

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

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OF ITU

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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Communication
procedures

Gateway control protocol: DCME interworking package

Recommendation ITU-T H.248.42

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Gateway control protocol: DCME interworking package

Summary

The DCME Package is used for interfacing digital circuit multiplication equipment (DCME). DCME types are for instance defined by Recommendations ITU-T G.763, G.767 or G.768. There is a signalling interface defined between DCME and a so-called "international switching centre" (ISC). Recommendation ITU-T Q.50 defines such an interface. The DCME Package scopes DCME with Q.50 interfaces.

This revision of Recommendation ITU-T H.248.42 adds new parameters for events, to allow the media gateway controller (MGC) to resynchronize itself in the event it loses track of this state.

Source

Recommendation ITU-T H.248.42 was approved on 16 March 2009 by ITU-T Study Group 16 (2009-2012) under Recommendation ITU-T A.8 procedure.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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.

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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, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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Recommendation ITU-T H.248.42

Gateway control protocol: DCME interworking package

1 Scope

The DCME Package is used for interfacing digital circuit multiplication equipment (DCME). DCME types are for instance, defined by [b-ITU-T G.763], [b-ITU-T G.767] or [b-ITU-T G.768]. There is a signalling interface defined between DCME and a so-called "international switching centre" (ISC). [ITU-T Q.50] defines such an interface. The DCME Package scopes DCME with Q.50 interfaces (see Figure 1).

NOTE 1 – Relation to PCME [b-ITU-T G.765]: the DCME package may be applied in principle as well for PCME types with Q.50-based CME signalling and E1/PDH trunk interface types. The final decision is still for further studies, e.g., due to dependencies with the still open clause 19 of [b-ITU-T G.765] on dynamic load control.

NOTE 2 – Relation to IP-CME [b-ITU-T G.769]: the DCME package may be applied for IP-CME types with Q.50-based CME signalling and E1/PDH trunk interface types. Other trunk facilities are for further study.

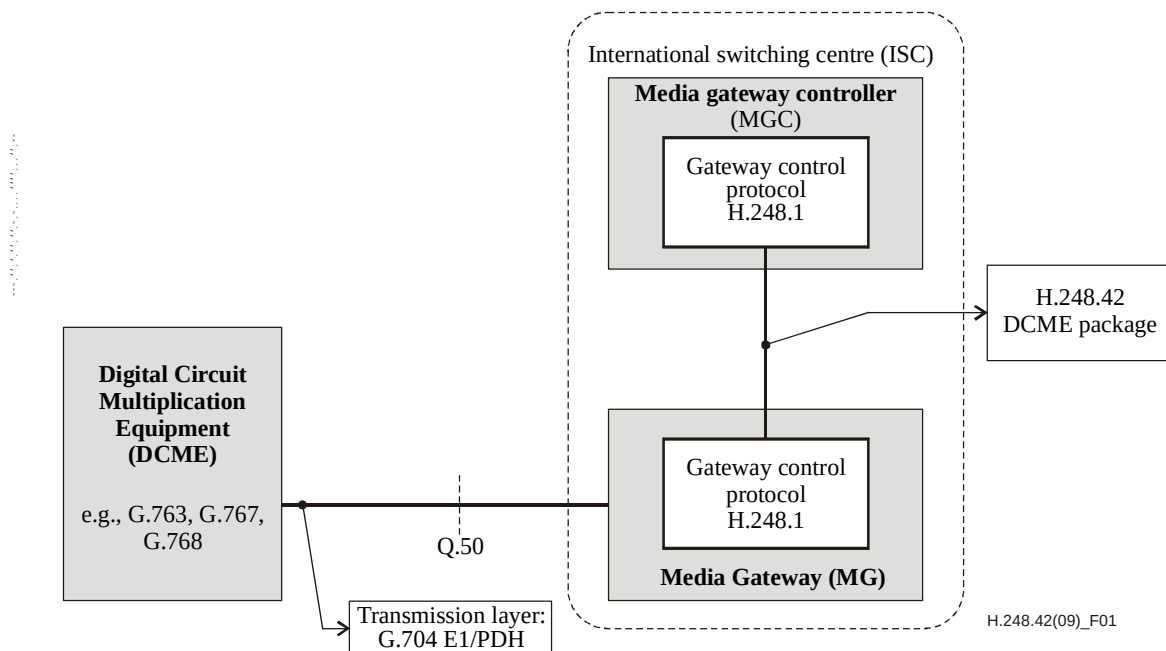


Figure 1 – Scope of the DCME Package

The DCME Package must support DCME-ISC signalling interface functions. The required Package capabilities may be summarized by the following overview from [b-ITU-T G.763] and [ITU-T Q.50]. There are three major groups of functions:

- *Transmission resource management*
Facilitates the dynamic load control process within the ISC and the DCME concurrently, based on the status of the traffic loading on the DCME system.
- *Seizure/release of 64 kbit/s circuits*
Used in the DCME for the generation of internal assignment and disconnection messages and in the ISCs for the validation of circuit seizure selection/release based on acknowledgement from the DCME.

- *Maintenance information*
Facilitates information exchange between the DCME and the ISCs pertaining to the maintenance status. Maintenance status information may be exchanged between the DCME and the ISC.

2 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 G.704] Recommendation ITU-T G.704 (1998), *Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels.*
- [ITU-T H.248.1] Recommendation ITU-T H.248.1 (2005), *Gateway control protocol: Version 3, including its Amendment 1 (2008).*
- [ITU-T H.248.8] Recommendation ITU-T H.248.8 (2005), *Gateway control protocol: Error code and service change reason description.*
- [ITU-T H.248.33] Recommendation ITU-T H.248.33 (2005), *Gateway control protocol: PCM frame spare bit package.*
- [ITU-T Q.50] Recommendation ITU-T Q.50 (2001), *Signalling between Circuit Multiplication Equipment (CME) and International Switching Centres (ISC).*

3 Terms and definitions

None.

4 Abbreviations

This Recommendation uses the following abbreviations:

2PTY	Two-Party
3PTY	Three-Party
C2C	Circuit-to-Circuit
C2P	Circuit-to-Packet
CAS	Channel Associated Signalling
CME	Circuit Multiplication Equipment
CSN	Circuit-Switched Network
DCME	Digital Circuit Multiplication Equipment
DS	Dual Seizure
IP-CME	CME optimized for IP-based networks
ISC	International Switching Centre
MG	Media Gateway
MGC	Media Gateway Controller

MPTY	Multiparty
NGN	Next Generation Network
NROR	No Response On Release
OoS	Out of Service
P2P	Packet-to-Packet
PCM	Pulse Code Modulation
PCME	Packet Circuit Multiplication Equipment
PSN	Packet-Switched Network
RDSD	Remote DCME Signalling Disabled
SNOT	Seizability NOT yet enabled
TDM	Time Division Multiplexing
TRM	Transmission Resource Management
TS	Time-Slot
UKLS	UnKnown Line State

5 DCME interworking package

Package Name:	DCME Interworking package
Package ID:	dcme (0x009e)
Description:	This package defines the H.248 signals and events for a decomposed international switching centre (ISC) following [ITU-T Q.50]. The intention of this package is to be independent of [ITU-T Q.50] Annexes A and B implementation. The H.248 MG provides PCM30 [ITU-T G.704] compliant 2 Mbit/s interface(s), whereas time-slot 16 is used to carry the ISC-DCME signalling protocol. The "term PCM30" is defined in clause 3.1 of [ITU-T H.248.33].
Version:	2
Extends:	None

5.1 Properties

5.1.1 DCME protocol

Property Name:	DCME Protocol
Property ID:	cmeprotocol (0x0001)
Description:	The specific protocol (ISC ↔ DCME) supported for a 2 Mbit/s interface. Note that the MG shall provision this property for the physical termination representing time-slot 16. For the other physical terminations of the 2 Mbit/s interface, this is optional.
Type:	Enumeration
Possible values:	"None" (0x0001) "Q50AnnexA" (0x0002) "Q50AnnexB" (0x0003)

