

Source: TSG CT WG4
Title: Corrections on TE14 on Mc-interface
Agenda item: 7.16
Document for: APPROVAL

| Doc-2nd-Level | Spec | CR # | Rev | Rel | Tdoc Title | CAT | C_Version |
|----------------------|-------------|-------------|------------|------------|---|------------|------------------|
| C4-050812 | 29.232 | 210 | 1 | Rel-4 | Definition of requirement for support of commands | F | 4.11.0 |
| C4-050813 | 29.232 | 211 | 1 | Rel-5 | Definition of requirement for support of commands | F | 5.10.0 |
| C4-050814 | 29.232 | 212 | 1 | Rel-6 | Definition of requirement for support of commands | F | 6.1.0 |
| C4-050904 | 29.232 | 214 | | Rel-4 | Text encoding of IPBCP for IP transport on Mc interface | F | 4.11.0 |
| C4-050905 | 29.232 | 215 | | Rel-5 | Text encoding of IPBCP for IP transport on Mc interface | A | 5.10.0 |
| C4-050894 | 29.232 | 209 | 2 | Rel-6 | Text encoding of IPBCP for IP transport on Mc interface | A | 6.1.0 |

CHANGE REQUEST

⌘ **29.232 CR 210** ⌘ rev **1** ⌘ Current version: **4.11.0** ⌘

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 ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|--|
| Title: | ⌘ Definition of requirement for support of commands | | |
| Source: | ⌘ Vodafone | | |
| Work item code: | ⌘ TEI4 | Date: | ⌘ 07/04/2005 |
| Category: | ⌘ F | Release: | ⌘ Rel-4 |
| | Use <u>one</u> 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 <u>one</u> of the following releases: Ph2 (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) Rel-7 (Release 7) |

| | |
|--------------------------------------|--|
| Reason for change: | ⌘ At CN4 #26, specification for the support of procedures was introduced. However, certain procedures could not be agreed upon at that time as to whether support should be mandatory or optional and also some additional procedures were introduced without specification of their required support due to the cross over of CR's. This completes the specification in this area. |
| Summary of change: | ⌘ The support requirement for Audit Descriptor is set to 'Mandatory' |
| Consequences if not approved: | ⌘ No clear requirement for the support of certain commands leads to potential interoperability problems between vendors. |

| | | | | | | | | | | | |
|------------------------------|---|---|---|--|---|--|---|--|---|--|---|
| Clauses affected: | ⌘ 14.1 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> | Y | N | | X | | X | | X | Other core specifications Test specifications O&M Specifications | ⌘ |
| Y | N | | | | | | | | | | |
| | X | | | | | | | | | | |
| | X | | | | | | | | | | |
| | X | | | | | | | | | | |
| Other comments: | ⌘ | | | | | | | | | | |

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/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.

14.1 Call independent H.248 transactions

Table 2 shows the relationship between each non call-related procedure in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) and the corresponding stage 2 procedure defined in 3GPP TS 23.205 [2], as well as specifying the requirement for support of each procedure on the Mc interface.

For further description of error codes and service change reasons, refer to ITU-T Recommendation H.248 Annex L [14].

Table 2: Correspondence between Q.1950 non call-related transactions and TS 23.205 procedures

| Transaction used in Q.1950 | Procedure defined in 3GPP TS 23.205 [2] | Support | Comments |
|--------------------------------------|---|--------------------------|---|
| BIWF_Service_Cancellation_Indication | MGW Out of Service | Mandatory | |
| BIWF_Lost_Communication | MGW Communication Up | Mandatory | |
| BIWF_Service_Restoration_Indication | MGW Restoration | Mandatory | |
| BIWF_Registration | MGW Register | Mandatory | |
| BIWF_Re-Registration | MGW Re-register | Mandatory | |
| CCU Ordered BIWF Re-Registration | (G)MSC Server Ordered Re-register | Mandatory | |
| CCU Initiated Service Restoration | (G)MSC Server Restoration | Optional | |
| CCU Initiated Service Cancellation | (G)MSC Server Out of Service | Optional | |
| BIWF_Service_Cancellation_Indication | Termination Out-of-Service | Mandatory | Is a part of BIWF Service cancellation in Q.1950 |
| BIWF_Service_Restoration_Indication | Termination Restoration | Mandatory | Is a part of BIWF Service cancellation in Q.1950 |
| Audit_Values | Audit Value | FFS Mandatory | Required for the audit of Termination State |
| Audit_Capabilities | Audit Capability | Optional | |
| BIWF_Capability_Change | Capability Update | Optional | |

CHANGE REQUEST

⌘ **29.232 CR 211** ⌘ rev **1** ⌘ Current version: **5.10.0** ⌘

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 ME Radio Access Network Core Network

| | | | |
|------------------------|--|---------------------------|---|
| Title: | ⌘ Definition of requirement for support of commands | | |
| Source: | ⌘ Vodafone | | |
| Work item code: | ⌘ TEI5 | Date: | ⌘ 07/04/2005 |
| Category: | ⌘ F | Release: | ⌘ Rel-5 |
| | Use <u>one</u> of the following categories: | | Use <u>one</u> of the following releases: |
| | F (correction) | Ph2 (GSM Phase 2) | |
| | A (corresponds to a correction in an earlier release) | R96 (Release 1996) | |
| | B (addition of feature), | R97 (Release 1997) | |
| | C (functional modification of feature) | R98 (Release 1998) | |
| | D (editorial modification) | R99 (Release 1999) | |
| | Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Rel-4 (Release 4) |
| | | | Rel-5 (Release 5) |
| | | | Rel-6 (Release 6) |
| | | | Rel-7 (Release 7) |

| | |
|--------------------------------------|--|
| Reason for change: | ⌘ At CN4 #26, specification for the support of procedures was introduced. However, certain procedures could not be agreed upon at that time as to whether support should be mandatory or optional and also some additional procedures were introduced without specification of their required support due to the cross over of CR's. This completes the specification in this area. |
| Summary of change: | ⌘ The support requirement for Audit Descriptor is set to 'Mandatory'. The support requirement for Emergency Call Indication is set to 'Optional'. |
| Consequences if not approved: | ⌘ No clear requirement for the support of certain commands leads to potential interoperability problems between vendors. |

| | | | | | | | | | | | |
|------------------------------|---|---------------------|---|--|---|--|---|--|---|---------------------------|---|
| Clauses affected: | ⌘ 14.1, 14.2 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> | Y | N | | X | | X | | X | Other core specifications | ⌘ |
| Y | N | | | | | | | | | | |
| | X | | | | | | | | | | |
| | X | | | | | | | | | | |
| | X | | | | | | | | | | |
| | | Test specifications | | | | | | | | | |
| | | O&M Specifications | | | | | | | | | |
| Other comments: | ⌘ | | | | | | | | | | |

How to create CRs using this form:

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14.1 Call independent H.248 transactions

Table 2 shows the relationship between each non call-related procedure in ITU-T Recommendation Q.1950 [23] (see 3GPP TS 29.205 [7]) and the corresponding stage 2 procedure defined in 3GPP TS 23.205 [2], as well as specifying the requirement for support of each procedure on the Mc interface.

For further description of error codes and service change reasons, refer to ITU-T Recommendation H.248.8 [14].

Table 2: Correspondence between ITU-T Recommendation Q.1950 [23] non call-related transactions and 3GPP TS 23.205 [2] procedures

| Transaction used in ITU-T Recommendation Q.1950 [23] | Procedure defined in 3GPP TS 23.205 [2] | Support | Comments |
|--|---|--------------------------|---|
| BIWF_Service_Cancellation_Indication | MGW Out of Service | Mandatory | |
| BIWF_Lost_Communication | MGW Communication Up | Mandatory | |
| BIWF_Service_Restoration_Indication | MGW Restoration | Mandatory | |
| BIWF_Registration | MGW Register | Mandatory | |
| BIWF_Re-Registration | MGW Re-register | Mandatory | |
| CCU Ordered BIWF Re-Registration | (G)MSC Server Ordered Re-register | Mandatory | |
| CCU Initiated Service Restoration | (G)MSC Server Restoration | Optional | |
| CCU Initiated Service Cancellation | (G)MSC Server Out of Service | Optional | |
| BIWF_Service_Cancellation_Indication | Termination Out-of-Service | Mandatory | Is a part of BIWF Service cancellation in Q.1950 |
| BIWF_Service_Restoration_Indication | Termination Restoration | Mandatory | Is a part of BIWF Service cancellation in Q.1950 |
| Audit_Values | Audit Value | FFS Mandatory | Required for the audit of Termination State |
| Audit_Capabilities | Audit Capability | Optional | The capabilities to be audited shall be defined in clause 12. |
| BIWF_Capability_Change | Capability Update | Optional | |
| | MGW Resource Congestion Handling - Activate | Mandatory | |
| | MGW Resource Congestion Handling - Indication | Mandatory | |

***** Next Changed Section *****

14.2 Call related H.248 transactions

Table 3 shows the relationship between each call-related procedure in ITU-T Recommendation Q.1950 [23] (see 3GPP TS 29.205 [7]) and the corresponding stage 2 procedure defined in 3GPP TS 23.205 [2], as well as specifying the requirement for support of each procedure on the Mc interface.

Table 3: Correspondence between ITU-T Recommendation Q.1950 [23] call-related transactions and 3GPP TS 23.205 [2] and 3GPP TS 23.153 [1] procedures

| Transaction used in Q.1950 | Procedure defined in 3GPP TS 23.205 [2] and 23.153 [1] | Support | Comments |
|---------------------------------------|---|-----------|---|
| Change_Topology | Change Flow Direction | Mandatory | |
| Join | Join Bearer Termination | Mandatory | |
| Isolate | Isolate Bearer Termination | Mandatory | |
| Establish_BNC_Notify+(tunnel) | Establish Bearer | Mandatory | |
| Prepare_BNC_Notify+(tunnel) | Prepare Bearer | Mandatory | |
| Cut_Through | Change Through Connection | Mandatory | |
| Not defined in Q.1950 | Activate Interworking Function | Optional | |
| Cut_BNC (include several procedures). | Release Bearer (Release Bearer and Release termination) | Mandatory | |
| BNC Established | Bearer Established | Mandatory | |
| BNC Release | Bearer Released | Mandatory | |
| Insert_Tone | Send Tone | Mandatory | |
| Insert_Announcement | Play Announcement | Mandatory | |
| Signal Completion | Announcement Completed | Mandatory | |
| Detect_Digit | Detect DTMF | Mandatory | |
| Insert_Digit | Send DTMF | Mandatory | |
| Digit Detected | Report DTMF | Mandatory | |
| Confirm_Char | Confirm Char | Optional | |
| Modify_Char | Modify Char | Optional | |
| Reserve_Char | Reserve Char | Optional | |
| BNC Modified | Bearer Modified | Optional | |
| Echo Canceller | Activate Voice Processing Function | Mandatory | |
| BNC Modification failed | Bearer Modified Failed | Optional | |
| Tunnel (MGC-MGW) | Tunnel Information Down | Optional | Shall be supported if the Nb interface transport protocol is IP |
| Tunnel (MGW-MGC) | Tunnel Information Up | Optional | Shall be supported if the Nb interface transport protocol is IP |
| Insert_Tone | Stop Tone | Mandatory | |
| Insert_Announcement | Stop Announcement | Mandatory | |
| Detect_Digit | Stop DTMF Detection | Optional | |
| Insert_Digit | Stop DTMF | Mandatory | |
| Signal Completion | Tone Completed | Optional | |
| Not defined | Reserve Circuit | Mandatory | |
| Not defined | Command Rejected | Mandatory | |
| Not defined | TFO Activation | Optional | |
| Not defined | Codec Modify | Optional | |
| Not defined | Optimal Codec and Distant List_Notify | Optional | |
| Not defined | Distant Codec List | Optional | |
| Modify_Char | Modify Bearer Characteristics | Mandatory | |
| Not defined | Rate Change | Optional | |
| Not defined | Bearer Modification Support | Optional | |
| Not defined | Protocol Negotiation Result | Optional | |
| Reserve_Char | Reserve Bearer Characteristics | Optional | |
| Confirm_Char | Confirm Bearer Characteristics | Optional | |
| ECS_Indication | Emergency Call Indication | Optional | |

NOTE: A procedure defined in table 3 can be combined with another procedure in the same action. This means that they can share the same contextID and termination ID(s).

CHANGE REQUEST

⌘ **29.232 CR 212** ⌘ rev **1** ⌘ 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 ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Definition of requirement for support of commands | | |
| Source: | ⌘ Vodafone | | |
| Work item code: | ⌘ TEI6 | Date: | ⌘ 07/04/2005 |
| Category: | ⌘ F | Release: | ⌘ Rel-6 |
| | Use <u>one</u> 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 <u>one</u> of the following releases: Ph2 (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) Rel-7 (Release 7) |

| | |
|--------------------------------------|--|
| Reason for change: | ⌘ At CN4 #26, specification for the support of procedures was introduced. However, certain procedures could not be agreed upon at that time as to whether support should be mandatory or optional and also some additional procedures were introduced without specification of their required support due to the cross over of CR's. This completes the specification in this area. |
| Summary of change: | ⌘ The support requirement for Audit Descriptor is set to 'Mandatory'. The support requirements for Emergency Call Indication, Continuity Check Tone, Continuity Check Verify, Continuity Check Response, TFO Status Notify and TFO Status are set to 'Optional'. |
| Consequences if not approved: | ⌘ No clear requirement for the support of certain commands leads to potential interoperability problems between vendors. |

| | | | | | | | | | | | |
|------------------------------|--|---|---|--|---|--|---|--|---|--|--|
| Clauses affected: | ⌘ 14.1, 14.2 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘ | Y | N | | X | | X | | X | | |
| Y | N | | | | | | | | | | |
| | X | | | | | | | | | | |
| | X | | | | | | | | | | |
| | X | | | | | | | | | | |
| Other comments: | ⌘ | | | | | | | | | | |

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14.1 Call independent H.248 transactions

Table 2 shows the relationship between each non call-related procedure in ITU-T Recommendation Q.1950 [23] (see 3GPP TS 29.205 [7]) and the corresponding stage 2 procedure defined in 3GPP TS 23.205 [2].

For further description of error codes and service change reasons, refer to ITU-T Recommendation H.248.8 [14].

Table 14.1.1: Correspondence between ITU-T Recommendation Q.1950 [23] non call-related transactions and 3GPP TS 23.205 [2] procedures

| Transaction used in ITU-T Recommendation Q.1950 [23] | Procedure defined in 3GPP TS 23.205 [2] | Support | Comments |
|--|---|------------------------------|---|
| BIWF_Service_Cancellation_Indication | MGW Out of Service | Mandatory | |
| BIWF_Lost_Communication | MGW Communication Up | Mandatory | |
| BIWF_Service_Restoration_Indication | MGW Restoration | Mandatory | |
| BIWF_Registration | MGW Register | Mandatory | |
| BIWF_Re-Registration | MGW Re-register | Mandatory | |
| CCU Ordered BIWF Re-Registration | (G)MSC Server Ordered Re-register | Mandatory | |
| CCU Initiated Service Restoration | (G)MSC Server Restoration | Optional | |
| CCU Initiated Service Cancellation | (G)MSC Server Out of Service | Optional | |
| BIWF_Service_Cancellation_Indication | Termination Out-of-Service | Mandatory | Is a part of BIWF Service cancellation in Q.1950 |
| BIWF_Service_Restoration_Indication | Termination Restoration | Mandatory | Is a part of BIWF Service cancellation in Q.1950 |
| Audit_Values | Audit Value | FFS Mandatory | Required for the audit of Termination State |
| Audit_Capabilities | Audit Capability | Optional | The capabilities to be audited shall be defined in clause 12. |
| BIWF_Capability_Change | Capability Update | Optional | |
| Not Defined | MGW Resource Congestion Handling - Activate | Mandatory | |
| Not Defined | MGW Resource Congestion Handling - Indication | Mandatory | |
| Continuity Check Tone | Continuity Check Tone | FFS Optional ↓ | |
| Continuity Check Verify | Continuity Check Verify | FFS Optional ↓ | |
| Continuity Check Response | Continuity Check Response | FFS Optional ↓ | |

***** *Next Changed Section* *****

14.2 Call related H.248 transactions

Table 3 shows the relationship between each call-related procedure in ITU-T Recommendation Q.1950 [23] (see 3GPP TS 29.205 [7]) and the corresponding stage 2 procedure defined in 3GPP TS 23.205 [2], as well as specifying the requirement for support of each procedure on the Mc interface.

Table 14.2.1: Correspondence between ITU-T Recommendation Q.1950 [23] call-related transactions and 3GPP TS 23.205 [2] and 3GPP TS 23.153 [1] procedures

| Transaction used in Q.1950 | Procedure defined in 3GPP TS 23.205 [2] and 23.153 [1] | Support | Comments |
|---------------------------------------|---|-------------------------|---|
| Change_Topology | Change Flow Direction | Mandatory | |
| Join | Join Bearer Termination | Mandatory | |
| Isolate | Isolate Bearer Termination | Mandatory | |
| Establish_BNC_Notify+(tunnel) | Establish Bearer | Mandatory | |
| Prepare_BNC_Notify+(tunnel) | Prepare Bearer | Mandatory | |
| Cut_Through | Change Through Connection | Mandatory | |
| Not defined in Q.1950 | Activate Interworking Function | Optional | |
| Cut_BNC (include several procedures). | Release Bearer (Release Bearer and Release termination) | Mandatory | |
| BNC Established | Bearer Established | Mandatory | |
| BNC Release | Bearer Released | Mandatory | |
| Insert_Tone | Send Tone | Mandatory | |
| Insert_Announcement | Play Announcement | Mandatory | |
| Signal Completion | Announcement Completed | Mandatory | |
| Detect_Digit | Detect DTMF | Mandatory | |
| Insert_Digit | Send DTMF | Mandatory | |
| Digit Detected | Report DTMF | Mandatory | |
| Confirm_Char | Confirm Char | Optional | |
| Modify_Char | Modify Char | Optional | |
| Reserve_Char | Reserve Char | Optional | |
| BNC Modified | Bearer Modified | Optional | |
| Echo Cancellor | Activate Voice Processing Function | Mandatory | |
| BNC Modification failed | Bearer Modified Failed | Optional | |
| Tunnel (MGC-MGW) | Tunnel Information Down | Optional | Shall be supported if the Nb interface transport protocol is IP |
| Tunnel (MGW-MGC) | Tunnel Information Up | Optional | Shall be supported if the Nb interface transport protocol is IP |
| Insert_Tone | Stop Tone | Mandatory | |
| Insert_Announcement | Stop Announcement | Mandatory | |
| Detect_Digit | Stop DTMF Detection | Optional | |
| Insert_Digit | Stop DTMF | Mandatory | |
| Signal Completion | Tone Completed | Optional | |
| Not defined | Reserve Circuit | Mandatory | |
| Not defined | Command Rejected | Mandatory | |
| Not defined | TFO Activation | Optional | |
| Not defined | Codec Modify | Optional | |
| Not defined | Optimal Codec and Distant List_Notify | Optional | |
| Not defined | Distant Codec List | Optional | |
| Not defined | TFO status Notify | FFS Optional | |
| Not defined | TFO status | FFS Optional | |
| Modify_Char | Modify Bearer Characteristics | Mandatory | |
| Not defined | Rate Change | Optional | |
| Not defined | Bearer Modification Support | Optional | |
| Not defined | Protocol Negotiation Result | Optional | |
| Reserve_Char | Reserve Bearer Characteristics | Optional | |
| Confirm_Char | Confirm Bearer Characteristics | Optional | |
| ECS_Indication | Emergency Call Indication | FFS Optional | |

NOTE: A procedure defined in table 3 can be combined with another procedure in the same action. This means that they can share the same contextID and termination ID(s).

CHANGE REQUEST

⌘ **29.232 CR 209** ⌘ rev **2** ⌘ 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 ME Radio Access Network Core Network

| | |
|------------------------|--|
| Title: | ⌘ Text encoding of IPBCP for IP transport on Mc interface |
| Source: | ⌘ Siemens, Lucent |
| Work item code: | ⌘ TEI4 |
| Date: | ⌘ 29/04/2005 |
| Category: | ⌘ A |
| | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </div> <div style="width: 45%;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p>Ph2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> <p>Rel-7 (Release 7)</p> </div> </div> |

Reason for change: ⌘ For a BICC network with IP transport, IPBCP, ITU-T Q.1970, is used to transport bearer related information, e.g. transport IP addresses and port numbers. IPBCP is based on SDP, RFC 2327, and is therefore structured in lines and uses CR (ASCII carriage return 0x0d) and/or LF (ASCII newline 0x0a) characters. IPBCP is transported within H.248 messages. However, if text encoding is used for H.248, the CR and LF characters are not allowed:

- IPBCP is transported with the "BICC Bearer Control Tunneling Protocol", Q.1990.
- Q.1990 is transported within the Q.1950 "Bearer Control Tunneling Package", also according 29.232. According to Q.1950, the information is transported as "other signal parameter", or "ObservedEventsDescriptor", and the "quotedString" alternative for the parameter value shall be used for text encoding.
- The "quotedString" type is defined in H.248.1, Annex B, and rules out CR and LF. Checking H.248.1 Annex B, also shows that the only other allowed encoding for "other signal parameter", or "ObservedEventsDescriptor" would be "1*(SafeChar)", and thus even more restrictive.

Summary of change: ⌘ Remove the option of text encoding for IP bearer transport from the Mc interface

Consequences if not approved: ⌘ Interoperability problems might occur

Clauses affected: ⌘ 2, 8

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

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- [12] IETF RFC 2960: "Stream control transmission protocol".
- [13] 3GPP TS 29.202: "Signalling System No. 7 (SS7) signalling transport in core network; Stage 3".
- [14] ITU-U Recommendation H.248.8: "Error codes and service change reason description".
- [15] ITU-U Recommendation H.248.10: "Media gateway resource congestion handling package".
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- [24] ITU-T Recommendation Q.765.5: "Signalling system No. 7 - Application transport mechanism: Bearer Independent Call Control (BICC)".
- [25] ITU-T Recommendation G.711: "Pulse code modulation (PCM) of voice frequencies".
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- [27] 3GPP TS 23.014: "Technical Specification Group Core Network; Support of Dual Tone Multi-Frequency (DTMF) signalling".
- [28] ITU-T Recommendation H.248.7: "Generic Announcement Package".
- [29] 3GPP TS 32.421: " Subscriber and equipment trace: Trace concepts and requirements "
- [30] 3GPP TS 32.422: "Subscriber and equipment trace: Trace control and configuration management".
- [31] 3GPP TS 32.423: "Subscriber and equipment trace: Trace data definition and management".
- [xx] [IETF RFC 2327: " Session Description Protocol"](#).

***** [end Modified section 1](#) *****

***** [Modified section 2](#) *****

8 Transport

Each implementation of the Mc interface should provide the appropriate protocol options: MTP3B as defined in ITU-T Recommendation Q.2210 [11] (for ATM signalling transport) or SCTP as defined in RFC 2960 [12] (for IP signalling transport) and in the case where the signalling relation consists of both ATM signalling transport and IP signalling transport the M3UA protocol layer (3GPP TS 29.202 [13]) shall be added to SCTP to provide interworking. M3UA layer may also be added to SCTP for pure IP signalling transport. As SCTP provides security mechanisms the use of IPsec shall not be used for the Mc interface. In summary:

- 1) For pure IP connections, H.248/SCTP/IP should be used. .In addition, to allow for flexible implementations of gateways and controllers in order to offer efficient use of SCTP associations the M3UA layer may also be added on top of SCTP
- 2) For pure ATM connections, H.248/MTP3b/SSCF/SSCOP/AAL5/ATM should be used.
- 3) For mixed IP&ATM connections, H.248/M3UA/SCTP/IP shall be used as the IP transport.

[For a BICC network with IP transport and IPBCP is transported within H.248 messages, text encoding is not recommended to be used on Mc interface until ITU has resolved the contradiction in RFC2327 \[xx\] and H.248.1 \[10\] on the usage of CR \(ASCII carriage return 0x0d\) and/or LF \(ASCII newline 0x0a\) characters e.g. in SDP these Characters are missing when using the currently specified "quotedString" type.](#)

***** [end Modified section 2](#) *****

CHANGE REQUEST

⌘ **29.232 CR 214** ⌘ rev **-** ⌘ Current version: **4.11.0** ⌘

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 ME Radio Access Network Core Network

| | | | |
|------------------------|--|---------------------------|---|
| Title: | ⌘ Text encoding of IPBCP for IP transport on Mc interface | | |
| Source: | ⌘ Siemens, Lucent | | |
| Work item code: | ⌘ TEI4 | Date: | ⌘ 29/04/2005 |
| Category: | ⌘ F | | Release: ⌘ Rel-4 |
| | Use <u>one</u> of the following categories: | | Use <u>one</u> of the following releases: |
| | F (correction) | Ph2 (GSM Phase 2) | |
| | A (corresponds to a correction in an earlier release) | R96 (Release 1996) | |
| | B (addition of feature), | R97 (Release 1997) | |
| | C (functional modification of feature) | R98 (Release 1998) | |
| | D (editorial modification) | R99 (Release 1999) | |
| | Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Rel-4 (Release 4) |
| | | | Rel-5 (Release 5) |
| | | | Rel-6 (Release 6) |
| | | | Rel-7 (Release 7) |

| | |
|--------------------------------------|--|
| Reason for change: | ⌘ Essential correction |
| | <p>For a BICC network with IP transport, IPBCP, ITU-T Q.1970, is used to transport bearer related information, e.g. transport IP addresses and port numbers. IPBCP is based on SDP, RFC 2327, and is therefore structured in lines and uses CR (ASCII carriage return 0x0d) and/or LF (ASCII newline 0x0a) characters. IPBCP is transported within H.248 messages. However, if text encoding is used for H.248, the CR and LF characters are not allowed:</p> <ul style="list-style-type: none"> • IPBCP is transported with the "BICC Bearer Control Tunneling Protocol", Q.1990. • Q.1990 is transported within the Q.1950 "Bearer Control Tunneling Package", also according 29.232. According to Q.1950, the information is transported as "other signal parameter", or "ObservedEventsDescriptor", and the "quotedString" alternative for the parameter value shall be used for text encoding. • The "quotedString" type is defined in H.248.1, Annex B, and rules out CR and LF. Checking H.248.1 Annex B, also shows that the only other allowed encoding for "other signal parameter", or "ObservedEventsDescriptor" would be "1*(SafeChar)", and thus even more restrictive. |
| Summary of change: | ⌘ Remove the option of text encoding for IP bearer transport from the Mc interface |
| Consequences if not approved: | ⌘ Interoperability problems might ocure |

| | | | | | | | | | | | | |
|------------------------------|---------------------|---|---|---|--|---|--|---|--|---|---------------------------|---|
| Clauses affected: | ⌘ | 2, 8 | | | | | | | | | | |
| Other specs affected: | ⌘ | <table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr></table> | Y | N | | X | | X | | X | Other core specifications | ⌘ |
| | | Y | N | | | | | | | | | |
| | | | X | | | | | | | | | |
| | X | | | | | | | | | | | |
| | X | | | | | | | | | | | |
| | Test specifications | | | | | | | | | | | |
| | O&M Specifications | | | | | | | | | | | |
| Other comments: | ⌘ | | | | | | | | | | | |

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- [3] 3GPP TS 24.008: "3rd Generation Partnership Project; Technical Specification Group Core Network; Mobile radio interface layer 3 specification"
- [4] 3GPP TS 25.415: "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN Iu interface user plane protocols".
- [5] 3GPP TS 28.062: "3rd Generation Partnership Project; Technical Specification Group Services & System Aspects; In-band Tandem Free Operation (TFO) of Speech Codecs; Stage 3 – Service Description"
- [6] 3GPP TS 29.007: "3rd Generation Partnership Project; Technical Specification Group Core Network; General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)"
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- [8] 3GPP TS 29.415: "3rd Generation Partnership Project; Technical Specification Group Core Network; CN Nb interface user plane protocols".
- [9] 3GPP TS 48.008: "3rd Generation Partnership Project; Technical Specification Group GSM EDGE Radio Access Network; Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".
- [10] ITU-T Recommendation H.248 (06/00): "Media Gateway Control Protocol"
- [11] ITU-T Recommendation Q.2210 (07/96): "Message transfer part level 3 functions and messages using the services of ITU-T Recommendation Q.2140"
- [12] RFC 2960 "Stream Control Transmission Protocol"
- [13] 3G TS 29.202: "SS7 signalling transport in core network"
- [14] ITU-U Recommendation H.248 Annex L, "Error Codes and Service Change Reason Description"
- [15] 3GPP TS 23.014: "Technical Specification Group Core Network; Support of Dual Tone Multi-Frequency (DTMF) signalling".

[xx] [IETF RFC 2327: " Session Description Protocol"](#).

***** end Modified section 1 *****

***** Modified section 2 *****

8 Transport

Each implementation of the Mc interface should provide the appropriate protocol options: MTP3B as defined in ITU—T Recommendation Q.2210 [11] (for ATM signalling transport) or SCTP as defined in RFC2960 [12] (for IP signalling transport) and in the case where the signalling relation consists of both ATM signalling transport and IP signalling transport the M3UA protocol layer [13] shall be added to SCTP to provide interworking. M3UA layer may also be added to SCTP for pure IP signalling transport. In summary:

- 1) For pure IP connections, H.248/SCTP/IP should be used. In addition, to allow for flexible implementations of gateways and controllers in order to offer efficient use of SCTP associations the M3UA layer may also be added on top of SCTP.
- 2) For pure ATM connections, H.248/MTP3b/SSCF/SSCOP/AAL5/ATM should be used,
- 3) For mixed IP&ATM connections, H.248/M3UA/SCTP/IP shall be used as the IP transport.

[For a BICC network with IP transport and IPBCP is transported within H.248 messages, text encoding is not recommended to be used on Mc interface until ITU has resolved the contradiction in RFC2327 \[xx\] and H.248.1 \[10\] on the usage of CR \(ASCII carriage return 0x0d\) and/or LF \(ASCII newline 0x0a\) characters e.g. in SDP these Characters are missing when using the currently specified "quotedString" type.](#)

***** end Modified section 2 *****

CHANGE REQUEST

⌘ **29.232 CR 215** ⌘ rev **-** ⌘ Current version: **5.10.0** ⌘

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 ME Radio Access Network Core Network

| | | | |
|------------------------|---|--------------|---|
| Title: | ⌘ Text encoding of IPBCP for IP transport on Mc interface | | |
| Source: | ⌘ Siemens, Lucent | | |
| Work item code: | ⌘ TEI4 | Date: | ⌘ 29/04/2005 |
| Category: | ⌘ A Use <u>one</u> 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 . | | Release: ⌘ Rel-5 Use <u>one</u> of the following releases: Ph2 (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) Rel-7 (Release 7) |

| | |
|--------------------------------------|--|
| Reason for change: | ⌘ Essential correction For a BICC network with IP transport, IPBCP, ITU-T Q.1970, is used to transport bearer related information, e.g. transport IP addresses and port numbers. IPBCP is based on SDP, RFC 2327, and is therefore structured in lines and uses CR (ASCII carriage return 0x0d) and/or LF (ASCII newline 0x0a) characters. IPBCP is transported within H.248 messages. However, if text encoding is used for H.248, the CR and LF characters are not allowed: <ul style="list-style-type: none"> IPBCP is transported with the "BICC Bearer Control Tunneling Protocol", Q.1990. Q.1990 is transported within the Q.1950 "Bearer Control Tunneling Package", also according 29.232. According to Q.1950, the information is transported as "other signal parameter", or "ObservedEventsDescriptor", and the "quotedString" alternative for the parameter value shall be used for text encoding. The "quotedString" type is defined in H.248.1, Annex B, and rules out CR and LF. Checking H.248.1 Annex B, also shows that the only other allowed encoding for "other signal parameter", or "ObservedEventsDescriptor" would be "1*(SafeChar)", and thus even more restrictive. |
| Summary of change: | ⌘ Remove the option of text encoding for IP bearer transport from the Mc interface |
| Consequences if not approved: | ⌘ Interoperability problems might ocure |

| | | | | | | | | | | | | |
|------------------------------|-------------------------------------|---|-------------------------------------|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|---------------------------|---|
| Clauses affected: | ⌘ | 2, 8 | | | | | | | | | | |
| Other specs affected: | ⌘ | <table border="1"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table> | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications | ⌘ |
| | | Y | N | | | | | | | | | |
| | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | |
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| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | |
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- [22] 3GPP TS 23.078: "Customized Applications for Mobile network Enhanced Logic (CAMEL); Stage 2".
- [23] ITU-T Recommendation Q.1950: "Bearer independent call bearer control protocol".
Note: Only H.248.1 v1 applies to the Mc Interface
- [24] ITU-T Recommendation Q.765.5: "Signalling system No. 7 - Application transport mechanism: Bearer Independent Call Control (BICC)".
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