INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.1912.4

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(07/2001)

SERIES Q: SWITCHING AND SIGNALLING

Specifications of signalling related to Bearer Independent Call Control (BICC)

Interworking between Digital Subscriber Signalling System No. 2 and the Bearer Independent Call Control protocol

ITU-T Recommendation Q.1912.4

(Formerly CCITT Recommendation)

ITU-T Q-SERIES RECOMMENDATIONS

SWITCHING AND SIGNALLING

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.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
SPECIFICATIONS OF SIGNALLING RELATED TO BEARER INDEPENDENT CALL CONTROL (BICC)	**Q.1900–Q.1999**
BROADBAND ISDN	Q.2000–Q.2999

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

ITU-T Recommendation Q.1912.4

Interworking between Digital Subscriber Signalling System No. 2 and the Bearer Independent Call Control protocol

Summary

This Recommendation defines the signalling interworking for 64 kbit/s ISDN Circuit Mode Services between Digital Subscriber Signalling System No. 2 (DSS2) and Bearer Independent Call Control (BICC).

Source

ITU-T Recommendation Q.1912.4 was prepared by ITU-T Study Group 11 (2001-2004) and approved under the WTSA Resolution 1 procedure on 2 July 2001.

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 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.

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.

CONTENTS

ITU-T Recommendation Q.1912.4

Interworking between Digital Subscriber Signalling System No. 2 and the Bearer Independent Call Control protocol

1 Scope

This Recommendation defines the signalling interworking between the Bearer Independent Call Control (BICC) protocol and Digital Subscriber Signalling System No. 2 (DSS2). In this Recommendation, interworking is defined through the relationships in existing Recommendations for interworking between DSS2 and B-ISUP, in addition to interworking between B-ISUP and ISUP.

BICC is the protocol defined in ITU-T Q.1902.1 to Q.1902.4 [6]. DSS2 is defined by ITU-T Q.2931 [15], Q.2932.1 [17], Q.2951 [18], Q.2951.9 [19], Q.2957 [20], Q.2941.2 [21]. B-ISUP is the protocol defined in ITU-T Q.2761 to Q.2764 [14]. ISUP is the protocol defined in ITU-T Q.761 to Q.764 [4].

This Recommendation builds on:

– The signalling interworking between existing DSS2 and the B-ISDN User Part (B-ISUP) protocol as defined in various ITU-T Recommendations.

– The signalling interworking between existing B-ISUP signalling systems and the ISDN User Part (ISUP) protocol of Signalling System No. 7 as defined in various ITU-T Recommendations.

– The signalling interworking between the Bearer Independent Call Control (BICC) protocol and the ISDN User Part (ISUP) protocol of Signalling System No. 7 as defined in ITU-T Q.1912.1 [7].

The scope of this Recommendation as shown in Figure 1.

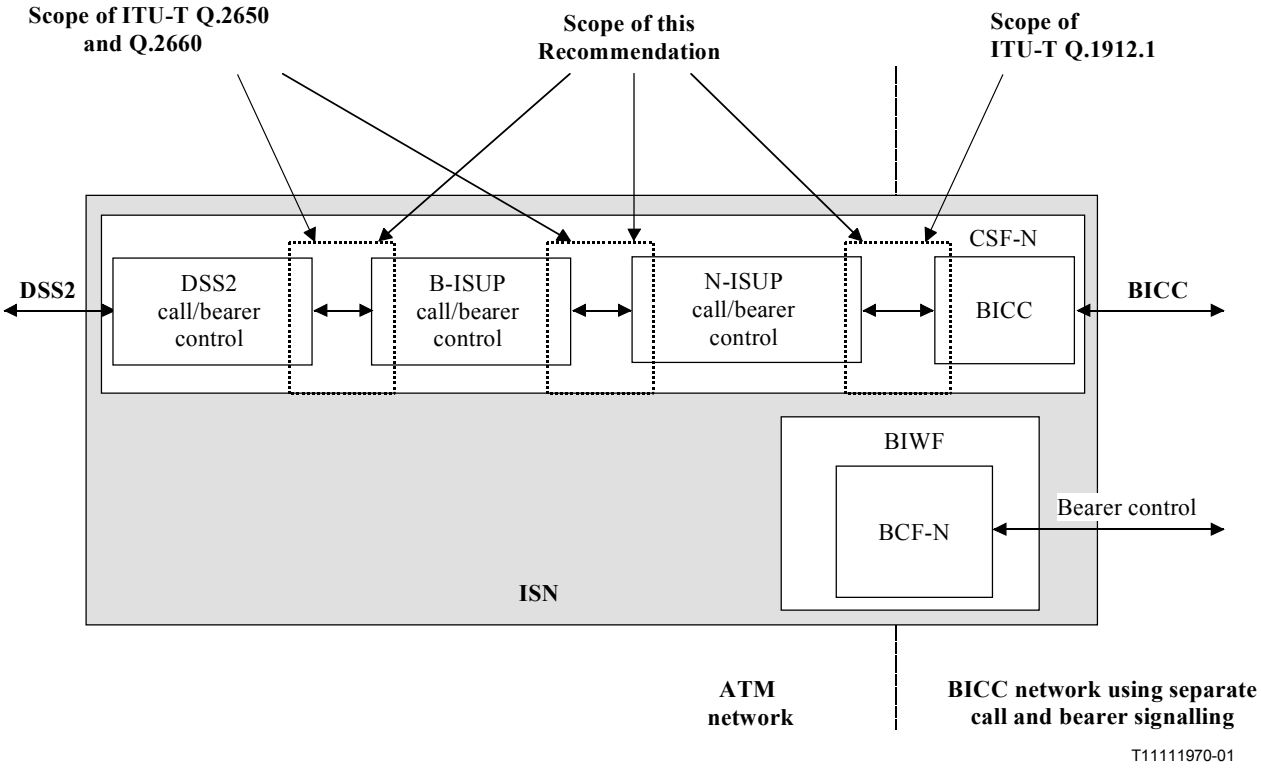

Figure 1/Q.1912.4 – Scope of this Recommendation for BICC/DSS2 interworking

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.

[1] ITU-T Q.617 (1993), *Logic procedures for incoming Signalling System No. 7 (ISUP)*.

[2] ITU-T Q.627 (1993), *Logic procedures for outgoing Signalling System No. 7 (ISUP)*.

[3] ITU-T Q.699 (1997), *ISDN access and non-ISDN access over ISDN user part of Signalling System No. 7*.

[4] ITU-T Q.761 to Q.764 (1999), *Specifications of Signalling System No. 7 ISDN user part (ISUP)*.

[5] ITU-T Q.931 (1998), *ISDN user-network interface layer 3 specification for basic call control*.

[6] ITU-T Q.1902.1 to Q.1902.4 (2001), *Specifications of the Bearer Independent Call Control protocol (BICC)*.

[7] ITU-T Q.1912.1 (2001), *Interworking between Signalling System No. 7 ISDN user part (ISUP) and the Bearer Independent Call Control protocol (BICC)*.

[8] ITU-T Q.118 (1997), *Abnormal conditions – Special release arrangements*.

[9] ITU-T Q.543 (1993), *Digital exchange performance design objectives*.

[10] ITU-T Q.2650 (1999), *Interworking between Signalling System No. 7 broadband ISDN user part (B-ISUP) and Digital Subscriber Signalling System No. 2 (DSS2)*.

[11] ITU-T Q.2660 (1999), *Interworking between Signalling System No. 7 broadband ISDN user part (B-ISUP) and narrow-band ISDN user part (N-ISUP)*.

[12] ITU-T Q.2730 (1999), *Signalling System No. 7 B-ISDN user part (B-ISUP) – Supplementary services*.

[13] ITU-T Q.2735.1 (1997), *Stage 3 description for community of interest supplementary services for B-ISDN using SS No. 7: Closed User Group (CUG)*.

[14] ITU-T Q.2761 to Q.2764 (1999), *Broadband Integrated Services Digital Network (B-ISDN) – Signalling System No. 7 B-ISDN user part (B-ISUP)*.

[15] ITU-T Q.2931 (1995), *Digital Subscriber Signalling System No. 2 – User-Network Interface (UNI) layer 3 specification for basic call/connection control*.

[16] ITU-T Q.2931, Amendment 2 (1999), *Digital Subscriber Signalling System No. 2 – User-Network Interface (UNI) layer 3 specification for basic call/connection control*.

[17] ITU-T Q.2932.1 (1996), *Digital Subscriber Signalling System No. 2 – Generic functional protocol: Core functions*.

[18] ITU-T Q.2951.1-8 (1995), *Stage 3 description for number identification supplementary services using B-ISDN Digital Subscriber Signalling System No. 2 (DSS2) – Basic Call*.

[19] ITU-T Q.2951.9 (1999), *Stage 3 description for number identification supplementary services using B-ISDN Digital Subscriber Signalling System No.2 (DSS2) – Basic Call: Support of ATM end system addressing format by Number identification supplementary services*.

[20] ITU-T Q.2957 (1995), *Stage 3 Description for Additional Information Transfer Supplementary Services Using B-ISDN Digital Subscriber Signalling System No. 2 (DSS2) – Basic Call*.

[21] ITU-T Q.2941.2 (1999), *Digital Subscriber Signalling System No. 2 – Generic identifier transport extensions*.

3 Definitions

For the BICC specific terminology, the reader is referred to ITU-T Q.1902.1 [6].

4 Abbreviations

This Recommendation uses the following abbreviations:

ATM Asynchronous Transfer Mode

BICC Bearer Independent Call Control

B-ISDN Broadband ISDN

B-ISUP Broadband ISUP

CSF-N Call Service Nodal Function

DSS1 Digital Subscriber Signalling System No. 1

DSS2 Digital Subscriber Signalling System No. 2

ISDN Integrated Services Digital Network

ISUP ISDN User Part

5 General considerations

This Recommendation specifies the interworking principle between BICC and Digital Subscriber Signalling System No. 2. The interworking is defined by the concatenation of information provided by several ITU-T Recommendations that are part of a set of interlocking B-ISDN service and signalling Recommendations that comprise broadband signalling capabilities. Figure 2 provides the functional grouping of the entities involved.

The B-ISDN access signalling DSS2 is specified in ITU-T Q.2931 [16]. The interworking between DSS2 for 64 kbit/s circuit mode services and BICC shall act according to the interworking between DSS2 and B-ISUP defined in ITU-T Q.2650 [10] and the interworking between B-ISUP and ISUP defined in ITU-T Q.2660 [11].

The ISDN circuit mode services are interworked following, in sequence, the procedures in ITU-T Q.2650 and Q.2660. The reader may find it helpful to read ITU-T Q.699 [3] for the detailed description of how indicator values are used when interworking 64 kbit/s ISDN Circuit Mode Services.

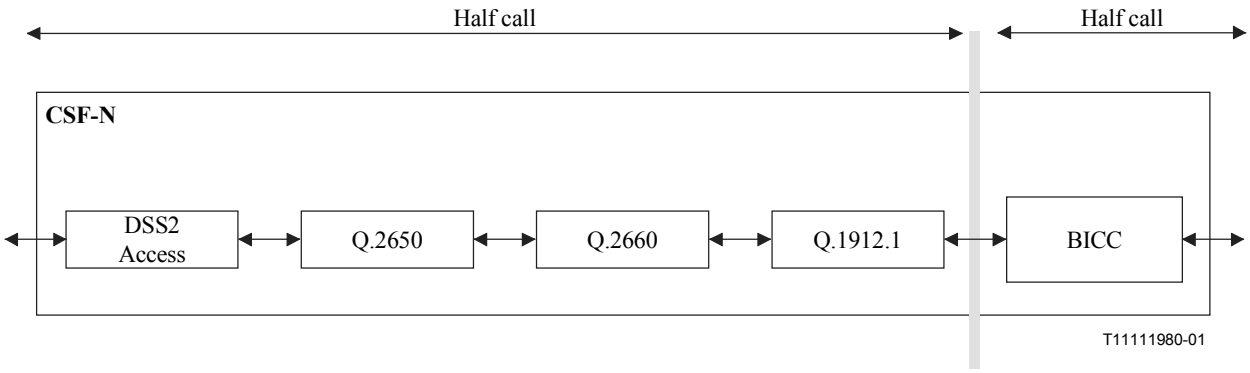

Figure 2/Q.1912.4 – Functional description of the interworking configuration

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network 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, telephone installations, local line networks
Series Q	**Switching and signalling**
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communications
Series Y	Global information infrastructure and Internet protocol aspects
Series Z	Languages and general software aspects for telecommunication systems

Printed in Switzerland
Geneva, 2002