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Twain for SmartSource Programming Reference V1.2.0 January 22, 2015

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1 Overview

Twain for Adaptive is an implementation of the Twain specification to permit Twain based applications to control the Burroughs SmartSource Adaptive. This document provides the resources for a developer familiar with Twain to incorporate the features that aren't covered by the Twain specification into their applications.

2 Twain for Adaptive System Requirements

Twain for Adaptive will run on any PC that meets the requirements for the SmartSource Adaptive's SmartPVA API.

3 Custom Functionality

3.1 Custom Capabilities

3.1.1 BCAP_PAGE_PORTRAIT

Description

If set to TRUE the SmartSource Adaptive will return page documents in portrait orientation.

Values

<i>Numeric ID:</i>	0x8001
<i>Type:</i>	TW_BOOL
<i>Default Value:</i>	FALSE
<i>Allowed Values:</i>	TRUE or FALSE
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.2 BCAP_PAGE_RESOLUTION

Description

Sets the resolution the SmartSource Adaptive will use to capture page documents. The default is to capture page documents at the same resolution as checks.

Values

<i>Numeric ID:</i>	0x8002
<i>Type:</i>	TW_FIX32
<i>Default Value:</i>	0 (<i>Same as checks</i>)
<i>Allowed Values:</i>	0

	200
	240
	300
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.3 BCAP_PAGE_MINHEIGHT

Description

The minium height, in inches, an item must be to be treated as a page. This dimension is referenced in the direction of the track flow.

Values

<i>Numeric ID:</i>	0x8003
<i>Type:</i>	TW_FIX32
<i>Default Value:</i>	9.5
<i>Allowed Values:</i>	Any value
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.4 BCAP_PAGE_MINWIDTH

Description

The minium width, in inches, an item must be to be treated as a page. This dimension is referenced in the vertical direction.

Values

<i>Numeric ID:</i>	0x8004
<i>Type:</i>	TW_FIX32
<i>Default Value:</i>	5.0
<i>Allowed Values:</i>	Any value
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.5 BCAP_PAGE_IMAGEBOTHDIMENSIONS

Description

If TRUE an item must exceed both BCAP_PAGE_MINWIDTH and BCAP_PAGE_MINHEIGHT dimensions to be considered a page. If FALSE an item must exceed either dimension to be considered a page.

Values

<i>Numeric ID:</i>	0x8005
<i>Type:</i>	TW_BOOL
<i>Default Value:</i>	FALSE
<i>Allowed Values:</i>	TRUE or FALSE
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.6 BCAP_MAX_PAGE_LENGTH

Description

Determines the longest length of page document that can be captured. The shortest length 9.25" will result in highest throughput but will not capture longer documents. The longest dimension 14.2" will capture legal documents, but will decrease throughput.

Values

<i>Numeric ID:</i>	0x8006
<i>Type:</i>	TW_UINT16
<i>Default Value:</i>	BPSPL_11_7
<i>Allowed Values:</i>	BPSPL_11_7 0 BPSPL_9_25 1 BPSPL_14_2 2
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.7 BCAP_OCR1ENABLED

Description

Enables the SmartSource Adaptive's OCR reader. If enabled the OCR data will be provided as BDAT_OCR1DATA.

Values

<i>Numeric ID:</i>	0x8007
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<i>Type:</i>	TW_BOOL
<i>Default Value:</i>	FALSE
<i>Allowed Values:</i>	TRUE or FALSE
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.8 BCAP_OCR2ENABLED

Description

Enables the SmartSource Adaptive's OCR reader. If enabled the OCR data will be provided as BDAT_OCR2DATA.

Values

<i>Numeric ID:</i>	0x8008
<i>Type:</i>	TW_BOOL
<i>Default Value:</i>	FALSE
<i>Allowed Values:</i>	TRUE or FALSE
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.9 BCAP_ADDINGMACHINETAPECAPTURE

Description

Enables the SmartSource Adaptive's adding machine capture. Only the front image can be captured so the tape must be oriented accordingly.

Values

<i>Numeric ID:</i>	0x8009
<i>Type:</i>	TW_UINT16
<i>Default Value:</i>	BPSAMT_NONE
<i>Allowed Values:</i>	BPSAMT_NONE 0
	BPSAMT_FRONT 1
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.1.10 BCAP_IDCARDIMAGING

Description

If enabled ID cards will be fed from an auxiliary input. Please refer to your scanner's operating instructions for more details. Otherwise, items will be fed from the primary input hopper."

Values

<i>Numeric ID:</i>	0x800B
<i>Type:</i>	TW_BOOL
<i>Default Value:</i>	FALSE
<i>Allowed Values:</i>	TRUE or FALSE
<i>Container for MSG_GET:</i>	TW_ONEVALUE
<i>Container for MSG_SET:</i>	TW_ONEVALUE
<i>Container for MSG_QUERY_SUPPORT:</i>	TW_ONEVALUE

3.2 Custom Data Structure Definitions

This section describes the custom data structures used with Twain for Adaptive.

3.2.1 BPS_TWA_READERDATA

```
typedef struct {  
    TW_INFO    Reader;  
}BPS_TWA_READERDATA, FAR* pBPS_TWA_READERDATA ;
```

Used by

DG_IMAGE / BDAT_OCR1DATA / MSG_GET
DG_IMAGE / BDAT_OCR2DATA / MSG_GET

Description

This struction is used to pass OCR strings from the data source to the application at the end of state 7.

Field Descriptions

Reader	This is a TW_INFO structure. The OCR will be a null terminated string contained in the item field of TW_INFO.
--------	---

3.3 Custom Data Argument Types

3.3.1 DG_IMAGE / BDAT_OCR1DATA / MSG_GET

Call

DSM_Entry(pOrigin, pDest, DG_IMAGE, BDAT_OCR1DATA, MSG_GET, pREADERDATA) ;

pREADERDATA = A pointer to a BPS_TWA_READERDATA structure.

Valid States

7 only, after receiving TWRC_XFERDONE

Description

This operation is used by the application to obtain any OCR data captured by OCR reader

1. BCAP_OCR1ENABLED must be set to TRUE to retrieve this data.

Values

Numeric ID: 0x8001

3.3.2 DG_IMAGE / BDAT_OCR2DATA / MSG_GET

Call

DSM_Entry(pOrigin, pDest, DG_IMAGE, BDAT_OCR2DATA, MSG_GET, pREADERDATA) ;

pREADERDATA = A pointer to a BPS_TWA_READERDATA structure.

Valid States

7 only, after receiving TWRC_XFERDONE

Description

This operation is used by the application to obtain any OCR data captured by OCR reader

2. BCAP_OCR2ENABLED must be set to TRUE to retrieve this data.

Values

Numeric ID: 0x8002

4 Standard Functionality

4.1 Standard Supported Capabilities

The following capabilities are supported by Twain for Adaptive. For more information on these standard capabilities, consult the Twain specification.

CAP_DEVICEONLINE

CAP_PAPERDETECTABLE

CAP_FEEDERENABLED

CAP_FEEDERLOADED
CAP_AUTOFEED
CAP_AUTOSCAN
CAP_SUPPORTEDCAPS
CAP_UICONTROLLABLE
CAP_XFERCOUNT
CAP_ENABLEDSUIONLY
CAP_CUSTOMDSDATA
ICAP_BITDEPTH
ICAP_BITORDER
ICAP_COMPRESSION
ICAP_FRAMES
ICAP_MAXFRAMES
ICAP_IMAGEFILEFORMAT
ICAP_PHYSICALHEIGHT
ICAP_PHYSICALWIDTH
ICAP_PIXELFLAVOR
ICAP_PIXELTYPE
ICAP_PLANARCHUNKY
ICAP_UNITS
ICAP_XFERMECH
ICAP_XRESOLUTION
ICAP_YRESOLUTION
CAP_DUPLEX
CAP_DUPLEXENABLED
CAP_MICREENABLED
ICAP_UNDEFINEDIMAGESIZE
ICAP_AUTOMATICBORDERDETECTION
ICAP_AUTOMATICDESKEW

CAP_INDICATORS
ICAP_SUPPORTEDSIZES
CAP_DEVICEEVENT
CAP_SERIALNUMBER
CAP_DEVICEONLINE
CAP_PAPERDETECTABLE
CAP_FEEDERENABLED
CAP_FEEDERLOADED
CAP_AUTOFEED
CAP_AUTOSCAN
CAP_SUPPORTEDCAPS
CAP_UICONTROLLABLE
CAP_XFERCOUNT
CAP_ENABLEDSUIONLY
CAP_CUSTOMDSDATA
ICAP_BITDEPTH
ICAP_BITORDER
ICAP_COMPRESSION
ICAP_FRAMES
ICAP_MAXFRAMES
ICAP_IMAGEFILEFORMAT
ICAP_PHYSICALHEIGHT
ICAP_PHYSICALWIDTH
ICAP_PIXELFLAVOR
ICAP_PIXELTYPE
ICAP_PLANARCHUNKY
ICAP_UNITS
ICAP_XFERMECH
ICAP_XRESOLUTION

ICAP_YRESOLUTION

CAP_DUPLEX

CAP_DUPLEXENABLED

CAP_MICREENABLED

ICAP_UNDEFINEDIMAGESIZE

ICAP_AUTOMATICBORDERDETECTION

ICAP_AUTOMATICDESKEW

CAP_INDICATORS

ICAP_SUPPORTEDSIZES

CAP_DEVICEEVENT

CAP_SERIALNUMBER

ICAP_BRIGHTNESS

ICAP_CONTRAST