3GPP TSG-T (Terminals) Meeting #12
Stockholm, Sweden, 13 - 15 June 2001

Tdoc TP-010151
(Corrected version of TP-010106)

Source: T3

Title: Change Requests to 3GPP 11.14 and 31.111 "(U)SIM application Toolkit"

Document for: Approval

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

T3 Doc	Spec	CR	Rv	Rel	Subject
T3-010415	11.14	A195		R98	Clarification of min and max length for GET INPUT
T3-010416	11.14	A196		R99	Clarification of min and max length for GET INPUT
T3-010419	11.14	A197		R98	Limitation of data field in the C-APDU and R-APDU data object
T3-010420	11.14	A198		R99	Limitation of data field in the C-APDU and R-APDU data object
T3-010423	11.14	A199		R98	REFRESH-SIM Initialization : correction of a reference
T3-010424	11.14	A200		R99	REFRESH-SIM Initialization : correction of a reference
T3-010449	11.14	A201		R99	Correction of Annex J (Bearer independant protocol examples)
T3-010402	31.111	041		R99	Correction to NMR functionnality (and BCCH list & TA)
T3-010403	31.111	042		rel-4	Correction to NMR functionnality (and BCCH list & TA)
T3-010413	31.111	043		R99	General corrections
T3-010414	31.111	044		rel-4	General corrections
T3-010417	31.111	045		R99	Clarification of min and max length for GET INPUT
T3-010418	31.111	046		rel-4	Clarification of min and max length for GET INPUT
T3-010421	31.111	047		R99	Limitation of data field in the C-APDU and R-APDU data object
T3-010422	31.111	048		rel-4	Limitation of data field in the C-APDU and R-APDU data object
T3-010447	31.111	049		R99	Correction of Annex I (Bearer independant protocol examples)
T3-010448	31.111	050		rel-4	Correction of Annex I (Bearer independant protocol examples)

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A195** ⌘ rev **-** ⌘ Current version: **7.6.0** ⌘

*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:	⌘	Clarification of min and max length for GET INPUT command
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 11/5/2001
Category:	⌘ **F**	***Release:*** ⌘ R98

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:	⌘	Usually the lengths are measured in bytes, but the minimum and maximum lengths of user response are measured in characters. A faulty implementation causes problems especially with the UCS2 characters.
Summary of change:	⌘	Clarification of the coding added.
Consequences if not approved:	⌘	Risk of wrong implementations.

Clauses affected:	⌘	6.6.3
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

6.6.3 GET INPUT

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
Text string	12.15	M	Y	C
Response length	12.11	M	Y	D
Default Text	12.23	O	N	E
Icon identifier	12.31	O	N	F

- Text string
  Contents: text for the ME to display in conjunction with asking the user to respond.

- Response length
  Contents: the minimum and maximum acceptable lengths in characters (see subclause 6.4.3) for the response from the user.

- Default Text
  Contents: text for the ME to display, corresponds to a default text string offered by the SIM.

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A196** ⌘ rev **-** ⌘ Current version: **8.6.0** ⌘

*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:	⌘	Clarification of min and max length for GET INPUT command
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 11/5/2001
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:	⌘	Usually the lengths are measured in bytes, but the minimum and maximum lengths of user response are measured in characters. A faulty implementation causes problems especially with the UCS2 characters.
Summary of change:	⌘	Clarification of the coding added.
Consequences if not approved:	⌘	Risk of wrong implementations.

Clauses affected:	⌘	6.6.3
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

6.6.3 GET INPUT

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
Text string	12.15	M	Y	C
Response length	12.11	M	Y	D
Default Text	12.23	O	N	E
Icon identifier	12.31	O	N	F

- Text string
  Contents: text for the ME to display in conjunction with asking the user to respond.

- Response length
  Contents: the minimum and maximum acceptable lengths in characters (see subclause 6.4.3) for the response from the user.

- Default Text
  Contents: text for the ME to display, corresponds to a default text string offered by the SIM.

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A0197** ⌘ rev **-** ⌘ Current version: **7.6.0** ⌘

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

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

Title:	⌘	Limitation of data field in the C-APDU and R-APDU data object
Source:	⌘	T3
Work item code:	⌘	Toolkit
Date:	⌘	11/05/2001
Category:	⌘	**F**
Release:	⌘	R98

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:	⌘	Due to the TLV structure of the proactive command and its response, the size of the data field send in C-APDU S-TLV and returned in R-APDU S-TLV is limited and does not allow to send the amount of data defined in ISO 7816-4 as referenced.
Summary of change:	⌘	Define the size limitation for C-APDU and R-APDU
Consequences if not approved:	⌘	Toolkit application writers may not be aware of this limitation

Clauses affected:	⌘	§12.35, §12.36
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

12.35 C-APDU

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

Byte(s)	Description	Length
1	C-APDU tag	1
2 to (Y+1)	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2	Command class CLA	1
Y+3	Command instruction code INS	1
Y+4	P1 parameter	1
Y+5	P2 parameter	1
Y+6	Lc (optional)	0 or 1
(Y+7) to (Y+X)	Data (optional)	Lc
Y+X+1	Le (optional)	0 or 1

This object contains the command APDU for Card x in the format defined in ISO/IEC 7816-4 [25]. Command class CLA, instruction code INS, P1 and P2 parameters, Lc, Data and Le are coded as defined in ISO/IEC 7816-4 [25]. Extended lengths are not supported.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 241 bytes, so the maximum length for the Data (value of Lc) in a Case 3 type of APDU is 236 bytes.

12.36 R-APDU

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

Byte(s)	Description	Length
1	R-APDU tag	1
2 to Y+1	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2 to Y+X-1	R-APDU data (optional)	X-2
Y+X	Status word SW1	1
Y+X+1	Status word SW2	1

This object contains the response APDU from Card x in the format defined in ISO/IEC 7816-4 [25]. The R-APDU data and status words SW1 and SW2 are coded as defined in ISO/IEC 7816-4 [25]. It is possible for no R-APDU data to be present; this is indicated by the length of the data object.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 239 bytes, so the maximum length of the R-APDU data is 237 bytes.

Tdoc T3-010420

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A0198** ⌘ rev **-** ⌘ Current version: **8.6.0** ⌘

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

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

Title:	⌘	Limitation of data field in the C-APDU and R-APDU data object
Source:	⌘	T3
Work item code:	⌘	Toolkit
Date:	⌘	11/05/2001
Category:	⌘	**A**
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:	⌘	Due to the TLV structure of the proactive command and its response, the size of the data field send in C-APDU S-TLV and returned in R-APDU S-TLV is limited and does not allow to send the amount of data defined in ISO 7816-4 as referenced.
Summary of change:	⌘	Define the size limitation for C-APDU and R-APDU
Consequences if not approved:	⌘	Toolkit application writers may not be aware of this limitation

Clauses affected:	⌘	§12.35, §12.36
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

12.35 C-APDU

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

Byte(s)	Description	Length
1	C-APDU tag	1
2 to (Y+1)	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2	Command class CLA	1
Y+3	Command instruction code INS	1
Y+4	P1 parameter	1
Y+5	P2 parameter	1
Y+6	Lc (optional)	0 or 1
(Y+7) to (Y+X)	Data (optional)	Lc
Y+X+1	Le (optional)	0 or 1

This object contains the command APDU for Card x in the format defined in ISO/IEC 7816-4 [25]. Command class CLA, instruction code INS, P1 and P2 parameters, Lc, Data and Le are coded as defined in ISO/IEC 7816-4 [25]. Extended lengths are not supported.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 241 bytes, so the maximum length for the Data (value of Lc) in a Case 3 type of APDU is 236 bytes.

12.36 R-APDU

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

Byte(s)	Description	Length
1	R-APDU tag	1
2 to Y+1	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2 to Y+X-1	R-APDU data (optional)	X-2
Y+X	Status word SW1	1
Y+X+1	Status word SW2	1

This object contains the response APDU from Card x in the format defined in ISO/IEC 7816-4 [25]. The R-APDU data and status words SW1 and SW2 are coded as defined in ISO/IEC 7816-4 [25]. It is possible for no R-APDU data to be present; this is indicated by the length of the data object.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 239 bytes, so the maximum length of the R-APDU data is 237 bytes.

3GPP T3 (USIM) Meeting #19
St John, US Virgin Island, 8-11 May, 2001

Tdoc T3-010423
(revised from T3-010283)

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A199** ⌘ rev **-** ⌘ Current version: **7.6.0** ⌘

*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:	⌘	REFRESH-SIM Initialization : correction of a reference
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11-05-2001
Category:	⌘	**F**
Release:	⌘	R98

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)*

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 description of the REFRESH command, for the "SIM initialization" mode, a reference is made to a wrong subclause of TS 11.11. The good one is 11.2.1 ("SIM initialization") which describes the procedures after SIM activation.
Summary of change:	⌘	Reference to the subclause number in TS 11.11 is removed.
Consequences if not approved:	⌘	Risk of wrong implementation in the ME.

Clauses affected:	⌘	Section 6.4.7		
Other specs affected:	⌘	[ ] Other core specifications [ ] Test specifications [ ] O&M Specifications	⌘	
Other comments:	⌘	A corresponding CR for the R99 specification is also needed.		

6.4.7 REFRESH

The purpose of this command is to enable the ME to be notified of the changes to the SIM configuration that have occurred as the result of a SIM application activity. It is up to the SIM application to ensure that this is done correctly.

The command supports five different modes:

- SIM Initialization. This mode tells the ME to carry out SIM initialization as it is defined in GSM 11.11[20] ~~subclause 11.6.1 only~~, starting after the CHV1 verification procedure. The ME shall not reset the SIM electrically.

- File Change Notification. This mode advises the ME of the identity of the EFs that have been changed (in structure and/or contents) in the SIM. This information can be used by the ME if there is an image of SIM EFs (e.g. the ADN file) in the ME's memory, to determine whether it needs to update this image.

- SIM Initialization and File Change Notification. This is a combination of the first two modes above.

- SIM Initialization and Full File Change Notification. This mode causes the ME to perform the SIM initialization procedure of the first mode above and advises the ME that several EFs have been changed (in structure or contents) in the SIM. If there is an image of SIM EFs in the ME's memory, the ME shall completely update this image.

- SIM Reset. This mode causes the ME to run the GSM session termination procedure and to deactivate the SIM in accordance with GSM 11.11 [20]. Subsequently, the ME activates the SIM again and starts a new card session. In case of a 3 Volt technology ME, the ME shall restart the SIM with the same supply voltage as in the previous session, if the ME can ensure that the SIM has not been changed in between. Otherwise, the ME shall perform the supply voltage switching in accordance with GSM 11.12 [21]. The ME shall not send the TERMINAL RESPONSE; this is an exception from the normal procedure, where TERMINAL RESPONSE is sent after completion of the command. The SIM Application shall interpret a new activation of the contacts of the SIM as an implicit TERMINAL RESPONSE. The SIM Reset mode is used when a SIM application requires ATR or complete SIM initialization procedures to be performed. SIM Applications should take into account that early implementations of SIM Application Toolkit in some MEs may send a TERMINAL RESPONSE after performing the REFRESH command involving resetting the SIM electrically.

If the ME performs the REFRESH command successfully for only those EFs indicated in the mode, the ME shall inform the SIM using TERMINAL RESPONSE (OK), after it has completed its refreshing.

3GPP T3 (USIM) Meeting #19
St John, US Virgin Island, 8-11 May, 2001

Tdoc T3-010424

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A200** ⌘ rev **-** ⌘ Current version: **8.6.0** ⌘

*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:	⌘	REFRESH-SIM Initialization : correction of a reference
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11-05-2001
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)*

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 description of the REFRESH command, for the "SIM initialization" mode, a reference is made to a wrong subclause of TS 11.11. The good one is 11.2.1 ("SIM initialization") which describes the procedures after SIM activation.
Summary of change:	⌘	Reference to the subclause number in TS 11.11 is removed.
Consequences if not approved:	⌘	Risk of wrong implementation in the ME.

Clauses affected:	⌘	Section 6.4.7		
Other specs affected:	⌘	[ ] Other core specifications [ ] Test specifications [ ] O&M Specifications	⌘	
Other comments:	⌘	This CR is equivalent to CR 11-14-A199 (R98)		

6.4.7 REFRESH

The purpose of this command is to enable the ME to be notified of the changes to the SIM configuration that have occurred as the result of a SIM application activity. It is up to the SIM application to ensure that this is done correctly.

The command supports five different modes:

- SIM Initialization. This mode tells the ME to carry out SIM initialization as it is defined in GSM 11.11[20] ~~subclause 11.6.1 only~~, starting after the CHV1 verification procedure. The ME shall not reset the SIM electrically.

- File Change Notification. This mode advises the ME of the identity of the EFs that have been changed (in structure and/or contents) in the SIM. This information can be used by the ME if there is an image of SIM EFs (e.g. the ADN file) in the ME's memory, to determine whether it needs to update this image.

- SIM Initialization and File Change Notification. This is a combination of the first two modes above.

- SIM Initialization and Full File Change Notification. This mode causes the ME to perform the SIM initialization procedure of the first mode above and advises the ME that several EFs have been changed (in structure or contents) in the SIM. If there is an image of SIM EFs in the ME's memory, the ME shall completely update this image.

- SIM Reset. This mode causes the ME to run the GSM session termination procedure and to deactivate the SIM in accordance with GSM 11.11 [20]. Subsequently, the ME activates the SIM again and starts a new card session. In case of a 3 Volt technology ME, the ME shall restart the SIM with the same supply voltage as in the previous session, if the ME can ensure that the SIM has not been changed in between. Otherwise, the ME shall perform the supply voltage switching in accordance with GSM 11.12 [21]. The ME shall not send the TERMINAL RESPONSE; this is an exception from the normal procedure, where TERMINAL RESPONSE is sent after completion of the command. The SIM Application shall interpret a new activation of the contacts of the SIM as an implicit TERMINAL RESPONSE. The SIM Reset mode is used when a SIM application requires ATR or complete SIM initialization procedures to be performed. SIM Applications should take into account that early implementations of SIM Application Toolkit in some MEs may send a TERMINAL RESPONSE after performing the REFRESH command involving resetting the SIM electrically.

If the ME performs the REFRESH command successfully for only those EFs indicated in the mode, the ME shall inform the SIM using TERMINAL RESPONSE (OK), after it has completed its refreshing.

3GPP T3 (USIM) Meeting #19
Saint John, US Virgin Islands

Tdoc T3-010449
(TS 11.14 version of T3-010447)

CR-Form-v3

CHANGE REQUEST

⌘ **11.14** **CR** **A201** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

*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:	⌘	Correction of Annex J (Bearer independant protocol examples)
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 09/05/01
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:	⌘	Annex J is not reflecting the implementation of the bearer independent protocol as described in 6.4.27 OPEN CHANNEL and 6.4.30 SEND DATA.
Summary of change:	⌘	• In case of an “immediate link establishment”, the terminal response is sent after the link is established. • In case of a “send data immediately”, the terminal response is sent after the data is sent.
Consequences if not approved:	⌘	Inconsistencies in the specification.

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

Annex J (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 (immediate) ⟶		Set Up Call ⟶
		⟵ OK
⟵ Terminal Response (Channel identifier)		
		~~Set Up Call ⟶~~
		~~⟵ OK~~
⟵ ENVELOPE (Channel Status, link established)		
OPEN CHANNEL 'On demand link' establishment' and SEND DATA 'immediately'		
OPEN CHANNEL (on demand) ⟶		
⟵ Terminal Response (Channel identifier)		
SEND DATA (immediate, Data) ⟶		Set Up Call ⟶
		⟵ OK
		Data ⟶
⟵ Terminal Response (Channel Data Length)		
OPEN CHANNEL 'On demand link' establishment' and SEND DATA 'Stored in Tx buffer'		
OPEN CHANNEL (on demand) ⟶		
⟵ Terminal Response (Channel identifier)		
SEND DATA (Store~~Immediate~~, Data) ⟶		Set Up Call ⟶
⟵ Terminal Response (Channel Data Length)		
SEND DATA (Store~~Immediate~~, Data) ⟶		
⟵ Terminal Response (Channel Data Length)		⟵ OK
		~~Data ⟶~~
SEND DATA (Immediate, Data) ⟶		Data ⟶
		Data ⟶
⟵ Terminal Response (Channel Data Length)		
CLOSE CHANNEL		
CLOSE CHANNEL(Channel identifier) ⟶		Terminate call ⟶
		⟵ OK
⟵ Terminal Response(OK)		
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)	~~Data ⟶~~
SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

GET CHANNEL STATUS

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

3GPP T3 (USIM) Meeting #19
St John, US Virgin Island, 8-11 May, 2001

Tdoc T3-010402
(revised from Tdoc T3-010380)

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **41** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

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

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

Title:	⌘	Correction to NMR functionnality (and BCCH list & TA)
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11-05-2001
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)*

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:	⌘	Network Measurement Results (NMR), Timing Advance (TA), BCCH channel list, that are provided thanks to the PROVIDE LOCAL INFORMATION proactive command apply only to GSM.
Summary of change:	⌘	Clarification that BCCH channel list, NMR and TA apply only when the terminal is using a GSM Radio Access. Wrong references to TS 24.008 are changed to refer to TS 04.18.
Consequences if not approved:	⌘	Inconsistency of the specification

Clauses affected:	⌘	Section 2, 6.4.15, 8.22, 8.29, 8.46
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	An equivalent CR is needed for the REL-4 version of the specification (see CR 31.111-42)

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".

...

[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)"

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

6.4.15 PROVIDE LOCAL INFORMATION

~~Editor's note: NMR, BCCH channel list and Timing Advance needs to be redefined for UTRAN.~~

This command requests the ME to send current local information to the UICC. At present, this information is restricted to:

- location information: the mobile country code (MCC), mobile network code (MNC), location area code (LAC) and cell ID of the current serving cell;
- the IMEI of the ME;
- ~~(~~the Network Measurement Results and the BCCH channel list, suitable only for GSM access network~~)~~;
- the current date, time and time zone;
- the current ME language setting;
- ~~(~~the Timing Advance, suitable only for GSM access network~~)~~.

The ME shall return the requested local information within a TERMINAL RESPONSE. Where location information or Network Measurement Results has been requested and no service is currently available, then the ME shall return TERMINAL RESPONSE (ME currently unable to process command - no service). Where location information or Network Measurement Results has been requested and the ME is on limited service (e.g. emergency calls only), the ME shall return the data requested in the TERMINAL RESPONSE with the general result (Limited Service).

NMR are only available if the ME is connected to a GSM access network. If the NMR are requested and a call is in progress, the value of all the returned parameters provided by the ME in the response to the command will be valid. The NMR returned when a call is in progress from MEs supporting multiband operation, shall be according to the value of the multiband reporting parameter as defined in 3G 04.18 [x]~~24.008 [9].~~ If a call is not in progress (i.e. ME is in idle mode) some of the returned parameters (e.g. RXQUAL) may be invalid. In idle mode, MEs supporting multiband operation shall ignore the value of the multiband reporting parameter and the NMR returned shall be as defined in 3G 04.18 [x]~~24.008 [9]~~ when the multiband reporting parameter equals zero.

NOTE 2: When in idle mode, the only information element on which it is possible to rely on is the RXLEV-FULL-SERVING-CELL, which contains the value of the received signal strength on the BCCH of the current serving cell.

NOTE 3: Network Measurement Results are defined in 3G ~~24.008 [9]~~ 04.18 [x] as Measurement Results.

The BCCH channel list is only available if the ME is connected to a GSM access network.

The ME shall return the current date and time as set by the user. If available, the ME shall also return the time zone known from the network with the NITZ feature (see 3G 22.042 [3]). If the time zone information is not available, the ME shall return 'FF' for this element.

If language setting is requested, the ME shall return the currently used language.

Timing advance is only available if the ME is connected to a GSM access network. If the Timing Advance is requested, the ME shall return the timing advance value that was received from the BTS during the last active dedicated connection (e.g. for call or SMS). Timing advance is defined in 3G 04.18 [x]~~24.008 [9].~~ An ME supporting the Timing Advance feature shall be able to store the last value of timing advance. In addition to the timing advance value, the ME shall return its current status (i.e. ME is in idle mode or not) in order for the application to be aware of potential misinterpretation of the timing advance value. Caution should be taken if using the Timing Advance value for distance measurement as reflections from the external environment (buildings etc.) may affect the accuracy.

8.22 Network Measurement Results

~~Editor's Note: This element needs to be aligned with 3G specifications for UTRAN equivalent.~~

This information is only available when the ME is connected to a GSM access network.

Byte(s)	Description	Length
1	Network Measurement Results tag	1
2	Length = '10'	1
3 - 18	Network Measurement Results	16

The Network Measurement Results are coded as for the Measurement Results information element in 3G ~~24.008 [9]~~04.18 [x], ~~starting at octet 2 (the IEI is removed, as this information is duplicated by the data object tag).

8.29 BCCH channel list

~~Editor's Note: This element needs to be aligned with 3G specifications for UTRAN equivalent.~~

This information is only available when the ME is connected to a GSM access network.

Byte(s)	Description	Length
1	BCCH channel list tag	1
2	Length (X) of bytes following	1
3 to X+2	BCCH channel list	X

- BCCH channel list:
  - contents: the list of absolute RF channels for BCCH carriers, as known by the ME from the SYSTEM INFORMATION messages. The BCCH channel list is composed of one to three BCCH channel sub lists, each sub list is derived from the set of frequencies defined by reference neighbour cells description information element or elements. In the latter case the set is the union of the different subsets defined by the neighbour cells description information elements (see 3G ~~24.008 [9]~~ 04.18 [x]). The length of the BCCH channel list field depends on the length of the received BCCH channel list derived from the different SYSTEM INFORMATION messages to be considered.
  - coding: Each ARFCN is represented by 10 bits. Spare bit(s) are to be filled with 0.

	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1
Byte 1	ARFCN#1 (high part)							
Byte 2	ARFCN#1 (low part)		ARFCN#2 (high part)					
Byte 3	ARFCN#2 (low part)				ARFCN#3 (high part)			
…	…							
Byte X-1	ARFCN#m-1 (low part)				ARFCN#m (high part)			
Byte X	ARFCN#m (low part)						Spare bit (0)	Spare bit (0)

8.46 Timing Advance

~~Editor's Note: This element needs to be aligned with 3G specifications for UTRAN equivalent.~~

This information is only available when the ME is connected to a GSM access network.

Byte(s)	Description	Length
1	Timing Advance tag	1
2	Length = '02'	1
3	ME Status	1
4	Timing Advance	1

- Coding of ME status:
  - '00' = ME is in the idle state;
  - '01' = ME is not in idle state;
  - '02' to'FF'= reserved values.

The Timing Advance is coded as for the Timing Advance information element in 3G ~~24.008 [9]~~ 04.18 [x], starting at octet 2 (the IEI is removed, as this information is duplicated by the data object tag).

3GPP T3 (USIM) Meeting #19
St John, US Virgin Island, 8-11 May, 2001

Tdoc T3-010403

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **42** ⌘ rev **-** ⌘ Current version: **4.2.1** ⌘

*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:	⌘	Correction to NMR functionnality (and BCCH list & TA)
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11-05-2001
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)*

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:	⌘	Network Measurement Results (NMR), Timing Advance (TA), BCCH channel list, that are provided thanks to the PROVIDE LOCAL INFORMATION proactive command apply only to GSM.
Summary of change:	⌘	Clarification that BCCH channel list, NMR and TA apply only when the terminal is using a GSM Radio Access. Wrong references to TS 24.008 are changed to refer to TS 44.018.
Consequences if not approved:	⌘	Inconsistency of the specification

Clauses affected:	⌘	Section 2, 6.4.15, 8.22, 8.29, 8.46
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	Equivalent CR to the one on the R99 specification (CR 31.111-41). Reference are made to 44.018 instead of 04.18.

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".

...

[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)"

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

6.4.15 PROVIDE LOCAL INFORMATION

~~Editor's note: NMR, BCCH channel list and Timing Advance needs to be redefined for UTRAN.~~

This command requests the ME to send current local information to the UICC. At present, this information is restricted to:

- location information: the mobile country code (MCC), mobile network code (MNC), location area code (LAC) and cell ID of the current serving cell;
- the IMEI of the ME;
- ~~(~~the Network Measurement Results and the BCCH channel list, suitable only for GSM access network~~)~~;
- the current date, time and time zone;
- the current ME language setting;
- ~~(~~the Timing Advance, suitable only for GSM access network~~)~~.

The ME shall return the requested local information within a TERMINAL RESPONSE. Where location information or Network Measurement Results has been requested and no service is currently available, then the ME shall return TERMINAL RESPONSE (ME currently unable to process command - no service). Where location information or Network Measurement Results has been requested and the ME is on limited service (e.g. emergency calls only), the ME shall return the data requested in the TERMINAL RESPONSE with the general result (Limited Service).

NMR are only available if the ME is connected to a GSM access network. If the NMR are requested and a call is in progress, the value of all the returned parameters provided by the ME in the response to the command will be valid. The NMR returned when a call is in progress from MEs supporting multiband operation, shall be according to the value of the multiband reporting parameter as defined in 3G 44.018 [x]~~24.008 [9].~~ If a call is not in progress (i.e. ME is in idle mode) some of the returned parameters (e.g. RXQUAL) may be invalid. In idle mode, MEs supporting multiband operation shall ignore the value of the multiband reporting parameter and the NMR returned shall be as defined in 3G 44.018 [x]~~24.008 [9]~~ when the multiband reporting parameter equals zero.

NOTE 2: When in idle mode, the only information element on which it is possible to rely on is the RXLEV-FULL-SERVING-CELL, which contains the value of the received signal strength on the BCCH of the current serving cell.

NOTE 3: Network Measurement Results are defined in 3G ~~24.008 [9]~~ 44.018 [x] as Measurement Results.

The BCCH channel list is only available if the ME is connected to a GSM access network.

The ME shall return the current date and time as set by the user. If available, the ME shall also return the time zone known from the network with the NITZ feature (see 3G 22.042 [3]). If the time zone information is not available, the ME shall return 'FF' for this element.

If language setting is requested, the ME shall return the currently used language.

Timing advance is only available if the ME is connected to a GSM access network. If the Timing Advance is requested, the ME shall return the timing advance value that was received from the BTS during the last active dedicated connection (e.g. for call or SMS). Timing advance is defined in 3G 44.018 [x]~~24.008 [9].~~ An ME supporting the Timing Advance feature shall be able to store the last value of timing advance. In addition to the timing advance value, the ME shall return its current status (i.e. ME is in idle mode or not) in order for the application to be aware of potential misinterpretation of the timing advance value. Caution should be taken if using the Timing Advance value for distance measurement as reflections from the external environment (buildings etc.) may affect the accuracy.

8.22 Network Measurement Results

~~Editor's Note: This element needs to be aligned with 3G specifications for UTRAN equivalent.~~

This information is only available when the ME is connected to a GSM access network.

Byte(s)	Description	Length
1	Network Measurement Results tag	1
2	Length = '10'	1
3 - 18	Network Measurement Results	16

The Network Measurement Results are coded as for the Measurement Results information element in 3G ~~24.008 [9]~~44.018 [x]~~,~~ starting at octet 2 (the IEI is removed, as this information is duplicated by the data object tag).

8.29 BCCH channel list

~~Editor's Note: This element needs to be aligned with 3G specifications for UTRAN equivalent.~~

This information is only available when the ME is connected to a GSM access network.

Byte(s)	Description	Length
1	BCCH channel list tag	1
2	Length (X) of bytes following	1
3 to X+2	BCCH channel list	X

- BCCH channel list:
  - contents: the list of absolute RF channels for BCCH carriers, as known by the ME from the SYSTEM INFORMATION messages. The BCCH channel list is composed of one to three BCCH channel sub lists, each sub list is derived from the set of frequencies defined by reference neighbour cells description information element or elements. In the latter case the set is the union of the different subsets defined by the neighbour cells description information elements (see 3G ~~24.008 [9]~~ 44.018 [x]). The length of the BCCH channel list field depends on the length of the received BCCH channel list derived from the different SYSTEM INFORMATION messages to be considered.
  - coding: Each ARFCN is represented by 10 bits. Spare bit(s) are to be filled with 0.

	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1
Byte 1	ARFCN#1 (high part)							
Byte 2	ARFCN#1 (low part)		ARFCN#2 (high part)					
Byte 3	ARFCN#2 (low part)				ARFCN#3 (high part)			
…	…							
Byte X-1	ARFCN#m-1 (low part)				ARFCN#m (high part)			
Byte X	ARFCN#m (low part)						Spare bit (0)	Spare bit (0)

8.46 Timing Advance

~~Editor's Note: This element needs to be aligned with 3G specifications for UTRAN equivalent.~~

This information is only available when the ME is connected to a GSM access network.

Byte(s)	Description	Length
1	Timing Advance tag	1
2	Length = '02'	1
3	ME Status	1
4	Timing Advance	1

- Coding of ME status:
  - '00' = ME is in the idle state;
  - '01' = ME is not in idle state;
  - '02' to'FF'= reserved values.

The Timing Advance is coded as for the Timing Advance information element in 3G ~~24.008 [9]~~ 44.018 [x], starting at octet 2 (the IEI is removed, as this information is duplicated by the data object tag).

3GPP T3 (USIM) Meeting #19
St John, US VI, 8-11 May, 2001

Tdoc T3-010413
Revision on T3-010332

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **043** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

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

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

Title:	⌘	General corrections
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11/05/01
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:	⌘	
Summary of change:	⌘	IMUI replaced by IMSI Deletion of some changes detected by the ME before sending the ENVELOPE (EVENT DOWNLOAD – Channel status) command to the UICC. Correction on byte numbering and length value in section 8.47, 8.48, 8.51
Consequences if not approved:	⌘	Inconsistencies.

Clauses affected:	⌘	3.2, 6.4.7, 6.4.7.1, 7.5.11.1, 8.47, 8.48, 8.51
Other specs Affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

3.2 Abbreviations

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

ADN	Abbreviated Dialling Number
APDU	Application Protocol Data Unit
ATR	Answer To Reset
BCD	Binary Coded Decimal
BDN	Barred Dialling Number
BER	Basic Encoding Rules of ASN.1
C-APDU	Command Application Protocol Data Unit
CB	Cell Broadcast
CBMI	Cell Broadcast Message Identifier
CCP	Capability/Configuration Parameter
CSD	Circuit Switched Data
DTMF	Dual Tone Multiple Frequency
EF	Elementary File
EGPRS	EDGE General Packet Radio Service
ETSI	European Telecommunications Standards Institute
etu	elementary time unit
FDN	Fixed Dialling Number
GGSN	Gateway GPRS Support Node
GPRS	General Packet Radio Service
GSM	Global System for Mobile communications
ID	IDentifier
IEC	International Electrotechnical Commission
IMEI	International Mobile Equipment Identity
IMS~~U~~I	International Mobile Subscriber~~User~~ Identity
ISO	International Organization for Standardization
lgth	The (specific) length of a data unit
LND	Last Number Dialled
ME	Mobile Equipment
MMI	Man Machine Interface
NMR	Network Measurement Results (see also 3G 24.008 [9])
NPI	Numbering Plan Identifier
PDN	Packet Data Network
PDP	Packet Data Protocol, e.g., Ip or X25 or PPP
PDU	Protocol Data Unit
RAND	A RANDom challenge issued by the network
R-APDU	Response Application Protocol Data Unit
RFU	Reserved for Future Use
SDU	Service Data Unit
SMS	Short Message Service
SRES	Signed RESponse calculated by a UICC
SS	Supplementary Service
SSC	Supplementary Service Control string
SW1/SW2	Status Word 1 / Status Word 2
TCP	Transmission Control Protocol
TE	Terminal Equipment (e.g. an attached personal computer)
TLV	Tag, length, value
TON	Type Of Number
TP	Transfer layer Protocol
TS	Technical Specification
UDP	User Datagram Protocol
UCS2	Universal two byte coded Character Set
UE	User Equipment
UICC	USIM Integrated Circuit Card
UMTS	Universal Mobile Telecommunication System
URL	Uniform Resource Location
USAT	USIM Application Toolkit

USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Service Data

[…]

6.4.7 REFRESH

The purpose of this command is to enable the ME to be notified of the changes to the UICC configuration that have occurred as the result of a USIM application activity. It is up to the USIM application to ensure that this is done correctly.

The UICC may indicate the AID of the USIM application it wants to REFRESH.

- If the indicated USIM is active, the ME shall perform the REFRESH.
- If indicated USIM is not active, the ME shall send a TERMINAL RESPONSE. The ME shall not select the indicated USIM.
- If no AID is indicated, then the ME shall assume the REFRESH applies to the current USIM application.

The command supports seven different modes:

- USIM Initialization. This mode tells the ME to carry out USIM initialization as it is defined in TS 31.102 [14] only, starting after the PIN verification procedure.
- USIM File Change Notification. This mode advises the ME of the identity of the EFs that have been changed (in structure and/or contents) in the indicated USIM and files under $DF_{TELECOM}$. This information can be used by the ME if there is an image of USIM EFs in the ME's memory, to determine whether it needs to update this image.
- USIM Initialization and File Change Notification. This is a combination of the first two modes above.
- USIM Initialization and Full File Change Notification. This mode causes the ME to perform the USIM initialization procedure of the first mode above and advises the ME that several EFs have been changed (in structure or contents) in the indicated USIM. If there is an image of USIM EFs in the ME's memory, the ME shall completely update this image.
- UICC Reset. This mode causes the ME to run the UICC session termination procedure in accordance with TS 31.101 [13]. Subsequently, the ME performs a reset (warm reset preferred) on the UICC and starts a new application session. The ME shall not send the TERMINAL RESPONSE; this is an exception from the normal procedure, where TERMINAL RESPONSE is sent after completion of the command. The UICC shall interpret the reset as an implicit TERMINAL RESPONSE. The UICC Reset mode is used when a USAT requires ATR or complete UICC initialization procedures to be performed.- USIM Application Reset. This mode causes the ME to run the 3G session termination and the USIM application closure procedures in accordance with TS 31.102 [14]. Subsequently, the ME performs USIM initialization procedure.
- 3G Session Reset. This mode is equivalent to "USIM Initialization and File Change Notification" mode and in addition requires the ME to perform the MM Restart procedure defined in 3G 23.122 [7].

If the ME performs the REFRESH command successfully for only those EFs indicated in the mode, the ME shall inform the UICC using TERMINAL RESPONSE (OK), after it has completed its refreshing (i.e. taking into account the new value of the EFs).

For REFRESH commands with mode other than "UICC Reset" or "USIM Application Reset", it is permissible for the ME, as part of its execution of the REFRESH command, to read EFs in addition to those notified by the UICC, or to perform a USIM initialisation, provided that the procedure executed wholly encompasses the mode requested by the UICC and does not involve re-entering the PIN. The ME shall not electrically reset the UICC. If the ME does the refreshing successfully, it shall inform the UICC using TERMINAL RESPONSE (Refresh performed with additional EFs read), after the ME has completed its refreshing. It should be noted that reading additional EFs will lengthen the refresh procedure.

If the ME receives a REFRESH command while in a state where execution of the command would be unacceptable, upsetting the current user operation (e.g. notification during a call that the ~~IMUI~~IMSI has changed), the ME shall inform

the UICC using TERMINAL RESPONSE (ME currently unable to process command - currently busy on call) or TERMINAL RESPONSE (ME currently unable to process command - screen is busy) as appropriate.

NOTE: Many MEs copy an image of the USIM application files to the ME at initialization to speed up access to these fields during a 3G session. One of the purposes of this coding of the REFRESH command is to enable MEs to change such an image efficiently.

If, on receipt of the REFRESH command, the ME replies that it is busy (e.g. in call or navigating menus), the toolkit application may retry it later.

It is recommended for the ME to minimise the use of sending temporary problem TERMINAL RESPONSE, as during the period between the UICC issuing a REFRESH command and the ME performing the refresh procedure, there may be inconsistencies between data held in the ME and in the UICC. However, responsibility for retrying of all pro-active commands lies with the UICC.

6.4.7.1 $EF_{~~IMUI~~IMSI}$ changing procedure

When an $EF_{~~IMUI~~IMSI}$ is changed via Data Download or a USAT application and a REFRESH command is issued by the UICC the following rules apply to the UICC and ME:

- USIM Initialization. This command shall not be used if an $EF_{~~IMUI~~IMSI}$ is changed, as the behaviour of the UE is unpredictable;
- File Change Notification. This command shall not be used if an $EF_{~~IMUI~~IMSI}$ is changed, as the behaviour of the UE is unpredictable;
- USIM Initialization and File Change Notification. This command shall not be used if an $EF_{~~IMUI~~IMSI}$ is changed, as the behaviour of the UE is unpredictable;
- USIM Initialization and Full File Change Notification. This command shall not be used if an $EF_{~~IMUI~~IMSI}$ is changed, as the behaviour of the UE is unpredictable;
- UICC Reset. Normal UICC Reset procedure is carried out;
- USIM Application Reset. Normal USIM Application Reset procedure is carried out;
- 3G Session Reset. Normal 3G Session Reset procedure is carried out.

If an $EF_{~~IMUI~~IMSI}$ is to be updated, neither $EF_{~~IMUI~~IMSI}$ nor EF_{LOCI} shall be updated in the UICC before the 3G session termination procedure has been completed by the ME.

[…]

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:

- ~~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 UICC that this has occurred, by using the ENVELOPE (EVENT DOWNLOAD – Channel status) command as defined below.

[…]

8.47 Browser Identity

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

- Coding:
  - 00 = Default Browser shall be used;
  - Other values are RFU.

8.48 URL

Byte(s)	Description	Length
1	URL tag	1
2 to (Y+1)	Length (X)	Y
(Y+21) 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 RFC 1738 [24] on using the "SMS 7bit default alphabet" with bit 8 set to 0 .

8.51 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 #19
St John, US VI, 8-11 May, 2001

Tdoc T3-010414
Revision of T3-010396

CR-Form-v3

CHANGE REQUEST

⌘ **31.111 CR 044** ⌘ rev **-** ⌘ Current version: **4.2.1** ⌘

*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:	⌘	General corrections
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11/05/01
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:	⌘	Some subclauses need to be clarified
Summary of change:	⌘	IMUI replaced by IMSI Deletion of some changes detected by the ME before sending the ENVELOPE (EVENT DOWNLOAD – Channel status) command to the UICC. Correction on byte numbering and length value in section 8.47, 8.48, 8.51 Addition of the Get-Inkey (Variable Timeout) bit to the TERMINAL PROFILE
Consequences if not approved:	⌘	Inconsistencies.

Clauses affected:	⌘	3.2, 5.2, 6.4.7, 6.4.7.1, 7.5.11.1, 8.47, 8.48, 8.51
Other specs Affected:	⌘	[ ] Other core specifications [ ] Test specifications [ ] O&M Specifications
	⌘	
Other comments:	⌘	

3.2 Abbreviations

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

ADN	Abbreviated Dialling Number
APDU	Application Protocol Data Unit
ATR	Answer To Reset
BCD	Binary Coded Decimal
BD_ADDR	Bluetooth Device address
BDN	Barred Dialling Number
BER	Basic Encoding Rules of ASN.1
C-APDU	Command Application Protocol Data Unit
CB	Cell Broadcast
CBMI	Cell Broadcast Message Identifier
CCP	Capability/Configuration Parameter
CoD	Class Of Device (Bluetooth related)
CSD	Circuit Switched Data
DTMF	Dual Tone Multiple Frequency
EF	Elementary File
EGPRS	EDGE General Packet Radio Service
EIA	Electronics Industries Association
ETSI	European Telecommunications Standards Institute
etu	elementary time unit
FDN	Fixed Dialling Number
GGSN	Gateway GPRS Support Node
GPRS	General Packet Radio Service
GSM	Global System for Mobile communications
ID	IDentifier
IEC	International Electrotechnical Commission
IMEI	International Mobile Equipment Identity
IMSUI	International Mobile Subscriber~~User~~ Identity
ISO	International Organization for Standardization
lgth	The (specific) length of a data unit
LND	Last Number Dialled
ME	Mobile Equipment
MMI	Man Machine Interface
NMR	Network Measurement Results (see also 3G 24.008 [9])
NPI	Numbering Plan Identifier
PDN	Packet Data Network
PDP	Packet Data Protocol, e.g., Ip or X25 or PPP
PDU	Protocol Data Unit
RAND	A RANDom challenge issued by the network
R-APDU	Response Application Protocol Data Unit
RFU	Reserved for Future Use
SDP	Service Discovery Protocol (Bluetooth related)
SDU	Service Data Unit
SMS	Short Message Service
SRES	Signed RESponse calculated by a UICC
SS	Supplementary Service
SSC	Supplementary Service Control string
SW1/SW2	Status Word 1 / Status Word 2
TCP	Transmission Control Protocol
TE	Terminal Equipment (e.g. an attached personal computer)
TIA	Telecommunications Industries Association
TLV	Tag, length, value
TON	Type Of Number
TP	Transfer layer Protocol
TS	Technical Specification
UDP	User Datagram Protocol
UCS2	Universal two byte coded Character Set

UE	User Equipment
UICC	USIM Integrated Circuit Card
UMTS	Universal Mobile Telecommunication System
URL	Uniform Resource Location
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Service Data

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

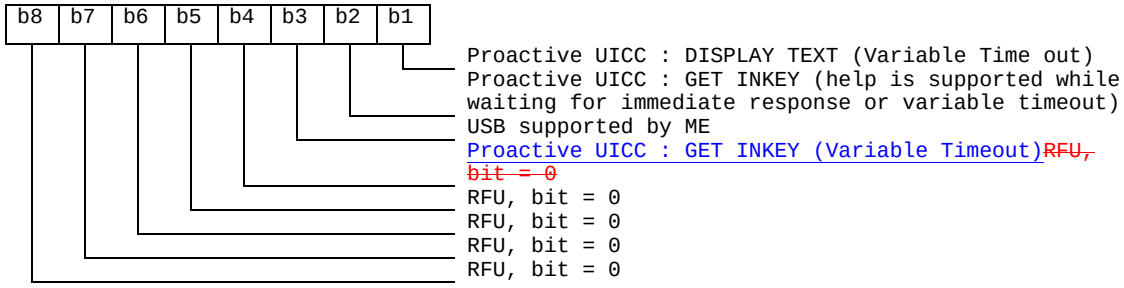
The command header is specified in TS 31.101 [13].

Command parameters/data:

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

- […]

Eighteenth byte:



[…]

6.4.7 REFRESH

The purpose of this command is to enable the ME to be notified of the changes to the UICC configuration that have occurred as the result of a USIM application activity. It is up to the USIM application to ensure that this is done correctly.

The UICC may indicate the AID of the USIM application it wants to REFRESH.

- If the indicated USIM is active, the ME shall perform the REFRESH.
- If indicated USIM is not active, the ME shall send a TERMINAL RESPONSE. The ME shall not select the indicated USIM.
- If no AID is indicated, then the ME shall assume the REFRESH applies to the current USIM application.

The command supports seven different modes:

- USIM Initialization. This mode tells the ME to carry out USIM initialization as it is defined in TS 31.102 [14] only, starting after the PIN verification procedure.
- USIM File Change Notification. This mode advises the ME of the identity of the EFs that have been changed (in structure and/or contents) in the indicated USIM and files under $DF_{TELECOM}$. This information can be used by the ME if there is an image of USIM EFs in the ME's memory, to determine whether it needs to update this image.
- USIM Initialization and File Change Notification. This is a combination of the first two modes above.

- USIM Initialization and Full File Change Notification. This mode causes the ME to perform the USIM initialization procedure of the first mode above and advises the ME that several EFs have been changed (in structure or contents) in the indicated USIM. If there is an image of USIM EFs in the ME's memory, the ME shall completely update this image.

- UICC Reset. This mode causes the ME to run the UICC session termination procedure in accordance with TS 31.101 [13]. Subsequently, the ME performs a reset (warm reset preferred) on the UICC and starts a new application session. The ME shall not send the TERMINAL RESPONSE; this is an exception from the normal procedure, where TERMINAL RESPONSE is sent after completion of the command. The UICC shall interpret the reset as an implicit TERMINAL RESPONSE. The UICC Reset mode is used when a USAT requires ATR or complete UICC initialization procedures to be performed.- USIM Application Reset. This mode causes the ME to run the 3G session termination and the USIM application closure procedures in accordance with TS 31.102 [14]. Subsequently, the ME performs USIM initialization procedure.

- 3G Session Reset. This mode is equivalent to "USIM Initialization and File Change Notification" mode and in addition requires the ME to perform the MM Restart procedure defined in 3G 23.122 [7].

If the ME performs the REFRESH command successfully for only those EFs indicated in the mode, the ME shall inform the UICC using TERMINAL RESPONSE (OK), after it has completed its refreshing (i.e. taking into account the new value of the EFs).

For REFRESH commands with mode other than "UICC Reset" or "USIM Application Reset", it is permissible for the ME, as part of its execution of the REFRESH command, to read EFs in addition to those notified by the UICC, or to perform a USIM initialisation, provided that the procedure executed wholly encompasses the mode requested by the UICC and does not involve re-entering the PIN. The ME shall not electrically reset the UICC. If the ME does the refreshing successfully, it shall inform the UICC using TERMINAL RESPONSE (Refresh performed with additional EFs read), after the ME has completed its refreshing. It should be noted that reading additional EFs will lengthen the refresh procedure.

If the ME receives a REFRESH command while in a state where execution of the command would be unacceptable, upsetting the current user operation (e.g. notification during a call that the ~~IMUI~~IMSI has changed), the ME shall inform the UICC using TERMINAL RESPONSE (ME currently unable to process command - currently busy on call) or TERMINAL RESPONSE (ME currently unable to process command - screen is busy) as appropriate.

NOTE: Many MEs copy an image of the USIM application files to the ME at initialization to speed up access to these fields during a 3G session. One of the purposes of this coding of the REFRESH command is to enable MEs to change such an image efficiently.

If, on receipt of the REFRESH command, the ME replies that it is busy (e.g. in call or navigating menus), the toolkit application may retry it later.

It is recommended for the ME to minimise the use of sending temporary problem TERMINAL RESPONSE, as during the period between the UICC issuing a REFRESH command and the ME performing the refresh procedure, there may be inconsistencies between data held in the ME and in the UICC. However, responsibility for retrying of all pro-active commands lies with the UICC.

6.4.7.1 EF~~IMUI~~IMSI changing procedure

When an EF~~IMUI~~IMSI is changed via Data Download or a USAT application and a REFRESH command is issued by the UICC the following rules apply to the UICC and ME:

- USIM Initialization. This command shall not be used if an EF~~IMUI~~IMSI is changed, as the behaviour of the UE is unpredictable;

- File Change Notification. This command shall not be used if an EF~~IMUI~~IMSI is changed, as the behaviour of the UE is unpredictable;

- USIM Initialization and File Change Notification. This command shall not be used if an EF~~IMUI~~IMSI is changed, as the behaviour of the UE is unpredictable;

- USIM Initialization and Full File Change Notification. This command shall not be used if an EF~~IMUI~~IMSI is changed, as the behaviour of the UE is unpredictable;

- UICC Reset. Normal UICC Reset procedure is carried out;
- USIM Application Reset. Normal USIM Application Reset procedure is carried out;
- 3G Session Reset. Normal 3G Session Reset procedure is carried out.

If an $EF_{~~IMUI~~IMSI}$ is to be updated, neither $EF_{~~IMUI~~IMSI}$ nor EF_{LOCI} shall be updated in the UICC before the 3G session termination procedure has been completed by the ME.

[…]

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:

- ~~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 UICC that this has occurred, by using the ENVELOPE (EVENT DOWNLOAD – Channel status) command as defined below.

[…]

8.47 Browser Identity

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

- Coding:
  - 00 = Default Browser shall be used;
  - Other values are RFU.

8.48 URL

Byte(s)	Description	Length
1	URL tag	1
2 to (Y+1)	Length (X)	Y
(Y+2~~1~~) 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 RFC 1738 [24] on using the "SMS 7bit default alphabet" with bit 8 set to 0 .

8.51 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.

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St John, US VI, 8-11 May, 2001

Tdoc T3-010417

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **045** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

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

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

Title:	⌘	Clarification of min and max length for GET INPUT command
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 11/5/2001
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:	⌘	Usually the lengths are measured in bytes, but the minimum and maximum lengths of user response are measured in characters. A faulty implementation causes problems especially with the UCS2 characters.
Summary of change:	⌘	Clarification of the coding added.
Consequences if not approved:	⌘	Risk of wrong implementations.

Clauses affected:	⌘	6.6.3
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

6.6.3 GET INPUT

Description	Subclause	M/O/C	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
Text string	8.15	M	Y	C
Response length	8.11	M	Y	D
Default Text	8.23	O	N	E
Icon identifier	8.31	O	N	F

- Text string:
  - Contents: text for the ME to display in conjunction with asking the user to respond.
- Response length:
  - Contents: the minimum and maximum acceptable lengths in characters (see subclause 6.4.3) for the response from the user.
- Default Text:
  - Contents: text for the ME to display corresponds to a default text string offered by the UICC.

3GPP T3 (USIM) Meeting #19
St John, US VI, 8-11 May, 2001

Tdoc T3-010418

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **046** ⌘ rev **-** ⌘ Current version: **4.2.1** ⌘

*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:	⌘	Clarification of min and max length for GET INPUT command
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 11/5/2001
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:	⌘	Usually the lengths are measured in bytes, but the minimum and maximum lengths of user response are measured in characters. A faulty implementation causes problems especially with the UCS2 characters.
Summary of change:	⌘	Clarification of the coding added.
Consequences if not approved:	⌘	Risk of wrong implementations.

Clauses affected:	⌘	6.6.3
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

6.6.3 GET INPUT

Description	Subclause	M/O/C	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
Text string	8.15	M	Y	C
Response length	8.11	M	Y	D
Default Text	8.23	O	N	E
Icon identifier	8.31	O	N	F

- Text string:
  - Contents: text for the ME to display in conjunction with asking the user to respond.
- Response length:
  - Contents: the minimum and maximum acceptable lengths in characters (see subclause 6.4.3) for the response from the user.
- Default Text:
  - Contents: text for the ME to display, corresponds to a default text string offered by the UICC.

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CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **047** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

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

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

Title:	⌘	Limitation of data field in the C-APDU and R-APDU data object
Source:	⌘	T3
Work item code:	⌘	Toolkit
Date:	⌘	11/05/2001
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:	⌘	Due to the TLV structure of the proactive command and its response, the size of the data field send in C-APDU S-TLV and returned in R-APDU S-TLV is limited and does not allow to send the amount of data defined in ISO 7816-4 as referenced.
Summary of change:	⌘	Define the size limitation for C-APDU and R-APDU
Consequences if not approved:	⌘	Toolkit application writers may not be aware of this limitation

Clauses affected:	⌘	§8.35, § 8.36
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

8.35 C-APDU

Byte(s)	Description	Length
1	C-APDU tag	1
2 to (Y+1)	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2	Command class CLA	1
Y+3	Command instruction code INS	1
Y+4	P1 parameter	1
Y+5	P2 parameter	1
Y+6	Lc (optional)	0 or 1
(Y+7) to (Y+X)	Data (optional)	Lc
Y+X+1	Le (optional)	0 or 1

This object contains the command APDU for Card x in the format defined in ISO/IEC 7816-4 [17]. Command class CLA, instruction code INS, P1 and P2 parameters, Lc, Data and Le are coded as defined in ISO/IEC 7816-4 [17]. Extended lengths are not supported.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 241 bytes, so the maximum length for the Data (value of Lc) in a Case 3 type of APDU is 236 bytes.

8.36 R-APDU

Byte(s)	Description	Length
1	R-APDU tag	1
2 to Y+1	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2 to Y+X-1	R-APDU data (optional)	X-2
Y+X	Status word SW1	1
Y+X+1	Status word SW2	1

This object contains the response APDU from Card x in the format defined in ISO/IEC 7816-4 [17]. The R-APDU data and status words SW1 and SW2 are coded as defined in ISO/IEC 7816-4 [17]. It is possible for no R-APDU data to be present; this is indicated by the length of the data object.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 239 bytes, so the maximum length of the R-APDU data is 237 bytes.

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CHANGE REQUEST

⌘ **31.111** **CR** **048** ⌘ rev **-** ⌘ Current version: **4.2.0** ⌘

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

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

Title:	⌘	Limitation of data field in the C-APDU and R-APDU data object
Source:	⌘	T3
Work item code:	⌘	Toolkit
Date:	⌘	11/05/2001
Category:	⌘	**A**
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:	⌘	Due to the TLV structure of the proactive command and its response, the size of the data field send in C-APDU S-TLV and returned in R-APDU S-TLV is limited and does not allow to send the amount of data defined in ISO 7816-4 as referenced.
Summary of change:	⌘	Define the size limitation for C-APDU and R-APDU
Consequences if not approved:	⌘	Toolkit application writers may not be aware of this limitation

Clauses affected:	⌘	§8.35, § 8.36
Other specs affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

8.35 C-APDU

Byte(s)	Description	Length
1	C-APDU tag	1
2 to (Y+1)	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2	Command class CLA	1
Y+3	Command instruction code INS	1
Y+4	P1 parameter	1
Y+5	P2 parameter	1
Y+6	Lc (optional)	0 or 1
(Y+7) to (Y+X)	Data (optional)	Lc
Y+X+1	Le (optional)	0 or 1

This object contains the command APDU for Card x in the format defined in ISO/IEC 7816-4 [17]. Command class CLA, instruction code INS, P1 and P2 parameters, Lc, Data and Le are coded as defined in ISO/IEC 7816-4 [17]. Extended lengths are not supported.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 241 bytes, so the maximum length for the Data (value of Lc) in a Case 3 type of APDU is 236 bytes.

8.36 R-APDU

Byte(s)	Description	Length
1	R-APDU tag	1
2 to Y+1	Length (X) of bytes following (Y = 1 or 2)	Y
Y+2 to Y+X-1	R-APDU data (optional)	X-2
Y+X	Status word SW1	1
Y+X+1	Status word SW2	1

This object contains the response APDU from Card x in the format defined in ISO/IEC 7816-4 [17]. The R-APDU data and status words SW1 and SW2 are coded as defined in ISO/IEC 7816-4 [17]. It is possible for no R-APDU data to be present; this is indicated by the length of the data object.

Note: The maximum size of the value part of this Simple TLV (value of X) is limited to 239 bytes, so the maximum length of the R-APDU data is 237 bytes.

3GPP T3 (USIM) Meeting #19
Saint John, US Virgin Islands

Tdoc T3-010447
Revision of T3-010331

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **049** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

*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:	⌘	Correction of Annex I (Bearer independant protocol examples)
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 09/05/01
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:	⌘	Annex I is not reflecting the implementation of the bearer independent protocol as described in 6.4.27 OPEN CHANNEL and 6.4.30 SEND DATA.
Summary of change:	⌘	• In case of an “immediate link establishment”, the terminal response is sent after the link is established. • In case of a “send data immediately”, the terminal response is sent after the data is sent.
Consequences if not approved:	⌘	Inconsistencies in the specification.

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

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 (immediate) ⟶		Set Up Call ⟶
		⟵ OK
⟵ Terminal Response (Channel identifier)		
		~~Set Up Call ⟶~~
		~~⟵ OK~~
⟵ ENVELOPE (Channel Status, link established)		
OPEN CHANNEL 'On demand link' establishment' and SEND DATA 'immediately'		
OPEN CHANNEL (on demand) ⟶		
⟵ Terminal Response (Channel identifier)		
SEND DATA (immediate, Data) ⟶		Set Up Call ⟶
		⟵ OK
		Data ⟶
⟵ Terminal Response (Channel Data Length)		
OPEN CHANNEL 'On demand link' establishment' and SEND DATA 'Stored in Tx buffer'		
OPEN CHANNEL (on demand) ⟶		
⟵ Terminal Response (Channel identifier)		
SEND DATA (Store~~Immediate~~, Data) ⟶		Set Up Call ⟶
⟵ Terminal Response (Channel Data Length)		
SEND DATA (Store~~Immediate~~, Data) ⟶		
⟵ Terminal Response (Channel Data Length)		⟵ OK
		~~Data ⟶~~
SEND DATA (Immediate, Data) ⟶		Data ⟶
		Data ⟶
⟵ Terminal Response (Channel Data Length)		
CLOSE CHANNEL		
CLOSE CHANNEL(Channel identifier) ⟶		Terminate call ⟶
		⟵ OK
⟵ Terminal Response(OK)		
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)	~~Data ⟶~~
SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

GET CHANNEL STATUS

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

3GPP T3 (USIM) Meeting #19
Saint John, US Virgin Islands

Tdoc T3-010448
(rel-4 version of T3-010447)

CR-Form-v3

CHANGE REQUEST

⌘ **31.111** **CR** **050** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

*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:	⌘	Correction of Annex I (Bearer independant protocol examples)
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 09/05/01
Category:	⌘	A ***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)*
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Reason for change:	⌘	Annex I is not reflecting the implementation of the bearer independent protocol as described in 6.4.27 OPEN CHANNEL and 6.4.30 SEND DATA.
Summary of change:	⌘	• In case of an “immediate link establishment”, the terminal response is sent after the link is established. • In case of a “send data immediately”, the terminal response is sent after the data is sent.
Consequences if not approved:	⌘	Inconsistencies in the specification.

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

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 (immediate) ⟶		Set Up Call ⟶
		⟵ OK
⟵ Terminal Response (Channel identifier)		
		~~Set Up Call ⟶~~
		~~⟵ OK~~
⟵ ENVELOPE (Channel Status, link established)		
OPEN CHANNEL 'On demand link' establishment' and SEND DATA 'immediately'		
OPEN CHANNEL (on demand) ⟶		
⟵ Terminal Response (Channel identifier)		
SEND DATA (immediate, Data) ⟶		Set Up Call ⟶
		⟵ OK
		Data ⟶
⟵ Terminal Response (Channel Data Length)		
OPEN CHANNEL 'On demand link' establishment' and SEND DATA 'Stored in Tx buffer'		
OPEN CHANNEL (on demand) ⟶		
⟵ Terminal Response (Channel identifier)		
SEND DATA (Store~~Immediate~~, Data) ⟶		Set Up Call ⟶
⟵ Terminal Response (Channel Data Length)		
SEND DATA (Store~~Immediate~~, Data) ⟶		
⟵ Terminal Response (Channel Data Length)		⟵ OK
		~~Data ⟶~~
SEND DATA (Immediate, Data) ⟶		Data ⟶
		Data ⟶
⟵ Terminal Response (Channel Data Length)		
CLOSE CHANNEL		
CLOSE CHANNEL(Channel identifier) ⟶		Terminate call ⟶
		⟵ OK
⟵ Terminal Response(OK)		
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)	~~Data ⟶~~
SEND DATA (Immediate, Data) ⟶ ⟵ Terminal Response(Channel Data length)	Data ⟶

GET CHANNEL STATUS

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