

BWSip

Generated by Doxygen 1.7.6.1

Tue Mar 15 2016 14:39:34



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# Chapter 1

## Class Index

### 1.1 Class List

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## Chapter 2

# Class Documentation

### 2.1 com.bandwidth.bwsip.BWAccount Class Reference

#### Classes

- class [MyAccount](#)

#### Public Member Functions

- [BWAccount](#) ([BWPhone](#) phone)
- boolean [equals](#) (Object o)
- [BWAccountDelegate](#) [getDelegate](#) ()
- void [setDelegate](#) ([BWAccountDelegate](#) delegate)
- void [connect](#) ()
- void [close](#) ()
- void [addSipHeader](#) (String name, String value)
- void [clearSipHeaders](#) ()
- void [addProxy](#) (String proxy)
- void [clearProxies](#) ()
- boolean [isIceEnabled](#) ()
- void [setIceEnabled](#) (boolean iceEnabled)
- boolean [isRegistrationActive](#) ()
- void [updateRegistration](#) (boolean renew)
- int [getRegistrationInterval](#) ()
- void [setRegistrationInterval](#) (int interval)
- int [getRegistrationRegistrarInterval](#) ()
- int [getRegistrationFirstRetryInterval](#) ()
- void [setRegistrationFirstRetryInterval](#) (int interval)
- int [getRegistrationRetryInterval](#) ()
- void [setRegistrationRetryInterval](#) (int interval)
- [BWSipResponse](#) [getLastState](#) ()

- String [getIdUri](#) ()
- void [setIdUri](#) (String idUri)
- String [getDisplayName](#) ()
- void [setDisplayName](#) (String displayName)
- String [getRegistrar](#) ()
- void [setRegistrar](#) (String registrar)
- [BWCredentials](#) [getCredentials](#) ()
- void [setCredentials](#) ([BWCredentials](#) credentials)
- long [getServerPort](#) ()
- void [setServerPort](#) (long serverPort)

### Protected Member Functions

- void [addCall](#) ([BWCall](#) call)
- void [removeCall](#) ([BWCall](#) call)

### Protected Attributes

- [MyAccount](#) **myAccount**
- List< [BWCall](#) > **calls**

## 2.1.1 Detailed Description

[BWAccount](#) is the class used to connect to the SIP server.

## 2.1.2 Constructor & Destructor Documentation

### 2.1.2.1 `com.bandwidth.bwsip.BWAccount.BWAccount ( BWPhone phone )`

Constructor: when a [BWAccount](#) object is initialized it checks if the [BWPhone](#) used as a parameter in the constructor is already initialized (i.e. the PJSUA2 library is already loaded and Endpoint is not null).

#### Parameters

<i>phone</i>	<a href="#">BWPhone</a>
--------------	-------------------------

## 2.1.3 Member Function Documentation

### 2.1.3.1 `void com.bandwidth.bwsip.BWAccount.addCall ( BWCall call )` [protected]

Add a [BWCall](#) to the call list.

## Parameters

<i>call</i>	
-------------	--

2.1.3.2 void com.bandwidth.bwsip.BWAccount.addProxy ( String *proxy* )

Add a proxy.

## Parameters

<i>proxy</i>	String proxy URL.
--------------	-------------------

2.1.3.3 void com.bandwidth.bwsip.BWAccount.addSipHeader ( String *name*, String *value* )

Add a header to the SIP INVITE.

## Parameters

<i>name</i>	String the header name.
<i>value</i>	String the header value.

## 2.1.3.4 void com.bandwidth.bwsip.BWAccount.clearProxies ( )

Clear the proxies.

## 2.1.3.5 void com.bandwidth.bwsip.BWAccount.clearSipHeaders ( )

Clear the SIP headers.

## 2.1.3.6 void com.bandwidth.bwsip.BWAccount.close ( )

Closes all connections for that account.

## 2.1.3.7 void com.bandwidth.bwsip.BWAccount.connect ( )

Establish a connection with the SIP server. This method must be called after a [BWAccount](#) object is created and the developer has already set all the connection parameters like registrar, user credentials, etc. Any change in the [BWAccount](#) object only has affect when a new connection is done.

2.1.3.8 boolean com.bandwidth.bwsip.BWAccount.equals ( Object *o* )

Compare two [BWAccount](#) objects.

## Parameters

	<i>o</i>
--	----------

## Returns

**2.1.3.9 BWCredentials com.bandwidth.bwsip.BWAccount.getCredentials ( )**

Get the user credentials.

## Returns

[BWCredentials](#)

**2.1.3.10 BWAccountDelegate com.bandwidth.bwsip.BWAccount.getDelegate ( )**

Get the delegated class.

## Returns

BWAccountDelegate

**2.1.3.11 String com.bandwidth.bwsip.BWAccount.getDisplayName ( )**

Get the display name.

## Returns

the displayName

**2.1.3.12 String com.bandwidth.bwsip.BWAccount.getIdUri ( )**

Get the myAccount ID.

## Returns

String

**2.1.3.13 BWSipResponse com.bandwidth.bwsip.BWAccount.getLastState ( )**

Get the account's last state.

## Returns

BWSipResponse the account state.

**2.1.3.14 String com.bandwidth.bwsip.BWAccount.getRegistrar ( )**

Get the registrar URI.

**Returns**

String

**2.1.3.15 int com.bandwidth.bwsip.BWAccount.getRegistrationFirstRetryInterval ( )**

Get the interval that will retry to do the registration for the first time.

**Returns**

int the first registration retry interval, in seconds.

**2.1.3.16 int com.bandwidth.bwsip.BWAccount.getRegistrationInterval ( )**

Get the registration interval.

**Returns**

int the registration interval in seconds.

**2.1.3.17 int com.bandwidth.bwsip.BWAccount.getRegistrationRegistrarInterval ( )**

Get the registration interval returned by the registrar; it might be different than the registration interval set by the client.

**Returns**

int the registration interval, in seconds.

**2.1.3.18 int com.bandwidth.bwsip.BWAccount.getRegistrationRetryInterval ( )**

Get the interval that will redo the registration.

**Returns**

int the re-registration interval, in seconds.

**2.1.3.19 long com.bandwidth.bwsip.BWAccount.getServerPort ( )**

Get the port number.

**Returns**

the clientPort

**2.1.3.20 boolean com.bandwidth.bwsip.BWAccount.isIceEnabled ( )**

Check if ICE (Interactive Connectivity Establishment) is enabled when doing the SIP connection.

**Returns**

true if it's enabled

**2.1.3.21 boolean com.bandwidth.bwsip.BWAccount.isRegistrationActive ( )**

Flag to tell if the account is currently registered.

**Returns**

boolean true if the account is currently registered; false if it's not.

**2.1.3.22 void com.bandwidth.bwsip.BWAccount.removeCall ( BWCall *call* )**  
[protected]

Remove a [BWCall](#) from the call list.

**Parameters**

<i>call</i>	
-------------	--

**2.1.3.23 void com.bandwidth.bwsip.BWAccount.setCredentials ( BWCredentials *credentials* )**

Set the credentials (username & password) to connect to the myAccount.

**Parameters**

<i>credentials</i>	<a href="#">BWCredentials</a>
--------------------	-------------------------------



2.1.3.24 void com.bandwidth.bwsip.BWAccount.setDelegate ( BWAccountDelegate *delegate* )

Set the delegated class.

Parameters

<i>delegate</i>	BWAccountDelegate class
-----------------	-------------------------

2.1.3.25 void com.bandwidth.bwsip.BWAccount.setDisplayName ( String *displayName* )

The name that will be displayed with the phone number when you make calls.

Parameters

<i>displayName</i>	the displayName to set
--------------------	------------------------

2.1.3.26 void com.bandwidth.bwsip.BWAccount.setIceEnabled ( boolean *iceEnabled* )

Enable or disable ICE (Interactive Connectivity Establishment) connections.

Parameters

<i>iceEnabled</i>	true if you want to enable ICE connection
-------------------	---

2.1.3.27 void com.bandwidth.bwsip.BWAccount.setIdUri ( String *idUri* )

Set the myAccount ID.

- Example: "12223334444@bwsip.io"

Parameters

<i>idUri</i>	String
--------------	--------

2.1.3.28 void com.bandwidth.bwsip.BWAccount.setRegistrar ( String *registrar* )

Set the registrar URI that will get connected.

- Example: "bwsip.io"

## Parameters

<i>registrar</i>	String
------------------	--------

**2.1.3.29 void com.bandwidth.bwsip.BWAccount.setRegistrationFirstRetryInterval ( int *interval* )**

The interval, in seconds, when we will try to do the registration again after it fails for the first time.

## Parameters

<i>interval</i>	
-----------------	--

**2.1.3.30 void com.bandwidth.bwsip.BWAccount.setRegistrationInterval ( int *interval* )**

Set the registration interval.

## Parameters

<i>interval</i>	the interval, in seconds, when the registration will be sent again.
-----------------	---

**2.1.3.31 void com.bandwidth.bwsip.BWAccount.setRegistrationRetryInterval ( int *interval* )**

The interval, in seconds, when we will try to do the registration again after it fails for the second time.

## Parameters

<i>interval</i>	
-----------------	--

**2.1.3.32 void com.bandwidth.bwsip.BWAccount.setServerPort ( long *serverPort* )**

Set the port number. (default = 5060)

## Parameters

<i>serverPort</i>	the clientPort to set
-------------------	-----------------------

**2.1.3.33 void com.bandwidth.bwsip.BWAccount.updateRegistration ( boolean *renew* )**

Update registration or perform un-registration.

## 2.2 com.bandwidth.bwsip.delegates.BWAccountDelegate Interface Reference 11

### Parameters

<i>renew</i>	true to renew the registration, false to cancel the registration.
--------------	---

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

- BWAccount.java

## 2.2 com.bandwidth.bwsip.delegates.BWAccountDelegate Interface Reference

### Public Member Functions

- void **onRegStateChanged** ([BWAccount](#) account)
- void **onIncomingCall** ([BWCall](#) call)

### 2.2.1 Detailed Description

Interface with methods used by the Delegation Pattern.

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

- BWAccountDelegate.java

## 2.3 com.bandwidth.bwsip.BWCall Class Reference

### Classes

- class **MyCall**

### Public Member Functions

- [BWCall](#) ([BWAccount](#) bwAccount)
- [BWCall](#) ([BWAccount](#) bwAccount, int callId)
- [BWAccount](#) [getParentAccount](#) ()
- boolean [equals](#) (Object o)
- [BWCallDelegate](#) [getDelegate](#) ()
- void [setDelegate](#) ([BWCallDelegate](#) delegate)
- void [close](#) ()
- void [makeCall](#) ()
- void [answerCall](#) ([BWSipResponse](#) answerType)
- void [hangupCall](#) ()
- void [addSipHeader](#) (String name, String value)
- [BWCallState](#) [getLastState](#) ()

- [BWSipResponse](#) [getLastStatusCode](#) ()
- void [addGeolocation](#) ([BWGps](#) gps)
- void [setMute](#) (boolean enabled)
- void [dialDTMF](#) (String digits)
- String [getLocalUri](#) ()
- String [getRemoteUri](#) ()
- void [setRemoteUri](#) (String remoteUri)
- [CallStats](#) [getStats](#) ()
- boolean [isIncoming](#) ()
- void [setIncoming](#) (boolean incoming)
- boolean [isOnHold](#) ()
- void [setOnHold](#) (boolean enabled)
- boolean [isMuted](#) ()
- int [getDuration](#) ()
- Map< String, List< String > > [getInviteHeaders](#) ()

### Protected Attributes

- MyCall **myCall**

### Package Functions

- void **setInviteHeaders** (Map< String, List< String > > inviteHeaders)

### Package Attributes

- String **remoteUri**

## 2.3.1 Detailed Description

Class used to receive and make phone calls.

## 2.3.2 Constructor & Destructor Documentation

### 2.3.2.1 com.bandwidth.bwsip.BWCall.BWCall ( [BWAccount](#) *bwAccount* )

Constructor.

#### Parameters

<i>bwAccount</i>	<a href="#">BWAccount</a> - the account that will generate the call.
------------------	--

### 2.3.2.2 com.bandwidth.bwsip.BWCall.BWCall ( BWAccount *bwAccount*, int *callId* )

Constructor.

#### Parameters

<i>bwAccount</i>	<a href="#">BWAccount</a> - the account that will generate the call.
<i>callId</i>	int - the call Id.

### 2.3.3 Member Function Documentation

#### 2.3.3.1 void com.bandwidth.bwsip.BWCall.addGeolocation ( BWGps *gps* )

Add the Geolocation header to the call.

#### Parameters

<i>gps</i>	<a href="#">BWGps</a> - the <a href="#">BWGps</a> object with the coordinates set.
------------	--

#### 2.3.3.2 void com.bandwidth.bwsip.BWCall.addSipHeader ( String *name*, String *value* )

Add a header to the SIP INVITE.

#### Parameters

<i>name</i>	String the header name.
<i>value</i>	String the header value.

#### 2.3.3.3 void com.bandwidth.bwsip.BWCall.answerCall ( BWSipResponse *answerType* )

Answers the call

#### Parameters

<i>answerType</i>	int - the answer type (available in BWConsts).
-------------------	--

#### 2.3.3.4 void com.bandwidth.bwsip.BWCall.close ( )

Closes a [BWCall](#) object and removes it from the call list in the parent [BWAccount](#) object.

#### 2.3.3.5 void com.bandwidth.bwsip.BWCall.dialDTMF ( String *digits* )

Send DTMF digits using RFC 2833 payload formats.

## Parameters

<i>digits</i>	String - the digits that will be sent to the other party.
---------------	---

**2.3.3.6** boolean `com.bandwidth.bwsip.BWCall.equals ( Object o )`

Compare two [BWCall](#) objects.

## Parameters

<i>o</i>	<a href="#">BWCall</a> - the object that will be compared with the current instance of <a href="#">BWCall</a> .
----------	---

## Returns

boolean - true if the objects have the same call Id; false if they are different.

**2.3.3.7** `BWCallDelegate` `com.bandwidth.bwsip.BWCall.getDelegate ( )`

Get the delegated class.

## Returns

`BWCallDelegate`

**2.3.3.8** int `com.bandwidth.bwsip.BWCall.getDuration ( )`

Return the call duration.

## Returns

int - the call duration, in seconds.

**2.3.3.9** `Map<String, List<String> >` `com.bandwidth.bwsip.BWCall.getInviteHeaders ( )`

Get the headers received on the INVITE request. This is only populated for inbound calls.

**2.3.3.10** `BWCallState` `com.bandwidth.bwsip.BWCall.getLastState ( )`

Get the call's last state.

## Returns

`BWCallState` the call state.

**2.3.3.11 BWSipResponse com.bandwidth.bwsip.BWCall.getLastStatusCode ( )**

Get the call's last status code.

**Returns**

the call's last status code.

**2.3.3.12 String com.bandwidth.bwsip.BWCall.getLocalUri ( )**

Get the Local URI.

**Returns**

String - the local URI.

**2.3.3.13 BWAccount com.bandwidth.bwsip.BWCall.getParentAccount ( )**

Get the call's parent account.

**Returns**

[BWAccount](#) - the [BWAccount](#) that generated this call object.

**2.3.3.14 String com.bandwidth.bwsip.BWCall.getRemoteUri ( )**

Get the Remote URI.

**Returns**

String - the remote URI.

**2.3.3.15 CallStats com.bandwidth.bwsip.BWCall.getStats ( )**

Get the call stats.

**Returns**

CallStats - the key value representation of the call stats.

**2.3.3.16 void com.bandwidth.bwsip.BWCall.hangupCall ( )**

Hangs-up the call.

**2.3.3.17 boolean com.bandwidth.bwsip.BWCall.isIncoming ( )**

Check if it's an incoming call.

**Returns**

boolean - true if it's an incoming call; false if it's an outgoing call.

**2.3.3.18 boolean com.bandwidth.bwsip.BWCall.isMuted ( )**

Check if the call is muted.

**Returns**

boolean - true if the call is muted; false if it's not muted.

**2.3.3.19 boolean com.bandwidth.bwsip.BWCall.isOnHold ( )**

Check if the call is on hold.

**Returns**

boolean - true if the call is on hold; false if it's not on hold.

**2.3.3.20 void com.bandwidth.bwsip.BWCall.makeCall ( )**

Calls the URI previously set in the method setRemoteUri.

**2.3.3.21 void com.bandwidth.bwsip.BWCall.setDelegate ( BWCallDelegate *delegate* )**

Set the delegated class.

**Parameters**

<i>delegate</i>	BWCallDelegate class
-----------------	----------------------

**2.3.3.22 void com.bandwidth.bwsip.BWCall.setIncoming ( boolean *incoming* )**

Set the call property to incoming or outgoing.

**Parameters**

<i>incoming</i>	boolean
-----------------	---------



## 2.4 com.bandwidth.bwsip.delegates.BWCallDelegate Interface Reference 17

### 2.3.3.23 void com.bandwidth.bwsip.BWCall.setMute ( boolean *enabled* )

Mute or un-mute a call.

#### Parameters

<i>enabled</i>	boolean - true to mute the call; false to un-mute.
----------------	--

### 2.3.3.24 void com.bandwidth.bwsip.BWCall.setOnHold ( boolean *enabled* )

Put a call on hold or release the hold.

#### Parameters

<i>enabled</i>	boolean - true to put a call on hold; false to release the hold.
----------------	--

### 2.3.3.25 void com.bandwidth.bwsip.BWCall.setRemoteUri ( String *remoteUri* )

Set the URI that is making the phone call.

#### Parameters

<i>remoteUri</i>	String the remote URI.
------------------	------------------------

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

- BWCall.java

## 2.4 com.bandwidth.bwsip.delegates.BWCallDelegate Interface - Reference

### Public Member Functions

- void **onCallStateChanged** ([BWCall](#) call)
- void **onIncomingDTMF** ([BWCall](#) call, String digits)

### 2.4.1 Detailed Description

Interface with methods used by the Delegation Pattern.

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

- BWCallDelegate.java

## 2.5 com.bandwidth.bwsip.constants.BWCallState Enum Reference

### Public Member Functions

- int **getValue** ()

### Static Public Member Functions

- **[static initializer]**
- static [BWCallState](#) **get** (int value)

### Public Attributes

- **NULL** = (0)
- **CALLING** = (1)
- **INCOMING** = (2)
- **EARLY** = (3)
- **CONNECTING** = (4)
- **CONFIRMED** = (5)
- **DISCONNECTED** = (6)

### 2.5.1 Detailed Description

Created by vegidio on 3/19/15.

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

- BWCallState.java

## 2.6 com.bandwidth.bwsip.BWCodec Class Reference

### Public Member Functions

- String **getId** ()
- void **setId** (String id)
- short **getPriority** ()
- void **setPriority** (short priority)

### Static Public Member Functions

- static List< [BWCodec](#) > **listAvailable** ()
- static void **setPriority** (List< [BWCodec](#) > codecs)

### 2.6.1 Detailed Description

Class used to create and set codec priorities.

### 2.6.2 Member Function Documentation

**2.6.2.1** static List<BWCodec> com.bandwidth.bwsip.BWCodec.listAvailable ( )  
[static]

List the available codecs.

**2.6.2.2** static void com.bandwidth.bwsip.BWCodec.setPriority ( List< BWCodec >  
codecs ) [static]

Set the codec priorities.

#### Parameters

<i>codecs</i>	
---------------	--

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

- BWCodec.java

## 2.7 com.bandwidth.bwsip.BWCredentials Class Reference

### Public Member Functions

- String getPassword ()
- String getToken ()
- String getUsername ()
- boolean isTokenBased ()

### Static Public Member Functions

- static BWCredentials createWithPassword (String username, String password)
- static BWCredentials createWithToken (String username, String token)

### 2.7.1 Detailed Description

Created by vegidio on 7/1/15.

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

- BWCredentials.java

## 2.8 com.bandwidth.bwsip.BWGps Class Reference

Inherits `LocationListener`.

### Public Member Functions

- void `updateCoordinates` (`Activity` activity)
- String `generatePIDFLOxml` ()
- void `onLocationChanged` (`Location` location)
- void `onProviderDisabled` (String provider)
- void `onProviderEnabled` (String provider)
- void `onStatusChanged` (String provider, int status, Bundle extras)
- double `getLatitude` ()
- void `setLatitude` (double latitude)
- double `getLongitude` ()
- void `setLongitude` (double longitude)
- Date `getTime` ()
- void `setTime` (Date time)
- boolean `isSuccess` ()
- `BWGpsDelegate` `getDelegate` ()
- void `setDelegate` (`BWGpsDelegate` delegate)

### 2.8.1 Detailed Description

Class used the get GPS coordinates.

### 2.8.2 Member Function Documentation

#### 2.8.2.1 String com.bandwidth.bwsip.BWGps.generatePIDFLOxml ( )

Generate a XML in the PIDF-LO format representing the GPS coordinates.

Returns

#### 2.8.2.2 double com.bandwidth.bwsip.BWGps.getLatitude ( )

Returns

the latitude

**2.8.2.3 double com.bandwidth.bwsip.BWGps.getLongitude ( )**

Returns

the longitude

**2.8.2.4 Date com.bandwidth.bwsip.BWGps.getTime ( )**

Returns

the time

**2.8.2.5 void com.bandwidth.bwsip.BWGps.onLocationChanged ( Location *location* )**

Location Manager Listeners

**2.8.2.6 void com.bandwidth.bwsip.BWGps.setLatitude ( double *latitude* )**

Parameters

<i>latitude</i>	the latitude to set
-----------------	---------------------

**2.8.2.7 void com.bandwidth.bwsip.BWGps.setLongitude ( double *longitude* )**

Parameters

<i>longitude</i>	the longitude to set
------------------	----------------------

**2.8.2.8 void com.bandwidth.bwsip.BWGps.setTime ( Date *time* )**

Parameters

<i>time</i>	the time to set
-------------	-----------------

**2.8.2.9 void com.bandwidth.bwsip.BWGps.updateCoordinates ( Activity *activity* )**

Update the GPS coordinates. Delegated method: [BWGpsDelegate#onCoordinates-Updated\(BWGps\)](#)

Parameters

<i>activity</i>	
-----------------	--

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

- [BWGps.java](#)

## 2.9 [com.bandwidth.bwsip.delegates.BWGpsDelegate](#) Interface - Reference

### Public Member Functions

- void **onCoordinatesUpdated** ([BWGps](#) gps)

#### 2.9.1 Detailed Description

Interface with methods used by the Delegation Pattern.

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

- [BWGpsDelegate.java](#)

## 2.10 [com.bandwidth.bwsip.constants.BWOutputRoute](#) Enum - Reference

### Public Member Functions

- int **getValue** ()

### Static Public Member Functions

- **[static initializer]**
- static [BWOutputRoute](#) **get** (int value)

### Public Attributes

- **EARPIECE** = (0)
- **LOUDSPEAKER** = (1)

#### 2.10.1 Detailed Description

Created by vegidio on 3/19/15.

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

- [BWOutputRoute.java](#)

## 2.11 com.bandwidth.bwsip.BWPhone Class Reference

### Classes

- class **BWLogWriter**

### Public Member Functions

- synchronized void [initialize](#) ()
- void [updateNameServers](#) ()
- synchronized boolean [isInitialized](#) ()
- void [createTransport](#) () throws Exception
- void [close](#) ()
- void [setAudioOutputRoute](#) (Context context, [BWOutputRoute](#) outputRoute)
- [EndpointInfo](#) [getEndpointInfo](#) (Context context)
- int [getLogLevel](#) ()
- void [setLogLevel](#) (int logLevel)
- long [getClientPort](#) ()
- void [setClientPort](#) (long clientPort)
- [BWTransport](#) [getTransportType](#) ()
- void [setTransportType](#) ([BWTransport](#) transportType)
- String [getTransportTag](#) ()
- String [getUserAgent](#) ()
- void [setUserAgent](#) (String userAgent)
- boolean [hasSrvResolution](#) ()
- void [setSrvResolution](#) (boolean srvResolution)
- boolean [isKeepAliveActive](#) ()
- void [setKeepAlive](#) (Context context)
- float [getInputVolume](#) ()
- void [setInputVolume](#) (float volume)
- float **[getOutputVolume](#)** ()
- void [setOutputVolume](#) (float volume)
- void [playWavFile](#) (String filepath)

### Static Public Member Functions

- static [BWPhone](#) [getInstance](#) ()

### Public Attributes

- StringVector **stunServers** = new StringVector()
- StringVector **nameServers** = new StringVector()
- Context **context** = null
- List< [BWAccount](#) > **accounts**

### Protected Member Functions

- void **addAccount** ([BWAccount](#) account)
- void **removeAccount** ([BWAccount](#) account)

### Protected Attributes

- Endpoint **endpoint**
- String **remoteIpAddress** = ""

### Static Package Functions

- **[static initializer]**

#### 2.11.1 Detailed Description

Main class of the framework. You must initialize and configure this class before you use any other class in the framework.

#### 2.11.2 Member Function Documentation

##### 2.11.2.1 void **com.bandwidth.bwsip.BWPhone.close** ( )

Deletes any PJSUA2 object. You must call this function when SIP connection is no longer used.

##### 2.11.2.2 void **com.bandwidth.bwsip.BWPhone.createTransport** ( ) throws Exception

Configure the transport for the current endpoint.

#### Exceptions

<i>Exception</i>
------------------

##### 2.11.2.3 long **com.bandwidth.bwsip.BWPhone.getClientPort** ( )

Get the port number.

#### Returns

the clientPort



#### 2.11.2.4 EndpointInfo com.bandwidth.bwsip.BWPhone.getEndpointInfo ( Context context )

Get the local/remote IPs, name servers and the Wifi SSID (if used).

##### Parameters

<i>context</i>	the Application context.
----------------	--------------------------

##### Returns

EndpointInfo

#### 2.11.2.5 float com.bandwidth.bwsip.BWPhone.getInputVolume ( )

Get the input volume.

##### Returns

int input the volume value.

#### 2.11.2.6 static BWPhone com.bandwidth.bwsip.BWPhone.getInstance ( ) [static]

Get the [BWPhone](#) instance.

##### Returns

[BWPhone](#) object

#### 2.11.2.7 int com.bandwidth.bwsip.BWPhone.getLogLevel ( )

Get the log level.

##### Returns

the logLevel

#### 2.11.2.8 String com.bandwidth.bwsip.BWPhone.getTransportTag ( )

##### Returns

the transportTag

### 2.11.2.9 BWTransport com.bandwidth.bwsip.BWPhone.getTransportType ( )

#### Returns

the transportType

### 2.11.2.10 String com.bandwidth.bwsip.BWPhone.getUserAgent ( )

Get the user agent.

#### Returns

the userAgent

### 2.11.2.11 boolean com.bandwidth.bwsip.BWPhone.hasSrvResolution ( )

Check if the SRV Resolution is enabled.

#### Returns

true if SRV Resolution is enabled; false if it's disabled.

### 2.11.2.12 synchronized void com.bandwidth.bwsip.BWPhone.initialize ( )

Initialize the [BWPhone](#) object.

### 2.11.2.13 synchronized boolean com.bandwidth.bwsip.BWPhone.isInitialized ( )

Check if PJSUA2 native library is loaded and the Endpoint is initialized.

#### Returns

true if it's loaded

### 2.11.2.14 boolean com.bandwidth.bwsip.BWPhone.isKeepAliveActive ( )

Check if the Keep Alive is active or not.

#### Returns

boolean true if the Keep Alive is active; false if it's not.

**2.11.2.15 void com.bandwidth.bwsip.BWPhone.playWavFile ( String *filepath* )**

Plays a given WAV file WAV file MUST be formatted as 16bit PCM mono/single channel

**Parameters**

<i>filepath</i>	The path to the file to be played
-----------------	-----------------------------------

**2.11.2.16 void com.bandwidth.bwsip.BWPhone.setAudioOutputRoute ( Context *context*, BWOutputRoute *outputRoute* )**

Selects the device's audio output (Earpiece, Loudspeaker or Bluetooth)

**Parameters**

<i>context</i>	the Application context.
<i>outputRoute</i>	the output route constant.

**2.11.2.17 void com.bandwidth.bwsip.BWPhone.setClientPort ( long *clientPort* )**

Set the port number. (default = 0)

**Parameters**

<i>clientPort</i>	the clientPort to set
-------------------	-----------------------

**2.11.2.18 void com.bandwidth.bwsip.BWPhone.setInputVolume ( float *volume* )**

Update the input volume (usually the device's mic).

**Parameters**

<i>volume</i>	the volume level (0 - mute, 1 - normal, > 1 - louder than normal)
---------------	---

**2.11.2.19 void com.bandwidth.bwsip.BWPhone.setKeepAlive ( Context *context* )**

Set up the Keep Alive feature. With Keep Alive active, every successful [BWAccount](#) connection will be automatically renewed. When the registration reaches half of its time, the framework will wake up the device and renew all active registrations.

**Parameters**

<i>context</i>	the application context.
----------------	--------------------------

**2.11.2.20 void com.bandwidth.bwsip.BWPhone.setLogLevel ( int *logLevel* )**

Set the log level. (default = 0)

**Parameters**

<i>logLevel</i>	the logLevel to set
-----------------	---------------------

**2.11.2.21 void com.bandwidth.bwsip.BWPhone.setOutputVolume ( float *volume* )**

Update the output volume (usually the device's speaker).

**Parameters**

<i>volume</i>	the volume level (0 - mute, 1 - normal, > 1 - louder than normal)
---------------	---

**2.11.2.22 void com.bandwidth.bwsip.BWPhone.setSrvResolution ( boolean *srvResolution* )**

Enable or disable the SRV Resolution.

**Parameters**

<i>srv-Resolution</i>	true to enable the SRV Resolution; false to disable it.
-----------------------	---

**2.11.2.23 void com.bandwidth.bwsip.BWPhone.setTransportType ( BWTransport *transportType* )**

The transport type (UDP, TCP or TLS).

**Parameters**

<i>transport-Type</i>	the transportType to set
-----------------------	--------------------------

**2.11.2.24 void com.bandwidth.bwsip.BWPhone.setUserAgent ( String *userAgent* )**

Set the user agent. (default = 'BWSip Framework v1.0')

**Parameters**

<i>userAgent</i>	the userAgent to set
------------------	----------------------

## 2.11.2.25 void com.bandwidth.bwsip.BWPhone.updateNameServers ( )

Update the name servers used by the endpoint.

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

- BWPhone.java

## 2.12 com.bandwidth.bwsip.constants.BWSipResponse Enum - Reference

### Public Member Functions

- **BWSipResponse** (int value)
- int [getValue](#) ()
- boolean [isProvisional](#) ()
- boolean [isSuccessful](#) ()
- boolean [isRedirection](#) ()
- boolean [isClientFailure](#) ()
- boolean [isServerFailure](#) ()
- boolean [isGlobalFailure](#) ()
- boolean [isFailure](#) ()

### Static Public Member Functions

- **[static initializer]**
- static [BWSipResponse get](#) (int value)

### Public Attributes

- **TRYING** = (100)
- **RINGING** = (180)
- **CALL\_BEING\_FORWARDED** = (181)
- **QUEUED** = (182)
- **PROGRESS** = (183)
- **OK** = (200)
- **ACCEPTED** = (202)
- **MULTIPLE\_CHOICES** = (300)
- **MOVED\_PERMANENTLY** = (301)
- **MOVED\_TEMPORARILY** = (302)
- **USE\_PROXY** = (305)
- **ALTERNATIVE\_SERVICE** = (380)
- **BAD\_REQUEST** = (400)
- **UNAUTHORIZED** = (401)

- **PAYMENT\_REQUIRED** = (402)
- **FORBIDDEN** = (403)
- **NOT\_FOUND** = (404)
- **METHOD\_NOT\_ALLOWED** = (405)
- **NOT\_ACCEPTABLE** = (406)
- **PROXY\_AUTHENTICATION\_REQUIRED** = (407)
- **REQUEST\_TIMEOUT** = (408)
- **GONE** = (410)
- **REQUEST\_ENTITY\_TOO\_LARGE** = (413)
- **REQUEST\_URI\_TOO\_LONG** = (414)
- **UNSUPPORTED\_MEDIA\_TYPE** = (415)
- **UNSUPPORTED\_URI\_SCHEME** = (416)
- **BAD\_EXTENSION** = (420)
- **EXTENSION\_REQUIRED** = (421)
- **SESSION\_TIMER\_TOO\_SMALL** = (422)
- **INTERVAL\_TOO\_BRIEF** = (423)
- **TEMPORARILY\_UNAVAILABLE** = (480)
- **CALL\_TSX\_DOES\_NOT\_EXIST** = (481)
- **LOOP\_DETECTED** = (482)
- **TOO\_MANY\_HOPS** = (483)
- **ADDRESS\_INCOMPLETE** = (484)
- **AMBIGUOUS** = (485)
- **BUSY\_HERE** = (486)
- **REQUEST\_TERMINATED** = (487)
- **NOT\_ACCEPTABLE\_HERE** = (488)
- **BAD\_EVENT** = (489)
- **REQUEST\_UPDATED** = (490)
- **REQUEST\_PENDING** = (491)
- **UNDECIPHERABLE** = (493)
- **INTERNAL\_SERVER\_ERROR** = (500)
- **NOT\_IMPLEMENTED** = (501)
- **BAD\_GATEWAY** = (502)
- **SERVICE\_UNAVAILABLE** = (503)
- **SERVER\_TIMEOUT** = (504)
- **VERSION\_NOT\_SUPPORTED** = (505)
- **MESSAGE\_TOO\_LARGE** = (513)
- **PRECONDITION\_FAILURE** = (580)
- **BUSY\_EVERYWHERE** = (600)
- **DECLINE** = (603)
- **DOES\_NOT\_EXIST\_ANYWHERE** = (604)
- **NOT\_ACCEPTABLE\_ANYWHERE** = (606)

### 2.12.1 Detailed Description

Enumeration of the SIP status codes.

### 2.12.2 Member Function Documentation

#### 2.12.2.1 static BWSipResponse com.bandwidth.bwsip.constants.BWSipResponse.get ( int *value* ) [static]

Get the enumeration for the given integer status code.

##### Parameters

<i>value</i>	the integer status code.
--------------	--------------------------

##### Returns

the enumeration value for the given integer or null if not found.

#### 2.12.2.2 int com.bandwidth.bwsip.constants.BWSipResponse.getValue ( )

##### Returns

the integer value of this status code.

#### 2.12.2.3 boolean com.bandwidth.bwsip.constants.BWSipResponse.isClientFailure ( )

##### Returns

whether this is a client failure status code or not.

#### 2.12.2.4 boolean com.bandwidth.bwsip.constants.BWSipResponse.isFailure ( )

##### Returns

whether this is a client, server or global failure status code or not.

#### 2.12.2.5 boolean com.bandwidth.bwsip.constants.BWSipResponse.isGlobalFailure ( )

##### Returns

whether this is a global failure status code or not.

#### 2.12.2.6 boolean com.bandwidth.bwsip.constants.BWSipResponse.isProvisional ( )

##### Returns

whether this is a provisional status code or not.

2.12.2.7 `boolean com.bandwidth.bwsip.constants.BWSipResponse.isRedirection ( )`

**Returns**

whether this is a redirection status code or not.

2.12.2.8 `boolean com.bandwidth.bwsip.constants.BWSipResponse.isServer-Failure ( )`

**Returns**

whether this is a server failure status code or not.

2.12.2.9 `boolean com.bandwidth.bwsip.constants.BWSipResponse.isSuccessful ( )`

**Returns**

whether this is a successful status code or not.

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

- BWSipResponse.java

## 2.13 com.bandwidth.bwsip.BWTone Class Reference

### Public Member Functions

- synchronized void [close](#) ()
- synchronized void [startRingback](#) ()
- synchronized void [stopRingback](#) ()
- synchronized boolean [isRingbackPlaying](#) ()
- void [startDigit](#) (String digit)
- void [startDigit](#) (String digit, float volume)
- void [stopDigit](#) ()
- void [playDigit](#) (String digit)
- void [playDigit](#) (String digit, float volume)
- void [playDigit](#) (String digit, int duration)
- void [playDigit](#) (String digit, int duration, float volume)

### 2.13.1 Detailed Description

Class used to generate tones in the device.



### 2.13.2 Member Function Documentation

#### 2.13.2.1 synchronized void com.bandwidth.bwsip.BWTone.close ( )

Closes the tone generator. Should be called before setting all references to null.

#### 2.13.2.2 synchronized boolean com.bandwidth.bwsip.BWTone.isRingbackPlaying ( )

Return true if the ringback tone is playing; false if it's not playing.

##### Returns

ringbackPlaying boolean

#### 2.13.2.3 void com.bandwidth.bwsip.BWTone.playDigit ( String *digit* )

Plays a DTMF tone (default duration = 200 ms)

##### Parameters

<i>digit</i>	String - the DTMF digit to be played.
--------------	---------------------------------------

#### 2.13.2.4 void com.bandwidth.bwsip.BWTone.playDigit ( String *digit*, float *volume* )

Plays a DTMF tone (default duration = 200 ms)

##### Parameters

<i>digit</i>	String - the DTMF digit to be played.
<i>volume</i>	float - the tone volume [0 - mute; 1 - full volume].

#### 2.13.2.5 void com.bandwidth.bwsip.BWTone.playDigit ( String *digit*, int *duration* )

Plays a DTMF tone for X milliseconds.

##### Parameters

<i>digit</i>	String - the DTMF digit to be played.
<i>duration</i>	int - the number of milliseconds to play the tone.

#### 2.13.2.6 void com.bandwidth.bwsip.BWTone.playDigit ( String *digit*, int *duration*, float *volume* )

Plays a DTMF tone for X milliseconds.

## Parameters

<i>digit</i>	String - the DTMF digit to be played.
<i>duration</i>	int - the number of milliseconds to play the tone.
<i>volume</i>	float - the tone volume [0 - mute; 1 - full volume].

2.13.2.7 void `com.bandwidth.bwsip.BWTone.startDigit ( String digit )`

Starts a tone with an indefinite duration.

## Parameters

<i>digit</i>	String - the DTMF digit to be played.
--------------	---------------------------------------

2.13.2.8 void `com.bandwidth.bwsip.BWTone.startDigit ( String digit, float volume )`

Starts a tone with an indefinite duration.

## Parameters

<i>digit</i>	String - the DTMF digit to be played.
<i>volume</i>	float - the tone volume [0 - mute; 1 - full volume].

2.13.2.9 synchronized void `com.bandwidth.bwsip.BWTone.startRingback ( )`

Starts the ringback tone. You must have the [BWPhone](#) initialized to call this method.

2.13.2.10 void `com.bandwidth.bwsip.BWTone.stopDigit ( )`

Stops any tone currently playing.

2.13.2.11 synchronized void `com.bandwidth.bwsip.BWTone.stopRingback ( )`

Stops the ringback tone. You must have the [BWPhone](#) initialized to call this method.

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

- BWTone.java

2.14 `com.bandwidth.bwsip.constants.BWTransport` Enum Reference

## Public Member Functions

- int `getValue ( )`

### Static Public Member Functions

- **[static initializer]**
- static [BWTransport](#) **get** (int value)

### Public Attributes

- **UDP** = (0)
- **TCP** = (1)
- **TLS** = (2)

#### 2.14.1 Detailed Description

Created by vegidio on 3/19/15.

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

- BWTransport.java

## 2.15 com.bandwidth.bwsip.models.CallStats Class Reference

### Public Member Functions

- long **getCodecClock** ()
- void **setCodecClock** (long codecClock)
- String **getCodecName** ()
- void **setCodecName** (String codecName)
- int **getRoundTripTimeMean** ()
- void **setRoundTripTimeMean** (int roundTripTimeMean)
- long **getRxBytes** ()
- void **setRxBytes** (long rxBytes)
- int **getRxJitterMean** ()
- void **setRxJitterMean** (int rxJitterMean)
- int **getRxLossPeriodMean** ()
- void **setRxLossPeriodMean** (int rxLossPeriodMean)
- long **getRxPackageDiscard** ()
- void **setRxPackageDiscard** (long rxPackageDiscard)
- long **getRxPackageDuplicated** ()
- void **setRxPackageDuplicated** (long rxPackageDuplicated)
- long **getRxPackageLost** ()
- void **setRxPackageLost** (long rxPackageLost)
- long **getRxPackageNumber** ()
- void **setRxPackageNumber** (long rxPackageNumber)
- long **getRxPackageReordered** ()
- void **setRxPackageReordered** (long rxPackageReordered)

- long **getTxBytes** ()
- void **setTxBytes** (long txBytes)
- int **getTxJitterMean** ()
- void **setTxJitterMean** (int txJitterMean)
- int **getTxLossPeriodMean** ()
- void **setTxLossPeriodMean** (int txLossPeriodMean)
- long **getTxPackageDiscard** ()
- void **setTxPackageDiscard** (long txPackageDiscard)
- long **getTxPackageDuplicated** ()
- void **setTxPackageDuplicated** (long txPackageDuplicated)
- long **getTxPackageLost** ()
- void **setTxPackageLost** (long txPackageLost)
- long **getTxPackageNumber** ()
- void **setTxPackageNumber** (long txPackageNumber)
- long **getTxPackageReordered** ()
- void **setTxPackageReordered** (long txPackageReordered)

### 2.15.1 Detailed Description

Created by vegidio on 5/26/15.

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

- CallStats.java

## 2.16 com.bandwidth.bwsip.receivers.ConnectivityChangeReceiver Class Reference

Inherits BroadcastReceiver.

### Public Member Functions

- void **onReceive** (Context context, Intent intent)

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

- ConnectivityChangeReceiver.java

## 2.17 com.bandwidth.bwsip.models.EndpointInfo Class Reference

### Public Member Functions

- String **getIpLocalAddress** ()

- void **setIpLocalAddress** (String ipLocalAddress)
- String **getIpRemoteAddress** ()
- void **setIpRemoteAddress** (String ipRemoteAddress)
- List< String > **getNameServers** ()
- void **setNameServers** (List< String > nameServers)
- String **getWifiSSID** ()
- void **setWifiSSID** (String wifiSSID)

### 2.17.1 Detailed Description

Created by vegidio on 5/26/15.

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

- EndpointInfo.java

## 2.18 com.bandwidth.bwsip.receivers.KeepAliveReceiver Class - Reference

Inherits BroadcastReceiver.

### Public Member Functions

- void **onReceive** (Context context, Intent intent)

### 2.18.1 Detailed Description

Created by vegidio on 2/25/15.

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

- KeepAliveReceiver.java

## 2.19 com.bandwidth.bwsip.services.KeepAliveService Class - Reference

Inherits Service.

### Public Member Functions

- IBinder **onBind** (Intent intent)
- void **onCreate** ()
- int **onStartCommand** (Intent intent, int flags, int startId)

## Static Public Member Functions

- static int [getShortestRegistrationInterval](#) ()
- static void [cancelAlarms](#) ()
- static void [scheduleAlarm](#) (int registrationInterval)

### 2.19.1 Detailed Description

Created by vegidio on 2/25/15.

### 2.19.2 Member Function Documentation

**2.19.2.1 static void com.bandwidth.bwsip.services.KeepAliveService.cancelAlarms ( ) [static]**

Cancel any existing alarm.

**2.19.2.2 static int com.bandwidth.bwsip.services.KeepAliveService.getShortestRegistrationInterval ( ) [static]**

Get the shortest registration interval across all accounts.

#### Returns

int the registration interval, in seconds.

**2.19.2.3 static void com.bandwidth.bwsip.services.KeepAliveService.scheduleAlarm ( int registrationInterval ) [static]**

Schedule an alarm to run X seconds after the current time.

#### Parameters

<i>registration-Interval</i>	the registration interval, in seconds.
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The documentation for this class was generated from the following file:

- KeepAliveService.java

## 2.20 com.bandwidth.bwsip.BWAccount.MyAccount Class Reference

Inherits Account.

### Public Member Functions

- **MyAccount** ([BWAccount](#) bwAccount)
- void **onRegState** (OnRegStateParam prm)
- void **onIncomingCall** (OnIncomingCallParam prm)

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

- BWAccount.java