BIXOLON®

iOS Printer SDK
API Reference Guide

Rev. 3.02

SRP-F310 / SRP-F312
SRP-350plus / SRP-352plus
SRP-350plusII / SRP-352plusII
SRP-350II / SRP-350IIOBE
SRP-350III / SRP-352III
SRP-350plusIII/SRP-352plusIII
SRP-275 / SRP-275II
SRP-340
SPP-R200II / SPP-R210
SPP-R300 / SPP-R400

Made for
iPod iPhone iPad

http://www.bixolon.com

■ Table of Contents

1. About This Manual

This SDK manual describes the contents of the library required to develop iOS application programs.

BIXOLON constantly makes improvements to the functions and quality of its products. The specifications and contents of this manual are subject to change without prior notice for this reason.

1-1 Supported Device

The devices in the following list are validated. iPod touch second generation or higher are compatible even though they are not listed here.

- iPhone 3GS / 4G / 5G
- iPad / iPad2 / iPad mini

1-2 Supported Platform & Development Environment

- Platform
  - iOS 4.3 or higher

- Development Environment
  - XCode 3.2.6 higher

1-3 List of Supported Printers / Interfaces

Method/Property	Ethernet	Wi-Fi	Bluetooth
SRP-275	O		
SRP-275II	O		
SRP-350II	O		
SRP-350IIOBE	O		O
SRP-350III	O		
SRP-352III	O		
SRP-350plus	O		
SRP-350plusII	O		
SRP-350plusIII	O	O	O
SRP-352plus	O		
SRP-352plusII	O		
SRP-352plusIII	O	O	O
SRP-F310	O	O	
SRP-F312	O	O	
SRP-340	O		
SPP-R200II		O	O
SPP-R210		O	O
SPP-R300		O	O
SPP-R400		O	O

1-4 List of Supported Properties

Property	POS Printer	Mobile Printer
Version	O	O
delegate	O	O
Target	O	O
lookupDuration	O	O
lookupCount	O	O
alignment	O	O
attribute	O	O
textSize	O	O
characterSet	O	O
internationalCharacterSet	O	O
State	O	O
Power	O	O
AutoConnection	O	O
drawerPin	O	X
drawerOpenLevel	O	X

1-5 List of Supported Methods

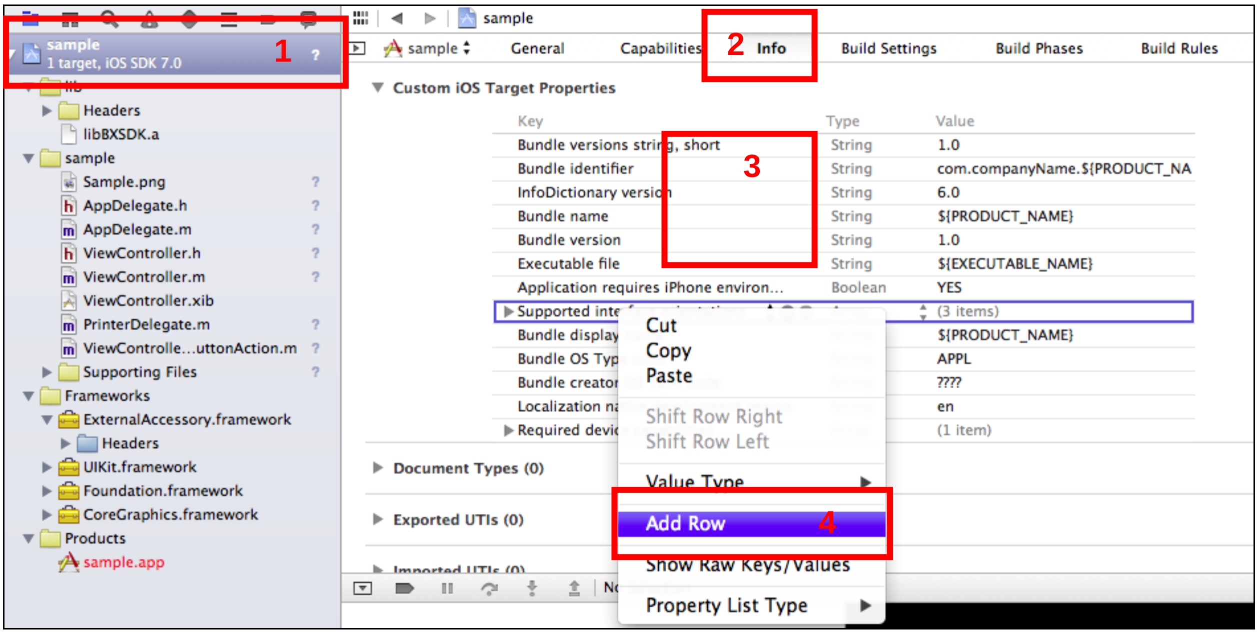
Method		POS Printer	Mobile Printer
General	*getInstance*	O	O
	open	O	O
	close	O	O
Search	*lookup*	O	O
	willLookupPrinters	O	O
	didFindPrinter	O	O
	didLookupPrinters	O	O
	didNotLookup	O	O
Connection	*selectTarget*	O	O
	connect	O	O
	disconnect	O	O
	didConnect	O	O
	didDisconnect	O	O
	didNotConnect	O	O
	didBeBrokenConnection	O	O
Status Check	*enableLSB*	O	O
	checkPrinter	O	O
	isSupport_MSR	O	O
	isSupport_IC	O	O
	isSupport_Config	O	O
	isSupport_CashDrawer	O	O
	isSupport_LSB	O	O
	getBarcodeSupportTable	O	O
Printings	*printText*	O	O
	printBox	O	O
	lineFeed	O	O
	nextPrintPos	O	O
	printBarcode	O	O
	printBitmap	O	O
	printBitmapWithImage	O	O
MSR	*msrReadReady*	X	O
	msrReadCancel	X	O
	msrReadTrack	X	O
	msrGetTrack	X	O
	msrReadFullTrack	X	O
Direct IO	*directIO*	O	O

IC Card	*icON*	X	X
	icOFF	X	X
	icApdu	X	X
	icGetStatus	X	X
NV Image	*nvImageList*	O	O
	downloadNVImage (Diffusion)	O	O
	downloadNVImage (Normal)	O	O
	printNVImage	O	O
	removeNVImage	O	O
	removeAllNVImages	O	O
Cash Drawer	*openDrawer*	O	X

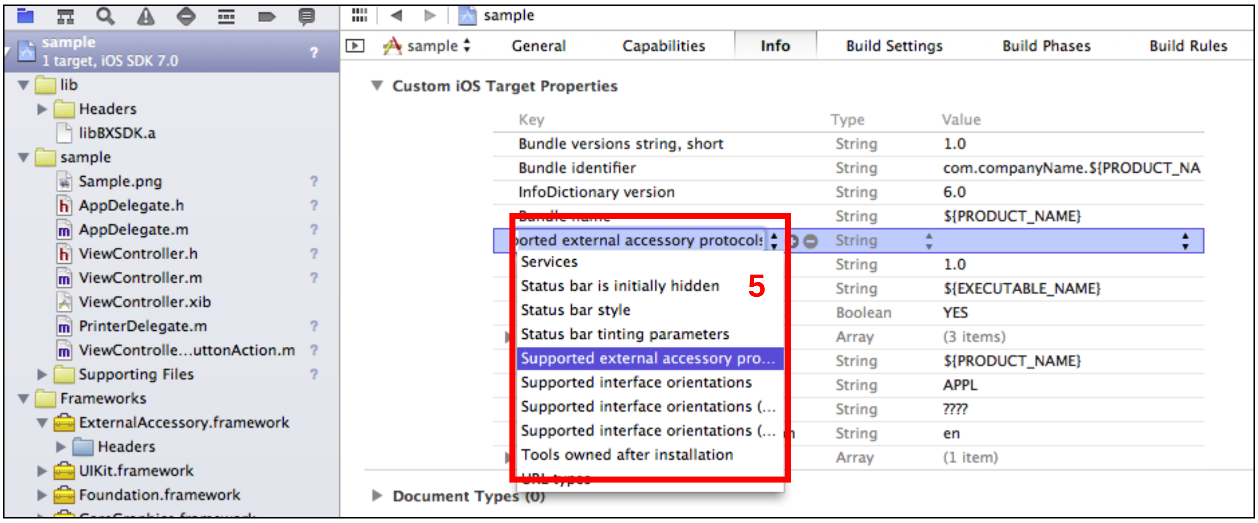
1-6 Setting SDK Project

[Note] Registration with the Apple Developer Program is required to develop iOS applications. Refer to the Apple Developer's Website (*http://developer.apple.com/devcenter/ios*) for details.

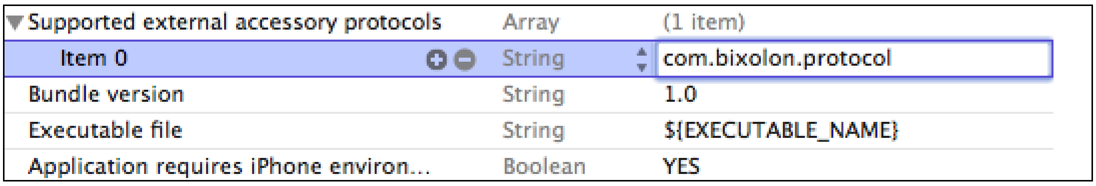
1-6-1 Adding ExternalAccessory.framework



1) Select project file
2) Select [Info] tab
3) Ctrl-click in the Area 3
4) Select [Add Row] from the pop up menu


5
Services
Status bar is initially hidden
Status bar style
Status bar tinting parameters
Supported external accessory pro…
Supported interface orientations
Supported interface orientations (…
Supported interface orientations (…
Tools owned after installation

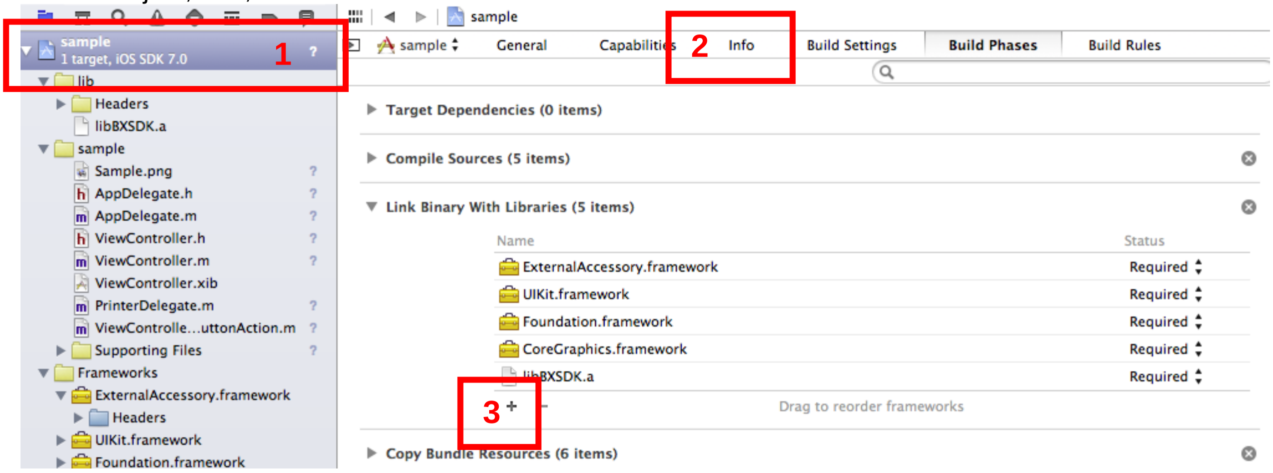
5) Enter "Supported external accessory protocols".
6) Enter "com.bixolon.protocol" in the Items field.



▼Supported external accessory protocols	Array	(1 item)
Item 0	String	com.bixolon.protocol
Bundle version	String	1.0
Executable file	String	${EXECUTABLE_NAME}
Application requires iPhone environ…	Boolean	YES

1-6-2 Adding Bluetooth Protocol

1) Select Project, Info, and + in the order shown below.



sample
1 target, iOS SDK 7.0
lib
Headers
libBXSDK.a
sample
Sample.png
AppDelegate.h
AppDelegate.m
ViewController.h
ViewController.m
ViewController.xib
PrinterDelegate.m
ViewControlle...uttonAction.m
Supporting Files
Frameworks
ExternalAccessory.framework
Headers
UIKit.framework
Foundation.framework

sample

General | Capabilities | Info | Build Settings | Build Phases | Build Rules

Target Dependencies (0 items)

Compile Sources (5 items)

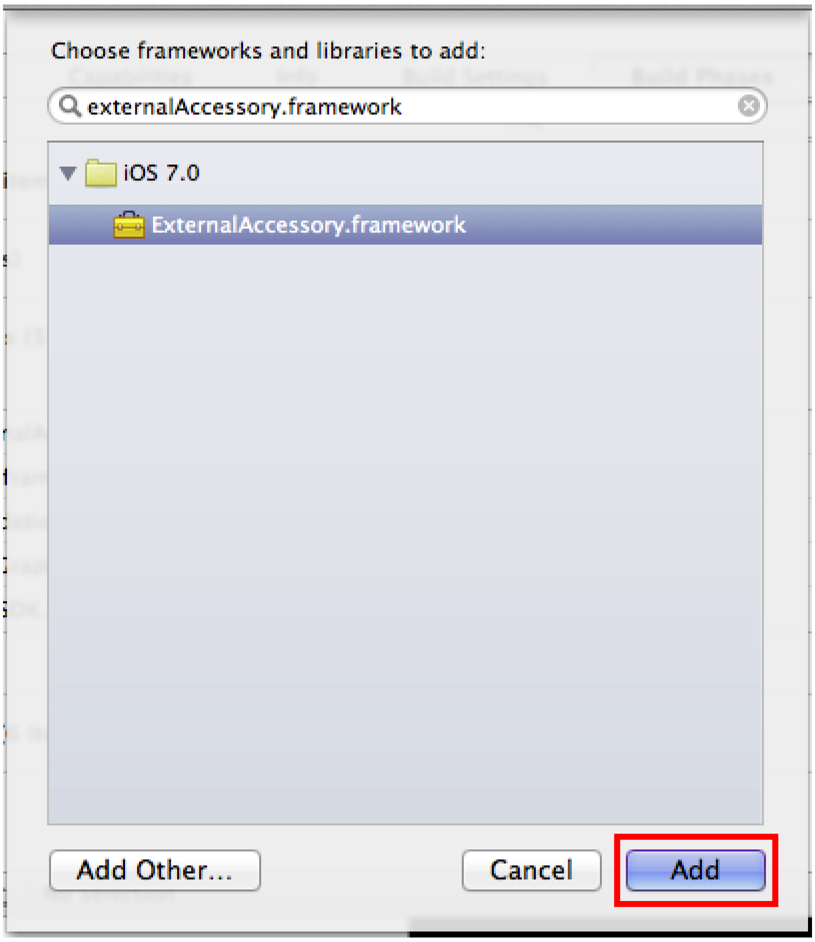
Link Binary With Libraries (5 items)

Name	Status
ExternalAccessory.framework	Required
UIKit.framework	Required
Foundation.framework	Required
CoreGraphics.framework	Required
libBXSDK.a	Required

Drag to reorder frameworks

Copy Bundle Resources (6 items)

2) Search “ExternalAccessory.framework” and click the [Add] to add it.



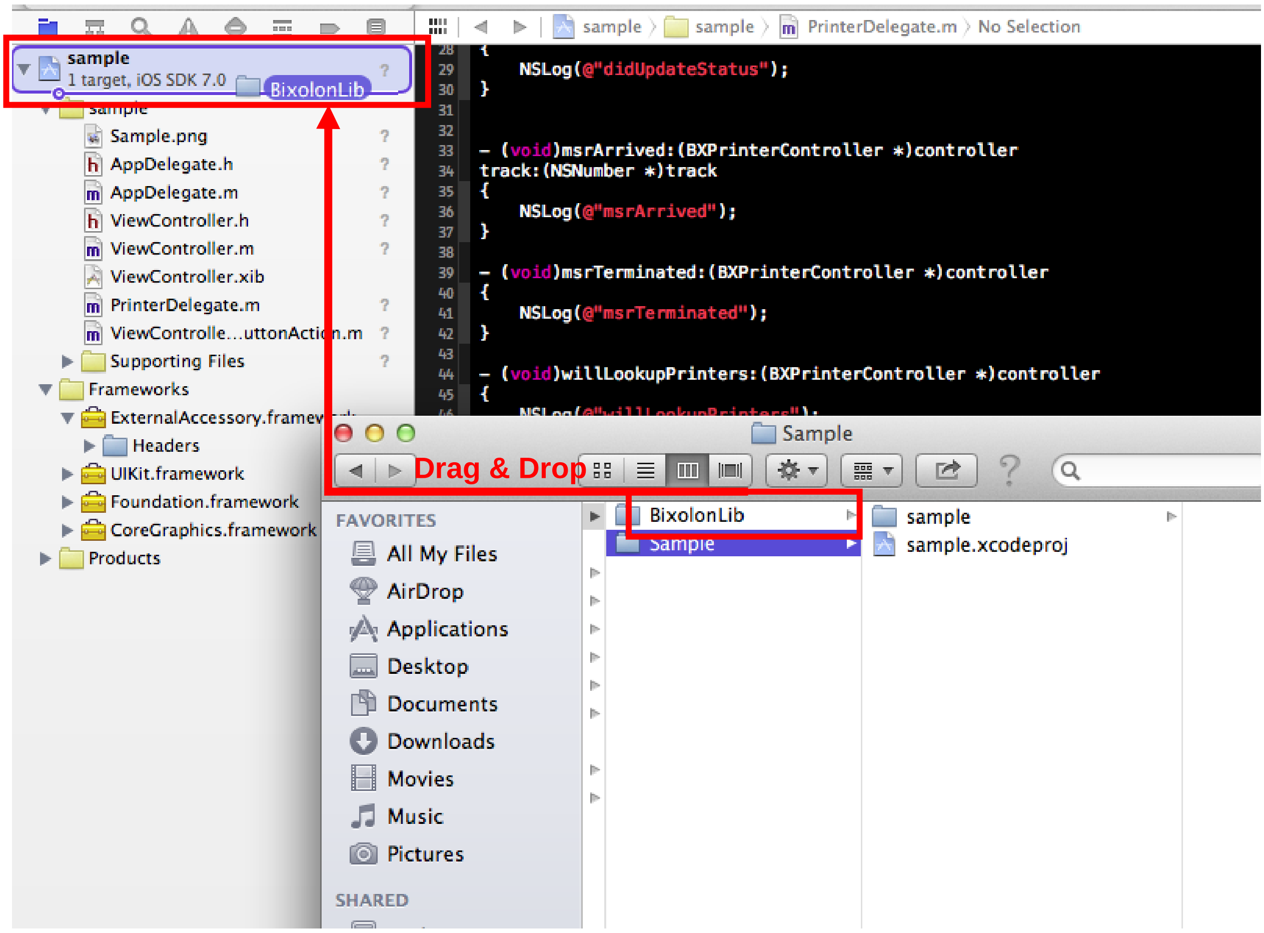
Choose frameworks and libraries to add:

externalAccessory.framework

iOS 7.0
ExternalAccessory.framework

1-6-3 Adding Bixolon Library to Project

1) Drag the library folder and drop it to the project.



```
{
    NSLog(@"didUpdateStatus");
}

- (void)msrArrived:(BXPrinterController *)controller
track:(NSNumber *)track
{
    NSLog(@"msrArrived");
}

- (void)msrTerminated:(BXPrinterController *)controller
{
    NSLog(@"msrTerminated");
}

- (void)willLookupPrinters:(BXPrinterController *)controller
{
    NSLog(@"willLookupPrinters");
```

2. Constants

Constants used by the provided SDK are defined in the "BXCode.h" file.

2-1 Defined Constants

2-1-1 Character Set

This is an attribute to define code page, and the default value is set to BXL_CS_437.

The following options are available for the code page.

Code	Value	Description
BXL_CS_PC437	0	Code page PC437
BXL_CS_Katakana	1	Katakana
BXL_CS_PC850	2	Code page PC850
BXL_CS_PC860	3	Code page PC860
BXL_CS_PC863	4	Code page PC863
BXL_CS_PC865	5	Code page PC860
BXL_CS_WPC1252	16	Code page WPC1252
BXL_CS_PC866	17	Code page PC860
BXL_CS_PC852	18	Code page PC852
BXL_CS_PC858	19	Code page PC858
BXL_CS_PC864	22	Code page PC864
BXL_CS_THAI42	23	Code page THAI42
BXL_CS_WPC1253	24	Code page WPC1253
BXL_CS_WPC1254	25	Code page WPC1254
BXL_CS_WPC1257	26	Code page WPC1257
BXL_CS_FARSI	27	Code page FARSI
BXL_CS_WPC1251	28	Code page WPC1251
BXL_CS_PC737	29	Code page PC737
BXL_CS_PC775	30	Code page PC775
BXL_CS_THAI14	31	Code page THAI14
BXL_CS_PC862	33	Code page PC862
BXL_CS_PC855	36	Code page PC855
BXL_CS_PC857	37	Code page PC857
BXL_CS_PC928	38	Code page PC928
BXL_CS_THAI16	39	Code page THAI16
BXL_CS_WPC1256	40	Code page WPC1256
BXL_CS_USER	255	User set page

2-1-2 International Character Set

This is an attribute to define international character set and the default value is set to BXL_ICS_USA.

The following options are available for the International Character Set.

Code	Value	Description
BXL_ICS_USA	0	U.S.A.
BXL_ICS_FRANCE	1	France
BXL_ICS_GERMANY	2	Germany
BXL_ICS_UK	3	U.K.
BXL_ICS_DENMARK1	4	Denmark *I*
BXL_ICS_SWEDEN	5	Sweden
BXL_ICS_ITALY	6	Italy
BXL_ICS_SPAIN	7	Spain
BXL_ICS_NORWAY	9	Norway
BXL_ICS_DENMARK2	10	Denmark *II*

2-1-3 Text Encoding

This is an attribute to define Text Encoding type and the default value is set to BXL_TEXTENCODING_SINGLEBYTEFONT.

The following options are available for Text Encoding type.

Code	Value	Description
BXL_TEXTENCODING_SINGLEBYTEFONT	0x00000001	Default. Use Single byte font.
BXL_TEXTENCODING_KSC5601	0x80000422	Korean encoding
BXL_TEXTENCODING_SHIFT_JIS	0x00000008	Japanese encoding
BXL_TEXTENCODING_BIG5	0x80000a03	Chinese encoding–BIG5
BXL_TEXTENCODING_GB2312	0x80000421	Chinese encoding–GB2312
BXL_TEXTENCODING_GB18030	0x80000632	Chinese encoding-GB18030

Refer to NSString.h, NSStringEncoding to see more lists of encoding type.

2-1-4 Barcode/Image/Text Alignment

This is an attribute to define alignment of barcode/image/text, and the default value is set to BXL_ALIGNMENT_LEFT.

The following options are available for this value.

Code	Value	Description
BXL_ALIGNMENT_LEFT	0	Align to Left
BXL_ALIGNMENT_CENTER	1	Align to Center
BXL_ALIGNMENT_RIGHT	2	Align to Right

2-1-5 Text Size

This is an attribute to set the size of text, and the height and width can be set simultaneously using bitwise OR combination.

The following options are available.

<Width Attribute>

Code	Value	Description
BXL_TS_0WIDTH	0	Width magnification factor is set to X1.
BXL_TS_1WIDTH	16	Width magnification factor is set to X2.
BXL_TS_2WIDTH	32	Width magnification factor is set to X3.
BXL_TS_3WIDTH	48	Width magnification factor is set to X4.
BXL_TS_4WIDTH	64	Width magnification factor is set to X5.
BXL_TS_5WIDTH	80	Width magnification factor is set to X6.
BXL_TS_6WIDTH	96	Width magnification factor is set to X7.
BXL_TS_7WIDTH	112	Width magnification factor is set to X8.

<Height Attribute >

Code	Value	Description
BXL_TS_0HEIGHT	0	Height magnification factor is set to X1.
BXL_TS_1HEIGHT	16	Height magnification factor is set to X2.
BXL_TS_2HEIGHT	32	Height magnification factor is set to X3.
BXL_TS_3HEIGHT	48	Height magnification factor is set to X4.
BXL_TS_4HEIGHT	64	Height magnification factor is set to X5.
BXL_TS_5HEIGHT	80	Height magnification factor is set to X6.
BXL_TS_6HEIGHT	96	Height magnification factor is set to X7.
BXL_TS_7HEIGHT	112	Height magnification factor is set to X8.

2-1-6 Text Attribute

This attribute is to set the text attribute and each attribute can be combined by bitwise OR operation.

The following options are available for this attribute.

Code	Value	Description
BXL_FT_DEFAULT	0	Default attribute NOT BOLD, FONTA, NOT UNDERLINE, NOT REVERSE
BXL_FT_FONTB	1	Use FONTB.
BXL_FT_FONTC	16	Use FONTC.
BXL_FT_BOLD	2	Use Bold attribute.
BXL_FT_UNDERLINE	4	Use Underline attribute.
BXL_FT_REVERSE	8	Use Reverse attribute.
BXL_ExFT_CHINA_FONTB	32	

2-1-7 Barcode Text Position

It sets the position to print barcode data.

The following options are available.

Code	Value	Description
BXL_BC_TEXT_NONE	0	Barcode data is not printed.
BXL_BC_TEXT_ABOVE	1	Barcode data is printed above the barcode.
BXL_BC_TEXT_BELOW	2	Barcode data is printed below the barcode.

2-1-8 Barcode Symbology

This attribute defines the barcode type.

The following options are available.

Code	Value	Number of Data	Range of Data
BXL_BCS_UPCA	101	11 <= n <= 12	48 <= data <= 57
BXL_BCS_UPCE	102	11 <= n <= 12	48 <= data <= 57
BXL_BCS_EAN13	103	12 <= n <= 13	48 <= data <= 47
BXL_BCS_JAN13	104	7 <= n <= 8	48 <= data <= 57 64 <= data <= 90 data = 32,36,37,43,45,46,47
BXL_BCS_EAN8	105	7 <= n <= 8	48 <= data <= 57
BXL_BCS_JAN8	106	7 <= n <= 8	48 <= data <= 57
BXL_BCS_Code39	107	1 <= n <= 255	48 <= data <= 57 65 <= data <= 68 data = 32,36,37,43,45,46,47
BXL_BCS_ITF	108	1 <= n <= 255 (even number)	48 <= data <= 57
BXL_BCS_Codabar	109	1 <= n <= 255	48 <= data <= 57 65 <= data <= 68 data = 36,43,45,46,47,58
BXL_BCS_Code93	110	1 <= n <= 255	0 <= data <= 127
BXL_BCS_Code128	111	2 <= n <= 255	0 <= data <= 127
BXL_BCS_PDF417	200	2 <= n <= 928	0 <= data <= 255
BXL_BCS_QRCODE	202~203	2 <= n <= 928	0 <= data <= 255
BXL_BCS_DATAMATRIX	204	2 <= n <= 928	0 <= data <= 255
BXL_BCS_MAXICODE	205~6	2 <= n <= 928	0 <= data <= 255

2-1-9 Image Width

This attribute sets the width of image. The range of this value can be from 0 to maximum width of printer.
Values set as in the following table changes the image size accordingly as described in the table.

The following options are available for this attribute.

Code	Value	Description
BXL_WIDTH_FULL	-1	Image width is set to the maximum width and converted to the maximum width of given paper.
BXL_WIDTH_NONE	-2	Image size is not changed.

2-1-10 Status Check Mask

This attribute is to set the range of printer status for status checking.
It is used as a parameter of checkPrinter method.

The following options are available.

Code	Value	Description
BXL_MASK_COVERSTATUS	1	Check the status of printer cover.
BXL_MASK_PAPERSTATUS	2	Check the status of printer paper.
BXL_MASK_POWERSTATUS	4	Check the status of printer power.
BXL_MASK_MODELNAME	8	Check the model name of printer.
BXL_MASK_VERSION	16	Check the firmware version of printer.
BXL_MASK_CASHDRAWER	32	Check the status of Cash Drawer if it is connected to printer.
BXL_MASK_ALL	0XFF	Check all of above status.

2-1-11 Power

This attribute indicates the battery status. It is a read-only parameter and the value is updated whenever the status of printer battery changes.

The battery status is reported as follows.

Code	Value	Description
BXL_PWR_HIGH	0	The battery is 95% charged.
BXL_PWR_MIDDLE	1	The battery is 85% charged.
BXL_PWR_LOW	2	The battery is 50% charged.
BXL_PWR_SMALL	3	The battery is 25% charged.
BXL_PWR_NOT	4	The battery is less than 25% charged.

2-1-12 State

This attribute is to get the printer status. It is read-only and printer status is returned in this attribute when calling CheckPrinter function. Each setting can be set multiple times and individual status can be extracted through bit operation.

Printer status values are as follows.

Code	Value	Description
BXL_STS_NORMAL	0	Normal state
BXL_STS_PAPEREMPTY	1	No paper
BXL_STS_COVEROPEN	2	Printer cover is open.
BXL_STS_POWEROVER	4	Battery is low.
BXL_STS_MSR_READY	8	Printer is not ready. It is in MSR read mode.
BXL_STS_PRINTING	16	Printer is printing / exchanging data.
BXL_STS_ERROR	32	There is an error in communication with printer.
BXL_STS_NOT_OPEN	64	The “open” method on BXPrinterContro has not been called.
BXL_STS_ERROR_OCCUR	128	There is an error in the printer.
BXL_STS_NOT_CONNECTED	-1	Printer is currently disconnected.

2-1-13 Connection Control

This is for setting the method of printer connection.

The available options are as follows.

Code	Value	Description
BXL_CONNECTIONMODE_AUTO	0	Automatic connection mode
BXL_CONNECTIONMODE_NOAUTO	100	Manual connection mode

2-1-14 Drawer kick-out connector pin

This is for setting a pin number to be used for connecting cash drawer.

The available options are as follows.

Code	Value	Description
BXL_CASHDRAWER_PIN_2	0	Cash drawer connection pin: 2
BXL_CASHDRAWER_PIN_5	1	Cash drawer connection pin: 5

2-1-15 Drawer open level

This is for setting cash drawer type.

The following options are available.

Code	Value	Description
BXL_CASHDRAWER_OPENLEVEL_LOW	0	Low when cash drawer is open
BXL_CASHDRAWER_OPENLEVEL_HIGH	1	High when cash drawer is open

2-1-16 Model ID

This is for setting the printer type.

The following options are available.

Code	Value	Description
BXL_MODEL_ID_SPPR200II	0x12000002	SPP-R200II
BXL_MODEL_ID_SRPR210	0x12100000	SPP-R210
BXL_MODEL_ID_SRPR300	0x13000000	SPP-R300
BXL_MODEL_ID_SPPR400	0x14000000	SPP-R400
BXL_MODEL_ID_SRP350II	0x23500002	SRP-350II
BXL_MODEL_ID_SRP350plus	0x23507000	SRP-350plus
BXL_MODEL_ID_SRP352plus	0x23527000	SRP-352plus
BXL_MODEL_ID_SRP350plusII	0x23507002	SRP-350plusII
BXL_MODEL_ID_SRP352plusII	0x23527002	SRP-352plusII
BXL_MODEL_ID_SRP350III	0x23500003	SRP-350III
BXL_MODEL_ID_SRP352III	0x23520003	SRP-352III
BXL_MODEL_ID_SRP275	0x32750000	SRP-275, SRP-275II
BXL_MODEL_ID_SRPF310	0x93100000	SRP-F310
BXL_MODEL_ID_SRPF312	0x93120000	SRP-F312
BXL_MODEL_ID_SRP350plusIII	0x23507002	SRP-350plusIII
BXL_MODEL_ID_SRP352plusIII	0x23527002	SRP-352plusIII

2-1-17 Connection Class

This is for defining the connection type of the printer.
When ‘didFindPrinter’ function is called, the connectionClass of BXPrinter class is updated.

Code	Value	Description
BXL_CONNECTIONCLASS_WIFI	0x0000	Wi-Fi Connection
BXL_CONNECTIONCLASS_ETHERNET	0x0001	Ethernet Connection
BXL_CONNECTIONCLASS_BLUETOOTH	0x0002	Bluetooth Connection

2-1-18 Result Code

This is for defining the result returned after performing specific functions by various methods.

Code DEFINE	Value	Description
BXL_SUCCESS	0	Success
BXL_NOT_CONNECTED	-1	Printer is not connected.
BXL_NOT_OPENED	101	SDK is not open.
BXL_STATUS_ERROR	103	There is an error during status check.
BXL_CONNECT_ERROR	105	Connection error
BXL_NOT_SUPPORT	107	Not supported
BXL_BAD_ARGUMENT	108	Wrong function argument
BXL_BUFFER_ERROR	109	Error in MSR buffer
BXL_NOT_CONNECTED	110	Printer is not connected
BXL_RGBA_ERROR	111	Error in converting image file to RGBA data
BXL_MEMORY_ERROR	112	Memory allocation error
BXL_TOO_LARGE_IMAGE	113	Image file to download NV area is too big
BXL_NOT_SUPPORT_DEVICE	114	Not supported by the printer.
BXL_READ_ERROR	301	Error in data reception
BXL_WRITE_ERROR	300	Error in data transmission
BXL_BITMAPLOAD_ERROR	400	Error in reading image file
BXL_BC_DATA_ERROR	500	Error in bar code data
BXL_BC_NOT_SUPPORT	501	Unsupported barcode type
BXLMSR_NOTREADY	602	MSR is not ready.
BXLMSR_FAILEDMODE	601	Automatic read mode is not set.
BXLMSR_DATAEMPTY	603	There is no data read from MSR.
	1001H	Unknown command
	1002H	Command cannot be executed.
	1003H	Incorrect number of argument.
	1004H	First byte of unknown command or invalid command
	1005H	Response time is exceeded.
	1010H	Response error by card reset, or the first byte of response is invalid.
	1012H	Message limit is exceeded. Maximum is 254 bytes, or 248 bytes for card data.
	1013H	Byte read error in asynchronous routine
	1015H	Card mode is terminated. Card mode command needs to be sent.
	101BH	Command with incorrect argument is sent.
	101DH	Error in TCK check byte

Code DEFINE	Value	Description
	10A0H	Error in card reset response (unknown protocol, or TA1 byte recognition error), unsupported card, no card response for reset
	10A1H	Card protocol error (T=0/T=1)
	10A2H	Timeout in card response
	10A3H	Parity error
	10A4H	Connection with card is terminated.(T=1)
	10A5H	Connection with reader is terminated. (T=2)
	10A6H	RESYNCH with IC module is successful.
	10A7H	PPS error
	10A8H	IC module already set to IC CARD mode.
	10B0H	PC link command is not supported.
	10E4H	Card sent invalid procedure byte.
	10E5H	Card exchange is interrupted.
	10E7H	Error returned from card.
	10F7H	Card is removed while processing command
	10F8H	Card cannot be used because the battery is low.
	10FBH	Card recognition error or card entry error

3. BXBarcode Class Reference

Inherits from	NSObject
Confirms to	
Framework	BXPrinter.a
[Availability]	iOS 4.3 and later
Declared	BXBarcodeInfo.h

3-1 Overview

BXBarcode Class is an object that contains the information of supported barcode types of target printer.

3-2 Properties

3-2-1 barNumber

Barcode Define Number

```
@property   int        barNumber
```

[Discussion]
It is saved automatically with the information obtained from the connected printer.

[See Also]
2-1-8 Barcode Symbology

[Availability]
SDK 3.0.3 and later

3-2-2 name

Barcode name

```
@property   NSString *      barName
```

[Discussion]
It is saved automatically with the information obtained from the connected printer.

[Availability]
SDK 3.0.3 and later

3-2-3 support

Barcode support

```
@property    BOOL               support
```

[Discussion]
It is saved automatically with the information obtained from the connected printer.

[Availability]
SDK 3.0.3 and later

4. BXPrinter Class Reference

Inherits from	NSObject
Confirms to	
Framework	BXPrinter.a
[Availability]	iOS 4.3 and later
Declared	BXPrinterObject.h

4-1 Overview

BXPrinter Class is an object that contains the information of target printer (name / network address/port).

4-2 Properties

4-2-1 name

Printer name

@property(readonly) NSString * name

[Discussion]
Name is saved automatically with the information obtained from the connected printer.

[Availability]
SDK 0.6.0 and later

4-2-2 address

Printer network address

@property(readwrite) NSString * address

[Discussion]
Network address of the printer should be assigned before making connection.

[Availability]
SDK 0.6.0 and later

4-2-3 port

Network port of printer

@property(readwrite) unsigned short port

[Discussion]
Network port of printer should be assigned before connection.

[Availability]
SDK 0.6.0 and later

4-2-4 modelStr

Printer model name

It is a model name provided by firmware - _ SRP-350II in case of SRP-350II printer.

@property(readwrite) NSString * modelStr

[Discussion]
This value is updated by the checkPrinter method of BXPrinterController.

[See Also]
5-3-17 checkPrinter

[Availability]
SDK 0.8.0 and later

4-2-5 versionStr

Firmware version of printer

It is a version name provided by firmware and is provided in the format like
V01.00 STOB 040711.

@property(readwrite) NSString * versionStr

[Discussion]
This value is updated by the *checkPrinter* method of BXPrinterController.

[See Also]
5-3-17 checkPrinter

[Availability]
SDK 0.8.0 and later

4-2-6 connectionClass

Printer connection type

Information about network connection is saved in this object.

@property(readwrite) unsigned short *   connectionClass

[See Also]
2-15 Connection Class

[Availability]
SDK 3.0.3 and later

5. BXPrinterController Class Reference

Inherits from	NSObject
Confirms to	
Framework	BXPrinter.a
[Availability]	iOS 4.3 and later
Declared	BXPrinter.h

5-1 Overview

BXPrinterController Class is a main object for printer control.

5-2 Properties

5-2-1 version

SDK version

@property(readonly) NSString *   version

[Discussion]
It is a character string with a format like “1.0.0” and it is a read-only variable.

[See Also]
5-3-17 checkPrinter

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController   = [BXPrinterController   getInstance];

If(pController == nil)
        NSLog (@”getInstance Fail.”);

NSLog(@“SDK Version : %@”, pController.version);
```

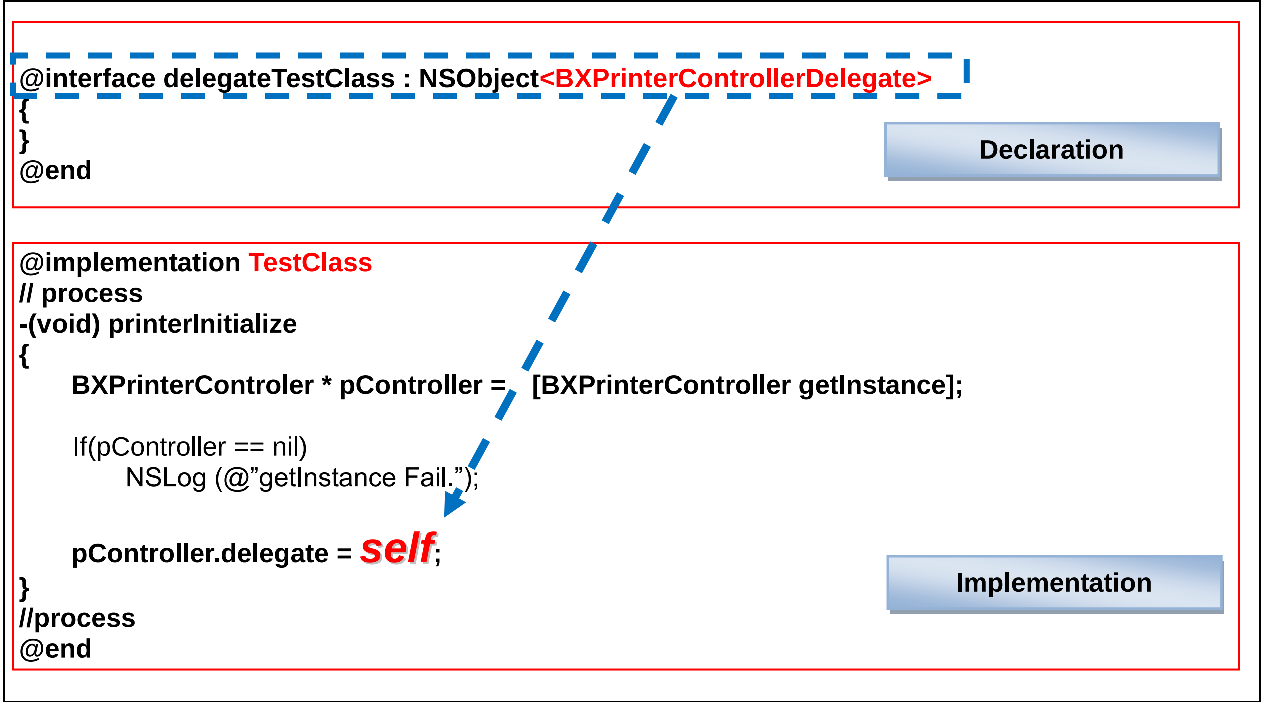
5-2-2 delegate

It is an object to delegate BXPrinterControlDelegate method

@property(readwrite) id<BXPrinterControlDelegate>   delegate

[Availability]
SDK 0.6.0 and later

[Example]



```
@interface delegateTestClass : NSObject<BXPrinterControllerDelegate>
{
}
@end
```

```
@implementation TestClass
// process
-(void) printerInitialize
{
      BXPrinterControler * pController =  [BXPrinterController getInstance];

      If(pController == nil)
            NSLog (@"getInstance Fail.");

      pController.delegate = self;
}
//process
@end
```

5-2-3 target

It is a target control printer object.

@property(readwrite) BXPrinter *   target

[Discussion]
This object for target control printer should be assigned before controlling printer.

[See Also].
5-3-5 *selectTarget*

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController   = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

[pController Open];

// printer object searched by using lookup function can also be used.
BXPrinter* printer = [BXPrinter new];
printer.connectionClass=BXL_CONNECTIONCLASS_BT;
printer.macAddress = @"XX:XX:XX:XX:XX:XX";

pController.target = printer;
If(BXL_SUCCESS == [pController selectTarget])
{
      NSLog(@"Select Target Success");
}
// ...
[printer release];
//…
```

5-2-4 lookupDuration

Printer search period (unit: second)

@property(readwrite) CGFloat lookupDuration

[Discussion]
Fractional number like 0.5 can also be used.

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

pController.lookupDuration = 2.0;
pController.lookupCount     = 5;

[pController lookup]
```

5-2-5 lookupCount

Number of repetitions in sending signal for printer search

@property(readwrite) unsigned lookupCount

[Discussion]
Default value is set to 1. When it is higher than 1, printer search signal is repeated by the specified number in 0.2 second units.

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

pController.lookupDuration = 2.0;
pController.lookupCount     = 5;

[pController lookup]
```

5-2-6 alignment

Horizontal alignment setting

@property(readwrite) int alignment

[Discussion]
Default value is Left Align, and this setting affects all print settings including text and barcode.

[Availability]
SDK 0.8.0 and later

[See Also]
2-1-4 Barcode/Image/Text Alignment
5-3-9 printText

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

pController.alignment = BXL_ALIGNMENT_LEFT;
If(BXL_SUCCESS == [pController printText:@"This is alignment Test - left"])
       NSLog(@"printText Success");

pController.alignment = BXL_ALIGNMENT_CENTER;
If(BXL_SUCCESS == [pController printText:@"This is alignment Test - center"])
       NSLog(@"printText Success");


pController.alignment = BXL_ALIGNMENT_RIGHT;
If(BXL_SUCCESS == [pController printText:@"This is alignment Test - right"])
       NSLog(@"printText Success");
```

5-2-7 attribute

Text output attribute

@property(readwrite) int attribute

[Availability]
SDK 0.8.0 and later

[See Also]
2-1-6 Text Attribute
5-3-9 printText

[Example]

```
BXPrinterController* pController   = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

pController.attribute = BXL_ALIGNMENT_LEFT;
If(BXL_SUCCESS == [pController printText:@"This is alignment Test - left"])
      NSLog(@"printText Success");

pController.alignment = BXL_ALIGNMENT_CENTER;
If(BXL_SUCCESS == [pController printText:@"This is alignment Test - center"])
      NSLog(@"printText Success");


pController.alignment = BXL_ALIGNMENT_RIGHT;
If(BXL_SUCCESS == [pController printText:@"This is alignment Test - right"])
      NSLog(@"printText Success");
```

5-2-8 textSize

Size of printed text

@property(readwrite) int textSize

[Availability]
SDK 0.6.0 and later

[See Also]
2-1-5 Text Size
5-3-9 printText

[Example]

```
BXPrinterController* pController   = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

pController.textSize = BXL_TS_0WIDTH| BXL_TS_1HEIGHT;
If(BXL_SUCCESS == [pController printText:@”This is textSizeTest 0x0-default”])
      NSLog(@”printText Success”);

pController.textSize = BXL_TS_1WIDTH| BXL_TS_1HEIGHT;
If(BXL_SUCCESS == [pController printText:@”This is textSizeTest 1x1”])
      NSLog(@”printText Success”);

pController.textSize = BXL_TS_2WIDTH| BXL_TS_2HEIGHT;
If(BXL_SUCCESS == [pController printText:@”This is textSizeTest 2x2”])
      NSLog(@”printText Success”);

pController.textSize = BXL_TS_2WIDTH| BXL_TS_4HEIGHT;
If(BXL_SUCCESS == [pController printText:@”This is textSizeTest 2x4”])
      NSLog(@”printText Success”);

pController.textSize = BXL_TS_7WIDTH| BXL_TS_7HEIGHT;
If(BXL_SUCCESS == [pController printText:@”This is textSizeTest 7x7”])
      NSLog(@”printText Success”);
```

5-2-9 characterSet

Attribute to define the code page of printer

@property(readwrite) char   characterSet

[Discussion]
Default value is set to BXL_CS_437.

[Availability]
SDK 0.6.0 and later

[See Also]
2-1-1 Character Set

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

pController.characterSet = BXL_CS_437;
If(BXL_SUCCESS == [pController printText:@" "])
      NSLog(@"printText Success");

pController.textSize = BXL_TS_1WIDTH| BXL_TS_1HEIGHT;
If(BXL_SUCCESS == [pController printText:@"This is textSizeTest 1x1"])
      NSLog(@"printText Success");

pController.textSize = BXL_TS_2WIDTH| BXL_TS_2HEIGHT;
If(BXL_SUCCESS == [pController printText:@"This is textSizeTest 2x2"])
      NSLog(@"printText Success");

pController.textSize = BXL_TS_2WIDTH| BXL_TS_4HEIGHT;
If(BXL_SUCCESS == [pController printText:@"This is textSizeTest 2x4"])
      NSLog(@"printText Success");

pController.textSize = BXL_TS_7WIDTH| BXL_TS_7HEIGHT;
If(BXL_SUCCESS == [pController printText:@"This is textSizeTest 7x7"])
      NSLog(@"printText Success");
```

5-2-10 internationalCharacterSet

Attribute to define the code page of special character area of printer

@property(readwrite) char internationalCharacterSet

[Discussion]
Refer to 2-2 International Character Set. Default value is set to BXL_ICS_USA.

[Availability]
SDK 0.6.0 and later

[See Also]
2-1-2 internationalCharacter Set

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

pController.characterSet = BXL_CS_437;
If(BXL_SUCCESS == [pController printText:@" "])
      NSLog(@"printText Success");
```

5-2-11 textEncoding

Attribute for setting Text Encoding type.

@property(readwrite) long   textEncoding

[Discussion]
The characterSet is extended code set that can be used in one byte font. Separate text encoding may be required in case of two byte font and some character sets.

[See Also]
2-1-3 Text Encoding

[Availability]
SDK 3.0.2 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

pController.textEncoding
                                  = BXL_TEXTENCODING_KSC5601;
If(BXL_SUCCESS == [pController printText:@" "])
     NSLog(@"한국어 출력 성공");
                                                              KSC5601

pController.textEncoding
                                  = BXL_TEXTENCODING_SHIFT_JIS;
If(BXL_SUCCESS == [pController printText:@" "])
     NSLog(@"にほんご出力か 完了しました。");
                                                              Shift-JIS

pController.textEncoding
                                  = BXL_TEXTENCODING_GB18030;
If(BXL_SUCCESS == [pController printText:@" "])
     NSLog(@" 完成中國輸出");
                                                              GB18030
```

5-2-12 state

Printer status code
This value is updated when checkPrinter method of BXPrinterController is called.

```
@property(readonly) long            state
```

[Availability]
SDK 0.6.0 and later

[See Also]
2-1-12 State
5-3-17 checkPrinter

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

If (BXL_SUCCESS==
     [pController checkStatus:BXL_MASK_COVEROPEN ] )
{
     If(pController.state & BXL_STS_COVEROPEN)
       NSLog(@"printer Cover is open");
}
```

Check cover status only

```
If (BXL_SUCCESS==
     [pController checkStatus:BXL_MASK_All      ] )
{
     If(pController.state & BXL_STS_COVEROPEN)
       NSLog(@"printer Cover is open");

     If(pController.state & BXL_STS_PAPEREMPTY)
       NSLog(@"Paper is empty.");
}
```

Check all status

5-2-13 power

Power status of printer
This value is updated when checkPrinter method of BXPrinterController is called.

@property(readonly) long state

[Discussion]
BXL_PWR_HIGH is returned in case of models that do not use a battery.

[See Also]
2-1-11 Power
5-3-17 checkPrinter

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController   = [BXPrinterController getInstance];

If(pController != nil)
      NSLog (@"getInstance Fail.");

If (BXL_SUCCESS==
    [pController checkStatus:BXL_MASK_POWERSTATUS] )
{
     switch(pController.power)
     {
          case BXL_PWR_HIGH:
               NSLog(@"Power Status is High");
               break;

          case BXL_PWR_MIDDLE:
               NSLog(@"Power Status is Middle");
               break;

          case BXL_PWR_LOW:
               NSLog(@"Power Status is Low");
               break;
     }
 }
```

5-2-14 AutoConnection

Options on printer connection

```
@property(assign) int                    AutoConnection
```

[Discussion]

When this attribute is set to BXL_CONNECTIONMODE_AUTO, the *5-3-6 connect* / *5-3-7 disconnect* methods cannot be used as the connection will be automatic. Print speed may become slower if connect and disconnect process are repeated, and this function is not supported in Bluetooth mode.

[See Also]

2-1-13 Connection Control
5-3-6 connect
5-3-7 disconnect

[Availability]

SDK 2.0.2 and later

5-2-15 drawerPin

Attribute of pin of Cash Drawer

@property(assign) int drawerPin

[Discussion]
Check the attribute of pin as Cash Drawer may not work if pin attribute setting is incorrect.

[Availability]
SDK 3.0.1 and later

[See Also]
2-1-14 Drawer kick-out connector pin

5-2-16 drawerOpenLevel

Level to recognize Open of Cash Drawer

```
@property(assign) int                drawerOpenLevel
```

[Discussion]

Incorrect Open Level setting may reverse the Open/Close state of Cash Drawer. Check Open Level in this case.

[Availability]

SDK 3.0.1 and later

[See Also]

2-1-15 Drawer open level

5-3 Instance Methods

5-3-1 getInstance

This is a method to get the instance of BXPrinterController class.

[Syntax]

- (BXPrinterController)getInstance

[Return Value]

BXPrinterController class is created automatically and returned when this method is called first time, and existing BXPrinterController class is returned when this method is called again.

[Discussion]

Since BXPrinterController class uses only one instance in a process, create and use the class through this method instead of creating it directly by user.

[Availability]

SDK 0.8.0 and later

[Example]

```
BXPrinterController* pController   = [BXPrinterController   getInstance];

If(pController == nil)
        NSLog (@”getInstance Fail.”);
```

5-3-2 open

This method initializes various variables for using BXPrinterController class (memory allocation and background thread operation)

[Syntax]
- (void)open

[Discussion]
This should be called before calling main delegate of applications like (void)applicationDidBecomeActive:(UIApplication *)application.

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController == nil)
        NSLog (@"getInstance Fail.");

[pController open];
```

5-3-3 close

This method is used to release the resources allocated for using the BXPrinterController class.

[Discussion]

- This should be called before calling main delegate of applications like (void)applicationDidBecomeActive:(UIApplication *)application.
  If applications using BXPrinterController run in background mode without calling this method, use of BXPrinterController at the same time by other applications can be restricted.

[Availability]

SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController == nil)
        NSLog (@"getInstance Fail.");

[pController Open];

//Do Something

[pController close];
```

5-3-4 lookup

This method searches the printers in the same Wi-Fi network as the iPhone is connected.

[Syntax]
- (void)lookup

[Discussion]
Start/end of search and list of searched printers can be obtained from BXPrinterControlDelegate. In case of iPhone, both 3G and Wi-Fi have two network adapters and lookup method performs search operation using only Wi-Fi. It has no effect if there is no connected Wi-Fi network.

[See Also]

- 6-2-3 didFindPrinter
- 6-2-6 willLookupPrinters
- 6-2-7 didLookupPrinters
- 6-2-8 didNotLookup

[Availability]
SDK 0.6.0 and later

[Example]

```
- (IBAction) buttonUp_Lookup:(id)sender
{
        NSLog(@" Lookup / Targetting Button Up.");
        BXPrinterController* pController    = [BXPrinterController getInstance];

        If(pController != nil)
                NSLog (@"getInstance Fail.");
        [pController lookup];
}
```

```
// The following function is called when staring printer search.
- (void)willLookupPrinters:(BXPrinterController *)controller
{
        NSLog("will Lookup Printers.");
}
```

```
// The following function is called when printer search operation is completed.
- (void)didLookupPrinters:(BXPrinterController *)controller
{
        NSLog("printer Lookup Finish.");

}
```

```
// This function is called every time printer is searched.
- (void)didFindPrinter:(BXPrinterController *)controller printer:(BXPrinter*) printer
{
        NSLog("printer Find.");
}
```

```
// This function is called every time printer is searched.
- (void)didNotLookup:(BXPrinterController *)controller withError:(NSError*) error
{
        NSLog(“didNotLookup.”);
}
```

Search Fail

5-3-5 selectTarget

This method is to initialize the object specified as target.

[Syntax]

- (long)selectTarget
- (long)selectTarget : (int) modelID

[Parameters]

modelID

- Select model type.
- It is assigned automatically if not specified. Refer to 2-14 Model ID.

[Return Value]

Refer to *2-1-18 Result Code*.

[Discussion]

Target of BXPrinterController should be assigned before calling this method.

[See Also]

5-2-3 target

[Availability]

SDK 2.0.2 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

[pController Open];

// Object of searched printer can be used by using lookup function.
BXPrinter* printer = [BXPrinter new];
printer.connectionClass=BXL_CONNECTIONCLASS_BT;
printer.macAddress = @"XX:XX:XX:XX:XX:XX";

pController.target = printer;
If(BXL_SUCCESS == [pController selectTarget])
{
      NSLog(@"Select Target Success");
}
// ...
[printer release];
//…
```

5-3-6 connect

This method connects the target printer.

[Syntax]
- (BOOL)connect

[Discussion]
It has no effect if AutoConnection variable is set to BXL_CONNECTIONMODE_AUTO (default, == 0).

The target of BXPrinterController should be assigned before calling this method.

[See Also]

- *6-2-4 didConnect*
- 6-2-5 didNotConnect
- *6-2-9 didBeBrokenConnection*

[Availability]
SDK 2.0.2 and later

[Return Value]
YES if the operation is successful. The return values contain the results of the Connect operation.
Refer to the description of delegate function to check the results.

[Example]

```
- (void ) buttonUp_Disconnect:(id)sender
{
            BXPrinterController* pController   = [BXPrinterController getInstance];

            If(pController != nil)
               NSLog (@"getInstance Fail.");


            If(BXL_SUCCESS == [pController connect])
                NSLog(@"Connect Request is Success.");
}
```

```
// The following function is called when "connect" operation is successful.
- (void)didConnect:(BXPrinterController *)controller printer:(BXPrinter*) printer
{
      NSLog("Connect Complete");                                        SUCCESS
}
```

```
// The following function is called when "connect" operation fails.
- (void)didNotConnect:(BXPrinterController *)controller withError:(NSError*) error
{
      NSLog("Connect Fail");                                              FAIL
}
```

5-3-7 disconnect

This method disconnects the connection with printer.

[Syntax]
- (void)disconnect

[Discussion]
This method has no effect if AutoConnection variable is set to BXL_CONNECTIONMODE_AUTO (default, == 0).

[Availability]
SDK 2.0.2 and later

[See Also]
The following delegate function is called when disconnect operation is completed.

- *6-2-10 didDisconnect*

[Example]

```
- (void ) buttonUp_Disconnect:(id)sender
{
        // process
        [pController disconnect];
        // process
  }
```

```
// The following function is called when "Disconnect" operation is completed.
- (void)didDisconnect:(BXPrinterController *)controller printer:(BXPrinter*) printer
{
        NSLog("Disconnect Complete");
}
```

disconnect Completed

5-3-8 enableLSB

This method activates the Last Status Back function.

[Syntax]

- (long)enableLSB:(BOOL)bEnable

[Parameters]

bEnable

LSB setting.
FALSE: LSB Disable
TRUE: LSB Enable

[Return Value]

Refer to *2-1-18 Result Code*.

[See Also]

2-1-12 State
6-2-12 didUpdateStatus

[Availability]

SDK 3.0.0 and later

[Example]

```
- (void) enableLSBTest
{
       //   Enable
       If( BXL_SUCCESS == [pController enableLSB:YES];)
           NSLog(@"enableLSB:YES   Success" );

       //   disable
       If(BXL_SUCCESS == [pController enableLSB:NO])
            NSLog(@"enableLSB:NO   Success");
}
```

```
// The following function is called when state is changed.
- (void)didUpdateStatus:(BXPrinterController *)controller status:(NSNumber*)status
{
       NSLog("did Update Status");

       If(status & BXL_STS_NORMAL)
           NSLog(@"Printer Status is Normal.");
       If(status & BXL_STS_PAPEREMPTY)
           NSLog(@"Paper is empty.");
       If(status & BXL_STS_COVEROPEN)
           NSLog(@"Printer Status is Normal.");

}
```

State is changed

5-3-9 printText

This method prints text.
It has no effect if there is no connected printer.

[Syntax]

(long)printText:(NSString *)string

[Parameters]

string

Target text string, unicode data with null as terminator

[Return Value]

Refer to 2-1-18 Result Code

[Discussion]

Alignment and attributes of text should be assigned before calling this method.

[See Also]

2-1 Character Set
2-2 internationalCharacter Set
2-1-4 Barcode/Image/Text Alignment
2-1-5 Text Size
2-1-6 Text Attribute
5-2-6 alignment
5-2-8 textSize
5-2-7 attribute
5-2-9 characterSet
5-2-10 internationalCharacterSet
5-2-11 textEncoding

[Availability]

SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

// Basic printing method
If(BXL_SUCCESS == [pController printText:@"This is printText\r\n"])
      NSLog(@"printText Success");
```

```
//   Align to center, bold font
pController.alignment = BXL_ALIGNMENT_CENTER;              //   Align to center
pController.attribute = BXL_FT_BOLD;                       //   Bold font

If(BXL_SUCCESS == [pController printText:@ “Center alignment and Bold Font.”])
      NSLog(@”printText Success”);
```

```
//   Align to right, underlined font
pController.alignment = BXL_ALIGNMENT_RIGHT;               //   Align to right
pController.attribute = BXL_FT_UNDERLINE;                  //   Underlined

If(BXL_SUCCESS == [pController printText:@ “Right alignment and Underline Font.”])
       NSLog(@”printText Success”);
```

```
//   Align to left, bold and underlined, magnify the font size by 2x in height and width
pController.alignment = BXL_ALIGNMENT_LEFT;                //   Align to let
pController.attribute = BXL_FT_BOLD| BXL_FT_UNDERLINE;    //   Bold and underlined
pController.textSize = BXL_TS_1WIDTH|BXL_TS_1HEIGHT;      //   2X in width and height

If(BXL_SUCCESS == [pController printText:@ “Left alignment and BOLD, Underline Font and Big Font.”])
       NSLog(@”printText Success”);
```

5-3-10 printBox

This method prints box-shaped text.
It has no effect if there is no connected printer.

[Syntax]

(long)printText:(int)width height: (int)height;

[Parameters]

int

Width of the box
1 == Width corresponding to one alphabet letter

int

Height of the box
1 == Height corresponding to one alphabet letter

[Return Value]

Refer to 2-1-18 Result Code

[Discussion]

Text alignment and attributes should be assigned before calling this method.

[See Also]

- *2-1-4 Barcode/Image/Text Alignment*
- *2-1-5 Text Size*
- *2-1-6 Text Attribute*
- *5-2-6 alignment*
- *5-2-8 textSize*
- *5-2-7 attribute*

[Availability]

SDK 3.0.3 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

If(BXL_SUCCESS == [pController printBox:43 height:3])
       NSLog(@”printBox Suceess.”);
```

5-3-11 lineFeed

This method performs line feed.

[Syntax]
- (long)linefeed:(int)lines

[Parameters]
lines
Number of lines to feed

[Return Value]
Refer to *2-1-18 Result Code*

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

If(BXL_SUCCESS == [pController lineFeed:3])
      NSLog(@"linefeed Success.");
```

5-3-12 nextPrintPos

This method feeds the paper to the starting point of the next label paper.

[Syntax]
- (long)nextPrintPos

[Return Value]
Refer to *2-1-18 Result Code*.

[Discussion]
This method is effective only in the label mode.

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

If(BXL_SUCCESS == [pController nextPrintPos])
      NSLog(@”nextPrintPos Success.”);
```

5-3-13 printBarcode

This method prints one-dimensional and two-dimensional barcode.

[Syntax]

```
- (long)printBarcode:(char *)data
          symbology:(long)symbology
        width:(long)width
        height:(long)height
        alignment:(long)alignment
        textPosition:(long)textPosition
```

[Parameters]

data

ANSI code data with null terminator to define barcode data for printing

symbology

Barcode type

Refer *2-1-8 Barcode Symbology*

height

Height of barcode in Dot unit with the range of 1~255

It has no effect in two-dimensional barcode.

width

Width of barcode with 2~7 steps in width

If barcode print area exceeds the size of paper, printing may stop or only part of the barcode is printed.

This setting has no effect to two-dimensional barcode.

alignment

Barcode alignment setting

Refer to *2-1-4 Barcode/Text/Image Alignment*

textPosition

Barcode text position setting

Refer to *2-1-7 Barcode Text Position*

[Return Value]

Refer to *2-1-18 Result Code*

[See Also]

2-1-4 Barcode/Text/Image Alignment

2-1-7 Barcode Text Position

2-1-8 Barcode Symbology

[Availability]

SDK 0.6.0 and later

[Example]

```
long lResult = BXL_SUCCESS;
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

// Print EAB13 barcode, one of 1D barcode type
lResult = [pController printBarcode:"123456789012"
                            symbology: BXL_BCS_EAN13
                                       width: 3
                                       height:100];


If(BXL_SUCCESS == lResult)
      NSLog(@"printBarcode Success.");
```

```
// Print Code128 barcode, one of 1D barcode type
If(BXL_SUCCESS == [pController printBarcode:3])
      NSLog(@"linefeed Success.");


// Print QR barcode, one of 1D barcode type
If(BXL_SUCCESS == [pController printBarcode:3])
      NSLog(@"linefeed Success.");
```

5-3-14 printBitmap

This method prints image file.

[Syntax]

```
- (long)printBitmap:(NSString *)path
              width:(long)width
               level:(long)level
```

[Parameters]

path

Path of image file

width

Width of image file to convert and print, with the range of 0 ~ maximum width
If the value is smaller than 0, image will be converted with the following conditions.
Refer to *2-1-9 Image Width*

level

Image color level and diffusion option

Value	Description
0 ~ 100	Color level value
If fourth digit is 1	Enable diffusion processing
If fifth digit is 1	Print image using ESC * command

[See Also]

2-1-4 Barcode/Text/Image Alignment
7-1-1 About Error Diffusion

[Return Value]

Refer to *2-1-18 Result Code*

[Availability]

SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
       NSLog (@"getInstance Fail.");

NSString *path = [[NSBundle mainBundle] pathForResource:@"Sample" ofType:@"png"]];
If (BXL_SUCCESS == [pController printBitmap:path
                                        width:BXL_WIDTH_FULL
                                         level:1050 ] )
      NSLog(@"printBitmap   Success.");
```

5-3-15 printBitmapWithImage

This method prints image file.

[Syntax]

```
- (long)printBitmapWithImage:(UIImage *) image
                               width:(long)width
                                level:(long)level
```

[Parameters]

path

Path of image file

width

Width of image file to convert and print, with the range of 0 ~ maximum width
If the value is smaller than 0, image will be converted with the following conditions.
Refer to *2-1-9 Image Width*

level

Image color level and diffusion option

Value	Description
0 ~ 100	Color level value
If fourth digit is 1	Enable diffusion processing
If fifth digit is 1	Print image using ESC * command

[See Also]

2-1-4 Barcode/Text/Image Alignment
7-1-1 About Error Diffusion

[Return Value]

Refer to *2-1-18 Result Code*

[Availability]

SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

UIImage* image    = [UIImage imageNamed:@"sample.png"];
If (BXL_SUCCESS == [pController printBitmapWithImage:image
                                       width:BXL_WIDTH_FULL
                                        level:1050 ] )
      NSLog(@"printBitmap   Success.");
```

5-3-16 cutPaper

This method cuts the print paper after printing.

[Syntax]
- (long) cutPaper;

[Discussion]
Paper cutting position might be located in such a way that printed material is partially cut due to the difference in printer mechanism. In this case, adjust the cutting position using the line feed function.

[See Also]
2-1-4 Barcode/Text/Image Alignment
7-1-1 About Error Diffusion

[Return Value]
Refer to *2-1-18 Result Code*

[Example]

```
BXPrinterController* pController   = [BXPrinterController getInstance];

If(pController != nil)
      NSLog (@"getInstance Fail.");

If (BXL_SUCCESS == [pController printText:@" printText\r\n"] )
     NSLog(@"printText   Success.");

If (BXL_SUCCESS == [pController lineFeed:3] )
     NSLog(@"lineFeed   Success.");

If (BXL_SUCCESS == [pController cutPaper] )
     NSLog(@"cutPaper   Success.");
```

5-3-17 checkPrinter

This method checks the printer status and returns the status in status attributes.

[Syntax]
- (long)checkPrinter : (int) mask

[Return Value]
Refer to *2-1-18 Result Code*

[Availability]
SDK 0.6.0 and later

[See Also]
2-1-4 Barcode/Text/Image Alignment
2-1-10 Status check Mask

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");
```

```
If (BXL_SUCCESS==
     [pController checkStatus:BXL_MASK_COVEROPEN ] )
{
     If(pController.state & BXL_STS_COVEROPEN)
       NSLog(@"printer Cover is open");
}
```

Check Cover Status Only

```
If (BXL_SUCCESS==
     [pController checkStatus:BXL_MASK_COVERSTATUS
                                          | BXL_MASK_PAPERSTATUS ] )
{
     If(pController.state & BXL_STS_COVEROPEN)
       NSLog(@"printer Cover is open");

     If(pController.state & BXL_STS_PAPEREMPTY)
       NSLog(@"Paper is empty.");
}
```

Check Cover/Paper Status

5-3-18 msrReadReady

This method sets the printer to MSR Ready state. Print operation cannot be performed in the Ready state.
Supported device: POS printers do not support this function.

[Syntax]
- (long)msrReadReady

[Return Value]
Refer to *2-1-18 Result Code*

[Discussion]
The msrArrived method is called when MSR data becomes available.

[See Also]
6-2-11 msrArrived
5-3-19 msrReadCancel
5-3-20 msrReadTrack
5-3-21 msrGetTrack
5-3-22 msrReadFullTrack

[Availability]
SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

If (BXL_SUCCESS == [pController msrReadReady] )
      NSLog(@"msrReadReady     Success.");

// The following function is called when MSR data becomes available.
- (void)msrArrived:(BXPrinterController *)controller
                         track:(NSNumber *)track
{
        NSLog(@"MSR Data Arrived.");
        NSData* data = nil;
        if( [track intValue] & BXL_MSG_TRACK1 ) {
               If(BXL_SUCCESS ==    [controller msrGetTrack:BXL_MSG_TRACK1
                                                        response: &data] ) {
                    NSLog(@"Track 1 :    %s", data.bytes);
             }
        }

        if( [track intValue] & BXL_MSG_TRACK2 ) {
               If(BXL_SUCCESS ==    [controller msrGetTrack:BXL_MSG_TRACK2
                                                        response: &data] ) {
                    NSLog(@"Track 2 :    %s", data.bytes);
             }
        }

        if( [track intValue] & BXL_MSG_TRACK3 ) {
               If(BXL_SUCCESS ==    [controller msrGetTrack:BXL_MSG_TRACK3
                                                        response: &data] ) {
                    NSLog(@"Track 3 :    %s", data.bytes);
             }
        }
}
```

5-3-19 msrReadCancel

This method cancels the MSR Ready state of printer.
Supported device: POS printers do not support this function.

[Syntax]
- (long)msrReadCancel

[Return Value]
Refer to *2-1-18 Result Code*

[See Also]
6-2-11 msrArrived
5-3-18 msrReadReady
5-3-20 msrReadTrack
5-3-21 msrGetTrack
5-3-22 msrReadFullTrack

[Availability]
SDK 0.6.0 and later
[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

If (BXL_SUCCESS == [pController msrReadCancel] )
      NSLog(@"msrReadCancel Success.");
```

5-3-20 msrReadTrack

This method reads MSR data. If the mode is MSR read mode and BXLMSR_DATAEMPTY is returned, card is not read from MSR yet. Read mode can be cancelled by scanning the card in MSR or using msrReadCancel method.
Supported Device: POS printers are not supported.

[Syntax]

```
- (long)msrReadTrack:(NSData **)data1
                    data2:(NSData **)data2
                    data3:(NSData **)data3
```

[Parameters]

data1

MSR Data Track 1 is obtained and saved in data1.

data2

MSR Data Track 2 is obtained and saved in data2.

data3

MSR Data Track 3 is obtained and saved in data3.

[Return Value]

Refer to *2-1-18 Result Code*.

[Discussion]

All of data1, data2, and data3 are returned through unallocated NSData *data, and NSData object is internally allocated in this method. Allocated data1, data2, and data3 are released automatically and they do not have to be released explicitly by users.

[See Also]

6-2-11 msrArrived
5-3-18 msrReadReady
5-3-19 msrReadCancel
5-3-21 msrGetTrack
5-3-22 msrReadFullTrack

[Availability]

SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

If (BXL_SUCCESS == [pController msrReadReady] )
      NSLog(@”msrReadReady      Success.”);

// The following function is called when MSR Data becomes available.
- (void)msrArrived:(BXPrinterController *)controller
                    track:(NSNumber *)track
{
        NSLog(@”MSR Data Arrived.”);
        NSData *data1 = nil;
        NSData *data2 = nil;
        NSData *data3 = nil;

        if(BXL_SUCCESS == [pController msrReadTrack:&data1
                                                     data2:&data2
                                                     data3:&data3])
        {
              NSLog(@”track 1 : %s”, data1.bytes);
              NSLog(@”track 2 : %s”, data2.bytes);
              NSLog(@”track 3 : %s”, data3.bytes);
        }
}
```

5-3-21 msrGetTrack

This method reads MSR data. If the mode is MSR read mode and BXLMSR_DATAEMPTY is returned, card is not read from MSR yet. Read mode can be cancelled by scanning the card in MSR or using msrReadCancel method.
Supported Device: POS printers are not supported.

[Syntax]
- (long)msrGetTrack:(int)track response:(NSData **)response

[Parameters]
track
MSR Data Track Number 1 ~ 3
response
Value of MSR Data Track

[Return Value]
Refer to *2-1-18 Result Code*.

[Discussion]
The responses are returned through unallocated NSData *data, and NSData object is internally allocated in this method. Allocated response object is automatically released, and they do not have to be released explicitly by users.

[See Also]
6-2-11 msrArrived
5-3-18 msrReadReady
5-3-19 msrReadCancel
5-3-20 msrReadTrack
5-3-22 msrReadFullTrack

[Availability]
SDK 0.9.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

NSData* data = nil;

If(BXL_SUCCESS ==  [controller msrGetTrack:BXL_MSG_TRACK1
                                        response: &data] )
{
      NSLog(@"Track 1 :   %s", data.bytes);                    Track 1
}

If(BXL_SUCCESS ==  [controller msrGetTrack:BXL_MSG_TRACK2
                                        response: &data] )
{
      NSLog(@"Track 2 :   %s", data.bytes);                    Track 2
}

If(BXL_SUCCESS ==  [controller msrGetTrack:BXL_MSG_TRACK3
                                        response: &data] )
{
      NSLog(@"Track 3 :   %s", data.bytes);                    Track 3
}
```

5-3-22 msrReadFullTrack

This method reads all MSR data. If the mode is MSR read mode and BXLMSR_DATAEMPTY is returned, card is not read from MSR yet. Read mode can be cancelled by scanning the card in MSR or using msrReadCancel method.
Supported Device: POS printers are not supported.

[Syntax]
- (long)msrReadFullTrack:(NSData **)response

[Return Value]
Refer to *2-1-18 Result Code*.

[Parameters]
response
Value of MSR Data Track

[Discussion]
The responses are returned through unallocated NSData *data, and NSData object is internally allocated in this method. Allocated response object is automatically released, and they do not have to be released explicitly by users.

[See Also]
6-2-11 msrArrived
5-3-18 msrReadReady
5-3-19 msrReadCancel
5-3-20 msrReadTrack
5-3-21 msrGetTrack

[Availability]
SDK 0.9.0 and later

[Example]

```
BXPrinterController* pController   = [BXPrinterController getInstance];
If(pController != nil)
        NSLog (@"getInstance Fail.");
If (BXL_SUCCESS == [pController msrReadReady] )
      NSLog(@"msrReadReady     Success.");

// The following function is called when MSR Data becomes available.
- (void)msrArrived:(BXPrinterController *)controller
                          track:(NSNumber *)track
{
        NSLog(@"MSR Data Arrived.");
        NSData *data = nil;

        if(BXL_SUCCESS == [pController msrReadFullTrack:&data])
        {
              NSLog(@"full : %s", data.bytes);
        }
}
```

5-3-23 directIO

This method sends or reads user-defined data.

[Syntax]

```
- (long)directIO:(NSData *)request
         response:(NSData **)response
```

[Return Value]

Refer to *2-1-18 Result Code*.

[Parameters]

request

It contains the ANSI CODE data to send to printer.

response

It contains the response from printer.

[Availability]

SDK 0.6.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];
If(pController != nil)
        NSLog (@”getInstance Fail.”);
If (BXL_SUCCESS == [pController msrReadReady] )
      NSLog(@”msrReadReady      Success.”);
```

```
BYTE test1[] = {0x30, 0x31, 0x32, 0x0d, 0x0a};
if(BXL_SUCCESS ==
  [pController directIO:[NSData dataWithBytes:test
                                              length:sizeof(test1)]
             requiredSize:0
                response:nil])
{
      NSLog(@””directIO Success. ”);
}
```

Transmission Only

```
BYTE test2[] = {0x10, 0x04, 0x02};
NSData* dataResponse = nil;
if(BXL_SUCCESS ==
  [pController directIO:[NSData dataWithBytes:test
                                              length:sizeof(test2)]
             requiredSize:1
           response:&dataResponse])
{
      NSLog(@””directIO Success. Response : %d”, dataRespons.bytes);
}
```

Transmission of Data with Response

5-3-24 icON

Apply the power to smart card reader of printer.

[Syntax]
- (long)icON:(NSData **)response

[Parameters]
response
It contains ATR(Answer to Reset) value.

[Return Value]
Refer to *2-1-18 Result Code*.

[Discussion]
The response is released automatically inside this method, and they do not have to be released explicitly by users.

[Availability]
SDK 0.6.0 and later

5-3-25 icOFF

This method turns off the power to the smart card reader of printer.
Supported Device: POS printers are not supported.

[Syntax]
- (long)icOFF

[Return Value]
Refer to *2-1-18 Result Code*.

[Availability]
SDK 0.6.0 and later

5-3-26 icApdu

This method sends APDU command and reads the response. It works correctly only when power is applied to printer smart card.
Supported Device: POS printers are not supported.

[Syntax]

```
- (long)icApdu:(NSData **)request
        response:(NSData **)response
```

[Parameters]

request

It contains APDU command data to send to printer and data is ANSI CODE data.

response

It contains APDU response from the printer.

[Return Value]

Refer to *2-1-18 Result Code*.

[Availability]

SDK 0.6.0 and later

5-3-27 icGetStatus

This method reads the status of card inserted in the smart card reader of printer.
Supported Device: POS printers are not supported.

[Syntax]

- (long)icGetStatus:(NSData **)response

[Parameters]

response

It contains the card status values.

[Return Value]

Refer to *2-1-18 Result Code*.

[Availability]

SDK 0.6.0 and later

5-3-28 nvImageList

This method obtains the list of address of images stored in NV area.

[Syntax]
- (long)nvImageList:(NSArray **)images

[Parameters]
images

This parameter provides the address list.
Each address is provided as NSNumber*. This object is automatically released and they do not have to be released explicitly by users.

[Return Value]
Refer to *2-1-18 Result Code*.

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];
If(pController != nil)
        NSLog (@"getInstance Fail.");

NSArray          *images;

If(BXL_SUCCESS != [pController nvImageList:&images] )
      NSLog(@"get List is Fail.");

for( NSNumber *n in images)
{
        NSLog(@"%d", [NSNumber intValue]);
}
```

[Availability]
SDK 1.0.0 and later

5-3-29 downloadNVImage (Diffusion)

This method downloads the image data corresponding to the specified address in NV area.

[Syntax]

```
- (long)downloadNVImage:(int)address
                        withImage:(UIImage *)image
                        width:(long)width
                        level:(long)level
```

[Parameters]

address

It contains image address value ranging from 0 ~ 99. Existing image stored in the corresponding address is replaced by the new image.

images

It contains the target image object to be downloaded.

width

It is the width of target image printing. The image is resized to the maximum width when it is set to BXL_WIDTH_FULL.

Images that are narrower than the specified width are enlarged, and the images that are wider than the specified width are reduced.

level

It determines image color level and diffusion processing option.

Value	Description
0 ~ 100	Color Level Value
If fourth digit is 1	Enable diffusion processing
If fifth digit is 1	Print image using ESC * command

[Return Value]

Refer to *2-1-18 Result Code*.

[Discussion]

Size of the images with a width larger than the maximum width of the printer is adjusted automatically.

[See Also]

7-1-1 About Error Diffusion

[Availability]

SDK 1.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

UIImage* image    = [UIImage imageNamed:@"sample.png"];
If (BXL_SUCCESS == [pController downloadNVImage: 0
                                        withImage:image
                                            width:BXL_WIDTH_FULL
                                             level:1050 ] )
      NSLog(@"downloadNVImage Success.");
```

5-3-30 downloadNVImage (Normal)

This method downloads the image data corresponding to the specified address in NV area.

[Syntax]

```
- (long)downloadNVImage:(int)address
               withImage:(UIImage *)image
```

[Parameters]

address

It contains image address value ranging 0 ~ 99. Existing image stored in the corresponding address is replaced by the new image.

images

It contains the target image object to be downloaded.

[Return Value]

Refer to *2-1-18 Result Code*.

[Discussion]

Size of the images with a width larger than the maximum width of the printer is adjusted automatically.

[See Also]

7-1-1 About Error Diffusion

[Availability]

SDK 1.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

UIImage* image    = [UIImage imageNamed:@"sample.png"];
If (BXL_SUCCESS == [pController downloadNVImage: 0
                                        withImage:image] )
      NSLog(@"downloadNVImage Success.");
```

5-3-31 printNVImage

This method prints the image stored in the specified address of NV area.

[Syntax]
- (long)printNVImage:(int)address

[Parameters]
address

Useable image address ranging 0 ~ 99

[Return Value]
Refer to *2-1-18 Result Code*.

[Discussion]
Image cannot be printed if it does not exist in the corresponding address.

[Availability]
SDK 1.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

UIImage* image    = [UIImage imageNamed:@"sample.png"];
If (BXL_SUCCESS == [pController printNVImage:0] )
      NSLog(@"printNVImage Success.");
```

5-3-32 removeNVImage

This method removes the image stored in the specified address in NV area.

[Syntax]
- (long)removeNVImage:(int)address

[Parameters]
address
Useable image address ranging 0 ~ 99

[Return Value]
Refer to *2-1-18 Result Code*.

[Discussion]
No action is taken if image does not exist in the corresponding address.

[Availability]
SDK 1.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

UIImage* image    = [UIImage imageNamed:@"sample.png"];
If (BXL_SUCCESS == [pController removeNVImage:0] )
      NSLog(@"removeNVImage Success.");
```

5-3-33 removeAllNVImages

This method removes all images stored in the NV area.

[Syntax]
- (long)removeAllNVImages

[Return Value]
Refer to *2-1-18 Result Code*.

[Availability]
SDK 1.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

UIImage* image    = [UIImage imageNamed:@“sample.png“];
If (BXL_SUCCESS == [pController removeAllNVImages] )
       NSLog(@”removeAllNVImages Success.”);
```

5-3-34 openDrawer

This method opens Cash Drawer.

[Syntax]
- (long)openDrawer

[Return Value]
Refer to *2-1-18 Result Code*.

[Availability]
SDK 3.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");


If(BXL_SUCCESS== [pController openDrawer])
     NSLog(@" OpenDrawer Success.");

else
     NSLog(@" OpenDrawer Fail.");
```

5-3-35 isSupport_MSR

This method checks the support of MSR-related functions.

[Syntax]
- (BOOL)isSupport_MSR

[Return Value]
This method returns TRUE if MSR-related functions are supported.

[Availability]
SDK 3.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

BOOL isSupportMSR= [pController isSupport_MSR];

If(isSupportMSR)
     NSLog(@" MSR Functions is Supported.");

else
     NSLog(@" MSR Functions is not Supported.");
```

5-3-36 isSupport_IC

This method checks the support of IC-related functions.

[Syntax]
- (BOOL)isSupport_IC

[Return Value]
This method returns TRUE if IC-related functions are supported.

[Availability]
SDK 3.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");

BOOL isSupportIC= [pController isSupport_IC];

If(isSupportIC)
    NSLog(@" IC Functions is Supported.");

else
    NSLog(@" IC Functions is not Supported.");
```

5-3-37 isSupport_Config

This method checks the support of Config-related functions.

[Syntax]
- (BOOL)isSupport_Config

[Return Value]
This method returns TRUE if Config-related functions are supported.

[Availability]
SDK 3.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@”getInstance Fail.”);

BOOL isSupportConfig= [pController isSupport_Config];

If(isSupportConfig)
     NSLog(@” Config Functions is Supported.”);

else
     NSLog(@” Config Functions is not Supported.”);
```

5-3-38 isSupport_CashDrawer

This method checks the support of CashDrawer-related functions.

[Syntax]
- (BOOL)isSupport_CashDrawer

[Return Value]
This method returns TRUE if CashDrawer-related functions are supported.

[Availability]
SDK 3.0.0 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");


BOOL            isSupportCashDrawer=            [pController
isSupport_CashDrawer];


If(isSupportCashDrawer)
     NSLog(@"CashDrawerFunctions is Supported.");

else
     NSLog(@" CashDrawerFunctions is not Supported.");
```

5-3-39 isSupport_LSB

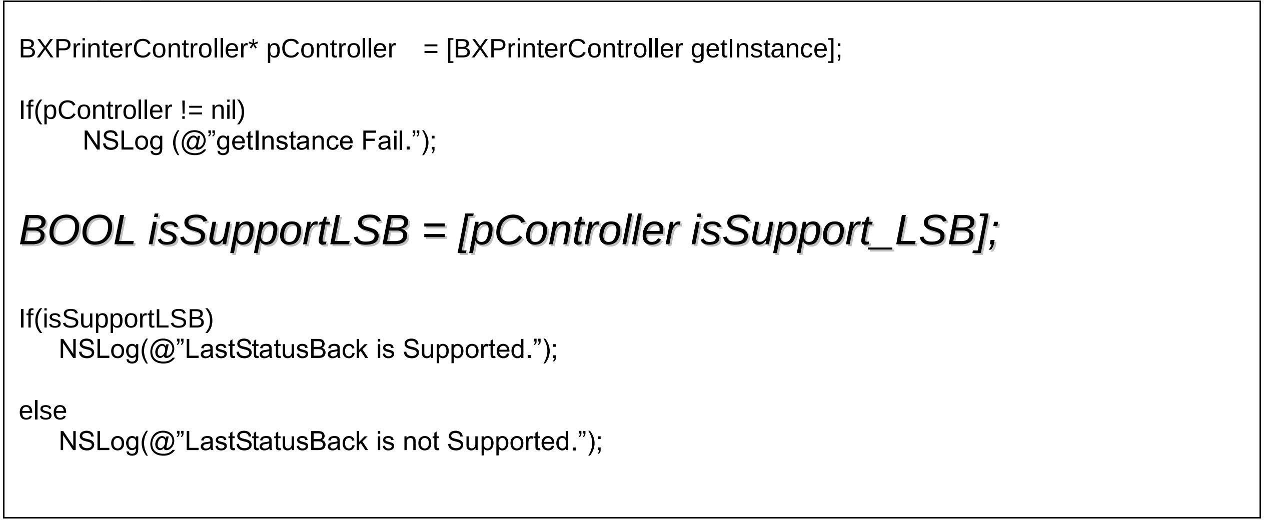
This method checks the support of LSB-related functions.

[Syntax]
- (BOOL)isSupport_MSR

[Return Value]
This method returns TRUE if LSB-related functions are supported.

[Availability]
SDK 3.0.0 and later

[Example]



```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");


BOOL isSupportLSB = [pController isSupport_LSB];


If(isSupportLSB)
     NSLog(@"LastStatusBack is Supported.");

else
     NSLog(@"LastStatusBack is not Supported.");
```

5-3-40 getBarcodeSupportTable

This method checks the support of Barcode.

[Syntax]
- (NSMutableArray*)getBarcodeSupportTable

[Return Value]
The method returns NSMutableArray that contains BXBarcode.

[Availability]
SDK 3.0.3 and later

[Example]

```
BXPrinterController* pController    = [BXPrinterController getInstance];

If(pController != nil)
        NSLog (@"getInstance Fail.");


NSMutableArray *tbl = [printerController getBarcode
SupportTable];


If( nil == tbl)
       NSLog(@"getBarcodeSupportTable    Fail.");
for(BXBarcode *p in tbl)
{
       NSLog("barcode number: %d , p.barNumber");
       NSLog("barcode name    : %@", priner.name);
       NSLog("is Support    : %d", p.support);
}
```

6. BXPrinterControllerDelegate Protocol Reference

Inherits from	NSObject
Confirms to	
Framework	BXPrinter.a
[Availability]	iOS 4.3 and later
Declared	BXPrinteControlDelegater.h

6-1 Overview

This protocol is for handling events occurring inside the BXPrinterController class.

6-2 Instance Methods

6-2-1 didStart

This method is called when the use of class is started using the open method of BXPrinterControll.

It is called after connection with printer is established.

[Syntax]

- (void) didStart

[Parameters]

controller

It is a BXPrinterController object for handling events.

[Discussion]

It can be used to indicate the start of use of printer class to users.

[Availability]

SDK 0.6.0 and later

6-2-2 didStop

This method is called when the use of class is stopped using the close method of BXPrinterControll.

[Syntax]
- (void) didStop

[Parameters]
controller
It is a BXPrinterController object for handling events.

[Discussion]
It can be used to indicate the end of use of printer class to users.

[Availability]
SDK 0.6.0 and later

6-2-3 didFindPrinter

This method is called for each printer searched and found in the same network.

[Syntax]
- (void)didFindPrinter:(BXPrinterController *)controller
        printer:(BXPrinter *)printer

[Parameters]
controller
    It is a BXPrinterController object for handling events.
printer
    Information of searched printer

[Availability]
SDK 0.6.0 and late

[Example]

```
// The following method is called when “connect” operation is successful.
- (void)didFindPrinter:(BXPrinterController *)controller
                  printer:(BXPrinter*) printer
{
      NSLog(“did Find Printer, ”);
      NSLog(“printer Name : %@”, priner.name);
      NSLog(“printer Address : %@”, priner.address);
      NSLog(“printer MacAddress : %@”, priner.macAddress);
}
```

6-2-4 didConnect

This method is called after connection with printer is completed.

[Syntax]

```
- (void)didConnect:(BXPrinterController *)controller
                      printer:(BXPrinter*) printer
```

[Parameters]

controller

It is a BXPrinterController object for handling events.

printer

It is a BXPrinter object for handling events.

[Discussion]

It can be used to remove the status shown to users before connecting with printer.
Refer to the target property of BXPrinterController if information of target connection printer is required.

[Availability]

SDK 2.0.2 and later

[See Also]

5-3-6 connect

[Availability]

SDK 2.0.2 and later

[Return Value]

YES if operation is successful.
It contains the result to the Connect request.
Refer to the description of delegate function to check the results of connection.

[Example]

```
// The following function is called when "connect" is successful.
- (void)didConnect:(BXPrinterController *)controller
                      printer:(BXPrinter*) printer
{
    NSLog("Connect Complete");
}
```

6-2-5 didNotConnect

This function is called when connection to printer fails.

[Syntax]

```
- (void)didNotConnect:(BXPrinterController *)controller
      withError:(NSError *)error
```

[Parameters]

controller

BXPrinterController object for handling events

error

Information about the cause of failure

[Discussion]

This method cannot be used if there is an error during connection process.

[Availability]

SDK 0.6.0 and later

[Example]

```
// The following function is called when “Disconnect” is completed.
- (void)didNotConnect::(BXPrinterController *)controller withError:(NSError*) error
{
     NSLog(“cannot connect to the printer.”);
}
```

6-2-6 willLookupPrinters

This method is called before searching printers.

[Syntax]
- (void)willLookupPrinters:(BXPrinterController *)controller

[Parameters]
controller
BXPrinterController object for handling events.

[Discussion]
It can be used to provide separate indication to users during printer search process.

[Availability]
SDK 0.6.0 and later

[Example]

```
// The following function is called when “Disconnect” is completed.
- (void)willLookupPrinters::(BXPrinterController *)controller
{
    NSLog(“the lookup did start. ”);
}
```

6-2-7 didLookupPrinters

This function is called when printer search process is completed.

[Syntax]
- (void)didLookupPrinters:(BXPrinterController *)controller

[Parameters]
controller
BXPrinterController object for handling events

[Discussion]
It can be used to provide separate indication to users during printer search process.

[Availability]
SDK 0.6.0 and later

[Example]

```
// The following function is called when “Disconnect’ is completed.
- (void)didNotLookup::(BXPrinterController *)controller withError:(NSError*) error
{
    NSLog(“printer lookup fail.”);
}
```

6-2-8 didNotLookup

This method is called when printer search operation fails.

[Syntax]

- (void)didNotLookup:(BXPrinterController *)controller
withError:(NSError *)error

[Parameters]

controller

BXPrinterController object for handling events

error

Information about cause of failure

[Availability]

SDK 0.6.0 and later

[Example]

```
// The following function is called when “Disconnect’ is completed.
- (void)didNotLookup::(BXPrinterController *)controller withError:(NSError*) error
{
     NSLog(“printer lookup fail.”);
}
```

6-2-9 didBeBrokenConnection

This method is called when the printer gets disconnected.

[Syntax]

```
- (void)didBeBrokenConnection:(BXPrinterController *)controller
                          withError:(NSError *)error
```

[Parameters]

controller

BXPrinterController object for handling events

error

Information about cause of failure

[Discussion]

This function is not called when the printer is disconnected by explicitly calling the close method of BXPrinterController by users. It is called only when the printer gets disconnected by external failure rather than user command.
Refer to the target property of BXPrinterController if the information of target printer is required.

[Availability]

SDK 0.6.0 and later

[Example]

```
// The following function is called when “Disconnect’ is completed.
- (void)didBeBrokenConnection::(BXPrinterController *)controller withError:(NSError*) error
{
    NSLog(“connection is broken.”);
}
```

6-2-10 didDisconnect

This method is called when the process to disconnect the printer is completed.

[Syntax]

```
- (void)didDisconnection:(BXPrinterController *)controller
                        printer:(BXPrinter*) printer
```

[Parameters]

controller

BXPrinterController object for handling events

printer

BXPrinter object for handling events

[See Also]

5-3-7 disconnect

[Availability]

SDK 0.6.0 and later

[Example]

```
// The following function is called when “Disconnect’ is completed.
- (void)didDisconnect:(BXPrinterController *)controller printer:(BXPrinter*) printer
{
     NSLog(“Disconnect Complete”);
}
```

6-2-11 msrArrived

This method is called when MSR data arrives correctly in the MSR read mode.

[Syntax]

- (void)msrArrived:(BXPrinterController *)controller
  track:(NSNumber *)track

[Parameters]

controller

BXPrinterController object for handling events

track

No. 1 ~ 3 of the track corresponding to MSR data

[Discussion]

After calling this method, MSR data can be obtained using the getTrack: method of BXPrinterController.

[See Also]

6-2-11 msrArrived
5-3-18 msrReadReady
5-3-19 msrReadCancel
5-3-20 msrReadTrack
5-3-21 msrGetTrack
5-3-22 msrReadFullTrack

[Availability]

SDK 0.6.0 and later

[Example]

```
- (void)msrArrived:(BXPrinterController *)controller
                   track:(NSNumber *)track
{
      NSLog(@"MSR Data Arrived.");
      NSData *data1 = nil;
      NSData *data2 = nil;
      NSData *data3 = nil;

      if(BXL_SUCCESS == [pController msrReadTrack:&data1
                                                  data2:&data2
                                                  data3:&data3])
      {
            NSLog(@"track 1 : %s", data1.bytes);
            NSLog(@"track 2 : %s", data2.bytes);
            NSLog(@"track 3 : %s", data3.bytes);
      }
}
```

6-2-12 didUpdateStatus

This method is called when printer status is changed.

[Syntax]

```
- (void)didUpdateStatus:(BXPrinterController *)controller
                Status(NSNumber*) status
```

[Parameters]

controller
BXPrinterController object for handling events
status
Current status of printer

[See Also]

2-1-12 State
5-3-8 enableLSB

[Availability]

SDK 3.0.0 and later

[Example]

```
// After printer connection is completed
BXPrinterController *    pController = [BXPrinterController getInstance];
[pController enableLSB:YES];

// After that, the following delegate function is called when status is changed.
- (void)didUpdateStatus:(BXPrinterController *)controller
                                status:(NSNumber*)status
{
      NSLog("did Update Status");

      If(status & BXL_STS_NORMAL)
          NSLog(@"Printer Status is Normal.");

      If(status & BXL_STS_PAPEREMPTY)
          NSLog(@"Paper is empty.");

      If(status & BXL_STS_COVEROPEN)
          NSLog(@"Printer Status is Normal.");
}
```

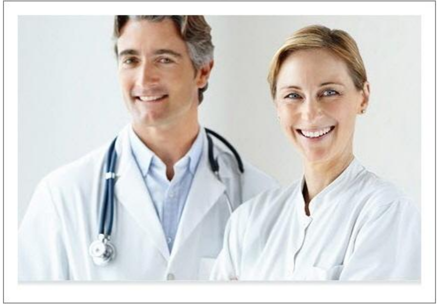
7. Appendix

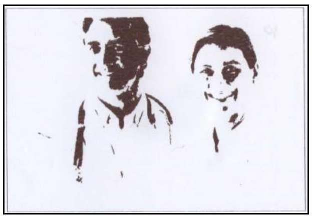
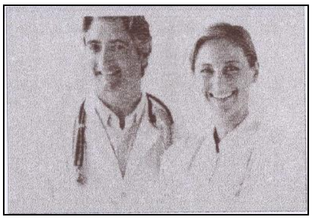
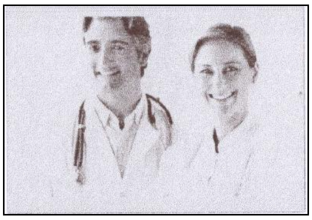
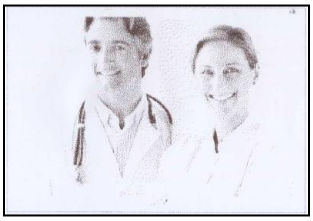
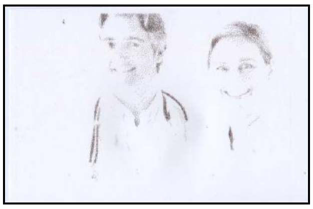
7-1-1 Error Diffusion

It is a technology to represent color image or black and white image with fewer bits or pixels. It has superior capability to preserve sharp images although obvious side effects like snake patterns can be seen in some specific types of images.
One of the disadvantages is long processing time, and this is because of the number of computations required to measure errors and distribute them to neighboring pixels.

It is recommended to use the error diffusion algorithm with this SDK.

[Original Image]



Application of Diffusion Algorithm	Result	
X	 [Level: 50]	
O	 [Level: 1020]	 [Level: 1035]
O	 [Level: 1050]	 [Level: 1070]

7-1-2 Printer Model Classification

Model Name	Supported Interface	Printer Type
SRP-275	E	POS Printer
SRP-275II	E	POS Printer
SRP-350plus	E	POS Printer
SRP-352plus	E	POS Printer
SRP-350plusII	E	POS Printer
SRP-352plusII	E	POS Printer
SRP-350II	E	POS Printer
SRP-350IIOBE	E / B	POS Printer
SRP-F310	E / W	POS Printer
SRP-F312	E / W	POS Printer
SRP-350III	E / W	POS Printer
SRP-352III	E / W	POS Printer
SRP-350plusIII	E / W / B	POS Printer
SRP-352plusIII	E / W / B	POS Printer
SRP-340	E	POS Printer
SPP-R200II	W / B	Mobile Printer
SPP-R210	W / B	Mobile Printer
SPP-R300	W / B	Mobile Printer
SPP-R400	W / B	Mobile Printer

- E : Ethernet
- W : WiFi(Wireless LAN)
- B : Bluetooth(MFi)