3GPP TSG-T plenary meeting #19
Birmingham, UK, 12-14 March 2003

Tdoc TP-030022

Source: T3

Title: CRs to TS 31.113 USAT interpreter; stage 3; Byte Codes

CRs to TS 31.114: USAT interpreter; Protocol administration

Document for: Approval

This document contains the following change requests:

T3-Doc	Spec	CR	Rev	Cat	Phase	Subject	Version-Current	Version-New	WI
T3-030126	31.113	025	-	F	Rel-5	Several Corrections	5.4.0	5.5.0	USAT1-Interpr
T3-030127	31.113	026	-	F	Rel-6	Several Corrections	6.1.0	6.2.0	USAT1-Interpr
T3-030128	31.114	004	-	F	Rel-5	Correction on Byte Code List Value	5.2.0	5.3.0	USAT1-Interpr

3GPP TSG-T3 Meeting #26
Lisbon, Portugal, 11-14 Feb 2003

Tdoc ⌘T3-030126
(revised version of T3-030041)

CR-Form-v7

CHANGE REQUEST

⌘ **31.113** **CR** **025** ⌘**rev** **-** ⌘ Current version: **5.4.0** ⌘

*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:	⌘	Several Corrections
Source:	⌘	T3
Work item code:	⌘	USAT1-Interpr
Date:	⌘	11/02/2003
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:	⌘	1. Error handling due to missing buffer space for temporary variables is not specified. 2. There is no need for the Page Reference Tag '92' as not attribute are specified for the Page Reference TLV. 3. Correction of figure 8.1: VAR in picture is not valid. 4. Error handling of transmission errors in clause 7.9 is in contradiction with error handling of transmission errors in clause 4.2.3.
Summary of change:	⌘	Clarifications on the issues mentioned in reason for change: 1. On problem with memory allocation "Problem in memory management"-error shall be used. 2. Removal of '92' tag. 3. Removal of VAR field in picture 8.1. 4. Correct the error handling of transmission errors in clause 7.9.
Consequences if not approved:	⌘	Risk of misinterpretation of TS 31.113.

Clauses affected:	⌘	6.1.3, 7.9, 8.7.4, 13

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

Other comments:	⌘	

6.1.3 Temporary variable area

Temporary variables are used during the execution of the current page. If the USAT Interpreter is not able to create a new temporary variable due to the limits of the temporary variable area memory space, the USAT Interpreter shall generate a "Problem in memory management " error. Temporary variables~~They~~ may be shared with the following page. Temporary variables are used for 2 purposes:

- as variables defined and used within the current page;
- as variables to be shared between the current page and the following page.

The current page shall define, which variables are to be kept for access of the following page. To ensure, that only a dedicated following page can access the variables defined to be sharable, the current page may protect them with a One Time Password (OTP). The following page shall present a Page Unlock TLV to get access to the shared variables. This TLV contains the OTP of the preceding page.

If this mechanism is used to protect shared variable, it might happen that a page is not able to access the protected shared variables, if the sequence of pages provided to the USAT Interpreter is disturbed (e.g. by using backward navigation between pages...).

[...]

7.9 Page Reference

This TLV can represent a page, an anchor within the current page, or an anchor within another page.

If the Anchor Reference TLV or the Variable Identifier List TLV is available, then the USAT Interpreter shall start rendering the requested locally stored Anchor. If the Anchor is not found locally, an error is generated.

If the Submit Configuration TLV is available (that indicates that the page is not locally stored on the USIM, i.e. e.g. stored at an external system entity), then the USAT Interpreter shall build a request to the external system entity according to clause 7.10 .If the transmission to the external system entity fails, the USAT Interpreter shall execute the "Transport error while submitting data" exception case of the terminal response handler mechanism~~an USAT Interpreter transmission error shall be generated by the USAT Interpreter and the execution shall stop~~.

Length	Value	Description	M/O
1	'12' ~~/ '92'~~	Page Reference Tag	M
1-3	A	Length	M
A	TLV	either - Anchor Reference TLV or - Variable Identifier List TLV (referring to a variable containing the value part of an Anchor Reference, only the first variable ID shall be considered by the USAT Interpreter, remaining variable IDs shall be ignored) or - Submit Configuration TLV	M

[...]

8.7.4 Sequence of Simple TLVs and Simple TLV Indicators

The sequence of these Simple TLVs and Simple TLV Indicators is translated by the USAT Interpreter to form the sequence of Simple TLVs of an USAT command (3GPP TS 31.111 [1]). When expanding Simple TLV Indicators to Simple TLVs the length of the BER-TLV of the resulting USAT command shall be adjusted by the USAT Interpreter before issuing the command to the UE.

When executing a Execute USAT command byte code, the USAT Interpreter issues a regular USAT command to the UE using the USAT protocol. The translation procedure from the Execute USAT Command TLV to an USAT command can be visualised in principle as follows:

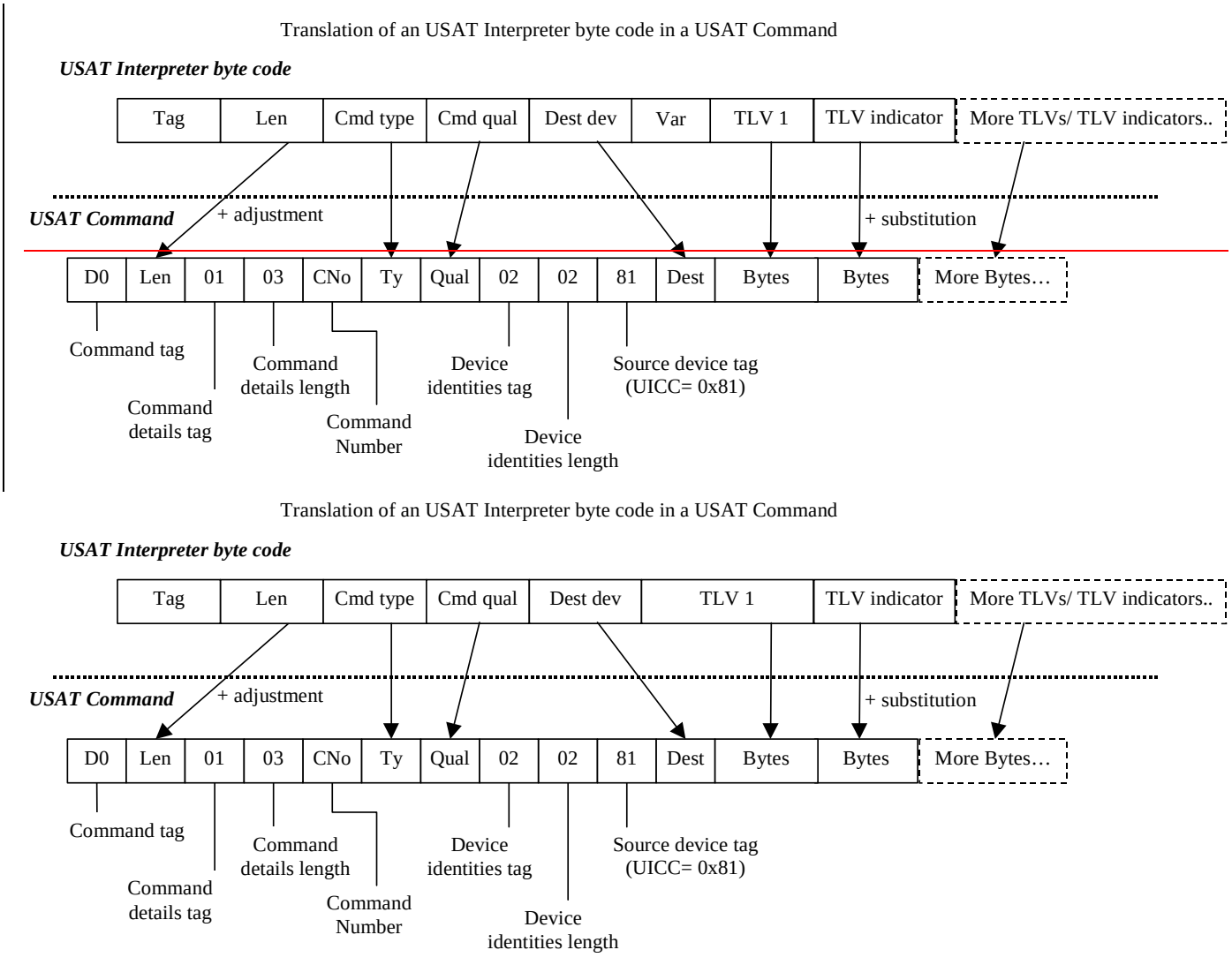

Figure 8.1

[...]

13 Tag Values

The present document uses the following Tag values:

Tag Value	Usage
'01' / '81'	Page Tag
'02'	Page Identification Tag
'03'	Page Unlock Code Tag
'04'	One Time Password Tag
'05'	Keep Alive List Tag
'06'	Service ID Tag
'07'	String Pool Tag
'08' / '88'	Terminal response handler modifier ~~t~~Tag
'09' / '89'	Action TLV ~~t~~Tag
'0A' / '8A'	Navigation Unit Tag
'0B'	Anchor Tag
'0C'	Anchor Reference Tag
'0D'	Variable Identifier List Tag
'0E' / '8E'	Inline Value Tag
'0F' / '8F'	Inline Value 2 Tag
'10'	Input List Tag
'11'	Ordered TLV List Tag
'12' ~~/ '92'~~	Page Reference Tag
'13' / '93'	Submit Configuration Tag
'14'	Submit Data Tag
'15' / '95'	Gateway Address Tag
'16'	Submit Tag
'17' to '3F'	RFU for data structures
'40'	Set Variable Tag
'41'	Assign and Branch Tag
'42'	Extract Tag
'43' / 'C3'	Go Back Tag
'44'	Branch on Variable Value Tag
'45' / 'C5'	Exit Tag
'46' / 'C6'	Execute USAT Command Tag
'47' / 'C7'	Execute Native Command Tag
'48'	Get Length Tag
'49'	Get TLV Value Tag
'4A' / 'CA'	Display Text Tag
'4B' / 'CB'	Get Input Tag
'4C' to '7F'	RFU for commands

All other Tag values are RFU.

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Lisbon, Portugal, 11-14 Feb 2003

Tdoc ⌘T3-030127
(revised version of T3-030042)

CR-Form-v7

CHANGE REQUEST

⌘ **31.113** **CR** **026** ⌘**rev** **-** ⌘ Current version: **6.1.0** ⌘

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

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

Title:	⌘	Several Corrections
Source:	⌘	T3
Work item code:	⌘	USAT1-Interpr
Date:	⌘	11/02/2003
Category:	⌘	**F**
Release:	⌘	Rel-6

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

Use one of the following releases:

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

Reason for change:	⌘	1. Error handling due to missing buffer space for temporary variables is not specified. 2. There is no need for the Page Reference Tag '92' as not attribute are specified for the Page Reference TLV. 3. Correction of figure 8.1: VAR in picture is not valid. 4. Error handling of transmission errors in clause 7.9 is in contradiction with error handling of transmission errors in clause 4.2.3.
Summary of change:	⌘	Clarifications on the issues mentioned in reason for change: 1. On problem with memory allocation "Problem in memory management"-error shall be used. 2. Removal of '92' tag. 3. Removal of VAR field in picture 8.1. 4. Correct the error handling of transmission errors in clause 7.9.
Consequences if not approved:	⌘	Risk of misinterpretation of TS 31.113.

Clauses affected:	⌘	6.1.3, 7.9, 8.7.4, 13

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

Other comments: ⌘

6.1.3 Temporary variable area

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Length	Value	Description	M/O
1	'12' ~~/ '92'~~	Page Reference Tag	M
1-3	A	Length	M
A	TLV	either - Anchor Reference TLV or - Variable Identifier List TLV (referring to a variable containing the value part of an Anchor Reference, only the first variable ID shall be considered by the USAT Interpreter, remaining variable IDs shall be ignored) or - Submit Configuration TLV	M

[...]

8.7.4 Sequence of Simple TLVs and Simple TLV Indicators

The sequence of these Simple TLVs and Simple TLV Indicators is translated by the USAT Interpreter to form the sequence of Simple TLVs of an USAT command (3GPP TS 31.111 [1]). When expanding Simple TLV Indicators to Simple TLVs the length of the BER-TLV of the resulting USAT command shall be adjusted by the USAT Interpreter before issuing the command to the UE.

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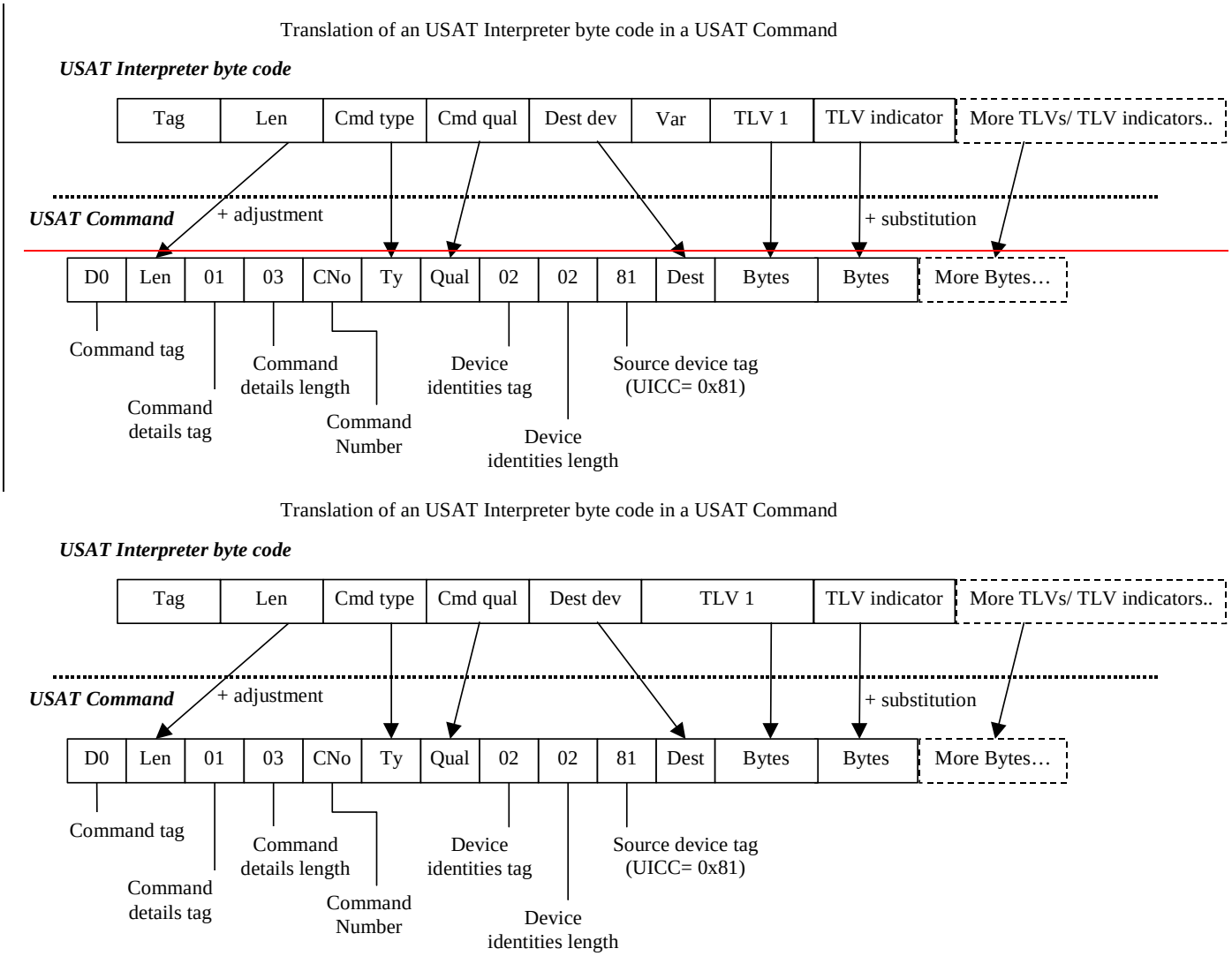

Figure 8.1

[...]

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The present document uses the following Tag values:

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'05'	Keep Alive List Tag
'06'	Service ID Tag
'07'	String Pool Tag
'08' / '88'	Terminal response handler modifier ~~t~~Tag
'09' / '89'	Action TLV ~~t~~Tag
'0A' / '8A'	Navigation Unit Tag
'0B'	Anchor Tag
'0C'	Anchor Reference Tag
'0D'	Variable Identifier List Tag
'0E' / '8E'	Inline Value Tag
'0F' / '8F'	Inline Value 2 Tag
'10'	Input List Tag
'11'	Ordered TLV List Tag
'12' ~~/ '92'~~	Page Reference Tag
'13' / '93'	Submit Configuration Tag
'14'	Submit Data Tag
'15' / '95'	Gateway Address Tag
'16'	Submit Tag
'17' to '3F'	RFU for data structures
'40'	Set Variable Tag
'41'	Assign and Branch Tag
'42'	Extract Tag
'43' / 'C3'	Go Back Tag
'44'	Branch on Variable Value Tag
'45' / 'C5'	Exit Tag
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'48'	Get Length Tag
'49'	Get TLV Value Tag
'4A' / 'CA'	Display Text Tag
'4B' / 'CB'	Get Input Tag
'4C' to '7F'	RFU for commands

All other Tag values are RFU.

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Lisbon, Portugal, 11-14 Feb 2003

Tdoc ⌘T3-030128
(revised version of T3-030043)

CR-Form-v7

CHANGE REQUEST

⌘ **31.114** **CR** **004** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

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

Title:	⌘	Correction on Byte Code List Value
Source:	⌘	T3
Work item code:	⌘	USAT1-Interpr
Date:	⌘	11/02/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
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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:	⌘	In byte 4 of the USAT Interpreter Byte Code List b8 is linked to the value '57'. The correct value is '5F'
Summary of change:	⌘	Correction of the value to '5F' instead of '57'.
Consequences if not approved:	⌘	Risk of wrong implementations of TS 31.114.

Clauses affected:	⌘	6.1.2.10.3.8			
Other specs affected:	⌘	**Y**	**N**		
		[ ]	[ ]	Other core specifications	⌘
		[ ]	[ ]	Test specifications	
		[ ]	[ ]	O&M Specifications	
Other comments:	⌘				

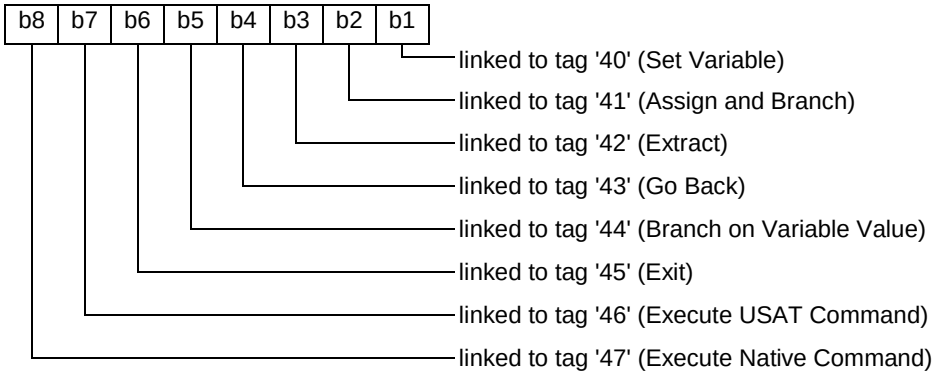
6.1.2.10.3.8 Parameter: USAT Interpreter byte code list

Description: see clause 5.3.1.1.

Length	Value	Description	M/O
1	'08'	Index value for USAT Interpreter byte code list	M
1	A	Length (1-4)	M
A	Data	USAT byte code list. Coding see below.	M

The coding of the USAT Interpreter byte code list is linked with the table in chapter "Tag Values" of TS 31.113 [2]. For each possible value in the range of '40' to '5F' in that table one bit is assigned in the coding of the USAT Interpreter byte code list. Therefore the maximum length of the USAT Interpreter byte code list is 4 bytes. If the USAT Interpreter byte code list is coded in less than 4 bytes, the missing bytes are assumed to have the value '00', indicating, that the corresponding USAT Interpreter commands are not allowed.

Byte 1 of USAT Interpreter byte code list:



...

Byte 4 of USAT Interpreter byte code list: