3GPP TSG-T (Terminals) Meeting #17
Biarritz, France 4 – 6 September 2002

Tdoc TP-020217

Source: T3

Title: Change Requests to TS 03.19 and TS 43.019

Document for: Approval

This document contains several change requests as follows:

T3 Doc	Spec	CR	Rv	Rel	Cat	Subject
T3-020663	03.19	A020	-	R99	F	Correction of incorrect integrated CR
T3-020662	43.019	024	-	Rel-4	F	Correction of incorrect integrated CR
T3-020658	43.019	021	-	Rel-5	F	Clarification of ToolkitException.HANDLER_NOT_AVAILABLE for getCapacity() methods
T3-020650	43.019	022	-	Rel-5	F	Clarification on EVENT_FIRST_COMMAND_AFTER_SELECT
T3-020649	43.019	023	-	Rel-5	F	Specification alignment with approved change requests
T3-020711	43.019	025	-	Rel-5	F	Correction of method getChannelIdentifier().
T3-020712	43.019	026	-	Rel-5	F	Clarification of handling of statusType parameter by the framework in case of PoR.
T3-020713	43.019	027		Rel-5	F	Correction of the example applet

3GPP TSG-T3 24 ***Tdoc T3-020663***
Seattle,United States, 19-22 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **03.19** **CR** **A020** ⌘ **rev** **-** ⌘ Current version: **8.4.0** ⌘

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

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

Title:	⌘	Correction of incorrect integrated CR
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	R99

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

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

Reason for change:	⌘	Correction of a incorrect implemented CR
Summary of change:	⌘	Change > to >= in the description of the getValue method
Consequences if not approved:	⌘	Specification is incomplete.

Clauses affected:	⌘	Annex A			
Other specs affected:	⌘	Y	N		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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Annex A (normative): Java Card SIM API

The attached files "Annex_A_java.zip" and "Annex_A_HTML.zip" contains source files for the Java Card SIM API.

List of changes to the API html and java source files

Class sim.toolkit.MEProfile

```
/**
    * Returns the binary value of a parameter, delimited by two indexes, from the handset profile.
    *
    * @param indexMSB index of the Most Significant Bit of the handset profile .
    * @param indexLSB index of the Lowest Significant Bit of the handset profile .
    *
    * @return binary value of the data field indicated in the handset profile.
    * The indexLSB bit in the MEProfile data is the Lowest Significant bit in the short returned value. If padding is necessary, the
    * returned value is left padded with 0. The values outside the MEProfile data available are considered to bet set to 0.
    *
    *       The return value is according to the following example:<ul>
    *          <li>If indexMSB=108 and indexLSB=104, the return value is the number of
    *          characters down ME display.</li>
    *          <li>If indexMSB=31 and indexLSB=16, the return value is a short built
    *          from the 4th and 3rd byte of the handset profile with the 4th byte as
    *          the Most significant byte.</li></ul>
    *
    * @exception ToolkitException  with the following reason codes: <ul>
    *     <li>ME_PROFILE_NOT_AVAILABLE if Terminal Profile data are not available
*     <li>BAD_INPUT_PARAMETER if (indexMSB >= indexLSB +16) or (indexMSB < indexLSB) or
    *     <li>BAD_INPUT_PARAMETER if (indexMSB > indexLSB +16) or (indexMSB < indexLSB) or
    *     (indexMSB < 0) or (indexLSB < 0) </ul>
    */
public static short getValue(short indexMSB, short indexLSB) throws ToolkitException {
}
```

3GPP TSG-T3 #24
Seattle, United States, 19 –22 August 2002

Tdoc T3-020658

CR-Form-v7

CHANGE REQUEST

⌘ **43.019** **CR** **021** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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

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

Title:	⌘	Clarification of ToolkitException.HANDLER_NOT_AVAILABLE for getCapacity() methods
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	22/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
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R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The exception toolkitexception.HANDLER_NOT_AVAILABLE can never be thrown for EnvelopeHandler, ProactiveHandler and ProactiveResponseHandler.
Summary of change:	⌘	Remove the toolkitexception.HANDLER_NOT_AVAILABLE in sim.toolkit.ProactiveHandler, sim.toolkit.EnvelopeHandler, sim.toolkit.ProactiveResponseHandler classes.
Consequences if not approved:	⌘	Specification is not consistent.

Clauses affected:	⌘	Annex A and B

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

Other comments:	⌘	

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List of changes to the API html and java source files Annex A and B

Class sim.toolkit.ProactiveHandler
+ getCapacity()
Class sim.toolkit.EnvelopeHandler
+ getCapacity()
Class sim.toolkit.ProactiveResponseHandler
+ getCapacity()

in all final handler classes as listed above

```
/**
 * Returns the maximum size of the Simple TLV list managed by the handler.
 * @return size in bytes
 * @exception ToolkitException with the following reason codes: <ul>
 *    <li><code>HANDLER_NOT_AVAILABLE</code> if the handler is busy</ul>
 */
public short getCapacity() throws ToolkitException{
 return (short)0;
}
```

3GPP TSG-T3 #24
Seattle, United States, 19 –22 August 2002

Tdoc T3-020650

CR-Form-v7

CHANGE REQUEST

⌘ **43.019** **CR** **022** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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

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

Title:	⌘	Clarification on EVENT_FIRST_COMMAND_AFTER_SELECT
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	22/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
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D *(editorial modification)*
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R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The definition of the event introduced in the 43.019 CR 003 may be misunderstood regarding the applet triggering mechanism.
Summary of change:	⌘	Clarify when the applet shall be triggered by the toolkit framework for the event EVENT_FIRST_COMMAND_AFTER_SELECT
Consequences if not approved:	⌘	Current version of the specification may lead to misinterpretation and raise some issues for the Java API testing group.

Clauses affected:	⌘	§ 6.2

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

Other comments: ⌘

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6.2 Applet Triggering

EVENT_FIRST_COMMAND_AFTER_SELECT

Upon reception of the first command received by the GSM~~SIM~~ application after it has been selected, or after the ATR if it is the default application, and before the Status Word of the processed command has been sent back by the GSM application ~~and after the command has been processed by the GSM application~~, the toolkit framework shall trigger all the toolkit applets registered to this event.

If the first command received by the GSM application is a toolkit applet triggering command (e.g. TERMINAL PROFILE), the toolkit applets registered on the EVENT_FIRST_COMMAND_AFTER_SELECT event shall be triggered first.

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Seattle,United States, 19-22 August 2002

Tdoc T3-020649
Revised T3-020560

CR-Form-v7

CHANGE REQUEST

⌘ **43.019** **CR** **023** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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

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

Title:	⌘	Specification alignement with approved change requests
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	20/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

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R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Some events defined in the specification were not integrated in the table of handler availability. Some CRs were not correctly integrated in the specification
Summary of change:	⌘	- Update Table of handler availability (table 1) according to the approved CRs - Update html files.
Consequences if not approved:	⌘	Specification is incomplete.

Clauses affected:	⌘	6.6, Annex A

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

Other comments: ⌘

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6.6 Handle

6.7 r availability

The system handlers : ProactiveHandler, ProactiveResponseHandler, EnvelopeHandler and EnvelopeResponseHandler are Temporary JCRE Entry Point Object as defined in the Java Card Runtime Environment Specification [8].

The following rules define the minimum requirement for the availability of the system handlers and the lifetime of their content. They are generic rules and may vary with the event that triggers the toolkit applet.

ProactiveHandler:

- The ProactiveHandler is valid from the invocation to the termination of the processToolkit method.
- If a proactive command is pending the ProactiveHandler may not be available.
- At the processToolkit method invocation the TLV-List is cleared.
- At the call of it's init method the content is cleared and then initialised.
- After a call to ProactiveHandler.send method the handler will remain unchanged (i.e. previously send proactive command) until the ProactiveHandler.init or appendTLV methods are called.

ProactiveResponseHandler:

- The ProactiveResponseHandler may not be available before the first call to ProactiveHandler.send method, if available the content is cleared.
- The ProactiveResponseHandler is available after the first call to the ProactiveHandler.send method to the termination of the processToolkit method.
- If a proactive command is pending the ProactiveResponseHandler may not be available.
- The ProactiveResponseHandler content is changed after the call to ProactiveHandler.send method and remains unchanged until next call to the ProactiveHandler.send method.

EnvelopeHandler:

- The EnvelopeHandler and its content are available for all triggered toolkit applets (see Table1), from the invocation to the termination of their processToolkit method.
- The SIM Toolkit Framework guarantees that all registered toolkit applet are triggered and receive the data.

EnvelopeResponseHandler:

The EnvelopeResponseHandler is available for all triggered toolkit applets, until a toolkit applet has posted an envelope response or sent a proactive command. After a call to the post method the handler is no longer available.

- At the process Toolkit method invocation the TLV-List is cleared.
- The EnvelopeResponseHandler content must be posted before the first invocation of a ProactiveHandler.send method or before the termination of the processToolkit, so that the GSM applet can offer these data to the ME (eg 9Fxx/9Exx/91xx). After the first invocation of the ProactiveHandler.send method the EnvelopeResponseHandler is no more available

The following diagram illustrates these rules.

Applet		Applet 1							Applet 2			
Method	*processToolkit*		*post*		*init*		*termination*		*init*		*init*	
Invocation		*init*		*send*		*send*		*processToolkit*		*send*		
Envelope Handler												
EnvelopeResponseHandler												
ProactiveHandler												
Proactive ResponseHandler												

Figure 5: Typical handler availability for toolkit applets (see Table 1 for detail)

The following table describes the minimum availability of the handlers for all the events at the invocation of the processToolkit method of the toolkit applet.

Table 1: Handler availability for each event

EVENT_	**Reply busy allowed**	**EnvelopeHandler**	**EnvelopeResponseHandler**	**Nb of triggered / registrered Applet**
_FORMATTED_SMS_PP_ENV	Y (see Note 2)	Y	Y	1 / n (per TAR)
_FORMATTED_SMS_PP_UPD	N	Y	N	1 / n (per TAR)
_UNFORMATTED_SMS_PP_ENV	Y	Y	Y	n / n
_UNFORMATTED_SMS_PP_UPD	N	Y	N	n / n
_FORMATTED_SMS_CB	Y	Y	N	1 / n (per TAR)
_UNFORMATTED_SMS_CB	Y	Y	N	n / n
_MENU_SELECTION	Y	Y	N	1 / n (per Item Id)
_MENU_SELECTION_HELP_REQUEST	Y	Y	N	1 / n (per Item Id)
_CALL_CONTROL	N	Y	Y	1 / 1
_SMS_MO_CONTROL	N	Y	Y	1 / 1
_TIMER_EXPIRATION	Y	Y	N	1/ 8 (per timer) (see Note 1)
_EVENT_DOWNLOAD				
_MT_CALL	Y	Y	N	n / n
_CALL_CONNECTED	Y	Y	N	n / n
_CALL_DISCONNECTED	Y	Y	N	n / n
_LOCATION_STATUS	Y	Y	N	n / n
_USER_ACTIVITY	Y	Y	N	n / n
_IDLE_SCREEN_AVAILABLE	Y	Y	N	n / n
_CARD_READER_STATUS	Y	Y	N	n / n
_LANGUAGE_SELECTION	Y	Y	N	n / n
_BROWSER_TERMINATION	Y	Y	N	n / n
_DATA_AVAILABLE	Y	Y	N	1/7 (per channel) (see Note 1)
_CHANNEL_STATUS	Y	Y	N	1/7 (per channel) (see Note 1)
~~_UNRECOGNISED_ENVELOPE~~ _UNRECOGNIZED_ENVELOPE	Y	Y	Y	n / n
_STATUS_COMMAND	N	N	N	n / n
_PROFILE_DOWNLOAD	N	N	N	n / n
_FIRST_COMMAND_AFTER_SELECT	N	N	N	n / n

Note 1: One toolkit applet can register to several timers/channels, but a timer/channel can only be allocated to one toolkit applet.

Note 2: The framework may reply busy and not trigger the toolkit applet if a PoR using SMS SUBMIT is required in the incoming message and a proactive session is ongoing.

Annex A (normative): Java Card SIM API

The attached files "Annex_A_java.zip" and "Annex_A_HTML.zip" contains source files for the Java Card SIM API.

List of changes to the API html and java source files

Class sim.toolkit.EnvelopeHandler

```
/**
    * Looks for the Secured Data from the Command Packet in the first SMS TPDU
    * or Cell Broadcast Page Simple TLV contained in the Envelope handler. This can
    * be used on the events:
    * - EVENT_FORMATTED_SMS_PP_ENV, EVENT_FORMATTED_SMS_PP_UPD, if the SMS TP-UD is formatted
    * according to ~~GSM~~ TS 03.48 Single Short Message.
    * - EVENT_FORMATTED_SMS_CB, if the Cell Broadcast Page is formatted according to GSM 03.48.
    * If the element is available it becomes the TLV selected.
    *
    * @return the offset of the Secured Data first byte in the first SMS TPDU or Cell Broadcast Page TLV element. If the Secured Data length is zero the value returned shall be the offset of the first byte following the TS 03.48 Command Packet structure.~~If the Secured Data length is zero the value returned shall be the SMS TPDU TLV length.~~
    * 
    * @exception ToolkitException with the following reason codes: <ul>
    *      <li><code>UNAVAILABLE_ELEMENT</code> in case of unavailable SMS TPDU or Cell Broadcast Page TLV element or wrong data format </ul>
    */

    public short getSecuredDataOffset() throws ToolkitException {
}
```

Class sim.toolkit.MEProfile

```
/**
    * Returns the binary value of a parameter, delimited by two indexes, from the handset profile.
    *
    * @param indexMSB index of the Most Significant Bit of the handset profile .
    * @param indexLSB index of the Lowest Significant Bit of the handset profile .
    *
```

```
    * @return binary value of the data field indicated in the handset profile.
    * The indexLSB bit in the MEProfile data is the Lowest Significant bit in the short returned value. If padding is necessary, the
    * returned value is left padded with 0. The values outside the MEProfile data available are considered to bet set to 0.
    *
    *       The return value is according to the following example:<ul>
    *          <li>If indexMSB=108 and indexLSB=104, the return value is the number of
    *          characters down ME display.</li>
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    *          from the 4th and 3rd byte of the handset profile with the 4th byte as
    *          the Most significant byte.</li></ul>
    *
    * @exception ToolkitException  with the following reason codes: <ul>
    *     <li>ME_PROFILE_NOT_AVAILABLE if Terminal Profile data are not available
*     <li>BAD_INPUT_PARAMETER if (indexMSB >= indexLSB +16) or (indexMSB < indexLSB) or
    *     <li>BAD_INPUT_PARAMETER if (indexMSB > indexLSB +16) or (indexMSB < indexLSB) or
    *     (indexMSB < 0) or (indexLSB < 0) </ul>
    */
public static short getValue(short indexMSB, short indexLSB) throws ToolkitException {
}
```

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Seattle,United States, 19-22 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **43.019** **CR** **024** ⌘ **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.*

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Title:	⌘	Correction of incorrect integrated CR
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	REL-4

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		[ ] / [X]	Test specifications		
		[ ] / [X]	O&M Specifications		
Other comments:	⌘				

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    * Returns the binary value of a parameter, delimited by two indexes, from the handset profile.
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    * @param indexMSB index of the Most Significant Bit of the handset profile .
    * @param indexLSB index of the Lowest Significant Bit of the handset profile .
    *
    * @return binary value of the data field indicated in the handset profile.
    * The indexLSB bit in the MEProfile data is the Lowest Significant bit in the short returned value. If padding is necessary, the
    * returned value is left padded with 0. The values outside the MEProfile data available are considered to bet set to 0.
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    *       The return value is according to the following example:<ul>
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    *          from the 4th and 3rd byte of the handset profile with the 4th byte as
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    *
    * @exception ToolkitException  with the following reason codes: <ul>
    *     <li>ME_PROFILE_NOT_AVAILABLE if Terminal Profile data are not available
*     <li>BAD_INPUT_PARAMETER if (indexMSB >= indexLSB +16) or (indexMSB < indexLSB) or
    *     <li>BAD_INPUT_PARAMETER if (indexMSB > indexLSB +16) or (indexMSB < indexLSB) or
    *     (indexMSB < 0) or (indexLSB < 0) </ul>
    */
public static short getValue(short indexMSB, short indexLSB) throws ToolkitException {
}
```

3GPP TSG T3 # 24 ***Tdoc T3-020711***
Seattle,United States, 19-22 August 2002

CR-Form-v5.1

CHANGE REQUEST

⌘ **43.019** **CR** **025** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

*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 [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Correction of method getChannelIdentifier().
Source:	⌘	TSG T3
Work item code:	⌘	TEI
Date:	⌘	22/08/02
Category:	⌘	**F**
Release:	⌘	REL-5

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

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

Reason for change:	⌘	The behavior of the getChannelIdentifier() method is not defined in case the Simple TLV Channel Status has a length equal to 0.
Summary of change:	⌘	Add the exception OUT_OF_TLV_BOUNDARIES for the getChannelIdentifier() method.
Consequences if not approved:	⌘	The behavior is not defined.

Clauses affected:	⌘	Annex A (normative): Java Card SIM API
Other specs Affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

List of changes to the API html and java source files

Class sim.toolkit.EnvelopeHandler

```
/**
    * Returns the channel indentifier value from the first Channel status TLV element<BR>
    * in the current Envelope data field. If the element is available it becomes the currently <BR>
    * selected TLV.
    *
    * @return channel identfier
    * @exception ToolkitException with the following reason codes: <ul>
    *       <li><code>UNAVAILABLE_ELEMENT</code> in case of unavailable TLV element
    *      <li><code>OUT_OF_TLV_BOUNDARIES</code> if the Simple TLV Channel Status length is equal to 0.</ul>
    */
   public byte getChannelIdentifier() throws ToolkitException {return 0;}
```

Class sim.toolkit.ProactiveResponseHandler

```
/**
    * Returns the channel indentifier value from the first Channel status TLV element<BR>
    * in the current Envelope data field. If the element is available it becomes the currently <BR>
    * selected TLV.
    *
    * @return channel identfier
    * @exception ToolkitException with the following reason codes: <ul>
    *       <li><code>UNAVAILABLE_ELEMENT</code> in case of unavailable TLV element
    *      <li><code>OUT_OF_TLV_BOUNDARIES</code> if the Simple TLV Channel Status length is equal to 0.
</ul>
    */
    public byte getChannelIdentifier() throws ToolkitException {return 0;}
```

3GPP TSG T3 #24 ***Tdoc T3-020712***
Seattle,United States, 19-22 August 2002

CR-Form-v5.1

CHANGE REQUEST

⌘ **43.019** **CR** **026** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

*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 [ ] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Clarification of handling of *statusType* parameter by the framework in case of PoR.
Source:	⌘	TSG T3
Work item code:	⌘	TEI
Date:	⌘	22/08/01
Category:	⌘	**F**
Release:	⌘	REL-5

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

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

Reason for change:	⌘	There is an ambiguity in §6.5 : the *statusType* parameter is meaningless is case of SMS-SUBMIT
Summary of change:	⌘	Specify that *statusType* parameter is meaningless only in case of SMS-SUBMIT.
Consequences if not approved:	⌘	Cards could behave differently regarding this parameter.

Clauses affected:	⌘	§6.5
Other specs Affected:	⌘	[ ] Other core specifications ⌘ [ ] Test specifications [ ] O&M Specifications
Other comments:	⌘	

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6.5 Envelope response handling

To allow a toolkit applet to answer to some specific events (e.g. EVENT_CALL_CONTROL_BY_SIM) the SIM Toolkit Framework shall provide the *sim.toolkit.ViewHandler.EditHandler.EnvelopeResponseHandler*.

The toolkit applet can then post a response to some events with the *post()* or the *postAsBERTLV()* methods, the toolkit applet can continue it's processing (e.g. prepare a proactive command) the SIM Toolkit Framework will return the response APDU defined by the toolkit applet (i.e. 9F xx, 9E xx or 91 xx).

Case of *EVENT_FORMATTED_SMS_PP_ENV:*

When the *post()* or the *postAsBERTLV()* method is invoked, the SIM Toolkit Framework shall, according to bit 6 of the second octet of the SPI defined in TS 23.048[4], build a SMS-DELIVER-REPORT or a SMS-SUBMIT. ~~(~~In ~~the~~case of SMS-SUBMIT ~~last~~~~that case~~ the *statusType* method parameter is meaningless~~)~~. If the SMS-SUBMIT is to be used, the SIM Toolkit Framework shall build and issue a Send Short Message proactive command as defined in TS 11.14 [3].

3GPP TSG-T3 Meeting #24
Seattle, USA, 19-22 August 2002

Tdoc ⌘T3-020713

CR-Form-v7

CHANGE REQUEST

⌘ **43.019** **CR** **027** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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

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

Title:	⌘	Correction of the example applet
Source:	⌘	TSG T3
Work item code:	⌘	TEI
Date:	⌘	22/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

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

Use one of the following releases:

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

Reason for change:	⌘	The example Applet given in Annex D does not cover new features of the REL-5 API
Summary of change:	⌘	- Handling the BIP - Using the getUserDataLength() method instead of getTPUDLOffset() - Put the example applet in a separate file
Consequences if not approved:	⌘	No example to explain the usage of the API for the BIP and the handling of Concatenated SMS

Clauses affected:	⌘	Annex D
Other specs affected:	⌘	Y N [ ] [X] Other core specifications [ ] [X] Test specifications [ ] [X] O&M Specifications
Other comments:	⌘	

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

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Annex D (informative): Toolkit applet example

```
/**
 * Example of Toolkit Applet
 */

package ToolkitAppletExample;

import sim.toolkit.*;
import sim.access.*;
import javacard.framework.*;


public class MyToolkitApplet extends javacard.framework.Applet implements ToolkitInterface,
ToolkitConstants{

    public static final byte MY_INSTRUCTION          = (byte)0x46;
    public static final byte SERVER_OPERATION        = (byte)0x0F;
    public static final byte CMD_QUALIFIER           = (byte)0x80;
    public static final byte EXIT_REQUESTED_BY_USER  = (byte)0x10;
    private byte[] menuEntry =    {(byte)'S',(byte)'e',(byte)'r',(byte)'v',(byte)'i',(byte)'c',
                                   (byte)'e', (byte)'1'};
     private byte[] menuTitle=    {(byte)'M',(byte)'y',(byte)'M',(byte)'e',(byte)'n' ,(byte)'u'};
    private byte[] item1 =        {(byte)'I',(byte)'T',(byte)'E',(byte)'M',(byte)'1' };
    private byte[] item2 =        {(byte)'I',(byte)'T',(byte)'E',(byte)'M',(byte)'2' };
    private byte[] item3 =        {(byte)'I',(byte)'T',(byte)'E',(byte)'M',(byte)'3' };
    private byte[] item4 =        {(byte)'I',(byte)'T',(byte)'E',(byte)'M',(byte)'4' };
    private Object[] ItemList =   { item1, item2, item3, item4 };
    private byte[] textDText =    {(byte)'H',(byte)'e',(byte)'l',(byte)'l',(byte)'o',(byte)' ',
                                   (byte)'w',(byte)'o',(byte)'r',(byte)'l',(byte)'d',(byte)'2'};
    private byte[] textGInput =   {(byte)'Y',(byte)'o',(byte)'u',(byte)'r',(byte)' ',(byte)'n',
                                   (byte)'a',(byte)'m',(byte)'e',(byte)'?'};

    private byte[]  baGSMAID =
{(byte)0xA0,(byte)0x00,(byte)0x00,(byte)0x00,(byte)0x09,(byte)0x00,(byte)0x01};
    private ToolkitRegistry reg;
    private SIMView gsmFile;
    private byte buffer[] = new byte[10];
    private byte itemId;
    private byte result;
    private boolean repeat;

    /**
     * Constructor of the applet
     */
    public MyToolkitApplet() {

        // get the GSM application reference
        gsmFile = SIMSystem.getTheSIMView();

        // register to the SIM Toolkit Framework
        reg = ToolkitRegistry.getEntry();

        // Define the applet Menu Entry and register to the EVENT_MENU_SELECTION
        itemId = reg.initMenuEntry(menuEntry, (short)0x0000, (short)menuEntry.length,
                                   PRO_CMD_DISPLAY_TEXT, false, (byte) 0x00, (short) 0x0000);
        // register to the EVENT_UNFORMATTED_SMS_PP_ENV
        reg.setEvent(EVENT_UNFORMATTED_SMS_PP_ENV);
    }

    /**
     * Method called by the JCRE at the installation of the applet
     */
    public static void install(byte bArray[], short bOffset, byte bLength) {
        MyToolkitApplet MyApplet = new MyToolkitApplet ();
        MyApplet.register();
    }

    /**
     * Method called by the GSM Framework
     */
    public Shareable getShareableInterfaceObject ( AID clientAID, byte parameter)
    {
```

```
        if (parameter == (byte) 0x00)
        {
            if ( clientAID.partialEquals(baGSMAID, (byte) 0x00, (byte) baGSMAID.length) == true )
                return ((Shareable) this);
        }
        return(null);
    }

    /**
     * Method called by the SIM Toolkit Framework
     */
    public void processToolkit(byte event) {

        // get the handler references
        EnvelopeHandler          envHdlr = EnvelopeHandler.getTheHandler();
        ProactiveHandler         proHdlr = ProactiveHandler.getTheHandler();
        ProactiveResponseHandler rspHdlr;

         switch(event) {
            case EVENT_MENU_SELECTION:
                // Prepare the Select Item proactive command
                proHdlr.init(PRO_CMD_SELECT_ITEM,(byte)0x00,DEV_ID_ME);
                // Append the Menu Title
                proHdlr.appendTLV((byte) (TAG_ALPHA_IDENTIFIER | TAG_SET_CR),
                                  menuTitle,(short)0x0000,(short)menuTitle.length);
                // add all the Item
                for (short i=(short) 0x0000; i<(short) 0x0004; i++) {
                    proHdlr.appendTLV((byte) (TAG_ITEM | TAG_SET_CR),(byte) (i+1),
                                      (byte[])ItemList[i],(short) 0x0000,
                                      (short)((byte[])ItemList[i]).length);
                }
                // ask the SIM Toolkit Framework to send the proactive command and check the result
                if ((result = proHdlr.send()) == RES_CMD_PERF){
                    rspHdlr = ProactiveResponseHandler.getTheHandler();
                    // SelectItem response handling
                    switch (rspHdlr.getItemIdentifier()) {
                        case 1:
                        case 2:
                        case 3: // DisplayText
                            proHdlr.init(PRO_CMD_DISPLAY_TEXT, CMD_QUALIFIER,
                                         DEV_ID_DISPLAY);
                            proHdlr.appendTLV((byte)(TAG_TEXT_STRING| TAG_SET_CR), DCS_8_BIT_DATA,
                                         textDText,(short)0x0000, (short)textDText.length);
                            proHdlr.send();
                            break;
                        case 4: // Ask the user to enter data and display it
                            do {
                                repeat = false;
                                try {

                                    // GetInput asking the users name
                                    proHdlr.initGetInput((byte)0x01, DCS_8_BIT_DATA,
textGInput,(byte)0x00,
                                        (short)textGInput.length,(short)0x0001,(short)0x0002);
                                    proHdlr.send();

                                    // display the entered text
                                    rspHdlr.copyTextString(textDText,(short)0x0000);
                                    proHdlr.initDisplayText((byte)0x00,DCS_8_BIT_DATA, textDText,
                                        (short)0x0000,(short) textDText.length);
                                    proHdlr.send();
                                }
                                catch (ToolkitException MyException) {
                                    if (MyException.getReason() ==
ToolkitException.UNAVAILABLE_ELEMENT) {
                                        if (rspHdlr.getGeneralResult() != EXIT_REQUESTED_BY_USER)
                                            repeat = true;
                                        break;
                                    }
                                }
                            }
                            while (repeat);
                            break;
                    }
                }
                break;

            case EVENT_UNFORMATTED_SMS_PP_ENV:
```

```
                // get the offset of the instruction in the TP-UD field
                short TPUDOffset = (short) (envHdlr.getTPUDLOffset() + SERVER_OPERATION);

                // start the action requested by the server
                switch (envHdlr.getValueByte((short)TPUDOffset) ) {
                case 0x41 : // Update of a gsm file
                    // get the data from the received SMS
                    envHdlr.copyValue((short)TPUDOffset+1,buffer, (short)0x0000,(short)0x0003);
                    // write these data in the EFpuct
                    gsmFile.select(SIMView.FID_DF_GSM);
                    gsmFile.select(SIMView.FID_EF_PUCT);
                    gsmFile.updateBinary((short)0x0000,buffer,(short)0x0000,(short)0x0003);

                    break;

                case 0x36 : // change the MenuTitle for the SelectItem
                    envHdlr.copyValue((short)TPUDOffset+1, menuTitle,(short)0x0000,(short)0x0006);
                    break;
                }
                break;
            }

    }

    /**
     * Method called by the JCRE, once selected
     */
    public void process(APDU apdu) {
        // Handle the Select AID apdu
        if (selectingApplet()) return;

        switch(apdu.getBuffer()[1]) {
            // specific APDU for this applet to configure the MenuTitle from SelectItem
            case (byte)MY_INSTRUCTION:
                if (apdu.setIncomingAndReceive()>(short)0) {
                    Util.arrayCopy(apdu.getBuffer(),(short)0x0005,menuTitle,(short)0x0000,
                                   (short)0x0006);
                }
                break;
            default:
                ISOException.throwIt(ISO7816.SW_INS_NOT_SUPPORTED);
        }
    }
}
```

The attached file "Annex_D_ToolkitAppletExample.zip" contains source files for the toolkit applet example.