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SERIES F: NON-TELEPHONE TELECOMMUNICATION SERVICES

Data transmission services

Service and operational principles for public data transmission services

Reedition of CCITT Recommendation F.600 published in Blue Book, Fascicle II.5 (1989)

NOTES

1 CCITT Recommendation F.600 was published in Fascicle II.5 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Recommendation F.600

SERVICE AND OPERATIONAL PRINCIPLES FOR PUBLIC DATA TRANSMISSION SERVICES

1 Introduction

1.1 *Scope*

These provisions fix the rules to be followed for International Public Data Transmission Services.

1.2 *Definition*

The definition of «public data transmission service» is a data transmission service established and operated by administration and provided by means of a public network. Circuit switched, packet switched, and leased circuit data transmission services are specified.

Note 1 – A public data transmission service may be subdivided into derived services.

Note 2 – A public data transmission service or a derived service consists of service elements forming a basic service and of other service elements which are called optional user facilities.

Note 3 – There is an implicit definition of data transmission services in Recommendations X.1 and X.2.

1.3 Issues of an essentially technical nature concerning International Public Data Transmission Services are dealt with in other CCITT Recommendations.

1.4 Issues of an essentially technical nature concerning compatibility of terminals and connected equipment are dealt with in Recommendations A.20 and A.21.

2 Terms

2.1 **data transmission relations**

A data transmission relation between two terminal countries exists when there is between them an exchange of data traffic (and normally a settlement of accounts).

2.2 **primary route**

The route normally used in a given relation.

2.3 **alternative route**

The route normally used when the primary route is not available for any reason.

2.4 **data service calls**

Those data calls that relate to the operation of the international telecommunications services.

2.5 *Other terms*

These are given in the appropriate CCITT Recommendations and publications.

3 Access to the service

3.1 *Types of access*

Two types of terminal can access the public data transmission service.

3.1.1 Terminals defined by ISO operating at OSI levels 1 to 3 (Recommendation A.20).

3.1.2 Other terminals (e.g., teletex terminals as defined by Study Group VIII) providing telematic services (Recommendation A.21) or other new as yet undefined CCITT services operating at OSI levels 1 to 7.

3.1.3 Access may be either packet mode (Recommendations X.25 or X.32) or start-stop mode (Recommendation X.28) terminals. Details of services offered are contained in Table 1/X.1, parts (c) and (d).

4 International data circuits/routes

4.1 An international route established and operated between Administrations for the specific purpose of providing public data transmission services. Circuit switched and/or packet switched data transmission techniques are feasible.

4.2 For each data transmission relation the Administrations concerned shall by mutual agreement decide upon the necessity and possibility of alternative data routes. In this respect Administrations should conform with the principles in the appropriate CCITT Recommendations.

4.3 The networks of the Administrations operating data services shall, as far as possible be directly connected using appropriate conversion facilities as necessary. If international transmit points are used, they should be restricted in principle to the definitions given in CCITT Recommendation X.92 and others.

4.4 In the event of interruption to the data transmission service every effort must be made to restore the service with minimum delay.

5 Duration of service

5.1 International data transmission services are in principle continuously available.

5.2 Services that are not available continuously are required to extend beyond the normal closing hours until calls in progress are terminated.

5.3 Each Administration shall designate universal time in all telecommunication activities. Recommendation B.11 refers.

6 Type of call

6.1 Data calls may originate on one data network (e.g. packet) and terminate on the same type of network. In addition it is possible that data calls may originate on one network e.g. telephone and terminate on another network e.g. packet. Possible routines may include:

- Telephone to/from packet;
- Packet to/from telex (Recommendation F.73);
- Circuit to/from packet;
- Telephone to/from telex.

Implementation to be subject to bilateral agreement between Administrations.

6.2 *Service calls*

6.2.1 In principle the use of data transmission services for service calls between Administrations concerned with the international data services should be excluded from international accounts.

6.2.2 Data service calls may only be originated as authorized by the respective Administrations.

6.2.3 Data service calls should as far as possible be made outside the busiest hours.

6.2.4 The identification of service calls is for futher study.

7 Modes of operation

7.1 *General provisions*

7.1.1 The data transmission service should be operated in the automatic mode. It is noted that semi-automatic or manual operation may be necessary.

7.1.2 Administrations shall reach mutual agreement on the most appropriate method of operation to be applied in the case of the data transmission service concerned.

7.2 *Automatic operation*

7.2.1 In principle the data network of each Administration should be interconnected on an automatic basis permitting all subscribers to reach one another either directly or by automatic means.

7.2.2 To establish an international data call by automatic means the subscriber shall normally follow the appropriate CCITT Recommendation (e.g. X.121).

7.2.3 The duration of normal calls in the automatic service should not be limited.

7.3 *Semi-automatic and manual operation*

7.3.1 Semi-automatic and manual operation may be offered on an exceptional basis, subject to bilateral agreement.

8 Directories – compilation and supply

Note – This is for further study in conjunction with Question 14/I.

8.1 As far as possible each Administration shall make available a directory of its dedicated data subscribers which is updated at least once a year. Customers may elect to be excluded from the directory.

8.2 Printed directories for international use should not be larger than 216 × 297mm (A4).

8.3 The directories for international use shall be set up in Roman letters. The call number published shall be that which the calling subscriber has to transmit in order to obtain the called subscriber after he has followed the procedure prescribed in his own country to gain access to the destination country.

8.4 When directories are written in a language other than a language used in that country, they shall be accompanied by an explanatory note to facilitate the use of such directories. This note shall be drawn up in whatever official language of the Union has been agreed upon by the Administration concerned.

8.5 Each Administration will supply to the Administration with which data service exists, a number of copies of its subscribers directories. The number of such copies shall be fixed in advance by mutual agreement and shall be regarded as applying until a request to change it is received.

9 Call progress signals on public data networks

These are defined in Recommendation X.96. (The interpretation of these codes needs further consideration.)

10 Quality of service

The quality of service criteria for the various public data transmission services are to be defined separately in the F.600 series recommendations taking due account of existing CCITT Recommendations. The following are examples of service criteria which need to be covered in individual Recommendations:

- service availability;
- percentage of effective calls;
- data throughput;
- bit error rate;
- transmission delay;
- blocking aspects.

11 Provision of customer support

Administrations should provide customers with the following information:

- access and log-on procedures;
- explanation of call progress and error messages;
- fault reporting arrangements;
- disputed calls arrangements;
- directory facilities.

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