# 3GPP TSG CN Plenary Meeting #15 6th – 8th March 2002. Cheju, Korea.

Source: TSG CN WG4

Title: CRs on R98 TEI

Agenda item: 7.22

**Document for:** APPROVAL

# **Introduction**:

This document contains 8 CRs on R98 Work Item "TEI", that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #15 for approval.

Spec	CR	Re	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
09.02	A324		N4-020180	R98	Clarification on CODEC-Info	F	7.10.0
29.002	401		N4-020181	R99	Clarification on CODEC-Info	Α	3.11.0
29.002	402		N4-020182	Rel-4	Clarification on CODEC-Info	Α	4.6.0
29.002	403		N4-020183	Rel-5	Clarification on CODEC-Info	Α	5.0.0
09.02	A321	1	N4-020245	R98	Incomplete description of Restore Data parameters	F	7.10.0
29.002	388	1	N4-020246	R99	Incomplete description of Restore Data parameters	F	3.11.0
29.002	389	1	N4-020247	Rel-4	Incomplete description of Restore Data parameters	F	4.6.0
29.002	390	1	N4-020248	Rel-5	Incomplete description of Restore Data parameters	Α	5.0.0

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- 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.

# \*\*\*\* FIRST MODIFIED SECTION \*\*\*\*

# 8.10.3 MAP\_RESTORE\_DATA service

### 8.10.3.1 Definition

This service is invoked by the VLR on receipt of a MAP\_PROVIDE\_ROAMING\_NUMBER indication for an unknown IMSI, or for a known IMSI with the indicator "Confirmed by HLR" set to "Not confirmed". The service is used to update the LMSI in the HLR, if provided, and to request the HLR to send all data to the VLR that are to be stored in the subscriber's IMSI record.

The MAP\_RESTORE\_DATA service is a confirmed service using the service primitives defined in table 6.10/3.

### 8.10.3.2 Service primitives

Table 8.10/3: MAP\_RESTORE\_DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	M	M(=)	M(=)	M(=)
IMSI	M	M(=)		
LMSI	U	C(=)		
Supported CAMEL phases	С	C(=)		
SoLSA Support Indicator	<u>C</u>	<u>C(=)</u>		
HLR number			С	C(=)
MS Not Reachable Flag			С	C(=)
User error			С	C(=)
Provider error				0

### 8.10.3.3 Parameter definitions and use

#### Invoke Id

See definition in subclause 5.6.1.

### **IMSI**

See definition in subclause 5.6.2.

#### **LMSI**

See definition in subclause 5.6.2. It is an operator option to provide the LMSI from the VLR; it is mandatory for the HLR to support the LMSI handling procedures.

### Supported CAMEL Phases

This parameter indicates which phases of CAMEL are supported. Must be present if a CAMEL phase different from phase 1 is supported. Otherwise may be absent.

#### **SoLSA Support Indicator**

This parameter is used by the VLR to indicate to the HLR in the Restore Data indication that SoLSA is supported. If this parameter is not included in the Restore Data indication then the HLR shall not perform any specific error handling. and the Subscriber is marked as only allowed to roam in Subscribed LSAs, then the HLR shall reject the roaming and indicate to the VLR that roaming is not allowed to that Subscriber in the VLR.

This SoLSA Support Indicator shall be stored by the HLR per VLR where there are Subscribers roaming. If a Subscriber is marked as only allowed to roam in Subscribed LSAs while roaming in a VLR and no SoLSA Support indicator is stored for that VLR, the location status of that Subscriber shall be set to Restricted.

#### HLR number

See definition in subclause 5.6.2. The presence of this parameter is mandatory in case of successful outcome of the service.

### MS Not Reachable Flag

See definition in subclause 5.6.8. This parameter shall be present in case of successful outcome of the service, if the "MS Not Reachable flag" was set in the HLR.

#### User error

In case of unsuccessful outcome of the service, an error cause shall be returned by the HLR. The following error causes defined in subclause 5.6.1 may be used, depending on the nature of the fault:

- unknown subscriber;
- system failure;
- unexpected data value;
- data missing.

### Provider error

For definition of provider errors see subclause 5.6.1.

\*\*\*\* END OF MODIFICATIONS \*\*\*\*

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- 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.

# 17.1.3 Use of information elements defined outside MAP

An information element or a set of information elements (messages) transparently carried in the Mobile Application Part but defined in other recommendation/technical specifications are handled in one of the following ways:

- i) The contents of each information element (without the octets encoding the identifier and the length in the recommendation/technical specification where it is defined <u>unless explicitly stated otherwise</u>) is carried as the value of an ASN.1 NamedType derived from the OCTET STRING data type. Additionally, the internal structure may be explained by means of comments. In case of misalignment the referred to recommendation/technical specification takes precedence.
- ii) The complete information element (including the octets encoding the identifier and the length in the recommendation/technical specification where it is defined) or set of information elements and the identity of the associated protocol are carried as the value of the ExternalSignalInfo data type defined in the present document. Where more than one information element is carried, the information elements are sent contiguously with no filler octets between them.

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# 17.7.12 Group Call data types

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```
CODEC-Info ::= OCTET STRING (SIZE (5..10))
-- Refers to channel type
-- coded according to 3GPP TS 48.008 [49] and including Element identifier and Length
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- i) The contents of each information element (without the octets encoding the identifier and the length in the recommendation/technical specification where it is defined <u>unless explicitly stated otherwise</u>) is carried as the value of an ASN.1 NamedType derived from the OCTET STRING data type. Additionally, the internal structure may be explained by means of comments. In case of misalignment the referred to recommendation/technical specification takes precedence.
- ii) The complete information element (including the octets encoding the identifier and the length in the recommendation/technical specification where it is defined) or set of information elements and the identity of the associated protocol are carried as the value of the ExternalSignalInfo data type defined in the present document. Where more than one information element is carried, the information elements are sent contiguously with no filler octets between them.

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# 17.7.12 Group Call data types

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```
CODEC-Info ::= OCTET STRING (SIZE (5..10))
-- Refers to channel type
-- coded according to 3GPP TS 48.008 [49] and including Element identifier and Length
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# 17.1.3 Use of information elements defined outside MAP

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- i) The contents of each information element (without the octets encoding the identifier and the length in the recommendation/technical specification where it is defined <u>unless explicitly stated otherwise</u>) is carried as the value of an ASN.1 NamedType derived from the OCTET STRING data type. Additionally, the internal structure may be explained by means of comments. In case of misalignment the referred to recommendation/technical specification takes precedence.
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# 17.7.12 Group Call data types

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```
CODEC-Info ::= OCTET STRING (SIZE (5..10))
    -- Refers to channel type
    -- coded according to GSM 08.08 and including Element identifier and Length
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- 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.

# \*\*\*\* FIRST MODIFIED SECTION \*\*\*\*

# 8.10.3 MAP\_RESTORE\_DATA service

### 8.10.3.1 Definition

This service is invoked by the VLR on receipt of a MAP\_PROVIDE\_ROAMING\_NUMBER indication for an unknown IMSI, or for a known IMSI with the indicator "Confirmed by HLR" set to "Not confirmed". The service is used to update the LMSI in the HLR, if provided, and to request the HLR to send all data to the VLR that are to be stored in the subscriber's IMSI record.

The MAP\_RESTORE\_DATA service is a confirmed service using the service primitives defined in table 8.10/3.

### 8.10.3.2 Service primitives

Table 8.10/3: MAP\_RESTORE\_DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	M	M(=)	M(=)	M(=)
IMSI	M	M(=)		
LMSI	U	C(=)		
Supported CAMEL phases	С	C(=)		
SoLSA Support Indicator	<u>C</u>	<u>C(=)</u>		
IST Support Indicator	<u>C</u>	<u>C(=)</u>		
Super-Charger Supported in Serving Network Entity	<u>C</u>	<u>C(=)</u>		
Long FTN Supported	<u>C</u>	<u>C(=)</u>		
Supported LCS Capability Sets	C	C(=)		
HLR number			С	C(=)
MS Not Reachable Flag			С	C(=)
User error			С	C(=)
Provider error				Ö

#### 8.10.3.3 Parameter definitions and use

### Invoke Id

See definition in clause 7.6.1.

#### **IMSI**

See definition in clause 7.6.2.

### **LMSI**

See definition in clause 7.6.2. It is an operator option to provide the LMSI from the VLR; it is mandatory for the HLR to support the LMSI handling procedures.

# Supported CAMEL Phases

This parameter indicates which phases of CAMEL are supported. Must be present if a CAMEL phase different from phase 1 is supported. Otherwise may be absent.

### **SoLSA Support Indicator**

This parameter is used by the VLR to indicate to the HLR in the Restore Data indication that SoLSA is supported. If this parameter is not included in the Restore Data indication then the HLR shall not perform any specific error handling.

and the Subscriber is marked as only allowed to roam in Subscribed LSAs, then the HLR shall reject the roaming and indicate to the VLR that roaming is not allowed to that Subscriber in the VLR.

This SoLSA Support Indicator shall be stored by the HLR per VLR where there are Subscribers roaming. If a Subscriber is marked as only allowed to roam in Subscribed LSAs while roaming in a VLR and no SoLSA Support indicator is stored for that VLR, the location status of that Subscriber shall be set to Restricted.

### **IST Support Indicator**

This parameter is used to indicate to the HLR that the VMSC supports basic IST functionality, that is, the VMSC is able to terminate the Subscriber Call Activity that originated the IST Alert when it receives the IST alert response indicating that the call(s) shall be terminated. If this parameter is not included in the Restore Data indication and the Subscriber is marked as an IST Subscriber, then the HLR may limit the service for the subscriber (by inducing an Operator Determined barring of Roaming, Incoming or Outgoing calls), or allow service assuming the associated risk of not having the basic IST mechanism available.

This parameter can also indicate that the VMSC supports the IST Command service, including the ability to terminate all calls being carried for the identified subscriber by using the IMSI as a key. If this additional capability is not included in the Restore Data indication and the HLR supports the IST Command capability, then the HLR may limit the service for the subscriber (by inducing an Operator Determined barring of Roaming, Incoming or Outgoing calls), or allow service assuming the associated risk of not having the IST Command mechanism available.

#### Long FTN Supported

This parameter indicates that the VLR supports Long Forwarded-to Numbers.

Super-Charger Supported in Serving Network Entity

This parameter is used by the VLR to indicate to the HLR that the VLR supports the Super-Charger functionality and whether subscription data has been retained by the VLR. If subscription data has been retained by the VLR the age indicator shall be included. Otherwise the VLR shall indicate that subscriber data is required.

If this parameter is absent then the VLR does not support the Super-Charger functionality.

### Supported LCS Capability Sets

This parameter indicates, if present, the capability sets of LCS which are supported. If the parameter is sent but no capability set is marked as supported then the VLR does not support LCS at all.

If this parameter is absent then the VLR may support at most LCS capability set 1, that is LCS Release98 or Release99 version.

#### **HLR** number

See definition in clause 7.6.2. The presence of this parameter is mandatory in case of successful outcome of the service.

### MS Not Reachable Flag

See definition in clause 7.6.8. This parameter shall be present in case of successful outcome of the service, if the "MS Not Reachable flag" was set in the HLR.

### User error

In case of unsuccessful outcome of the service, an error cause shall be returned by the HLR. The following error causes defined in clause 7.6.1 may be used, depending on the nature of the fault:

- unknown subscriber;
- system failure;
- unexpected data value;
- data missing.

#### Provider error

For definition of provider errors see clause 7.6.1.

**** END OF MODIFICATIONS ****
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### How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ 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 <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> 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.

# \*\*\*\* FIRST MODIFIED SECTION \*\*\*\*

# 8.10.3 MAP\_RESTORE\_DATA service

### 8.10.3.1 Definition

This service is invoked by the VLR on receipt of a MAP\_PROVIDE\_ROAMING\_NUMBER indication for an unknown IMSI, or for a known IMSI with the indicator "Confirmed by HLR" set to "Not confirmed". The service is used to update the LMSI in the HLR, if provided, and to request the HLR to send all data to the VLR that are to be stored in the subscriber's IMSI record.

The MAP\_RESTORE\_DATA service is a confirmed service using the service primitives defined in table 8.10/3.

### 8.10.3.2 Service primitives

Table 8.10/3: MAP\_RESTORE\_DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	M	M(=)	M(=)	M(=)
IMSI	M	M(=)		
LMSI	U	C(=)		
Supported CAMEL phases	С	C(=)		
SoLSA Support Indicator	<u>C</u>	<u>C(=)</u>		
IST Support Indicator	<u>C</u>	<u>C(=)</u>		
Super-Charger Supported in Serving Network Entity	<u>C</u>	<u>C(=)</u>		
Long FTN Supported	<u>C</u>	<u>C(=)</u>		
Supported LCS Capability Sets	<u>C</u>	<u>C(=)</u>		
HLR number			С	C(=)
MS Not Reachable Flag			С	C(=)
User error			С	C(=)
Provider error				Ö

#### 8.10.3.3 Parameter definitions and use

### Invoke Id

See definition in clause 7.6.1.

#### **IMSI**

See definition in clause 7.6.2.

### **LMSI**

See definition in clause 7.6.2. It is an operator option to provide the LMSI from the VLR; it is mandatory for the HLR to support the LMSI handling procedures.

### Supported CAMEL Phases

This parameter indicates which phases of CAMEL are supported. Must be present if a CAMEL phase different from phase 1 is supported. Otherwise may be absent.

### **SoLSA Support Indicator**

This parameter is used by the VLR to indicate to the HLR in the Restore Data indication that SoLSA is supported. If this parameter is not included in the Restore Data indication then the HLR shall not perform any specific error

handling and the Subscriber is marked as only allowed to roam in Subscribed LSAs, then the HLR shall reject the roaming and indicate to the VLR that roaming is not allowed to that Subscriber in the VLR.

This SoLSA Support Indicator shall be stored by the HLR per VLR where there are Subscribers roaming. If a Subscriber is marked as only allowed to roam in Subscribed LSAs while roaming in a VLR and no SoLSA Support indicator is stored for that VLR, the location status of that Subscriber shall be set to Restricted.

#### **IST Support Indicator**

This parameter is used to indicate to the HLR that the VMSC supports basic IST functionality, that is, the VMSC is able to terminate the Subscriber Call Activity that originated the IST Alert when it receives the IST alert response indicating that the call(s) shall be terminated. If this parameter is not included in the Restore Data indication and the Subscriber is marked as an IST Subscriber, then the HLR may limit the service for the subscriber (by inducing an Operator Determined barring of Roaming, Incoming or Outgoing calls), or allow service assuming the associated risk of not having the basic IST mechanism available.

This parameter can also indicate that the VMSC supports the IST Command service, including the ability to terminate all calls being carried for the identified subscriber by using the IMSI as a key. If this additional capability is not included in the Restore Data indication and the HLR supports the IST Command capability, then the HLR may limit the service for the subscriber (by inducing an Operator Determined barring of Roaming, Incoming or Outgoing calls), or allow service assuming the associated risk of not having the IST Command mechanism available.

#### Long FTN Supported

This parameter indicates that the VLR supports Long Forwarded-to Numbers.

Super-Charger Supported in Serving Network Entity

This parameter is used by the VLR to indicate to the HLR that the VLR supports the Super-Charger functionality and whether subscription data has been retained by the VLR. If subscription data has been retained by the VLR the age indicator shall be included. Otherwise the VLR shall indicate that subscriber data is required.

If this parameter is absent then the VLR does not support the Super-Charger functionality.

### Supported LCS Capability Sets

This parameter indicates, if present, the capability sets of LCS which are supported. If the parameter is sent but no capability set is marked as supported then the VLR does not support LCS at all.

If this parameter is absent then the VLR may support at most LCS capability set 1, that is LCS Release98 or Release99 version.

#### HLR number

See definition in clause 7.6.2. The presence of this parameter is mandatory in case of successful outcome of the service.

### MS Not Reachable Flag

See definition in clause 7.6.8. This parameter shall be present in case of successful outcome of the service, if the "MS Not Reachable flag" was set in the HLR.

### User error

In case of unsuccessful outcome of the service, an error cause shall be returned by the HLR. The following error causes defined in clause 7.6.1 may be used, depending on the nature of the fault:

- unknown subscriber;
- system failure;
- unexpected data value;
- data missing.

#### Provider error

For definition of provider errors see clause 7.6.1.

**** END OF MODIFICATIONS ****
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- 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.

# \*\*\*\* FIRST MODIFIED SECTION \*\*\*\*

# 8.10.3 MAP\_RESTORE\_DATA service

### 8.10.3.1 Definition

This service is invoked by the VLR on receipt of a MAP\_PROVIDE\_ROAMING\_NUMBER indication for an unknown IMSI, or for a known IMSI with the indicator "Confirmed by HLR" set to "Not confirmed". The service is used to update the LMSI in the HLR, if provided, and to request the HLR to send all data to the VLR that are to be stored in the subscriber's IMSI record.

The MAP\_RESTORE\_DATA service is a confirmed service using the service primitives defined in table 8.10/3.

### 8.10.3.2 Service primitives

Table 8.10/3: MAP\_RESTORE\_DATA

	1	•	•	
Parameter name	Request	Indication	Response	Confirm
Invoke Id	М	M(=)	M(=)	M(=)
IMSI	M	M(=)		
LMSI	U	C(=)		
Supported CAMEL phases	С	C(=)		
SoLSA Support Indicator	<u>C</u>	<u>C(=)</u>		
IST Support Indicator	<u>C</u>	<u>C(=)</u>		
Super-Charger Supported in Serving Network Entity	<u>C</u>	<u>C(=)</u>		
Long FTN Supported	<u>C</u>	<u>C(=)</u>		
HLR number			С	C(=)
MS Not Reachable Flag			С	C(=)
User error			С	C(=)
Provider error				0

### 8.10.3.3 Parameter definitions and use

### Invoke Id

See definition in clause 7.6.1.

### **IMSI**

See definition in clause 7.6.2.

#### **LMSI**

See definition in clause 7.6.2. It is an operator option to provide the LMSI from the VLR; it is mandatory for the HLR to support the LMSI handling procedures.

#### Supported CAMEL Phases

This parameter indicates which phases of CAMEL are supported. Must be present if a CAMEL phase different from phase 1 is supported. Otherwise may be absent.

#### SoLSA Support Indicator

This parameter is used by the VLR to indicate to the HLR in the Restore Data indication that SoLSA is supported. If this parameter is not included in the Restore Data indication then the HLR shall not perform any specific error handling and the Subscriber is marked as only allowed to roam in Subscribed LSAs, then the HLR shall reject the roaming and indicate to the VLR that roaming is not allowed to that Subscriber in the VLR.

This SoLSA Support Indicator shall be stored by the HLR per VLR where there are Subscribers roaming. If a Subscriber is marked as only allowed to roam in Subscribed LSAs while roaming in a VLR and no SoLSA Support indicator is stored for that VLR, the location status of that Subscriber shall be set to Restricted.

### **IST Support Indicator**

This parameter is used to indicate to the HLR that the VMSC supports basic IST functionality, that is, the VMSC is able to terminate the Subscriber Call Activity that originated the IST Alert when it receives the IST alert response indicating that the call(s) shall be terminated. If this parameter is not included in the Restore Data indication and the Subscriber is marked as an IST Subscriber, then the HLR may limit the service for the subscriber (by inducing an Operator Determined barring of Roaming, Incoming or Outgoing calls), or allow service assuming the associated risk of not having the basic IST mechanism available.

This parameter can also indicate that the VMSC supports the IST Command service, including the ability to terminate all calls being carried for the identified subscriber by using the IMSI as a key. If this additional capability is not included in the Restore Data indication and the HLR supports the IST Command capability, then the HLR may limit the service for the subscriber (by inducing an Operator Determined barring of Roaming, Incoming or Outgoing calls), or allow service assuming the associated risk of not having the IST Command mechanism available.

#### Long FTN Supported

This parameter indicates that the VLR supports Long Forwarded-to Numbers.

Super-Charger Supported in Serving Network Entity

This parameter is used by the VLR to indicate to the HLR that the VLR supports the Super-Charger functionality and whether subscription data has been retained by the VLR. If subscription data has been retained by the VLR the age indicator shall be included. Otherwise the VLR shall indicate that subscriber data is required.

If this parameter is absent then the VLR does not support the Super-Charger functionality.

### HLR number

See definition in clause 7.6.2. The presence of this parameter is mandatory in case of successful outcome of the service.

#### MS Not Reachable Flag

See definition in clause 7.6.8. This parameter shall be present in case of successful outcome of the service, if the "MS Not Reachable flag" was set in the HLR.

#### User error

In case of unsuccessful outcome of the service, an error cause shall be returned by the HLR. The following error causes defined in clause 7.6.1 may be used, depending on the nature of the fault:

- unknown subscriber;
- system failure;
- unexpected data value;
- data missing.

#### Provider error

For definition of provider errors see clause 7.6.1.

\*\*\*\* END OF MODIFICATIONS \*\*\*\*

CHANGE REQUEST								
<sup>≆</sup> <mark>09.02</mark>		CR A324	# re\	<b>/</b> - <sup>9</sup>	₭ Current ve	ersion:	7.10.0	ж
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Category:  # F (essential correction)  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)  P (editorial modification)  D (editorial modification) of the above categories can be found in 3GPP TR 21.900.  Release:  R98  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)								ases:
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# 17.1.3 Use of information elements defined outside MAP

An information element or a set of information elements (messages) transparently carried in the Mobile Application Part but defined in other recommendation/technical specifications are handled in one of the following ways:

- i) The contents of each information element (without the octets encoding the identifier and the length in the recommendation/technical specification where it is defined <u>unless explicitly stated otherwise</u>) is carried as the value of an ASN.1 NamedType derived from the OCTET STRING data type. Additionally, the internal structure may be explained by means of comments. In case of misalignment the referred to recommendation/technical specification takes precedence.
- ii) The complete information element (including the octets encoding the identifier and the length in the recommendation/technical specification where it is defined) or set of information elements and the identity of the associated protocol are carried as the value of the ExternalSignalInfo data type defined in the present document. Where more than one information element is carried, the information elements are sent contiguously with no filler octets between them.

. . . .

# 17.7.12 Group Call data types

• • • • •

```
CODEC-Info ::= OCTET STRING (SIZE (5..10))
    -- Refers to channel type
    -- coded according to GSM 08.08 and including Element identifier and Length
```

. . . . .