



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.762

(12/1999)

SERIES Q: SWITCHING AND SIGNALLING

Specifications of Signalling System No. 7 – ISDN user part

Signalling System No. 7 – ISDN User Part general functions of messages and signals

ITU-T Recommendation Q.762

(Formerly CCITT Recommendation)

SIGNALLING IN THE INTERNATIONAL MANUAL SERVICE	Q.1-Q.3
INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING	Q.4-Q.59
FUNCTIONS AND INFORMATION FLOWS FOR SERVICES IN THE ISDN	Q.60-Q.99
CLAUSES APPLICABLE TO ITU-T STANDARD SYSTEMS	Q.100-Q.119
SPECIFICATIONS OF SIGNALLING SYSTEMS No. 4 AND No. 5	Q.120-Q.249
SPECIFICATIONS OF SIGNALLING SYSTEM No. 6	Q.250-Q.309
SPECIFICATIONS OF SIGNALLING SYSTEM R1	Q.310-Q.399
SPECIFICATIONS OF SIGNALLING SYSTEM R2	Q.400-Q.499
DIGITAL EXCHANGES	Q.500-Q.599
INTERWORKING OF SIGNALLING SYSTEMS	Q.600-Q.699
SPECIFICATIONS OF SIGNALLING SYSTEM No. 7	Q.700-Q.849
General	Q.700
Message transfer part (MTP)	Q.701-Q.709
Signalling connection control part (SCCP)	Q.711-Q.719
Telephone user part (TUP)	Q.720-Q.729
ISDN supplementary services	Q.730-Q.739
Data user part	Q.740-Q.749
Signalling System No. 7 management	Q.750-Q.759
ISDN user part	Q.760-Q.769
Transaction capabilities application part	Q.770-Q.779
Test specification	Q.780-Q.799
Q3 interface	Q.800-Q.849
DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 1	Q.850-Q.999
PUBLIC LAND MOBILE NETWORK	Q.1000-Q.1099
INTERWORKING WITH SATELLITE MOBILE SYSTEMS	Q.1100-Q.1199
INTELLIGENT NETWORK	Q.1200-Q.1699
SIGNALLING REQUIREMENTS AND PROTOCOLS FOR IMT-2000	Q.1700-Q.1799
BROADBAND ISDN	Q.2000-Q.2999

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

ITU-T Recommendation Q.762

Signalling System No. 7 – ISDN User Part general functions of messages and signals

Summary

This ITU-T Recommendation describes the messages, parameters and the signalling information contained within parameters used by the ISDN user part protocol, and their function.

Source

ITU-T Recommendation Q.762 was prepared by ITU-T Study Group 11 (1997-2000) and approved under the WTSC Resolution 1 procedure on 3 December 1999.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), 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 WTSC 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.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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.

© ITU 2001

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

	Page
1 General	1
1.1 Scope	1
1.2 References	1
1.3 Terms and definitions	1
1.4 Abbreviations	2
2 Signalling messages.....	4
3 Signalling parameters	7
4 Parameter information	12



ITU-T Recommendation Q.762**Signalling System No. 7 – ISDN User Part general functions of messages and signals****1 General****1.1 Scope**

This ITU-T Recommendation describes the elements of signalling information used by the ISDN user part protocol and their function. The encoding of these elements, the format of the messages in which they are conveyed, and an indication of whether or not they are for national use, are described in ITU-T Recommendation Q.763 [1].

1.2 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; all 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.

- [1] ITU-T Recommendation Q.763 (1999), *Signalling System No. 7 – ISDN user part formats and codes*.
- [2] CCITT Recommendation Q.28 (1988), *Determination of the moment of the called subscriber's answer in the automatic service*.
- [3] CCITT Recommendation E.260 (1988), *Basic technical problems concerning the measurement and recording of call durations*.
- [4] CCITT Recommendation Q.101 (1988), *Facilities provided in international semi-automatic working*.
- [5] ITU-T Recommendation Q.1218 (1995), *Interface Recommendation for intelligent network CS-1*.
- [6] ITU-T Recommendation Q.1228 (1997), *Interface Recommendation for intelligent network CS-2*.
- [7] ITU-T Recommendation E.412 (1998), *Network management controls*.
- [8] ITU-T Recommendation Q.850 (1998), *Use of cause and location in the digital subscriber Signalling System No. 1 and Signalling System No. 7 ISDN user part*.
- [9] CCITT Recommendation X.229 (1988), *Remote Operations: Protocol specification*.
- [10] ITU-T Recommendation X.121 (1996), *International numbering plan for public data networks*.
- [11] CCITT Recommendation E.212 (1988), *Identification plan for land mobile stations*.
- [12] ITU-T Recommendation Q.704 (1996), *Signalling network functions and messages*.

1.3 Terms and definitions

See clauses 2 to 4.

1.4 Abbreviations

This ITU-T Recommendation uses the following abbreviations:

APP	Application Transport Parameter
ASE	Application Service Element
ATII	Application Transport Instruction Indicators
CCBS	Completion of Calls to Busy Subscriber
CCNR	Completion of Calls on No Reply
CCSS	Call Completion Service Setup
DNIC	Data Network Identification Code
ECT	Explicit Call Transfer
GVNS	Global Virtual Network Service
ID	Identifier
IN	Intelligent Network
ISC	International Switching Centre
LFB	Look For Busy
MCID	Malicious Call Identification
MLPP	Multilevel Precedence and Pre-emption
MNIC	Mobile Network Identification Code
PDU	Protocol Data Unit
QoR	Query on Release
ROER	Remote Operation Error
ROIV	Remote Operation Invoke
RORJ	Remote Operation Reject
RORS	Remote Operation Result
SCCP	Signalling Connection Control Part
SCF	Service Control Function
SLR	Segmentation Local Reference
UID	User Interactive Dialogue
WGS-84	World Geodetic System 1984

Table 1 defines the acronyms used for ISDN user part messages.

Table 1/Q.762 – ISDN user part message acronyms

Acronym	Message
ACM	Address complete
ANM	Answer
APM	Application transport
BLA	Blocking acknowledgement
BLO	Blocking
CCR	Continuity check request
CFN	Confusion
CGB	Circuit group blocking
CGBA	Circuit group blocking acknowledgement
CGU	Circuit group unblocking
CGUA	Circuit group unblocking acknowledgement
CON	Connect
COT	Continuity
CPG	Call progress
CRG	Charge information
CQM	Circuit group query
CQR	Circuit group query response
DRS	Delayed release (reserved – used in 1988 version)
FAA	Facility accepted
FAC	Facility
FAR	Facility request
FOT	Forward transfer
FRJ	Facility reject
GRA	Circuit group reset acknowledgement
GRS	Circuit group reset
IAM	Initial address
IDR	Identification request
IRS	Identification response
INF	Information
INR	Information request
LPA	Loop back acknowledgement
LOP	Loop prevention
NRM	Network resource management
OLM	Overload
PAM	Pass-along
PRI	Pre-release information
REL	Release
RES	Resume
RLC	Release complete
RSC	Reset circuit
SAM	Subsequent address
SDM	Subsequent directory number
SGM	Segmentation
SUS	Suspend
UBL	Unblocking
UBA	Unblocking acknowledgement
UCIC	Unequipped circuit identification code
UPA	User part available
UPT	User part test
USR	User-to-user information

2 Signalling messages

2.1 Address Complete Message (ACM): A message sent in the backward direction indicating that all the address signals required for routing the call to the called party have been received.

2.2 Answer message (ANM): A message sent in the backward direction indicating that the call has been answered. In semi-automatic working, this message has a supervisory function. In automatic working, this message is used in conjunction with charging information in order to:

- start metering the charge to the calling subscriber (see Recommendation Q.28 [2]); and
- start measurement of call duration for international accounting purposes (see Recommendation E.260 [3]).

2.3 Application Transport message (APM): A message sent in either direction to convey application information using the Application Transport mechanism.

2.4 Blocking message (BLO): A message sent only for maintenance purposes to the exchange at the other end of a circuit, to cause an engaged condition of that circuit for subsequent calls outgoing from that exchange. When a circuit is used in the bothway mode of operation, an exchange receiving the blocking message must be capable of accepting incoming calls on the concerned circuit unless it has also sent a blocking message. Under certain conditions, a blocking message is also a proper response to a reset circuit message.

2.5 Blocking Acknowledgement message (BLA): A message sent in response to a blocking message indicating that the circuit has been blocked.

2.6 Call Progress message (CPG): A message, sent in either direction during the setup or active phase of the call, indicating that an event, which is of significance, and should be relayed to the originating or terminating access, has occurred.

2.7 Charge information message (CRG): Information sent in either direction for accounting and/or call charging purposes.

2.8 Circuit Group Blocking message (CGB): A message sent to the exchange at the other end of an identified group of circuits to cause an engaged condition of this group of circuits for subsequent calls outgoing from that exchange. An exchange receiving a circuit group blocking message must be able to accept incoming calls on the group of blocked circuits unless it has also sent a blocking message. Under certain conditions, a circuit group blocking message is also a proper response to a reset circuit message.

2.9 Circuit Group Blocking Acknowledgement message (CGBA): A message sent in response to a circuit group blocking message to indicate that the requested group of circuits has been blocked.

2.10 circuit Group Reset message (GRS): A message sent to release an identified group of circuits when, due to memory mutilation or other causes, it is unknown whether for example, a release or release complete message is appropriate for each of the circuits in the group. If at the receiving end a circuit is remotely blocked, reception of this message should cause that condition to be removed.

2.11 circuit Group Reset Acknowledgement message (GRA): A message sent in response to a circuit group reset message and indicating that the requested group of circuits has been reset. The message also indicates the maintenance blocking state of each circuit.

2.12 Circuit Group Unblocking message (CGU): A message sent to the exchange at the other end of an identified group of circuits to cause cancellation in that group of circuits of an engaged condition invoked earlier by a blocking or circuit group blocking message.