



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.2920

(12/2003)

SERIES Q: SWITCHING AND SIGNALLING

Broadband ISDN – B-ISDN application protocols for
access signalling

**Broadband integrated services digital network
(B-ISDN) – Digital Subscriber Signalling
System No. 2 (DSS 2): Call/connection control
for the support of ATM-MPLS network
interworking**

ITU-T Recommendation Q.2920

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ITU-T Recommendation Q.2920

Broadband integrated services digital network (B-ISDN) – Digital Subscriber Signalling System No. 2 (DSS 2): Call/connection control for the support of ATM-MPLS network interworking

Summary

MPLS has the potential to consolidate service provider networks and services over a single common network core infrastructure. Different services and technologies such as ATM, frame relay, circuit emulation and IP can be supported over MPLS networks. DSS 2 may be used for setting up and controlling ATM connections between two ATM/MPLS network nodes attached to an MPLS network. Extensions to DSS 2 information elements and procedures are defined to allow the exchange of MPLS LSP labels and other parameters specific to support ATM services over MPLS networks.

Source

ITU-T Recommendation Q.2920 was approved on 22 December 2003 by ITU-T Study Group 11 (2001-2004) under the ITU-T Recommendation A.8 procedure.

Keywords

ATM, control plane, interworking, MPLS, network.

FOREWORD

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ITU-T Recommendation Q.2920

Broadband integrated services digital network (B-ISDN) – Digital Subscriber Signalling System No. 2 (DSS 2): Call/connection control for the support of ATM-MPLS network interworking

1 Scope

This Recommendation specifies extensions to the Digital Subscriber Signalling System No. 2 (DSS 2) protocol to allow the use of DSS 2 between two ATM/MPLS network equipments being connected via a Multi-Protocol Label Switching (MPLS) network as specified in ITU-T Recs Y.1411 and Y.1412.

This Recommendation addresses the role of ATM signalling to establish Interworking LSPs between IWFs (Interworking Functions) during ATM VCC or VPC establishment and to perform related signalling functions.

This Recommendation is part of the DSS 2 family of ITU-T Recommendations. It specifies extensions to DSS 2 Recommendations and does not repeat states, information elements, messages and procedures contained therein. DSS 2 extensions defined in this Recommendation are limited to point-to-point connections. Point-to-multipoint connections may be considered in the future.

This Recommendation is applicable to equipment, supporting DSS 2 signalling capabilities as defined, in particular, in ITU-T Recs Q.2931, Q.2934 and other DSS 2-related Recommendations.

TRQ.2830 [1] provides the signalling requirements for the support of ATM-MPLS network 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. 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 Y.1411 (2003), *ATM-MPLS network interworking – Cell mode user plane interworking*.
- ITU-T Recommendation Y.1412 (2003), *ATM-MPLS network interworking – Frame mode user plane interworking*.
- ITU-T Recommendation Q.2931 (1995), *Digital Subscriber Signalling System No. 2 – User-Network Interface (UNI) layer 3 specification for basic call/connection control*.
- ITU-T Recommendation Q.2934 (1998), *Digital Subscriber Signalling System No. 2 – Switched virtual path capability*.
- ITU-T Recommendation Q.2610 (1999), *Usage of cause and location in B-ISDN user part and DSS 2*.