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H.248.4
Corrigendum 1
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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Communication procedures

Gateway control protocol: Transport over Stream Control Transmission Protocol (SCTP)

Corrigendum 1

ITU-T Recommendation H.248.4 (2000) – Corrigendum 1

ITU-T H-SERIES RECOMMENDATIONS

AUDIOVISUAL AND MULTIMEDIA SYSTEMS

For further details, please refer to the list of ITU-T Recommendations.

ITU-T Recommendation H.248.4

Gateway control protocol: Transport over Stream Control Transmission Protocol (SCTP)

Corrigendum 1

Summary

This Recommendation defines the transport of H.248.1 Gateway Control Protocol messages over the Stream Control Transmission Protocol (SCTP). SCTP is an alternative to UDP or TCP. Transport of H.248.1 over UDP or TCP is defined in Annex D/H.248.1.

The corrections incorporated by this corrigendum are:

• clarification of number of SCTP Streams;

• clarification of "At-Most-Once" functionality in H.248.4;

• clarification of MTP3 Interworking.

NOTE – This Recommendation has been renumbered. It was formerly known as ITU-T Rec. H.248, Annex H.

FOREWORD

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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ITU-T Recommendation H.248.4

Gateway control protocol: Transport over Stream Control Transmission Protocol (SCTP)

Corrigendum 1

1)   Clause 1 – Overview

Revise clause 1 as follows:

1   Overview

This Recommendation defines a package that extends the applicability of ITU-T Rec. H.248.1, Gateway control protocol. In particular, this Recommendation defines the transport of H.248.1 Gateway Control Protocol messages over the Stream Control Transmission Protocol (SCTP).

Protocol messages may be transmitted over the Stream Control Transmission Protocol (SCTP).

In a transaction-oriented protocol like H.248.1, there are still ways for transaction requests or responses to be lost, e.g., caused by entity/component failure. As such, it is recommended that entities using SCTP transport implement application level timers for each request.

Commands should be sent to the default port number, 2944 for text-encoded operation, or 2945 for binary-encoded operation. Responses must be sent to the address and port from which the corresponding commands were sent, except if the response is to a handoff or failover, in which case the procedures of 11.5/H.248.1 apply. SCTP payload protocol identifier shall be 7.

To provide interworking between MTP3B and SCTP, and to allow for flexible implementations of gateways and controllers in order to offer efficient use of SCTP associations, the M3UA layer may be added on top of SCTP.

2)   Clause 2 – Normative references

Revise clause 2 as follows:

2   Normative references

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

–   ITU-T Recommendation H.248.1 (05/2002), *Gateway Control Protocol*: *Version 2*.

–   IETF RFC 2960 (2000), *Stream Control Transmission Protocol*.

3)   Clause 3 – Providing the At-Most-Once functionality

Revise clause 3 as follows:

3   Providing the At-Most-Once functionality

SCTP is designed to recover from transport losses or duplications, but loss of a transaction request or its reply may nonetheless be noted in real implementations. In the absence of a timely response, H.248.1 may repeat commands. Most H.248.1 commands are not idempotent. The state of the Media Gateway (MG) would become unpredictable if, for example, Add commands were executed several times.

To guard against such losses, it is recommended that entities follow the procedures in Annex D.1.1/H.248.1 with two exceptions:

–   LONG-TIMER shall not be used to remove a Transaction Identity from the list of responses. The SCTP Data acknowledge or a response to the requested command shall be used;

–   the TransactionResponseAck parameter shall not be used.

4)   Clause 8 – Stream independence

Revise clause 8 as follows:

8   Stream independence

SCTP can provide up to ~~65536~~ 65535 unidirectional streams in each direction of an MGC-MG association. SCTP transmits messages and processes received messages in one stream, independent to the order or status of messages in any other streams. H.248.1 may avoid head-of-line blocking by transmitting unrelated transactions on different streams. Reliability is still provided. Ordering of messages is available per-stream.

It is recommended that transactions related to one context are transported over the same stream.

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