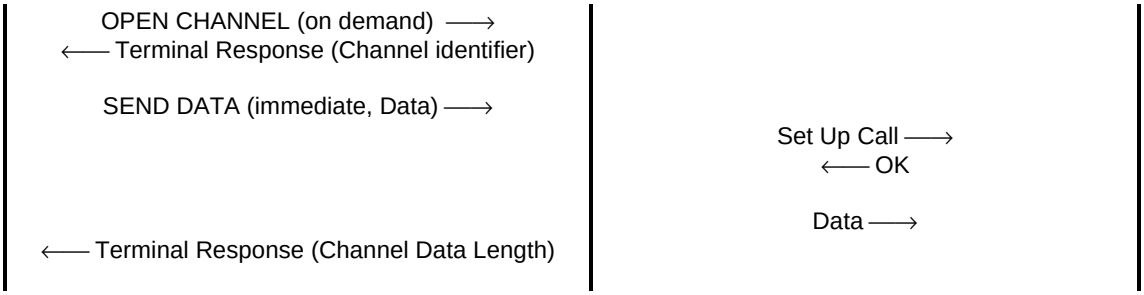
This annex applies only if class "e" is supported.

UICC	ME	Network

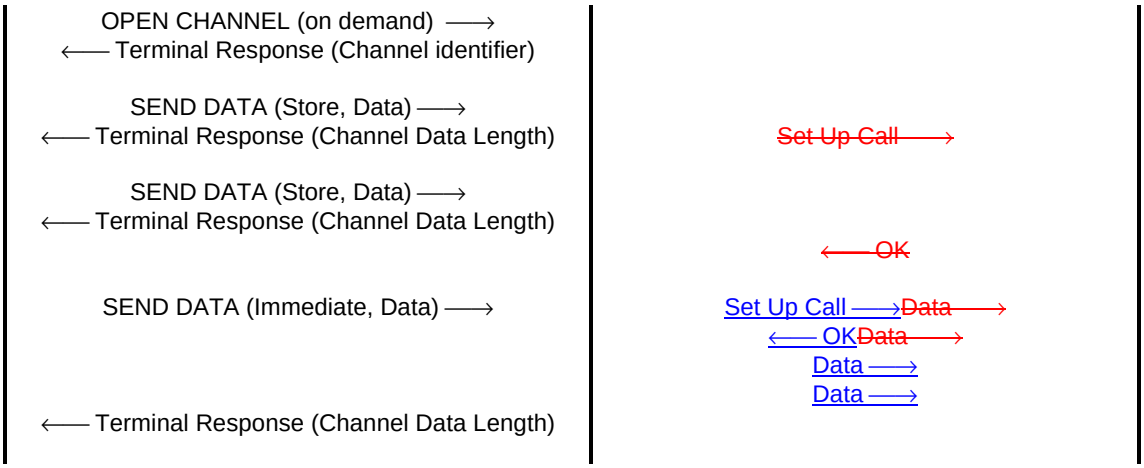
OPEN CHANNEL 'immediate link establishment'



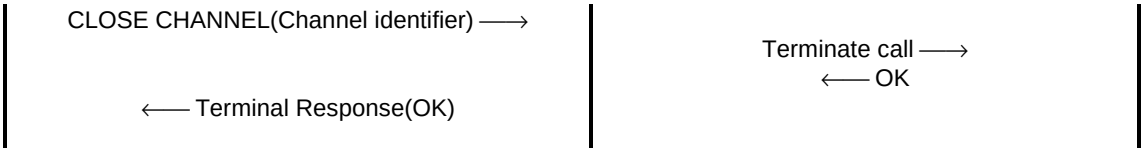
OPEN CHANNEL 'On demand link establishment' and SEND DATA 'immediately'



OPEN CHANNEL 'On demand link establishment' and SEND DATA 'Stored in Tx buffer'



CLOSE CHANNEL



RECEIVE DATA

	⟵ ENVELOPE (Data available)	⟵ Data
	RECEIVE DATA (Channel Data length) ⟶ ⟵ Terminal Response(Data<=Length)	

SEND DATA 'immediately'

	SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

SEND DATA 'Stored in Tx Buffer'

	SEND DATA (Store, Data) ⟶ ⟵ Terminal Response(Channel Data length)	
	SEND DATA (Store, Data) ⟶ ⟵ Terminal Response(Channel Data length)	
	SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

GET CHANNEL STATUS

	GET CHANNEL STATUS ⟶ ⟵ Terminal Response (Channel status)	1 Channel available

Example for GPRS bearer:

ICC	ME	SGSN

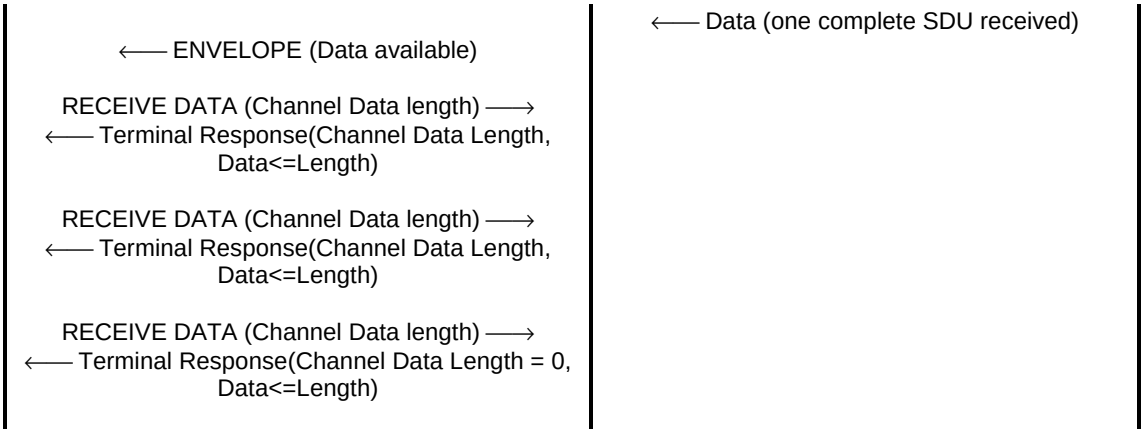
OPEN CHANNEL

	OPEN CHANNEL (immediate, Bearer description(bearer type=GPRS, QoS, PDP type=IP), Buffer size, APN, SIM/ME interface transport level (UDP, port *p*), data destination address)⟶	
		Attach request ⟶ ⟵ Attach accept
		Activate PDP context Request (Requested PDP address, QoS, APN, PDP Type ⟶
		⟵ Activate PDP context Accept (PDP address, negotiated QoS, PDP type)
	⟵ Terminal Response (Channel identifier, link established, no further information, buffer size) ~~⟵ ENVELOPE (Channel status event: Channel identifier, link established)~~	

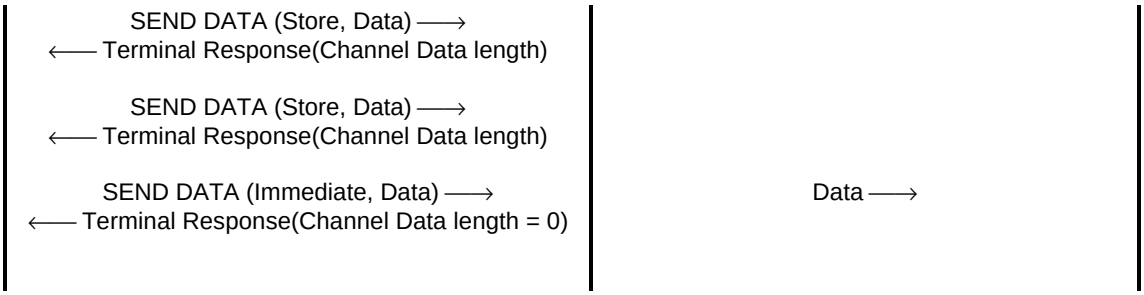
CLOSE CHANNEL

	CLOSE CHANNEL(Channel identifier) ⟶	Deactivate PDP context request ⟶ ⟵ Deactivate PDP context accept
	⟵ Terminal Response(OK)	

RECEIVE DATA



SEND DATA 'Stored in Tx Buffer'



GET CHANNEL STATUS