WOSA

(Windows[™] Open Services Architecture)

Extensions for Financial Services

A Client-Server Architecture for Financial Enterprise Computing under Microsoft® Windows

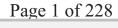
Revision 1.1 April 14, 1994

Developed by the members of the Banking Systems Vendor Council:

Andersen Consulting
AT&T Global Information Solutions
Digital Equipment Corporation
EDS Corporation
International Computers Limited
Microsoft Corporation
Ing. C. Olivetti & C. S.p.A.
Siemens Nixdorf Informationssysteme AG
Tandem Computers
Unisys Corporation

ABB Inc.

EXHIBIT 1009





Revision History:

0.71	December 17, 1992	Preliminary release of API specification
1.0	May 24, 1993	Initial release of API and SPI specification
1.01	June 11, 1993	Minor updates to BSVC member contact list
1.1	April 14, 1994	Major updates and additions

The information in this document was contributed by members of the Banking Systems Vendor Council and represents its 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. The Banking Systems Vendor Council makes no warranty, express or implied, with respect to this document.

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

Apple and Macintosh are registered trademarks of Apple Computer, Inc.

IBM and NetView are registered trademarks of International Business Machines Corporation.

UNIX is a registered trademark of UNIX Systems Laboratories.

Microsoft part number: 098-54431

Page 2 of 228



Table of Contents

1. Introduction	1
1.1 Background	1
1.2 Objectives	1
1.3 Strategies	2
1.4 Benefits	3
2. WOSA Extensions for Financial Services Overview	4
2.1 Architecture	
2.2 API and SPI Summary	8
2.3 Device Classes	9
3. Other WOSA Components	10
3.1 Enterprise Communications	10
3.1.1 Windows SNA APIs	10
3.1.2 Windows RPC (Remote Procedure Call)	11
3.1.3 Windows Sockets	11
3.2 MAPI (Messaging API)	11
3.3 ODBC (Open Database Connectivity) 3.4 License Service API	11 12
3.5 Windows Telephony API	12
3.6 WOSA Extensions for Real-Time Market Data	12
4. The Future of WOSA and the Extensions for Financial Services	13
4.1 Financial Transaction Messaging and Management	13
4.2 Network and System Management	13
4.3 Security	13
4.4 Emerging technologies	13
5. Architectural and Implementation Issues	14
5.1 The XFS Manager	14
5.2 Service Providers	15
5.2.1 Service Provider Functionality	15
5.2.2 Service Provider "Packaging" 5.3 Asynchronous, Synchronous and Immediate Functions	16 16
5.3.1 Asynchronous Functions	16
5.3.2 Synchronous Functions	16
5.3.3 Immediate Functions	17
5.4 Processing API Functions	17
5.5 Opening a session	18
5.6 Closing a Session	19
5.7 Configuration Information	20
5.8 Exclusive Service and Device Access	23
5.8.1 Lock Policy for Independent Devices	23
5.8.2 Compound Devices	24
5.9 Timeout	26
5.10 Function Status Return	26
5.11 Notification Mechanisms — Registering for Events	27
5.12 Application Processes, Threads and Blocking Functions 5.13 Memory Management	29 31
J. 13 IVIGITIOLY IVIALIAUCITICIT	



6. Application Programming Interface (API) Functions	33
6.1 WFSCancelAsyncRequest	35
6.2 WFSCancelBlockingCall	36
6.3 WFSCleanUp	37
6.4 WFSClose	38
6.5 WFSAsyncClose	39
6.6 WFSCreateAppHandle	40
6.7 WFSDeregister	41
6.8 WFSAsyncDeregister	42
6.9 WFSDestroyAppHandle	44
6.10 WFSExecute	45
6.11 WFSAsyncExecute	47
6.12 WFSFreeResult	49
6.13 WFSGetInfo	50
6.14 WFSAsyncGetInfo	52
6.15 WFSGetSCode	54
6.16 WFSIsBlocking	55
6.17 WFSLock	56
6.18 WFSAsyncLock	58
6.19 WFSOpen	60
6.20 WFSAsyncOpen	63
6.21 WFSRegister	66
6.22 WFSAsyncRegister	68
6.23 WFSSetBlockingHook	70
6.24 WFSStartUp	71
6.25 WFSUnhookBlockingHook	73
6.26 WFSUnlock	74
6.27 WFSAsyncUnlock	75



7. Service Class Definitions	76
7.1 Printers	77
7.1.1 Banking Printer Types	78
7.1.2 Forms Model	78
7.1.3 Command Overview	80
7.1.4 Info Commands	81
7.1.4.1 WFS INF PTR STATUS	81
7.1.4.2 WFS_INF_PTR_CAPABILITIES	83
7.1.4.3 WFS_INF_PTR_FORM_LIST	84
7.1.4.4 WFS_INF_PTR_MEDIA_LIST	84
7.1.4.5 WFS_INF_PTR_QUERY_FORM	85
7.1.4.6 WFS_INF_PTR_QUERY_MEDIA	87
7.1.4.7 WFS_INF_PTR_QUERY_FIELD	88
7.1.5 Execute Commands	90
7.1.5.1 WFS_CMD_PTR_CONTROL_MEDIA	90
7.1.5.2 WFS_CMD_PTR_PRINT_FORM	91 93
7.1.5.3 WFS_CMD_PTR_READ_FORM 7.1.5.4 WFS_CMD_PTR_RAW_DATA	94
7.1.5.5 WFS_CMD_FTR_MEDIA_EXTENTS	95
7.1.6 Execute Events	96
7.1.6.1 WFS EXEE PTR NOMEDIA	96
7.1.6.2 WFS EXEE PTR MEDIAINSERTED	96
7.1.6.3 WFS EXEE PTR FIELDERROR	96
7.1.6.4 WFS_EXEE_PTR_FIELDWARNING	97
7.1.7 Form and Media Definition	98
7.1.7.1 Form Definition	98
7.1.7.2 Field Definition	99
7.1.7.3 Media Definition	102
7.2 Magnetic Stripe Readers and Writers	103
7.2.1 Info Commands	104
7.2.1.1 WFS_INF_IDC_STATUS	104
7.2.1.2 WFS_INF_IDC_CAPABILITIES	106
7.2.2 Execute Commands	108
7.2.2.1 WFS_CMD_IDC_READ_TRACK	108
7.2.2.2 WFS_CMD_IDC_WRITE_TRACK	109
7.2.2.3 WFS_CMD_IDC_EJECT_CARD	110
7.2.2.4 WFS_CMD_IDC_RETAIN_CARD 7.2.2.5 WFS_CMD_IDC_RESET_COUNT	110 111
7.2.2.6 WFS_CMD_IDC_RESET_	111
7.2.3 Messages	112
7.2.3.1 WFS EXEE IDC INVALIDTRACKDATA	112
7.2.3.2 WFS EXEE IDC NOMEDIA	112
7.2.3.3 WFS EXEE IDC MEDIAINSERTED	112
7.2.3.4 WFS_EXEE_IDC_MEDIAREMOVED	112
7.2.3.5 WFS_SRVE_IDC_CARDACTION	113
7.2.3.6 WFS_USRE_IDC_RETAINBINFULL	113
7.2.4 Form Description	114
7.3 Cash Dispensers	116
7.3.1 Info Commands	117
7.3.1.1 WFS_INF_CDM_STATUS	117
7.3.1.2 WFS_INF_CDM_CAPABILITIES	118
7.3.1.3 WFS_INF_CDM_CASH_UNIT_INFO	120
7.3.1.4 WFS_INF_CDM_TELLER_INFO	122
7.3.1.5 WFS_INF_CDM_TELLER_POSITIONS	123
7.3.1.6 WFS_INF_CDM_CURRENCY_EXP	123
7.3.1.7 WFS_INF_CDM_MIX_TYPES	124



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

