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Extensions for Financial Services (XFS) interface specification - Release 3.01 - Part 23: Sensors and Indicators Unit Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.01 (this CWA) - Programmer's Reference

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Rue de Stassart, 36 • B-1050 Bruxelles
Tel : +32 2 550 08 11 • Fax : +32 2 550 08 19

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Foreword

This CWA is revision 3.01 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 2000-10-16. 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 3.01.

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 Device Class Interface - Programmer's Reference

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

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

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

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

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

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

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

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

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

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

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

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

Part 16: Application Programming Interface (API) - Service Provider Interface (SPI) - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 17: Printer Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 18: Identification Card Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 19: Cash Dispenser Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 20: PIN Keypad Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 21: Depository Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 22: Text Terminal Unit Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 23: Sensors and Indicators Unit Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 24: Camera Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 25: Identification Card Device Class Interface - PC/SC Integration Guidelines

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.cenorm.be/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.

1. General

A new reset command, three new guidelights, a remote status indicator, and an audible alarm have been added. In addition, the meanings of the various device status values have been clarified.

Due to the requirements of the American Disabilities Act, the SIU has been enhanced to support an Audio Jack device.

1.1 Audio Jack Overview

The Audio Jack device is provided to support the requirements of the American Disabilities Act. This device allows audio feedback publicly and / or via the consumers' personal headset (vendor hardware permitting). For privacy, the device allows input to only be directed to the consumers' headset. In 'auto' & 'semi-auto' mode (and where the vendor's hardware allows), public transmission of audio can be automatically inhibited when the consumer's headset is plugged in to the audio jack. In 'auto' mode (and where the vendor's hardware allows), public transmission of audio can be automatically re-activated when the consumer's headset is unplugged from the audio jack

The audio jack provides the application with the following information

- If the headset is present
- Whether the audio output is to the speakers or headset
- Privacy\public mode: ie. Whether insertion of a headset automatically switches public audio on or off.

The device is managed by a sensor WFS_SIU_ENHANCEDAUDIO, 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_ENHANCEDAUDIOCONTROL auxiliary is used to control the behaviour of the Audio Jack. It allows the application to,

- set the mode of the Audio Jack – auto mode, semi-auto mode or manual mode.
- Set the state of the Audio Jack – public or private.

There are no events associated with this auxiliary.

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

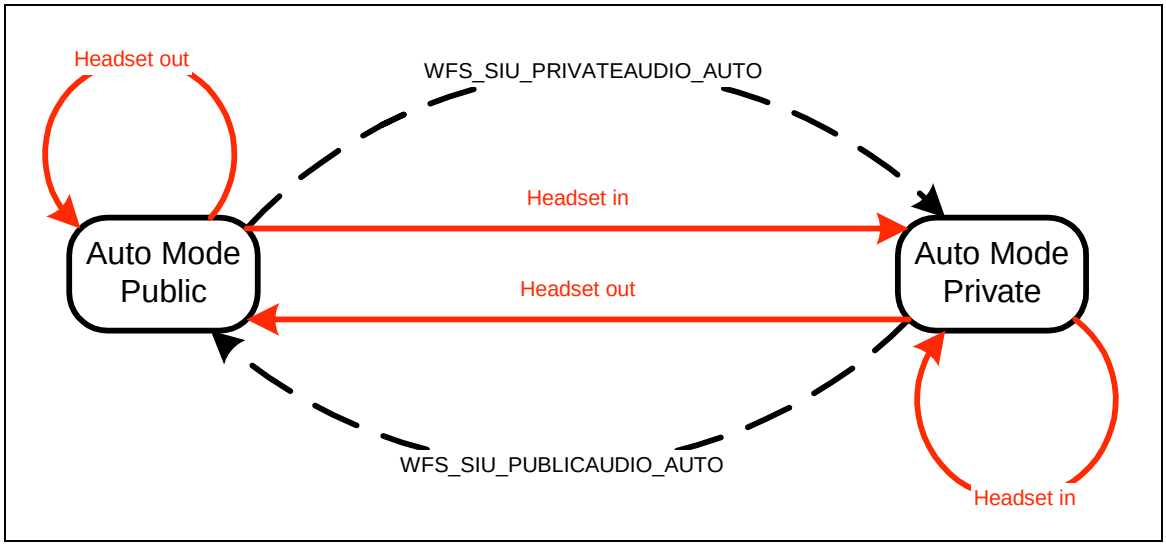
The following describes the device behaviour during auto and manual mode.

Auto Mode

In auto mode, when a consumer headset is plugged into the jack, the audio is automatically directed to the headset and the audio is no longer sent to the speakers. When the headset is removed the audio is redirected to the speakers. The following state diagram completely describes the behaviour 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 headset 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 be 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.

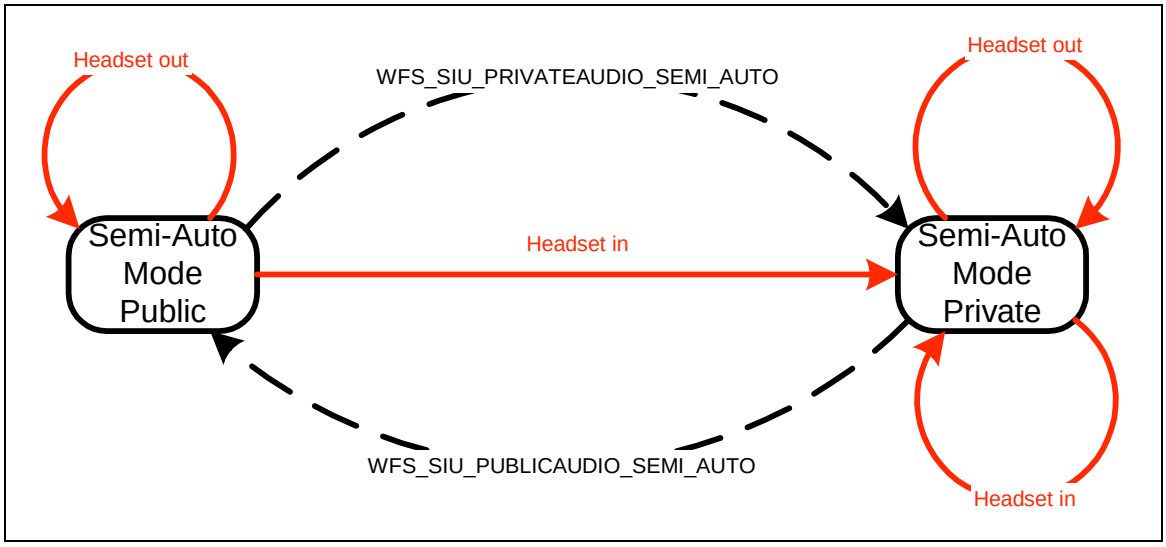
Semi-Auto Mode

This mode is required to ensure customer sensitive information is not broadcast via the public speakers when the consumer's headset is deliberately or otherwise unplugged.

In semi-auto mode, when a consumer headset is plugged into the jack, the audio is automatically directed to the headset and the audio is no longer sent to the speakers. When the headset is removed the audio remains via the jack. 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 behaviour 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 headset only



Semi-Auto-mode State diagram 2

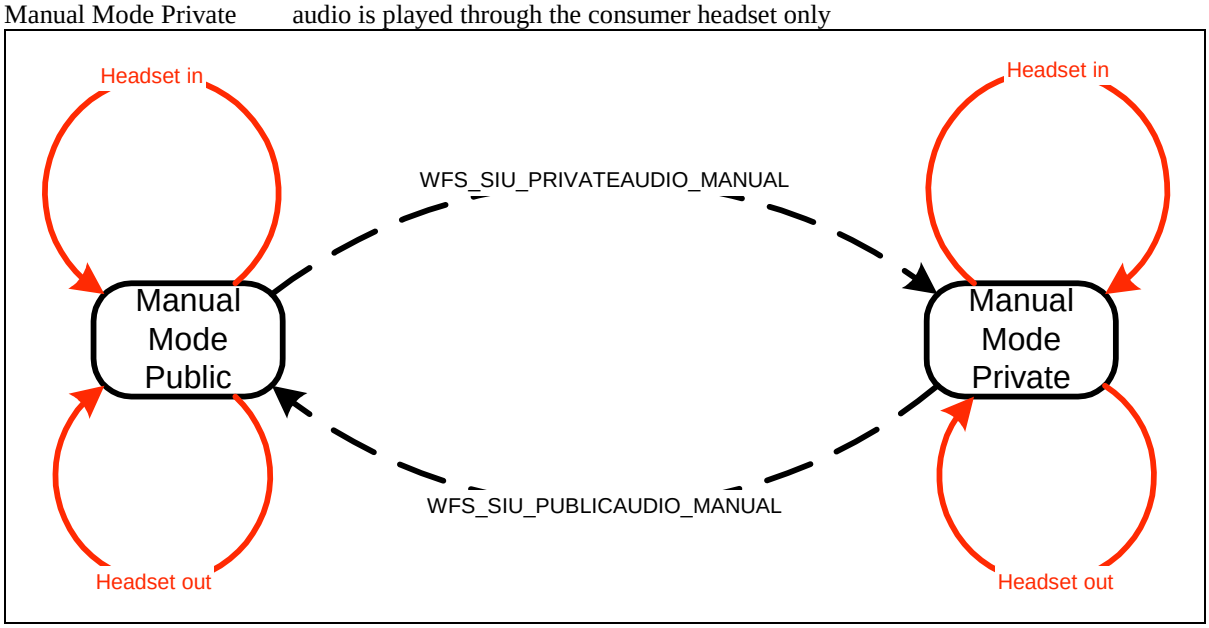
The dashed-line transitions are caused by application calls to WFS_CMD_SIU_SET_PORT or WFS_CMD_SIU_SET_AUXILIARY for the WFS_SIU_ENHANCEDAUDIOCONTROL auxiliary with values of WFS_SIU_PRIVATEAUDIO_AUTO or WFS_SIU_PUBLICAUDIO_AUTO

Manual mode

In manual mode, when a consumer headset is plugged into the jack, 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 behaviour 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 headset 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

Inte-Mode behaviour

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.

Notes

- 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 connected headset, as well as the speakers. Independent volume control of the speakers and headset is not supported.
- Any 'beep' tones generated by the PINPAD, etc will be fed to a connected headset (vendor hardware permitting).

2. New Chapter

2.1 References

1. XFS Application Programming Interface (API)/Service Provider Interface (SPI), Programmer's Reference Revision 3.0, October 18, 2000

3. New Info Commands

None.

4. Changes to existing 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;
   } 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.

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 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. 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 otherwise of consumer headphone connected to the Audio Jack. Specified as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Audio Jack.
WFS_SIU_PRESENT	There is a headset connected.
WFS_SIU_NOT_PRESENT	There is no headset connected.

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 the state of the Cabinet Doors. 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	The Cabinet Doors are **closed**.
WFS_SIU_OPEN	At least one of the Cabinet Doors is **open**.
WFS_SIU_LOCKED	The Cabinet Doors are closed and **locked**.
WFS_SIU_BOLTED	The 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.

fwIndicators [...]
Specifies the state of the Status Indicators. A number of Status 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:

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 Heating is turned **off**.
WFS_SIU_ON	The Heating is turned **on**.

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.

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 Uninterruptable 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	There is no UPS 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 as 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 of the device 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 Audio Jack Controller as one of the following flags:

Value	Meaning
WFS_SIU_NOT_AVAILABLE	There is no Audio Jack Controller available.
WFS_SIU_PUBLICAUDIO_MANUAL	The Audio Jack is in manual mode and is in the public state (ie audio will be played through speakers). Connecting a headset will have no impact, ie. Output will remain through the speakers & no audio will be directed to the headset.
WFS_SIU_PUBLICAUDIO_AUTO	The Audio Jack is in auto mode and is in the public state (ie audio will be played through speakers). When a headset is connected, the device will go to the private state
WFS_SIU_PUBLICAUDIO_SEMI_AUTO	The Audio Jack is in semi-auto mode and is in the public state (ie audio will be played through speakers). When a headset is connected, the device will go

	to the private state
WFS_SIU_PRIVATEAUDIO_MANUAL	The Audio Jack is in manual mode and is in the private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers.
WFS_SIU_PRIVATEAUDIO_AUTO	The Audio Jack is in auto mode and is in the private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers. When a headset is disconnected, the device will go to the public state
WFS_SIU_PRIVATEAUDIO_SEMI_AUTO	The Audio Jack is in semi-auto mode and is in the private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers. When a headset is disconnected, 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:

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
Specifies 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 will be null-terminated, with the final string terminating with two null characters.

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.

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;
   } WFSSIUCAPS, * LPWFSSIUCAPS;
```

wClass
Specifies the logical service class, value is:
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 Status 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 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

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 the Cabinet 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 Cabinet Door available.	A
WFS_SIU_CLOSED	The Cabinet Doors can be closed.	B

WFS_SIU_OPEN	The Cabinet Doors can be open.	B
WFS_SIU_LOCKED	The Cabinet Doors can be locked.	B
WFS_SIU_BOLTED	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

fwIndicators [...]
Specifies which Status Indicators are available, and if so, which states they can take. A number of Status 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.

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. 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 Audio Jack Controller is available, 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_HEADSET_DETECTION	The Audio Jack is available and supports headset insertion & removal. The device is able to report events to indicate headset insertion & removal.	B
WFS_SIU_MODE_CONTROLLABLE	The Audio Jack is available and supports application control of the Audio Jack mode via the WFS_CMD_SIU_SET_PORTS & WF_CMD_SET_AUXILIARY command.	B

fwGuidLights [...]
Specifies which Guidance Lights are available, and if so, which states they can take. 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 available at this position.
WFS_SIU_AVAILABLE	A Guidance Light 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
Specifies 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 will be null-terminated, with the final string terminating with two null characters.

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. New Execute Commands

5.1 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.

6. Changes to existing Execute Commands

6.1 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 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_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.

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 sensor 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.

fwIndicators [...]
Specifies which of the Status Indicators should report changes. A number of Status 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.

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 or not. 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 or not. 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 or not, 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 or not. 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.

fwAuxiliarises [WFS_SIU_ENHANCEDAUDIOCONTROL]
Specifies whether the Audio Jack 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 Audio Jack controller should report whenever it is changed.
WFS_SIU_DISABLE_EVENT	The Audio Jack 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 Light Indicators should report whenever any of them changes its state.
WFS_SIU_DISABLE_EVENT	The 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
Specifies a list of vendor-specific, or any other extended, information. The information is passed as a series of "*key=value*" strings so that it is easily extensible by service providers. Each string will be null-terminated, with the final string terminating with two 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	A 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.

6.2 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 the 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	The Cabinet doors are bolted.
WFS_SIU_UNBOLT	The 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.

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 indicator.
WFS_SIU_CLOSED	The indicator is changed to show that the terminal is closed for a consumer.
WFS_SIU_OPEN	The 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 beeper.	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 light.
WFS_SIU_OFF	The Heating is turned off.
WFS_SIU_ON	The Heating is turned on.

fwAuxiliaries [WFS_SIU_VOLUME]
Specifies whether the value of the volume control should be changed or not. 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 light.
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 or not. 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 or not. 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 Audio Jack should be changed or not. 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 Audio Jack.
WFS_SIU_PUBLICAUDIO_MANUAL	Set the Audio Jack to manual mode, public state (ie audio will be played through speakers only)
WFS_SIU_PUBLICAUDIO_AUTO	Set the Audio Jack to auto mode, public state (ie audio will be played through speakers). When a headset is connected, the device will go to the private state

WFS_SIU_PUBLICAUDIO_SEMI_AUTO	Set the Audio Jack to semi-auto mode, public state (ie audio will be played through speakers). When a headset is connected, the device will go to the private state
WFS_SIU_PRIVATEAUDIO_MANUAL	Set the Audio Jack to manual mode, private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers.
WFS_SIU_PRIVATEAUDIO_AUTO	Set the Audio Jack to auto mode, private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers. When a headset is disconnected, the device will go to the public state
WFS_SIU_PRIVATEAUDIO_SEMI_AUTO	Set the Audio Jack to semi-auto mode, private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers. When a headset is disconnected, 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 Lights structure can be specified as one of the following values:

Value	Meaning
WFS_SIU_NO_CHANGE	Do not change the current status of the Light Indicator.
WFS_SIU_OFF	The Light Indicator is turned off.
WFS_SIU_SLOW_FLASH	The Light Indicator is set to flash slowly.
WFS_SIU_MEDIUM_FLASH	The light is blinking medium frequency.
WFS_SIU_QUICK_FLASH	The Light Indicator is set to flash quickly.
WFS_SIU_CONTINUOUS	The 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
Specifies a list of vendor-specific, or any other extended, information. The information is passed as a series of "*key=value*" strings so that it is easily extensible by service providers. Each string will be null-terminated, with the final string terminating with two 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.

6.3 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 Audio Jack Controller

fwCommand
It specifies the values for the volume control or the command to the UPS device. 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 Audio Jack to manual mode, public state (ie audio will be played through speakers only)
WFS_SIU_PUBLICAUDIO_AUTO	Set the Audio Jack to auto mode, public state (ie audio will be played through speakers). When a headset is connected, the device will go to the private state
WFS_SIU_PUBLICAUDIO_SEMI_AUTO	Set the Audio Jack to semi-auto mode, public state (ie audio will be played through speakers). When a headset is connected, the device will go to the private state
WFS_SIU_PRIVATEAUDIO_MANUAL	Set the Audio Jack to manual mode, private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers.
WFS_SIU_PRIVATEAUDIO_AUTO	Set the Audio Jack to auto mode, private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers. When a headset is disconnected, the device will go to the public state
WFS_SIU_PRIVATEAUDIO_SEMI_AUTO	Set the Audio Jack to semi-auto mode, private state (ie audio will be played only through a connected headset). In private mode, no audio is transmitted through the speakers.. When a headset is disconnected, 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 None.

6.4 WFS_CMD_SIU_SET_GUIDLIGHT

Description This command is used to set the status of a Guidance Light.

Input Param

```
LPWFSSIUSETGUIDLIGHT       lpSetGuidLight;

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

wGuidLights
Specifies the index of the Guidance Light 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 Light Indicator is turned off.
WFS_SIU_SLOW_FLASH	The Light Indicator is set to flash slowly.
WFS_SIU_MEDIUM_FLASH	The light is blinking medium frequency.
WFS_SIU_QUICK_FLASH	The Light Indicator is set to flash quickly.
WFS_SIU_CONTINUOUS	The 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.

7. New Events

None.

8. Changes to existing Events

8.1 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 Status 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 being plugged-in or removed..
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_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_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 Control has changed state.
WFS_SIU_CARDUNIT	The Guidance Light state for the card unit has changed.
WFS_SIU_PINPAD	The Guidance Light state for the PIN pad unit has changed.
WFS_SIU_NOTESDISPENSER	The Guidance Light state for the note dispenser unit has changed.
WFS_SIU_COINDISPENSER	The Guidance Light state for the coin dispenser unit has changed.
WFS_SIU_RECEIPTPRINTER	The Guidance Light state for the receipt printer unit has changed.
WFS_SIU_PASSBOOKPRINTER	The Guidance Light state for the passbook printer unit has changed.
WFS_SIU_ENVDEPOSITORY	The Guidance Light state for the envelope depository unit has changed.
WFS_SIU_CHEQUEUNIT	The Guidance Light state for the cheque unit has changed.
WFS_SIU_BILLACCEPTOR	The Guidance Light state for the bill acceptor unit has changed.
WFS_SIU_ENVDISPENSER	The Guidance Light state for the envelope dispenser unit has changed.
WFS_SIU_DOCUMENTPRINTER	The Guidance Light state for the Document Printer unit has changed.
WFS_SIU_COINACCEPTOR	The Guidance Light state for the coin acceptor has changed.
WFS_SIU_SCANNER	Set the state of the Guidance Light 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
Specifies 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 will be null-terminated, with the final string terminating with two null characters.

Comments None.

8.2 WFS_EXEE_SIU_PORT_ERROR

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

Event Param

```
LPWFSSIUPORTERROR   pPortError;

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 Status 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_INTTAMPER	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 Enhanced audio 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_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_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 Control has detected an error
WFS_SIU_CARDUNIT	The Guidance Light state for the card unit has detected an error.

WFS_SIU_PINPAD	The Guidance Light state for the PIN pad unit has detected an error.
WFS_SIU_NOTESDISPENSER	The Guidance Light state for the note dispenser unit has detected an error.
WFS_SIU_COINDISPENSER	The Guidance Light state for the coin dispenser unit has detected an error.
WFS_SIU_RECEIPTPRINTER	The Guidance Light state for the receipt printer unit has detected an error.
WFS_SIU_PASSBOOKPRINTER	The Guidance Light state for the passbook printer unit has detected an error.
WFS_SIU_ENVDEPOSITORY	The Guidance Light state for the envelope depository unit has detected an error.
WFS_SIU_CHEQUEUNIT	The Guidance Light state for the cheque unit has detected an error.
WFS_SIU_BILLACCEPTOR	The Guidance Light state for the bill acceptor unit has detected an error.
WFS_SIU_ENVDISPENSER	The Guidance Light state for the envelope dispenser unit has detected an error.
WFS_SIU_DOCUMENTPRINTER	The Guidance Light state for the document printer has detected an error.
WFS_SIU_COINACCEPTOR	The Guidance Light state for the coin acceptor has detected an error.
WFS_SIU_SCANNER	The Guidance Light state 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
Specifies 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 will be null-terminated, with the final string terminating with two null characters.

Comments None.

9. Changes to C-Header file

```
/******************************************************************************
*                                                                             *
* xfssiu.h      WOSA/XFS - definitions                                        *
*               for the Sensors and Indicators Unit - services                *
*                                                                             *
*               Version 3.01 (16/11/01)                                       *
*                                                                             *
******************************************************************************/

#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       0x0103

#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)


/* SIU Messages */

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


/* 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
```

```
/* 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)

/* 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)


/* 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)


/* 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.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)


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

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

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

#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))


/*=================================================================*/
/* 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;
} 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;
} 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;


/*=================================================================*/
/* 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;

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

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

#endif  /* __INC_XFSSIU__H */
```