

**3GPP TSG\_CN**  
**Plenary Meeting #8, Dusseldorf, Germany**  
**21<sup>st</sup> – 23<sup>rd</sup> June 2000.**

**Tdoc NP-000242**

**Source:** TSG\_N WG 2  
**Title:** CRs to 3G Work Item CAMEL phase 2 - Stage 3  
**Agenda item:** 6.1.2  
**Document for:** APPROVAL

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**Introduction:**

This document contains 3 CRs on **Work Item CAMEL phase 2 (C1)**, that have been agreed by **TSG\_N WG 2**, and are forwarded to **TSG\_N Plenary meeting #8** for approval.

Tdoc	Spec	CR	Rev	CAT	Rel.	Old Ver	New Ver	Subject
N2-000226	09.78	A075	2	F	R97	6.4.0	6.5.0	Clarification of encoding of CollectedDigits
N2-000227	09.78	A076	2	A	R98	7.0.0	7.1.0	Clarification of encoding of CollectedDigits
N2-000228	29.078	096	2	A	R99	3.3.0	3.4.0	Clarification of encoding of CollectedDigits

# CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**09.78 CR A075r2**

Current Version: **6.4.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **CN#8**  
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Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
 (at least one should be marked with an X)

**Source:** N2 **Date:** 25.05.00

**Subject:** Clarification of encoding of CollectedDigits and DigitsResponse

**Work item:** CAMEL Phase 2

**Category:** F Correction  **Release:** Phase 2   
 A Corresponds to a correction in an earlier release  Release 96   
 B Addition of feature  Release 97   
 C Functional modification of feature  Release 98   
 D Editorial modification  Release 99   
 Release 00

(only one category shall be marked with an X)

**Reason for change:** Via the Prompt and Collect User Information operation the gsmSCF requests the digits to be collected from the subscriber and the gsmSRF reports the digits received. It shall be possible to collect non decimal digits. The encoding definition is missing.

**Clauses affected:**

**Other specs affected:** Other 3G core specifications  → List of CRs: CR 29.078-A076  
 Other GSM core specifications  → List of CRs: CR 09.78-096  
 MS test specifications  → List of CRs:  
 BSS test specifications  → List of CRs:  
 O&M specifications  → List of CRs:

**Other comments:** This correction is considered as an essential correction since it is required to allow multi-vendor configuration. Therefore category C1 is proposed.



<-----

**\*\*\* First Modification \*\*\***

```
CollectedDigits ::= SEQUENCE {
    minimumNbOfDigits [0] INTEGER (1..16) DEFAULT 1,
    maximumNbOfDigits [1] INTEGER (1..16),
    endOfReplyDigit [2] OCTET STRING (SIZE (1..2)) OPTIONAL,
    cancelDigit [3] OCTET STRING (SIZE (1..2)) OPTIONAL,
    startDigit [4] OCTET STRING (SIZE (1..2)) OPTIONAL,
    firstDigitTimeOut [5] INTEGER (1..127) OPTIONAL,
    interDigitTimeOut [6] INTEGER (1..127) OPTIONAL,
    errorTreatment [7] ErrorTreatment DEFAULT stdErrorAndInfo,
    interruptableAnnInd [8] BOOLEAN DEFAULT TRUE,
    voiceInformation [9] BOOLEAN DEFAULT FALSE,
    voiceBack [10] BOOLEAN DEFAULT FALSE
}
```

```
-- The use of voiceBack and the support of voice recognition via voiceInformation is
-- network operator specific. The endOfReplyDigit, cancelDigit, and startDigit parameters
-- have been designated as OCTET STRING, and are to be encoded as BCD, one digit per octet
-- only, contained in the four least significant bits of each OCTET. The following encoding shall
-- be applied for the non-decimal characters:
-- 1011 (*), 1100 (#).
-- The usage is service dependent.
```

**\*\*\* Next Modification \*\*\***

```
Digits ::= OCTET STRING (SIZE (minDigitsLength .. maxDigitsLength))
```

```
-- Indicates the address signalling digits. Refer to the ETS 300 356-1 [3] Generic Number
-- and Generic Digits parameters for encoding. The coding of the subfields "NumberQualifier"
-- in Generic Number and "Type Of Digits" in Generic Digits are irrelevant to the CAP, the
-- ASN.1 tags are sufficient to identify the parameter. The ISUP format does not allow to
-- exclude these subfields, therefore they shall be sent. The value is network operator specific.
--
-- The following parameters should use Generic Number:
-- AdditionalCallingPartyNumber for InitialDP
-- AssistingSSIPRoutingAddress for EstablishTemporaryConnection
-- CorrelationID for AssistRequestInstructions
--
-- The following parameters should use Generic Digits:
-- CorrelationID in EstablishTemporaryConnection
-- number in VariablePart
-- digitsResponse in ReceivedInformationArg
-- In the digitsResponse the digits may also include the '*', '#', a, b, c and d digits by using
-- the IA5 character encoding scheme. If the BCD even or BCD odd encoding scheme is used, the
-- following encoding shall be applied for the non-decimal characters:
-- 1011 (*), 1100 (#).
-- Note that when CorrelationID is transported in Generic Digits, then the digits shall
-- always be BCD encoded.
```

# CHANGE REQUEST

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**09.78 CR A076r2**

Current Version: **7.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **CN#8**  
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Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <http://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
 (at least one should be marked with an X)

**Source:** **N2** **Date:** **25.05.00**

**Subject:** Clarification of encoding of CollectedDigits and DigitsResponse

**Work item:** CAMEL Phase 2

<b>Category:</b> <small>(only one category shall be marked with an X)</small>	F Correction	<input type="checkbox"/>	<b>Release:</b>	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input checked="" type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input checked="" type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>	Release 99	<input type="checkbox"/>	
			Release 00	<input type="checkbox"/>	

**Reason for change:** Via the Prompt and Collect User Information operation the gsmSCF requests the digits to be collected from the subscriber and the gsmSRF reports the digits received. It shall be possible to collect non decimal digits. The encoding definition is missing.

**Clauses affected:**

<b>Other specs affected:</b>	Other 3G core specifications	<input checked="" type="checkbox"/>	→ List of CRs:	CR 29.078-096
	Other GSM core specifications	<input checked="" type="checkbox"/>	→ List of CRs:	CR 09.78-A075
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

**Other comments:** This correction is considered as an essential correction since it is required to allow multi-vendor configuration. Therefore category C1 is proposed.



<-----

**\*\*\* First Modification \*\*\***

```
CollectedDigits ::= SEQUENCE {
    minimumNbOfDigits [0] INTEGER (1..16) DEFAULT 1,
    maximumNbOfDigits [1] INTEGER (1..16),
    endOfReplyDigit [2] OCTET STRING (SIZE (1..2)) OPTIONAL,
    cancelDigit [3] OCTET STRING (SIZE (1..2)) OPTIONAL,
    startDigit [4] OCTET STRING (SIZE (1..2)) OPTIONAL,
    firstDigitTimeOut [5] INTEGER (1..127) OPTIONAL,
    interDigitTimeOut [6] INTEGER (1..127) OPTIONAL,
    errorTreatment [7] ErrorTreatment DEFAULT stdErrorAndInfo,
    interruptableAnnInd [8] BOOLEAN DEFAULT TRUE,
    voiceInformation [9] BOOLEAN DEFAULT FALSE,
    voiceBack [10] BOOLEAN DEFAULT FALSE
}
```

```
-- The use of voiceBack and the support of voice recognition via voiceInformation is
-- network operator specific. The endOfReplyDigit, cancelDigit, and startDigit parameters
-- have been designated as OCTET STRING, and are to be encoded as BCD, one digit per octet
-- only, contained in the four least significant bits of each OCTET. The following encoding shall
-- be applied for the non-decimal characters:
-- 1011 (*), 1100 (#).
-- The usage is service dependent.
```

```
Digits ::= OCTET STRING (SIZE (minDigitsLength .. maxDigitsLength))
```

```
-- Indicates the address signalling digits. Refer to the ETS 300 356-1 [3] Generic Number
-- and Generic Digits parameters for encoding. The coding of the subfields "NumberQualifier"
-- in Generic Number and "Type Of Digits" in Generic Digits are irrelevant to the CAP, the
-- ASN.1 tags are sufficient to identify the parameter. The ISUP format does not allow to
-- exclude these subfields, therefore they shall be sent. The value is network operator specific.
--
-- The following parameters should use Generic Number:
-- AdditionalCallingPartyNumber for InitialDP
-- AssistingSSPIPRoutingAddress for EstablishTemporaryConnection
-- CorrelationID for AssistRequestInstructions
--
-- The following parameters should use Generic Digits:
-- CorrelationID in EstablishTemporaryConnection
-- number in VariablePart
-- digitsResponse in ReceivedInformationArg
-- Note that when CorrelationID is transported in Generic Digits, then the digits shall
-- always be BCD encoded.
```

**\*\*\* Next Modification \*\*\***

```
Digits ::= OCTET STRING (SIZE (minDigitsLength .. maxDigitsLength))
```

```
-- Indicates the address signalling digits. Refer to the ETS 300 356-1 [3] Generic Number
-- and Generic Digits parameters for encoding. The coding of the subfields "NumberQualifier"
-- in Generic Number and "Type Of Digits" in Generic Digits are irrelevant to the CAP, the
-- ASN.1 tags are sufficient to identify the parameter. The ISUP format does not allow to
-- exclude these subfields, therefore they shall be sent. The value is network operator specific.
--
-- The following parameters should use Generic Number:
-- AdditionalCallingPartyNumber for InitialDP
-- AssistingSSPIPRoutingAddress for EstablishTemporaryConnection
-- CorrelationID for AssistRequestInstructions
--
-- The following parameters should use Generic Digits:
-- CorrelationID in EstablishTemporaryConnection
-- number in VariablePart
-- digitsResponse in ReceivedInformationArg
-- In the digitsResponse the digits may also include the '*', '#', a, b, c and d digits by using
-- the IA5 character encoding scheme. If the BCD even or BCD odd encoding scheme is used, the
-- following encoding shall be applied for the non-decimal characters:
-- 1011 (*), 1100 (#).
-- Note that when CorrelationID is transported in Generic Digits, then the digits shall
-- always be BCD encoded.
```

# CHANGE REQUEST

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**29.078 CR 096r2**

Current Version: **3.3.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **CN#8**  
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**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
 (at least one should be marked with an X)

**Source:** **N2** **Date:** **25.05.00**

**Subject:** Clarification of encoding of CollectedDigits and DigitsResponse

**Work item:** CAMEL Phase 2

<b>Category:</b>  (only one category shall be marked with an X)	F Correction	<input type="checkbox"/>	<b>Release:</b>	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input checked="" type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
			Release 00	<input type="checkbox"/>	

**Reason for change:** Via the Prompt and Collect User Information operation the gsmSCF requests the digits to be collected from the subscriber and the gsmSRF reports the digits received. It shall be possible to collect non decimal digits. The encoding definition is missing.

**Clauses affected:**

<b>Other specs affected:</b>	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	CR 09.78-A075, CR 09.78-A076
	Other GSM core specifications	<input checked="" type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

**Other comments:** This correction is considered as an essential correction since it is required to allow multi-vendor configuration. Therefore category C1 is proposed.



<-----

**\*\*\* First Modification \*\*\***

```
CollectedDigits ::= SEQUENCE {
  minimumNbOfDigits [0] INTEGER (1..30) DEFAULT 1,
  maximumNbOfDigits [1] INTEGER (1..30),
  endOfReplyDigit [2] OCTET STRING (SIZE (1..2)) OPTIONAL,
  cancelDigit [3] OCTET STRING (SIZE (1..2)) OPTIONAL,
  startDigit [4] OCTET STRING (SIZE (1..2)) OPTIONAL,
  firstDigitTimeOut [5] INTEGER (1..127) OPTIONAL,
  interDigitTimeOut [6] INTEGER (1..127) OPTIONAL,
  errorTreatment [7] ErrorTreatment DEFAULT stdErrorAndInfo,
  interruptableAnnInd [8] BOOLEAN DEFAULT TRUE,
  voiceInformation [9] BOOLEAN DEFAULT FALSE,
  voiceBack [10] BOOLEAN DEFAULT FALSE
}
-- The use of voiceBack and the support of voice recognition via voiceInformation
-- is network operator specific.
-- The endOfReplyDigit, cancelDigit, and startDigit parameters have been
-- designated as OCTET STRING, and are to be encoded as BCD, one digit per octet
-- only, contained in the four least significant bits of each OCTET. The following encoding shall
-- be applied for the non-decimal characters:
-- 1011 (*), 1100 (#).
-- The usage is service dependent.
-- firstDigitTimeOut and interDigitTimeOut are measured in seconds.
```

**\*\*\* Next Modification \*\*\***

```
Digits {PARAMETERS-BOUND : bound} ::= OCTET STRING (SIZE
                                         (bound.&minDigitsLength..bound.&maxDigitsLength))
-- Indicates the address signalling digits.
-- Refer to ETS 300 356-1 [8] Generic Number & Generic Digits parameters for encoding.
-- The digits may also include the '#', '*', a, b and c digits.
-- The coding of the subfields 'NumberQualifier' in Generic Number and 'TypeOfDigits' in
-- Generic Digits are irrelevant to the CAP;
-- the ASN.1 tags are sufficient to identify the parameter.
-- The ISUP format does not allow to exclude these subfields,
-- therefore the value is network operator specific.
-- The following parameters should use Generic Number:
-- AdditionalCallingPartyNumber for InitialDP
-- AssistingSSPIPRoutingAddress for EstablishTemporaryConnection
-- CorrelationID for AssistRequestInstructions
-- CalledAddressValue for all occurrences, CallingAddressValue for all occurrences.
--
-- The following parameters should use Generic Digits:
-- CorrelationID in EstablishTemporaryConnection
-- number in VariablePart
-- digitsResponse in ReceivedInformationArg
-- In the digitsResponse the digits may also include the '*', '#', a, b, c and d digits by using
-- the IA5 character encoding scheme. If the BCD even or BCD odd encoding scheme is used, the
-- following encoding shall be applied for the non-decimal characters:
-- 1011 (*), 1100 (#).
```