



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

I.326

(03/2003)

SERIES I: INTEGRATED SERVICES DIGITAL
NETWORK

Overall network aspects and functions – Reference
models

Functional architecture of transport networks based on ATM

ITU-T Recommendation I.326

ITU-T I-SERIES RECOMMENDATIONS
INTEGRATED SERVICES DIGITAL NETWORK

GENERAL STRUCTURE	
Terminology	I.110–I.119
Description of ISDNs	I.120–I.129
General modelling methods	I.130–I.139
Telecommunication network and service attributes	I.140–I.149
General description of asynchronous transfer mode	I.150–I.199
SERVICE CAPABILITIES	
Scope	I.200–I.209
General aspects of services in ISDN	I.210–I.219
Common aspects of services in the ISDN	I.220–I.229
Bearer services supported by an ISDN	I.230–I.239
Teleservices supported by an ISDN	I.240–I.249
Supplementary services in ISDN	I.250–I.299
OVERALL NETWORK ASPECTS AND FUNCTIONS	
Network functional principles	I.310–I.319
Reference models	I.320–I.329
Numbering, addressing and routing	I.330–I.339
Connection types	I.340–I.349
Performance objectives	I.350–I.359
Protocol layer requirements	I.360–I.369
General network requirements and functions	I.370–I.399
ISDN USER-NETWORK INTERFACES	
Application of I-series Recommendations to ISDN user-network interfaces	I.420–I.429
Layer 1 Recommendations	I.430–I.439
Layer 2 Recommendations	I.440–I.449
Layer 3 Recommendations	I.450–I.459
Multiplexing, rate adaption and support of existing interfaces	I.460–I.469
Aspects of ISDN affecting terminal requirements	I.470–I.499
INTERNETWORK INTERFACES	
MAINTENANCE PRINCIPLES	
B-ISDN EQUIPMENT ASPECTS	
ATM equipment	I.730–I.739
Transport functions	I.740–I.749
Management of ATM equipment	I.750–I.759
Multiplexing aspects	I.760–I.769

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

ITU-T Recommendation I.326

Functional architecture of transport networks based on ATM

Summary

This Recommendation describes the functional architecture of the ATM transport assembly using the transport functional architecture defined in ITU-T Rec. G.805. The ATM transport assembly consists of the VC layer network, the VC to VP adaptation, the VP layer network and the VP to Transmission path adaptation. The features described in the I-series Recommendations that are relevant to ATM transport networks are described in this Recommendation. Annex A describes the correspondence between the terms used in ITU-T Recs I.326 and I.311.

Source

ITU-T Recommendation I.326 was revised by ITU-T Study Group 15 (2001-2004) and approved under the WTSA Resolution 1 procedure on 16 March 2003.

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.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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 2003

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

CONTENTS

Page

1	Scope	1
2	References.....	1
3	Abbreviations.....	2
4	Transport functional architecture of ATM networks.....	3
4.1	General	3
4.2	ATM layer networks.....	4
4.3	Client/server associations	5
4.4	Connection supervision	9
4.5	Survivability techniques	9
Annex A	– Correspondence of vocabulary between ITU-T Recs I.311 and I.326	10
A.1	ATM network layering	10
A.2	Topological components inside a layer network	10
A.3	Transport entities and transport functions	11
A.4	Reference points	11
Appendix I	– Multipoint connection.....	11
I.1	Multipoint connection point (MPCP).....	11
I.2	Representation of multipoint connections	11

Copyright International Telecommunication Union/ITU Telecommunication Sector
Provided by IHS Markit under license with ITU-T
No reproduction or networking permitted without license from IHS

ITU-T Recommendation I.326

Functional architecture of transport networks based on ATM

1 Scope

This Recommendation describes the ATM network as a transport network from the viewpoint of its information transfer capability. More specifically, the functional and structural architecture of a transport network based on ATM are described using the generic definitions, symbols and abbreviations that are defined in ITU-T Rec. G.805.

This Recommendation describes the functional architecture of the ATM transport network using the transport functional architecture defined in ITU-T Rec. G.805. The ATM transport network consists of the VC layer network, the VC to VP adaptation, the VP layer network and the VP to Transmission path adaptation. The features described in the I-series Recommendations that are relevant to ATM transport networks are described in this Recommendation. Annex A describes the correspondence between the terms used in ITU-T Recs I.326 and I.311.

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 G.707/Y.1322 (2000), *Network node interface for the synchronous digital hierarchy (SDH)*.
- ITU-T Recommendation G.709/Y.1331 (2003), *Interfaces for the Optical Transport Network (OTN)*.
- ITU-T Recommendation G.804 (1998), *ATM cell mapping into plesiochronous digital hierarchy (PDH)*.
- ITU-T Recommendation G.805 (2000), *Generic functional architecture of transport networks*.
- ITU-T Recommendation I.113 (1997), *Vocabulary of terms for broadband aspects of ISDN*.
- ITU-T Recommendation I.233 (1991), *Frame mode bearer services*.
- ITU-T Recommendation I.311 (1996), *B-ISDN general network aspects*.
- ITU-T Recommendation I.361 (1999), *B-ISDN ATM layer specification*.
- ITU-T Recommendation I.363.1 (1996), *B-ISDN ATM Adaptation Layer Specification: Type 1 AAL*.
- ITU-T Recommendation I.363.2 (2000), *B-ISDN ATM Adaptation Layer Specification: Type 2 AAL*.
- ITU-T Recommendation I.363.3 (1996), *B-ISDN ATM Adaptation Layer Specification: Type 3/4 AAL*.
- ITU-T Recommendation I.363.5 (1996), *B-ISDN ATM Adaptation Layer Specification: Type 5 AAL*.