INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.2726.3

SERIES Q: SWITCHING AND SIGNALLING

Broadband ISDN – B-ISDN application protocols for the network signalling

B-ISDN user part – Network generated session identifier

ITU-T Recommendation Q.2726.3

ITU-T Q-SERIES RECOMMENDATIONS

SWITCHING AND SIGNALLING

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

ITU-T RECOMMENDATION Q.2726.3

B-ISDN USER PART – NETWORK GENERATED SESSION IDENTIFIER

Summary

This Recommendation specifies the extensions to the Broadband ISDN User Part to support the network-generated session identifier.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The 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 their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 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

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The 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, the ITU had/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.

CONTENTS

Recommendation Q.2726.3

B-ISDN USER PART – NETWORK GENERATED SESSION IDENTIFIER

(Geneva, 1996)

3 Network call correlation identifier

3.1 Overview

3.1.1 Scope

This Recommendation defines a Network Call Correlation Identifier for a call between the user and the network. It can be used to correlate records at multiple exchanges within a network, e.g. for accounting purposes. The identifier is not used to trigger real-time processing at a receiving exchange.

3.1.2 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.2763 (1995), *Signalling System No. 7 B-ISDN User Part (B-ISUP) – Formats and codes.*

3.1.3 Abbreviations

This Recommendation uses the following abbreviation.

MLPP   Multi-Level Precedence and Preemption

3.2 B-ISDN User Part Messages and Parameters

3.2.1 Definitions

This Recommendation defines the following terms.

3.2.1.1 network call correlation identifier: Circuit independent information identifying a particular call for the purpose of correlating call related information at different exchanges.

3.2.1.2 connection identifier: Information identifying a specific connection within a call on an end-to-end basis.

3.2.2 Messages

The following tables show the impact of the new parameters on message coding.

3.2.2.1 IAM

The IAM contains the following additional parameters (see Table 3-1):

Table 3-1/Q.2726.3 – Additional Parameters to be included in the IAM

IAM
Network Call Correlation Identifier
Connection Identifier

3.2.2.2 ACM

The ACM contains the following additional parameter (see Table 3-2):

Table 3-2/Q.2726.3 – Additional Parameter to be included in the ACM

ACM
Connection Identifier

3.2.2.3 ANM

The ANM contains the following additional parameter (see Table 3-3):

Table 3-3/Q.2726.3 – Additional Parameter to be included in the ANM

ANM
Connection Identifier

3.2.3 Formats

3.2.3.1 Network Call Correlation Identifier

The format of the Network Call Correlation Identifier parameter field is shown in Figure 3-1.

The parameter name code allocated to the Network Call Correlation Identifier parameter is 0110 1000.

	8	7	6	5	4	3	2	1
1	1st NI digit				2nd NI digit			
2	3rd NI digit				4th NI digit			
3	Point code							
4								
5								
6	Call identifier							
7								
8								
9								

Figure 3-1/Q.2726.3 – Network Call Correlation Identifier parameter

The following codes are used in the subfields of the Network Call Correlation Identifier parameter field:

a)   *Network identity (NI) (octets 1 and 2)*

Coding as specified for the MLPP precedence parameter sub-field in Recommendation Q.2763.

b)   *Point code*

Point code of the exchange generating the Network Call Correlation Identifier. Bit 1 of octet 3 is the least significant bit and bit 8 of octet 5 is the most significant bit. Unused bits shall be coded as 0s.

NOTE – This format supports a 3-octet field for the point code of the generating node to allow for national point code arrangements. International point code would use octet 3 and bits 1 to 6 of octet 4.
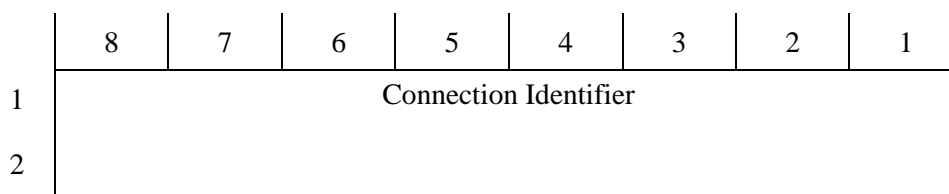
c)   *Call Identifier*

A bit string representing the identification allocated to the call.

3.2.3.2   Connection Identifier

The format of the Connection Identifier parameter field is shown in Figure 3-2.

The parameter name code allocated to the Connection Identifier parameter is 0110 1001.

8	7	6	5	4	3	2	1
1			Connection Identifier				
2							

Figure 3-2/Q.2726.3 – Connection Identifier parameter field

The following codes are used in the sub-fields of the Connection Identifier parameter field:

a)   *Connection Identifier*

A bit string representing the identification allocated to the connection within a call.

3.3   Application Process Procedures

a)   *Originating Exchange*

The Set_Up request primitive may include Network Call Correlation Identifier. The algorithm used to allocate Network Call Correlation Identifier to the call is implementation dependent. However, every call must be assigned a unique Network Call Correlation Identifier that is also unique over a sufficiently long time period. In other words, the exchange should sequence through a broad range of call identifier values before reusing a value. The exchange, for instance, cannot immediately reuse a call identifier value for another call. For a multiconnection call for which a Network Call Correlation Identifier has been generated, the Set_Up request primitive shall also include a Connection Identifier. The Connection Identifier value shall uniquely identify the connection, within the context of the call.

For a point-to-multipoint call, the Set_Up request primitive for additional parties shall include the same Network Call Correlation Identifier as for the first leaf party. The exchange may store the Network Call Correlation Identifier for the duration of the call for recording call related information and shall release it when the call is released.

b)   *Intermediate Exchange*

The intermediate exchanges may store the Network Call Correlation and Connection Identifiers for the duration of the call for recording call related information and shall release them when the call is released. The intermediate exchanges shall pass these parameters unaltered.

If an intermediate exchange does not receive a Network Call Correlation Identifier for a point-to-point call, it may generate a Network Call Correlation Identifier and include it in the Set_Up request primitive issued.

c)   *Destination Exchange*

The destination exchange may store the Network Call Correlation and Connection Identifiers for the duration of the call for recording call related information and shall release them when the call is released.

d) *Addition of connections to a multiconnection call*

For a call for which a Network Call Correlation Identifier has been generated:

1) For connections added by the calling party, the Set-Up request primitive shall include a Connection Identifier. The Connection Identifier value shall uniquely identify the connection, within the context of the call.

2) For connections added by the called party the Set-Up request primitive shall not include the Connection Identifier parameter. When the corresponding Set-Up indication primitive is received at the call origination exchange, the generated Address_Complete request primitive or Answer request primitive shall include the Connection Identifier for this added connection.

The intermediate exchanges may store the Connection identifier for the duration of the connection for recording call related information and shall release it when the connection is released. The intermediate exchanges shall pass this parameter unaltered.

The destination exchange may store the Connection Identifier received in the Address_Complete indication primitive or Answer indication primitive for the duration of the connection for recording call related information and shall release it when the connection is released.

3.4 Application Service Elements and Primitives

The following primitives are affected.

3.4.1 Primitives Between SACF and Application Process

3.4.1.1 Set_Up Request/Indication Primitive

Table 3-4 shows parameters that must be added to the Set_Up Request/Indication primitive.

Table 3-4/Q.2726.3 – Parameters for Set_Up Request/Indication Primitive

Set_Up Request/Indication	B-ISDN	N-ISDN
Network Call Correlation Identifier	O	O
Connection Identifier	O	O

3.4.1.2 Address_Complete Request/Indication Primitive

Table 3-5 shows parameter that must be added to the Address_Complete Request/Indication primitive.

Table 3-5/Q.2726.3 – Parameter for Address_Complete Request/Indication Primitive

Address_Complete Request/Indication	B-ISDN	N-ISDN
Connection Identifier	O	O

3.4.1.3   Answer Request/Indication Primitive

Table 3-6 shows parameter that must be added to the Answer Request/Indication primitive.

Table 3-6/Q.2726.3 – Parameter for Answer Request/Indication Primitive

Answer Request/Indication	B-ISDN	N-ISDN
Connection Identifier	O	O

3.4.2   Primitives between CC ASE and SAC

3.4.2.1   Call_Set_Up Request/Indication Primitive

Table 3-7 shows new parameters that must be added to the Call_Set_Up Request/Indication primitive.

Table 3-7/Q.2726.3 – Parameters for Call_Set_Up Request/Indication Primitive

Call_Set_Up Request/Indication
Network Call Correlation Identifier
Connection Identifier

3.4.2.2   Call_Address_Complete request/indication primitive

Table 3-8 shows new parameter that must be added to the Call_Address_Complete request/indication primitive.

Table 3-8/Q.2726.3 – Parameter for Call_Address_Complete request/indication primitive

Call_Address_Complete request/indication
Connection identifier

3.4.2.3   Call_Answer Request/Indication Primitive

Table 3-9 shows new parameter that must be added to the Call_Answer Request/Indication primitive.

Table 3-9/Q.2726.3 – Parameter for Call_Answer Request/Indication Primitive

Call_Answer Request/Indication
Connection identifier

3.4.3   ASE descriptions

No changes are required to the ASE descriptions for BCC or CC ASEs.

3.5   Interworking

3.5.1   Interworking with CS-1 Nodes

The instruction indicators are set so as to pass on these parameters at a CS-1 node.

The setting of the instruction indicators is shown in Appendix I.

3.5.2 Interworking with ISUP

The instruction indicators are set so as to discard these parameters at an interworking node.

3.5.3 Interworking with DSS 2

There is no interworking with DSS 2. The parameters are discarded at the interworking local exchange.

APPENDIX I

Setting of instruction indicators

The setting of the instruction indicators for the Network Call Correlation Identifier parameter is as follows:

Parameter	Pass on not possible ind.	Discard parameter ind.	Discard message ind.	Send notification ind.	Release call ind.	Transit at intermed. exchange ind.	Broadband/ Narrow-band interworking ind.
Network Call Correlation Identifier	Discard parameter	Do not discard parameter	Do not discard message	Do not send notification	Do not release call	Transit node interpretation	Discard parameter

The setting of the instruction indicators for the Connection Identifier parameter is as follows:

Parameter	Pass on not possible ind.	Discard parameter ind.	Discard message ind.	Send notification ind.	Release call ind.	Transit at intermed. exchange ind.	Broadband/ Narrow-band interworking ind.
Connection Identifier	Discard parameter	Do not discard parameter	Do not discard message	Do not send notification	Do not release call	Transit node interpretation	Discard parameter

ITU-T RECOMMENDATIONS SERIES

Series A   Organization of the work of the ITU-T

Series B   Means of expression

Series C   General telecommunication statistics

Series D   General tariff principles

Series E   Telephone network and ISDN

Series F   Non-telephone telecommunication services

Series G   Transmission systems and media

Series H   Transmission of non-telephone signals

Series I   Integrated services digital network

Series J   Transmission of sound-programme and television signals

Series K   Protection against interference

Series L   Construction, installation and protection of cables and other elements of outside plant

Series M   Maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits

Series N   Maintenance: international sound-programme and television transmission circuits

Series O   Specifications of measuring equipment

Series P   Telephone transmission quality

Series Q   **Switching and signalling**

Series R   Telegraph transmission

Series S   Telegraph services terminal equipment

Series T   Terminal equipments and protocols for telematic services

Series U   Telegraph switching

Series V   Data communication over the telephone network

Series X   Data networks and open system communication

Series Z   Programming languages