Source: TSG CN WG4

Title: Corrections on CSSPLIT

Agenda item: 8.8

Document for: APPROVAL

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.205	006	2	N4-030712	Rel-5	Alignment of references after renumbering of H248 by ITU-T	F	5.5.0
29.232	057	1	N4-030694	Rel-5	Alignment of references after renumbering of H248 by ITU-T	F	5.5.0

CR-Form-v7

CHANGE REQUEST

⌘ **29.205** CR **006** ⌘rev **2** ⌘ Current version: **5.0.0** ⌘

*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 **X**

Title: ⌘	Alignment of references after renumbering of H248 by ITU-T
Source: ⌘	CN4
Work item code: ⌘	CSSPLIT ***Date:*** ⌘ 20/05/2003
Category: ⌘	**F** ***Release:*** ⌘ Rel 5

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:
  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: ⌘	In March 2002 ITU- decided t o renumber the specifications on H.248 and their annexes. For example H.248, Annex L is renamed to H.248.8 This CR aligns the references to H248 to the new numbering shema of H.248
Summary of change: ⌘	Renumbered specification numbers of ITU-T are introduced
Consequences if not approved: ⌘	Superceeded Specifications of ITU-T are referenced.

Clauses affected: ⌘	

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

Other comments: ⌘	

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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.

2   References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]   3GPP TS 23.205: "Bearer Independent CS Core Network – Stage 2"

[2]   3GPP TS 23153 "Out of Band Transcoder Control - Stage 2"

[3]   3GPP TS 29.232 "Media Gateway Controller (MGC) – Media Gateway (MGW) Interface; Stage 3"

[4]   3GGP TS 29.414 "Core Network Nb Data Transport and Signalling Transport"

[5]   ITU-T Q.765.5: "Application Transport Mechanism"

[6]   ITU-T Q.1902.1: "Bearer Independent Call Control CS2 Functional Description"

[7]   ITU-T Q.1902.2: "Bearer Independent Call Control CS2 General Functions of Messages and Signals"

[8]   ITU-T Q.1902.3: "Bearer Independent Call Control CS2 Formats and Codes"

[9]   ITU-T Q.1902.4: "Bearer Independent Call Control CS2 Basic Call Procedures"

[10]   ITU-T Q.1902.5: "Exceptions to the Application Transport Mechanism in the Context of Bearer Independent Call Control"

[11]   ITU-T Q.1902.~~5~~6: "Generic Signalling Procedures and Support of the ISDN User Part Supplementary Services with the Bearer Independent Call Control Protocol

[12]   ITU-T Q.1950 "Call Bearer Control Protocol"

[13]   ITU-T Q.2630.1-2: "AAL type 2 signalling protocol"

[14]   ITU-T Q.1990 "BICC tunnelling control protocol"

[15]   ITU-T Q.1970 "IP Bearer Control protocol"

[16]   ITU-T Q.1912.1 "ISUP-BICC Interworking"

[17]   ITU-T Q.1912.2 "Interworking between selected Signalling System (PSTN Access DSS1, C5, R1, R2, TUP) AND THE Bearer Independent Call Control Protocol"

[18]   ITU-T Q.2150.0 "Generic Signalling Transport Service"

[19]   ITU-T Q.2150.1 "Signalling Transport Converter MTP and MTP3 B".

 [20]   ITU-T Recommendation Q.2150.3 "Signalling Transport Converter on SCTP".

[21]   ITU-T H.248.4 : "~~Media~~ Gateway Control Protocol: Transport over SCTP " ~~(06/00)~~

[22]   3GPP TS 29.202: "SS7 signalling transport in core network"

 [yy]   ITU-T H.248.5 : " Gateway control protocol: Transport over ATM "

~~Editors note: The references to the Q.19XX and Q.2150.X recommendations will be replaced by an URL pointing to the 3GPP web. These references will become dated references to those specifications when decided.~~

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Last modified section

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4.5.2   Resource control protocol (G)MSC and MGW (Mc Interface)

3GGP TS.29.232.	**Media Gateway Controller (MGC) – Media Gateway (MGW) Interface;Stage 3 [3] including H.248.4 [21] ~~Annex H~~ "Transport over SCTP", H.248.5 [~~21~~yy] ~~Annex I~~ "Transport over ATM" , and 3GPP TS 29.202 "SS7 signalling transport in core network" [22]. Annex A:** The use of M3UA in 3GGP networks~~SS7 MTP3-User Adaption Layer (M3UA)~~.

CR-Form-v7

CHANGE REQUEST

⌘ **29.232** CR **057** ⌘rev **1** ⌘ Current version: **5.5.0** ⌘

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Proposed change affects: UICC apps⌘ ☐   ME ☐   Radio Access Network ☐   Core Network **X**

Title: ⌘	Alignment of references after renumbering of H248 by ITU-T	
Source: ⌘	CN4	
Work item code: ⌘	CSSPLIT	***Date:*** ⌘ 07/05/2003
Category: ⌘	**F**	***Release:*** ⌘ Rel-5

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Reason for change: ⌘	In March 2002 ITU- decided t o renumber the specifications on H.248 and their annexes. For example H.248, Annex L is renamed to H.248.8 This CR aligns the references to H248 to the new numbering shema of H.248
Summary of change: ⌘	Renumbered specification n umbers of ITU-T are introduced.
Consequences if not approved: ⌘	Superceeded Specifications of ITU-T are referenced.

Clauses affected: ⌘	2, 5.2.1, 7, 9,10, 11, 14, 14.1, 15.1.6.1, 15.1.6.2, 15.1.6.5

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

Other comments: ⌘	

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[1]   3GPP TS 23.153: "Out of band transcoder control; Stage 2".

[2]   3GPP TS 23.205: "Bearer independent circuit-switched core network; Stage 2".

[3]   3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".

[4]   3GPP TS 25.415: "UTRAN Iu interface user plane protocols".

[5]   3GPP TS 28.062: "Inband Tandem Free Operation (TFO) of speech codecs; Service description; Stage 3".

[6]   3GPP TS 29.007: "General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".

[7]   3GPP TS 29.205: "Application of Q.1900 series to Bearer Independent circuit-switched network architecture; Stage 3".

[8]   3GPP TS 29.415: "Customized Applications for Mobile network Enhanced Logic (CAMEL) Phase 3; CAMEL Application Part (CAP) specification".

[9]   3GPP TS 48.008: "Mobile Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".

[10]   ITU-T Recommendation H.248.1 (~~2000~~03/02): "Gateway control protocol". Version 1

[11]   ITU-T Recommendation Q.2210 (1996): "Message transfer part level 3 functions and messages using the services of ITU-T Recommendation Q.2140".

[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 ~~(Annex L)~~.8: "Error codes and service change reason description".

[15]   ITU-U Recommendation H.248 ~~(Annex M.2)~~.10: "Media gateway resource congestion handling package".

[16]   3GPP TS 26.103: "Speech codec list for GSM and UMTS".

[17]   ITU-U Recommendation H.248 (Annex F).2: "Facsimile, text conversation and call discrimination packages".

[18]   3GPP TS 26.226: "Cellular text telephony; Transport of text in the voice channel".

[19]   ITU-T Recommendation T.140: "Protocol for multimedia application text conversation".

[20]   3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

[21]   3GPP TS 25.414: "UTRAN Iu interface data transport and transport signalling".

[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".

[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".

[26]   3GPP TS 26.102: "3rd Generation Partnership Project; Mandatory speech codec; AMR speech codec; Interface to Iu, Uu and Nb"

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Next modified Section

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5.2.1   Termination naming convention

The following general structure of termination ID shall be used:

ASN.1 coding:

4 octets shall be used for the termination ID. The following defines the general structure for the termination ID:

Termination type	X

Termination type:

Length 3 bits

Values:

000 Reserved

001 Ephemeral termination

010 TDM termination

011 - 110 Reserved

111 Reserved for ROOT termination Id

X:

Length 29 bits.

Usage dependent on Termination type. TDM terminations specified below in subclause 5.2.2. Other usage unspecified.

ABNF coding:

TerminationID   = "ROOT" / pathName / "$" / "*"   ; According to H.248.1 annex B

With ephemeral termination:

pathName   = EphTokenUNDERSCORE(EPHsystem/"*")

EphToken = "Ephemeral"

UNDERSCORE = %x5F   ;"_"

EPHsystem : Usage is not specified

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Next modified Section

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7   Transaction timers

All transaction timers specified in ITU-T Recommendation H.248.1 [10] shall be supported in this subset of the protocol.

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Next modified Section

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9   Multiple Virtual MG.

If an MGW is connected to more than one (G)MSC, the MGW shall fulfil the requirements outlined in the subclause "Multiple virtual MGW" in ITU-T Recommendation H.248.1 [10].

10   Formats and codes

Table 1 shows the parameters which are required, in addition to those defined in the subclause "Formats and Codes" of ITU-T Recommendation Q.1950 [23] (see 3GPP TS 29.205 [7]).

The coding rules applied in ITU-T Recommendation H.248.1 [10] for the applicable coding technique shall be followed for the UMTS capability set.

Table 1: Additional parameters required

actprot	Signal descriptor	As for the signal "Activate protocol" in subclause 15.1.2.3
Mode	Local control	As for the property "UP mode of operation" in subclause 15.1.1.1
Version	Local control	As for the property "Upversion" in subclause 15.1.1.1
Value	Local control	As for the property " Delivery of erroneous SDUs" in subclause 15.1.1.1
Interface	Local control	As for the property " Interface" in subclause 15.1.1.1
Initdirection	Local control	As for the property " Initialization Direction" in subclause 15.1.1.1
PLMN bearer capability	Local control	As for the property "PLMN BC" in subclause 15.1.2.1
Coding	Local control	As for the property " GSM channel coding" in subclause 15.1.2.1
Tfoenable	Local control	As for the property " TFO activity control" in subclause 15.1.3.1
Codeclist	Local control	As for the property" TFO Codec List" in subclause 15.1.3.1
Result	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Protocol Negotiation Result" in subclause 15.1.2.2
Cause	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Protocol Negotiation Result" in subclause 15.1.2.2
Rate	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Rate Change" in subclause 15.1.2.2
Optimalcodec	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Optimal Codec Type" in subclause 15.1.3.2
Distlist	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Distant TFO List" in subclause 15.1.3.2
Off / value	Local control	As for the property "Echo cancelling" in subclause E.13.1 in ITU-T Recommendation H.248.1 [10]
Error	Error descriptor	As defined in the subclause "Command error code" in ITU-T Recommendation H.248.1 [10]
Reduction	ObservedEvent descriptor	As for the ObserverdEventDescriptor in "MGW Resource Congestion Handling– Indication" in subclause 14.1.15.
Bearer Modification Support	EventDescriptor	As for the EventsDescriptor in "Bearer Modification Support" in subclause 15.1.4.2.
Bearer modification possible	ObservedEvent descriptor	As for the ObserverdEventDescriptor in "Bearer Modification Support" in subclause 15.1.4.2.
Ctmstate	TerminationState	As for the TerminationState "Text termination connection state" in subclause 15.1.6.1.
Ctmtransport	Local control	As for the property "Text Transport" in subclause 15.1.6.1.
Ctmtext version	Local control	As for the property " Text Protocol Version" in subclause 15.1.6.1.
Connchng	ObservedEventDe scriptor	As for the ObservedEventDescriptor " Connection State Change in subclause 15.1.6.2
Ctmbits	Statistics descriptor	As for the Statistics descriptor "Characters Transferred" in subclause 15.1.6.4
Bitrate	Local control	As for the property" Bitrate" in subclause 15.1.7.1
Ipaddress	Local control	As for the property" IP transport address" in subclause 15.1.8.1
UDPport	Local control	As for the property" UDP port " in subclause 15.1.8.1
Flextone	Local control	As for the signal "Flexible Tone " in subclause 15.1. 9.1

11 Mandatory Support of SDP and H.248.1 annex C information elements

This clause shall be in accordance with the subclause "Mandatory Support of SDP and H.248.1 annex C information elements" in ITU-T Recommendation Q.1950 [23] (see 3GPP TS 29.205 [7]).

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Next modified Section

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# 14	H.248 standard packages

The following H.248 packages are used by this UMTS Capability Set:

- Generic v1 (see ITU-T Recommendation H.248.1 [10] annex E.1).

- Base Root Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.2).

- Tone Generator Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.3).

- Tone Detection Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.4).

- Basic DTMF Generator Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.5).

- DTMF Detection Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.6).

- Call Progress Tones Generator Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.7).

- Generic Announcement Package v1 (see ITU-T Recommendation H.248.1 [10] annex K).

- TDM Circuit Package v1 (see ITU-T Recommendation H.248.1 [10] annex E.13).

- Media Gateway Resource Congestion Handling Package v1 (see ITU-T Recommendation H.248.10 [15] annex M.2).

- Text Telephony Package (see ITU-T Recommendation H.248.2 [1017] annex F.7).

- Call Discrimination package (see ITU-T Recommendation H.248.2 [1017] annex F.8).

## 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 (Annex L).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]	Comments
BIWF_Service_Cancellation_Indication	MGW Out of Service	
BIWF_Lost_Communication	MGW Communication Up	
BIWF_Service_Restoration_Indication	MGW Restoration	
BIWF_Registration	MGW Register	
BIWF_Re-Registration	MGW Re-register	
CCU Ordered BIWF Re-Registration	(G)MSC Server Ordered Re-register	
CCU Initiated Service Restoration	(G)MSC Server Restoration	
CCU Initiated Service Cancellation	(G)MSC Server Out of Service	
BIWF_Service_Cancellation_Indication	Termination Out-of-Service	Is a part of BIWF Service cancellation in Q.1950
BIWF_Service_Restoration_Indication	Termination Restoration	Is a part of BIWF Service cancellation in Q.1950
Audit_Values	Audit Value	
Audit_Capabilities	Audit Capability	
BIWF_Capability_Change	Capability Update	
	MGW Resource Congestion Handling - Activate	
	MGW Resource Congestion Handling - Indication	

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15.1.6.1 Properties

Text termination connection state:

PropertyID: connstate (0x0001).

Description: The connection state property is used to reflect details of the achieved text connection. For each new session connstate should be reset to "Prepare".

Type: Enumeration.

Possible values:

- "Idle" (0x0001) meaning that CTM availability negotiation has failed; CTM is disabled except for monitoring the incoming line for CTM signals.

- "Prepare" (0x0002) for CTM being enabled, monitoring for CTM signals and ready to send CTM signals.

- "Connected" (0x0006) for CTM being enabled and to have detected CTM availability in the current session.

Defined in: TerminationState.

Characteristics: Read/Write.

Text Transport:

PropertyID: trpt (0x0002)

Description: The transport parameter reflects the transport mechanism selected for the Text Conversation termination. In 3GPP, one possible transport mechanism is the Cellular Text Telephone Modem as in 3GPP TS 26.226 [18]. It is used when it is desired to transport the text conversation in a voice channel. CTM enables alternating use of the voice channel for voice and text during the call.

Type: Enumeration.

Possible values:

- "ctm" (0x0008) for text transport in mobile voice channel as in 3GPP TS 26.226 [18].

Defined in: LocalControl.

Characteristics: Read/Write.

Text Protocol Version:

PropertyID: textproto (0x0003).

Description: The version of the ITU-T Recommendation T.140 [19] protocol used in the connection.

Type: Integer.

Possible values:

- Any integer corresponding to a T.140 version number (currently 1) as in ITU-T Recommendation H.248 .2(Annex F) [17].

Defined in: LocalControl.

Characteristics: Read/Write.

15.1.6.2 Events

Connection State Change:

EventID: connchange (0x0001).

Description:

- This event will occur when the text connection state for the termination has changed.

- The parameter values are the same as the Connection State property.

- If a CTM availability request timed out, the state is returned to Idle.

EventDescriptorParameters:

None.

ObservedEventDescriptorParameters:

ParameterName: Connection Change.

ParameterID: connchng (0x0001).

Type: Enumeration.

Possible Values: As property threegctm/connstate.

****

Next modified Section

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15.1.6.5   Procedures

If the MGC detects a CTM indication it shall send a request (Add/Modify/Move) with the CTM Transport property. Upon receivable of it, the MGW shall allocate a termination with CTM capabilities. Normal usage is that the CTM enabled termination handles one text stream and one voice stream and alternates between transporting voice and text in the voice channel according to the functionality of CTM. This termination could for example be combined in a context with a termination with the txp and ctyp packages for gateway functionality between PSTN text telephony and mobile CTM based text telephony. These packages are described in ITU-T Recommendation H.248 (Annex F).2 [17].

The CTM algorithm has states. The states defined in the text termination connection state property are mapped into CTM states in the following way:

- Idle: CTM disabled because of an unsuccessful CTM availability negotiation.

- Prepare: normal initial state with CTM monitoring active.

- Connected: CTM negotiation is completed.

For each new call, the CTM termination shall be put in the Prepare state.

When the CTM availability negotiation is completed, the state is Connected.

The state transitions are automatic, except for setting Prepare state as described above.