

INTERNATIONAL STANDARD

ISO
8571-1

First edition
1988-10-01



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Information processing systems — Open Systems Interconnection — File Transfer, Access and Management —

Part 1 : General introduction

*Systemes de traitement de l'information — Interconnexion de systemes ouverts — Gestion,
accès et transfert de fichier —*

Partie 1 : Introduction générale

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

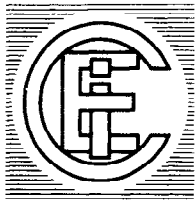
International Standard ISO 8571-1 was prepared by Technical Committee ISO/TC 97, *Information processing systems*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

ISO 8571 consists of the following parts, under the general title *Information processing systems – Open Systems Interconnection – File Transfer, Access and Management*

- *Part 1 : General introduction*
- *Part 2 : Virtual Filestore Definition*
- *Part 3 : File Service Definition*
- *Part 4 : File Protocol Specification*

Annexes A and B are for information only.



INTERNATIONAL STANDARD ISO 8571-1 : 1988
TECHNICAL CORRIGENDUM 1

Published 1991-06-01

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION
INTERNATIONAL ELECTROTECHNICAL COMMISSION • МЕЖДУНАРОДНАЯ ЭЛЕКТРОТЕХНИЧЕСКАЯ КОМИССИЯ • COMMISSION ELECTROTECHNIQUE INTERNATIONALE

Information processing systems — Open Systems Interconnection — File Transfer, Access and Management —

Part 1: General introduction

TECHNICAL CORRIGENDUM 1

*Systèmes de traitement de l'information — Interconnexion de systèmes ouverts — Gestion, accès et transfert de fichier —
Partie 1: Introduction générale*

RECTIFICATIF TECHNIQUE 1

Technical corrigendum 1 to International Standard ISO 8571-1 : 1988 was prepared by ISO/IEC JTC 1, *Information technology*.

Page ii

Foreword

Fifth paragraph, add the following: "*Part 5: Protocol Implementation Conformance Statement Proforma*"

Page 1

Clause 0

Fifth paragraph, line 1, delete "four" and insert "five"

After Part 4 insert the following: "*Part 5: Protocol Implementation Conformance Statement Proforma*"

UDC 681.3.01

Ref. No. ISO 8571-1 : 1988/Cor.1 : 1991 (E)

Descriptors: data processing, information interchange, network interconnection, open systems interconnection, files, communication procedure, management.

© ISO/IEC 1991

Printed in Switzerland

Clause 1

Line 2, delete "parts 2 to 4" and insert "parts 2 to 5"

Clause 2

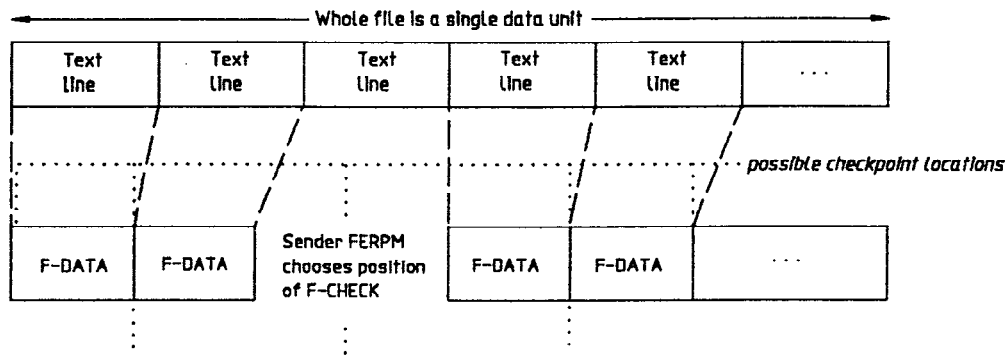
After ISO 8571, Part 4, insert the following: "*Part 5: Protocol Implementation Conformance Statement Proforma.*"

Delete reference to ISO 9804 and insert the following: "*ISO/IEC 9804, Information technology — Open Systems Interconnection — Service definition for the Commitment, Concurrency and Recovery service element.*"

Page 15

Figure 9

Change figure 9 by extending the *possible checkpoint locations* as shown below:



Contents	Page
0 Introduction	1
1 Scope and field of application	1
2 References	1
3 Reference model definitions	1
4 Service conventions definitions	2
5 FTAM definitions	2
5.1 General	2
5.2 Architectural	2
5.3 Filestore schema	3
5.4 Filestore access	3
5.5 File structure	3
5.6 Constraint set	3
5.7 Document types	4
6 Abbreviations	4
Section one: FTAM general concepts	
7 OSI architectural background	5
8 Nature of the file service	6
8.1 Control of file activity	6
8.2 Asymmetry of the dialogue	6
8.3 External file service and internal file service	6
8.4 Service classes and functional units	7
9 Functions associated with the file service	7
9.1 Control of actions	7
9.2 Accounting	8
9.3 Concurrency control	8
9.4 Access control	9
9.5 Commitment	10
10 Service providers supporting FTAM	10
10.1 ACSE - application contexts and the FTAM environment	10
10.2 Presentation Service	10
10.3 Session Service	10
Section two: Virtual Filestore — General Concepts	
11 Virtual filestore	12

11.1	Need for a filestore model	12
11.2	Mapping the virtual filestore definition	12
11.3	Form of the virtual filestore	13
11.4	Attribute dynamics	14
11.5	Filestore schema	14
12	File structures	14
12.1	Categories of Structure	14
12.2	File access structure	15
12.3	Presentation structure	15
13	Constraint sets	16
14	Document types	16
Section three: Overview of the file service and file protocol		
15	File service	17
15.1	FTAM regime initialization phase	17
15.2	Filestore management phase	17
15.3	File selection phase	17
15.4	File management phase	18
15.5	File open phase	18
15.6	Data access phase	18
15.7	File close phase	18
15.8	File deselection phase	18
15.9	FTAM regime termination phase	18
16	Mechanisms in the file protocol	18
16.1	Protocol state machine	18
16.2	Grouping of protocol data units	18
16.3	Transparency	18
16.4	Checkpoint insertion	19
16.5	Diagnostics and results	19
16.6	Docket handling and non-volatile storage	19
16.7	Error recovery mechanisms	19
Annexes		
A	Examples of the use of FTAM	20
B	Summary of information objects identified in ISO 8571	25

Figures

1	Flow of information between RSE and OSIE.....	5
2	Logical and actual flows of information in file transfer	6
3	Example of the dialogue between file entities.....	6
4	Structuring a file protocol entity	7
5	Restrictions on the possible actions	8
6	Mapping between real systems and open systems	12
7	Virtual filestore schema	13
8	An example of a file access structure	14
9	Transmission of an unstructured text file	15
10	File service regimes and related primitives.....	17
11	Sending a file to a remote system	21
12	Remote database access	22
13	Use of FTAM in a LAN fileserver	23
14	File management.....	24

This page intentionally left blank

Information processing systems — Open Systems Interconnection — File Transfer, Access and Management —

Part 1 : General introduction

0 Introduction

ISO 8571 is one of a set of International Standards produced to facilitate the interconnection of computer systems. Its relation to other International Standards in the set is defined by the Reference Model for Open Systems Interconnection (ISO 7498). The Reference Model subdivides the area of standardization for interconnection into a series of layers of specification, each of manageable size.

The aim of Open Systems Interconnection is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of computer systems:

- a) from different manufacturers,
- b) under different managements,
- c) of different levels of complexity,
- d) of different ages.

ISO 8571 defines a file service and specifies a file protocol available within the application layer of the Reference Model. The service defined is of the category Application Service Element (ASE). It is concerned with identifiable bodies of information which can be treated as files, and may be stored within open systems or passed between application processes.

ISO 8571 defines a basic file service. It provides sufficient facilities to support file transfer, and establishes a framework for file access and file management. ISO 8571 does not specify the interfaces to a file transfer or access facility within the local system.

ISO 8571 consists of the following four parts:

- Part 1: General introduction
- Part 2: Virtual Filestore definition
- Part 3: File Service definition
- Part 4: File Protocol specification

The definitions in this part of ISO 8571 are used in the subsequent parts of ISO 8571 which specify the virtual filestore, services and protocols.

This part of ISO 8571 contains the following annexes which do not form part of the standard:

- Annex A - Examples of the use of FTAM
- Annex B - Summary of objects identified

1 Scope and field of application

This part of ISO 8571 provides a general introduction to the concepts and mechanisms specified in parts 2 to 4 of ISO 8571.

2 References

ISO 7498, *Information Processing Systems - Open Systems Interconnection - Basic Reference Model*.

ISO 8326, *Information Processing Systems - Open Systems Interconnection - Basic Connection Oriented Session Service Definition*.

ISO/TR 8509, *Information Processing Systems - Open Systems Interconnection - Service Conventions*.

ISO 8571, *Information Processing Systems - Open Systems Interconnection - File transfer, access and management*.

- Part 2: Virtual Filestore definition.
- Part 3: File Service definition.
- Part 4: File Protocol specification.

ISO 8649, *Information Processing Systems - Open Systems Interconnection - Service definition for the Association Control Service Element*.

ISO 8822, *Information Processing Systems - Open Systems Interconnection - Connection-oriented Presentation Service Definition*.

ISO 8824, *Information Processing Systems - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)*.

ISO 8825, *Information Processing Systems - Open Systems Interconnection - Specification of Basic encoding rules for Abstract Syntax Notation One (ASN.1)*.

ISO 9804, *Information Processing Systems - Open Systems Interconnection - Definition of Application Service Elements - Commitment, Concurrency and Recovery*.¹⁾

ISO 9834-2, *Information Processing Systems - Procedures for specific OSI registration authorities - Part 2: Registration of Document Types*.¹⁾

¹⁾ At present at the stage of draft; publication anticipated in due course.