CEN

WORKSHOP

AGREEMENT

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Extensions for Financial Services (XFS) interface specification - Release 3.10 - Part 10: Sensors and Indicators Unit Device Class Interface - Programmer's Reference

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 Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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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

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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

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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.

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

Revision History:

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.
2.0	November 11, 1996	Update release encompassing the self-service environment
3.0	October 18, 2000	Updated as follows Addition of the reset command Addition of the auxiliaries WFS_SIU_REMOTE_STATUS_MONITOR and WFS_SIU_AUDIBLE_ALARM Addition of WFS_SIU_SCANNER, WFS_SIU_DOCUMENTPRINTER and WFS_SIU_COINACCEPTOR guidance lights. For a detailed description see CWA 14050-23 SIU Migration from Version 2.0 to Version 3.0, October 18, 2000.
3.01	November 16, 2001	Addition of an enhanced audio device. Required for support of American Disabilities Act.
3.10	November 29, 2007	For a description of changes see CWA 15748-69:2007 SIU Migration from Version 3.01 (see CWA 14050) to Version 3.10.

1. Introduction

1.1 Background to Release 3.10

The CEN/ISSS XFS Workshop aims to promote a clear and unambiguous specification defining a multi-vendor software interface to financial peripheral devices. The XFS (eXtensions for Financial Services) specifications are developed within the CEN/ISSS (European Committee for Standardization/Information Society Standardization System) Workshop environment. CEN/ISSS Workshops aim to arrive at a European consensus on an issue that can be published as a CEN Workshop Agreement (CWA).

The CEN/ISSS XFS Workshop encourages the participation of both banks and vendors in the deliberations required to create an industry standard. The CEN/ISSS XFS Workshop achieves its goals by focused sub-groups working electronically and meeting quarterly.

Release 3.10 of the XFS specification is based on a C API and is delivered with the continued promise for the protection of technical investment for existing applications. This release of the XFS specification has been prompted by a series of factors.

There has been a technical imperative to extend the scope of the existing specification to include new devices, such as the Barcode Reader, Card Dispenser and Item Processing Module.

Similarly, there has also been pressure, through implementation experience and additional requirements, to extend the functionality and capabilities of the existing devices covered by the specification.

1.2 XFS Service-Specific Programming

The service classes are defined by their service-specific commands and the associated data structures, error codes, messages, etc. These commands are used to request functions that are specific to one or more classes of Service Providers, but not all of them, and therefore are not included in the common API for basic or administration functions.

When a service-specific command is common among two or more classes of Service Providers, the syntax of the command is as similar as possible across all services, since a major objective of XFS is to standardize function codes and structures for the broadest variety of services. For example, using the **WFSExecute** function, the commands to read data from various services are as similar as possible to each other in their syntax and data structures.

In general, the specific command set for a service class is defined as a superset of the specific capabilities likely to be provided by the developers of the services of that class; thus any particular device will normally support only a subset of the defined command set.

There are three cases in which a Service Provider may receive a service-specific command that it does not support:

The requested capability is defined for the class of Service Providers by the XFS specification, the particular vendor implementation of that service does not support it, and the unsupported capability is *not* considered to be fundamental to the service. In this case, the Service Provider returns a successful completion, but does no operation. An example would be a request from an application to turn on a control indicator on a passbook printer; the Service Provider recognizes the command, but since the passbook printer it is managing does not include that indicator, the Service Provider does no operation and returns a successful completion to the application.

The requested capability is defined for the class of Service Providers by the XFS specification, the particular vendor implementation of that service does not support it, and the unsupported capability *is* considered to be fundamental to the service. In this case, a WFS_ERR_UNSUPP_COMMAND error is returned to the calling application. An example would be a request from an application to a cash dispenser to dispense coins; the Service Provider recognizes the command but, since the cash dispenser it is managing dispenses only notes, returns this error.

The requested capability is *not* defined for the class of Service Providers by the XFS specification. In this case, a WFS_ERR_INVALID_COMMAND error is returned to the calling application.

This design allows implementation of applications that can be used with a range of services that provide differing subsets of the functionalities that are defined for their service class. Applications may use the **WFSGetInfo** and **WFSAsyncGetInfo** commands to inquire about the capabilities of the service they are about to use, and modify their behavior accordingly, or they may use functions and then deal with WFS_ERR_UNSUPP_COMMAND error returns to make decisions as to how to use the service.

2. Sensors and Indicators Unit

This specification describes the functionality of the services provided by the Sensors and Indicators Unit (SIU) services under WOSA/XFS, by defining the service-specific commands that can be issued, using the **WFSGetInfo, WFSAsyncGetInfo**, **WFSExecute** and **WFSAsyncExecute** functions.

This section describes the functions provided by a generic Sensors and Indicators Unit service. This service allows for the operation of the following categories of ports:

- Door sensors, such as cabinet, safe or vandal shield doors.

- Alarm sensors, such as tamper, seismic or heat sensors.

- Generic sensors, such as proximity or ambient light sensors.

- Key switch sensors, such as the ATM operator switch.

- Lamp/sign indicators, such as fascia light or audio indicators.

- Auxiliary indicators.

- Enhanced Audio Controller, for use by the partially sighted.

In self-service devices, the sensors and indicators unit is capable of dealing with external sensors, such as door switches, locks, alarms and proximity sensors, as well as external indicators, such as turning on lamps or heating.

2.1   Enhanced Audio Controller Overview

The Enhanced Audio Controller is provided to support the requirements of the American Disabilities Act. The Enhanced Audio Controller device controls how private and public audio are broadcast when a headset is inserted into/removed from the Audio Jack, and when the Handset is off-hook/on-hook. In the following 'Privacy Device' is used to refer to either the headset or handset. This device allows audio feedback publicly and/or via the consumer's Privacy Device (vendor hardware permitting). For privacy, the device allows input to only be directed to the consumers' Privacy Device. In 'auto' and 'semi-auto' mode (and where the vendor's hardware allows), public transmission of audio can be automatically inhibited when the consumer's Privacy Device is activated. In 'auto' mode (and where the vendor's hardware allows), public transmission of audio can be automatically re-activated when the consumer's Privacy Device is deactivated.

The Enhanced Audio Controller provides the application with the following information:

- If a Privacy Device is activated (headset connected/handset off the hook).

- Whether the audio output is to the speakers or to the Privacy Device.

- Privacy/public mode: i.e. whether the activation of the Privacy Device automatically switches public audio on or off.

The device is managed by the sensors WFS_SIU_ENHANCEDAUDIO, WFS_SIU_HANDSETSENSOR, and an auxiliary WFS_SIU_ENHANCEDAUDIOCONTROL.

The WFS_SIU_ENHANCEDAUDIO sensor is used to:

- Provide information on the presence of the Audio Jack device.

- To report whether a headset is currently attached.

- Report state change events when a headset is inserted or removed.

The WFS_SIU_HANDSETSENSOR sensor is used to:

- Provide information on the presence of the handset device.

- To report whether a handset is currently off the hook.

- Report state change events when a handset is taken off the hook or put on the hook.

The WFS_SIU_ENHANCEDAUDIOCONTROL auxiliary is used to control the behavior of the Enhanced Audio Controller. It allows the application to:

- Set the mode of the Enhanced Audio Controller - auto mode, semi-auto mode or manual mode.

- Set the state of the Enhanced Audio Controller- public or private.

There are no events associated with this auxiliary.

A full description of auto, semi-auto and manual mode, as well as public and private states is contained in the following pages.

The following describes the device behavior during auto and manual mode.

Auto Mode

In auto mode, when a consumer activates the Privacy Device, the audio is automatically directed to the Privacy Device and the audio is no longer sent to the speakers. When the Privacy Device is deactivated, the audio is redirected to the speakers. The following state diagram completely describes the behavior of the device in auto mode.

State Description

Auto Mode Public   Audio output is played through the public speakers only.
Auto Mode Private   Audio is played through the consumer's Privacy Device only.

Auto Mode State Diagram 1

The dashed-line transitions are caused by application calls to WFS_CMD_SIU_SET_PORT or WFS_CMD_SIU_SET_AUXILIARY for the WFS_SIU_ENHANCEDAUDIOCONTROL auxiliary with values of WFS_SIU_PRIVATEAUDIO_AUTO or WFS_SIU_PUBLICAUDIO_AUTO.

Note that some vendor implementations may not have the ability to allow the application to command the Service Provider to transition between public and private states. To determine if this feature is available, the application can query the field *fwAuxiliaries[WFS_SIU_ENHANCEDAUDIOCONTROL]* in the WFSSIUCAPS structure.

Semi-Auto Mode

This mode is required to ensure customer sensitive information is not broadcast via the public speakers when the consumer's Privacy Device is deliberately or otherwise deactivated.
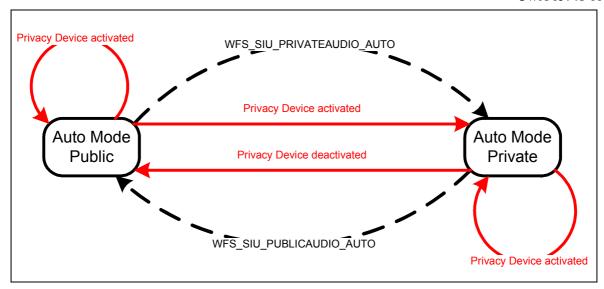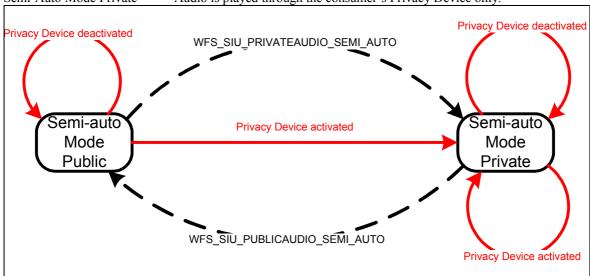
In semi-auto mode, when a consumer's Privacy Device is activated, the audio is automatically directed to the Privacy Device and the audio is no longer sent to the speakers. When the Privacy Device is deactivated the audio remains directed at the existing interface (i.e. not the speakers). If required, the application must explicitly return the device to its public state if audio is required via the speakers. The following state diagram completely describes the behavior of the device in auto mode.

State Description

Semi-Auto Mode Public   Audio output is played through the public speakers only.
Semi-Auto Mode Private   Audio is played through the consumer's Privacy Device only.

Semi-Auto Mode State Diagram 2

The dashed-line transitions are caused by application calls to WFS_CMD_SIU_SET_PORT or WFS_CMD_SIU_SET_AUXILIARY for the WFS_SIU_ENHANCEDAUDIOCONTROL auxiliary with values of WFS_SIU_PRIVATEAUDIO_AUTO or WFS_SIU_PUBLICAUDIO_AUTO.

Manual Mode

In manual mode, when a consumer's Privacy Device is activated, the audio remains directed at the existing interface (i.e. the speaker), The application must explicitly change to the other mode, if required. Note that the application must explicitly return the device to its public state if audio is required via the speakers. The following state diagram completely describes the behavior of the device in manual mode.

State Description

Manual Mode Public   Audio output is played through the public speakers only.
Manual Mode Private   Audio is played through the consumer's Privacy Device only.

Manual Mode State Diagram 1

The dashed-line transitions are caused by application calls to WFS_CMD_SIU_SET_PORT or WFS_CMD_SIU_SET_AUXILIARY for the WFS_SIU_ENHANCEDAUDIOCONTROL auxiliary with values of WFS_SIU_PRIVATEAUDIO_MANUAL or WFS_SIU_PUBLICAUDIO_MANUAL.
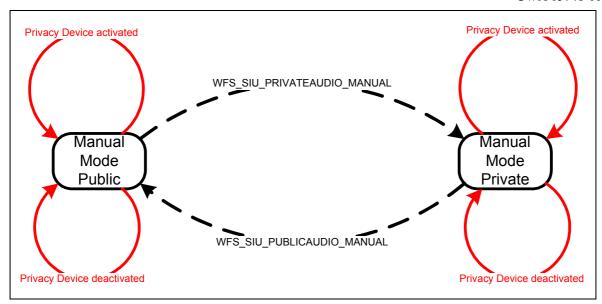
<u>**Inter-Mode Behavior**</u>

The values described in the previous sections (_AUTO, _SEMI_AUTO, and _MANUAL, etc) can also be used to move from one mode to another. This will then change the mode of the device.

<u>Notes:</u>

- Note that if a vendor device does not support auto mode, or semi-auto mode then the WFS_EXEE_SIU_PORT_ERROR event is received on any attempt to call WFS_CMD_SIU_SET_PORT, etc. with the WFS_SIU_PUBLICAUDIO_AUTO, WFS_PRIVATEAUDIO_AUTO, WFS_SIU_PUBLICAUDIO_SEMI_AUTO, and WFS_PRIVATEAUDIO_SEMI_AUTO settings. The same event is generated if calls to change the mode to manual are received when the vendor device does not support manual mode.

- The existing *WFS_SIU_VOLUME* auxiliary can be used to control the volume setting of any audio delivered to a connected Privacy Device, as well as the speakers. Independent volume control of the speakers and Privacy Device is not supported.

- Any 'beep' tones generated by the PINPAD, etc will be fed to a connected Privacy Device (vendor hardware permitting).

3. References

1. XFS Application Programming Interface (API)/Service Provider Interface (SPI), Programmer's Reference
Revision 3.10

4. Info Commands

4.1 WFS_INF_SIU_STATUS

Description   This command reports the full range of information available, including the information that is provided by the Service Provider.

Input Param   None.

Output Param   LPWFSSIUSTATUS lpStatus;

```
typedef struct _wfs_siu_status
    {
    WORD            fwDevice;
    WORD            fwSensors [WFS_SIU_SENSORS_SIZE];
    WORD            fwDoors [WFS_SIU_DOORS_SIZE];
    WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR           lpszExtra;
    USHORT          usPowerSaveRecoveryTime;
    } WFSSIUSTATUS, *LPWFSSIUSTATUS;
```

fwDevice
Specifies the state of the Sensors and Indicators Unit device as one of the following flags:

Value	Meaning
WFS_SIU_DEVONLINE	The device is online (i.e. powered on and operable).
WFS_SIU_DEVOFFLINE	The device is offline (e.g. the operator has taken the device offline by turning a switch or pulling out the device).
WFS_SIU_DEVPOWEROFF	The device is powered off or physically not connected.
WFS_SIU_DEVNODEVICE	There is no device 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_SIU_DEVHWERROR	The device is inoperable due to a hardware error.
WFS_SIU_DEVUSERERROR	The device is present but a person is preventing proper operation.
WFS_SIU_DEVBUSY	The device is busy and unable to process an execute command at this time.
WFS_SIU_DEVFRAUDATTEMPT	The device is present but has detected a fraud attempt.

fwSensors [...]
Specifies the state of the sensors. A number of sensor types are defined below. Vendor specific sensors are defined starting from the end of the array. The maximum sensor index is WFS_SIU_SENSORS_MAX.

fwSensors [WFS_SIU_OPERATORSWITCH]
Specifies the state of the Operator Switch(es). This switch is used to tell the terminal if an operator/supervisor wants to change the state from Run to Operators/Supervisors mode or vice versa. The Run mode is used for normal consumer operations/transactions. The Maintenance mode is used when replenishing the terminal. The Supervisor mode is used when operating the terminal for service and testing. Supervisor mode has higher priority than Maintenance mode. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_RUN	The switch is in Run mode.
WFS_SIU_MAINTENANCE	The switch is in Maintenance mode.
WFS_SIU_SUPERVISOR	The switch is in Supervisor mode.

fwSensors [WFS_SIU_TAMPER]
Specifies the state of the Tamper Sensor for the terminal. This sensor indicates whether the terminal has been tampered with (such as a burglar attempt). Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	There is no indication of a tampering attempt.
WFS_SIU_ON	There has been a tampering attempt.

fwSensors [WFS_SIU_INTTAMPER]
Specifies the state of the Internal Tamper Sensor for the internal alarm. This sensor indicates whether the internal alarm has been tampered with (such as a burglar attempt). Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	There is no indication of a tampering attempt.
WFS_SIU_ON	There has been a tampering attempt.

fwSensors [WFS_SIU_SEISMIC]
Specifies the state of the Seismic Sensor. This sensor indicates whether the terminal has been shaken (e.g. burglar attempt or seismic activity). Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The seismic activity has not been high enough to trigger the sensor.
WFS_SIU_ON	The seismic or other activity has triggered the sensor.

fwSensors [WFS_SIU_HEAT]
Specifies the state of the Heat Sensor. This sensor is triggered by excessive heat (fire) near the terminal. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The heat has not been high enough to trigger the sensor.
WFS_SIU_ON	The heat has been high enough to trigger the sensor.

fwSensors [WFS_SIU_PROXIMITY]
Specifies the state of the Proximity Sensor. This sensor is triggered by movements around the terminal. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_PRESENT	The sensor is showing that there is someone present at the terminal.
WFS_SIU_NOT_PRESENT	The sensor can not sense any people around the terminal.

fwSensors [WFS_SIU_AMBLIGHT]
Specifies the state of the Ambient Light Sensor. This sensor indicates the level of ambient light around the terminal. Interpretation of this value is vendor-specific and therefore it is not guaranteed to report a consistent actual ambient light level across different vendor hardware. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_VERY_DARK	The level of light is: very dark.
WFS_SIU_DARK	The level of light is: dark.

WFS_SIU_MEDIUM_LIGHT	The level of light is: medium light.
WFS_SIU_LIGHT	The level of light is: light.
WFS_SIU_VERY_LIGHT	The level of light is: very light.

fwSensors [WFS_SIU_ENHANCEDAUDIO]
Specifies the presence or absence of a consumer's headphone connected to the Audio Jack.
Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_PRESENT	There is a headset connected.
WFS_SIU_NOT_PRESENT	There is no headset connected.

fwSensors [WFS_SIU_BOOT_SWITCH]
Specifies the state of the Boot Switch Sensor. This sensor is triggered whenever the terminal is
about to be rebooted due to a delayed effect switch. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_ON	The terminal is about to be rebooted.
WFS_SIU_OFF	The sensor has not been triggered.

fwSensors [WFS_SIU_CONSUMER_DISPLAY]
Specifies the state of the Consumer Display. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Consumer Display is switched off.
WFS_SIU_ON	The Consumer Display is in a good state and is turned on.
WFS_SIU_DISPLAY_ERROR	The Consumer Display is in an error state.

fwSensors [WFS_SIU_OPERATOR_CALL_BUTTON]
Specifies the state of the Operator Call Button as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Operator Call Button is released (not pressed).
WFS_SIU_ON	The Operator Call Button is being pressed.

fwSensors [WFS_SIU_HANDSETSENSOR]
Specifies the state of the Handset, which is a device similar to a telephone receiver. Specified as
one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF_THE_HOOK	The Handset is off the hook.
WFS_SIU_ON_THE_HOOK	The Handset is on the hook.

fwSensors [WFS_SIU_GENERALINPUTPORT]
Specifies the state of the vendor dependent General-Purpose Input Ports as a bitmap. Before
making use of the General-Purpose Input Ports the vendor should examine if the required
functionality is covered in this or other device classes as a vendor independent feature. Each bit of
this value represents one General-Purpose Input Port and is specified as one of the following
binary values:

Value	Meaning
0	The General-Purpose Input Port is turned off.
1	The General-Purpose Input Port is turned on.

The following flags can be used to reference each General-Purpose Input Port.

Value	Meaning
WFS_SIU_GPP1	General-Purpose Input Port 1.
WFS_SIU_GPP2	General-Purpose Input Port 2.

…
WFS_SIU_GPP16   General-Purpose Input Port 16.

fwDoors [...]
Specifies the state of the doors. A number of door types are defined below. Vendor specific doors
are defined starting from the end of the array. The maximum door index is
WFS_SIU_DOORS_MAX.

fwDoors [WFS_SIU_CABINET]
Specifies a summary of the states of the Cabinet Doors. A more detailed status may be available
through the door specific state for e.g. WFS_SIU_CABINET_REAR. Cabinet Doors are doors
that open up for consumables, and hardware that does not have to be in a secure place. Specified
as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	All Cabinet Doors are closed.
WFS_SIU_OPEN	At least one of the Cabinet Doors is open.
WFS_SIU_LOCKED	All Cabinet Doors are closed and locked.
WFS_SIU_BOLTED	All Cabinet Doors are closed, locked and bolted.

fwDoors [WFS_SIU_SAFE]
Specifies the state of the Safe Doors. Safe Doors are doors that open up for secure hardware, such
as the note dispenser, the security device, etc. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	The Safe Doors are closed.
WFS_SIU_OPEN	At least one of the Safe Doors is open.
WFS_SIU_LOCKED	The Safe Doors are closed and locked.
WFS_SIU_BOLTED	The Safe Doors are closed, locked and bolted.

fwDoors [WFS_SIU_VANDALSHIELD]
Specifies the state of the Vandal Shield. The Vandal Shield is a door that open up for consumer
access to the terminal. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	The Vandal Shield is closed.
WFS_SIU_OPEN	The Vandal Shield is open.
WFS_SIU_LOCKED	The Vandal Shield is closed and locked.
WFS_SIU_SERVICE	The Vandal Shield is in service position.
WFS_SIU_KEYBOARD	The Vandal Shield position permits access to the keyboard.
WFS_SIU_AJAR	The Vandal Shield is ajar.
WFS_SIU_JAMMED	The Vandal Shield is jammed.

fwDoors [WFS_SIU_CABINET_FRONT]
Specifies the overall state of the Front Cabinet Doors (the overall status for all cabinet doors is
available through the status for WFS_SIU_CABINET). The front is defined as the side facing the
customer/consumer. Cabinet Doors are doors that open up for consumables, and hardware that
does not have to be in a secure place. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	All Front Cabinet Doors are closed.
WFS_SIU_OPEN	At least one of the Front Cabinet Doors is open.
WFS_SIU_LOCKED	All Front Cabinet Doors are closed and locked.
WFS_SIU_BOLTED	All Front Cabinet Doors are closed, locked and bolted.

fwDoors [WFS_SIU_CABINET_REAR]

Specifies the overall state of the Rear Cabinet Doors (the overall status for all cabinet doors is available through the status for WFS_SIU_CABINET). The rear is defined as the side opposite the side facing the customer/consumer. Cabinet Doors are doors that open up for consumables, and hardware that does not have to be in a secure place. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	All Rear Cabinet Doors are closed.
WFS_SIU_OPEN	At least one of the Rear Cabinet Doors is open.
WFS_SIU_LOCKED	All Rear Cabinet Doors are closed and locked.
WFS_SIU_BOLTED	All Rear Cabinet Doors are closed, locked and bolted.

fwDoors [WFS_SIU_CABINET_LEFT]

Specifies the overall state of the Left Cabinet Doors (the overall status for all cabinet doors is available through the status for WFS_SIU_CABINET). The left is defined as the side to the left as seen by the customer/consumer. Cabinet Doors are doors that open up for consumables, and hardware that does not have to be in a secure place. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	All Left Cabinet Doors are closed.
WFS_SIU_OPEN	At least one of the Left Cabinet Doors is open.
WFS_SIU_LOCKED	All Left Cabinet Doors are closed and locked.
WFS_SIU_BOLTED	All Left Cabinet Doors are closed, locked and bolted.

fwDoors [WFS_SIU_CABINET_RIGHT]

Specifies the overall state of the Right Cabinet Doors (the overall status for all cabinet doors is available through the status for WFS_SIU_CABINET). The right is defined as the side to the right as seen by the customer/consumer. Cabinet Doors are doors that open up for consumables, and hardware that does not have to be in a secure place. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	All Right Cabinet Doors are closed.
WFS_SIU_OPEN	At least one of the Right Cabinet Doors is open.
WFS_SIU_LOCKED	All Right Cabinet Doors are closed and locked.
WFS_SIU_BOLTED	All Right Cabinet Doors are closed, locked and bolted.

fwIndicators [...]

Specifies the state of the indicators. A number of indicator types are defined below. Vendor specific indicators are defined starting from the end of the array. The maximum indicator index is WFS_SIU_INDICATORS_MAX.

fwIndicators [WFS_SIU_OPENCLOSE]

Specifies the state of the Open/Closed Indicator as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_CLOSED	The terminal is closed for a consumer.
WFS_SIU_OPEN	The terminal is open to be used by a consumer.

fwIndicators [WFS_SIU_FASCIALIGHT]

Specifies the state of the Fascia Light as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Fascia Light is turned off.
WFS_SIU_ON	The Fascia Light is turned on.

fwIndicators [WFS_SIU_AUDIO]

Specifies the state of the Audio Indicator as one of the following flags of type A and B, or as WFS_SIU_CONTINUOUS in combination with one of the flags of type B: Interpretation of this value is vendor-specific and therefore it is not possible to guarantee a consistent actual sound pattern across different vendor hardware.

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	The status is not available.	A
WFS_SIU_OFF	The Audio Indicator is turned off.	A
WFS_SIU_KEYPRESS	The Audio Indicator sounds a key click signal.	B
WFS_SIU_EXCLAMATION	The Audio Indicator sounds an exclamation signal.	B
WFS_SIU_WARNING	The Audio Indicator sounds a warning signal.	B
WFS_SIU_ERROR	The Audio Indicator sounds an error signal.	B
WFS_SIU_CRITICAL	The Audio Indicator sounds a critical signal.	B
WFS_SIU_CONTINUOUS	The Audio Indicator sound is turned on continuously.	C

fwIndicators [WFS_SIU_HEATING]

Specifies the state of the Internal Heating as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Internal Heating is turned off.
WFS_SIU_ON	The Internal Heating is turned on.

fwIndicators [WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT]

Specifies the state of the Consumer Display Backlight as one of the following:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Consumer Display Backlight is turned off.
WFS_SIU_ON	The Consumer Display Backlight is turned on.

fwIndicators [WFS_SIU_SIGNAGEDISPLAY]

Specifies the state of the Signage Display. The Signage Display is a lighted banner or marquee that can be used to display information or an advertisement. Any dynamic data displayed must be loaded by a means external to the Service Provider. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Signage Display is turned off.
WFS_SIU_ON	The Signage Display is turned on.

fwIndicators [WFS_SIU_TRANSINDICATOR]

Specifies the state of the Transaction Indicators as a bitmap. Each bit of this value represents one Transaction Indicator and is specified as one of the following binary values:

Value	Meaning
0	The Transaction Indicator is turned off.
1	The Transaction Indicator is turned on.

The following flags can be used to reference each Transaction Indicator.

Value	Meaning
WFS_SIU_LAMP1	Transaction Indicator 1.
WFS_SIU_LAMP2	Transaction Indicator 2.
…	
WFS_SIU_LAMP16	Transaction Indicator 16.

fwIndicators [WFS_SIU_GENERALOUTPUTPORT]

Specifies the state of the vendor dependent General-Purpose Output Ports as a bitmap. Before making use of the General-Purpose Output Ports the vendor should examine if the required functionality is covered in this or other device classes as a vendor independent feature. Each bit of this value represents one General-Purpose Output Port and is specified as one of the following binary values:

Value	Meaning
0	The General-Purpose Output Port is turned off.
1	The General-Purpose Output Port is turned on.

The following flags can be used to reference each General-Purpose Output Port.

Value	Meaning
WFS_SIU_GPP1	General-Purpose Output Port 1.
WFS_SIU_GPP2	General-Purpose Output Port 2.
…	
WFS_SIU_GPP16	General-Purpose Output Port 16.

fwAuxiliaries [...]

Specifies the state of the auxiliary indicators. A number of auxiliary indicator types are defined below. Vendor specific auxiliaries are defined starting from the end of the array. The maximum auxiliary index is WFS_SIU_AUXILIARIES_MAX.

fwAuxiliaries [WFS_SIU_VOLUME]

Specifies the value of the Volume Control. The value of Volume Control is defined in an interval from 1 to 1000 where 1 is the lowest volume level and 1000 is the highest volume level. The interval is defined in logarithmic steps, e.g. a volume control on a radio. Note: The Volume Control field is handled as unsigned short. Interpretation of this value is vendor-specific and therefore it is not possible to guarantee a consistent actual volume level across different vendor hardware.

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
1, ..., 1000	The volume level. This field is handled as an unsigned short.

fwAuxiliaries [WFS_SIU_UPS]

Specifies the state of the Uninterruptible Power Supply device as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	The status is not available.	A
WFS_SIU_AVAILABLE	The UPS is available.	B
WFS_SIU_LOW	The charge level of the UPS is low.	B
WFS_SIU_ENGAGED	The UPS is engaged.	B
WFS_SIU_POWERING	The UPS is powering the system. The main power supply is off.	B
WFS_SIU_RECOVERED	The UPS was engaged when the main power went off.	B

fwAuxiliaries[WFS_SIU_REMOTE_STATUS_MONITOR]

Specifies the state of the Remote Status Monitor device (which uses LEDs for displaying the status of the system). Possible states are WFS_SIU_NOT_AVAILABLE or a combination of one of each flag of type B, C and D:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	The status is not available.	A
WFS_SIU_GREEN_LED_ON	The green LED is on.	B
WFS_SIU_GREEN_LED_OFF	The green LED is off.	B
WFS_SIU_AMBER_LED_ON	The amber LED is on.	C
WFS_SIU_AMBER_LED_OFF	The amber LED is off.	C
WFS_SIU_RED_LED_ON	The red LED is on.	D
WFS_SIU_RED_LED_OFF	The red LED is off.	D

fwAuxiliaries[WFS_SIU_AUDIBLE_ALARM]
Species the state of the Audible Alarm device as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The Alarm is turned off.
WFS_SIU_ON	The Alarm is turned on.

fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL]
Specifies the state of the Enhanced Audio Controller. The Enhanced Audio Controller controls how private and public audio are broadcast when the headset is inserted into/removed from the audio jack and when the handset is off-hook/on-hook. In the following, Privacy Device is used to refer to either the headset or handset. The Enhanced Audio Controller state is specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_PUBLICAUDIO_MANUAL	The Enhanced Audio Controller is in manual mode and is in the public state (i.e. audio will be played through speakers). Activating a Privacy Device (headset connected/handset off-hook) will have no impact, i.e. Output will remain through the speakers & no audio will be directed to the Privacy Device.
WFS_SIU_PUBLICAUDIO_AUTO	The Enhanced Audio Controller is in auto mode and is in the public state (i.e. audio will be played through speakers). When a Privacy Device is activated, the device will go to the private state.
WFS_SIU_PUBLICAUDIO_SEMI_AUTO	The Enhanced Audio Controller is in semi-auto mode and is in the public state (i.e. audio will be played through speakers). When a Privacy Device is activated, the device will go to the private state.
WFS_SIU_PRIVATEAUDIO_MANUAL	The Enhanced Audio Controller is in manual mode and is in the private state (i.e. audio will be played only through a connected Privacy Device). In private mode, no audio is transmitted through the speakers.
WFS_SIU_PRIVATEAUDIO_AUTO	The Enhanced Audio Controller is in auto mode and is in the private state (i.e. audio will be played only through a connected Privacy Device). In private mode, no audio is transmitted through the speakers. When a Privacy Device is deactivated (headset disconnected/handset on-hook), the device will go to the public state.

WFS_SIU_PRIVATEAUDIO_SEMI_AUTO   The Enhanced Audio Controller is in semi-auto mode and is in the private state (i.e. audio will be played only through a connected Privacy Device). In private mode, no audio is transmitted through the speakers. When a Privacy Device is deactivated, the device will remain in the private state.

fwGuidLights [...]
Specifies the state of the Guidance Light Indicators. A number of guidance light types are defined below. Vendor specific guidance lights are defined starting from the end of the array. The maximum guidance light index is WFS_SIU_GUIDLIGHTS_MAX. All member elements in this array are specified as one of the following flags. Interpretation of this value is vendor-specific and therefore it is not possible to guarantee a consistent actual flash rate across different vendor hardware.

Value	Meaning
WFS_SIU_NOT_AVAILABLE	The status is not available.
WFS_SIU_OFF	The light is turned off.
WFS_SIU_SLOW_FLASH	The light is blinking slowly.
WFS_SIU_MEDIUM_FLASH	The light is blinking medium frequency.
WFS_SIU_QUICK_FLASH	The light is blinking quickly.
WFS_SIU_CONTINUOUS	The light is turned on continuous (steady).

fwGuidLights [WFS_SIU_CARDUNIT]
Specifies the state of the Guidance Light Indicator on the Card Unit (IDC).

fwGuidLights [WFS_SIU_PINPAD]
Specifies the state of the Guidance Light Indicator on the PIN pad unit.

fwGuidLights [WFS_SIU_NOTESDISPENSER]
Specifies the state of the Guidance Light Indicator on the note dispenser unit.

fwGuidLights [WFS_SIU_COINDISPENSER]
Specifies the state of the Guidance Light Indicator on the coin dispenser unit.

fwGuidLights [WFS_SIU_RECEIPTPRINTER]
Specifies the state of the Guidance Light Indicator on the receipt printer unit.

fwGuidLights [WFS_SIU_PASSBOOKPRINTER]
Specifies the state of the Guidance Light Indicator on the passbook printer unit.

fwGuidLights [WFS_SIU_ENVDEPOSITORY]
Specifies the state of the Guidance Light Indicator on the envelope depository unit.

fwGuidLights [WFS_SIU_CHEQUEUNIT]
Specifies the state of the Guidance Light Indicator on the cheque processing unit.

fwGuidLights [WFS_SIU_BILLACCEPTOR]
Specifies the state of the Guidance Light Indicator on the bill acceptor unit.

fwGuidLights [WFS_SIU_ENVDISPENSER]
Specifies the state of the Guidance Light Indicator on the envelope dispenser unit.

fwGuidLights [WFS_SIU_DOCUMENTPRINTER]
Specifies the state of the Guidance Light Indicator on the document printer.

fwGuidLights [WFS_SIU_COINACCEPTOR]
Specifies the state of the Guidance Light Indicator on the coin acceptor.

fwGuidLights [WFS_SIU_SCANNER]
Specifies the state of the Guidance Light Indicator on the scanner unit.

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.

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 require or expect specific information to be present in the *lpszExtra* parameter may not be device or vendor-independent.

In the case where the value to be reported in a status field cannot be determined because of a communications failure, then the status for that field will be reported as WFS_SIU_NOT_AVAILABLE. *fwDevice* will report WFS_SIU_DEVONLINE so long as at least one status field can be reported.

4.2 WFS_INF_SIU_CAPABILITIES

Description   This command is used to retrieve the capabilities of the Sensors and Indicators Unit.

Input Param   None.

Output Param   LPWFSSIUCAPS lpCaps;

```
typedef struct _wfs_siu_caps
    {
WORD            wClass;
WORD            fwType;
WORD            fwSensors [WFS_SIU_SENSORS_SIZE];
WORD            fwDoors [WFS_SIU_DOORS_SIZE];
WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
LPSTR           lpszExtra;
BOOL            bPowerSaveControl;
    } WFSSIUCAPS, *LPWFSSIUCAPS;
```

wClass
Specifies the logical service class as WFS_SERVICE_CLASS_SIU.

fwType
Specifies the type of sensors and indicators supported by this device as a combination of the following flags:

Value	Meaning
WFS_SIU_SENSORS	The device supports input sensors.
WFS_SIU_DOORS	The device support door sensors.
WFS_SIU_INDICATORS	The device supports indicators.
WFS_SIU_AUXILIARIES	The device supports auxiliary indicators.
WFS_SIU_GUIDLIGHTS	The device supports guidance lights.

fwSensors [...]
Specifies which sensors are available, and if so, which states they can take. A number of sensor types are defined below. Vendor specific sensors are defined starting from the end of the array. The maximum sensor index is WFS_SIU_SENSORS_MAX.

fwSensors [WFS_SIU_OPERATORSWITCH]
Specifies whether the Operator Switch is available, and if so, which states it can take. Specified as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Operator Switch available.	A
WFS_SIU_RUN	The switch can be set in Run mode.	B
WFS_SIU_MAINTENANCE	The switch can be set in Maintenance mode.	B
WFS_SIU_SUPERVISOR	The switch can be set in Supervisors mode.	B

fwSensors [WFS_SIU_TAMPER]
Specifies whether the Tamper Sensor for the terminal is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Tamper Sensor available.
WFS_SIU_AVAILABLE	The Tamper Sensor is available.

fwSensors [WFS_SIU_INTTAMPER]
Specifies whether the Internal Tamper Sensor for internal alarm is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Internal Tamper Sensor available.
WFS_SIU_AVAILABLE	The Internal Tamper Sensor is available.

fwSensors [WFS_SIU_SEISMIC]
Specifies whether the Seismic Sensor is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Seismic Sensor available.
WFS_SIU_AVAILABLE	The Seismic Sensor is available.

fwSensors [WFS_SIU_HEAT]
Specifies whether the Heat Sensor is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Heat Sensor available.
WFS_SIU_AVAILABLE	The Heat Sensor is available.

fwSensors [WFS_SIU_PROXIMITY]
Specifies whether the Proximity Sensor is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Proximity Sensor available.
WFS_SIU_AVAILABLE	The Proximity Sensor is available.

fwSensors [WFS_SIU_AMBLIGHT]
Specifies whether the Ambient Light Sensor is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Ambient Light Sensor available.
WFS_SIU_AVAILABLE	The Ambient Light Sensor is available.

fwSensors [WFS_SIU_ENHANCEDAUDIO]
Specifies whether the Audio Jack is present, and if so, which modes it supports. Specified as
WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Audio Jack available.	A
WFS_SIU_MANUAL	The Audio Jack is available and supports manual mode.	B
WFS_SIU_AUTO	The Audio Jack is available and supports auto mode.	B
WFS_SIU_SEMI_AUTO	The Audio Jack is available and supports semi-auto mode.	B

fwSensors [WFS_SIU_BOOT_SWITCH]
Specifies whether the Boot Switch is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Boot Switch Sensor available.
WFS_SIU_AVAILABLE	The Boot Switch Sensor is available.

fwSensors [WFS_SIU_CONSUMER_DISPLAY]
Specifies whether the Consumer Display Sensor is available. Specified as one of the following
flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Consumer Display Sensor available.
WFS_SIU_AVAILABLE	The Consumer Display Sensor is available.

fwSensors [WFS_SIU_OPERATOR_CALL_BUTTON]
Specifies whether the Operator Call Button is available. The Operator Call Button does not
actually call the operator but just sends a signal to the application. Specified as one of the
following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Operator Call Button available.
WFS_SIU_AVAILABLE	The Operator Call Button is available.

fwSensors [WFS_SIU_HANDSETSENSOR]
Specifies whether the Handset is present, and if so, which modes it supports. Specified as
WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Handset available.	A
WFS_SIU_MANUAL	The Handset is available and it supports manual mode.	B
WFS_SIU_AUTO	The Handset is available and it supports auto mode.	B
WFS_SIU_SEMI_AUTO	The Handset is available and it supports semi-auto mode.	B

fwSensors [WFS_SIU_GENERALINPUTPORT]
Specifies whether the vendor dependent General-Purpose Input Ports are available. Before making
use of the General-Purpose Input Ports the vendor should examine if the required functionality is
covered in this or other device classes as a vendor independent feature. This value is a bitmap and
each bit of this value represents one General-Purpose Input Port. Each bit is specified as one of the
following binary values:

Value	Meaning
0	The General-Purpose Input Port is not available.
1	The General-Purpose Input Port is available.

The following flags can be used to reference each General-Purpose Input Port.

Value	Meaning
WFS_SIU_GPP1	General-Purpose Input Port 1.
WFS_SIU_GPP2	General-Purpose Input Port 2.
…	
WFS_SIU_GPP16	General-Purpose Input Port 16.

fwDoors [...]
Specifies which doors are available, and if so, which states they can take. A number of door types
are defined below. Vendor specific doors are defined starting from the end of the array. The
maximum door index is WFS_SIU_DOORS_MAX.

fwDoors [WFS_SIU_CABINET]
Specifies whether at least one Cabinet Doors is available, and if so, which states they can take.
Specified as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Cabinet Door available.	A
WFS_SIU_CLOSED	At least one of the Cabinet Doors can detect a closed state.	B
WFS_SIU_OPEN	At least one of the Cabinet Doors can detect an open state.	B
WFS_SIU_LOCKED	At least one of the Cabinet Doors can be locked.	B
WFS_SIU_BOLTED	At least one of the Cabinet Doors can be bolted.	B

fwDoors [WFS_SIU_SAFE]
Specifies whether the Safe Doors are available, and if so, which states they can take. Specified as
WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Safe Door available.	A
WFS_SIU_CLOSED	The Safe Doors can be closed.	B

WFS_SIU_OPEN	The Safe Doors can be open.	B
WFS_SIU_LOCKED	The Safe Doors can be locked.	B
WFS_SIU_BOLTED	The Safe Doors can be bolted.	B

fwDoors [WFS_SIU_VANDALSHIELD]
Specifies whether the Vandal Shield is available, and if so, which states it can take. Specified as
WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Vandal Shield available.	A
WFS_SIU_CLOSED	The Vandal Shield can be closed.	B
WFS_SIU_OPEN	The Vandal Shield can be open.	B
WFS_SIU_LOCKED	The Vandal Shield can be locked.	B
WFS_SIU_SERVICE	The Vandal Shield can be in service position.	B
WFS_SIU_KEYBOARD	The Vandal Shield can be in position that permits access to the keyboard.	B

fwDoors [WFS_SIU_CABINET_FRONT]
Specifies whether at least one Front Cabinet Door is available, and if so, which states they can
take (the overall capability for all cabinet doors is available through the capability for
WFS_SIU_CABINET). The front is defined as the side facing the customer/consumer. Specified
as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Front Cabinet Door available.	A
WFS_SIU_CLOSED	At least one of the Front Cabinet Doors can detect a closed state.	B
WFS_SIU_OPEN	At least one of the Front Cabinet Doors can detect an open state.	B
WFS_SIU_LOCKED	At least one of the Front Cabinet Doors can be locked.	B
WFS_SIU_BOLTED	At least one of the Front Cabinet Doors can be bolted.	B

fwDoors [WFS_SIU_CABINET_REAR]
Specifies whether at least one Rear Cabinet Door is available, and if so, which states they can take
(the overall capability for all cabinet doors is available through the capability for
WFS_SIU_CABINET). The rear is defined as the side opposite the side facing the
customer/consumer. Specified as WFS_SIU_NOT_AVAILABLE or as a combination of the
following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Rear Cabinet Door available.	A
WFS_SIU_CLOSED	At least one of the Rear Cabinet Doors can detect a closed state.	B
WFS_SIU_OPEN	At least one of the Rear Cabinet Doors can detect an open state.	B
WFS_SIU_LOCKED	At least one of the Rear Cabinet Doors can be locked.	B
WFS_SIU_BOLTED	At least one of the Rear Cabinet Doors can be bolted.	B

fwDoors [WFS_SIU_CABINET_LEFT]
Specifies whether at least one Left Cabinet Door is available, and if so, which states they can take
(the overall capability for all cabinet doors is available through the capability for
WFS_SIU_CABINET). The left is defined as the side to the left as seen by the
customer/consumer. Specified as WFS_SIU_NOT_AVAILABLE or as a combination of the
following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Left Cabinet Door available.	A
WFS_SIU_CLOSED	At least one of the Left Cabinet Doors can detect a closed state.	B
WFS_SIU_OPEN	At least one of the Left Cabinet Doors can detect an open state.	B
WFS_SIU_LOCKED	At least one of the Left Cabinet Doors can be locked.	B
WFS_SIU_BOLTED	At least one of the Left Cabinet Doors can be bolted.	B

fwDoors [WFS_SIU_CABINET_RIGHT]
Specifies whether at least one Right Cabinet Door is available, and if so, which states they can take (the overall capability for all cabinet doors is available through the capability for WFS_SIU_CABINET). The right is defined as the side to the right as seen by the customer/consumer. Specified as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Right Cabinet Door available.	A
WFS_SIU_CLOSED	At least one of the Right Cabinet Doors can detect a closed state.	B
WFS_SIU_OPEN	At least one of the Right Cabinet Doors can detect an open state.	B
WFS_SIU_LOCKED	At least one of the Right Cabinet Doors can be locked.	B
WFS_SIU_BOLTED	At least one of the Right Cabinet Doors can be bolted.	B

fwIndicators [...]
Specifies which indicators are available, and if so, which states they can take. A number of indicator types are defined below. Vendor specific indicators are defined starting from the end of the array. The maximum indicator index is WFS_SIU_INDICATORS_MAX.

fwIndicators [WFS_SIU_OPENCLOSE]
Specifies whether the Open/Closed Indicator is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Open/Closed Indicator available.
WFS_SIU_AVAILABLE	The Open/Closed Indicator is available.

fwIndicators [WFS_SIU_FASCIALIGHT]
Specifies whether the Fascia Light is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Fascia Light available.
WFS_SIU_AVAILABLE	The Fascia Light is available.

fwIndicators [WFS_SIU_AUDIO]
Specifies whether the Audio Indicator device is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Audio Indicator available.
WFS_SIU_AVAILABLE	The Audio Indicator is available.

fwIndicators [WFS_SIU_HEATING]
Specifies whether the internal Heating device is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Heating device available.
WFS_SIU_AVAILABLE	The Heating device is available.

fwIndicators [WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT]
Specifies whether the Consumer Display Backlight is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Consumer Display Backlight device available or it is not controllable by the application.
WFS_SIU_AVAILABLE	The Consumer Display Backlight device is available and is controllable by the application.

fwIndicators [WFS_SIU_SIGNAGEDISPLAY]
Specifies whether the Signage Display is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Signage Display available.
WFS_SIU_AVAILABLE	The Signage Display is available.

fwIndicators [WFS_SIU_TRANSINDICATOR]
Specifies whether the Transaction Indicators are available as a bitmap. Each bit of this value represents one Transaction Indicator and is specified as one of the following binary values:

Value	Meaning
0	The Transaction Indicator is not available.
1	The Transaction Indicator is available.

The following flags can be used to reference each Transaction Indicator.

Value	Meaning
WFS_SIU_LAMP1	Transaction Indicator 1.
WFS_SIU_LAMP2	Transaction Indicator 2.
…	
WFS_SIU_LAMP16	Transaction Indicator 16.

fwIndicators [WFS_SIU_GENERALOUTPUTPORT]
Specifies whether the vendor dependent General-Purpose Output Ports are available. Before making use of the General-Purpose Output Ports the vendor should examine if the required functionality is covered in this or other device classes as a vendor independent feature. This value is a bitmap and each bit of this value represents one General-Purpose Output Port. Each bit is specified as one of the following binary values:

Value	Meaning
0	The General-Purpose Output Port is not available.
1	The General-Purpose Output Port is available.

The following flags can be used to reference each General-Purpose Output Port.

Value	Meaning
WFS_SIU_GPP1	General-Purpose Output Port 1.
WFS_SIU_GPP2	General-Purpose Output Port 2.
…	
WFS_SIU_GPP16	General-Purpose Output Port 16.

fwAuxiliaries [...]
Specifies which auxiliaries are available, and if so, which states they can take. A number of auxiliary indicator types are defined below. Vendor specific auxiliaries are defined starting from the end of the array. The maximum auxiliary index is WFS_SIU_AUXILIARIES_MAX.

fwAuxiliaries [WFS_SIU_VOLUME]
Specifies whether the Volume Control is available, and if so, the increment/decrement value recommended by the vendor.

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Volume Control available.

| 1, ..., 1000 | The recommended increment/decrement value for the Volume Control. |

fwAuxiliaries [WFS_SIU_UPS]
Specifies whether the UPS device is available, and if so, which states it can take. Specified as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no UPS available.	A
WFS_SIU_AVAILABLE	The UPS is available.	B
WFS_SIU_LOW	The UPS can indicate that its charge level is low.	B
WFS_SIU_ENGAGED	The UPS can be engaged and disengaged by the application.	B
WFS_SIU_POWERING	The UPS can indicate that it is powering the system while the main power supply is off.	B
WFS_SIU_RECOVERED	The UPS can indicate that it was engaged when the main power went off.	B

fwAuxiliaries [WFS_SIU_REMOTE_STATUS_MONITOR]
Specifies whether the Remote Status Monitor device is available. The Remote Status Monitor device uses LEDs for displaying the status of the system. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Remote Status Monitor device available.
WFS_SIU_AVAILABLE	The Remote Status Monitor device is available.

fwAuxiliaries [WFS_SIU_AUDIBLE_ALARM]
Specifies whether the Audible Alarm device is available. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Audible Alarm device available.
WFS_SIU_AVAILABLE	The Audible Alarm device is available.

fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL]
Specifies whether the Enhanced Audio Controller is available, and if so, which modes it supports. The Enhanced Audio Controller controls how private and public audio are broadcast when the headset is inserted into/removed from the audio jack and when the handset is off-hook/on-hook. In the following Privacy Device is used to refer to either the headset or handset. The modes it supports are specified as WFS_SIU_NOT_AVAILABLE or as a combination of the following flags of type B:

Value	Meaning	Type
WFS_SIU_NOT_AVAILABLE	There is no Enhanced Audio Controller available.	A
WFS_SIU_HEADSET_DETECTION	The Enhanced Audio Controller is available and supports Privacy Device activation/deactivation. The device is able to report events to indicate Privacy Device activation/deactivation.	B
WFS_SIU_MODE_CONTROLLABLE	The Enhanced Audio Controller is available and supports application control of the Privacy Device mode via the WFS_CMD_SIU_SET_PORTS and WF_CMD_SET_AUXILIARY command.	B

fwGuidLights [...]
Specifies which Guidance Light Indicators are available. A number of guidance light types are defined below. Vendor specific guidance lights are defined starting from the end of the array. The maximum guidance light index is WFS_SIU_GUIDLIGHTS_MAX. The elements of this array are specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Guidance Light Indicator available at this position or the device controls the light.
WFS_SIU_AVAILABLE	A Guidance Light Indicator is available at this position.

fwGuidLights [WFS_SIU_CARDUNIT]
Specifies whether the Guidance Light Indicator on the Card Unit (IDC) is available.

fwGuidLights [WFS_SIU_PINPAD]
Specifies whether the Guidance Light Indicator on the PIN pad unit is available.

fwGuidLights [WFS_SIU_NOTESDISPENSER]
Specifies whether the Guidance Light Indicator on the note dispenser unit is available.

fwGuidLights [WFS_SIU_COINDISPENSER]
Specifies whether the Guidance Light Indicator on the coin dispenser unit is available.

fwGuidLights [WFS_SIU_RECEIPTPRINTER]
Specifies whether the Guidance Light Indicator on the receipt printer unit is available.

fwGuidLights [WFS_SIU_PASSBOOKPRINTER]
Specifies whether the Guidance Light Indicator on the passbook printer unit is available.

fwGuidLights [WFS_SIU_ENVDEPOSITORY]
Specifies whether the Guidance Light Indicator on the envelope depository unit is available.

fwGuidLights [WFS_SIU_CHEQUEUNIT]
Specifies whether the Guidance Light Indicator on the cheque processing unit is available.

fwGuidLights [WFS_SIU_BILLACCEPTOR]
Specifies whether the Guidance Light Indicator on the bill acceptor unit is available.

fwGuidLights [WFS_SIU_ENVDISPENSER]
Specifies whether the Guidance Light Indicator on the envelope dispenser unit is available.

fwGuidLights [WFS_SIU_DOCUMENTPRINTER]
Specifies whether the Guidance Light Indicator on the document printer is available.

fwGuidLights [WFS_SIU_COINACCEPTOR]
Specifies whether the Guidance Light Indicator on the coin acceptor is available.

fwGuidLights [WFS_SIU_SCANNER]
Specifies whether the Guidance Light Indicator on the scanner unit is available.

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.

bPowerSaveControl
Specifies whether power saving control is available. This can either be TRUE if available or FALSE if not available.

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

Comments   Applications which require or expect specific information to be present in the *lpszExtra* parameter may not be device or vendor-independent.

5. Execute Commands

5.1 WFS_CMD_SIU_ENABLE_EVENTS

Description   This command is used to enable or disable events from the Sensors and Indicators Unit. The default condition is that all events are disabled.

Input Param   LPWFSSIUENABLE lpEnable;

```
typedef struct _wfs_siu_enable
    {
    WORD           fwSensors [WFS_SIU_SENSORS_SIZE];
    WORD           fwDoors [WFS_SIU_DOORS_SIZE];
    WORD           fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD           fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD           fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR          lpszExtra;
    } WFSSIUENABLE, *LPWFSSIUENABLE;
```

fwSensors [...]
Specifies which of the sensors that should report changes. A number of sensor types are defined below. Vendor specific sensors are defined starting from the end of the array. The maximum sensor index is WFS_SIU_SENSORS_MAX.

fwSensors [WFS_SIU_OPERATORSWITCH]
Specifies whether the Operator Switch should report whenever the switch changes the operating mode. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Operators Switch should report whenever it changes mode from Run to Maintenance or Supervisor mode or vice versa.
WFS_SIU_DISABLE_EVENT	The Operators Switch should not report any changes of it operating mode.

fwSensors [WFS_SIU_TAMPER]
Specifies whether the Tamper Sensor should report whenever someone tampers with the terminal. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Tamper Sensor should report whenever it detects any tampering attempt.
WFS_SIU_DISABLE_EVENT	The Tamper Sensor should not report any changes of its status.

fwSensors [WFS_SIU_INTTAMPER]
Specifies whether the Internal Tamper Sensor should report whenever someone tampers with the internal alarm. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Internal Tamper Sensor should report whenever it detects any tampering attempt.
WFS_SIU_DISABLE_EVENT	The Internal Tamper Sensor should not report any changes of its status.

fwSensors [WFS_SIU_SEISMIC]
Specifies whether the Seismic Sensor should report whenever any seismic activity is detected. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.

WFS_SIU_ENABLE_EVENT	The Seismic Sensor should report whenever it detects any seismic activity.
WFS_SIU_DISABLE_EVENT	The Seismic Sensor should not report any changes of its status.

fwSensors [WFS_SIU_HEAT]
Specifies whether the Heat Sensor should report whenever any excessive heat is detected.
Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Heat Sensor should report whenever it detects any excessive heat.
WFS_SIU_DISABLE_EVENT	The Heat Sensor should not report any changes of its status.

fwSensors [WFS_SIU_PROXIMITY]
Specifies whether the Proximity Sensor should report whenever any movement is detected close to the terminal. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Proximity Sensor should report whenever it detects any movement.
WFS_SIU_DISABLE_EVENT	The Proximity Sensor should not report any changes of its status.

fwSensors [WFS_SIU_AMBLIGHT]
Specifies whether the Ambient Light Sensor should report whenever it detects changes in the ambient light. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Ambient Light Sensor should report whenever it detects a change.
WFS_SIU_DISABLE_EVENT	The Ambient Light Sensor should not report any change.

fwSensors [WFS_SIU_ENHANCEDAUDIO]
Specifies whether the Audio Jack should report whenever it detects changes in the audio jack.
Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Audio Jack should report whenever it detects a headset being connected or disconnected.
WFS_SIU_DISABLE_EVENT	The Audio Jack should not report any change in headset connection state.

fwSensors [WFS_SIU_BOOT_SWITCH]
Specifies whether the Boot Switch should report whenever the delayed effect boot switch is used.
Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Boot Switch should report whenever it detects the terminal is going to be rebooted.
WFS_SIU_DISABLE_EVENT	The Boot Switch should not report any changes of its status.

fwSensors [WFS_SIU_CONSUMER_DISPLAY]
Specifies whether the Consumer Display Sensor should report whenever it detects changes to the consumer display. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Consumer Display Sensor should report whenever it detects any changes of its status.
WFS_SIU_DISABLE_EVENT	The Consumer Display Sensor should not report any changes of its status.

fwSensors [WFS_SIU_OPERATOR_CALL_BUTTON]
Specifies whether the Operator Call Button should report whenever the Operator Call Button is pressed or released. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Operator Call Button should report whenever it detects that it is pressed or released.
WFS_SIU_DISABLE_EVENT	The Operator Call Button should not report any changes of its status.

fwSensors [WFS_SIU_HANDSETSENSOR]
Specifies whether the Handset Sensor should report whenever it detects changes of its status. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Handset Sensor should report whenever the handset is picked up or put down.
WFS_SIU_DISABLE_EVENT	The Handset Sensor should not report any changes of its status.

fwSensors [WFS_SIU_GENERALINPUTPORT]
Specifies whether the General-Purpose Input Port should report whenever it detects changes to any one of the General-Purpose Input Ports. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The General-Purpose Input Port should report whenever any General-Purpose Input Port is turned on or off.
WFS_SIU_DISABLE_EVENT	The General-Purpose Input Port should not report any changes of its status.

fwDoors [...]
Specifies which of the doors should report changes. A number of door types are defined below. Vendor specific doors are defined starting from the end of the array. The maximum door index is WFS_SIU_DOORS_MAX.

fwDoors [WFS_SIU_CABINET]
Specifies whether the Cabinet Doors should report whenever the doors are opened, closed, bolted or locked. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Cabinet Doors should report whenever the doors are opened, closed, locked or bolted.
WFS_SIU_DISABLE_EVENT	The Cabinet Doors sensor should not report any changes of the doors status.

fwDoors [WFS_SIU_SAFE]
Specifies whether the Safe Doors should report whenever the doors are opened, closed, bolted or locked. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.

WFS_SIU_ENABLE_EVENT	The Safe Doors should report whenever the doors are opened, closed, locked or bolted.
WFS_SIU_DISABLE_EVENT	The Safe Doors should not report any changes of the doors status.

fwDoors [WFS_SIU_VANDALSHIELD]
Specifies whether the Vandal Shield should report whenever the shield changed position. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Vandal Shield should report whenever the doors are opened or closed.
WFS_SIU_DISABLE_EVENT	The Vandal Shield should not report any changes of the status.

fwDoors [WFS_SIU_CABINET_FRONT]
Specifies whether the Front Cabinet Doors should report whenever the front doors are opened, closed, bolted or locked. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Front Cabinet Doors should report whenever the doors are opened, closed, locked or bolted.
WFS_SIU_DISABLE_EVENT	The Front Cabinet Doors sensor should not report any changes of the doors status.

fwDoors [WFS_SIU_CABINET_REAR]
Specifies whether the Rear Cabinet Doors should report whenever the rear doors are opened, closed, bolted or locked. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Rear Cabinet Doors should report whenever the doors are opened, closed, locked or bolted.
WFS_SIU_DISABLE_EVENT	The Rear Cabinet Doors sensor should not report any changes of the doors status.

fwDoors [WFS_SIU_CABINET_LEFT]
Specifies whether the Left Cabinet Doors should report whenever the left doors are opened, closed, bolted or locked. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Left Cabinet Doors should report whenever the doors are opened, closed, locked or bolted.
WFS_SIU_DISABLE_EVENT	The Left Cabinet Doors sensor should not report any changes of the doors status.

fwDoors [WFS_SIU_CABINET_RIGHT]
Specifies whether the Right Cabinet Doors should report whenever the right doors are opened, closed, bolted or locked. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Right Cabinet Doors should report whenever the doors are opened, closed, locked or bolted.
WFS_SIU_DISABLE_EVENT	The Right Cabinet Doors sensor should not report any changes of the doors status.

fwIndicators [...]
Specifies which of the indicators should report changes. A number of indicator types are defined below. Vendor specific indicators are defined starting from the end of the array. The maximum indicator index is WFS_SIU_INDICATORS_MAX.

fwIndicators [WFS_SIU_OPENCLOSE]
Specifies whether the Open/Closed Indicator should report whenever it is turned on (set to open) or turned off (set to closed). Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Open/Closed Indicator should report whenever it is turned on or off.
WFS_SIU_DISABLE_EVENT	The Open/Closed Indicator should not report any changes of the indicator.

fwIndicators [WFS_SIU_FASCIALIGHT]
Specifies whether the Fascia Light should report whenever it is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Fascia Light should report whenever it is turned on or off.
WFS_SIU_DISABLE_EVENT	The Fascia Light should not report any changes.

fwIndicators [WFS_SIU_AUDIO]
Specifies whether the Audio Indicator should report whenever it is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Audio Indicator should report whenever it is turned on or off.
WFS_SIU_DISABLE_EVENT	The Audio Indicator should not report any changes.

fwIndicators [WFS_SIU_HEATING]
Specifies whether the Heating device should report whenever it is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Heating device should report whenever it is turned on or off.
WFS_SIU_DISABLE_EVENT	The Heating device should not report any changes.

fwIndicators [WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT]
Specifies whether the Consumer Display Backlight should report whenever it is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Consumer Display Backlight should report whenever it is turned on or off.
WFS_SIU_DISABLE_EVENT	The Consumer Display Backlight should not report any changes.

fwIndicators [WFS_SIU_SIGNAGEDISPLAY]
Specifies whether the Signage Display should report whenever it is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.

WFS_SIU_ENABLE_EVENT	The Signage Display should report whenever it is turned on or off.
WFS_SIU_DISABLE_EVENT	The Signage Display should not report any changes.

fwIndicators [WFS_SIU_TRANSINDICATOR]
Specifies whether the Transaction Indicators should report whenever any one of them is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Transaction Indicators should report whenever any Transaction Indicator is turned on or off.
WFS_SIU_DISABLE_EVENT	The Transaction Indicators should not report any changes.

fwIndicators [WFS_SIU_GENERALOUTPUTPORT]
Specifies whether the General-Purpose Output Ports should report whenever any one of them is turned on or turned off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The General-Purpose Output Ports should report whenever any General-Purpose Output Port is turned on or off.
WFS_SIU_DISABLE_EVENT	The General-Purpose Output Ports should not report any changes.

fwAuxiliaries [...]
Specifies which of the auxiliary indicators should report changes. A number of auxiliary indicator types are defined below. Vendor specific indicators are defined starting from the end of the array. The maximum indicator index is WFS_SIU_AUXILIARIES_MAX.

fwAuxiliaries[WFS_SIU_VOLUME]
Specifies whether the Volume Control device should report whenever it is changed. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Volume Control device should report whenever it is changed.
WFS_SIU_DISABLE_EVENT	The Volume Control device should not report any changes.

fwAuxiliaries[WFS_SIU_UPS]
Specifies whether the UPS device should report whenever it is changed. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The UPS device should report whenever it is changed.
WFS_SIU_DISABLE_EVENT	The UPS device should not report any changes.

fwAuxiliaries[WFS_SIU_REMOTE_STATUS_MONITOR]
Specifies whether the Remote Status Monitor device should report whenever it is changed. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Remote Status Monitor device should report whenever it is changed.

WFS_SIU_DISABLE_EVENT	The Remote Status Monitor device should not report any changes.

fwAuxiliaries[WFS_SIU_AUDIBLE_ALARM]
Specifies whether the Audible Alarm device should report whenever it is changed. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Audible Alarm device should report whenever it is changed.
WFS_SIU_DISABLE_EVENT	The Audible Alarm device should not report any changes.

fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL]
Specifies whether the Enhanced Audio Controller should report whenever it changes status (assuming the device is capable of generating events). Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Enhanced Audio Controller should report whenever it is changed.
WFS_SIU_DISABLE_EVENT	The Enhanced Audio Controller device should not report any changes.

fwGuidLights [...]
Specifies which of the Guidance Light Indicators should report whenever any of them changes its state. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current reporting status.
WFS_SIU_ENABLE_EVENT	The Guidance Light Indicators should report whenever any of them changes its state.
WFS_SIU_DISABLE_EVENT	The Guidance Light Indicators should not report any changes of their states.

fwGuidLights [WFS_SIU_CARDUNIT]
Specifies whether the Guidance Light Indicator on the Card Unit (IDC) should report whenever it changes status.

fwGuidLights [WFS_SIU_PINPAD]
Specifies whether the Guidance Light Indicator on the PIN pad unit should report whenever it changes status.

fwGuidLights [WFS_SIU_NOTESDISPENSER]
Specifies whether the Guidance Light Indicator on the note dispenser unit should report whenever it changes status.

fwGuidLights [WFS_SIU_COINDISPENSER]
Specifies whether the Guidance Light Indicator on the coin dispenser unit should report whenever it changes status.

fwGuidLights [WFS_SIU_RECEIPTPRINTER]
Specifies whether the Guidance Light Indicator on the receipt printer unit should report whenever it changes status.

fwGuidLights [WFS_SIU_PASSBOOKPRINTER]
Specifies whether the Guidance Light Indicator on the passbook printer unit should report whenever it changes status.

fwGuidLights [WFS_SIU_ENVDEPOSITORY]
Specifies whether the Guidance Light Indicator on the envelope depository unit should report whenever it changes status.

fwGuidLights [WFS_SIU_CHEQUEUNIT]
Specifies whether the Guidance Light Indicator on the cheque processing unit should report whenever it changes status.

fwGuidLights [WFS_SIU_BILLACCEPTOR]
Specifies whether the Guidance Light Indicator on the bill acceptor unit should report whenever it changes status.

fwGuidLights [WFS_SIU_ENVDISPENSER]
Specifies whether the Guidance Light Indicator on the envelope dispenser unit should report whenever it changes status.

fwGuidLights [WFS_SIU_DOCUMENTPRINTER]
Specifies whether the Guidance Light Indicator on the document printer should report whenever it changes status.

fwGuidLights [WFS_SIU_COINACCEPTOR]
Specifies whether the Guidance Light Indicator on the coin acceptor should report whenever it changes status.

fwGuidLights [WFS_SIU_SCANNER]
Specifies whether the Guidance Light Indicator on the scanner unit should report whenever it changes status.

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.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to enable or disable events to a port was invalid because the port does not exist.
WFS_ERR_SIU_SYNTAX	The command was invoked with incorrect input data. E.g. an attempt to both enable and disable events to the same port was made.

Events   In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while enabling or disabling events on one or more ports.

Comments   No action has been taken if this command returns an error. If a hardware error occurs while executing the command, the command will return OK, but execute event(s) will be generated which indicate(s) the port(s) which have failed.

5.2 WFS_CMD_SIU_SET_PORTS

Description This command is used to set or clear one or more output ports (indicators) in the Sensors and Indicators Unit.

Input Param LPWFSSIUSETPORTS lpSetPorts;

```
typedef struct _wfs_siu_set_ports
    {
    WORD            fwDoors [WFS_SIU_DOORS_SIZE];
    WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR           lpszExtra;
    } WFSSIUSETPORTS, *LPWFSSIUSETPORTS;
```

fwDoors [WFS_SIU_CABINET]
Specifies whether all Cabinet Doors should be bolted or unbolted. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Cabinet Doors.
WFS_SIU_BOLT	All Cabinet Doors are bolted.
WFS_SIU_UNBOLT	All Cabinet Doors are unbolted.

fwDoors [WFS_SIU_SAFE]
Specifies whether the Safe Doors should be bolted or unbolted. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Safe Doors.
WFS_SIU_BOLT	The Safe Doors are bolted.
WFS_SIU_UNBOLT	The Safe Doors are unbolted.

fwDoors [WFS_SIU_VANDALSHIELD]
Specifies whether the Vandal Shield should change position. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current position of the Vandal Shield.
WFS_SIU_CLOSED	The Vandal Shield is closed.
WFS_SIU_OPEN	The Vandal Shield is opened.
WFS_SIU_SERVICE	The Vandal Shield is set in service position.
WFS_SIU_KEYBOARD	The Vandal Shield is set in position that permits access to the keyboard.

fwDoors [WFS_SIU_CABINET_FRONT]
Specifies whether the Front Cabinet Doors should be bolted or unbolted. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Front Cabinet Doors.
WFS_SIU_BOLT	All Front Cabinet Doors are bolted.
WFS_SIU_UNBOLT	All Front Cabinet Doors are unbolted.

fwDoors [WFS_SIU_CABINET_REAR]
Specifies whether the Rear Cabinet Doors should be bolted or unbolted. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Rear Cabinet Doors.

WFS_SIU_BOLT	All Rear Cabinet Doors are bolted.
WFS_SIU_UNBOLT	All Rear Cabinet Doors are unbolted.

fwDoors [WFS_SIU_CABINET_LEFT]
Specifies whether the Left Cabinet Doors should be bolted or unbolted. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Left Cabinet Doors.
WFS_SIU_BOLT	All Left Cabinet Doors are bolted.
WFS_SIU_UNBOLT	All Left Cabinet Doors are unbolted.

fwDoors [WFS_SIU_CABINET_RIGHT]
Specifies whether the Right Cabinet Doors should be bolted or unbolted. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Right Cabinet Doors.
WFS_SIU_BOLT	All Right Cabinet Doors are bolted.
WFS_SIU_UNBOLT	All Right Cabinet Doors are unbolted.

fwIndicators [WFS_SIU_OPENCLOSE]
Specifies whether the Open/Closed Indicator should show Open or Close to a consumer. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Open/Closed Indicator.
WFS_SIU_CLOSED	The Open/Closed Indicator is changed to show that the terminal is closed for a consumer.
WFS_SIU_OPEN	The Open/Closed Indicator is changed to show that the terminal is open to be used by a consumer.

fwIndicators [WFS_SIU_FASCIALIGHT]
Specifies whether the Fascia Lights should be turned on or off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the light.
WFS_SIU_OFF	The Fascia Light is turned off.
WFS_SIU_ON	The Fascia Light is turned on.

fwIndicators [WFS_SIU_AUDIO]
Specifies whether the Audio Indicator should be turned on or off. Specified as one of the following flags of type A and B, or as WFS_SIU_CONTINUOUS in combination with one of the flags of type B:

Value	Meaning	Type
WFS_SIU_NO_CHANGE	Do not change the current status of the Audio Indicator.	A
WFS_SIU_OFF	The Audio Indicator is turned off.	A
WFS_SIU_KEYPRESS	The Audio Indicator sounds a key click signal.	B
WFS_SIU_EXCLAMATION	The Audio Indicator sounds an exclamation signal.	B
WFS_SIU_WARNING	The Audio Indicator sounds a warning signal.	B
WFS_SIU_ERROR	The Audio Indicator sounds an error signal.	B
WFS_SIU_CRITICAL	The Audio Indicator sounds a critical error signal.	B

WFS_SIU_CONTINUOUS	The Audio Indicator sound is turned on continuously.	C

fwIndicators [WFS_SIU_HEATING]
Specifies whether the Internal Heating device should be turned on or off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Internal Heating device.
WFS_SIU_OFF	The Internal Heating device is turned off.
WFS_SIU_ON	The Internal Heating device is turned on.

fwIndicators [WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT]
Specifies whether the Consumer Display Backlight should be turned on or off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Consumer Display Backlight.
WFS_SIU_ON	The Consumer Display Backlight is turned on.
WFS_SIU_OFF	The Consumer Display Backlight is turned off.

fwIndicators [WFS_SIU_SIGNAGE_UNIT]
Specifies whether the Consumer Display Backlight should be turned on or off. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Signage Display.
WFS_SIU_ON	The Signage Display is turned on.
WFS_SIU_OFF	The Signage Display is turned off.

fwIndicators [WFS_SIU_TRANSINDICATOR]
Specifies whether the Transaction Indicators should be turned on or off. All Transaction Indicators must be specified and each bit of this value represents one Transaction Indicator. Each bit is specified as one of the following binary values:

Value	Meaning
0	The Transaction Indicator is turned off.
1	The Transaction Indicator is turned on.

The following flags can be used to reference each Transaction Indicator.

Value	Meaning
WFS_SIU_LAMP1	Transaction Indicator 1.
WFS_SIU_LAMP2	Transaction Indicator 2.
…	
WFS_SIU_LAMP16	Transaction Indicator 16.

fwIndicators [WFS_SIU_GENERALOUTPUTPORT]
Specifies whether the General-Purpose Output Ports should be turned on or off. All General-Purpose Output Ports must be specified and each bit of this value represents one General-Purpose Output Port. Each bit is specified as one of the following binary values:

Value	Meaning
0	The General-Purpose Output Port is turned off.
1	The General-Purpose Output Port is turned on.

The following flags can be used to reference each General-Purpose Output Port.

Value	Meaning
WFS_SIU_GPP1	General-Purpose Output Port 1.

WFS_SIU_GPP2	General-Purpose Output Port 2.
…	
WFS_SIU_GPP16	General-Purpose Output Port 16.

fwAuxiliaries [WFS_SIU_VOLUME]

Specifies whether the value of the Volume Control should be changed. If so, the value of Volume Control is defined in an interval from 1 to 1000 where 1 is the lowest volume level and 1000 is the highest volume level. Specified as one of the following values:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Volume Control.
1, ..., 1000	The volume level. This field is handled as an unsigned short. If a value greater than 1000 is used, the provider will map the value to 1000.

fwAuxiliaries [WFS_SIU_UPS]

Specifies whether the UPS device should be engaged or disengaged. The UPS device should not be engaged when the charge level is low. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the UPS device.
WFS_SIU_ENGAGE	Engage the UPS.
WFS_SIU_DISENGAGE	Disengage the UPS.

fwAuxiliaries[WFS_SIU_REMOTE_STATUS_MONITOR]

Specifies whether the state of the Remote Status Monitor device should be changed. Specified as WFS_SIU_NO_CHANGE or a combination of one or more of the following flags of type B, C and D, with at most one flag from each type.

Value	Meaning	Type
WFS_SIU_NO_CHANGE	Do not change the current status of the Remote Status Monitor device.	A
WFS_SIU_GREEN_LED_ON	Turn on the green LED on the Remote Status Monitor device.	B
WFS_SIU_GREEN_LED_OFF	Turn off the green LED on the Remote Status Monitor device.	B
WFS_SIU_AMBER_LED_ON	Turn on the amber LED on the Remote Status Monitor device.	C
WFS_SIU_AMBER_LED_OFF	Turn off the amber LED on the Remote Status Monitor device.	C
WFS_SIU_RED_LED_ON	Turn on the red LED on the Remote Status Monitor device.	D
WFS_SIU_RED_LED_OFF	Turn off the red LED on the Remote Status Monitor device.	D

fwAuxiliaries[WFS_SIU_AUDIBLE_ALARM]

Specifies whether the state of the Audible Alarm device should be changed. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the status of the Audible Alarm device.
WFS_SIU_OFF	Turn off the Audible Alarm device.
WFS_SIU_ON	Turn on the Audible Alarm device.

fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL]

Specifies whether the state of the Enhanced Audio Controller should be changed. Note that this will only be acted upon for hardware environments that return WFS_SIU_MODE_CONTROLLABLE for the *WFS_SIU_ENHANCEDAUDIOCONTROL* auxiliary in the WFS_INF_SIU_CAPABILITIES command. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change status of the Enhanced Audio Controller.
WFS_SIU_PUBLICAUDIO_MANUAL	Set the Enhanced Audio Controller to manual mode, public state (i.e. audio will be played through speakers only).
WFS_SIU_PUBLICAUDIO_AUTO	Set the Enhanced Audio Controller to auto mode, public state (i.e. audio will be played through speakers). When a Privacy Device is activated (headset connected/handset off-hook), the device will go to the private state.
WFS_SIU_PUBLICAUDIO_SEMI_AUTO	Set the Enhanced Audio Controller to semi-auto mode, public state (i.e. audio will be played through speakers). When a Privacy Device is activated, the device will go to the private state.
WFS_SIU_PRIVATEAUDIO_MANUAL	Set the Enhanced Audio Controller to manual mode, private state (i.e. audio will be played only through a connected Privacy Device). In private mode, no audio is transmitted through the speakers.
WFS_SIU_PRIVATEAUDIO_AUTO	Set the Enhanced Audio Controller to auto mode, private state (i.e. audio will be played only through an activated Privacy Device). In private mode, no audio is transmitted through the speakers. When a Privacy Device is deactivated (headset disconnected/handset on-hook), the device will go to the public state.
WFS_SIU_PRIVATEAUDIO_SEMI_AUTO	Set the Enhanced Audio Controller to semi-auto mode, private state (i.e. audio will be played only through an activated Privacy Device). In private mode, no audio is transmitted through the speakers. When a Privacy Device is deactivated, the device will remain in the private state.

fwGuidLights [...]
Specifies whether the Guidance Light Indicators should be turned on or off, or if they should flash. All member elements of the Guidance Light Indicators structure can be specified as one of the following values:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Guidance Light Indicator.
WFS_SIU_OFF	The Guidance Light Indicator is turned off.
WFS_SIU_SLOW_FLASH	The Guidance Light Indicator is set to flash slowly.
WFS_SIU_MEDIUM_FLASH	The Guidance Light Indicator is set to flash at a medium frequency.
WFS_SIU_QUICK_FLASH	The Guidance Light Indicator is set to flash quickly.
WFS_SIU_CONTINUOUS	The Guidance Light Indicator is turned on continuously (steady).

fwGuidLights [WFS_SIU_CARDUNIT]
Specifies the state of the Guidance Light Indicator on the Card Unit (IDC).

fwGuidLights [WFS_SIU_PINPAD]
Specifies the state of the Guidance Light Indicator on the PIN pad unit.

fwGuidLights [WFS_SIU_NOTESDISPENSER]
Specifies the state of the Guidance Light Indicator on the note dispenser unit.

fwGuidLights [WFS_SIU_COINDISPENSER]
Specifies the state of the Guidance Light Indicator on the coin dispenser unit.

fwGuidLights [WFS_SIU_RECEIPTPRINTER]
Specifies the state of the Guidance Light Indicator on the receipt printer unit.

fwGuidLights [WFS_SIU_PASSBOOKPRINTER]
Specifies the state of the Guidance Light Indicator on the passbook printer unit.

fwGuidLights [WFS_SIU_ENVDEPOSITORY]
Specifies the state of the Guidance Light Indicator on the envelope depository unit.

fwGuidLights [WFS_SIU_CHEQUEUNIT]
Specifies the state of the Guidance Light Indicator on the cheque processing unit.

fwGuidLights [WFS_SIU_BILLACCEPTOR]
Specifies the state of the Guidance Light Indicator on the bill acceptor unit.

fwGuidLights [WFS_SIU_ENVDISPENSER]
Specifies the state of the Guidance Light Indicator on the envelope dispenser unit.

fwGuidLights [WFS_SIU_DOCUMENTPRINTER]
Specifies the state of the Guidance Light Indicator on the document printer.

fwGuidLights [WFS_SIU_COINACCEPTOR]
Specifies the state of the Guidance Light Indicator on the coin acceptor.

fwGuidLights [WFS_SIU_SCANNER]
Specifies the state of the Guidance Light Indicator on the scanner unit.

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.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to set a port to a new value was invalid because the port does not exist or the port is pre-configured as an input port.
WFS_ERR_SIU_SYNTAX	The command was invoked with incorrect input data.

Events   In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while attempting to set or clear one or more output ports (indicators).

Comments   No action has been taken if this command returns an error. If a hardware error occurs while executing the command, the command will return OK, but execute event(s) will be generated which indicate(s) the port(s) which have failed.

5.3 WFS_CMD_SIU_SET_DOOR

Description   This command is used to set the status of one of the doors.

Input Param   LPWFSSIUSETDOOR lpSetDoor;

```
typedef struct _wfs_siu_set_door
    {
    WORD            wDoor;
    WORD            fwCommand;
    } WFSSIUSETDOOR, *LPWFSSIUSETDOOR;
```

wDoor
Specifies the index of the door to set as one of the following values:

Value	Meaning
WFS_SIU_CABINET	Bolt/unbolt all Cabinet Doors.
WFS_SIU_SAFE	Bolt/unbolt the Safe Doors.
WFS_SIU_VANDALSHIELD	Set position of the Vandal Shield.
WFS_SIU_CABINET_FRONT	Bolt/unbolt all Front Cabinet Doors.
WFS_SIU_CABINET_REAR	Bolt/unbolt all Rear Cabinet Doors.
WFS_SIU_CABINET_LEFT	Bolt/unbolt all Left Cabinet Doors.
WFS_SIU_CABINET_RIGHT	Bolt/unbolt all Right Cabinet Doors.

fwCommand
Specifies if the Cabinet or Safe doors should be bolted or unbolted or if the position of the Vandal Shield should be changed, as one of the following flags:

Value	Meaning
WFS_SIU_BOLT	Bolt the Safe or Cabinet Doors.
WFS_SIU_UNBOLT	Unbolt the Safe or Cabinet Doors.
WFS_SIU_OPEN	Open the Vandal Shield.
WFS_SIU_SERVICE	Position the Vandal Shield in service position.
WFS_SIU_KEYBOARD	Position the Vandal Shield to permit access to the keyboard.
WFS_SIU_CLOSED	Close the Vandal Shield.

See WFS_CMD_SIU_SET_PORTS command for a detailed description.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to set a port to a new value was invalid because the port does not exist or the port is pre-configured as an input port.
WFS_ERR_SIU_SYNTAX	The command was invoked with incorrect input data.
WFS_ERR_SIU_PORT_ERROR	A hardware error occurred while executing the command.

Events   In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while attempting to set the status of the door.

Comments   None.

5.4 WFS_CMD_SIU_SET_INDICATOR

Description   This command is used to set the status of an indicator.

Input Param   LPWFSSIUSETINDICATOR lpSetIndicator;

```
typedef struct _wfs_siu_set_indicator
    {
    WORD            wIndicator;
    WORD            fwCommand;
    } WFSSIUSETINDICATOR, *LPWFSSIUSETINDICATOR;
```

wIndicator
Specifies the index of the indicator to set as one of the following values:

Value	Meaning
WFS_SIU_OPENCLOSE	Set Open/Close Indicator for the consumer.
WFS_SIU_FASCIALIGHT	Turn on/off the Fascia Light.
WFS_SIU_AUDIO	Turn on/off the Audio Indicator.
WFS_SIU_HEATING	Turn on/off the Heating device.
WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT	
	Turn on/off the Consumer Display Backlight.
WFS_SIU_SIGNAGEDISPLAY	Turn on/off the Signage Display device.
WFS_SIU_TRANSINDICATOR	Turn on/off the Transaction Indicators.
WFS_SIU_GENERALOUTPUTPORT	Turn on/off the General-Purpose Output Ports.

fwCommand
Specifies the commands for the Open/Close Indicator, Fascia Light, Audio Indicator, Heating device, Consumer Display Backlight, Signage Display and General-Purpose Output Ports as one of the following flags:

Value	Meaning
WFS_SIU_CLOSED	The Open/Close Indicator is changed to show that the terminal is closed for a consumer.
WFS_SIU_OPEN	The Open/Close Indicator is changed to show that the terminal is open to be used by a consumer.
WFS_SIU_KEYPRESS	The Audio Indicator sounds a key click signal.
WFS_SIU_EXCLAMATION	The Audio Indicator sounds an exclamation signal.
WFS_SIU_WARNING	The Audio Indicator sounds a warning signal.
WFS_SIU_ERROR	The Audio Indicator sounds an error signal.
WFS_SIU_CRITICAL	The Audio Indicator sounds a critical error signal.
WFS_SIU_CONTINUOUS	The Audio Indicator sound is turned on continuously.
WFS_SIU_OFF	The Audio Indicator, Fascia Light, Heating device, Consumer Display Backlight or Signage Display is turned off.
WFS_SIU_ON	The Fascia Light, Heating device, Consumer Display Backlight or Signage Display is turned on.

For Transaction Indicators specifies whether the Transaction Indicators should be turned on or off. All Transaction Indicators must be specified and each bit of this value represents one Transaction Indicator. Each bit is specified as one of the following binary values:

Value	Meaning
0	The Transaction Indicator is turned off.
1	The Transaction Indicator is turned on.

The following flags can be used to reference each Transaction Indicator.

Value	Meaning
WFS_SIU_LAMP1	Transaction Indicator 1.
WFS_SIU_LAMP2	Transaction Indicator 2.
…	
WFS_SIU_LAMP16	Transaction Indicator 16.

For General-Purpose Output Ports specifies whether the General-Purpose Output Ports should be turned on or off. All General-Purpose Output Ports must be specified and each bit of this value represents one General-Purpose Output Port. Each bit is specified as one of the following binary values:

Value	Meaning
0	The General-Purpose Output Port is turned off.
1	The General-Purpose Output Port is turned on.

The following flags can be used to reference each General-Purpose Output Port.

Value	Meaning
WFS_SIU_GPP1	General-Purpose Output Port 1.
WFS_SIU_GPP2	General-Purpose Output Port 2.
…	
WFS_SIU_GPP16	General-Purpose Output Port 16.

See WFS_CMD_SIU_SET_PORTS command for a detailed description.

Output Param None.

Error Codes In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to set a port to a new value was invalid because the port does not exist or the port is pre-configured as an input port.
WFS_ERR_SIU_SYNTAX	The command was invoked with incorrect input data.
WFS_ERR_SIU_PORT_ERROR	A hardware error occurred while executing the command.

Events In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while attempting to set the status of the indicator.

Comments None.

5.5 WFS_CMD_SIU_SET_AUXILIARY

Description   This command is used to set the status of an auxiliary indicator.

Input Param   LPWFSSIUSETAUXILIARY lpSetAuxiliary;

```
typedef struct _wfs_siu_set_auxiliary
    {
    WORD            wAuxiliary;
    WORD            fwCommand;
    } WFSSIUSETAUXILIARY, *LPWFSSIUSETAUXILIARY;
```

wAuxiliary
Specifies the index of the auxiliary indicator to set as one of the following values:

Value	Meaning
WFS_SIU_VOLUME	Set the value of the Volume Control.
WFS_SIU_UPS	Set the value of the UPS.
WFS_SIU_REMOTE_STATUS_MONITOR	Set the value of the Remote Status Monitor.
WFS_SIU_AUDIBLE_ALARM	Set the value of the Audible Alarm.
WFS_SIU_ENHANCEDAUDIOCONTROL	Set the Value of the Enhanced Audio Controller.

fwCommand
It specifies the values for the auxiliary specified by *wAuxiliary*. Specified as one of the following values:

Value	Meaning
1, ..., 1000	The volume level. This field is handled as an unsigned short. If a value greater than 1000 is used, the provider will map the value to 1000.
WFS_SIU_ENGAGE	Engage the UPS.
WFS_SIU_DISENGAGE	Disengage the UPS.
WFS_SIU_GREEN_LED_ON	Turn on the green LED on the Remote Status Monitor.
WFS_SIU_GREEN_LED_OFF	Turn off the green LED on the Remote Status Monitor.
WFS_SIU_AMBER_LED_ON	Turn on the amber LED on the Remote Status Monitor.
WFS_SIU_AMBER_LED_OFF	Turn off the amber LED on the Remote Status Monitor.
WFS_SIU_RED_LED_ON	Turn on the red LED on the Remote Status Monitor.
WFS_SIU_RED_LED_OFF	Turn off the red LED on the Remote Status Monitor.
WFS_SIU_OFF	Turn off the Audible Alarm.
WFS_SIU_ON	Turn on the Audible Alarm.
WFS_SIU_PUBLICAUDIO_MANUAL	Set the Enhanced Audio Controller to manual mode, public state (i.e. audio will be played through speakers only).
WFS_SIU_PUBLICAUDIO_AUTO	Set the Enhanced Audio Controller to auto mode, public state (i.e. audio will be played through speakers). When a Privacy Device is activated (headset connected/handset off-hook), the device will go to the private state.
WFS_SIU_PUBLICAUDIO_SEMI_AUTO	Set the Enhanced Audio Controller to semi-auto mode, public state (i.e. audio will be played through speakers). When a Privacy Device is activated, the device will go to the private state.

WFS_SIU_PRIVATEAUDIO_MANUAL	Set the Enhanced Audio Controller to manual mode, private state (i.e. audio will be played only through a connected Privacy Device). In private mode, no audio is transmitted through the speakers.
WFS_SIU_PRIVATEAUDIO_AUTO	Set the Enhanced Audio Controller to auto mode, private state (i.e. audio will be played only through an activated Privacy Device). In private mode, no audio is transmitted through the speakers. When a Privacy Device is deactivated (headset disconnected/handset on-hook), the device will go to the public state.
WFS_SIU_PRIVATEAUDIO_SEMI_AUTO	Set the Enhanced Audio Controller to semi-auto mode, private state (i.e. audio will be played only through an activated Privacy Device). In private mode, no audio is transmitted through the speakers. When a Privacy Device is deactivated, the device will remain in the private state.

See WFS_CMD_SIU_SET_PORTS command for a detailed description.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to set a port to a new value was invalid because the port does not exist or the port is pre-configured as an input port.
WFS_ERR_SIU_SYNTAX	The command was invoked with incorrect input data.
WFS_ERR_SIU_PORT_ERROR	A hardware error occurred while executing the command.

Events   In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while attempting to set the status of the auxiliary indicator.

Comments   When *wAuxiliary* is any value other than WFS_SIU_REMOTE_STATUS_MONITOR the *fwCommand* parameter should contain one of the values that correspond to the auxiliary defined in *wAuxiliary*.

When *wAuxiliary* is WFS_SIU_REMOTE_STATUS_MONITOR then the *fwCommand* parameter may be specified as a combination of one or more of the following flags of type A, B and C, with at most one flag from each type.

Value	Meaning	Type
WFS_SIU_GREEN_LED_ON	Turn on the green LED on the Remote Status Monitor device.	A
WFS_SIU_GREEN_LED_OFF	Turn off the green LED on the Remote Status Monitor device.	A
WFS_SIU_AMBER_LED_ON	Turn on the amber LED on the Remote Status Monitor device.	B
WFS_SIU_AMBER_LED_OFF	Turn off the amber LED on the Remote Status Monitor device.	B
WFS_SIU_RED_LED_ON	Turn on the red LED on the Remote Status Monitor device.	C
WFS_SIU_RED_LED_OFF	Turn off the red LED on the Remote Status Monitor device.	C

5.6 WFS_CMD_SIU_SET_GUIDLIGHT

Description   This command is used to set the status of a guidance light indicator.

Input Param   LPWFSSIUSETGUIDLIGHT lpSetGuidLight;

```
typedef struct _wfs_siu_set_guidlight
    {
    WORD            wGuidLight;
    WORD            fwCommand;
    } WFSSIUSETGUIDLIGHT, *LPWFSSIUSETGUIDLIGHT;
```

wGuidLights
Specifies the index of the guidance light indicator to set as one of the following values:

Value	Meaning
WFS_SIU_CARDUNIT	Set the state of the Guidance Light Indicator on the Card Unit (IDC).
WFS_SIU_PINPAD	Set the state of the Guidance Light Indicator on the PIN pad unit.
WFS_SIU_NOTESDISPENSER	Set the state of the Guidance Light Indicator on the note dispenser unit.
WFS_SIU_COINDISPENSER	Set the state of the Guidance Light Indicator on the coin dispenser unit.
WFS_SIU_RECEIPTPRINTER	Set the state of the Guidance Light Indicator on the receipt printer unit.
WFS_SIU_PASSBOOKPRINTER	Set the state of the Guidance Light Indicator on the passbook printer unit.
WFS_SIU_ENVDEPOSITORY	Set the state of the Guidance Light Indicator on the envelope depository unit.
WFS_SIU_CHEQUEUNIT	Set the state of the Guidance Light Indicator on the cheque processing unit.
WFS_SIU_BILLACCEPTOR	Set the state of the Guidance Light Indicator on the bill acceptor unit.
WFS_SIU_ENVDISPENSER	Set the state of the Guidance Light Indicator on the envelope dispenser unit.
WFS_SIU_DOCUMENTPRINTER	Set the state of the Guidance Light Indicator on the document printer.
WFS_SIU_COINACCEPTOR	Set the state of the Guidance Light Indicator on the coin acceptor.
WFS_SIU_SCANNER	Set the state of the Guidance Light Indicator on the scanner.

fwCommand
Specifies the state of the Guidance Light Indicators, as one of the following flags:

Value	Meaning
WFS_SIU_OFF	The Guidance Light Indicator is turned off.
WFS_SIU_SLOW_FLASH	The Guidance Light Indicator is set to flash slowly.
WFS_SIU_MEDIUM_FLASH	The Guidance Light Indicator is set to flash at a medium frequency.
WFS_SIU_QUICK_FLASH	The Guidance Light Indicator is set to flash quickly.
WFS_SIU_CONTINUOUS	The Guidance Light Indicator is turned on continuously (steady).

See WFS_CMD_SIU_SET_PORTS command for a detailed description.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to set a port to a new value was invalid because the port does not exist or the port is pre-configured as an input port.
WFS_ERR_SIU_SYNTAX	The command was invoked with incorrect input data.

Events In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while attempting to set or clear one or more output ports (indicators).

Comments None.

5.7 WFS_CMD_SIU_RESET

Description   This command is used by the application to perform a hardware reset which will attempt to return the SIU devices to a known good state. This command does not over-ride a lock obtained on another application or service handle.

Input Param   None.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_PORT_ERROR	A hardware error occurred while executing the command.

Events   In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_EXEE_SIU_PORT_ERROR	An error occurred while attempting to set or clear one or more output ports (indicators).

Comments   None.

5.8   WFS_CMD_SIU_POWER_SAVE_CONTROL

Description   This command activates or deactivates the power-saving mode.

If the Service Provider receives another execute command while in power saving mode the Service Provider automatically exits the power saving mode and executes the requested command. If the Service Provider receives an information command while in power saving mode, the Service Provider will not exit the power saving mode.

The SIU class power saving control covers hardware such as consumer display, transaction indicators, fans, etc. The actual hardware covered by the SIU power saving control is device and vendor dependent and configuration options may be offered by the vendor. The SIU class power saving control does not cover hardware supported by other XFS device classes.

Input Param   LPWFSSIUPOWERSAVECONTROL lpPowerSaveControl;

```
typedef struct _wfs_siu_power_save_control
     {
     USHORT          usMaxPowerSaveRecoveryTime;
     } WFSSIUPOWERSAVECONTROL, *LPWFSSIUPOWERSAVECONTROL;
```

usMaxPowerSaveRecoveryTime
Specifies the maximum number of seconds in which the device must be able to return to its normal operating state when exiting power save mode. The device will be set to the highest possible power save mode within this constraint. If *usMaxPowerSaveRecoveryTime i*s set to zero then the device will exit the power saving mode.

Output Param   None.

Error Codes   In addition to the generic error codes defined in [Ref. 1], the following error codes can be generated by this command:

Value	Meaning
WFS_ERR_SIU_POWERSAVETOOSHORT	The power saving mode has not been activated because the device is not able to resume from the power saving mode within the specified *usMaxPowerSaveRecoveryTime* value.

Events   In addition to the generic events defined in [Ref. 1], the following events can be generated by this command:

Value	Meaning
WFS_SRVE_SIU_POWER_SAVE_CHANGE	The power save recovery time has changed.

Comments   None.

6. Events

6.1 WFS_SRVE_SIU_PORT_STATUS

Description   This event id is used to specify that a port has changed its state, due to the result of a command or to some external condition. Reporting of this event is controlled by the WFS_CMD_SIU_ENABLE_EVENTS command. Event reporting is disabled as a default situation.

Event Param   LPWFSSIUPORTEVENT lpPortEvent;

```
typedef struct _wfs_siu_port_event
    {
    WORD            wPortType;
    WORD            wPortIndex;
    WORD            wPortStatus;
    LPSTR           lpszExtra;
    } WFSSIUPORTEVENT, *LPWFSSIUPORTEVENT;
```

wPortType
Specifies the type of sensors and indicators that has changed state by one of the following flags:

Value	Meaning
WFS_SIU_SENSORS	A port in the input sensors has changed state.
WFS_SIU_DOORS	A port in the door sensors has changed state.
WFS_SIU_INDICATORS	A port in the indicators has changed state.
WFS_SIU_AUXILIARIES	A port in the auxiliary indicators has changed state.
WFS_SIU_GUIDLIGHTS	A port in the guidance lights has changed state.

wPortIndex
Specifies the index of the port that has changed state by one of the following values:

Value	Meaning
WFS_SIU_OPERATORSWITCH	The Operator Switch has changed its state.
WFS_SIU_TAMPER	The Tamper Sensor has changed its state.
WFS_SIU_INTTAMPER	The Internal Tamper Sensor has changed its state.
WFS_SIU_SEISMIC	The Seismic Sensor has changed its state.
WFS_SIU_HEAT	The Heat Sensor has changed its state.
WFS_SIU_PROXIMITY	The Proximity Sensor has changed its state.
WFS_SIU_AMBLIGHT	The Ambient Light Sensor has changed its state.
WFS_SIU_ENHANCEDAUDIO	The Audio Jack has changed its state (a headset has been plugged-in or removed).
WFS_SIU_BOOT_SWITCH	The Boot Switch Sensor has changed its state.
WFS_SIU_CONSUMER_DISPLAY	The Consumer Display Sensor has changed its state.
WFS_SIU_OPERATOR_CALL_BUTTON	The Operator Call Button has changed its state.
WFS_SIU_HANDSETSENSOR	The Handset Sensor has changed its state.
WFS_SIU_GENERALINPUTPORT	At least one of the General-Purpose Input Ports has changed its state. The status should be checked to determine which General-Purpose Input Port has changed its state.
WFS_SIU_CABINET	The Cabinet Doors have changed their state.
WFS_SIU_SAFE	The Safe Doors have changed their state.
WFS_SIU_VANDALSHIELD	The Vandal Shield has changed its state.
WFS_SIU_CABINET_FRONT	The Front Cabinet Doors have changed their state.

WFS_SIU_CABINET_REAR	The Rear Cabinet Doors have changed their state.
WFS_SIU_CABINET_LEFT	The Left Cabinet Doors have changed their state.
WFS_SIU_CABINET_RIGHT	The Right Cabinet Doors have changed their state.
WFS_SIU_OPENCLOSE	The Open/Close Indicator state has changed.
WFS_SIU_FASCIALIGHT	The Fascia Light state has changed.
WFS_SIU_AUDIO	The Audio Indicator state has changed.
WFS_SIU_HEATING	The Heating device state has changed.
WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT	
	The Consumer Display Backlight state has changed.
WFS_SIU_SIGNAGEDISPLAY	The Signage Display device state has changed.
WFS_SIU_TRANSINDICATOR	At least one of the Transaction Indicators has changed its value. Use the WFS_INF_SIU_STATUS command to determine which Transaction Indicators have changed.
WFS_SIU_GENERALOUTPUTPORT	At least one of the General-Purpose Output Ports has changed its state. Use the WFS_INF_SIU_STATUS command to determine which General-Purpose Output Ports have changed.
WFS_SIU_VOLUME	The Volume Control device has changed its value.
WFS_SIU_UPS	The UPS device state has changed.
WFS_SIU_REMOTE_STATUS_MONITOR	The Remote Status Monitor device state has changed.
WFS_SIU_AUDIBLE_ALARM	The Audible Alarm device state has changed.
WFS_SIU_ENHANCEDAUDIOCONTROL	The Enhanced Audio Controller has changed state.
WFS_SIU_CARDUNIT	The Guidance Light Indicator state for the card unit has changed.
WFS_SIU_PINPAD	The Guidance Light Indicator state for the PIN pad unit has changed.
WFS_SIU_NOTESDISPENSER	The Guidance Light Indicator state for the note dispenser unit has changed.
WFS_SIU_COINDISPENSER	The Guidance Light Indicator state for the coin dispenser unit has changed.
WFS_SIU_RECEIPTPRINTER	The Guidance Light Indicator state for the receipt printer unit has changed.
WFS_SIU_PASSBOOKPRINTER	The Guidance Light Indicator state for the passbook printer unit has changed.
WFS_SIU_ENVDEPOSITORY	The Guidance Light Indicator state for the envelope depository unit has changed.
WFS_SIU_CHEQUEUNIT	The Guidance Light Indicator state for the cheque unit has changed.
WFS_SIU_BILLACCEPTOR	The Guidance Light Indicator state for the bill acceptor unit has changed.
WFS_SIU_ENVDISPENSER	The Guidance Light Indicator state for the envelope dispenser unit has changed.
WFS_SIU_DOCUMENTPRINTER	The Guidance Light Indicator state for the Document Printer unit has changed.
WFS_SIU_COINACCEPTOR	The Guidance Light Indicator state for the coin acceptor has changed.
WFS_SIU_SCANNER	The Guidance Light Indicator state for the scanner has changed.

wPortStatus
Specifies the new state of the port indicated in the *wPortEvent*. See the WFS_INF_SIU_STATUS
information command for the possible values.

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.

Comments   None.

6.2 WFS_EXEE_SIU_PORT_ERROR

Description   This event is used to specify that a port has detected an error.

Event Param   LPWFSSIUPORTERROR lpPortError;

```
typedef struct _wfs_siu_port_error
    {
    WORD            wPortType;
    WORD            wPortIndex;
    HRESULT         PortError;
    WORD            wPortStatus;
    LPSTR           lpszExtra;
    } WFSSIUPORTERROR, *LPWFSSIUPORTERROR;
```

wPortType
Specifies the type of sensors and indicators that has detected an error by one of the following
flags:

Value	Meaning
WFS_SIU_SENSORS	A port in the input sensors has detected an error.
WFS_SIU_DOORS	A port in the door sensors has detected an error.
WFS_SIU_INDICATORS	A port in the indicators has detected an error.
WFS_SIU_AUXILIARIES	A port in the auxiliary Indicators has detected an error.
WFS_SIU_GUIDLIGHTS	A port in the guidance lights has detected an error.

wPortIndex
Specifies the index of the port that has detected an error by one of the following values:

Value	Meaning
WFS_SIU_OPERATORSWITCH	The Operator Switch has detected an error.
WFS_SIU_TAMPER	The Tamper Sensor has detected an error.
WFS_SIU_INT_TAMPER	The internal Tamper Sensor has detected an error.
WFS_SIU_SEISMIC	The Seismic Sensor has detected an error.
WFS_SIU_HEAT	The Heat Sensor has detected an error.
WFS_SIU_PROXIMITY	The Proximity Sensor has detected an error.
WFS_SIU_AMBLIGHT	The Ambient Light Sensor has detected an error.
WFS_SIU_ENHANCEDAUDIO	The Audio Jack Sensor has detected an error.
WFS_SIU_BOOT_SWITCH	The Boot Switch Sensor has detected an error.
WFS_SIU_CONSUMER_DISPLAY	The Consumer Display has detected an error.
WFS_SIU_OPERATOR_CALL_BUTTON	The Operator Call Button has detected an error.
WFS_SIU_HANDSETSENSOR	The Handset Sensor has detected an error.
WFS_SIU_GENERALINPUTPORT	The General-Purpose Input Port has detected an error.
WFS_SIU_CABINET	The Cabinet Doors have detected an error.
WFS_SIU_SAFE	The Safe Doors have detected an error.
WFS_SIU_VANDALSHIELD	The Vandal Shield has detected an error.
WFS_SIU_CABINET_FRONT	The Front Cabinet Doors have detected an error.
WFS_SIU_CABINET_REAR	The Rear Cabinet Doors have detected an error.
WFS_SIU_CABINET_LEFT	The Left Cabinet Doors have detected an error.
WFS_SIU_CABINET_RIGHT	The Right Cabinet Doors have detected an error.

WFS_SIU_OPENCLOSE	The Open/Close Indicator has detected an error.
WFS_SIU_FASCIALIGHT	The Fascia Light state has detected an error.
WFS_SIU_AUDIO	The Audio Indicator state has detected an error.
WFS_SIU_HEATING	The Heating device state has detected an error.
WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT	
	The Consumer Display Backlight state has detected an error.
WFS_SIU_SIGNAGEDISPLAY	The Signage Display device state has detected an error.
WFS_SIU_TRANSINDICATOR	The Transaction Indicator state has detected an error.
WFS_SIU_GENERALOUTPUTPORT	The General-Purpose Output Port has detected an error.
WFS_SIU_VOLUME	The Volume Control device has detected an error.
WFS_SIU_UPS	The UPS device has detected an error.
WFS_SIU_REMOTE_STATUS_MONITOR	The Remote Status Monitor device has detected an error.
WFS_SIU_AUDIBLE_ALARM	The Audible Alarm device has detected an error.
WFS_SIU_ENHANCEDAUDIOCONTROL	The Enhanced Audio Controller has detected an error.
WFS_SIU_CARDUNIT	The Guidance Light Indicator for the card unit has detected an error.
WFS_SIU_PINPAD	The Guidance Light Indicator for the PIN pad unit has detected an error.
WFS_SIU_NOTESDISPENSER	The Guidance Light Indicator for the note dispenser unit has detected an error.
WFS_SIU_COINDISPENSER	The Guidance Light Indicator for the coin dispenser unit has detected an error.
WFS_SIU_RECEIPTPRINTER	The Guidance Light Indicator for the receipt printer unit has detected an error.
WFS_SIU_PASSBOOKPRINTER	The Guidance Light Indicator for the passbook printer unit has detected an error.
WFS_SIU_ENVDEPOSITORY	The Guidance Light Indicator for the envelope depository unit has detected an error.
WFS_SIU_CHEQUEUNIT	The Guidance Light Indicator for the cheque unit has detected an error.
WFS_SIU_BILLACCEPTOR	The Guidance Light Indicator for the bill acceptor unit has detected an error.
WFS_SIU_ENVDISPENSER	The Guidance Light Indicator for the envelope dispenser unit has detected an error.
WFS_SIU_DOCUMENTPRINTER	The Guidance Light Indicator for the document printer has detected an error.
WFS_SIU_COINACCEPTOR	The Guidance Light Indicator for the coin acceptor has detected an error.
WFS_SIU_SCANNER	The Guidance Light Indicator for the scanner has detected an error.

PortError
Specifies the error of the port indicated in the *wPortType* and *wPortIndex* by one of the following values:

Value	Meaning
WFS_ERR_SIU_INVALID_PORT	An attempt to enable or disable events to a port was invalid because the port does not exist.
WFS_ERR_SIU_SYNTAX	Syntax error in the input parameters. E.g. an attempt to both enable and disable events to the same port was made.
WFS_ERR_SIU_PORT_ERROR	A hardware error occurred while executing a command.

wPortStatus
Specifies the new state of the port indicated in the *wPortEvent*. See the WFS_INF_SIU_STATUS information command for the possible values.

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.

Comments   None.

6.3 WFS_SRVE_SIU_POWER_SAVE_CHANGE

Description   This service event specifies that the power save recovery time has changed.

Event Param   LPWFSSIUPOWERSAVECHANGE lpPowerSaveChange;

```
typedef struct _wfs_siu_power_save_change
        {
        USHORT          usPowerSaveRecoveryTime;
        } WFSSIUPOWERSAVECHANGE, *LPWFSSIUPOWERSAVECHANGE;
```

usPowerSaveRecoveryTime
Specifies the actual number of seconds required by the device to resume its normal operational
state. This value is zero if the device exited the power saving mode.

Comments   None.

7. C - Header file

```
/*****************************************************************************
*                                                                           *
* xfssiu.h      XFS - Sensors and Indicators Unit (SIU) definitions         *
*                                                                           *
*               Version 3.10 (29/11/2007)                                   *
*                                                                           *
*****************************************************************************/

#ifndef __INC_XFSSIU__H
#define __INC_XFSSIU__H

#ifdef __cplusplus
extern "C" {
#endif

#include <xfsapi.h>

/* be aware of alignment */
#pragma pack (push, 1)

/* values of WFSSIUCAPS.wClass */

#define     WFS_SERVICE_CLASS_SIU              (8)

#define     WFS_SERVICE_CLASS_NAME_SIU         "SIU"
#define     WFS_SERVICE_CLASS_VERSION_SIU      (0x0A03) /* Version 3.10 */

#define     SIU_SERVICE_OFFSET                 (WFS_SERVICE_CLASS_SIU * 100)


/* SIU Info Commands */

#define     WFS_INF_SIU_STATUS                 (SIU_SERVICE_OFFSET + 1)
#define     WFS_INF_SIU_CAPABILITIES           (SIU_SERVICE_OFFSET + 2)


/* SIU Command Verbs */

#define     WFS_CMD_SIU_ENABLE_EVENTS          (SIU_SERVICE_OFFSET + 1)
#define     WFS_CMD_SIU_SET_PORTS              (SIU_SERVICE_OFFSET + 2)
#define     WFS_CMD_SIU_SET_DOOR               (SIU_SERVICE_OFFSET + 3)
#define     WFS_CMD_SIU_SET_INDICATOR          (SIU_SERVICE_OFFSET + 4)
#define     WFS_CMD_SIU_SET_AUXILIARY          (SIU_SERVICE_OFFSET + 5)
#define     WFS_CMD_SIU_SET_GUIDLIGHT          (SIU_SERVICE_OFFSET + 6)
#define     WFS_CMD_SIU_RESET                  (SIU_SERVICE_OFFSET + 7)
#define     WFS_CMD_SIU_POWER_SAVE_CONTROL     (SIU_SERVICE_OFFSET + 8)


/* SIU Messages */

#define     WFS_SRVE_SIU_PORT_STATUS           (SIU_SERVICE_OFFSET + 1)
#define     WFS_EXEE_SIU_PORT_ERROR            (SIU_SERVICE_OFFSET + 2)
#define     WFS_SRVE_SIU_POWER_SAVE_CHANGE     (SIU_SERVICE_OFFSET + 3)


/* Values of WFSSIUSTATUS.fwDevice */

#define     WFS_SIU_DEVONLINE                  WFS_STAT_DEVONLINE
#define     WFS_SIU_DEVOFFLINE                 WFS_STAT_DEVOFFLINE
#define     WFS_SIU_DEVPOWEROFF                WFS_STAT_DEVPOWEROFF
#define     WFS_SIU_DEVNODEVICE                WFS_STAT_DEVNODEVICE
#define     WFS_SIU_DEVHWERROR                 WFS_STAT_DEVHWERROR
#define     WFS_SIU_DEVUSERERROR               WFS_STAT_DEVUSERERROR
#define     WFS_SIU_DEVBUSY                    WFS_STAT_DEVBUSY
#define     WFS_SIU_DEVFRAUDATTEMPT            WFS_STAT_DEVFRAUDATTEMPT


/* Size and max index of fwSensors array */

#define     WFS_SIU_SENSORS_SIZE               (32)
#define     WFS_SIU_SENSORS_MAX                (WFS_SIU_SENSORS_SIZE - 1)
```

```
/* Size and max index of fwDoors array */

#define     WFS_SIU_DOORS_SIZE                 (16)
#define     WFS_SIU_DOORS_MAX                  (WFS_SIU_DOORS_SIZE - 1)


/* Size and max index of fwIndicators array */

#define     WFS_SIU_INDICATORS_SIZE            (16)
#define     WFS_SIU_INDICATORS_MAX             (WFS_SIU_INDICATORS_SIZE - 1)


/* Size max index of fwAuxiliaries array */

#define     WFS_SIU_AUXILIARIES_SIZE           (16)
#define     WFS_SIU_AUXILIARIES_MAX            (WFS_SIU_AUXILIARIES_SIZE - 1)


/* Size and max index of fwGuidLights array */

#define     WFS_SIU_GUIDLIGHTS_SIZE            (16)
#define     WFS_SIU_GUIDLIGHTS_MAX             (WFS_SIU_GUIDLIGHTS_SIZE - 1)


/* Indices of WFSSIUSTATUS.fwSensors [...]
           WFSSIUCAPS.fwSensors [...]
           WFSSIUENABLE.fwSensors [...]
           WFSSIUPORTEVENT.wPortIndex
           WFSSIUPORTERROR.wPortIndex */

#define     WFS_SIU_OPERATORSWITCH             (0)
#define     WFS_SIU_TAMPER                     (1)
#define     WFS_SIU_INTTAMPER                  (2)
#define     WFS_SIU_SEISMIC                    (3)
#define     WFS_SIU_HEAT                       (4)
#define     WFS_SIU_PROXIMITY                  (5)
#define     WFS_SIU_AMBLIGHT                   (6)
#define     WFS_SIU_ENHANCEDAUDIO              (7)
#define     WFS_SIU_BOOT_SWITCH                (8)
#define     WFS_SIU_CONSUMER_DISPLAY           (9)
#define     WFS_SIU_OPERATOR_CALL_BUTTON       (10)
#define     WFS_SIU_HANDSETSENSOR              (11)
#define     WFS_SIU_GENERALINPUTPORT           (12)


/* Indices of WFSSIUSTATUS.fwDoors [...]
           WFSSIUCAPS.fwDoors [...]
           WFSSIUENABLE.fwDoors [...]
           WFSSIUSETPORT.fwDoors [...]
           WFSSIUSETDOORS.wDoor
           WFSSIUPORTEVENT.wPortIndex
           WFSSIUPORTERROR.wPortIndex */

#define     WFS_SIU_CABINET                    (0)
#define     WFS_SIU_SAFE                       (1)
#define     WFS_SIU_VANDALSHIELD               (2)
#define     WFS_SIU_CABINET_FRONT              (3)
#define     WFS_SIU_CABINET_REAR               (4)
#define     WFS_SIU_CABINET_LEFT               (5)
#define     WFS_SIU_CABINET_RIGHT              (6)


/* Indices of WFSSIUSTATUS.fwIndicators [...]
           WFSSIUCAPS.fwIndicators [...]
           WFSSIUENABLE.fwIndicators [...]
           WFSSIUSETPORT.wIndicators [...]
           WFSSIUSETINDICATORS.wIndicator
           WFSSIUPORTEVENT.wPortIndex
           WFSSIUPORTERROR.wPortIndex */

#define     WFS_SIU_OPENCLOSE                  (0)
```

```
#define       WFS_SIU_FASCIALIGHT                 (1)
#define       WFS_SIU_AUDIO                       (2)
#define       WFS_SIU_HEATING                     (3)
#define       WFS_SIU_CONSUMER_DISPLAY_BACKLIGHT  (4)
#define       WFS_SIU_SIGNAGEDISPLAY              (5)
#define       WFS_SIU_TRANSINDICATOR              (6)
#define       WFS_SIU_GENERALOUTPUTPORT           (7)



/* Indices of WFSSIUSTATUS.fwAuxiliaries [...]
           WFSSIUCAPS.fwAuxiliaries [...]
           WFSSIUENABLE.fwAuxiliaries [...]
           WFSSIUSETPORT.wAuxiliaries [...]
           WFSSIUSETAUXILIARIES.wAuxiliary
           WFSSIUPORTEVENT.wPortIndex
           WFSSIUPORTERROR.wPortIndex */

#define       WFS_SIU_VOLUME                      (0)
#define       WFS_SIU_UPS                         (1)
#define       WFS_SIU_REMOTE_STATUS_MONITOR       (2)
#define       WFS_SIU_AUDIBLE_ALARM               (3)
#define       WFS_SIU_ENHANCEDAUDIOCONTROL        (4)


/* Indices of WFSSIUSTATUS.fwGuidLights [...]
           WFSSIUCAPS.fwGuidLights [...]
           WFSSIUENABLE.fwGuidLights [...]
           WFSSIUSETPORT.wGuidLights [...]
           WFSSIUSETGUIDLIGHTS.wGuidLight
           WFSSIUPORTEVENT.wPortIndex
           WFSSIUPORTERROR.wPortIndex */

#define       WFS_SIU_CARDUNIT                    (0)
#define       WFS_SIU_PINPAD                      (1)
#define       WFS_SIU_NOTESDISPENSER              (2)
#define       WFS_SIU_COINDISPENSER               (3)
#define       WFS_SIU_RECEIPTPRINTER              (4)
#define       WFS_SIU_PASSBOOKPRINTER             (5)
#define       WFS_SIU_ENVDEPOSITORY               (6)
#define       WFS_SIU_CHEQUEUNIT                  (7)
#define       WFS_SIU_BILLACCEPTOR                (8)
#define       WFS_SIU_ENVDISPENSER                (9)
#define       WFS_SIU_DOCUMENTPRINTER             (10)
#define       WFS_SIU_COINACCEPTOR                (11)
#define       WFS_SIU_SCANNER                     (12)


/* Values of WFSSIUSTATUS.fwSensors [...]
           WFSSIUSTATUS.fwDoors [...]
           WFSSIUSTATUS.fwIndicators [...]
           WFSSIUSTATUS.fwAuxiliaries [...]
           WFSSIUSTATUS.fwGuidLights [...]
           WFSSIUCAPS.fwSensors [...]
           WFSSIUCAPS.fwDoors [...]
           WFSSIUCAPS.fwIndicators [...]
           WFSSIUCAPS.fwAuxiliaries [...]
           WFSSIUCAPS.fwGuidLights [...] */

#define       WFS_SIU_NOT_AVAILABLE               (0x0000)
#define       WFS_SIU_AVAILABLE                   (0x0001)


/* Values of WFSSIUSTATUS.fwSensors [WFS_SIU_OPERATORSWITCH]
           WFSSIUCAPS.fwSensors [WFS_SIU_OPERATORSWITCH]
           WFSSIUPORTEVENT.fwPortStatus
           WFSSIUPORTERROR.fwPortStatus */

#define       WFS_SIU_RUN                         (0x0001)
#define       WFS_SIU_MAINTENANCE                 (0x0002)
#define       WFS_SIU_SUPERVISOR                  (0x0004)


/* Values of WFSSIUSTATUS.fwDoors [...]
```

```
             WFSSIUSTATUS.fwIndicators [WFS_SIU_OPENCLOSE]
             WFSSIUCAPS.fwDoors [...]
             WFSSIUCAPS.fwIndicators [WFS_SIU_OPENCLOSE]
             WFSSIUSETPORT.fwDoors [...]
             WFSSIUSETPORT.fwIndicators [WFS_SIU_OPENCLOSE]
             WFSSIUSETDOOR.wDoor
             WFSSIUSETINDICATOR.wCommand
             WFSSIUPORTEVENT.wPortStatus
             WFSSIUPORTERROR.wPortStatus */

#define     WFS_SIU_CLOSED                       (0x0001)
#define     WFS_SIU_OPEN                         (0x0002)
#define     WFS_SIU_LOCKED                       (0x0004)
#define     WFS_SIU_BOLTED                       (0x0008)
#define     WFS_SIU_SERVICE                      (0x0010)
#define     WFS_SIU_KEYBOARD                     (0x0020)
#define     WFS_SIU_AJAR                         (0x0040)
#define     WFS_SIU_JAMMED                       (0x0080)


/* Values of WFSSIUSTATUS.fwIndicators [WFS_SIU_AUDIO]
             WFSSIUSETPORT.fwIndicators [WFS_SIU_AUDIO]
             WFSSIUSETINDICATOR.wCommand
             WFSSIUPORTEVENT.wPortStatus
             WFSSIUPORTERROR.wPortStatus */

#define     WFS_SIU_KEYPRESS                     (0x0002)
#define     WFS_SIU_EXCLAMATION                  (0x0004)
#define     WFS_SIU_WARNING                      (0x0008)
#define     WFS_SIU_ERROR                        (0x0010)
#define     WFS_SIU_CRITICAL                     (0x0020)

/* Values of WFSSIUSTATUS.fwSensors [WFS_SIU_CONSUMER_DISPLAY]
             WFSSIUPORTEVENT.wPortStatus
             WFSSIUPORTERROR.wPortStatus */

#define     WFS_SIU_DISPLAY_ERROR                (0x0004)

/* Flags for WFSSIUSTATUS.fwIndicators [WFS_SIU_TRANSINDICATOR]
             WFSSIUSETPORT.fwIndicators [WFS_SIU_TRANSINDICATOR]
             WFSSIUSETINDICATOR.wCommand
             WFSSIUPORTEVENT.wPortStatus[WFS_SIU_TRANSINDICATOR]
             WFSSIUPORTERROR.wPortStatus[WFS_SIU_TRANSINDICATOR] */

#define     WFS_SIU_LAMP1                        (0x0001)
#define     WFS_SIU_LAMP2                        (0x0002)
#define     WFS_SIU_LAMP3                        (0x0004)
#define     WFS_SIU_LAMP4                        (0x0008)
#define     WFS_SIU_LAMP5                        (0x0010)
#define     WFS_SIU_LAMP6                        (0x0020)
#define     WFS_SIU_LAMP7                        (0x0040)
#define     WFS_SIU_LAMP8                        (0x0080)
#define     WFS_SIU_LAMP9                        (0x0100)
#define     WFS_SIU_LAMP10                       (0x0200)
#define     WFS_SIU_LAMP11                       (0x0400)
#define     WFS_SIU_LAMP12                       (0x0800)
#define     WFS_SIU_LAMP13                       (0x1000)
#define     WFS_SIU_LAMP14                       (0x2000)
#define     WFS_SIU_LAMP15                       (0x4000)
#define     WFS_SIU_LAMP16                       (0x8000)


/* Values of WFSSIUSTATUS.fwAuxiliaries [WFS_SIU_REMOTE_STATUS_MONITOR]
             WFSSIUSETPORT.fwAuxiliaries [WFS_SIU_REMOTE_STATUS_MONITOR]
             WFSSIUSETAUXILIARY.fwCommand
             WFSSIUPORTEVENT.wPortStatus
             WFSSIUPORTERROR.wPortStatus */

#define     WFS_SIU_GREEN_LED_ON                 (0x0001)
#define     WFS_SIU_GREEN_LED_OFF                (0x0002)
#define     WFS_SIU_AMBER_LED_ON                 (0x0004)
#define     WFS_SIU_AMBER_LED_OFF                (0x0008)
#define     WFS_SIU_RED_LED_ON                   (0x0010)
#define     WFS_SIU_RED_LED_OFF                  (0x0020)
```

```
/* Values of WFSSIUSTATUS.fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL]
           WFSSIUSETPORT.fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL]
           WFSSIUSETAUXILIARY.fwCommand
           WFSSIUPORTEVENT.wPortStatus
           WFSSIUPORTERROR.wPortStatus */

#define    WFS_SIU_PUBLICAUDIO_MANUAL          (0x0001)
#define    WFS_SIU_PUBLICAUDIO_AUTO            (0x0002)
#define    WFS_SIU_PUBLICAUDIO_SEMI_AUTO       (0x0004)
#define    WFS_SIU_PRIVATEAUDIO_MANUAL         (0x0008)
#define    WFS_SIU_PRIVATEAUDIO_AUTO           (0x0010)
#define    WFS_SIU_PRIVATEAUDIO_SEMI_AUTO      (0x0020)


/* Values of WFSSIUSTATUS.fwSensors [...]
           WFSSIUSTATUS.fwIndicators [...]
           WFSSIUSTATUS.fwAuxiliaries [...]
           WFSSIUSTATUS.fwGuidLights [...]
           WFSSIUCAPS.fwSensors [...]
           WFSSIUCAPS.fwIndicators [...]
           WFSSIUCAPS.fwGuidLights [...]
           WFSSIUSETPORT.fwIndicators [...]
           WFSSIUSETPORT.fwAuxiliaries [...]
           WFSSIUSETPORT.fwGuidLights [...]
           WFSSIUSETINDICATORS.fwCommand [...]
           WFSSIUSETAUXILIARY.fwCommand [...]
           WFSSIUSETGUIDLIGHTS.fwCommand [...]
           WFSSIUPORTEVENT.wPortStatus
           WFSSIUPORTERROR.wPortStatus */

#define    WFS_SIU_OFF                         (0x0001)
#define    WFS_SIU_ON                          (0x0002)
#define    WFS_SIU_SLOW_FLASH                  (0x0004)
#define    WFS_SIU_MEDIUM_FLASH                (0x0008)
#define    WFS_SIU_QUICK_FLASH                 (0x0010)
#define    WFS_SIU_CONTINUOUS                  (0x0080)


/* Flags for WFSSIUSTATUS.fwSensors [WFS_SIU_GENERALINPUTPORT]
           WFSSIUSTATUS.fwIndicators [WFS_SIU_GENERALOUTPUTPORT]
           WFSSIUSETPORT.fwIndicators [WFS_SIU_GENERALOUTPUTPORT]
           WFSSIUSETINDICATOR.wCommand
           WFSSIUPORTEVENT.wPortStatus[WFS_SIU_GENERALINPUTPORT]
           WFSSIUPORTEVENT.wPortStatus[WFS_SIU_GENERALOUTPUTPORT]
           WFSSIUPORTERROR.wPortStatus[WFS_SIU_GENERALINPUTPORT]
           WFSSIUPORTERROR.wPortStatus[WFS_SIU_GENERALOUTPUTPORT] */

#define    WFS_SIU_GPP1                        (0x0001)
#define    WFS_SIU_GPP2                        (0x0002)
#define    WFS_SIU_GPP3                        (0x0004)
#define    WFS_SIU_GPP4                        (0x0008)
#define    WFS_SIU_GPP5                        (0x0010)
#define    WFS_SIU_GPP6                        (0x0020)
#define    WFS_SIU_GPP7                        (0x0040)
#define    WFS_SIU_GPP8                        (0x0080)
#define    WFS_SIU_GPP9                        (0x0100)
#define    WFS_SIU_GPP10                       (0x0200)
#define    WFS_SIU_GPP11                       (0x0400)
#define    WFS_SIU_GPP12                       (0x0800)
#define    WFS_SIU_GPP13                       (0x1000)
#define    WFS_SIU_GPP14                       (0x2000)
#define    WFS_SIU_GPP15                       (0x4000)
#define    WFS_SIU_GPP16                       (0x8000)


/* Values of WFSSIUSTATUS.fwSensors [WFS_SIU_PROXIMITY]
           WFSSIUSTATUS.fwSensors [WFS_SIU_ENHANCEDCONTROL]
           WFSSIUPORTEVENT.wPortStatus
           WFSSIUPORTERROR.wPortStatus */

#define    WFS_SIU_PRESENT                     (0x0001)
#define    WFS_SIU_NOT_PRESENT                 (0x0002)
```

```
/* Values of WFSSIUSTATUS.fwSensors [WFS_SIU_HANDSETSENSOR] */

#define     WFS_SIU_OFF_THE_HOOK               (0x0001)
#define     WFS_SIU_ON_THE_HOOK                (0x0002)


/* Values of WFSSIUCAPS.fwSensors [WFS_SIU_ENHANCEDAUDIO]
        WFSSIUCAPS.fwSensors [WFS_SIU_HANDSETSENSOR] */

#define     WFS_SIU_MANUAL                     (0x0001)
#define     WFS_SIU_AUTO                       (0x0002)
#define     WFS_SIU_SEMI_AUTO                  (0X0004)


/* Values of WFSSIUSTATUS.fwSensors [WFS_SIU_AMBLIGHT]
        WFSSIUCAPS.fwSensors [WFS_SIU_AMBLIGHT]
        WFSSIUPORTEVENT.fwPortStatus
        WFSSIUPORTERROR.fwPortStatus */

#define     WFS_SIU_VERY_DARK                  (0x0001)
#define     WFS_SIU_DARK                       (0x0002)
#define     WFS_SIU_MEDIUM_LIGHT               (0x0004)
#define     WFS_SIU_LIGHT                      (0x0008)
#define     WFS_SIU_VERY_LIGHT                 (0x0010)


/* Values of WFSSIUSTATUS.fwAuxiliaries [WFS_SIU_UPS]
           WFSSIUCAPS.fwAuxiliaries [WFS_SIU_UPS]
            WFSSIUPORTEVENT.wPortStatus
            WFSSIUPORTERROR.wPortStatus */

#define WFS_SIU_LOW                            (0x0002)
#define WFS_SIU_ENGAGED                        (0x0004)
#define WFS_SIU_POWERING                       (0x0008)
#define WFS_SIU_RECOVERED                      (0x0010)


/* Values of WFSSIUCAPS.fwType */

#define     WFS_SIU_SENSORS                    (0x0001)
#define     WFS_SIU_DOORS                      (0x0002)
#define     WFS_SIU_INDICATORS                (0x0004)
#define     WFS_SIU_AUXILIARIES               (0x0008)
#define     WFS_SIU_GUIDLIGHTS                (0x0010)

/* Values of WFSSIUCAPS.fwAuxiliaries [WFS_SIU_ENHANCEDAUDIOCONTROL] */
#define     WFS_SIU_HEADSET_DETECTION          (0x0001)
#define     WFS_SIU_MODE_CONTROLLABLE          (0x0002)

/* Values of WFSSIUENABLE.fwSensors [...]
        WFSSIUENABLE.fwDoors [...]
        WFSSIUENABLE.fwIndicators [...]
        WFSSIUENABLE.fwAuxiliaries [...]
        WFSSIUENABLE.fwGuidLights [...]
        WFSSIUSETPORTS.fwDoors [...]
        WFSSIUSETPORTS.fwIndicators [...]
        WFSSIUSETPORTS.fwAuxiliaries [...]
        WFSSIUSETPORTS.fwGuidLights [...] */

#define     WFS_SIU_NO_CHANGE                  (0x0000)
#define     WFS_SIU_ENABLE_EVENT               (0x0001)
#define     WFS_SIU_DISABLE_EVENT              (0x0002)


/* Values of WFSSIUSETPORTS.fwDoors [...]
        WFSSIUSETDOORS.fwCommand [...] */

#define     WFS_SIU_BOLT                       (0x0001)
#define     WFS_SIU_UNBOLT                     (0x0002)


/* Values of WFSSIUSETPORTS.fwAuxiliaries [WFS_SIU_UPS]
```

```
     WFSSIUSETAUXILIARY.wAuxiliary [WFS_SIU_UPS] */

#define WFS_SIU_ENGAGE                      (0x0001)
#define WFS_SIU_DISENGAGE                   (0x0002)


/* XFS SIU Errors */

#define    WFS_ERR_SIU_INVALID_PORT         (-(SIU_SERVICE_OFFSET + 1))
#define    WFS_ERR_SIU_SYNTAX               (-(SIU_SERVICE_OFFSET + 2))
#define    WFS_ERR_SIU_PORT_ERROR           (-(SIU_SERVICE_OFFSET + 3))
#define    WFS_ERR_SIU_POWERSAVETOOSHORT    (-(SIU_SERVICE_OFFSET + 4))


/*==================================================================*/
/* SIU Info Command Structures and variables */
/*==================================================================*/

typedef struct _wfs_siu_status
{
    WORD            fwDevice;
    WORD            fwSensors [WFS_SIU_SENSORS_SIZE];
    WORD            fwDoors [WFS_SIU_DOORS_SIZE];
    WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR           lpszExtra;
    USHORT          usPowerSaveRecoveryTime;
} WFSSIUSTATUS, *LPWFSSIUSTATUS;

typedef struct _wfs_siu_caps
{
    WORD            wClass;
    WORD            fwType;
    WORD            fwSensors [WFS_SIU_SENSORS_SIZE];
    WORD            fwDoors [WFS_SIU_DOORS_SIZE];
    WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR           lpszExtra;
    BOOL            bPowerSaveControl;
} WFSSIUCAPS, *LPWFSSIUCAPS;


/*==================================================================*/
/* SIU Execute Command Structures */
/*==================================================================*/

typedef struct _wfs_siu_enable
{
    WORD            fwSensors [WFS_SIU_SENSORS_SIZE];
    WORD            fwDoors [WFS_SIU_DOORS_SIZE];
    WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR           lpszExtra;
} WFSSIUENABLE, *LPWFSSIUENABLE;


typedef struct _wfs_siu_set_ports
{
    WORD            fwDoors [WFS_SIU_DOORS_SIZE];
    WORD            fwIndicators [WFS_SIU_INDICATORS_SIZE];
    WORD            fwAuxiliaries [WFS_SIU_AUXILIARIES_SIZE];
    WORD            fwGuidLights [WFS_SIU_GUIDLIGHTS_SIZE];
    LPSTR           lpszExtra;
} WFSSIUSETPORTS, *LPWFSSIUSETPORTS;


typedef struct _wfs_siu_set_door
{
    WORD            wDoor;
    WORD            fwCommand;
} WFSSIUSETDOOR, *LPWFSSIUSETDOOR;
```

```
typedef struct _wfs_siu_set_indicator
{
    WORD            wIndicator;
    WORD            fwCommand;
} WFSSIUSETINDICATOR, *LPWFSSIUSETINDICATOR;


typedef struct _wfs_siu_set_auxiliary
{
    WORD            wAuxiliary;
    WORD            fwCommand;
} WFSSIUSETAUXILIARY, *LPWFSSIUSETAUXILIARY;


typedef struct _wfs_siu_set_guidlight
{
    WORD            wGuidLight;
    WORD            fwCommand;
} WFSSIUSETGUIDLIGHT, *LPWFSSIUSETGUIDLIGHT;


typedef struct _wfs_siu_power_save_control
{
    USHORT          usMaxPowerSaveRecoveryTime;
} WFSSIUPOWERSAVECONTROL, *LPWFSSIUPOWERSAVECONTROL;


/*=================================================================*/
/* SIU Message Structures */
/*=================================================================*/

typedef struct _wfs_siu_port_event
{
    WORD            wPortType;
    WORD            wPortIndex;
    WORD            wPortStatus;
    LPSTR           lpszExtra;
} WFSSIUPORTEVENT, *LPWFSSIUPORTEVENT;


typedef struct _wfs_siu_port_error
{
    WORD            wPortType;
    WORD            wPortIndex;
    HRESULT         PortError;
    WORD            wPortStatus;
    LPSTR           lpszExtra;
} WFSSIUPORTERROR, *LPWFSSIUPORTERROR;

typedef struct _wfs_siu_power_save_change
{
    USHORT          usPowerSaveRecoveryTime;
} WFSSIUPOWERSAVECHANGE, *LPWFSSIUPOWERSAVECHANGE;

/* restore alignment */
#pragma pack (pop)

#ifdef __cplusplus
}       /*extern "C"*/
#endif

#endif  /* __INC_XFSSIU__H */
```