



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Y.120

Annex A
(02/99)

SERIES Y: GLOBAL INFORMATION INFRASTRUCTURE
General

Global information infrastructure scenario
methodology

Annex A: Examples of use

ITU-T Recommendation Y.120 – Annex A

(Previously CCITT Recommendation)

ITU-T Y-SERIES RECOMMENDATIONS
GLOBAL INFORMATION INFRASTRUCTURE

General	Y.100–Y.199
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For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION Y.120

GLOBAL INFORMATION INFRASTRUCTURE SCENARIO METHODOLOGY

ANNEX A

Examples of use

Summary

This Annex presents scenario examples, based on the methodology described in Recommendation Y.120, primarily oriented towards provision of voice, data and video services.

Source

Annex A to ITU-T Recommendation Y.120, was prepared by ITU-T Study Group 13 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 15th of February 1999.

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 term *recognized operating agency (ROA)* includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration*, *ROA* and *public correspondence* are defined in the *Constitution of the ITU (Geneva, 1992)*.

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As of the date of approval of this Recommendation, the 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.

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Recommendation Y.120**GLOBAL INFORMATION INFRASTRUCTURE SCENARIO METHODOLOGY****ANNEX A****Examples of use***(Geneva, 1999)***A.1 Purpose of the scenarios**

The scenarios are intended to:

- a) facilitate the identification of key interface points in a scenario;
- b) facilitate classification of interfaces by an appropriate taxonomy scheme;
- c) facilitate identification of services that can be carried across such interfaces;
- d) facilitate classification of services by an appropriate taxonomy scheme;
- e) facilitate identification of end points for service delivery;
- f) facilitate investigation of interplay between all components;
- g) accommodate the protocols involved, either directly or indirectly, at a given interface;
- h) be generic enough to facilitate scenario development across all technologies and standards development organizations areas.

The scenario technique is also applicable to application requirements as well as network requirements.

An interface occurs between any point where two components need to communicate.

Application requirements can be included in the scenarios.

The scenarios currently contained in this Annex are primarily oriented towards provision of voice, data and video services. Example scenarios to meet other applications requirements, such as transaction processing, distributed computing, imaging etc. need to be similarly developed.

NOTE 1 – The set of examples contained within this Annex is not intended to be exhaustive.

NOTE 2 – Other physical implementations may be equally valid.

A.2 Abbreviations

Further to the abbreviations given in Recommendation Y.120, the following are additional in this Annex.

ADSL	Asymmetric Digital Subscriber Line
ATM	Asynchronous Transfer Mode
B-ISDN	Broadband ISDN
BS	Base Station
CATV	Cable Television
CPN	Customer Premises Network
DSB	Digital Satellite Broadcast

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Recommendation Y.120/Annex A (02/99)

FR	Frame Relay
FTTB	Fibre to the Building
FTTC	Fibre to the Curb
FTTH	Fibre to the Home
HDSL	High bit rate Digital Subscriber Line
HFC	Hybrid Fibre Coax
INI	Inter-Network Interface
IP	Internet Protocol
ISDN	Integrated Services Digital Network
LAN	Local Area Network
N-ISDN	Narrow-band ISDN
OAM	Operation Administration and Maintenance
PBX	Private Branch eXchange
PON	Passive Optical Network
POTS	Plain Old Telephone Service
RITL	Radio In The Loop
UNI	User Network Interface
VDSL	Very high speed Digital Subscriber Line
WLL	Wireless Local Loop

A.3 Reference model

See Figure A.0.

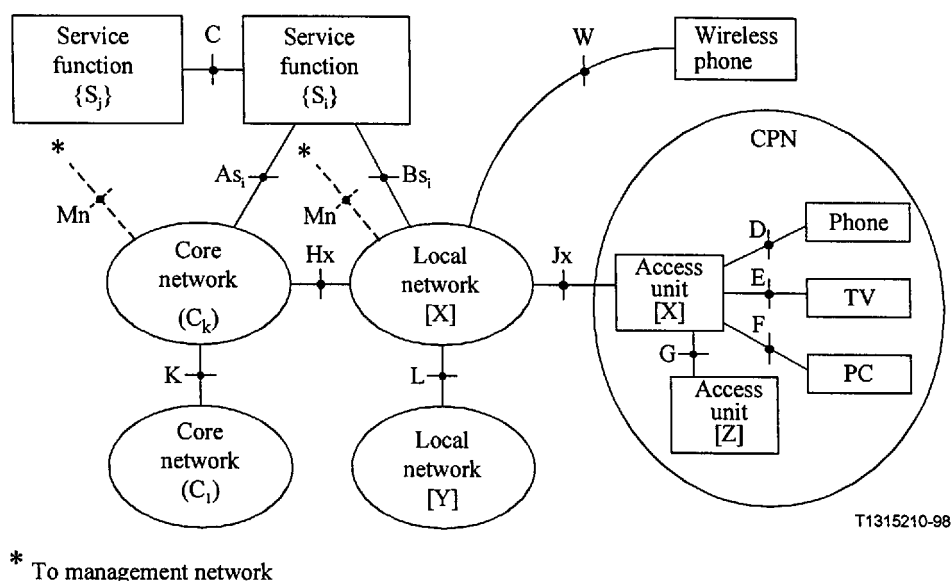


Figure A.0/Y.120 – Reference model

A.4 Components

- Service function: such as video server and video service provider for video service, and IP router and point of presence for Internet service.
 - Core network: such as telecommunication network, PSTN, N-ISDN, B-ISDN.
 - Local network: such as CATV network, ADSL/VDSL, fibre network, RITL, satellite and including access networks as described in Recommendation Y.120.
 - Customer Premises Network (CPN): such as access unit, TV, PC, phone, wireless phone.
- $\{S_i, S_j^*\}$ means the kind of services.
- (C_k, C_l^*) means the technology of core network.
- $[X, Y^*]$ means the technology of local network (access technology).

A.5 Interface points

- As Between service function and core network (s: kind of service).
- Bs Between service function and local network (s: kind of service).
- C Between service functions.
- W Terminal interface for wireless phone.
- D Terminal interface for phone.
- E Terminal interface for TV.
- F Terminal interface for PC.
- G Between access units.
- Hx Between core network and local network (x: kind of access technology).
- Jx Between local network and CPN (x: kind of access technology).
- K Between core networks.
- L Between local networks.
- Mn Between core/local network and management network (n: kind of network).

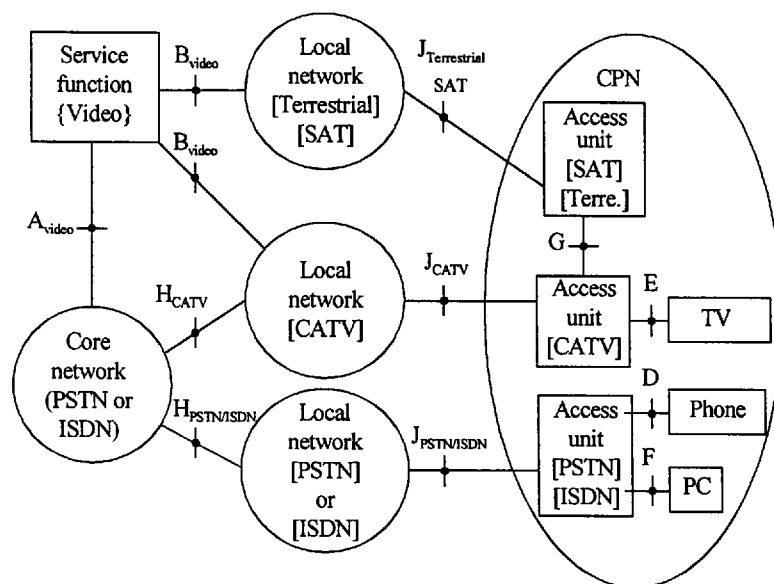
A.6 The scenarios

- 1) Provision of voice/data/video service over existing infrastructure.
- 2) Provision of voice/data/video services over cable networks using B-ISDN.
- 3) The use of ADSL or VDSL to provide video bandwidth over copper pairs.
- 4) Fibre access scenario.
- 5) The use of radio in the local loop.
- 6) Access using satellites.
- 7) Example of Internet access.

The scenarios, shown in Figures A.1 a) to A.7 b), highlight a significant number of standards related issues and questions.

A.7 Scenario 1 – Provision of voice/data/video service over existing infrastructure

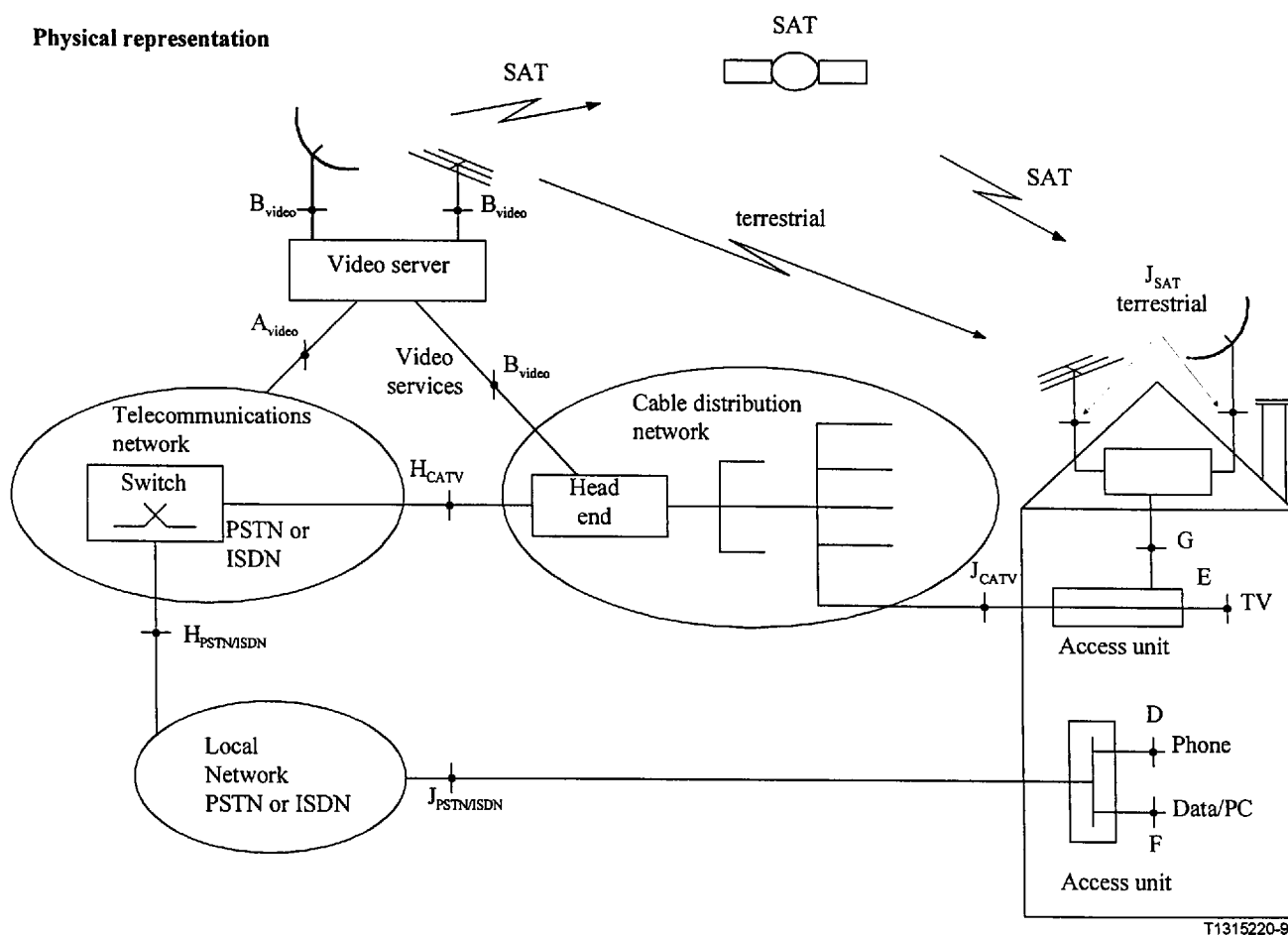
Logical representation



Components

- Service function: Video service provider
- Core network: PSTN or ISDN
- Local network: Cable distribution network, SAT
- Local network for PSTN or ISDN is needed
- CPN: TV, PC, Tel terminal, access unit for PSTN or ISDN, CATV, SAT

Physical representation



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Figure A.1 a)/Y.120 – Provision of voice/data/video services over existing infrastructure