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## Contents

Foreword .....	5
1 Scope .....	7
2 Normative references .....	7
3 Definitions .....	8
4 Abbreviations .....	8
5 Description .....	9
5.1 Terminals .....	9
5.2 Interoperability .....	9
5.3 Network .....	10
6 Procedures .....	10
6.1 Call establishment and termination procedures .....	10
6.1.1 Originating the call .....	10
6.1.1.1 Provision of the dialling information .....	10
6.1.1.2 Provision of the caller identification .....	10
6.1.2 Remote user identification check .....	10
6.1.3 Terminating the call .....	10
6.2 File transfer procedures .....	11
6.2.1 File transfer services .....	11
6.2.2 File format .....	11
6.2.3 Multiple filestore .....	11
6.2.4 Remote file management (rename, delete, etc.) .....	11
6.2.5 Automatic mode and recovery .....	11
6.3 Exceptional procedures .....	11
6.4 Terminal management services .....	12
6.4.1 Communication log .....	12
6.4.2 Correspondent phonebook and access control list .....	12
6.4.3 Local configuration procedures .....	12
7 Intercommunication considerations .....	12
7.1 Interworking with non-ISDNs .....	12
7.2 Interworking with private networks .....	12
8 Interaction with other supplementary services .....	12
9 Static description of the service using attributes .....	13
9.1 Low layer attributes .....	13
9.1.1 Information transfer attributes .....	13
9.1.2 Access attributes .....	13
9.2 High layer attributes .....	13
9.3 General attributes .....	13
10 Dynamic description .....	13
History .....	14

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## Foreword

This European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

In accordance with CCITT Recommendation I.130, the following three level structure is used to describe the supplementary telecommunication services as provided by European public telecommunications operators under the pan-European Integrated Services Digital Network (ISDN):

- stage 1: is an overall service description, from the user's standpoint;
- stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1; and
- stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This ETS details the stage 1 aspects (overall service description) for the Eurofile transfer teleservice. The stage 2 aspects are detailed in ETS 300 350 and the stage 3 aspects are detailed in ETS 300 102 and ETS 300 403.

<b>Transposition dates</b>	
Date of latest announcement of this ETS (doa):	30 September 1995
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## 1 Scope

This European Telecommunication Standard (ETS) defines the stage one of the Eurofile transfer teleservice for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators. Stage one is an overall service description from the user's point of view (see CCITT Recommendation I.130 [7]) but does not deal with the details of the human interface itself.

This ETS does define the interworking requirements of private ISDNs with the public ISDN.

This ETS specifies the base functionality where the service is provided to the user via a private ISDN.

This ETS does not specify the additional requirements where the service is provided to the user via a telecommunications network that is not an ISDN but does include interworking requirements of other networks with the public ISDN.

Charging principles are outside the scope of this ETS.

The values of the general attributes are outside the scope of this ETS.

The Eurofile teleservice is a service enabling users to exchange files between different types of equipment.

This ETS is applicable to the stage two and stage three ETSs for the ISDN Eurofile teleservice. The terms "stage two" and "stage three" are also defined in CCITT Recommendation I.130 [7]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorization leaving freedom, or as a capability or possibility), this shall be reflected in the text of the relevant stage two and stage three ETSs.

Furthermore, conformance to this ETS is met by conforming to the stage three ETSs with the field of application appropriate to the equipment being implemented and by conforming to the ETSs on the end-to-end characteristics with the field of application appropriate to the equipment being implemented. Therefore, no method of testing is provided for this ETS.

## 2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 383: "Integrated Services Digital Network (ISDN); File transfer over the ISDN EUROFILE transfer profile".
- [2] ETS 300 080 (1992): "Integrated Services Digital Network (ISDN); ISDN lower layer protocols for telematic terminals".
- [3] ETS 300 102: "Integrated Services Digital Network (ISDN); User-network interface layer 3, Specifications for basic call control".
- [4] ETS 300 125: "Integrated Services Digital Network (ISDN); User-network interface data link layer specifications; Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441".
- [5] CCITT Recommendation E.164 (1991): "Numbering plan for the ISDN era".
- [6] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".

- [7] CCITT Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [8] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [9] ETS 300 108 (1992): "Integrated Services Digital Network (ISDN): Circuit-mode 64 kbit/s unrestricted 8 kHz structured bearer service category; Service description".
- [10] CCITT Recommendation I.220 (1988): "Common dynamic description of basic telecommunication services".
- [11] ETS 300 345: "Integrated Services Digital Network (ISDN); Interworking between public ISDNs and private ISDNs for the provision of telecommunication services; General aspects".

### 3 Definitions

For the purposes of this ETS, the following definitions apply:

**Integrated Services Digital Network (ISDN):** See CCITT Recommendation I.112 [6], § 2.3, definition 308.

**service; telecommunications service:** See CCITT Recommendation I.112 [6], § 2.2, definition 201.

**supplementary service:** See CCITT Recommendation I.210 [8], § 2.4.

**ISDN number:** A number conforming to the numbering plan and structure specified in CCITT Recommendation E.164 [5].

**teleservice:** See CCITT Recommendation I.112 [6], § 2.2.

**filestore:** Work space that contains the files available for file transfer operations.

**navigation:** Capability to change and manage the change of the files of the remote entity.

**dedicated terminal:** A terminal only supporting the Eurofile teleservice.

**multiservice terminal:** A terminal supporting the Eurofile teleservice in addition to other bearer services and teleservices.

**bearer service:** See CCITT Recommendation I. 112 [6], § 2.2 definition 202.

**identifier:** A user's name and optionally a password.

### 4 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

CLI	Calling Line Identification
ISDN	Integrated Services Digital Network
PC	Personal Computer
TP	Terminal Portability



## 5 Description

The Eurofile teleservice is a service, which defines end-to-end compatibility between terminals and in which during the connection the network only provides a bearer service.

Users of the Eurofile teleservice can be either human users or automatic application entities. The human interface is outside the scope of this ETS.

Users of the Eurofile teleservice can exchange and manage files of any type either manually or (with some terminals) automatically via telecommunication networks. The Eurofile teleservice provides interactive services and allows the consultation of distant filestores.

During a call, data is transferred on one B-channel.

### 5.1 Terminals

The Eurofile teleservice profile takes accounts of a number of different types of terminals.

Terminals supporting the Eurofile teleservice shall provide file exchange and management.

Terminal supporting the Eurofile teleservice can be a dedicated or a multiservice terminal such as:

- a stand-alone Personal Computer (PC);
- a computer of any type;
- a file server.

Figure 1 gives an example of a generic Eurofile terminal.

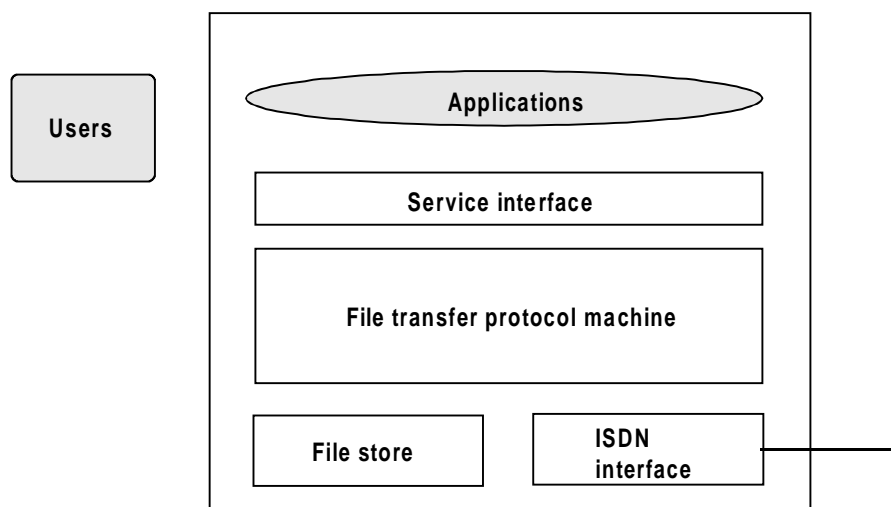


Figure 1: Generic Eurofile terminal

### 5.2 Interoperability

After the connection has been established, the calling user shall negotiate in-band with the called user the options to be used for file transfer. Only those options supported by both user shall be selected. No information exchange before call-set up about available options shall be necessary in order to ensure interoperability (with the exception of the exchange of security information, i.e. user name and password).

NOTE: With no prior knowledge of the options available from the other user the file transfer operation resulting from the negotiation may be unable to use the available capabilities.

### 5.3 Network

Terminals shall use the 64 kbit/s bearer capability within ISDN.

The procedures required for the establishment of connections over which files can be transferred are identical to the corresponding procedures for the circuit-mode 64 kbit/s unrestricted bearer service category (see ETS 300 108 [9]).

## 6 Procedures

### 6.1 Call establishment and termination procedures

The procedures required for the following aspects of the Eurofile teleservice shall be identical to the corresponding procedures for the circuit-mode 64 kbit/s unrestricted bearer service category (see ETS 300 108 [9]):

- a) normal procedures for establishing, maintaining and terminating calls; and
- b) exceptional procedures for failure situations.

#### 6.1.1 Originating the call

A call is originated by a user requesting the Eurofile teleservice to the called terminal. This request shall include an ISDN number identifying the called user. When a call is originated, the user shall indicate the in-band protocol to be used.

The user shall be informed when the call is either successful or not.

##### 6.1.1.1 Provision of the dialling information

ISDN numbers (CCITT Recommendation E.164 [5]) and other relevant information (e.g. the subaddress) of known parties can be stored in a local directory named "correspondent phonebook".

As defined in ETS 300 383 [1], subclause 7.4, the terminal shall provide to the user the means to identify the requested correspondent either selecting an entry in the "correspondent phonebook" or entering his ISDN number and additional information on a call by call basis.

##### 6.1.1.2 Provision of the caller identification

The terminal may provide the user the means to enter an identifier when initiating the call. The identifier shall then be exchanged during the in-band negotiation. Nevertheless the user can choose whether or not to provide an identity to the correspondent.

#### 6.1.2 Remote user identification check

Information (consisting of a user name and a password as defined in ETS 300 383 [1], subclause 7.2.1.3) of recognized remote users can be allocated and stored in an "access control list" together with the corresponding service authorizations and are used to accept/or refuse a call and to define the services and the files visible to the caller.

Remote Calling Line Identification (CLI), if available, can be used to identify the calling location.

If no remote user identification or remote CLI is available, the called terminal can still grant an authorization within the limit established in the "access control list".

The detailed description of these functions is given in ETS 300 383 [1], subclause 7.1.5.

#### 6.1.3 Terminating the call

The termination of the call shall conform to ETS 300 108 [9].

The termination of the file transfer shall conform to ETS 300 383 [1].

## **6.2 File transfer procedures**

### **6.2.1 File transfer services**

For the purpose of the Eurofile teleservice, file transfer operations shall be carried out between the remote filestore and the local filestore.

File names, which may be different from those used by the operating system, shall be used for transfer operations. They shall be unique in the remote filestore. They shall provide operating system independence.

Only the calling entity shall be able to initiate the file transfer procedures. Both the calling and the called entities shall be able to:

- transfer one or more files from the local filestore to the remote filestore;
- transfer one or more files from the remote filestore to the local filestore.

Only the calling entity shall be able to list "file names" of files visible in the remote filestore.

NOTE 1: An entity may permit only certain files to be visible to the other user.

NOTE 2: Common rules for the naming of files can be used to harmonize the user view of file names used for transfer operations.

### **6.2.2 File format**

Information in the file copied by means of the file exchange service between terminals shall be logically identical with the original in content.

### **6.2.3 Multiple filestore**

At least one "mandatory filestore" is made available to a remote user within every Eurofile terminal but, optionally, a terminal can extend the mandatory working area implementing a navigation working area organized into navigation filestores as defined in ETS 300 383 [1], subclause 7.3.5. Navigation services shall be available to the remote user to list and select the desired filestore.

### **6.2.4 Remote file management (rename, delete, etc.)**

Within the limits of the access rights given by the remote entity, the local entity can be allowed to perform management operations (such as rename, delete, etc.) on files included in the remote filestore.

File name(s) used for these operations shall be the same as those used for transfer operations.

A detailed description of this function is given in ETS 300 383 [1], subclause 7.3.

### **6.2.5 Automatic mode and recovery**

An automatic communication mode may be provided to initiate the ISDN calls and to process the file transfer operations when the user is not present. Terminals supporting the automatic communication mode shall also support a file transmission recovery mechanism.

A detailed description of this function is given in ETS 300 383 [1], subclause 7.1.3.

## **6.3 Exceptional procedures**

Exceptional procedures for call establishment are identical to those defined in ETS 300 108 [9].

Incompatible options or procedural errors detected during the in-band communication are handled as in ETS 300 383 [1].

## **6.4 Terminal management services**

### **6.4.1 Communication log**

As defined in ETS 300 383 [1], subclause 7.1.5, local services shall be provided to register and clearly indicate to the user the result of each communication event. This indication should be provided by a log capable to rapid display the latest events. The log should include a trace of any communication event or any communication incident. The log-examine function should always be able to access the log, independent of the status of the call and the operation mode. The log-examine function should be able to access at least the latest communication events.

### **6.4.2 Correspondent phonebook and access control list**

Local services shall be provided to access and administrate the correspondent phonebook and the access control list by an authorized administrator. A detailed description of these functions are given in ETS 300 383 [1], subclause 7.1.5.

### **6.4.3 Local configuration procedures**

As defined in ETS 300 383 [1], subclause 7.1.5, administration services of the local file transfer application shall be provided in order to access or configure local parameters, including, but not limited to:

- the local ISDN address (and the subaddress when appropriate);
- the technical configuration parameters.

## **7 Intercommunication considerations**

### **7.1 Interworking with non-ISDNs**

Not applicable.

### **7.2 Interworking with private networks**

Interworking with private ISDNs shall include the general requirements given in ETS 300 345 [11].

The situation where the communicating users are attached to a private ISDN and a public ISDN is detailed in clauses 5 and 6.

## **8 Interaction with other supplementary services**

The considerations for the interaction with supplementary services shall be identical to those described in ETS 300 108 [9], clause 8.

As indicated by ETS 300 080 [2], subclause 7.3.3, the Terminal Portability (TP) supplementary service shall not be used.

## 9 Static description of the service using attributes

### 9.1 Low layer attributes

#### 9.1.1 Information transfer attributes

The information transfer attributes of this teleservice are specified in table 1.

**Table 1: Values of information transfer attributes**

Attribute	Possible values
Information transfer mode	- circuit
Information transfer rate	- 64 kbit/s
Information transfer capability	- unrestricted digital information
Structure	- 8 kHz integrity
Establishment of communication	- on demand
Symmetry	- bi-directional symmetric
Communication configuration	- point-to-point

#### 9.1.2 Access attributes

The access attributes of this teleservice are specified in table 2.

**Table 2: Values of access attributes**

Attribute	Possible values
Access channel and rate	User information: - B-channel Signalling: - D-channel
Signalling access protocol	ETS 300 125 [4] and 300 102 [3]
Information access protocol	ETS 300 080 [2]

### 9.2 High layer attributes

Type of user information: files.

Layers 4, 5, 6 and 7 protocols: ETS 300 383 [1].

Other attributes are not applicable.

### 9.3 General attributes

This ETS does not provide values for general attributes.

## 10 Dynamic description

The dynamic description for the call control aspects of the Eurofile teleservice shall be identical to that for the circuit-mode 64 kbit/s unrestricted bearer service category on a demand basis which is given in CCITT Recommendation I.220 [10].

## History

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