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F.761

**OPERATIONS AND QUALITY OF SERVICE
AUDIOVISUAL SERVICES**

**SERVICE-ORIENTED REQUIREMENTS
FOR TELEWRITING APPLICATIONS**

ITU-T Recommendation F.761

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation F.761 (new numbering of Rec. F.730) 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.

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Recommendation F.761

SERVICE-ORIENTED REQUIREMENTS FOR TELEWRITING APPLICATIONS

The CCITT,

considering

- (a) that telewriting could offer graphic-oriented communication on real time or store-and-forward basis;
- (b) that telewriting could serve as an optional facility to the general public telephone service, which could be of interest to several categories of users (e.g. deaf people, architects, advertising agencies, etc.);
- (c) that telewriting could support applications like educational communication services (“electronic blackboard”);
- (d) that telewriting could be a facility within a teleconference service;
- (e) that telewriting could add a graphic-oriented facility to telematic services,

concludes

that telewriting can be applied as either a communication service or a communication technique within other services,

recommends

that the service-oriented aspects of telewriting applications be in accordance with this Recommendation.

1 General

1.1 Scope

This Recommendation specifies the service-oriented requirements for the application of telewriting in combination with telephony.

Use of telewriting as an independent telecommunication service or in combination with other services than telephony is for further study.

The technical characteristics of telewriting are specified in Recommendation T.150.

1.2 Definition

Telewriting enables the transmission of graphic information to be displayed at the receiving side in accordance with the writing movements at the sending side. This display is normally effected on a real time basis; a delay in the transmission may be included.

1.3 Applications

1.3.1 Telewriting can support:

- a) explanatory information exchange;
- b) teleconferencing;
- c) distant teaching or lecturing;
- d) telecommunication between speech- and/or ear-handicapped people.

1.3.2 Applications in combination with services other than the telephone service and/or non-real time applications are for further study.

2 General characteristics of telewriting

2.1 The main characteristics of telewriting in this context are real time display and interactive communication during one session, which requires availability of a terminal at each side. Consequently, both sides of the connection will be able to contribute to the same image.

2.2 The presentation functionalities along with their attributes are described in Recommendation T.150. They allow mainly for:

- the generation, transfer and representation of curves of arbitrary shapes; the effect of the movement of the writing instrument at the sending side is retained during reproduction;
- marking single positions in a telewriting image by means of a cursor;
- erasure of all or part of a telewriting image.

2.3 The image input is provided by appropriate writing tools, such as a writing tablet and a writing pencil.

2.4 At the originators' terminal, the input information is made visible either by a display unit or on the writing tablet itself.

2.5 The reproduction at the recipients' terminal will take place on a screen, on paper or on any other means, normally resulting in a real time copy. The writing speed at the transmitting and receiving end should generally be the same.

2.6 In principle, any type of network can be used as a carrier for telewriting signals.

3 Telewriting in combination with telephony

3.1 The general characteristics are as mentioned in § 2.1.

3.2 The subset of presentation functionalities available are the default capabilities of the basic terminal as defined in Recommendation T.150.

3.3 The following terminal operating modes are defined:

- a) speech plus telewriting: speech signals and telewriting signals can be sent simultaneously;
- b) telewriting only: in this mode sending of speech signals is blocked, reception of speech signals is still possible.

3.4 The public switched telephone network is used for carrying the telewriting information. In practice, a 300 bps sub-channel derived from the available speech channel bandwidth is used.

Note – Use of the ISDN for carrying telewriting information is for further study.

3.5 The quality of service depends on the characteristics of the telephone network and of the telewriting equipment.

In case of simultaneous transmission of speech and telewriting signals, mutual interference should be relatively small. Faults caused by speech interference on the telewriting band are not tolerable. The influence of the telewriting signals on the quality of the speech conversation must be limited.