CWA 13449-3

WORKSHOP

AGREEMENT

December 1998

ICS 35.200;35.240.15

English version

Extensions for Financial Services (XFS) interface specification -Part 3: Printer Device Class Interface - Programmer's Interface

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

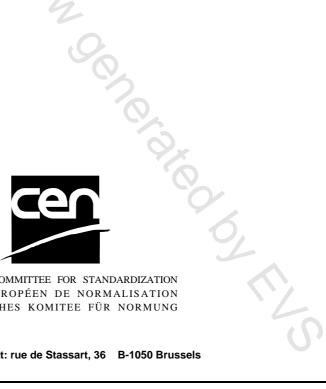
The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Central Secretariat can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN Members are the National Standards Bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

ien c



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

Foreword	4
0. Introduction	5
1. XFS Service-Specific Programming	6
2. Banking Printers	6
3. Banking Printer Types	7
4. Forms Model	8
5. Command Overview	9
6. Info Commands	9
6.1 WFS_INF_PTR_STATUS	9
6.2 WFS_INF_PTR_CAPABILITIES	11
6.3 WFS_INF_PTR_FORM_LIST	13
6.4 WFS_INF_PTR_MEDIA_LIST	13
6.5 WFS_INF_PTR_QUERY_FORM	14
6.6 WFS_INF_PTR_QUERY_MEDIA	15
6.7 WFS_INF_PTR_QUERY_FIELD	17
7. Execute Commands	
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM	19 20
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM 7.3 WFS_CMD_PTR_READ_FORM	19 20 21
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM 7.3 WFS_CMD_PTR_READ_FORM 7.4 WFS_CMD_PTR_RAW_DATA	19 20 21 22
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM 7.3 WFS_CMD_PTR_READ_FORM	19 20 21 22
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM 7.3 WFS_CMD_PTR_READ_FORM 7.4 WFS_CMD_PTR_RAW_DATA 7.5 WFS_CMD_PTR_MEDIA_EXTENTS 7.6 WFS_CMD_PTR_RESET_COUNT	19 20 21 22 23 24
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM 7.3 WFS_CMD_PTR_READ_FORM 7.4 WFS_CMD_PTR_RAW_DATA 7.5 WFS_CMD_PTR_MEDIA_EXTENTS	19 20 21 22 23 24
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 25
7.1 WFS_CMD_PTR_CONTROL_MEDIA 7.2 WFS_CMD_PTR_PRINT_FORM 7.3 WFS_CMD_PTR_READ_FORM 7.4 WFS_CMD_PTR_RAW_DATA 7.5 WFS_CMD_PTR_MEDIA_EXTENTS 7.6 WFS_CMD_PTR_RESET_COUNT 7.7 WFS_CMD_PTR_READ_IMAGE	19 20 21 22 23 24 24 25
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 25
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 25 25
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 23 24 25 25 25
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 25 25 25 25
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 25 25 25 25 26 26
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 24 25 25 25 26 26
7.1 WFS_CMD_PTR_CONTROL_MEDIA	19 20 21 22 23 24 24 25 25 25 25 25 26 26 27

9. Form, Field and Media Definitions	27
9.1 Definition Syntax	
9.2 Form and Media Measurements	
9.3 Form Definition	
9.4 Field Definition	
9.5 Frame Definition	
9.6 Media Definition	
10. C-Header File	40

Foreword

This CWA is revision 2.0 of the XFS interface specification. Release 2.0 extends the scope of the XFS interface specification to include both the self service/ATM environment as well as the branch environment. The new specification now fully supports cameras, deposit units, identification cards, PIN pads, sensors and indicator units, text terminals, cash dispenser modules and a wide variety of printing mechanisms.

This specification was originally developed by the Banking Solutions Vendor Council (BSVC), and is endorsed by the CEN/ISSS Workshop on XFS. This Workshop gathers both suppliers (among others the BSVC members) as well as banks and other financial service companies. A list of companies participating in this Workshop and in support of this CWA is available from the CEN/ISSS Secretariat.

The specification is continuously reviewed and commented in the CEN/ISSS Workshop on XFS. It is therefore expected that an update of the specification will be published in due time as a CWA, superseding this revision 2.00.

This CWA is supplemented by a set of release notes, which are available from the CEN/ISSS Secretariat (an on-line version of these release notes is available from http://www.cenorm.be/isss/Workshop/XFS/release-notes.htm).

0. Introduction

This is part 3 of the multi-part CWA 13449, describing Release 2.0 of the XFS interface specification.

The full CWA 13449 "Extensions for Financial Services (XFS) interface specification" consists of the following parts:

Part 1: Application Programming Interface (API) - Service Provider Interface (SPI); Programmer's Reference

Part 2: Service Classes Definition; Programmer's Reference

Part 3: Printer Device Class Interface - Programmer's Reference

Part 4: Identification Card Device Class Interface - Programmer's Reference

Part 5: Cash Dispenser Device Class Interface - Programmer's Reference

Part 6: PIN Keypad Device Class Interface - Programmer's Reference

Part 7: Check Reader/Scanner Device Class Interface - Programmer's Reference

Part 8: Depository Device Class Interface - Programmer's Reference

Part 9: Text Terminal Unit Device Class Interface - Programmer's Reference

Part 10: Sensors and Indicators Unit Device Class Interface - Programmer's Reference

Part 11: Vendor Dependent Mode Device Class Interface - Programmer's Reference

Part 12: Camera Device Class Interface - Programmer's Reference

In addition to these Programmer's Reference specifications, the reader of this CWA is also referred to a complementary document, called Release Notes. The Release Notes contain clarifications and explanations on the CWA specifications, which are not requiring functional changes. The current version of the Release Notes is available from the CEN/ISSS Secretariat (contact <u>isss@cenorm.be</u> or download from http://www.cenorm.be/isss/Workshop/XFS/release-notes.htm).

The information in this document originally contributed by members of the Banking Solutions Vendor Council and endorsed by the CEN/ISSS Workshop on XFS, represents the Workshop's current views on the issues discussed as of the date of publication. It is furnished for informational purposes only and is subject to change without notice. CEN/ISSS makes no warranty, express or implied, with respect to this document.

The XFS specifications are now further developed in the CEN/ISSS Workshop on XFS. CEN/ISSS Workshops are open to all interested parties offering to contribute. Parties interested in participating should contact the CEN/ISSS Secretariat (isss@cenorm.be).

A Software Development Kit (SDK) which supplies the components and tools to allow the implementation of compliant applications and services is available from Microsoft¹.

To the extent that date processing occurs, all XFS Workshop participants agree that the XFS specifications are Year 2000 compliant.

Revision History:

ILCAR:	51011 1115t01 y .	
1.0	May 24, 1993	Initial release of API and SPI specification
1.11	February 3, 1995	Separation of specification into separate documents for API/SPI and
		service class definitions, with updates
2.00	November 11, 1996	Updated release encompassing self-service environment.
	October 6, 1998	WOSA/XFS Release 2.00 as originally developed by the BSVC, has been
		formally accepted as a CEN Workshop Agreement by the
		CEN/ISSS XFS Workshop and the name WOSA/XFS has been changed
		into XFS. In spite of the name change, certain occurrencies of
		WOSA/XFS however still appear in the documentation, for compatibility
		reasons

¹ Microsoft is a registered trademark, and Windows and Windows NT are trademarks of Microsoft Corporation