

PDF Signer

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

pdfsigner.signer.AESCipher	??
EventObject	
pdfsigner.usb.USBEvent	??
pdfsigner.signer.HashGenerator	??
JFrame	
pdfsigner.gui.GUI	??
pdfsigner.Main	??
pdfsigner.gui.GUI.MenuBarIndices	??
pdfsigner.signer.PDFSigner	??
Runnable	
pdfsigner.usb.USBDetector	??
pdfsigner.usb.WindowsUSBDetector	??
pdfsigner.usb.USBEventHandler	??
pdfsigner.usb.USBEventListener	??

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

pdfsigner.signer.AESCipher	??
pdfsigner.gui.GUI	??
pdfsigner.signer.HashGenerator	??
pdfsigner.Main	??
pdfsigner.gui.GUI.MenuBarIndices	??
pdfsigner.signer.PDFSigner	??
pdfsigner.usb.USBDetector	??
pdfsigner.usb.USBEvent	??
pdfsigner.usb.USBEventHandler	??
pdfsigner.usb.USBEventListener	??
pdfsigner.usb.WindowsUSBDetector	??

Chapter 3

Class Documentation

3.1 pdfsigner.signer.AESCipher Class Reference

Public Member Functions

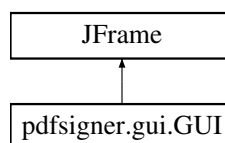
- **AESCipher** (Cipher cipher)
- byte[] **encrypt** (Key key, byte[] message) throws InvalidKeyException, IllegalBlockSizeException, BadPaddingException
- byte[] **decrypt** (Key key, byte[] message) throws InvalidKeyException, IllegalBlockSizeException, BadPaddingException

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/signer/AESCipher.java

3.2 pdfsigner.gui.GUI Class Reference

Inheritance diagram for pdfsigner.gui.GUI:



Classes

- enum [MenuBarIndices](#)

Public Member Functions

- [GUI](#) (int width, int height)
- [GUI](#) ()
- void [start](#) ()

3.2.1 Detailed Description

Manages the graphical user interface of the application.

3.2.2 Constructor & Destructor Documentation

3.2.2.1 GUI() [1/2]

```
pdfsigner.gui.GUI.GUI (
    int width,
    int height)
```

Creates the [GUI](#) object.

Parameters

<i>width</i>	Width of the window
<i>height</i>	Height of the window

3.2.2.2 GUI() [2/2]

```
pdfsigner.gui.GUI.GUI ()
```

Creates the default [GUI](#) object.

3.2.3 Member Function Documentation

3.2.3.1 start()

```
void pdfsigner.gui.GUI.start ()
```

Starts listening for the USB events.

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/gui/GUI.java

3.3 pdfsigner.signer.HashGenerator Class Reference

Public Member Functions

- **HashGenerator** (MessageDigest digest)
- byte[] **getHash** (String message)
- SecretKey **getHashAsKey** (String message)

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/signer/HashGenerator.java

3.4 pdfsigner.Main Class Reference

Static Public Member Functions

- static void **main** (String[] args)

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/Main.java

3.5 pdfsigner.gui.GUI.MenuBarIndices Enum Reference

Public Member Functions

- **MenuBarIndices** (int index)
- int **index** ()

Public Attributes

- **FILE** =(0)
- **SIGNATURE** =(1)
- **OPEN** =(0)
- **CLOSE** =(1)
- **SIGN** =(0)
- **VERIFY** =(1)

3.5.1 Detailed Description

Indices of the menu items in the menu bar.

The documentation for this enum was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/gui/GUI.java

3.6 pdfsigner.signer.PDFSigner Class Reference

Static Public Member Functions

- static Certificate **generateSelfSignedCert** (PrivateKey privateKey, PublicKey publicKey) throws CertificateException, IOException, OperatorCreationException
- static File **sign** (File inFile, File privKeyFile, File pubKeyFile, String password, boolean toSaveCert) throws GeneralSecurityException, IOException
- static List< String > **verify** (File inFile, File pubKeyFile) throws IOException, GeneralSecurityException
- static void **writeCertToFile** (Certificate cert, File outFile) throws IOException

Static Public Attributes

- static Provider `bcProvider` = new BouncyCastleProvider()

3.6.1 Detailed Description

Allows to sign and verify PDF documents.

Uses iText7, BouncyCastle and JCA.

3.6.2 Member Function Documentation

3.6.2.1 generateSelfSignedCert()

```
Certificate pdfsigner.signer.PDFSigner.generateSelfSignedCert (
    PrivateKey privateKey,
    PublicKey publicKey) throws CertIOException, OperatorCreationException, CertificateEx←
Exception [static]
```

Generates self-signed x509 certificate. **Does not** check whether keys form a correct pair.

Parameters

<code>privateKey</code>	Private key
<code>publicKey</code>	Public key

Returns

Generated ceritifcate

Exceptions

	<code>CertIOException</code>
	<code>OperatorCreationException</code>
	<code>CertificateException</code>

3.6.2.2 sign()

```
File pdfsigner.signer.PDFSigner.sign (
    File inFile,
    File privKeyFile,
    File pubKeyFile,
    String password,
    boolean toSaveCert) throws GeneralSecurityException, IOException [static]
```

Signs the PDF file using SHA-256 algorithm. Will throw if the file is not in a PDF format. If another signatures are present, the new one is appended.

Parameters

	<i>inFile</i>	File with the PDF document
	<i>privKeyFile</i>	File with the RSA private key
	<i>pubKeyFile</i>	File with the RSA public key
	<i>password</i>	Password to decrypt the private key
	<i>toSaveCert</i>	Whether to save the certificate used for signing

Returns

File with the signed PDF document or `null` if certificate generation was unsuccessful.

Exceptions

	<i>GeneralSecurityException</i>
	<i>IOException</i>

3.6.2.3 verify()

```
List< String > pdfsigner.signer.PDFSigner.verify (
    File inFile,
    File pubKeyFile) throws IOException, GeneralSecurityException [static]
```

Verifies the PDF file. Will throw if the file is not in a PDF format.

What is verified: whether the public key in the certificate matches one from the input; signature coverage, integrity and authenticity; revision number, total number of revisions.

Parameters

	<i>inFile</i>	File with the signed PDF document
	<i>pubKeyFile</i>	File with the RSA public key

Returns

List with the verification information

Exceptions

	<i>IOException</i>
	<i>GeneralSecurityException</i>

See also

```
com.itextpdf.signatures.SignatureUtil#getRevision(String)
com.itextpdf.signatures.SignatureUtil#getTotalRevisions()
com.itextpdf.signatures.SignatureUtil#signatureCoversWholeDocument(String)
com.itextpdf.signatures.PdfPKCS7#verifySignatureIntegrityAndAuthenticity()
```

3.6.2.4 writeCertToFile()

```
void pdfsigner.signer.PDFSigner.writeCertToFile (
    Certificate cert,
    File outFile) throws IOException [static]
```

Writes the certificate in the PEM format to a file.

Parameters

	<i>cert</i>	Cerificate to write.
	<i>outFile</i>	File, where the certificate will be persisted.

Exceptions

	<i>IOException</i>
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3.6.3 Member Data Documentation

3.6.3.1 bcProvider

```
Provider pdfsigner.signer.PDFSigner.bcProvider = new BouncyCastleProvider() [static]
```

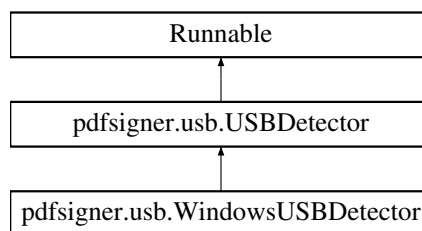
Default provider.

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/signer/PDFSigner.java

3.7 pdfsigner.usb.USBDetector Interface Reference

Inheritance diagram for pdfsigner.usb.USBDetector:



Public Member Functions

- void `run` ()

3.7.1 Detailed Description

Interface for detecting USB events.

3.7.2 Member Function Documentation

3.7.2.1 run()

```
void pdfsigner.usb.USBDetector.run ()
```

Listens for the USB events.

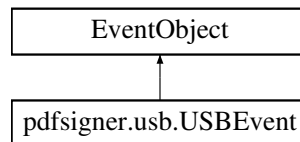
Implemented in [pdfsigner.usb.WindowsUSBDetector](#).

The documentation for this interface was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/usb/USBDetector.java

3.8 pdfsigner.usb.USBEvent Class Reference

Inheritance diagram for pdfsigner.usb.USBEvent:



Classes

- enum **USBEventTypes**

Public Member Functions

- [USBEvent](#) (Object source)
- String [getPath](#) ()
- void [setPath](#) (String path)
- USBEventTypes [getEventType](#) ()
- void [setEventType](#) (USBEventTypes eventType)

3.8.1 Detailed Description

Represents the USB event.

3.8.2 Constructor & Destructor Documentation

3.8.2.1 USBEvent()

```
pdfsigner.usb.USBEvent.USBEvent (  
    Object source)
```

Creates the [USBEvent](#) object.

Parameters

<div></div>	<i>source</i>	Source of the event
-------------	---------------	---------------------

3.8.3 Member Function Documentation

3.8.3.1 `getEventType()`

```
USBEventTypes pdfsigner.usb.USBEvent.getEventType ()
```

Returns type of the event.

Returns

Event type

3.8.3.2 `getPath()`

```
String pdfsigner.usb.USBEvent.getPath ()
```

Returns path of the detected file.

Returns

Path of the detected file

3.8.3.3 `setEventType()`

```
void pdfsigner.usb.USBEvent.setEventType (  
    USBEventTypes eventType)
```

Sets type of the event.

Parameters

<div></div>	<i>eventType</i>	Event type
-------------	------------------	------------

3.8.3.4 `setPath()`

```
void pdfsigner.usb.USBEvent.setPath (  
    String path)
```

Sets path of the detected file.

Parameters

<code>path</code>	Path of the detected file
-------------------	---------------------------

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/usb/USBEvent.java

3.9 pdfsigner.usb.USBEventHandler Class Reference

Public Member Functions

- [USBEventHandler](#) ()
- void [addListener](#) ([USBEventListener](#) listener)
- void [removeListener](#) ([USBEventListener](#) listener)
- void [fireEvent](#) (USBEventTypes eventType, String path)

3.9.1 Detailed Description

Allows to add, remove listeners and to fire events. Efficient only with small number of listeners.

3.9.2 Constructor & Destructor Documentation

3.9.2.1 USBEventHandler()

```
pdfsigner.usb.USBEventHandler.USBEventHandler ()
```

Creates the [USBEventHandler](#) object.

3.9.3 Member Function Documentation

3.9.3.1 addListener()

```
void pdfsigner.usb.USBEventHandler.addListener (
    USBEventListener listener)
```

Adds the listener to the list of listeners.

Parameters

<code>listener</code>	Listener
-----------------------	----------

3.9.3.2 fireEvent()

```
void pdfsigner.usb.USBEventHandler.fireEvent (
    USBEventTypes eventType,
    String path)
```

Creates the event object and lets listeners to utilize it. Every listener consumes the event in a separate thread.

Parameters

<i>eventType</i>	Type of the event from <code>pdfsigner.usb.USBEvent#USBEventTypes</code>
<i>path</i>	Path of the detected file

3.9.3.3 removeListener()

```
void pdfsigner.usb.USBEventHandler.removeListener (
    USBEventListener listener)
```

Removes the listener from the list of listeners.

Parameters

<i>listener</i>	Listener
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The documentation for this class was generated from the following file:

- `pdfsigner/src/main/java/pdfsigner/usb/USBEventHandler.java`

3.10 pdfsigner.usb.USBEventListener Interface Reference**Public Member Functions**

- void `handleEvent` (`USBEvent` usbEvent)

3.10.1 Detailed Description

Interface for listening on USB events.

3.10.2 Member Function Documentation**3.10.2.1 handleEvent()**

```
void pdfsigner.usb.USBEventListener.handleEvent (
    USBEvent usbEvent)
```

Utilizes USB events that were detected and passed to the handler.

Parameters

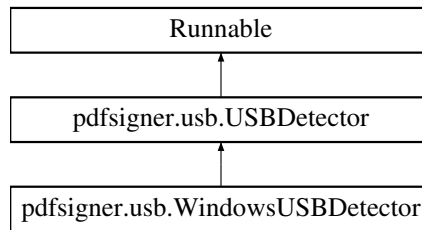
<i>usbEvent</i>	Event to handle
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The documentation for this interface was generated from the following file:

- `pdfsigner/src/main/java/pdfsigner/usb/USBEventListener.java`

3.11 pdfsigner.usb.WindowsUSBDetector Class Reference

Inheritance diagram for pdfsigner.usb.WindowsUSBDetector:



Public Member Functions

- [WindowsUSBDetector](#) ([USBEventHandler](#) eventHandler)
- void [run](#) ()

3.11.1 Detailed Description

Detects USB events in Windows.

3.11.2 Constructor & Destructor Documentation

3.11.2.1 WindowsUSBDetector()

```
pdfsigner.usb.WindowsUSBDetector.WindowsUSBDetector (
    USBEventHandler eventHandler)
```

Creates the [WindowsUSBDetector](#) object.

Parameters

eventHandler	Reference to the event handler
------------------------------	--------------------------------

3.11.3 Member Function Documentation

3.11.3.1 run()

```
void pdfsigner.usb.WindowsUSBDetector.run ()
```

Detects the USB events.

Detects insertion and ejection of the USB device. Finds *.priv files and *.pub files.

Implements [pdfsigner.usb.USBDetector](#).

The documentation for this class was generated from the following file:

- pdfsigner/src/main/java/pdfsigner/usb/WindowsUSBDetector.java

