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AMENDMENT 2
1993-08-15

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

Part 2 :
Virtual Filestore Definition

AMENDMENT 2 : Overlapped access

*Systèmes de traitement de l'information – Interconnexion de systèmes
ouverts – Transfert, accès et gestion de fichiers –*

Partie 2: Définition du système de fichiers virtuel

AMENDEMENT 2 : Chevauchement d'accès



Reference number
ISO 8571-2:1988/Amd.2:1993 (E)

ISO 8571-2:1988/Amd.2:1993 (E)**Foreword**

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Amendment 2 to International Standard ISO 8571-2:1988 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

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*
- *Part 5 : Protocol Implementation Conformance Statement Proforma*

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

Part 2 :

Virtual Filestore Definition

AMENDMENT 2 : Overlapped access

0 Introduction

Clause 0 provides an introduction to this amendment. The text in this clause is not intended for inclusion in ISO 8571 part 2.

0.1 General

ISO 8571 part 2 defines an abstract model of the virtual filestore for describing files and filestores. Sets of actions are defined that may be used to manipulate the elements of this model, and the properties of individual files and associations are defined in terms of attributes.

This amendment extends these definitions to incorporate the concepts of overlapped access.

0.2 Rationale

The objective in introducing overlapped access is to allow more efficient access to structured files when a single initiator has a need to perform many reading and updating operations; the serial nature of the current FTAM data transfer services introduces a significant control overhead if the FADUs are small. In this context, an FADU is small if its transmission time is comparable with the time to complete a confirmed service on the association (the association's round trip delay).

0.3 Summary

The current design envelope that there should be at most one file selection per association and one file open per file selection is maintained. If access to more than one file is to be overlapped, more than one association is necessary. The overlapped access takes place within a constant set of presentation contexts established as at present when the file is opened, or previously.

Two different degrees of overlap have been identified. Firstly, requests for future accesses may be issued whilst a previously requested BDT action is in progress, allowing the creation of a queue of read and write requests. In general, PCI relating to a given BDT action may be overlapped with

other BDT actions, subject to restrictions; this is called consecutive overlap. Secondly, read and write actions can be performed in parallel, so that both directions of data transfer are exploited at any one time. Requests are then taken from the queue whenever either direction of transfer becomes free. This is called concurrent access.

The transfer of a single FADU, specified in a single F-READ request has the same interpretation as in ISO 8571. The resultant effect on the virtual filestore of a set of overlapped requests using consecutive access shall be the same as that of the equivalent set of requests issued in series; the service provided is serializable. If concurrent access is used then the resultant effect of a set of write actions on the virtual filestore, is also serializable. However, due to the non-determinism introduced by the use of concurrent access, it is also possible that in some uses of the service, the data transferred as a result of a read action is not consistent with the current state of the file.

1 Scope and field of application

This amendment makes no additions to clause 1.

2 References

This amendment makes no additions to clause 2.

3 Reference model definitions

This amendment makes no additions to clause 3.

4 Service conventions definitions

This amendment makes no additions to clause 4.

5 FTAM Definitions

This amendment makes no additions to clause 5.