INTERNATIONAL TELECOMMUNICATION UNION

CCITT F.150

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

TELEGRAPH AND MOBILE SERVICES OPERATIONS AND QUALITY OF SERVICE

SERVICE AND OPERATIONAL PROVISIONS FOR THE INTEX SERVICE

Recommendation F.150

Geneva, 1991

FOREWORD

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT 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 Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

Recommendation F.150 was prepared by Study Group I and was approved under the Resolution No. 2 procedure on the 11th of October 1991.

CCITT NOTES

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

2) A list of abbreviations used in this Recommendation can be found in Annex A.

Recommendation F.150

SERVICE AND OPERATIONAL PROVISIONS FOR THE INTEX[1] SERVICE

1 Introduction

1.1 With the continuing development of the infrastructures of the networks which currently support, amongst others, the international telex service, it is feasible that some of these networks could support other services operating at speeds in excess of 50 bauds and using character sets other than those of International Telegraph Alphabet No. 2 (ITA2). There may be benefits to both customer and Administrations if a new text service could be introduced that would utilize the same network infrastructure as the international telex service.

2 Scope

2.1 This Recommendation sets out the service and operational principles for the introduction of a new text service, initially operating asynchronously at 300 bit/s and using International Alphabet No. 5 (IA5).

3 Service outline

3.1 This service will be real-time circuit switched and provide asynchronous operation with a basic transmission rate of 300 bit/s. The use of other transmission rates at a future date is for further study.

3.2 The service will be half-duplex in its normal mode (see § 4.5) but will allow for full duplex operation in the transparent mode (see § 4.8).

3.3 The Intex service will use the destination codes detailed in Recommendation F.69.

3.4 It is recommended that the national numbering scheme for the Intex service be similar to and compatible with that used for the international telex service.

4 Service description

4.1 Call set up procedures should be in accordance with the relevant Recommendations.

4.2 To allow maximum flexibility of use of the service and to ensure the compatibility of terminals interworking at the higher speed, four separate operating modes may be provided. These are normal mode, telex interworking mode, extended mode and transparent mode. As a minimum, normal and telex interworking mode should be provided, with the choice of operating in three modes, other than telex interworking, being a customer option on a call-by-call basis, or within a call.

4.3 At the beginning of any incoming or outgoing call an Intex terminal shall always default to the normal mode.

4.4 Character sets, structure and procedures for generating mode changes should generally be in accordance with the relevant CCITT Recommendation.

---

[1] The use of the name Intex is conditional on its being freely available in Member countries and hence the name of the service offered may vary from country to country.

4.5 *Normal mode*

Normal mode is the mode of the basic Intex call for the exchange of text. There is no need for any prearrangement or pre-knowledge with regard to the capabilities of the called terminal over and above that of normal mode functions. The character set in this mode shall be derived from the International Alphabet No. 5 in accordance with Recommendation S.34.

4.6 *Telex interworking mode*

Telex interworking mode is intended for interworking with the international telex service (see § 7). This mode may be invoked at the start of a call where it is known that the called party is a terminal participating in the international telex service or it will be entered into automatically where the call is found to terminate on such a terminal and the service identifier **TLX** will be indicated at the Intex terminal.

When the call is established in manual mode, the Intex operator should be informed if a previously-prepared message contains non-ITA2 characters. The procedures to be applied for automatic call set-up in the case where the Intex operator is not aware of the characteristics of the called party terminal are for further study.

4.7 *Extended mode*

Extended mode allows for the exchange of messages using the full character set of International Alphabet No. 5 in accordance with Recommendation T.50. This mode shall only be used when it has been established that it is supported by both terminals.

4.8 *Transparent mode*

In the transparent mode the character set to be used is defined by the customers involved in the call, subject only to the restriction on character structure within the network used. This mode shall only be used when it has been established that it is supported by both terminals.

5 Answerback composition

5.1 The Intex service shall employ the principle of the exchange of answerbacks, resident in the terminals and under the control of the service provider. The composition of the answerbacks for the Intex service must facilitate interworking, especially with the international telex service where many terminals employ answerback checking mechanisms based on format and length as well as content.

5.2 Intex answerbacks shall include:

a) the customer's national number;

b) the terminal identity letter or letters (if required);

c) an abbreviated name designating the customer;

d) the identification code, equivalent to the telex network identification code (TNIC) as specified in Recommendation F.69, preceded by a space character.

5.3 The Intex answerback shall comprise a sequence of 20 IA5 characters, formatted in accordance with Recommendation S.35, as follows:

a) for terminals without identification letters:

— character US (unit separator);

— carriage return;

— line feed;

— numeric characters representing the national number of the customer;

— character RS (record separator);

— space;

— alpha characters indicating the name of the customer;

— space;

— one or two characters representing the network identification code;

— character RS;

b) for terminals with identification letters:

— character US;

— carriage return;

— line feed;

— numeric characters representing the national number of the customer;

— character RS;

— one or two alpha characters identifying the terminal;

— space;

— alpha characters indicating the name of the customer;

— space;

— one or two characters representing the network identification code;

— character RS;

c) for terminals without identification letters and whose answerback code does not include letters indicating the name of the customer:

— character US;

— carriage return;

— line feed;

— numeric characters representing the national number of the customer;

— character RS;

— space;

— one or two characters representing the network identification code;

— character RS;

d) for terminals with identification letters and whose answerback code does not include letters indicating the name of the customer:

— character US;

— carriage return;

— line feed;

— numeric characters representing the national number of the customer;

— character RS;

— one or two alpha characters identifying the terminal;

— space;

— one or two characters representing the network identification code;

— character RS;

e) for terminals providing mailbox or similar store and retrieval facilities:

— character US;

— carriage return;

— line feed;

— numeric characters representing the national number of the customer;

— = (“equals” sign);

— character RS;

— two alpha characters identifying the mailbox;

— space;

— one or two characters representing the network identification code;

— character RS.

If the signals in the answerback code do not fill all the 20 places available, the unused places shall be filled by the necessary number of characters RS inserted before the network identification code.

5.4 The alpha fields of Intex answerbacks shall comprise either upper- or lower case latin letters, but not mixed.

5.5 Intex answerbacks, when subjected to the code conversion rules applied by networks, should result in answerback formats compatible with the requirements of the service with which Intex is interworking.

6 Operations

6.1 International interconnection of Intex services should be agreed bilaterally.

6.2 International signalling and information transfer procedures should be in accordance with the relevant CCITT Recommendations.

7 Interworking with the international telex service

7.1 Interworking with the international telex service should be in accordance with Recommendation F.82.

ANNEX A

(to Recommendation F.150)

Alphabetical list of abbreviations used in this Recommendation

IA5 International Alphabet No. 5

ITA2 International Telegraph Alphabet No. 2

RS Record separator

TNIC Telex network identification code

US Unit separator