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WORKSHOP

AGREEMENT

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Extensions for Financial Services (XFS) interface specification - Release 3.10 - Part 74: Cash-In Module Device Class Interface Migration from Version 3.02 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

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Foreword

This CWA is revision 3.10 of the XFS interface specification.

The CEN/ISSS XFS Workshop gathers suppliers 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.

This CWA was formally approved by the XFS Workshop meeting on 2007-11-29. 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 3.10.

The CWA is published as a multi-part document, consisting of:

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

Part 2: Service Classes Definition - Programmer's Reference

Part 3: Printer and Scanning 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

Part 13: Alarm Device Class Interface - Programmer's Reference

Part 14: Card Embossing Unit Device Class Interface - Programmer's Reference

Part 15: Cash-In Module Device Class Interface - Programmer's Reference

Part 16: Card Dispenser Device Class Interface - Programmer's Reference

Part 17: Barcode Reader Device Class Interface - Programmer's Reference

Part 18: Item Processing Module Device Class Interface- Programmer's Reference

Parts 19 - 28: Reserved for future use.

Parts 29 through 47 constitute an optional addendum to this CWA. They define the integration between the SNMP standard and the set of status and statistical information exported by the Service Providers.

Part 29: XFS MIB Architecture and SNMP Extensions - Programmer's Reference

Part 30: XFS MIB Device Specific Definitions - Printer Device Class

Part 31: XFS MIB Device Specific Definitions - Identification Card Device Class

Part 32: XFS MIB Device Specific Definitions - Cash Dispenser Device Class

Part 33: XFS MIB Device Specific Definitions - PIN Keypad Device Class

Part 34: XFS MIB Device Specific Definitions - Check Reader/Scanner Device Class

Part 35: XFS MIB Device Specific Definitions - Depository Device Class

Part 36: XFS MIB Device Specific Definitions - Text Terminal Unit Device Class

Part 37: XFS MIB Device Specific Definitions - Sensors and Indicators Unit Device Class

Part 38: XFS MIB Device Specific Definitions - Camera Device Class

Part 39: XFS MIB Device Specific Definitions - Alarm Device Class

Part 40: XFS MIB Device Specific Definitions - Card Embossing Unit Class

Part 41: XFS MIB Device Specific Definitions - Cash-In Module Device Class

Part 42: Reserved for future use.

Part 43: XFS MIB Device Specific Definitions - Vendor Dependent Mode Device Class

Part 44: XFS MIB Application Management

Part 45: XFS MIB Device Specific Definitions - Card Dispenser Device Class

Part 46: XFS MIB Device Specific Definitions - Barcode Reader Device Class

Part 47: XFS MIB Device Specific Definitions - Item Processing Module Device Class

Parts 48 - 60 are reserved for future use.

Part 61: Application Programming Interface (API) - Service Provider Interface (SPI) - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 62: Printer Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 63: Identification Card Device Class Interface - Migration from Version 3.02 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 64: Cash Dispenser Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 65: PIN Keypad Device Class Interface - Migration from Version 3.03 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 66: Check Reader/Scanner Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 67: Depository Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 68: Text Terminal Unit Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 69: Sensors and Indicators Unit Device Class Interface - Migration from Version 3.01 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 70: Vendor Dependent Mode Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 71: Camera Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 72: Alarm Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 73: Card Embossing Unit Device Class Interface - Migration from Version 3.0 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference

Part 74: Cash-In Module Device Class Interface - Migration from Version 3.02 (CWA 14050) to Version 3.10 (this CWA) - 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 online from http://www.cen.eu/isss/Workshop/XFS.

The information in this document 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.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN : AENOR, AFNOR, ASRO, BDS, BSI, CSNI, CYS, DIN, DS, ELOT, EVS, IBN, IPQ, IST, LVS, LST, MSA, MSZT, NEN, NSAI, ON, PKN, SEE, SIS, SIST, SFS, SN, SNV, SUTN and UNI.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

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1. Migration Information

XFS 3.10 has been designed to minimize backwards compatibility issues. This document highlights the changes made to the CIM device class between version 3.02 and 3.10, by highlighting the additions and deletions to the text.

2. Cash-In Module

This specification describes the functionality of an XFS compliant Cash-In Module (CIM) Service Provider. It defines the service-specific commands that can be issued to the Service Provider using the **WFSGetInfo, WFSAsyncGetInfo**, **WFSExecute** and **WFSAsyncExecute** functions.

Persistent values are maintained through power failures, open sessions, close session and system resets.

This specification covers the acceptance of items. An “item” is defined as any media that can be accepted and includes coupons, documents, bills and coins. However, if coins and bills are both to be accepted separate Service Providers must be implemented for each.

All currency parameters in this specification are expressed as a quantity of minimum dispense units, as defined in the description of the WFS_INF_CIM_CURRENCY_EXP command (see Section 4.5).

There are two types of CIM: Self-Service CIM and Teller CIM. A Self-Service CIM operates in an automated environment, while a Teller CIM has an operator present. The functionality provided by the following commands is only applicable to a Teller CIM:

WFS_CMD_CIM_SET_TELLER_INFO
WFS_INF_CIM_SET_TELLER_INFO

It is possible for the CIM to be part of a compound device with the Cash Dispenser Module (CDM). This CIM\CDM combination is referred to throughout this specification as a “cash recycler”. For details of the CDM interface see [Ref. 3].

If the device is a cash recycler then, if cash unit exchanges are required on both interfaces, the exchanges cannot be performed concurrently. An exchange on one interface must be complete (the WFS_CMD_CIM_END_EXCHANGE must have completed) before an exchange can start on the other interface. The WFS_ERR_CIM_EXCHANGEACTIVE error code will be returned if the correct sequence is not adhered to.

The CIM interface can be used for all exchange operations on cash recycle devices, and this interface should be used for cash units of multiple currencies and/or denominations (including multiple note identifiers associated with the same denomination).

The event WFS_SRVE_CIM_COUNTS_CHANGED will be posted if an operation on the CDM interface affects the recycle cash unit counts which are available through the CIM interface.

The following commands on the CDM interface may affect the CIM counts:

WFS_CMD_CDM_DISPENSE
WFS_CMD_CDM_PRESENT
WFS_CMD_CDM_RETRACT
WFS_CMD_CDM_COUNT
WFS_CMD_CDM_REJECT
WFS_CMD_CDM_SET_CASH_UNIT_INFO
WFS_CMD_CDM_END_EXCHANGE
WFS_CMD_CDM_RESET
WFS_CMD_CDM_TEST_CASH_UNITS

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The Cash-Out cash unit counts will be available through the CDM interface and the Cash-In

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3. References

1. XFS Application Programming Interface (API)/Service Provider Interface (SPI), Programmer's Reference Revision 3.10, November 29, 2007
2. ISO 4217 at http://www.iso.org
3. XFS Cash Dispenser Device Class Interface, Programmer's Reference, Revision 3.10, November 29, 2007
4. Paragraph 6 of the EU council regulation 1338/2001. Terms of reference for the adaptation of paragraph 6 on cash-in and cash-recycling machines (18.04.2002) at: http://www.ecb.int/pub/pdf/other/recyclingeurobanknotes2005en.pdf

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4. Info Commands

4.1 WFS_INF_CIM_STATUS

Description This command is used to obtain the status of the CIM. It may also return vendor-specific status information.

Input Param None.

Output Param LPWFSCIMSTATUS lpStatus;

```
typedef struct _wfs_cim_status
    {
    WORD                    fwDevice;
    WORD                    fwSafeDoor;
    WORD                    fwAcceptor;
    WORD                    fwIntermediateStacker;
    WORD                    fwStackerItems;
    WORD                    fwBanknoteReader;
    BOOL                    bDropBox;
    LPWFSCIMINPOS           *lppPositions;
    LPSTR                   lpszExtra;
    DWORD                   dwGuidLights[WFS_CIM_GUIDLIGHTS_SIZE];
    WORD                    wDevicePosition;
    USHORT                  usPowerSaveRecoveryTime;
    } WFSCIMSTATUS, *LPWFSCIMSTATUS;
```

fwDevice
Supplies the state of the CIM. However, an *fwDevice* status of WFS_CIM_DEVONLINE does not necessarily imply that accepting can take place: the value of the *fwAcceptor* field must be taken into account and - for some vendors - the state of the safe door (*fwSafeDoor*) may also be relevant. The state of the CIM will have one of the following values:

Value	Meaning
WFS_CIM_DEVONLINE	The device is online. This is returned when the acceptor is present and operational.
WFS_CIM_DEVOFFLINE	The device is offline (e.g. the operator has taken the device offline by turning a switch or pulling out the device).
WFS_CIM_DEVPOWEROFF	The device is powered off or physically not connected.
WFS_CIM_DEVNODEVICE	The device is not intended to be there, e.g. this type of self service machine does not contain such a device or it is internally not configured.
WFS_CIM_DEVHWERROR	The device is inoperable due to a hardware error.
WFS_CIM_DEVUSERERROR	The device is present but a person is preventing proper device operation.
WFS_CIM_DEVBUSY	The device is busy and unable to process an execute command at this time.
WFS_CIM_DEVFRAUDATTEMPT	The device is present but has detected a fraud attempt.

fwSafeDoor
Supplies the state of the safe door as one of the following values:

Value	Meaning
WFS_CIM_DOORNOTSUPPORTED	Physical device has no safe door or door state reporting is not supported.
WFS_CIM_DOOROPEN	Safe door is open.
WFS_CIM_DOORCLOSED	Safe door is closed.
WFS_CIM_DOORUNKNOWN	Due to a hardware error or other condition, the state of the door cannot be determined.

fwAcceptor
Supplies the state of the acceptor cash units as one of the following values:

Value	Meaning
WFS_CIM_ACCOK	All cash units present are in a good state.
WFS_CIM_ACCCUSTATE	One of the cash units present is in an abnormal state. The acceptor is operational, but one or more of the cash units is in a high, full or inoperative condition. Items can still be accepted into at least one of the cash units.
WFS_CIM_ACCCUSTOP	Due to a cash unit failure accepting is impossible. The acceptor is operational, but no items can be accepted because all of the cash units are in a full or inoperative condition. This state also occurs when a retract cash unit is full or no retract cash unit is present, or an application lock is set on every cash unit.
WFS_CIM_ACCCUUNKNOWN	Due to a hardware error or other condition, the state of the cash units cannot be determined.

fwIntermediateStacker
Supplies the state of the intermediate stacker as one of the following values:

Value	Meaning
WFS_CIM_ISEMPTY	The intermediate stacker is empty.
WFS_CIM_ISNOTEMPTY	The intermediate stacker is not empty.
WFS_CIM_ISFULL	The intermediate stacker is full.
WFS_CIM_ISUNKNOWN	Due to a hardware error or other condition, the state of the intermediate stacker cannot be determined.
WFS_CIM_ISNOTSUPPORTED	The physical device has no intermediate stacker.

fwStackerItems
This field informs the application whether items on the intermediate stacker have been in customer access. Possible values are:

Value	Meaning
WFS_CIM_CUSTOMERACCESS	Items on the intermediate stacker have been in customer access. If the device is a cash recycler then the items on the intermediate stacker may be there as a result of a previous cash-out operation.
WFS_CIM_NOCUSTOMERACCESS	Items on the intermediate stacker have not been in customer access.
WFS_CIM_ACCESSUNKNOWN	It is not known if the items on the intermediate stacker have been in customer access.
WFS_CIM_NOITEMS	There are no items on the intermediate stacker or the physical device has no intermediate stacker.

fwBanknoteReader
Supplies the state of the banknote reader as one of the following values:

Value	Meaning
WFS_CIM_BNROK	The banknote reader is in a good state.
WFS_CIM_BNRINOP	The banknote reader is inoperable.
WFS_CIM_BNRUNKNOWN	Due to a hardware error or other condition, the state of the banknote reader cannot be determined.

WFS_CIM_BNRNOTSUPPORTED	The physical device has no banknote reader.

bDropBox
The drop box is an area within the CIM where items which have caused a problem during an operation are stored. This field specifies the status of the drop box. TRUE means that some items are stored in the drop box due to a cash-in transaction which caused a problem. FALSE indicates that the drop box is empty.

lppPositions
Pointer to a NULL-terminated array of pointers to WFSCIMINPOS structures (one for each supported input or output position):

```
typedef struct _wfs_cim_inpos
    {
    WORD                    fwPosition;
    WORD                    fwShutter;
    WORD                    fwPositionStatus;
    WORD                    fwTransport;
    WORD                    fwTransportStatus;
    } WFSCIMINPOS, *LPWFSCIMINPOS;
```

fwPosition
Specifies the input or output position as one of the following values:

Value	Meaning
WFS_CIM_POSINLEFT	Left input position.
WFS_CIM_POSINRIGHT	Right input position.
WFS_CIM_POSINCENTER	Center input position.
WFS_CIM_POSINTOP	Top input position.
WFS_CIM_POSINBOTTOM	Bottom input position.
WFS_CIM_POSINFRONT	Front input position.
WFS_CIM_POSINREAR	Rear input position.
WFS_CIM_POSOUTLEFT	Left output position.
WFS_CIM_POSOUTRIGHT	Right output position.
WFS_CIM_POSOUTCENTER	Center output position.
WFS_CIM_POSOUTTOP	Top output position.
WFS_CIM_POSOUTBOTTOM	Bottom output position.
WFS_CIM_POSOUTFRONT	Front output position.
WFS_CIM_POSOUTREAR	Rear output position.

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fwShutter
Specifies the state of the shutter as one of the following values:

Value	Meaning
WFS_CIM_SHTCLOSED	The shutter is closed.
WFS_CIM_SHTOPEN	The shutter is opened.
WFS_CIM_SHTJAMMED	The shutter is jammed.
WFS_CIM_SHTUNKNOWN	Due to a hardware error or other condition, the state of the shutter cannot be determined.
WFS_CIM_SHTNOTSUPPORTED	The physical device has no shutter or shutter state reporting is not supported.

fwPositionStatus
The status of the input or output position. This field specifies the state of the position as one of the following values:

Value	Meaning
WFS_CIM_PSEMPTY	The position is empty.
WFS_CIM_PSNOTEMPTY	The position is not empty.
WFS_CIM_PSUNKNOWN	Due to a hardware error or other condition, the state of the position cannot be determined.
WFS_CIM_PSNOTSUPPORTED	The device is not capable of reporting whether or not items are at the position.
WFS_CIM_PSFOREIGNITEMS	Foreign items have been detected in the position.

fwTransport
Specifies the state of the transport mechanism as one of the following values:

Value	Meaning
WFS_CIM_TPOK	The transport is in a good state.
WFS_CIM_TPINOP	The transport is inoperative due to a hardware failure or media jam.
WFS_CIM_TPUNKNOWN	Due to a hardware error or other condition, the state of the transport cannot be determined.
WFS_CIM_TPNOTSUPPORTED	The physical device has no transport or transport state reporting is not supported.

fwTransportStatus
Returns information regarding items which may on the transport. If the device is a cash recycler it is possible that items will be on the transport due to a previous dispense operation, in which case the status will be WFS_CIM_TPSTATNOTEMPTY. The possible values of this field are:

Value	Meaning
WFS_CIM_TPSTATEMPTY	The transport is empty.
WFS_CIM_TPSTATNOTEMPTY	The transport is not empty, the items have not been in customer access.
WFS_CIM_TPSTATNOTEMPTYCUST	Items which a customer has had access to are on the transport.
WFS_CIM_TPSTATNOTEMPTY_UNK	Due to a hardware error or other condition it is not known whether there are items on the transport.
WFS_CIM_TPSTATNOTSUPPORTED	The device is not capable of reporting whether or not items are on the transport.

lpszExtra
Pointer to a list of vendor-specific, or any other extended, information. The information is returned as a series of *"key=value"* strings so that it is easily extensible by Service Providers. Each string is null-terminated, with the final string terminating with two null characters. An empty list may be indicated by either a NULL pointer or a pointer to two consecutive null characters.

dwGuidLights [...]
Specifies the state of the guidance light indicators. The elements of this array can be accessed by using the predefined index values specified for the *dwGuidLights* field in the capabilities. Vendor specific guidance lights are defined starting from the end of the array. The maximum guidance light index is WFS_CIM_GUIDLIGHTS_MAX.

Specifies the state of the guidance light indicator as WFS_CIM_GUIDANCE_NOT_AVAILABLE, WFS_CIM_GUIDANCE_OFF or a combination of the following flags consisting of one type B, and optionally one type C.

Value	Meaning	Type
WFS_CIM_GUIDANCE_NOT_AVAILABLE	The status is not available.	A
WFS_CIM_GUIDANCE_OFF	The light is turned off.	A
WFS_CIM_GUIDANCE_SLOW_FLASH	The light is blinking slowly.	B
WFS_CIM_GUIDANCE_MEDIUM_FLASH	The light is blinking medium frequency.	B
WFS_CIM_GUIDANCE_QUICK_FLASH	The light is blinking quickly.	B
WFS_CIM_GUIDANCE_CONTINUOUS	The light is turned on continuous (steady).	B
WFS_CIM_GUIDANCE_RED	The light is red.	C
WFS_CIM_GUIDANCE_GREEN	The light is green.	C
WFS_CIM_GUIDANCE_YELLOW	The light is yellow.	C
WFS_CIM_GUIDANCE_BLUE	The light is blue.	C
WFS_CIM_GUIDANCE_CYAN	The light is cyan.	C
WFS_CIM_GUIDANCE_MAGENTA	The light is magenta.	C
WFS_CIM_GUIDANCE_WHITE	The light is white.	C

wDevicePosition
Specifies the device position. The device position value is independent of the *fwDevice* value, e.g. when the device position is reported as WFS_CIM_DEVICENOTINPOSITION, *fwDevice* can have any of the values defined above (including WFS_CIM_DEVONLINE or WFS_CIM_DEVOFFLINE). If the device is not in its normal operating position (i.e. WFS_CIM_DEVICEINPOSITION) then media may not be accepted / presented through the normal customer interface. This value is one of the following values:

Value	Meaning
WFS_CIM_DEVICEINPOSITION	The device is in its normal operating position, or is fixed in place and cannot be moved.
WFS_CIM_DEVICENOTINPOSITION	The device has been removed from its normal operating position.
WFS_CIM_DEVICEPOSUNKNOWN	Due to a hardware error or other condition, the position of the device cannot be determined.
WFS_CIM_DEVICEPOSNOTSUPP	The physical device does not have the capability of detecting the position.

usPowerSaveRecoveryTime
Specifies the actual number of seconds required by the device to resume its normal operational state from the current power saving mode. This value is zero if either the power saving mode has not been activated or no power save control is supported.

Error Codes Only the generic error codes defined in [Ref. 1] can be generated by this command.

Comments Applications which rely on the *lpszExtra* parameter may not be device or vendor-independent.

In the case where communications with the device has been lost, the *fwDevice* field will report WFS_CIM_DEVPOWEROFF when the device has been removed or WFS_CIM_DEVHWERROR if the communications are unexpectedly lost. All other fields should contain a value based on the following rules and priority:

1. Report the value as unknown.
2. Report the value as a general h/w error.
3. Report the value as the last known value.

4.2 WFS_INF_CIM_CAPABILITIES

Description This command is used to retrieve the capabilities of the cash acceptor.

Input Param None.

Output Param LPWFSCIMCAPS lpCaps;

```
typedef struct _wfs_cim_caps
     {
     WORD                    wClass;
     WORD                    fwType;
     WORD                    wMaxCashInItems;
     BOOL                    bCompound;
     BOOL                    bShutter;
     BOOL                    bShutterControl;
     BOOL                    bSafeDoor;
     BOOL                    bCashBox;
     BOOL                    bRefill;
     WORD                    fwIntermediateStacker;
     BOOL                    bItemsTakenSensor;
     BOOL                    bItemsInsertedSensor;
     WORD                    fwPositions;
     WORD                    fwExchangeType;
     WORD                    fwRetractAreas;
     WORD                    fwRetractTransportActions;
     WORD                    fwRetractStackerActions;
     LPSTR                   lpszExtra;
     DWORD                   dwGuidLights[WFS_CIM_GUIDLIGHTS_SIZE];
     DWORD                   dwItemInfoTypes;
     BOOL                    bCompareSignatures;
     BOOL                    bPowerSaveControl;
     } WFSCIMCAPS, *LPWFSCIMCAPS;
```

wClass
Specifies the logical service class as WFS_SERVICE_CLASS_CIM.

fwType
Supplies the type of CIM as one of the following values:

Value	Meaning
WFS_CIM_TELLERBILL	The CIM is a Teller Bill Acceptor.
WFS_CIM_SELFSERVICEBILL	The CIM is a Self Service Bill Acceptor.
WFS_CIM_TELLERCOIN	The CIM is a Teller Coin Acceptor.
WFS_CIM_SELFSERVICECOIN	The CIM is a Self Service Coin Acceptor.

wMaxCashInItems
Supplies the maximum number of items that can be accepted in a single WFS_CMD_CIM_CASH_IN command. Normally reflects hardware limitations of the device.

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bCompound
Specifies whether or not the logical device is part of a compound physical device.

bShutter
If this flag is TRUE then the device has a shutter and explicit shutter control through the commands WFS_CMD_CIM_OPEN_SHUTTER and WFS_CMD_CIM_CLOSE_SHUTTER is supported. The definition of a shutter will depend on the h/w implementation. On some devices where items are automatically detected and accepted then a shutter is simply a latch that is opened and closed, usually under implicit control by the Service Provider. On other devices, the term shutter refers to a door, which is opened and closed to allow the customer to place the items onto a tray. If a Service Provider cannot detect when items are inserted and there is a shutter on the device, then it must provide explicit application control of the shutter.

bShutterControl
If set to TRUE the shutter is controlled implicitly by the Service Provider. If set to FALSE the shutter must be controlled explicitly by the application using the WFS_CMD_CIM_OPEN_SHUTTER and the WFS_CMD_CIM_CLOSE_SHUTTER commands. This field is always set to TRUE if the device has no shutter. This field applies to all shutters and all positions.

bSafeDoor
Specifies whether the WFS_CMD_CIM_OPEN_SAFE_DOOR command is supported.

bCashBox
This field is only applicable to CIM types WFS_CIM_TELLERBILL and WFS_CIM_TELLERCOIN. It specifies whether or not the tellers have been assigned a cash box.

bRefill
This field is not used.

fwIntermediateStacker
Specifies the number of items the intermediate stacker for cash-in can hold. Zero means that there is no intermediate stacker for cash-in available.

bItemsTakenSensor
Specifies whether or not the CIM can detect when items at the exit position are taken by the user. If set to TRUE the Service Provider generates an accompanying WFS_SRVE_CIM_ITEMSTAKEN event. If set to FALSE this event is not generated. This field relates to all output positions.

bItemsInsertedSensor
Specifies whether the CIM has the ability to detect when items have actually been inserted by the user. If set to TRUE the Service Provider generates an accompanying WFS_SRVE_CIM_ITEMSINSERTED event. If set to FALSE this event is not generated. This field relates to all input positions. This flag should not be reported as TRUE unless item insertion can be detected.

fwPositions
Specifies the CIM input and output positions which are available as a combination of the following flags:

Value	Meaning
WFS_CIM_POSINLEFT	Left input position.
WFS_CIM_POSINRIGHT	Right input position.
WFS_CIM_POSINCENTER	Center input position.
WFS_CIM_POSINTOP	Top input position.
WFS_CIM_POSINBOTTOM	Bottom input position.
WFS_CIM_POSINFRONT	Front input position.
WFS_CIM_POSINREAR	Rear input position.
WFS_CIM_POSOUTLEFT	Left output position.
WFS_CIM_POSOUTRIGHT	Right output position.
WFS_CIM_POSOUTCENTER	Center output position.
WFS_CIM_POSOUTTOP	Top output position.
WFS_CIM_POSOUTBOTTOM	Bottom output position.
WFS_CIM_POSOUTFRONT	Front output position.
WFS_CIM_POSOUTREAR	Rear output position.

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fwExchangeType
Specifies the type of cash unit exchange operations supported by the CIM. Values are a combination of the following flags:

Value	Meaning
WFS_CIM_EXBYHAND	The CIM supports manual replenishment either by emptying the cash unit by hand or by replacing the cash unit.
WFS_CIM_EXTOCASSETTES	The CIM supports moving items from the replenishment cash unit to the bill cash units.
WFS_CIM_CLEARRECYCLER	The CIM supports the emptying of recycle cash units.
WFS_CIM_DEPOSITINTO	The CIM supports moving items from the deposit entrance to the bill cash units.

fwRetractAreas
Specifies the areas to which items may be retracted. This field will be set to a combination of the following flags:

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__ ex. CWA 15748-74:2008 en Extensions for Financial Services (XFS) interface specification - Release 3.10 - Part 74: Cash-In Module Device Class Interface Migration from Version 3.02 (CWA 14050) to Version 3.10 (this CWA) - Programmer's Reference € 72.00

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