

USense Version 1.2

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Chapter 5

Namespace Documentation

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Packages

- package [meapsoft](#)

5.2 Package com.meapsoft

Classes

- class [FFT](#)

5.2.1 Detailed Description

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5.3 Package cs

Packages

- package [usense](#)

5.4 Package cs.usense

Packages

- package [accelerometer](#)
- package [bluetooth](#)
- package [db](#)
- package [inferenceModule](#)
- package [location](#)
- package [microphone](#)

Classes

- interface [ChangeListener](#)
- class [CircleDisplay](#)
- class [SensorProduct](#)
- class [SIAdapter](#)
- class [UsenseActivity](#)
- class [UsenseHistoryActivity](#)
- class [UsenseHistoryAdapter](#)
- class [UsenseService](#)

5.4.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. This class provides an interface to update pipeline information and provides the information to USenseService class, and USenseActivity class.

Author

Saeik Firdose (COPELABS/ULHT),
Luis Lopes (COPELABS/ULHT),
Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for USenseActivity class and provides custom-view for displaying the SocialInteraction and Propinquity level.

Author

Saeik Firdose (COPELABS/ULHT)
Philipp Jahoda

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support to USense service by providing the sensors to initiate for the each and every pipeline.

Author

Saeik Firdose (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for Inference module, USense activity and provides the functionality to update the SocialityDetails.

Author

Saeik Firdose (COPELABS/ULHT)
Luis Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. This class controls the User Interface and update it based on [UsenseService](#) results.

Author

Saeik Firdose (COPELABS/ULHT),
Luis Lopes (COPELABS/ULHT),
Waldir Moreira (COPELABS/ULHT),
Reddy Pallavali (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support to the USense History Activity.

Author

Saeik Firdose (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support to the USense History Activity, and provides the list of devices, SocialInteraction, and Propinquity information with the layout.

Author

Saeik Firdose (COPELABS/ULHT)
Luis Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It initialize and controls all the pipelines/modules, database and send the information to the USense↔ Activity.

Author

Saeik Firdose (COPELABS/ULHT),
Luis Lopes (COPELABS/ULHT),
Waldir Moreira (COPELABS/ULHT),
Reddy Pallavali (COPELABS/ULHT)

5.5 Package cs.usense.accelerometer

Classes

- interface [AccelerometerListener](#)
- class [AccelerometerPipeline](#)
- class [AccelerSenManager](#)
- class [ActionsEntry](#)
- class [Globals](#)
- class [WekaClassifier](#)

5.5.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. This class provides support for accelerometer pipeline, and it used to listen the accelerometer sensor orientation changes.

Author

Saeik Firdose (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for accelerometer pipeline.

Author

Saeik Firdose (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. This class is provided as input the classify the the activities in real time.

Author

Saeik Firdose (COPELABS/ULHT)

5.6 Package cs.usense.bluetooth

Classes

- class [BluetoothCore](#)
- interface [BTDeviceFinder](#)
- class [BTManager](#)
- class [BTUserDevAverageEncounterDuration](#)
- class [BTUserDevEncounterDuration](#)
- class [BTUserDevice](#)
- class [BTUserDevSocialWeight](#)
- class [OnNewHourUpdate](#)

5.6.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class contains the core functionalities of the application. The [BTManager](#) provides all the information from Bluetooth adapter so this class can perform the social context analysis prior to storing the required information in the database.

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. It provides the interface between [BTManager](#) and [BluetoothCore](#).

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class provides some methods to provide extended functionality to the android BluetoothAdapter.

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class holds the average duration of encounter between a peer and the user device in specific time slots. The information kept are device MAC address and average encounter duration.

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class holds the encounter duration between a peer and the user device in specific time slots. The information kept are device MAC address and time spent in the vicinity (i.e., total time within communication range).

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class represents a user device found by means of Bluetooth. The information kept are device name, MAC address, and time of first encounter.

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class holds the social weight between a peer and the user device in specific time slots. The information kept are device MAC address and social weight.

Author

Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 06-04-2016 Class is part of the USense application. This class is responsible for computing the social weight among users.

Author

Waldir Moreira (COPELABS/ULHT)

5.7 Package `cs.usense.db`

Classes

- interface [DataBaseChangeListener](#)
- class [UsenseDataSource](#)
- class [UsenseSQLiteHelper](#)

5.7.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for DataBase module.

Author

Saeik Firdose (COPELABS/ULHT)
Luis Lopes (COPELABS/ULHT),
Waldir Moreira (COPELABS/ULHT),
Reddy Pallavali (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. This class support for DataBase module and it provides various methods to access the DB from external modules.

Author

Saeik Firdose (COPELABS/ULHT),
Luis Lopes (COPELABS/ULHT),
Waldir Moreira (COPELABS/ULHT),
Reddy Pallavali (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for DataBase module. This class provides helper methods to the USenseDataSource.

Author

Saeik Firdose (COPELABS/ULHT),
Luis Lopes (COPELABS/ULHT),
Waldir Moreira (COPELABS/ULHT),
Reddy Pallavali (COPELABS/ULHT)

5.8 Package `cs.usense.inferenceModule`

Classes

- class [SocialInteraction](#)
- class [SocialityDetails](#)
- class [SocialityDetailsListParcelable](#)

5.8.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for [UsenseService](#) and USenseActivity classes to compute Social Interaction and Propinquity.

Author

Saeik Firdose (COPELABS/ULHT)
Waldir Moreira (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for inference module and provides the [SocialityDetails](#) object to store the information to compute Social Interaction and Propinquity.

Author

Saeik Firdose (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides helper methods for [SocialityDetails](#) class.

Author

Saeik Firdose (COPELABS/ULHT)

5.9 Package cs.usense.location

Classes

- class [CleanTask](#)
- class [LocationEntry](#)
- class [LocationPipeline](#)
- class [RelativePositionWiFiNoConnection](#)
- class [WifiAccessPoint](#)
- class [WifiServiceSearcher](#)

5.9.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 16-11-2015 Class is part of the USense application. This class verifies every location entry at the DB and removes the entries that were updated more than 6 minutes ago. This class is called by a Timer, and it is repeatedly called.

Author

Luis Amaral Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 16-11-2015 Class is part of the USense application. This class represents a entry from the location table.

Author

Luis Amaral Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 16-11-2015 Class is part of the USense application. This class is the entry point of Location Pipeline. It initializes all necessary modules to compute the relative distance to other devices.

Author

Luis Amaral Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 16-11-2015 Class is part of the USense application. It manages the Wi-Fi and also the Wi-Fi P2P to compute the relative distance to others devices.

Author

Luis Amaral Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 16-11-2015 Class is part of the USense application. This class is the entry point of Location Pipeline. When there are usense devices near (provided by [WifiService↔Searcher](#)) it performs a WiFi scan to detect this devices a to compute the respective relative distance.

Author

Luis Amaral Lopes (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, 16-11-2015 Class is part of the USense application. This class manage all the devices found at the WiFi p2p discover mechanism.

Author

Luis Amaral Lopes (COPELABS/ULHT)

5.10 Package `cs.usense.microphone`

Classes

- class [MicrophonePipeline](#)
- class [SoundLevel](#)
- interface [SoundListener](#)
- class [SoundManager](#)

5.10.1 Detailed Description

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for Microphone pipeline. This class is contains the core functionalities of the application relating to Microphone. The [SoundManager](#) provides all the information from Microphone adapter so this class can perform the analysis over Environmental Sound prior to storing the required information in the database. Some of the code is adapted from Google's NoiseAlert application code.

Author

Reddy Pallavali (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for Microphone pipeline and this class extracts the different sound levels such as Quite, Normal, Alert, and Noisy based on the sound frequency levels.

Author

Reddy Pallavali (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for Microphone pipeline and this class is the listener class to update sound levels in the application.

Author

Reddy Pallavali (COPELABS/ULHT)

Version

1.2 COPYRIGHTS COPELABS/ULHT, LGPLv3.0, date (e.g. 22-04-2016) Class is part of the USense application. It provides support for Microphone pipeline. This class provides the core idealogy of sound process with microphone adapter.

Author

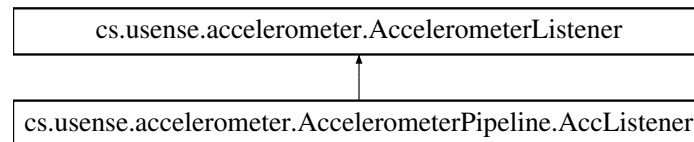
Reddy Pallavali (COPELABS/ULHT)

Chapter 6

Class Documentation

6.1 cs.usense.accelerometer.AccelerometerListener Interface Reference

Inheritance diagram for cs.usense.accelerometer.AccelerometerListener:



Public Member Functions

- void [updateBuffer](#) (float x, float y, float z)

6.1.1 Detailed Description

This class provides an interface to `updateBuffer`

6.1.2 Member Function Documentation

6.1.2.1 void cs.usense.accelerometer.AccelerometerListener.updateBuffer (float x, float y, float z)

This method `updateBuffer` when accelerometer sensor orientation changes

Parameters

x	X-axis represent tilting the phone from left - right and vice versa
y	Y-axis represent tilting the phone upside down and vice versa
z	Z-axis represent lifting the phone screen side up and down

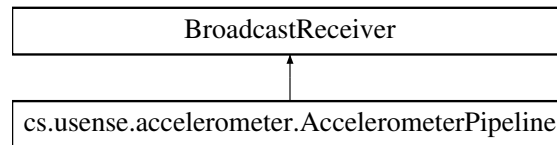
Implemented in [cs.usense.accelerometer.AccelerometerPipeline.AccListener](#).

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

- `src/cs/usense/accelerometer/AccelerometerListener.java`

6.2 cs.usense.accelerometer.AccelerometerPipeline Class Reference

Inheritance diagram for cs.usense.accelerometer.AccelerometerPipeline:



Classes

- class [AccListener](#)
- class [ActivityClassificationTask](#)
- class [HourChangeAlarmReceiver](#)
- class [PreviousAction](#)

Public Member Functions

- [AccelerometerPipeline](#) ([UsenseService](#) callback, [UsenseDataSource](#) dataSource)
- void [close](#) (Context context)
- int [getTimeSlot](#) ()
- void [appendLog](#) (String text, String start)
- void [onReceive](#) (Context context, Intent intent)

Static Public Member Functions

- static int[] [convertIntegers](#) (List< Integer > integers)
- static int [filterActivity](#) (int[] k1)

Static Public Attributes

- static String [mpreviousActionType](#) = ""
- static double [mpreviousDuration](#) = 0

Private Member Functions

- void [notifyDataBaseChange](#) ()

Private Attributes

- Context [mContext](#) = null
- [ActivityClassificationTask](#) [mActivityClassificationTask](#)
- [AccelerSenManager](#) [accelerSenManager](#)
- [AccelerometerListener](#) [accelerListener](#)
- [UsenseDataSource](#) [dataSource](#)
- [UsenseService](#) [callback](#) = null
- [SensorManager](#) [mSensorManager](#)
- ArrayList< [DataBaseChangeListener](#) > [listeners](#) = new ArrayList<[DataBaseChangeListener](#)> ()
- [PreviousAction](#) [mPreviousAction](#) = new [PreviousAction](#)()

Static Private Attributes

- static final String `TAG` = "ACCELEROMETER"
- static ArrayBlockingQueue< Double > `mAccBuffer`
- static String `actiontype` = ""
- static `ActionsEntry actualActionEntry` = null

6.2.1 Detailed Description

This class provides various methods to provide Accelerometer sensor data

6.2.2 Constructor & Destructor Documentation

6.2.2.1 `cs.usense.accelerometer.AccelerometerPipeline.AccelerometerPipeline (UsenseService callback, UsenseDataSource dataSource)`

This class instantiate the [AccelerometerPipeline](#) and initialize the listener and activity classification task

Parameters

<i>callback</i>	Supply functionality for UsenseActivity to use
<i>dataSource</i>	UsenseDataSource to access various methods and information of the USense Data base

6.2.3 Member Function Documentation

6.2.3.1 `void cs.usense.accelerometer.AccelerometerPipeline.appendLog (String text, String start)`

This method store the logs into USenseActivity.txt file

Parameters

<i>text</i>	Activity Type
<i>start</i>	Activity Start time

BufferedWriter for performance, true to set append to file flag

6.2.3.2 `void cs.usense.accelerometer.AccelerometerPipeline.close (Context context)`

This method close the context

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

6.2.3.3 `static int [] cs.usense.accelerometer.AccelerometerPipeline.convertIntegers (List< Integer > integers)`
[static]

This method converts list of integers

Parameters

<i>integers</i>	list with integers
-----------------	--------------------

Returns

ret list with integers

6.2.3.4 `static int cs.usense.accelerometer.AccelerometerPipeline.filterActivity (int[] k1) [static]`

This method to filter the activities to provide the confidence level

Parameters

<i>k1</i>	Number of activity instances
-----------	------------------------------

Returns

activityType activityType Type of the activity

6.2.3.5 int cs.usense.accelerometer.AccelerometerPipeline.getTimeSlot ()

This method provides the current time slot

Returns

currentTimeSlot current time slot

6.2.3.6 void cs.usense.accelerometer.AccelerometerPipeline.notifyDataBaseChange () [private]

This method provides the notifications when the database has new entries or updates

6.2.3.7 void cs.usense.accelerometer.AccelerometerPipeline.onReceive (Context context, Intent intent)

This method of the receiver is called by the Android system

Parameters

<i>context</i>	Interface to global information about an application environment.
<i>intent</i>	The intent.

6.2.4 Member Data Documentation

6.2.4.1 AccelerometerListener cs.usense.accelerometer.AccelerometerPipeline.accelerListener [private]

This class is to access functionality of Accelerometer Listener

6.2.4.2 AccelerSenManager cs.usense.accelerometer.AccelerometerPipeline.accelerSenManager [private]

This class is to access functionality of Sensor Manager

6.2.4.3 String cs.usense.accelerometer.AccelerometerPipeline.actiontype = "" [static], [private]

This variable is to store action type

6.2.4.4 ActionsEntry cs.usense.accelerometer.AccelerometerPipeline.actualActionEntry = null [static], [private]

This variable is to get the action details

6.2.4.5 UsenseService cs.usense.accelerometer.AccelerometerPipeline.callback = null [private]

This class is to access the functionality of Usense Service

6.2.4.6 UsenseDataSource `cs.usense.accelerometer.AccelerometerPipeline.dataSource` [private]

This class is to access functionality of Usense Data base

6.2.4.7 ArrayList<DataBaseChangeListener> `cs.usense.accelerometer.AccelerometerPipeline.listeners = new ArrayList<DataBaseChangeListener>()` [private]

This variable is to get the database listeners

6.2.4.8 ArrayBlockingQueue<Double> `cs.usense.accelerometer.AccelerometerPipeline.mAccBuffer` [static], [private]

This variable is to store the Buffer

6.2.4.9 ActivityClassificationTask `cs.usense.accelerometer.AccelerometerPipeline.mActivityClassificationTask` [private]

This class is to access functionality from Activity Classification Task of accelerometer pipeline

6.2.4.10 Context `cs.usense.accelerometer.AccelerometerPipeline.mContext = null` [private]

Interface to global information about an application environment.

6.2.4.11 PreviousAction `cs.usense.accelerometer.AccelerometerPipeline.mPreviousAction = new PreviousAction()` [private]

6.2.4.12 String `cs.usense.accelerometer.AccelerometerPipeline.mpreviousActionType = ""` [static]

6.2.4.13 double `cs.usense.accelerometer.AccelerometerPipeline.mpreviousDuration = 0` [static]

6.2.4.14 SensorManager `cs.usense.accelerometer.AccelerometerPipeline.mSensorManager` [private]

This class is to access functionality of Sensor Manager

6.2.4.15 final String `cs.usense.accelerometer.AccelerometerPipeline.TAG = "ACCELEROMETER"` [static], [private]

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

- `src/cs/usense/accelerometer/AccelerometerPipeline.java`

6.3 cs.usense.accelerometer.AccelerSenManager Class Reference

Public Member Functions

- [AccelerSenManager](#) (Context context)
- void [close](#) ()
- void [setAccelerListener](#) ([AccelerometerListener](#) listener)
- void [stopListening](#) ()
- void [startListening](#) ()

Static Public Member Functions

- static boolean [isListening](#) ()
- static boolean [isSupported](#) (Context context)

Static Private Attributes

- static final String [TAG](#) = "ACCELEROMETER"
- static Context [aContext](#) = null
- static Sensor [sensor](#)
- static SensorManager [sensorManager](#)
- static [AccelerometerListener](#) [listener](#)
- static Boolean [supported](#)
- static boolean [running](#) = false
- static SensorEventListener [sensorEventListener](#)

6.3.1 Detailed Description

This class provides some methods to provide the actions to the [UsenseService](#)

6.3.2 Constructor & Destructor Documentation

6.3.2.1 cs.usense.accelerometer.AccelerSenManager.AccelerSenManager (Context context)

This method start listening to the accelerometer sensor changes

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

6.3.3 Member Function Documentation

6.3.3.1 void cs.usense.accelerometer.AccelerSenManager.close ()

This method close the listener if it is not listening

6.3.3.2 static boolean cs.usense.accelerometer.AccelerSenManager.isListening () [static]

This method to check whether sensor manager class is listening to orientation changes

Returns

running true if the manager is listening to orientation changes

6.3.3.3 static boolean cs.usense.accelerometer.AccelerSenManager.isSupported (Context context) [static]

This method returns true if at least one Accelerometer sensor is available

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

Returns

true if Accelerometer sensor is available

6.3.3.4 void cs.usense.accelerometer.AccelerSenManager.setAccelerListener (AccelerometerListener listener)

This method set the listener

Parameters

<i>listener</i>	To listen the accelerometer sensor orientation changes
-----------------	--

6.3.3.5 void cs.usense.accelerometer.AccelerSenManager.startListening ()

This method registers a listener and start listening

Returns

running accelerometerListener callback for accelerometer events

6.3.3.6 void cs.usense.accelerometer.AccelerSenManager.stopListening ()

This method Unregisters listeners

6.3.4 Member Data Documentation

6.3.4.1 Context cs.usense.accelerometer.AccelerSenManager.aContext = null [static],[private]

Interface to global information about an application environment.

6.3.4.2 AccelerometerListener cs.usense.accelerometer.AccelerSenManager.listener [static],[private]

you could use an OrientationListener array instead if you plans to use more than one listener

6.3.4.3 boolean cs.usense.accelerometer.AccelerSenManager.running = false [static],[private]

indicates whether or not Accelerometer Sensor is running

6.3.4.4 Sensor cs.usense.accelerometer.AccelerSenManager.sensor [static],[private]

This class is to check the type of sensor

6.3.4.5 SensorEventListener cs.usense.accelerometer.AccelerSenManager.sensorEventListener [static],[private]

Initial value:


```

=
    new SensorEventListener() {
        private float x = 0;
        private float y = 0;
        private float z = 0;

        public void onAccuracyChanged(Sensor sensor, int accuracy) {}

        public void onSensorChanged(SensorEvent event) {
            x = event.values[0];
            y = event.values[1];
            z = event.values[2];

            listener.updateBuffer(x, y, z);
        }
    }
}

```

This method listen to events from the accelerometer listener

6.3.4.6 `SensorManager cs.usense.accelerometer.AccelerSenManager.sensorManager` [static], [private]

This class is to access functionality of Sensor Manager

6.3.4.7 `Boolean cs.usense.accelerometer.AccelerSenManager.supported` [static], [private]

indicates whether or not Accelerometer Sensor is supported

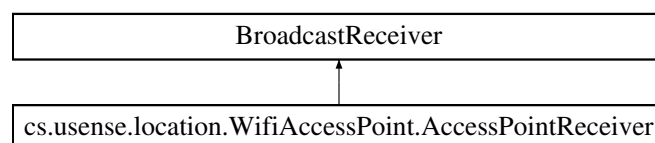
6.3.4.8 `final String cs.usense.accelerometer.AccelerSenManager.TAG = "ACCELEROMETER"` [static], [private]

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

- `src/cs/usense/accelerometer/AccelerSenManager.java`

6.4 cs.usense.location.WifiAccessPoint.AccessPointReceiver Class Reference

Inheritance diagram for `cs.usense.location.WifiAccessPoint.AccessPointReceiver`:



Public Member Functions

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

6.4.1 Detailed Description

BroadcastReceiver that receives events about WiFi state and WiFi connection state.

Author

Luis Amaral Lopes (COPELABS/ULHT)

6.4.2 Member Function Documentation

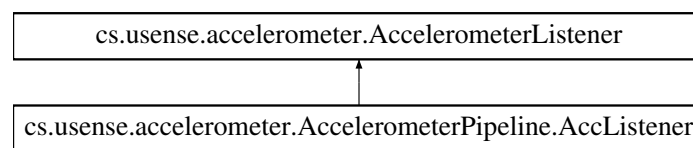
6.4.2.1 void `cs.usense.location.WifiAccessPoint.AccessPointReceiver.onReceive` (Context *context*, Intent *intent*)

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

- `src/cs/usense/location/WifiAccessPoint.java`

6.5 `cs.usense.accelerometer.AccelerometerPipeline.AccListener` Class Reference

Inheritance diagram for `cs.usense.accelerometer.AccelerometerPipeline.AccListener`:



Public Member Functions

- void `updateBuffer` (float *x*, float *y*, float *z*)

6.5.1 Detailed Description

This class provide the method to listen the accelerometer changes

6.5.2 Member Function Documentation

6.5.2.1 void `cs.usense.accelerometer.AccelerometerPipeline.AccListener.updateBuffer` (float *x*, float *y*, float *z*)

This method `updateBuffer` when accelerometer sensor orientation changes

Parameters

<i>x</i>	X-axis represent tilting the phone from left - right and vice versa
<i>y</i>	Y-axis represent tilting the phone upside down and vice versa
<i>z</i>	Z-axis represent lifting the phone screen side up and down

Exception happens when reach the capacity. Doubling the buffer. `ListBlockingQueue` has no such issue, But generally has worse performance

Implements `cs.usense.accelerometer.AccelerometerListener`.

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

- `src/cs/usense/accelerometer/AccelerometerPipeline.java`

6.6 `cs.usense.accelerometer.ActionsEntry` Class Reference

Public Member Functions

- `ActionsEntry` ()
- String `toString` ()

- String [getActionType](#) ()
- void [setActionType](#) (String actionType)
- long [getActionStartTime](#) ()
- long [getDay](#) ()
- void [setDay](#) (long day)
- int [getHour](#) ()
- void [setHour](#) (int hour)
- void [setActionStartTime](#) (long actionStartTime)
- double [getAverageDuration](#) ()
- void [setAverageDuration](#) (double averageDuration)
- long [getActionEndTime](#) ()
- void [setActionEndTime](#) (long actionEndTime)
- String [getTimeFrame](#) ()
- void [setTimeFrame](#) (String timeFrame)
- int [getActionCounter](#) ()
- void [setActionCounter](#) (int actionCounter)
- int [getID](#) ()
- void [setID](#) (int iD)

Private Attributes

- int [ID](#)
- String [ActionType](#)
- long [ActionStartTime](#)
- double [AverageDuration](#)
- long [ActionEndTime](#)
- long [Day](#)
- int [Hour](#)
- String [TimeFrame](#)
- int [ActionCounter](#)

6.6.1 Detailed Description

This class provides various methods to provide the action details to the [UsenseService](#)

6.6.2 Constructor & Destructor Documentation

6.6.2.1 cs.usense.accelerometer.ActionsEntry.ActionsEntry ()

This method constructs the Actions Entry

6.6.3 Member Function Documentation

6.6.3.1 int cs.usense.accelerometer.ActionsEntry.getActionCounter ()

This method get the action counter

Returns

ActionCounter the action counter

6.6.3.2 `long cs.usense.accelerometer.ActionsEntry.getActionEndTime ()`

This method get the action end time

Returns

ActionEndTime the action end time

6.6.3.3 `long cs.usense.accelerometer.ActionsEntry.getActionStartTime ()`

This method to get Action Start Time

Returns

ActionStartTime the action start time

6.6.3.4 `String cs.usense.accelerometer.ActionsEntry.getActionType ()`

This method get the action type

Returns

ActionType the action type

6.6.3.5 `double cs.usense.accelerometer.ActionsEntry.getAverageDuration ()`

This method get the average duration

Returns

AverageDuration the average duration

6.6.3.6 `long cs.usense.accelerometer.ActionsEntry.getDay ()`

This method get the day

Returns

Day the current day

6.6.3.7 `int cs.usense.accelerometer.ActionsEntry.getHour ()`

This method get the hour

Returns

hour the hour

6.6.3.8 `int cs.usense.accelerometer.ActionsEntry.getID ()`

This method get the id

Returns

the iD ithe id

6.6.3.9 String cs.usense.accelerometer.ActionsEntry.getTimeFrame ()

This method get the time frame

Returns

TimeFrame the time frame

6.6.3.10 void cs.usense.accelerometer.ActionsEntry.setActionCounter (int *actionCounter*)

This method set the action counter

Parameters

<i>actionCounter</i>	the action counter
----------------------	--------------------

6.6.3.11 void cs.usense.accelerometer.ActionsEntry.setActionEndTime (long *actionEndTime*)

This method set the action end time

Parameters

<i>actionEndTime</i>	the action end time
----------------------	---------------------

6.6.3.12 void cs.usense.accelerometer.ActionsEntry.setActionStartTime (long *actionStartTime*)

This method set the action start time

Parameters

<i>actionStartTime</i>	the action start time
------------------------	-----------------------

6.6.3.13 void cs.usense.accelerometer.ActionsEntry.setActionType (String *actionType*)

This method set the actionType

Parameters

<i>actionType</i>	the action type
-------------------	-----------------

6.6.3.14 void cs.usense.accelerometer.ActionsEntry.setAverageDuration (double *averageDuration*)

This method set the averageDuration

Parameters

<i>averageDuration</i>	the average duration
------------------------	----------------------

6.6.3.15 void cs.usense.accelerometer.ActionsEntry.setDay (long *day*)

This method set the day

Parameters

<i>day</i>	the current day
------------	-----------------

6.6.3.16 void cs.usense.accelerometer.ActionsEntry.setHour (int *hour*)

This method set hour

Parameters

<i>hour</i>	the hour
-------------	----------

6.6.3.17 void cs.usense.accelerometer.ActionsEntry.setID (int *iD*)

This method set the iD

Parameters

<i>iD</i>	the iD
-----------	--------

6.6.3.18 void cs.usense.accelerometer.ActionsEntry.setTimeFrame (String *timeFrame*)

This method set the time frame

Parameters

<i>timeFrame</i>	the time frame
------------------	----------------

6.6.3.19 String cs.usense.accelerometer.ActionsEntry.toString ()

This method return a string containing the ACTIONTYPE, ActionStartTime, AverageDuration, ActionEndTime, HOUR, ACTIONCOUNTER, DAY, and TIMEFRAME.

Returns

string String with the ACTIONTYPE, ActionStartTime, AverageDuration, ActionEndTime, HOUR, ACTIONCOUNTER, DAY, and TIMEFRAME values

6.6.4 Member Data Documentation

6.6.4.1 int cs.usense.accelerometer.ActionsEntry.ActionCounter [private]

ActionCounter variable of the [ActionsEntry](#) object

6.6.4.2 long cs.usense.accelerometer.ActionsEntry.ActionEndTime [private]

ActionEndTime variable of the [ActionsEntry](#) object

6.6.4.3 long cs.usense.accelerometer.ActionsEntry.ActionStartTime [private]

ActionStartTime variable of the [ActionsEntry](#) object

6.6.4.4 String cs.usense.accelerometer.ActionsEntry.ActionType [private]

ActionType variable of the [ActionsEntry](#) object

6.6.4.5 double cs.usense.accelerometer.ActionsEntry.AverageDuration [private]

AverageDuration variable of the [ActionsEntry](#) object

6.6.4.6 long cs.usense.accelerometer.ActionsEntry.Day [private]

Day variable of the [ActionsEntry](#) object

6.6.4.7 int cs.usense.accelerometer.ActionsEntry.Hour [private]

Hour variable of the [ActionsEntry](#) object

6.6.4.8 int cs.usense.accelerometer.ActionsEntry.ID [private]

Id variable of the [ActionsEntry](#) object

6.6.4.9 String cs.usense.accelerometer.ActionsEntry.TimeFrame [private]

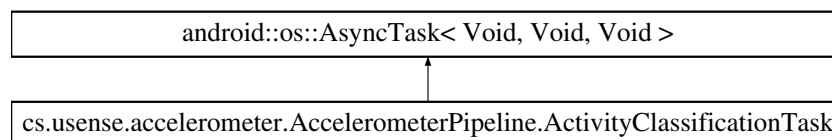
TimeFrame variable of the [ActionsEntry](#) object

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

- src/cs/usense/accelerometer/[ActionsEntry.java](#)

6.7 cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask Class Reference

Inheritance diagram for cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask:



Public Member Functions

- [ActivityClassificationTask](#) ()
- void [registerActiononDB](#) (String [actiontype](#), double mDuration, long start)

Protected Member Functions

- Void [doInBackground](#) (Void...arg0)

Private Member Functions

- void `updateAction` (String `actiontype`, double `mDuration`, long `start`)

Static Private Attributes

- static final int `mFeatLen` = `Globals.ACCELEROMETER_BLOCK_CAPACITY` + 2

6.7.1 Detailed Description

This class provides the real time activities by extending with asynchronous task

6.7.2 Constructor & Destructor Documentation

6.7.2.1 `cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask.ActivityClassificationTask ()`

6.7.3 Member Function Documentation

6.7.3.1 `Void cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask.doInBackground (Void... arg0)`
[protected]

Get Hour and Day

Clear the field

Append max after frequency component

Initialize array of 16 size and Store the entries computing the relevant activity and clear the array size and reinitialize array

Notifying the actiontype to the service

clearing feature vector

6.7.3.2 `void cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask.registerActiononDB (String actiontype, double mDuration, long start)`

This method to register actions in data base

Parameters

<i>actiontype</i>	Current action type
<i>mDuration</i>	Duration of the current activity
<i>start</i>	Start time of the activity

logic for Weekdays and weekend

6.7.3.3 `void cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask.updateAction (String actiontype, double mDuration, long start)` [private]

This method update the database when the activity is changed

Parameters

<i>actiontype</i>	Current action type
<i>mDuration</i>	Duration of the current activity
<i>start</i>	Start time of the activity

Get Hour and Day

6.7.4 Member Data Documentation

6.7.4.1 `final int cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask.mFeatLen = Globals.ACCELEROMETER_BLOCK_CAPACITY + 2` `[static], [private]`

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

- `src/cs/usense/accelerometer/AccelerometerPipeline.java`

6.8 cs.usense.bluetooth.BluetoothCore Class Reference

Classes

- class [CustomComparator](#)
- class **ServiceBTListener**
- class [socialWeight](#)

Public Member Functions

- [BluetoothCore](#) ([UsenseService](#) callback, Context context, [UsenseDataSource](#) datasource)
- boolean [isDeviceOnDB](#) (String deviceAdd)
- ArrayList< [socialWeight](#) > [getSocialWeightDetails](#) ()
- void [close](#) (Context context)
- int [getTimeSlot](#) ()

Private Member Functions

- void [notifyDataBaseChange](#) ()

Private Attributes

- [BTManager](#) myBTManager
- ServiceBTListener [btListener](#)
- AlarmManager [alarmMgr](#)
- PendingIntent [alarmIntent](#)
- [OnNewHourUpdate](#) newHour
- [UsenseDataSource](#) datasource
- [UsenseService](#) callback = null

6.8.1 Constructor & Destructor Documentation

6.8.1.1 `cs.usense.bluetooth.BluetoothCore.BluetoothCore (UsenseService callback, Context context, UsenseDataSource datasource)`

This method is the constructor for [BluetoothCore](#).

Parameters

<i>callback</i>	Supply UsenseService object for UsenseActivity to use
<i>context</i>	Interface to global information about an application environment.
<i>datasource</i>	UsenseDataSource to access various methods and information of the USense Data base

6.8.2 Member Function Documentation

6.8.2.1 void cs.usense.bluetooth.BluetoothCore.close (Context *context*)

This method unregisters BroadcastReceiver and closes the Bluetooth manager.

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

6.8.2.2 `ArrayList<socialWeight> cs.usense.bluetooth.BluetoothCore.getSocialWeightDetails ()`

This method provides social weight information for encountered devices.

Returns

`listWeights` The list of devices and social weights towards them in descending order.

Getting highest scial weight value

6.8.2.3 `int cs.usense.bluetooth.BluetoothCore.getTimeSlot ()`

This method provides the current time slot.

Returns

`currentTimeSlot` The actual time slot.

6.8.2.4 `boolean cs.usense.bluetooth.BluetoothCore.isDeviceOnDB (String deviceAdd)`

This method checks whether the device is in database.

Parameters

<i>deviceAdd</i>	The device MAC address.
------------------	-------------------------

Returns

`true`, if device is in DB, `false` otherwise.

6.8.2.5 `void cs.usense.bluetooth.BluetoothCore.notifyDataBaseChange () [private]`

This method notifies a database change to the listeners.

6.8.3 Member Data Documentation

6.8.3.1 `PendingIntent cs.usense.bluetooth.BluetoothCore.alarmIntent [private]`

This class is to access functionality of `PendingIntent`

6.8.3.2 `AlarmManager cs.usense.bluetooth.BluetoothCore.alarmMgr [private]`

This class is to access functionality of `AlarmManager`

6.8.3.3 `ServiceBTListener cs.usense.bluetooth.BluetoothCore.btListener [private]`

This class is to access functionality of `ServiceBTListener`

6.8.3.4 **UsenseService** `cs.usense.bluetooth.BluetoothCore.callback = null` [private]

This class is to access the functionality of Usense Service

6.8.3.5 **UsenseDataSource** `cs.usense.bluetooth.BluetoothCore.datasource` [private]

This class is to access functionality of Usense Data base

6.8.3.6 **BTManager** `cs.usense.bluetooth.BluetoothCore.myBTManager` [private]

This class is to access functionality of [BTManager](#)

6.8.3.7 **OnNewHourUpdate** `cs.usense.bluetooth.BluetoothCore.newHour` [private]

This class is to access functionality of [OnNewHourUpdate](#)

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

- `src/cs/usense/bluetooth/BluetoothCore.java`

6.9 **cs.usense.bluetooth.BTDeviceFinder** Interface Reference

Inherited by `cs.usense.bluetooth.BluetoothCore.ServiceBTListener`.

Public Member Functions

- void [onDeviceFound](#) (BluetoothDevice device, BluetoothClass btClass)

6.9.1 Detailed Description

This class provides the interface between [BTManager](#) and [BluetoothCore](#).

Author

Waldir Moreira (COPELABS/ULHT)

6.9.2 Member Function Documentation

6.9.2.1 void `cs.usense.bluetooth.BTDeviceFinder.onDeviceFound` (BluetoothDevice *device*, BluetoothClass *btClass*)

This method called when device found from BluetoothDevice and BluetoothClass

Parameters

<i>device</i>	Bluetooth Device
<i>btClass</i>	Bluetooth Class

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

- `src/cs/usense/bluetooth/BTDeviceFinder.java`

6.10 cs.usense.bluetooth.BTManager Class Reference

Classes

- class **adapterBroadcastReceiver**
- class **FindBluetoothDevice**

Public Member Functions

- [BTManager](#) (Context c)
- void [close](#) (Context c)
- void [startPeriodicScanning](#) ()
- boolean [isBTEnabled](#) ()
- boolean [enableBT](#) ()
- boolean [startDiscovery](#) ()
- void [setOnBTChangeListener](#) (BTDeviceFinder listener)
- void [clearOnBTChangeListener](#) ()
- List< String > [getLocalInfo](#) ()

Public Attributes

- boolean [isScanningActive](#) = false
- boolean [isWaitingScanResults](#) = false

Static Public Attributes

- static int [DISCOVER_INTERVAL](#) = 180000

Private Member Functions

- void [stopPeriodicScanning](#) ()

Private Attributes

- boolean [debug](#) = true
- Context [mContext](#)
- BluetoothAdapter [androidBTAdapter](#)
- BluetoothServerSocket [socket](#)
- UUID [uuid](#) = UUID.fromString("10101010-0101-0101-0101-010101010101")
- Map< BluetoothDevice, BluetoothClass > [btDeviceList](#) = new HashMap<BluetoothDevice, BluetoothClass>()
- FindBluetoothDevice [BTDevFinder](#)
- adapterBroadcastReceiver [adapterReceiver](#)
- BTDeviceFinder listener
- String [fetchingUUIDfromDevice](#)
- Handler [mHandler](#) = new Handler()
- Runnable [runScan](#)

Static Private Attributes

- static final String [TAG](#) = "BTManager"
- static boolean [mBTisTurningOnOff](#) = false

6.10.1 Constructor & Destructor Documentation

6.10.1.1 `cs.usense.bluetooth.BTManager.BTManager (Context c)`

This method is the constructor for [BTManager](#).

Parameters

<i>c</i>	Interface to global information about an application environment.
----------	---

Advertised UUID to let peer node knows that current node runs usense!

6.10.2 Member Function Documentation

6.10.2.1 `void cs.usense.bluetooth.BTManager.clearOnBTChangeListener ()`

This method clears the change listener.

6.10.2.2 `void cs.usense.bluetooth.BTManager.close (Context c)`

This method stops scanning and unregister BroadcastReceivers.

Parameters

<i>c</i>	Interface to global information about an application environment.
----------	---

6.10.2.3 `boolean cs.usense.bluetooth.BTManager.enableBT ()`

This method enables Bluetooth.

Returns

true/false If Bluetooth Adapter is Turning on or off

6.10.2.4 `List<String> cs.usense.bluetooth.BTManager.getLocalInfo ()`

This method provides the MAC Address and name of local Bluetooth adapter.

Returns

localinfo The local MAC Address

6.10.2.5 `boolean cs.usense.bluetooth.BTManager.isBTEnabled ()`

This method checks whether Bluetooth is enabled.

Returns

true/false If Bluetooth Adapter is enabled/not

6.10.2.6 `void cs.usense.bluetooth.BTManager.setOnBTChangeListener (BTDeviceFinder listener)`

This method sets a change listener.

Parameters

<i>listener</i>	The BTDeviceFinder listener
-----------------	---

6.10.2.7 boolean cs.usense.bluetooth.BTManager.startDiscovery ()

This method starts Bluetooth discovery process.

Returns

true/false True on success, false on failure

6.10.2.8 void cs.usense.bluetooth.BTManager.startPeriodicScanning ()

This method starts scanning.

6.10.2.9 void cs.usense.bluetooth.BTManager.stopPeriodicScanning () [private]

This method stops scanning.

6.10.3 Member Data Documentation

6.10.3.1 adapterBroadcastReceiver cs.usense.bluetooth.BTManager.adapterReceiver [private]

This class is to access functionality of Bluetooth Adapter

6.10.3.2 BluetoothAdapter cs.usense.bluetooth.BTManager.androidBTAdapter [private]

This class is to access functionality of Bluetooth Adapter

6.10.3.3 FindBluetoothDevice cs.usense.bluetooth.BTManager.BTDevFinder [private]

Used to identify Bluetooth Device

6.10.3.4 Map<BluetoothDevice, BluetoothClass> cs.usense.bluetooth.BTManager.btDeviceList = new HashMap<BluetoothDevice, BluetoothClass>() [private]

Used to access the Bluetooth device list

6.10.3.5 boolean cs.usense.bluetooth.BTManager.debug = true [private]

for debugging purposes

6.10.3.6 int cs.usense.bluetooth.BTManager.DISCOVER_INTERVAL = 180000 [static]

check how long BT scan is !!!!!

6.10.3.7 String cs.usense.bluetooth.BTManager.fetchingUUIDfromDevice [private]

This variable for fetching UUID from Device

6.10.3.8 boolean cs.usense.bluetooth.BTManager.isScanningActive = false

This variable is to check Scanning is Active

6.10.3.9 boolean cs.usense.bluetooth.BTManager.isWaitingScanResults = false

This variable is to check Waiting for Scan Results

6.10.3.10 BTDeviceFinder cs.usense.bluetooth.BTManager.listener [private]

This class is to access the listener of Bluetooth device finder

6.10.3.11 boolean cs.usense.bluetooth.BTManager.mBTisTurningOnOff = false [static],[private]

This variable is to check Bluetooth is turning on or off

6.10.3.12 Context cs.usense.bluetooth.BTManager.mContext [private]

Interface to global information about an application environment.

6.10.3.13 Handler cs.usense.bluetooth.BTManager.mHandler = new Handler() [private]

This class is to use send or process message

6.10.3.14 Runnable cs.usense.bluetooth.BTManager.runScan [private]

Initial value:

```
= new Runnable() {
    public void run() {
        if (isScanningActive) {
            if (!isBTEnabled()) {
                if (enableBT()) {
                    stopPeriodicScanning();
                } else {
                    Toast.makeText(mContext, "Error enabling BT. Closing Social Pipeline.",
                        Toast.LENGTH_SHORT).show();
                    close(mContext);
                }
                return;
            }
            if (!isWaitingScanResults && isBTEnabled()) {
                btDeviceList.clear();
                if (startDiscovery()) {
                    if (debug) {
                        Log.i(TAG, "Starting BT scanning...");
                    }
                    isWaitingScanResults = true;
                }
                mHandler.postDelayed(runScan,
                    DISCOVER_INTERVAL);
            } else if (isWaitingScanResults) {
                mHandler.postDelayed(runScan,
                    DISCOVER_INTERVAL);
                isWaitingScanResults = false;
            }
        }
    }
}
```

This method allows for starting and stopping periodic Bluetooth scanning.

6.10.3.15 `BluetoothServerSocket cs.usense.bluetooth.BTManager.socket` `[private]`

Used to identify USense! devices

6.10.3.16 `final String cs.usense.bluetooth.BTManager.TAG = "BTManager"` `[static], [private]`

6.10.3.17 `UUID cs.usense.bluetooth.BTManager.uuid = UUID.fromString("10101010-0101-0101-0101-0101010101")`
`[private]`

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

- `src/cs/usense/bluetooth/BTManager.java`

6.11 cs.usense.bluetooth.BTUserDevAverageEncounterDuration Class Reference

Public Member Functions

- `String getDevAdd ()`
- `double getAverageEncounterDuration (int timeSlot)`
- `void setDevAdd (String DevAdd)`
- `void setAverageEncounterDuration (int timeSlot, double avgEncounterDuration)`
- `BTUserDevAverageEncounterDuration ()`

Private Attributes

- `String deviceAdd`
- `double[] averageEncounterDuration = new double [24]`

6.11.1 Detailed Description

This class provides the average duration of encounter between a peer and the user device in specific time slots

Author

Waldir Moreira (COPELABS/ULHT)

6.11.2 Constructor & Destructor Documentation

6.11.2.1 `cs.usense.bluetooth.BTUserDevAverageEncounterDuration.BTUserDevAverageEncounterDuration ()`

BT User Device Average Encounter Duration Constructor

6.11.3 Member Function Documentation

6.11.3.1 `double cs.usense.bluetooth.BTUserDevAverageEncounterDuration.getAverageEncounterDuration (int timeSlot)`

This method gets the average encounter duration that the BT device is within communication range.

Parameters

<i>timeSlot</i>	The specific time slot.
-----------------	-------------------------

Returns

The average encounter duration in the given slot.

6.11.3.2 String cs.usense.bluetooth.BTUserDevAverageEncounterDuration.getDevAdd ()

This method gets the MAC address of this Bluetooth device.

Returns

deviceAdd The device address to be used as key.

6.11.3.3 void cs.usense.bluetooth.BTUserDevAverageEncounterDuration.setAverageEncounterDuration (int *timeSlot*, double *avgEncounterDuration*)

This method sets the average duration that the BT device is within communication range.

Parameters

<i>timeSlot</i>	The specific time slot.
<i>avgEncounterDuration</i>	The average duration of encounter.

6.11.3.4 void cs.usense.bluetooth.BTUserDevAverageEncounterDuration.setDevAdd (String *DevAdd*)

This method sets the ID of this Bluetooth device.

Parameters

<i>DevAdd</i>	The MAC address of device to set.
---------------	-----------------------------------

6.11.4 Member Data Documentation

6.11.4.1 double [] cs.usense.bluetooth.BTUserDevAverageEncounterDuration.averageEncounterDuration = new double [24] [private]

This variable is to get the device average duration in specific time slots

6.11.4.2 String cs.usense.bluetooth.BTUserDevAverageEncounterDuration.deviceAdd [private]

This variable is to get the address of device

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

- [src/cs/usense/bluetooth/BTUserDevAverageEncounterDuration.java](#)

6.12 cs.usense.bluetooth.BTUserDevEncounterDuration Class Reference

Public Member Functions

- String [getDevAdd](#) ()

- double [getEncounterDuration](#) (int timeSlot)
- void [setDevAdd](#) (String DevAdd)
- void [setEncounterDuration](#) (int timeSlot, double [encounterDuration](#))
- [BTUserDevEncounterDuration](#) ()

Private Attributes

- String [deviceAdd](#)
- double[] [encounterDuration](#) = new double [24]

6.12.1 Detailed Description

This class provide details of Bluetooth User Device and Encounter Duration

6.12.2 Constructor & Destructor Documentation

6.12.2.1 cs.usense.bluetooth.BTUserDevEncounterDuration.BTUserDevEncounterDuration ()

BT User Device Encounter Duration Constructor

6.12.3 Member Function Documentation

6.12.3.1 String cs.usense.bluetooth.BTUserDevEncounterDuration.getDevAdd ()

This method gets the MAC address of this Bluetooth device.

Returns

deviceAdd The device address to be used as key.

6.12.3.2 double cs.usense.bluetooth.BTUserDevEncounterDuration.getEncounterDuration (int *timeSlot*)

This method gets the duration that the BT device is within communication range.

Parameters

<i>timeSlot</i>	The specific time slot.
-----------------	-------------------------

Returns

The encounter duration in the given slot.

6.12.3.3 void cs.usense.bluetooth.BTUserDevEncounterDuration.setDevAdd (String *DevAdd*)

This method sets the ID of this Bluetooth device.

Parameters

<i>DevAdd</i>	The MAC address of device to set.
---------------	-----------------------------------

6.12.3.4 void cs.usense.bluetooth.BTUserDevEncounterDuration.setEncounterDuration (int *timeSlot*, double *encounterDuration*)

This method sets the duration that the BT device is within communication range.

Parameters

<i>timeSlot</i>	The specific time slot.
<i>encounter</i> ↔ <i>Duration</i>	The duration of encounter.

6.12.4 Member Data Documentation

6.12.4.1 String cs.usense.bluetooth.BTUserDevEncounterDuration.deviceAdd [private]

This variable is to get the address of device

6.12.4.2 double [] cs.usense.bluetooth.BTUserDevEncounterDuration.encounterDuration = new double [24] [private]

This variable is to get the device encounter duration in specific time slots

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

- src/cs/usense/bluetooth/[BTUserDevEncounterDuration.java](#)

6.13 cs.usense.bluetooth.BTUserDevice Class Reference

Public Member Functions

- String [getDevAdd](#) ()
- String [getDevName](#) ()
- long [getEncounterStart](#) ()
- void [setDevAdd](#) (String DevAdd)
- void [setDevName](#) (String DevName)
- void [setEncounterTime](#) (long time)
- [BTUserDevice](#) ()

Private Attributes

- String [deviceAdd](#)
- String [deviceName](#)
- long [encounterTime](#)

6.13.1 Detailed Description

This class Provide details of User device name, MAC address, and time of first encounter.

6.13.2 Constructor & Destructor Documentation

6.13.2.1 cs.usense.bluetooth.BTUserDevice.BTUserDevice ()

Bluetooth User Device Constructor

6.13.3 Member Function Documentation

6.13.3.1 String cs.usense.bluetooth.BTUserDevice.getDevAdd ()

This method gets the MAC address of this Bluetooth device.

Returns

deviceAdd The device address.

6.13.3.2 String cs.usense.bluetooth.BTUserDevice.getDevName ()

This method gets the name of this Bluetooth device.

Returns

deviceName The device name.

6.13.3.3 long cs.usense.bluetooth.BTUserDevice.getEncounterStart ()

This method gets the time that the BT device is first found.

Parameters

<i>encounterTime</i>	The time.
----------------------	-----------

6.13.3.4 void cs.usense.bluetooth.BTUserDevice.setDevAdd (String *DevAdd*)

This method sets the ID of this Bluetooth device.

Parameters

<i>DevAdd</i>	The MAC address of device to set.
---------------	-----------------------------------

6.13.3.5 void cs.usense.bluetooth.BTUserDevice.setDevName (String *DevName*)

This method sets the name of this Bluetooth device.

Parameters

<i>DevName</i>	The name of device to set.
----------------	----------------------------

6.13.3.6 void cs.usense.bluetooth.BTUserDevice.setEncounterTime (long *time*)

This method sets the time that the BT device is first found.

Parameters

<i>time</i>	The time.
-------------	-----------

6.13.4 Member Data Documentation

6.13.4.1 String cs.usense.bluetooth.BTUserDevice.deviceAdd [private]

This variable is to get the address of device

6.13.4.2 String cs.usense.bluetooth.BTUserDevice.deviceName [private]

This variable is to get the name of device

6.13.4.3 long cs.usense.bluetooth.BTUserDevice.encounterTime [private]

This variable is to get the encounter time of device

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

- src/cs/usense/bluetooth/[BTUserDevice.java](#)

6.14 cs.usense.bluetooth.BTUserDevSocialWeight Class Reference

Public Member Functions

- String [getDevAdd](#) ()
- double [getSocialWeight](#) (int timeSlot)
- void [setDevAdd](#) (String DevAdd)
- void [setSocialWeight](#) (int timeSlot, double [socialWeight](#))
- [BTUserDevSocialWeight](#) ()

Private Attributes

- String [deviceAdd](#)
- double[] [socialWeight](#) = new double [24]

6.14.1 Detailed Description

This class Provides the social weight between a peer and the user device in specific time slots.

6.14.2 Constructor & Destructor Documentation

6.14.2.1 cs.usense.bluetooth.BTUserDevSocialWeight.BTUserDevSocialWeight ()

BT User Device Social Weight Constructor

6.14.3 Member Function Documentation

6.14.3.1 String cs.usense.bluetooth.BTUserDevSocialWeight.getDevAdd ()

This method gets the MAC address of this Bluetooth device.

Returns

deviceAdd The device address to be used as key.

6.14.3.2 double cs.usense.bluetooth.BTUserDevSocialWeight.getSocialWeight (int timeSlot)

This method gets the social weight towards a BT device.

Parameters

<i>timeSlot</i>	The specific time slot.
-----------------	-------------------------

Returns

The social weight in the given slot.

6.14.3.3 void cs.usense.bluetooth.BTUserDevSocialWeight.setDevAdd (String *DevAdd*)

This method sets the ID of this Bluetooth device.

Parameters

<i>DevAdd</i>	The MAC address of device to set.
---------------	-----------------------------------

6.14.3.4 void cs.usense.bluetooth.BTUserDevSocialWeight.setSocialWeight (int *timeSlot*, double *socialWeight*)

This method sets the social weight towards a BT device.

Parameters

<i>timeSlot</i>	The specific time slot.
<i>socialWeight</i>	The social weight.

6.14.4 Member Data Documentation

6.14.4.1 String cs.usense.bluetooth.BTUserDevSocialWeight.deviceAdd [private]

This variable is to get the address of device

6.14.4.2 double [] cs.usense.bluetooth.BTUserDevSocialWeight.socialWeight = new double [24] [private]

This variable is to get the social weight in specific time slots

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

- [src/cs/usense/bluetooth/BTUserDevSocialWeight.java](#)

6.15 cs.usense.ChangeListener Interface Reference

Public Member Functions

- void [onLocationOutdoorChange](#) (String newMessage)
- void [onLocationIndoorChange](#) (List< [LocationEntry](#) > apEntries)
- void [onActionChange](#) (String newMessage)
- void [onSocialWeightChange](#) (ArrayList< [socialWeight](#) > arrayList)
- void [onSoundLevelChange](#) (String newSound)
- void [onSocialInteractionChange](#) (double socialInt)
- void [onProximityChange](#) (double propIn)
- void [onGetSociabilityChange](#) (ArrayList< [SocialityDetails](#) > newSocial)

6.15.1 Detailed Description

This class provides an interface to update pipeline information

6.15.2 Member Function Documentation

6.15.2.1 void cs.usense.ChangeListener.onActionChange (String *newMessage*)

This method called when Action information has been changed

Parameters

<i>newMessage</i>	Action Type information
-------------------	-------------------------

6.15.2.2 void cs.usense.ChangeListener.onGetSociabilityChange (ArrayList< **SocialityDetails** > *newSocial*)

This method called when SocialityDetails information has been changed

Parameters

<i>newSocial</i>	List of SocialityDetails objects
------------------	----------------------------------

6.15.2.3 void cs.usense.ChangeListener.onLocationIndoorChange (List< **LocationEntry** > *apEntries*)

This method called when Location Indoor table has been changed in the database

Parameters

<i>apEntries</i>	List of LocationEntry objects
------------------	-------------------------------

6.15.2.4 void cs.usense.ChangeListener.onLocationOutdoorChange (String *newMessage*)

This method called when Location Outdoor table has been changed in the database

Parameters

<i>newMessage</i>	Out door location information
-------------------	-------------------------------

6.15.2.5 void cs.usense.ChangeListener.onPropinquityChange (double *propIn*)

This method called when Propinquity information has been changed

Parameters

<i>propIn</i>	Propinquity information
---------------	-------------------------

6.15.2.6 void cs.usense.ChangeListener.onSocialInteractionChange (double *socialInt*)

This method called when Social Interaction information has been changed

Parameters

<i>socialInt</i>	Social Interaction information
------------------	--------------------------------

6.15.2.7 void cs.usense.ChangeListener.onSocialWeightChange (ArrayList< socialWeight > arrayList)

This method called when social Weight table has been changed

Parameters

<i>arrayList</i>	List of socialWeight objects
------------------	------------------------------

6.15.2.8 void cs.usense.ChangeListener.onSoundLevelChange (String newSound)

This method called when Sound Level has been changed

Parameters

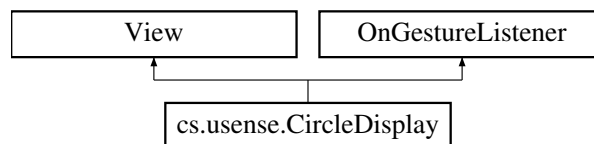
<i>newSound</i>	Sound level information
-----------------	-------------------------

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

- src/cs/usense/[ChangeListener.java](#)

6.16 cs.usense.CircleDisplay Class Reference

Inheritance diagram for cs.usense.CircleDisplay:



Classes

- interface [SelectionListener](#)
- class [Utils](#)

Public Member Functions

- [CircleDisplay](#) (Context context)
- [CircleDisplay](#) (Context context, AttributeSet attrs)
- [CircleDisplay](#) (Context context, AttributeSet attrs, int defStyleAttr)
- void [showValue](#) (float toShow, float total, boolean animated)
- void [setUnit](#) (String unit)
- float [getValue](#) ()
- void [startAnim](#) ()
- void [setAnimDuration](#) (int durationmillis)
- float [getDiameter](#) ()
- float [getRadius](#) ()
- void [setStartAngle](#) (float angle)
- float [getPhase](#) ()

- void [setPhase](#) (float phase)
- void [setDrawInnerCircle](#) (boolean enabled)
- boolean [isDrawInnerCircleEnabled](#) ()
- void [setDrawText](#) (boolean enabled)
- boolean [isDrawTextEnabled](#) ()
- void [setColor](#) (int color)
- void [setTextSize](#) (float size)
- void [setValueWidthPercent](#) (float percentFromTotalWidth)
- void [setCustomText](#) (String[] custom)
- void [setFormatDigits](#) (int digits)
- void [setDimAlpha](#) (int alpha)
- void [setPaint](#) (int which, Paint p)
- void [setStepSize](#) (float stepsize)
- float [getStepSize](#) ()
- PointF [getCenter](#) ()
- void [setTouchEnabled](#) (boolean enabled)
- boolean [isTouchEnabled](#) ()
- void [setSelectionListener](#) ([SelectionListener](#) l)
- boolean [onTouchEvent](#) (MotionEvent e)
- boolean [onSingleTapUp](#) (MotionEvent e)
- float [getAngleForPoint](#) (float x, float y)
- float [getAngleForValue](#) (float value)
- float [getValueForAngle](#) (float angle)
- float [distanceToCenter](#) (float x, float y)
- boolean [onDown](#) (MotionEvent e)
- boolean [onFling](#) (MotionEvent e1, MotionEvent e2, float velocityX, float velocityY)
- void [onLongPress](#) (MotionEvent e)
- boolean [onScroll](#) (MotionEvent e1, MotionEvent e2, float distanceX, float distanceY)
- void [onShowPress](#) (MotionEvent e)

Static Public Attributes

- static final int [PAINT_TEXT](#) = 1
- static final int [PAINT_ARC](#) = 2
- static final int [PAINT_INNER](#) = 3

Protected Member Functions

- void [onDraw](#) (Canvas canvas)

Private Member Functions

- void [init](#) ()
- void [drawText](#) (Canvas c)
- void [drawCustomText](#) (Canvas c)
- void [drawWholeCircle](#) (Canvas c)
- void [drawInnerCircle](#) (Canvas c)
- void [drawValue](#) (Canvas c)
- void [setupBox](#) ()
- float [calcAngle](#) (float percent)
- void [updateValue](#) (float x, float y)

Private Attributes

- String `mUnit` = "%"
- float `mStartAngle` = 270f
- float `mStepSize` = 1f
- float `mAngle` = 0f
- float `mPhase` = 0f
- float `mValue` = 0f
- float `mMaxValue` = 0f
- float `mValueWidthPercent` = 50f
- boolean `mDrawInner` = true
- boolean `mDrawText` = true
- boolean `mTouchEnabled` = true
- int `mDimAlpha` = 80
- DecimalFormat `mFormatValue` = new DecimalFormat("###,###,###,##0.0")
- String[] `mCustomText` = null
- RectF `mCircleBox` = new RectF()
- Paint `mArcPaint`
- Paint `mInnerCirclePaint`
- Paint `mTextPaint`
- ObjectAnimator `mDrawAnimator`
- boolean `mBoxSetup` = false
- SelectionListener `mListener`
- GestureDetector `mGestureDetector`

Static Private Attributes

- static final String `LOG_TAG` = "CircleDisplay"

6.16.1 Detailed Description

This class provides Simple custom-view for displaying values (with and without animation) and selecting values onTouch().

Author

Philipp Jahoda

6.16.2 Constructor & Destructor Documentation

6.16.2.1 cs.usense.CircleDisplay.CircleDisplay (Context *context*)

This method construct the [CircleDisplay](#) class

Parameters

<i>context</i>	Interface to global information about an application environment
----------------	--

6.16.2.2 cs.usense.CircleDisplay.CircleDisplay (Context *context*, AttributeSet *attrs*)

This method construct the [CircleDisplay](#) class

Parameters

<i>context</i>	Interface to global information about an application environment
<i>atts</i>	A collection of attributes, as found associated with a tag in an XML document

6.16.2.3 `cs.usense.CircleDisplay.CircleDisplay (Context context, AttributeSet attrs, int defStyleAttr)`

This method construct the [CircleDisplay](#) class

Parameters

<i>context</i>	Interface to global information about an application environment
<i>atts</i>	A collection of attributes, as found associated with a tag in an XML document
<i>defStyleAttr</i>	different styles when retrieving attribute values

6.16.3 Member Function Documentation

6.16.3.1 `float cs.usense.CircleDisplay.calcAngle (float percent) [private]`

This method calculates the needed angle for a given value

Parameters

<i>percent</i>	Input as percentage
----------------	---------------------

Returns

`percent/100f*360f` Output as percentage

6.16.3.2 `float cs.usense.CircleDisplay.distanceToCenter (float x, float y)`

This method returns the distance of a certain point on the view to the center of the view

Parameters

<i>x</i>	point
<i>y</i>	point

Returns

`dist` distance of a certain point on the view

`pythagoras`

6.16.3.3 `void cs.usense.CircleDisplay.drawCustomText (Canvas c) [private]`

This method draws the custom text in the center of the view

Parameters

<i>c</i>	canvas
----------	--------

6.16.3.4 `void cs.usense.CircleDisplay.drawInnerCircle (Canvas c) [private]`

This method draws the inner circle of the view

Parameters

<i>c</i>	canvas
----------	--------

6.16.3.5 void cs.usense.CircleDisplay.drawText (Canvas *c*) [private]

This method draws the text in the center of the view

Parameters

<i>c</i>	canvas
----------	--------

6.16.3.6 void cs.usense.CircleDisplay.drawValue (Canvas *c*) [private]

This method draws the actual value slice/arc

Parameters

<i>c</i>	Canvas
----------	--------

6.16.3.7 void cs.usense.CircleDisplay.drawWholeCircle (Canvas *c*) [private]

This method draws the background circle with less alpha

Parameters

<i>c</i>	canvas
----------	--------

6.16.3.8 float cs.usense.CircleDisplay.getAngleForPoint (float *x*, float *y*)

This method returns the angle relative to the view center for the given point on the chart in degrees. The angle is always between 0 and 360°, 0° is NORTH

Parameters

<i>x</i>	point
<i>y</i>	point

Returns

the angle relative to the view center for the given point

neutralize overflow

6.16.3.9 float cs.usense.CircleDisplay.getAngleForValue (float *value*)

This method returns the angle representing the given value

Parameters

<i>value</i>	representing the value
--------------	------------------------

Returns

value/mMaxValue*360f angle

6.16.3.10 `PointF cs.usense.CircleDisplay.getCenter ()`

This method returns the center point of the view in pixels

Returns

`PointF(float x, float y)` the width of view in pixels

6.16.3.11 `float cs.usense.CircleDisplay.getDiameter ()`

This method returns the diameter of the drawn circle/arc

Returns

`Math.min(getWidth(),getHeight())` the diameter of the drawn circle/arc

6.16.3.12 `float cs.usense.CircleDisplay.getPhase ()`

This method returns the current animation status of the view

Returns

`mPhase` phase of the view

6.16.3.13 `float cs.usense.CircleDisplay.getRadius ()`

This method returns the radius of the drawn circle

Returns

`getDiameter()/2` the radius of the drawn circle

6.16.3.14 `float cs.usense.CircleDisplay.getStepSize ()`

This method returns the current stepsize of the display, default 1f

Returns

`mStepSize` get the step size

6.16.3.15 `float cs.usense.CircleDisplay.getValue ()`

Returns the currently displayed value from the view. Depending on the used method to show the value, this value can be percent or actual value.

Returns

`mValue` value can be percent or actual value

6.16.3.16 `float cs.usense.CircleDisplay.getValueForAngle (float angle)`

This method returns the value representing the given angle

Parameters

<i>angle</i>	input value
--------------	-------------

Returns

angle/360f*mMaxValue value representing the given angle

6.16.3.17 void cs.usense.CircleDisplay.init () [private]

This method initialize the function of Arc, InnerCircle, Text Paint to set the style, color and also Initialize Drawing Animator function to calculated elapsed fraction of the animator

6.16.3.18 boolean cs.usense.CircleDisplay.isDrawInnerCircleEnabled ()

This method returns true if drawing the inner circle is enabled, false if not

Returns

mDrawInner drawing the inner circle

6.16.3.19 boolean cs.usense.CircleDisplay.isDrawTextEnabled ()

This method returns true if drawing the text in the center is enabled

Returns

mDrawText true to drawing of the text

6.16.3.20 boolean cs.usense.CircleDisplay.isTouchEnabled ()

This method returns true if touch-gestures are enabled, false if not

Returns

mTouchEnabled true/false if touch-gestures are enabled/or not

6.16.3.21 boolean cs.usense.CircleDisplay.onDown (MotionEvent e)

6.16.3.22 void cs.usense.CircleDisplay.onDraw (Canvas canvas) [protected]

6.16.3.23 boolean cs.usense.CircleDisplay.onFling (MotionEvent e1, MotionEvent e2, float velocityX, float velocityY)

6.16.3.24 void cs.usense.CircleDisplay.onLongPress (MotionEvent e)

6.16.3.25 boolean cs.usense.CircleDisplay.onScroll (MotionEvent e1, MotionEvent e2, float distanceX, float distanceY)

6.16.3.26 void cs.usense.CircleDisplay.onShowPress (MotionEvent e)

6.16.3.27 boolean cs.usense.CircleDisplay.onSingleTapUp (MotionEvent e)

get the distance from the touch to the center of the view

touch gestures only work when touches are made exactly on the bar/arc

6.16.3.28 boolean cs.usense.CircleDisplay.onTouchEvent (MotionEvent e)

if the detector recognized a gesture, consume it

get the distance from the touch to the center of the view

touch gestures only work when touches are made exactly on the bar/arc

6.16.3.29 void cs.usense.CircleDisplay.setAnimDuration (int durationmillis)

This method set the duration of the drawing animation in milliseconds

Parameters

<i>durationmillis</i>	Duration in milli seconds
-----------------------	---------------------------

6.16.3.30 void cs.usense.CircleDisplay.setColor (int color)

This method set the color of the arc

Parameters

<i>color</i>	color of the arc
--------------	------------------

6.16.3.31 void cs.usense.CircleDisplay.setCustomText (String[] custom)

This method Set an array of custom texts to be drawn instead of the value in the center of the [CircleDisplay](#). If set to null, the custom text will be reset and the value will be drawn. Make sure the length of the array corresponds with the maximum number of steps (set with [setStepSize\(float stepsize\)](#)).

Parameters

<i>custom</i>	custom texts to be drawn instead of the value
---------------	---

6.16.3.32 void cs.usense.CircleDisplay.setDimAlpha (int alpha)

This method set the aplha value to be used for the remainder of the arc, default 80 (use value between 0 and 255)

Parameters

<i>alpha</i>	value to be used for the remainder of the arc
--------------	---

6.16.3.33 void cs.usense.CircleDisplay.setDrawInnerCircle (boolean enabled)

This method set this to true to draw the inner circle, default: true

Parameters

<i>enabled</i>	true to draw the inner circle
----------------	-------------------------------

6.16.3.34 void cs.usense.CircleDisplay.setDrawText (boolean enabled)

This method set the drawing of the center text to be enabled or not

Parameters

<i>enabled</i>	true to drawing of the center text
----------------	------------------------------------

6.16.3.35 void cs.usense.CircleDisplay.setFormatDigits (int *digits*)

This method sets the number of digits used to format values

Parameters

<i>digits</i>	number of digits used to format values
---------------	--

6.16.3.36 void cs.usense.CircleDisplay.setPaint (int *which*, Paint *p*)

This method sets the given paint object to be used instead of the original/default one

Parameters

<i>which</i>	e.g.CircleDisplay.PAINT_TEXT to set a new text paint
<i>p</i>	paint colour

6.16.3.37 void cs.usense.CircleDisplay.setPhase (float *phase*)

DONT USE THIS METHOD

Parameters

<i>phase</i>	phase of the view
--------------	-------------------

6.16.3.38 void cs.usense.CircleDisplay.setSelectionListener (SelectionListener *l*)

This method set a selection listener for the circle-display that is called whenever a value is selected onTouch()

Parameters

<i>l</i>	selection listener for the circle-display
----------	---

6.16.3.39 void cs.usense.CircleDisplay.setStartAngle (float *angle*)

This method set the starting angle for the view

Parameters

<i>angle</i>	input of angle
--------------	----------------

6.16.3.40 void cs.usense.CircleDisplay.setStepSize (float *stepsize*)

This method Sets the stepsize (minimum selection interval) of the circle display, default 1f. It is recommended to make this value not higher than 1/5 of the maximum selectable value, and not lower than 1/200 of the maximum selectable value. For a maximum value of 100 for example, a stepsize between 0.5 and 20 is recommended.

Parameters

<i>stepsize</i>	setting minimum selection interval
-----------------	------------------------------------

6.16.3.41 void cs.usense.CircleDisplay.setTextSize (float *size*)

This method set the size of the center text in dp

Parameters

<i>size</i>	size of the center text
-------------	-------------------------

6.16.3.42 void cs.usense.CircleDisplay.setTouchEnabled (boolean *enabled*)

Enable touch gestures on the circle-display. If enabled, selecting values onTouch() is possible. Set a [SelectionListener](#) to retrieve selected values. Do not forget to set a value before selecting values. By default the maxvalue is 0f and therefore nothing can be selected.

Parameters

<i>enabled</i>	selecting values onTouch() is possible
----------------	--

6.16.3.43 void cs.usense.CircleDisplay.setUnit (String *unit*)

This method Sets the unit that is displayed next to the value in the center of the view. Default "%". Could be "€" or "\$" or left blank or whatever it is you display.

Parameters

<i>unit</i>	displayed next to the value in the center of the view
-------------	---

6.16.3.44 void cs.usense.CircleDisplay.setupBox () [private]

This method up the bounds of the view

6.16.3.45 void cs.usense.CircleDisplay.setValueWidthPercent (float *percentFromTotalWidth*)

This method set the thickness of the value bar, default 50%

Parameters

<i>percentFromTotalWidth</i>	percentage to thickness of the value bar
------------------------------	--

6.16.3.46 void cs.usense.CircleDisplay.showValue (float *toShow*, float *total*, boolean *animated*)

This method shows the given value in the circle view

Parameters

<i>toShow</i>	to be show
<i>total</i>	Total
<i>animated</i>	Animation

6.16.3.47 void cs.usense.CircleDisplay.startAnim ()

6.16.3.48 void cs.usense.CircleDisplay.updateValue (float x, float y) [private]

This method updates the display with the given touch position, takes stepsize into consideration

Parameters

x	point
y	point

calculate the touch-angle

calculate the new value depending on angle

if no stepsize

check if the new value is closer to the next, or the previous

set the new values

6.16.4 Member Data Documentation

6.16.4.1 final String cs.usense.CircleDisplay.LOG_TAG = "CircleDisplay" [static], [private]

6.16.4.2 float cs.usense.CircleDisplay.mAngle = 0f [private]

angle that represents the displayed value

6.16.4.3 Paint cs.usense.CircleDisplay.mArcPaint [private]

6.16.4.4 boolean cs.usense.CircleDisplay.mBoxSetup = false [private]

boolean flag that indicates if the box has been setup

6.16.4.5 RectF cs.usense.CircleDisplay.mCircleBox = new RectF() [private]

rect object that represents the bounds of the view, needed for drawing the circle

6.16.4.6 String [] cs.usense.CircleDisplay.mCustomText = null [private]

array that contains values for the custom-text

6.16.4.7 int cs.usense.CircleDisplay.mDimAlpha = 80 [private]

represents the alpha value used for the remainder bar

6.16.4.8 ObjectAnimator cs.usense.CircleDisplay.mDrawAnimator [private]

object animator for doing the drawing animations

6.16.4.9 boolean cs.usense.CircleDisplay.mDrawInner = true [private]

if enabled, the inner circle is drawn

6.16.4.10 `boolean cs.usense.CircleDisplay.mDrawText = true` `[private]`

if enabled, the center text is drawn

6.16.4.11 `DecimalFormat cs.usense.CircleDisplay.mFormatValue = new DecimalFormat("###,###,###,##0.0")` `[private]`

the decimalformat responsible for formatting the values in the view

6.16.4.12 `GestureDetector cs.usense.CircleDisplay.mGestureDetector` `[private]`

gesturedetector for recognizing single-taps

6.16.4.13 `Paint cs.usense.CircleDisplay.mInnerCirclePaint` `[private]`

6.16.4.14 `SelectionListener cs.usense.CircleDisplay.mListener` `[private]`

listener called when a value has been selected on touch

6.16.4.15 `float cs.usense.CircleDisplay.mMaxValue = 0f` `[private]`

the maximum displayable value, depends on the set value

6.16.4.16 `float cs.usense.CircleDisplay.mPhase = 0f` `[private]`

current state of the animation

6.16.4.17 `float cs.usense.CircleDisplay.mStartAngle = 270f` `[private]`

startangle of the view

6.16.4.18 `float cs.usense.CircleDisplay.mStepSize = 1f` `[private]`

field representing the minimum selectable value in the display - the minimum interval

6.16.4.19 `Paint cs.usense.CircleDisplay.mTextPaint` `[private]`

6.16.4.20 `boolean cs.usense.CircleDisplay.mTouchEnabled = true` `[private]`

if enabled, touching and therefore selecting values is enabled

6.16.4.21 `String cs.usense.CircleDisplay.mUnit = "%"` `[private]`

the unit that is represented by the circle-display

6.16.4.22 `float cs.usense.CircleDisplay.mValue = 0f` `[private]`

the currently displayed value, can be percent or actual value

6.16.4.23 `float cs.usense.CircleDisplay.mValueWidthPercent = 50f` [private]

percent of the maximum width the arc takes

6.16.4.24 `final int cs.usense.CircleDisplay.PAINT_ARC = 2` [static]

paint representing the value bar

6.16.4.25 `final int cs.usense.CircleDisplay.PAINT_INNER = 3` [static]

paint representing the inner (by default white) area

6.16.4.26 `final int cs.usense.CircleDisplay.PAINT_TEXT = 1` [static]

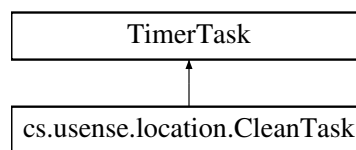
paint used for drawing the text

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

- [src/cs/usense/CircleDisplay.java](#)

6.17 cs.usense.location.CleanTask Class Reference

Inheritance diagram for cs.usense.location.CleanTask:



Public Member Functions

- [CleanTask](#) ([UsenseDataSource](#) dataSource, [LocationPipeline](#) callback)
- void [run](#) ()

Private Attributes

- String [TAG](#) = "LocationPipeline"
- [UsenseDataSource](#) dataSource
- [LocationPipeline](#) callback
- int [timeout](#) = 360000
- Handler [notifyDataBaseChangeHandler](#)

6.17.1 Constructor & Destructor Documentation

6.17.1.1 `cs.usense.location.CleanTask.CleanTask (UsenseDataSource dataSource, LocationPipeline callback)`

Clean Task constructor

Parameters

<i>dataSource</i>	the Usense data base
<i>callback</i>	the Location Pipeline

6.17.2 Member Function Documentation

6.17.2.1 void cs.usense.location.CleanTask.run ()

Thread core - It checks the last update in every location table entry.

6.17.3 Member Data Documentation

6.17.3.1 LocationPipeline cs.usense.location.CleanTask.callback [private]

Location Pipeline class. Used to notify the location pipeline about a change in DB.

6.17.3.2 UsenseDataSource cs.usense.location.CleanTask.dataSource [private]

Usense Database

6.17.3.3 Handler cs.usense.location.CleanTask.notifyDataBaseChangeHandler [private]

Initial value:

```
= new Handler() {
    public void handleMessage(Message msg) {
        super.handleMessage(msg);
        callback.notifyDataBaseChange();
    }
}
```

Handler used to notify the callback about a DB change.

6.17.3.4 String cs.usense.location.CleanTask.TAG = "LocationPipeline" [private]

6.17.3.5 int cs.usense.location.CleanTask.timeout = 360000 [private]

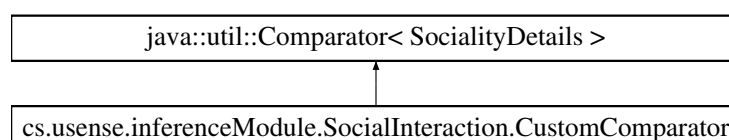
Timeout for a location entry to be removed.

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

- [src/cs/usense/location/CleanTask.java](#)

6.18 cs.usense.inferenceModule.SocialInteraction.CustomComparator Class Reference

Inheritance diagram for cs.usense.inferenceModule.SocialInteraction.CustomComparator:



Public Member Functions

- int [compare](#) ([SocialityDetails](#) entry1, [SocialityDetails](#) entry2)

6.18.1 Detailed Description

This method sorting the propinquity from the sociality details list

6.18.2 Member Function Documentation

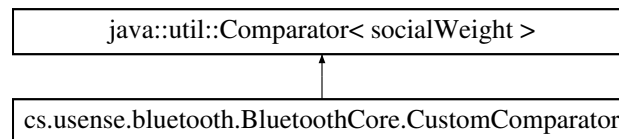
- 6.18.2.1 int cs.usense.inferenceModule.SocialInteraction.CustomComparator.compare ([SocialityDetails](#) entry1, [SocialityDetails](#) entry2)

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

- src/cs/usense/inferenceModule/[SocialInteraction.java](#)

6.19 cs.usense.bluetooth.BluetoothCore.CustomComparator Class Reference

Inheritance diagram for cs.usense.bluetooth.BluetoothCore.CustomComparator:



Public Member Functions

- int [compare](#) ([socialWeight](#) entry1, [socialWeight](#) entry2)

6.19.1 Detailed Description

This class sorts the devices by social weight.

6.19.2 Member Function Documentation

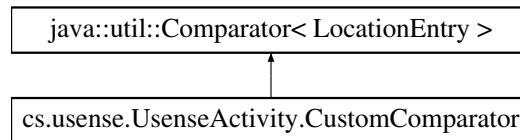
- 6.19.2.1 int cs.usense.bluetooth.BluetoothCore.CustomComparator.compare ([socialWeight](#) entry1, [socialWeight](#) entry2)

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

- src/cs/usense/bluetooth/[BluetoothCore.java](#)

6.20 cs.usense.UsenseActivity.CustomComparator Class Reference

Inheritance diagram for cs.usense.UsenseActivity.CustomComparator:



Public Member Functions

- int [compare](#) ([LocationEntry](#) entry1, [LocationEntry](#) entry2)

6.20.1 Detailed Description

This method compare the map of location entries based on the sorted distance

6.20.2 Member Function Documentation

6.20.2.1 int cs.usense.Util.Activity.CustomComparator.compare ([LocationEntry](#) entry1, [LocationEntry](#) entry2)

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

- src/cs/usense/[UsenseActivity.java](#)

6.21 cs.usense.db.DataBaseChangeListener Interface Reference

Public Member Functions

- void [onDataBaseChangeAcc](#) (List< [ActionsEntry](#) > actionsEntries)
- void [onDataBaseChangeBT](#) (ArrayList< [BTUserDevice](#) > arrayList)
- void [onDataBaseChangeBTEncDur](#) (ArrayList< [BTUserDevEncounterDuration](#) > arrayList)
- void [onDataBaseChangeBTAvgEncDur](#) (ArrayList< [BTUserDevAverageEncounterDuration](#) > arrayList)
- void [onDataBaseChangeBTSocialWeight](#) (ArrayList< [BTUserDevSocialWeight](#) > arrayList)
- void [onDataBaseChangeLocation](#) (List< [LocationEntry](#) > mLocationEntries)
- void [onSoundLevelChange](#) (ArrayList< [SoundLevel](#) > arrayList)

6.21.1 Detailed Description

This class provides list of interfaces to construct the database structure

6.21.2 Member Function Documentation

6.21.2.1 void cs.usense.db.DataBaseChangeListener.onDataBaseChangeAcc (List< [ActionsEntry](#) > *actionsEntries*)

This method called when ActionEntry table has been changed in the database

Parameters

<i>actionsEntries</i>	List of ActionsEntry objects
-----------------------	------------------------------

6.21.2.2 void cs.usense.db.DataBaseChangeListener.onDataBaseChangeBT (ArrayList< [BTUserDevice](#) > *arrayList*)

This method called when BTUserDevice table has been changed in the database

Parameters

<i>arrayList</i>	List of BTUserDevice objects
------------------	------------------------------

6.21.2.3 void cs.usense.db.DataBaseChangeListener.onDataBaseChangeBTAvgEncDur (ArrayList< BTUserDevAverageEncounterDuration > *arrayList*)

This method called when BTUserDevAverageEncounterDuration table has been changed in the database

Parameters

<i>arrayList</i>	List of BTUserDevAverageEncounterDuration objects
------------------	---

6.21.2.4 void cs.usense.db.DataBaseChangeListener.onDataBaseChangeBTEncDur (ArrayList< BTUserDevEncounterDuration > *arrayList*)

This method called when BTUserDevEncounterDuration table has been changed in the database

Parameters

<i>arrayList</i>	List of BTUserDevEncounterDuration objects
------------------	--

6.21.2.5 void cs.usense.db.DataBaseChangeListener.onDataBaseChangeBTSocialWeight (ArrayList< BTUserDevSocialWeight > *arrayList*)

This method called when BTUserDevSocialWeight table has been changed in the database

Parameters

<i>arrayList</i>	List of BTUserDevSocialWeight objects
------------------	---------------------------------------

6.21.2.6 void cs.usense.db.DataBaseChangeListener.onDataBaseChangeLocation (List< LocationEntry > *mLocationEntries*)

This method called when LocationEntry table has been changed in the database

Parameters

<i>mLocation↔ Entries</i>	List of LocationEntry objects
-------------------------------	-------------------------------

6.21.2.7 void cs.usense.db.DataBaseChangeListener.onSoundLevelChange (ArrayList< SoundLevel > *arrayList*)

This method called when SoundLevel table has been changed in the database

Parameters

<i>mLocation↔ Entries</i>	List of SoundLevel objects
-------------------------------	----------------------------

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

- src/cs/usense/db/[DataBaseChangeListener.java](#)

6.22 cs.usense.inferenceModule.SocialInteraction.DeviceDetails Class Reference

Public Member Functions

- String [getmMACAddress](#) ()
- void [setmMACAddress](#) (String [mMACAddress](#))
- String [getDevName](#) ()
- void [setDevName](#) (String [devName](#))
- double [getmDistance](#) ()
- void [setmDistance](#) (double [mDistance](#))
- double [getmSW](#) ()
- void [setmSW](#) (double [mSW](#))
- double [getmSI](#) ()
- void [setmSI](#) (double [mSI](#))
- double [getmPropinquity](#) ()
- void [setmPropinquity](#) (double [mPropinquity](#))

Public Attributes

- String [mMACAddress](#)
- String [devName](#)
- double [mDistance](#)
- double [mSW](#)
- double [mSI](#)
- double [mPropinquity](#)

6.22.1 Detailed Description

This method provides the getter and setter methods of device details

6.22.2 Member Function Documentation

6.22.2.1 String cs.usense.inferenceModule.SocialInteraction.DeviceDetails.getDevName ()

This method get the device name

Returns

[devName](#) the device name

6.22.2.2 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.getmDistance ()

This method get the distance

Returns

[mDistance](#) the distance

6.22.2.3 String cs.usense.inferenceModule.SocialInteraction.DeviceDetails.getmMACAddress ()

This method get the MAC address

Returns

mMACAddress the MAC address

6.22.2.4 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.getmPropinquity ()

This method get the propinquity

Returns

mPropinquity the propinquity

6.22.2.5 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.getmSI ()

This method get the social interaction

Returns

mSI the Social interaction

6.22.2.6 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.getmSW ()

This method get the social weight

Returns

mSW the social weight

6.22.2.7 void cs.usense.inferenceModule.SocialInteraction.DeviceDetails.setDevName (String *devName*)

This method set the device name

Parameters

<i>devName</i>	the device name
----------------	-----------------

6.22.2.8 void cs.usense.inferenceModule.SocialInteraction.DeviceDetails.setmDistance (double *mDistance*)

This method set the distance

Parameters

<i>mDistance</i>	the distance
------------------	--------------

6.22.2.9 void cs.usense.inferenceModule.SocialInteraction.DeviceDetails.setmMACAddress (String *mMACAddress*)

This method set the MAC address

Parameters

<i>mMACAddress</i>	the MAC address
--------------------	-----------------

6.22.2.10 void cs.usense.inferenceModule.SocialInteraction.DeviceDetails.setmProximity (double *mProximity*)

This method set the proximity

Parameters

<i>mProximity</i>	the proximity
-------------------	---------------

6.22.2.11 void cs.usense.inferenceModule.SocialInteraction.DeviceDetails.setmSI (double *mSI*)

This method set the social interaction

Parameters

<i>mSI</i>	the Social interaction
------------	------------------------

6.22.2.12 void cs.usense.inferenceModule.SocialInteraction.DeviceDetails.setmSW (double *mSW*)

This method set the social weight

Parameters

<i>mSW</i>	the social weight
------------	-------------------

6.22.3 Member Data Documentation

6.22.3.1 String cs.usense.inferenceModule.SocialInteraction.DeviceDetails.devName

6.22.3.2 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.mDistance

6.22.3.3 String cs.usense.inferenceModule.SocialInteraction.DeviceDetails.mMACAddress

6.22.3.4 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.mProximity

6.22.3.5 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.mSI

6.22.3.6 double cs.usense.inferenceModule.SocialInteraction.DeviceDetails.mSW

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

- src/cs/usense/inferenceModule/[SocialInteraction.java](#)

6.23 com.meapsoft.FFT Class Reference

Public Member Functions

- [FFT](#) (int n)
- double[] [getWindow](#) ()
- void [fft](#) (double[] x, double[] y)

Static Public Member Functions

- static void `main` (String[] args)
- static void `beforeAfter` (FFT fft, double[] re, double[] im)
- static void `printReIm` (double[] re, double[] im)

Protected Member Functions

- void `makeWindow` ()

6.23.1 Detailed Description

Utility class to perform a fast fourier transform without allocating any extra memory.

Author

Mike Mandel (mim@ee.columbia.edu)

6.23.2 Constructor & Destructor Documentation

6.23.2.1 com.meapsoft.FFT.FFT (int *n*)

Make sure n is a power of 2

precompute tables

6.23.3 Member Function Documentation

6.23.3.1 static void com.meapsoft.FFT.beforeAfter (FFT *fft*, double[] *re*, double[] *im*) [static]

6.23.3.2 void com.meapsoft.FFT.fft (double[] *x*, double[] *y*)

fft.c Douglas L. Jones University of Illinois at Urbana-Champaign January 19, 1992 <http://cnx.rice.edu/content/m12016/latest/>

fft: in-place radix-2 DIT DFT of a complex input

input: n: length of FFT: must be a power of two m: $n = 2 \cdot m$ input/output x: double array of length n with real part of data y: double array of length n with imag part of data

Permission to copy and use this program is granted as long as this header is included. Bit-reverse

FFT

6.23.3.3 double [] com.meapsoft.FFT.getWindow ()

6.23.3.4 static void com.meapsoft.FFT.main (String[] *args*) [static]

Test the FFT to make sure it's working Impulse

I Nyquist

Single sin

Ramp

6.23.3.5 `void com.meapsoft.FFT.makeWindow ()` [protected]

Make a blackman window: $w(n)=0.42-0.5\cos\{(2*\pi*n)/(N-1)\}+0.08\cos\{(4*\pi*n)/(N-1)\}$;

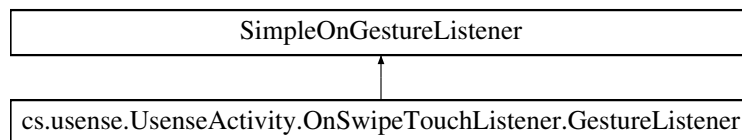
6.23.3.6 `static void com.meapsoft.FFT.printReIm (double[] re, double[] im)` [static]

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

- [src/com/meapsoft/FFT.java](#)

6.24 cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener Class Reference

Inheritance diagram for cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener:



Public Member Functions

- boolean [onDown](#) (MotionEvent e)
- boolean [onFling](#) (MotionEvent e1, MotionEvent e2, float velocityX, float velocityY)

Static Private Attributes

- static final int [SWIPE_THRESHOLD](#) = 100
- static final int [SWIPE_VELOCITY_THRESHOLD](#) = 100

6.24.1 Member Function Documentation

6.24.1.1 `boolean cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener.onDown (MotionEvent e)`

6.24.1.2 `boolean cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener.onFling (MotionEvent e1, MotionEvent e2, float velocityX, float velocityY)`

6.24.2 Member Data Documentation

6.24.2.1 `final int cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener.SWIPE_THRESHOLD = 100` [static], [private]

6.24.2.2 `final int cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener.SWIPE_VELOCITY_THRESHOLD = 100` [static], [private]

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

- [src/cs/usense/UsenseActivity.java](#)

6.25 cs.usense.accelerometer.Globals Class Reference

Static Public Attributes

- static final int [ACCELEROMETER_BUFFER_CAPACITY](#) = 2048
- static final int [ACCELEROMETER_BLOCK_CAPACITY](#) = 64
- static final String [ACTIVITY_TYPES](#) []

6.25.1 Detailed Description

This class provides global variables

6.25.2 Member Data Documentation

6.25.2.1 final int cs.usense.accelerometer.Globals.ACCELEROMETER_BLOCK_CAPACITY = 64 [static]

Accelerometer block capacity of [Globals](#) object

6.25.2.2 final int cs.usense.accelerometer.Globals.ACCELEROMETER_BUFFER_CAPACITY = 2048 [static]

Accelerometer buffer capacity of [Globals](#) object

6.25.2.3 final String cs.usense.accelerometer.Globals.ACTIVITY_TYPES[] [static]

Initial value:

```
= {
    "Standing", "Walking", "Running",
}
```

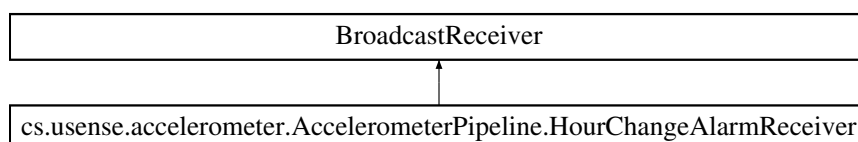
Activity types of [Globals](#) object

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

- [src/cs/usense/accelerometer/Globals.java](#)

6.26 cs.usense.accelerometer.AccelerometerPipeline.HourChangeAlarmReceiver Class Reference

Inheritance diagram for cs.usense.accelerometer.AccelerometerPipeline.HourChangeAlarmReceiver:



Public Member Functions

- void [onReceive](#) (Context context, Intent intent)

Static Public Attributes

- static final String [HOUR_CHANGE](#) = "android.intent.action.HOUR_CHANGE"

6.26.1 Detailed Description

This method provides Hour Change Alarm Receiver

6.26.2 Member Function Documentation

- 6.26.2.1 void `cs.usense.accelerometer.AccelerometerPipeline.HourChangeAlarmReceiver.onReceive (Context context, Intent intent)`

6.26.3 Member Data Documentation

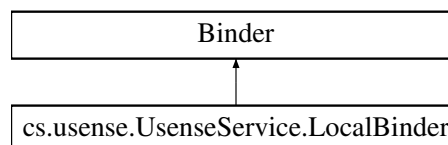
- 6.26.3.1 final String `cs.usense.accelerometer.AccelerometerPipeline.HourChangeAlarmReceiver.HOUR_CHANGE = "android.intent.action.HOUR_CHANGE" [static]`

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

- `src/cs/usense/accelerometer/AccelerometerPipeline.java`

6.27 cs.usense.UsenseService.LocalBinder Class Reference

Inheritance diagram for `cs.usense.UsenseService.LocalBinder`:



6.27.1 Detailed Description

This class binds the USense service

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

- `src/cs/usense/UsenseService.java`

6.28 cs.usense.location.LocationEntry Class Reference

Public Member Functions

- String [getDeviceName](#) ()
- String [getBSSID](#) ()
- double [getDistance](#) ()
- long [getLastUpdate](#) ()
- void [setDeviceName](#) (String *mDeviceName*)
- void [setBSSID](#) (String *bSSID*)
- void [setDistance](#) (double *mDistance*)

- void [setLastUpdate](#) (long [mLastUpdate](#))
- [LocationEntry](#) ()
- String [toString](#) ()

Private Attributes

- String [BSSID](#)
- String [mDeviceName](#)
- double [mDistance](#)
- long [mLastUpdate](#)

6.28.1 Constructor & Destructor Documentation

6.28.1.1 cs.usense.location.LocationEntry.LocationEntry ()

Location Entry Constructor

6.28.2 Member Function Documentation

6.28.2.1 String cs.usense.location.LocationEntry.getBSSID ()

Get the BSSID

Returns

the BSSID - The device's MAC address.

6.28.2.2 String cs.usense.location.LocationEntry.getDeviceName ()

Get the device name

Returns

mDeviceName - The device name.

6.28.2.3 double cs.usense.location.LocationEntry.getDistance ()

Get the distance to this device

Returns

mDistance - Distance to this device.

6.28.2.4 long cs.usense.location.LocationEntry.getLastUpdate ()

Get the time of last update

Returns

mLastUpdate - Last time this entry was updated

6.28.2.5 void cs.usense.location.LocationEntry.setBSSID (String *bSSID*)

Set the BSSID of this AP

Parameters

<i>bSSID</i>	the MAC address to set
--------------	------------------------

6.28.2.6 void cs.usense.location.LocationEntry.setDeviceName (String *mDeviceName*)

Set the device name

Parameters

<i>device</i>	name
---------------	------

6.28.2.7 void cs.usense.location.LocationEntry.setDistance (double *mDistance*)

Set the distance to this device

Parameters

<i>mDistance</i>	distance to this device
------------------	-------------------------

6.28.2.8 void cs.usense.location.LocationEntry.setLastUpdate (long *mLastUpdate*)

Set the last update time

Parameters

<i>mLastUpdate</i>	last update time
--------------------	------------------

6.28.2.9 String cs.usense.location.LocationEntry.toString ()

Return a string containing the SSID, BSSID, Distance and the last update.

6.28.3 Member Data Documentation

6.28.3.1 String cs.usense.location.LocationEntry.BSSID [private]

Device MAC address

6.28.3.2 String cs.usense.location.LocationEntry.mDeviceName [private]

Device Name

6.28.3.3 double cs.usense.location.LocationEntry.mDistance [private]

Distance to this device

6.28.3.4 long cs.usense.location.LocationEntry.mLastUpdate [private]

Last time this entry was updated

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

- src/cs/usense/location/[LocationEntry.java](#)

6.29 cs.usense.location.LocationPipeline Class Reference

Public Member Functions

- [LocationPipeline](#) ([UsenseService](#) callback, [UsenseDataSource](#) dataSource)
- void [close](#) ()
- void [notifyDataBaseChange](#) ()

Private Attributes

- Context [aContext](#) = null
- [UsenseService](#) callback = null
- [UsenseDataSource](#) dataSource

Static Private Attributes

- static [RelativePositionWiFiNoConnection](#) mRelativePositionWiFiNoConnection = null

6.29.1 Constructor & Destructor Documentation

6.29.1.1 `cs.usense.location.LocationPipeline.LocationPipeline (UsenseService callback, UsenseDataSource dataSource)`

Location Pipeline constructor - It initializes the Relative Position module and a Timer to remove old entries

Parameters

<i>callback</i>	Usense Service module
<i>dataSource</i>	Usense Data base

6.29.2 Member Function Documentation

6.29.2.1 `void cs.usense.location.LocationPipeline.close ()`

Close the Location Pipeline Calling this function will close Location Pipeline in your app.

6.29.2.2 `void cs.usense.location.LocationPipeline.notifyDataBaseChange ()`

Notifies a database change to the listeners.

6.29.3 Member Data Documentation

6.29.3.1 `Context cs.usense.location.LocationPipeline.aContext = null` `[private]`

Interface to global information about an application environment.

6.29.3.2 `UsenseService cs.usense.location.LocationPipeline.callback = null` `[private]`

Usense Service module

6.29.3.3 **UsenseDataSource** `cs.usense.location.LocationPipeline.dataSource` `[private]`

Usense Data base

6.29.3.4 **RelativePositionWiFiNoConnection** `cs.usense.location.LocationPipeline.mRelativePositionWiFiNoConnection = null` `[static], [private]`

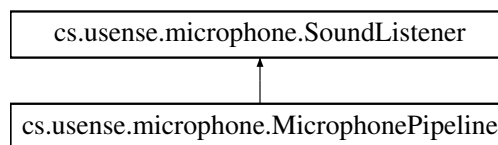
Relative Position module - manage the WiFi P2P to compute the relative distance

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

- `src/cs/usense/location/LocationPipeline.java`

6.30 **cs.usense.microphone.MicrophonePipeline** Class Reference

Inheritance diagram for `cs.usense.microphone.MicrophonePipeline`:



Public Member Functions

- `MicrophonePipeline` (`UsenseService` callback, `UsenseDataSource` `dataSource`)
- void `close` (Context context)
- void `updateSoundLevel` (double `soundDB`)
- String `getDuration` (long milliseconds)
- void `updateSoundLevel` (`SoundLevel` `soundLevel`)

Static Public Attributes

- static String `mEnvironmentalSound` = ""

Protected Member Functions

- List< `SoundLevel` > `getData` ()

Protected Attributes

- double `avgdB`
- double `soundDB`

Private Member Functions

- long `getTodayMillis` ()
- void `start` ()
- void `notifyDataBaseChange` ()
- void `Soundstorage` (String `envSound`, String date)

Private Attributes

- [SoundManager](#) `soundManager`
- `ArrayList< DataBaseChangeListener > listeners = new ArrayList<DataBaseChangeListener> ()`
- `boolean micPresent =true`
- [SoundLevel](#) `soundlevel`
- `Handler mHandler = new Handler()`
- [UsenseService](#) `scallback = null`
- `String envSound = ""`

Static Private Attributes

- `static SoundLevel mSoundLevel = new SoundLevel()`

6.30.1 Detailed Description

This class is contains the core functionalities of the application relating to Microphone.

6.30.2 Constructor & Destructor Documentation

6.30.2.1 `cs.usense.microphone.MicrophonePipeline.MicrophonePipeline (UsenseService callback, UsenseDataSource dataSource)`

This method constructs the [MicrophonePipeline](#)

Parameters

<i>callback</i>	Supply UsenseService object for UsenseActivity to use
<i>dataSource</i>	UsenseDataSource to access various methods and information of the USense Data base

6.30.3 Member Function Documentation

6.30.3.1 `void cs.usense.microphone.MicrophonePipeline.close (Context context)`

This method close the context

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

6.30.3.2 `List<SoundLevel> cs.usense.microphone.MicrophonePipeline.getData () [protected]`

This method provides the sound level data from the database

Returns

soundlevel Array list of [SoundLevel](#) objects from the database

6.30.3.3 `String cs.usense.microphone.MicrophonePipeline.getDuration (long milliseconds)`

This method calculates the duration

Parameters

<i>milliseconds</i>	Time in milliseconds
---------------------	----------------------

Returns

the time duration in hours, minutes and seconds

6.30.3.4 `long cs.usense.microphone.MicrophonePipeline.getTodayMillis ()` [private]

This method provides current date, hours, minutes, seconds and milliseconds of the system

Returns

current date and time of the system

6.30.3.5 `void cs.usense.microphone.MicrophonePipeline.notifyDataBaseChange ()` [private]

This method notifies a database change to the listeners.

6.30.3.6 `void cs.usense.microphone.MicrophonePipeline.Soundstorage (String envSound, String date)` [private]

This method writes a file for Microphone pipeline BufferedWriter for performance, true to set append to file flag

6.30.3.7 `void cs.usense.microphone.MicrophonePipeline.start ()` [private]

This method initialize the sound manager class which Start Capturing sound waves from microphone adapter.

6.30.3.8 `void cs.usense.microphone.MicrophonePipeline.updateSoundLevel (double soundDB)`

This method provides four different levels of sound and their duration Based on the captured sound decibels

Parameters

<i>soundDB</i>	soundLevel in decibels
----------------	------------------------

Returns

Quite, Normal, Alert, Noisy and Time duration in each state

set object Date

6.30.3.9 `void cs.usense.microphone.MicrophonePipeline.updateSoundLevel (SoundLevel soundLevel)`

This method update the sound level

Implements [cs.usense.microphone.SoundListener](#).

6.30.4 Member Data Documentation

6.30.4.1 `double cs.usense.microphone.MicrophonePipeline.avgdB` [protected]

This variable is used to access the average decibels

6.30.4.2 `String cs.usense.microphone.MicrophonePipeline.envSound = ""` [private]

This variable is used to access the environment sound

6.30.4.3 `ArrayList<DataBaseChangeListener> cs.usense.microphone.MicrophonePipeline.listeners = new ArrayList<DataBaseChangeListener> ()` [private]

This variable is used to access the listeners

6.30.4.4 `String cs.usense.microphone.MicrophonePipeline.mEnvironmentalSound = ""` [static]

This variable is used to access Environment sound

6.30.4.5 `Handler cs.usense.microphone.MicrophonePipeline.mHandler = new Handler()` [private]

This class is to use send or process message

6.30.4.6 `boolean cs.usense.microphone.MicrophonePipeline.micPresent =true` [private]

This variable is used to check whether microphone is available or not

6.30.4.7 `SoundLevel cs.usense.microphone.MicrophonePipeline.mSoundLevel = new SoundLevel()` [static], [private]

This class is to access Sound Level

6.30.4.8 `UsenseService cs.usense.microphone.MicrophonePipeline.scallback = null` [private]

This class is to access the functionality of Usense Service

6.30.4.9 `double cs.usense.microphone.MicrophonePipeline.soundDB` [protected]

This variable is used to access the sound in decibels

6.30.4.10 `SoundLevel cs.usense.microphone.MicrophonePipeline.soundlevel` [private]

This variable is used to access the sound level

6.30.4.11 `SoundManager cs.usense.microphone.MicrophonePipeline.soundManager` [private]

This class is to access functionality of Sensor Manager from accelerometer pipeline

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

- [src/cs/usense/microphone/MicrophonePipeline.java](#)

6.31 cs.usense.UsenseService.NOTIFICATION_ID Interface Reference

Static Public Attributes

- static int [FOREGROUND_SERVICE](#) = 112

6.31.1 Member Data Documentation

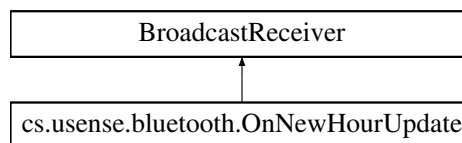
6.31.1.1 `int cs.usense.UsenseService.NOTIFICATION_ID.FOREGROUND_SERVICE = 112` [static]

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

- [src/cs/usense/UsenseService.java](#)

6.32 cs.usense.bluetooth.OnNewHourUpdate Class Reference

Inheritance diagram for `cs.usense.bluetooth.OnNewHourUpdate`:



Public Member Functions

- [OnNewHourUpdate](#) ([UsenseDataSource](#) datasource2)
- void [onReceive](#) (Context context, Intent intent)
- int [getTimeSlot](#) ()
- void [showDevicesOnDB](#) ()

Static Public Attributes

- static int [day](#) = 1
- static final String [NEW_HOUR](#)

Private Member Functions

- void [notifyDataBaseChange](#) ()

Private Attributes

- [UsenseDataSource](#) [datasource](#)
- ArrayList< [DataBaseChangeListener](#) > [listeners](#) = new ArrayList<[DataBaseChangeListener](#)> ()

6.32.1 Detailed Description

This class provides the computing updates for Social weights among users on hourly basis

6.32.2 Constructor & Destructor Documentation

6.32.2.1 `cs.usense.bluetooth.OnNewHourUpdate.OnNewHourUpdate (UsenseDataSource datasource2)`

This method is the constructor for [OnNewHourUpdate](#).

Parameters

<i>datasource2</i>	UsenseDataSource to access various methods and information of the USense Data base.
--------------------	---

6.32.3 Member Function Documentation

6.32.3.1 int cs.usense.bluetooth.OnNewHourUpdate.getTimeSlot ()

This method provides the current time slot.

Returns

currentTimeSlot The actual time slot.

6.32.3.2 void cs.usense.bluetooth.OnNewHourUpdate.notifyDataBaseChange () [private]

This method notifies a database change to the listeners.

6.32.3.3 void cs.usense.bluetooth.OnNewHourUpdate.onReceive (Context *context*, Intent *intent*)

This method receives action concerning social weight updates.

Parameters

<i>context</i>	Interface to global information about an application environment.
<i>intent</i>	The intent.

Set new encounter start

Update average encounter duration

Update social weight

6.32.3.4 void cs.usense.bluetooth.OnNewHourUpdate.showDevicesOnDB ()

This method shows the Bluetooth devices stored on the DB.

6.32.4 Member Data Documentation

6.32.4.1 UsenseDataSource cs.usense.bluetooth.OnNewHourUpdate.datasource [private]

This class is to access functionality of Usense Data base

6.32.4.2 int cs.usense.bluetooth.OnNewHourUpdate.day = 1 [static]

This variable is to provide the day

6.32.4.3 ArrayList<DataBaseChangeListener> cs.usense.bluetooth.OnNewHourUpdate.listeners = new ArrayList<DataBaseChangeListener> () [private]

6.32.4.4 final String cs.usense.bluetooth.OnNewHourUpdate.NEW_HOUR [static]

Initial value:

```
=
    "android.intent.action.NEWHOUR"
```

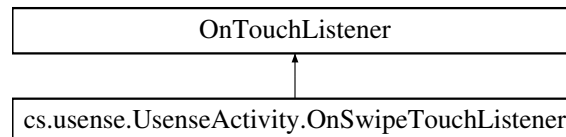
This variable is to get the new hour

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

- [src/cs/usense/bluetooth/OnNewHourUpdate.java](#)

6.33 cs.usense.UsenseActivity.OnSwipeTouchListener Class Reference

Inheritance diagram for cs.usense.UsenseActivity.OnSwipeTouchListener:



Classes

- class [GestureListener](#)

Public Member Functions

- [OnSwipeTouchListener](#) (Context ctx)
- boolean [onTouch](#) (View v, MotionEvent event)
- void [onSwipeRight](#) ()
- void [onSwipeLeft](#) ()
- void [onSwipeTop](#) ()
- void [onSwipeBottom](#) ()

Private Attributes

- final GestureDetector [gestureDetector](#)

6.33.1 Detailed Description

This class implements the OnSwipeTouch functionality

6.33.2 Constructor & Destructor Documentation

6.33.2.1 [cs.usense.UsenseActivity.OnSwipeTouchListener.OnSwipeTouchListener](#) (Context ctx)

6.33.3 Member Function Documentation

6.33.3.1 void [cs.usense.UsenseActivity.OnSwipeTouchListener.onSwipeBottom](#) ()

6.33.3.2 void [cs.usense.UsenseActivity.OnSwipeTouchListener.onSwipeLeft](#) ()

6.33.3.3 void [cs.usense.UsenseActivity.OnSwipeTouchListener.onSwipeRight](#) ()

6.33.3.4 void [cs.usense.UsenseActivity.OnSwipeTouchListener.onSwipeTop](#) ()

6.33.3.5 boolean cs.usense.UsenseActivity.OnSwipeTouchListener.onTouch (View *v*, MotionEvent *event*)

6.33.4 Member Data Documentation

6.33.4.1 final GestureDetector cs.usense.UsenseActivity.OnSwipeTouchListener.gestureDetector [private]

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

- src/cs/usense/[UsenseActivity.java](#)

6.34 cs.usense.accelerometer.AccelerometerPipeline.PreviousAction Class Reference

Public Member Functions

- String [getmPrevAction](#) ()

Public Attributes

- String [mPrevAction](#)
- int [mId](#)
- double [mDuration](#)
- long [mStartTime](#)
- int [mHour](#)
- int [mDay](#)

6.34.1 Detailed Description

This class provides various fields to set [PreviousAction](#)

6.34.2 Member Function Documentation

6.34.2.1 String cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.getmPrevAction ()

6.34.3 Member Data Documentation

6.34.3.1 int cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.mDay

6.34.3.2 double cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.mDuration

6.34.3.3 int cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.mHour

6.34.3.4 int cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.mId

6.34.3.5 String cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.mPrevAction

6.34.3.6 long cs.usense.accelerometer.AccelerometerPipeline.PreviousAction.mStartTime

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

- src/cs/usense/accelerometer/[AccelerometerPipeline.java](#)

6.35 cs.usense.location.RelativePositionWiFiNoConnection Class Reference

Classes

- class [UsenseDevice](#)

Public Member Functions

- [RelativePositionWiFiNoConnection](#) ()
- void [notifyDataBaseChange](#) ()
- void [restartDiscover](#) ()
- void [scheduleThread](#) ()
- void [close](#) ()

Static Public Attributes

- static final String [SERVICE_TYPE](#) = "_location._tcp"

Protected Member Functions

- [RelativePositionWiFiNoConnection](#) (Context [context](#), [UsenseDataSource](#) [dataSource](#), [LocationPipeline](#) [callback](#))

Private Attributes

- String [TAG](#) = "WiFiDirectBroadcastReceiverNoConnection"
- Context [context](#)
- [UsenseDataSource](#) [dataSource](#)
- [LocationPipeline](#) [callback](#)
- Handler [handlerDisc](#) = new Handler()
- int [mDiscState](#) = 0
- Random [rand](#) = new Random()
- Runnable [mThread](#)

6.35.1 Constructor & Destructor Documentation

6.35.1.1 [cs.usense.location.RelativePositionWiFiNoConnection.RelativePositionWiFiNoConnection](#) (Context *context*, [UsenseDataSource](#) *dataSource*, [LocationPipeline](#) *callback*) [protected]

[RelativePositionWiFiNoConnection](#) constructor - It initializes the [WifiServiceSearcher](#) and [WifiAccessPoint](#) modules and creates a handler to switch between this two modules.

Parameters

<i>context</i>	- Interface to global information about an application environment.
<i>dataSource</i>	- Usense data base.
<i>callback</i>	- LocationPipeline module

6.35.1.2 [cs.usense.location.RelativePositionWiFiNoConnection.RelativePositionWiFiNoConnection](#) ()

[RelativePositionWiFiNoConnection](#) constructor.

6.35.2 Member Function Documentation

6.35.2.1 void cs.usense.location.RelativePositionWiFiNoConnection.close ()

It stops [WifiServiceSearcher](#) and [WifiAccessPoint](#) modules

6.35.2.2 void cs.usense.location.RelativePositionWiFiNoConnection.notifyDataBaseChange ()

Notifies a database change to the listeners.

6.35.2.3 void cs.usense.location.RelativePositionWiFiNoConnection.restartDiscover ()

It informs the mWifiServiceSearcher to restart the Wifi P2P.

6.35.2.4 void cs.usense.location.RelativePositionWiFiNoConnection.scheduleThread ()

Used to schedule another thread

6.35.3 Member Data Documentation

6.35.3.1 LocationPipeline cs.usense.location.RelativePositionWiFiNoConnection.callback [private]

6.35.3.2 Context cs.usense.location.RelativePositionWiFiNoConnection.context [private]

6.35.3.3 UsenseDataSource cs.usense.location.RelativePositionWiFiNoConnection.dataSource [private]

6.35.3.4 Handler cs.usense.location.RelativePositionWiFiNoConnection.handlerDisc = new Handler() [private]

6.35.3.5 int cs.usense.location.RelativePositionWiFiNoConnection.mDiscState = 0 [private]

6.35.3.6 Runnable cs.usense.location.RelativePositionWiFiNoConnection.mThread [private]

Initial value:

```
= new Runnable() {
    @Override
    public void run() {
        if (mDiscState == 0) {
            mWifiServiceSearcher.startServiceDiscovery();
            mDiscState = 1;
            handlerDisc.postDelayed(this, ((rand.nextInt(20 - 19) + 19) * 1000));
        } else if (mDiscState == 1) {
            mWifiAccessPoint.stopLocalServices();
            mWifiAccessPoint.createGroup();
            mDiscState = 2;
            handlerDisc.postDelayed(this, ((rand.nextInt(40 - 20) + 20) * 1000));
        } else if (mDiscState == 2) {
            mWifiAccessPoint.removeGroup();
            mWifiServiceSearcher.stopDiscovery();
            mDiscState = 0;
        }
    }
}
```

6.35.3.7 Random cs.usense.location.RelativePositionWiFiNoConnection.rand = new Random() [private]

6.35.3.8 final String cs.usense.location.RelativePositionWiFiNoConnection.SERVICE_TYPE = "_location_tcp" [static]

Used by WiFi P2P to detect only Usense devices

6.35.3.9 String `cs.usense.location.RelativePositionWiFiNoConnection.TAG` = "WiFiDirectBroadcastReceiverNoConnection"
`[private]`

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

- `src/cs/usense/location/RelativePositionWiFiNoConnection.java`

6.36 `cs.usense.CircleDisplay.SelectionListener` Interface Reference

Public Member Functions

- void `onSelectionUpdate` (float *val*, float *maxval*)
- void `onValueSelected` (float *val*, float *maxval*)

6.36.1 Detailed Description

This method listener for callbacks when selecting values ontouch

Author

Philipp Jahoda

6.36.2 Member Function Documentation

6.36.2.1 void `cs.usense.CircleDisplay.SelectionListener.onSelectionUpdate` (float *val*, float *maxval*)

This method called everytime the user moves the finger on the circle-display

Parameters

<i>val</i>	Value
<i>maxval</i>	Max value

6.36.2.2 void `cs.usense.CircleDisplay.SelectionListener.onValueSelected` (float *val*, float *maxval*)

This method called when the user releases his finger fromt he circle-display

Parameters

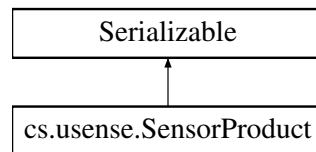
<i>val</i>	Value
<i>maxval</i>	Max value

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

- `src/cs/usense/CircleDisplay.java`

6.37 `cs.usense.SensorProduct` Class Reference

Inheritance diagram for `cs.usense.SensorProduct`:



Public Member Functions

- String [getSensorName](#) ()
- void [setSensorName](#) (String name)
- String [getInterval](#) ()
- void [setInterval](#) (String interval)
- String [getClassname](#) ()
- void [setClassname](#) (String classname)
- String [toString](#) ()
- [SensorProduct](#) ()

Private Attributes

- String [sensorname](#) = ""
- String [interval](#) = ""
- String [classname](#) = ""

6.37.1 Detailed Description

This class provides methods to get the sensor name, interval, and class of the sensor

6.37.2 Constructor & Destructor Documentation

6.37.2.1 cs.usense.SensorProduct.SensorProduct ()

This method provides the constructor of [SensorProduct](#) class

6.37.3 Member Function Documentation

6.37.3.1 String cs.usense.SensorProduct.getClassname ()

This method get the class name

Returns

classname Class name of the sensor

6.37.3.2 String cs.usense.SensorProduct.getInterval ()

This method get the interval

Returns

interval Interval time for the sampling

6.37.3.3 String cs.usense.SensorProduct.getSensorName ()

This method get the sensor name

Returns

sensorname Sensor name from the device

6.37.3.4 void cs.usense.SensorProduct.setClassname (String classname)

This method set the class name

Parameters

<i>classname</i>	Class name of the sensor
------------------	--------------------------

6.37.3.5 void cs.usense.SensorProduct.setInterval (String interval)

This method set the interval

Parameters

<i>interval</i>	Interval time for the sampling
-----------------	--------------------------------

6.37.3.6 void cs.usense.SensorProduct.setSensorName (String name)

This method set the sensor name

Parameters

<i>sensorname</i>	Sensor name from the device
-------------------	-----------------------------

6.37.3.7 String cs.usense.SensorProduct.toString ()

This method return a string containing the sensor name, interval, and class name.

Returns

string with sensor name, interval, and class name.

6.37.4 Member Data Documentation**6.37.4.1 String cs.usense.SensorProduct.classname = "" [private]**

Class name of the device

6.37.4.2 String cs.usense.SensorProduct.interval = "" [private]

Sensor interval of the device

6.37.4.3 String cs.usense.SensorProduct.sensorname = "" [private]

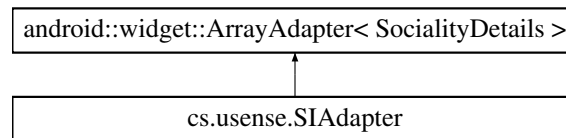
Sensor name of the device

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

- [src/cs/usense/SensorProduct.java](#)

6.38 cs.usense.SIAdapter Class Reference

Inheritance diagram for cs.usense.SIAdapter:



Classes

- class **EntryHolder**

Public Member Functions

- **SIAdapter** (Context context, List< [SocialityDetails](#) > data, int layoutResourceId, [UsenseActivity](#) listActivity)
- double **getMaxSI** ()
- double **getMaxProp** ()
- double **avgSI** ()
- double **avgProp** ()
- View **getView** (int position, View convertView, ViewGroup parent)

Static Private Attributes

- static final String **TAG** = "SI Adapter"

6.38.1 Detailed Description

This class provides methods to instantly update the SocialityDetails in the Usense activity

6.38.2 Constructor & Destructor Documentation

- 6.38.2.1 **cs.usense.SIAdapter.SIAdapter** (Context *context*, List< **SocialityDetails** > *data*, int *layoutResourceId*, **UsenseActivity** *listActivity*)

This method constructs the Social Interaction Adapter from the context and by providing SocialityDetails object, layout and activity information

Parameters

<i>context</i>	Interface to global information about an application environment.
<i>data</i>	List with SocialityDetails
<i>layoutResourceId</i>	Layout of the SocialityDetails
<i>listActivity</i>	UsenseActivity

6.38.3 Member Function Documentation

6.38.3.1 `double cs.usense.SIAdapter.avgProp ()`

This method provides the average propinquity

Returns

avgProp Average Propinquity

6.38.3.2 `double cs.usense.SIAdapter.avgSI ()`

This method provides the average social interaction

Returns

avgSI Average Social interaction

6.38.3.3 `double cs.usense.SIAdapter.getMaxProp ()`

This method provides the maximum propinquity

Returns

maxProp Maximum propinquity

6.38.3.4 `double cs.usense.SIAdapter.getMaxSI ()`

This class provides the maximum social interaction

Returns

maxSi Maximum social interaction

6.38.3.5 `View cs.usense.SIAdapter.getView (int position, View convertView, ViewGroup parent)`

6.38.4 Member Data Documentation

6.38.4.1 `final String cs.usense.SIAdapter.TAG = "SI Adapter" [static], [private]`

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

- [src/cs/usense/SIAdapter.java](#)

6.39 cs.usense.inferenceModule.SocialInteraction Class Reference

Classes

- class [CustomComparator](#)
- class [DeviceDetails](#)

Public Member Functions

- [SocialInteraction](#) (final [UsenseService](#) callback, [BluetoothCore](#) mBluetoothCore, [AccelerometerPipeline](#) mAccelerometerPipeline, [UsenseDataSource](#) dataSource)
- [ArrayList](#)< [DeviceDetails](#) > [getSocialIntAndProp](#) ([ArrayList](#)< [DeviceDetails](#) > mDevDetails, double mEnvironmentSound, double mMovementActivity)
- [ArrayList](#)< [DeviceDetails](#) > [getDeviceDetails](#) ()
- double [getMovementActivity](#) ()
- double [getEnvSound](#) ()
- int [getTimeSlot](#) ()
- void [close](#) (Context mContext)

Static Public Attributes

- static [ArrayList](#)< [DeviceDetails](#) > mDeviceDetails
- static [Map](#)< [String](#), [HashMap](#)< [String](#), [Double](#) > > mDistance
- static double mEnvironmentSound = 0.0
- static double mMovementActivity = 0.0

Private Member Functions

- [ArrayList](#)< [SocialityDetails](#) > [computeEMA](#) ([ArrayList](#)< [SocialityDetails](#) > listSocialDetails)

Private Attributes

- [UsenseDataSource](#) dataSource
- [BluetoothCore](#) mBluetoothCore
- [AccelerometerPipeline](#) mAccelerometerPipeline
- [Handler](#) mHandler
- double factor = 0.0
- double runningSiEMA = 0.0
- double runningPropEMA = 0.0

Static Private Attributes

- static final [String](#) TAG = "SOCIALInteraction"

6.39.1 Detailed Description

This class computes the social Interaction and propinquity

6.39.2 Constructor & Destructor Documentation

- 6.39.2.1 [cs.usense.inferenceModule.SocialInteraction.SocialInteraction](#) (final [UsenseService](#) callback, [BluetoothCore](#) mBluetoothCore, [AccelerometerPipeline](#) mAccelerometerPipeline, [UsenseDataSource](#) dataSource)

This class construct the [SocialInteraction](#)

Parameters

<i>callback</i>	Supply UsenseService object for UsenseActivity to use
<i>mBluetoothCore</i>	It contains the core functionalities of the application and can support to perform the social context analysis prior to storing the required information in the database.
<i>m↔ Accelerometer↔ Pipeline</i>	It provides various methods to provide Accelerometer sensor data
<i>dataSource</i>	UsenseDataSource to access various methods and information of the USenseDataSource

for Ema

Getting propinquity and Social Interaction

getSocialInteraction

6.39.3 Member Function Documentation

6.39.3.1 void cs.usense.inferenceModule.SocialInteraction.close (Context *mContext*)

This method close the context

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

6.39.3.2 ArrayList<SocialityDetails> cs.usense.inferenceModule.SocialInteraction.computeEMA (ArrayList<SocialityDetails> *listSocialDetails*) [private]

This method computes the EMA

Parameters

<i>listSocialDetails</i>	List of Sociality details objects
--------------------------	-----------------------------------

Returns

List of sociality details object with computed EMA

6.39.3.3 ArrayList<DeviceDetails> cs.usense.inferenceModule.SocialInteraction.getDeviceDetails ()

This method Provides the average of the current social weight values

Returns

avgSW The average of the current social weights towards nodes in the vicinity

Compute current social weight

6.39.3.4 double cs.usense.inferenceModule.SocialInteraction.getEnvSound ()

This method provides the Environment sound

Returns

Environment sound from the Sound pi

Environment Sound

6.39.3.5 double cs.usense.inferenceModule.SocialInteraction.getMovementActivity ()

This method provides the movement activity from accelerometer pipeline

Returns

activity Current activity from the accelerometer pipeline

Current Activity

6.39.3.6 ArrayList<DeviceDetails> cs.usense.inferenceModule.SocialInteraction.getSocialIntAndProp (ArrayList<DeviceDetails> mDevDetails, double mEnvironmentSound, double mMovementActivity)

This method Provides the social Interaction of the neighbor devices

Parameters

<i>mDevDetails</i>	List of DeviceDetails object
<i>mEnvironment↔ Sound</i>	Environment sound from the microphone
<i>mMovement↔ Activity</i>	Current activity from accelerometer pipeline

Returns

avgSW The social Interaction towards nodes in the vicinity

6.39.3.7 int cs.usense.inferenceModule.SocialInteraction.getTimeSlot ()

Provides the current time slot

Returns

currentTimeSlot The actual time slot

6.39.4 Member Data Documentation

6.39.4.1 UsenseDataSource cs.usense.inferenceModule.SocialInteraction.dataSource [private]

This class is to access functionality of Usense Data base

6.39.4.2 double cs.usense.inferenceModule.SocialInteraction.factor = 0.0 [private]

for EMA This variable is used to define factor

6.39.4.3 AccelerometerPipeline cs.usense.inferenceModule.SocialInteraction.mAccelerometerPipeline [private]

This class is to access functionality of Accelerometer pipeline

6.39.4.4 BluetoothCore cs.usense.inferenceModule.SocialInteraction.mBluetoothCore [private]

This class is to access core functionality of Bluetooth pipeline

6.39.4.5 `ArrayList<DeviceDetails> cs.usense.inferenceModule.SocialInteraction.mDeviceDetails` [static]

This variable is used to access the listeners

6.39.4.6 `Map<String, HashMap<String, Double> > cs.usense.inferenceModule.SocialInteraction.mDistance` [static]

This variable is used to get the distance

6.39.4.7 `double cs.usense.inferenceModule.SocialInteraction.mEnvironmentSound = 0.0` [static]

This variable is used to get the environment sound

6.39.4.8 `Handler cs.usense.inferenceModule.SocialInteraction.mHandler` [private]

This class is to send or process message

6.39.4.9 `double cs.usense.inferenceModule.SocialInteraction.mMovementActivity = 0.0` [static]

This variable is used to get the movement activity

6.39.4.10 `double cs.usense.inferenceModule.SocialInteraction.runningPropEMA = 0.0` [private]

This variable is used to get the Proximity EMA

6.39.4.11 `double cs.usense.inferenceModule.SocialInteraction.runningSiEMA = 0.0` [private]

This variable is used to get Social interaction EMA

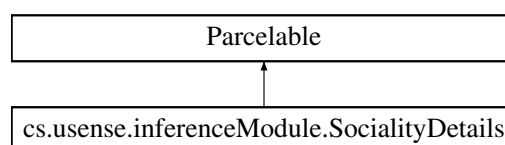
6.39.4.12 `final String cs.usense.inferenceModule.SocialInteraction.TAG = "SOCIALInteraction"` [static], [private]

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

- [src/cs/usense/inferenceModule/SocialInteraction.java](#)

6.40 cs.usense.inferenceModule.SocialityDetails Class Reference

Inheritance diagram for cs.usense.inferenceModule.SocialityDetails:



Public Member Functions

- [SocialityDetails](#) ()
- String [getDevName](#) ()
- void [setDevName](#) (String [devName](#))

- double [getmDistance](#) ()
- void [setmDistance](#) (double [mDistance](#))
- double [getmSI](#) ()
- void [setmSI](#) (double [mSI](#))
- double [getmPropinquity](#) ()
- void [setmPropinquity](#) (double [mPropinquity](#))
- double [getmSiEMA](#) ()
- void [setmSiEMA](#) (double [mSiEMA](#))
- double [getmPropEMA](#) ()
- void [setmPropEMA](#) (double [mPropEMA](#))
- double [getmPrevSiEMA](#) ()
- void [setmPrevSiEMA](#) (double [mPrevSiEMA](#))
- double [getmPrevPropEMA](#) ()
- void [setmPrevPropEMA](#) (double [mPrevPropEMA](#))
- int [describeContents](#) ()
- void [writeToParcel](#) (Parcel dest, int flags)
- [SocialityDetails](#) (Parcel in)

Public Attributes

- String [devName](#)
- double [mDistance](#)
- double [mSI](#)
- double [mPropinquity](#)
- double [mSiEMA](#)
- double [mPropEMA](#)
- double [mPrevSiEMA](#)
- double [mPrevPropEMA](#)

Static Public Attributes

- static final Parcelable.Creator< [SocialityDetails](#) > [CREATOR](#)

6.40.1 Detailed Description

This class provides getter and setter methods of [SocialityDetails](#) object

6.40.2 Constructor & Destructor Documentation

6.40.2.1 cs.usense.inferenceModule.SocialityDetails.SocialityDetails ()

This constructor method for [SocialityDetails](#)

6.40.2.2 cs.usense.inferenceModule.SocialityDetails.SocialityDetails (Parcel in)

This method initialize the parcelable with sociality details object

Parameters

<i>in</i>	Sociality details
-----------	-------------------

6.40.3 Member Function Documentation

6.40.3.1 `int cs.usense.inferenceModule.SocialityDetails.describeContents ()`

6.40.3.2 `String cs.usense.inferenceModule.SocialityDetails.getDevName ()`

This method get the device name

Returns

devName the device name

6.40.3.3 `double cs.usense.inferenceModule.SocialityDetails.getMDistance ()`

This method get the distance

Returns

mDistance the distance

6.40.3.4 `double cs.usense.inferenceModule.SocialityDetails.getMPrevPropEMA ()`

This method get the previous propinquity EMA

Returns

mPrevPropEMA the previous propinquity EMA

6.40.3.5 `double cs.usense.inferenceModule.SocialityDetails.getMPrevSiEMA ()`

This method get the previous social interaction EMA

Returns

mPrevSiEMA the previous social interaction EMA

6.40.3.6 `double cs.usense.inferenceModule.SocialityDetails.getMPropEMA ()`

This method get the propinquity EMA

Returns

mPropEMA the propinquity EMA

6.40.3.7 `double cs.usense.inferenceModule.SocialityDetails.getMPropinquity ()`

This method get the propinquity

Returns

mPropinquity the propinquity

6.40.3.8 double cs.usense.inferenceModule.SocialityDetails.getmSI ()

This method get the social interaction

Returns

mSI the social interaction

6.40.3.9 double cs.usense.inferenceModule.SocialityDetails.getmSiEMA ()

This method get the social interaction EMA

Returns

mSiEMA the social interaction EMA

6.40.3.10 void cs.usense.inferenceModule.SocialityDetails.setDevName (String devName)

This method set the device name

Parameters

<i>devName</i>	the device name
----------------	-----------------

6.40.3.11 void cs.usense.inferenceModule.SocialityDetails.setmDistance (double mDistance)

This method set the distance

Parameters

<i>mDistance</i>	the distance
------------------	--------------

6.40.3.12 void cs.usense.inferenceModule.SocialityDetails.setmPrevPropEMA (double mPrevPropEMA)

This method set the previous propinquity EMA

Parameters

<i>mPrevPropEMA</i>	the previous propinquity EMA
---------------------	------------------------------

6.40.3.13 void cs.usense.inferenceModule.SocialityDetails.setmPrevSiEMA (double mPrevSiEMA)

This method set the previous social interaction EMA

Parameters

<i>mPrevSiEMA</i>	the previous social interaction EMA
-------------------	-------------------------------------

6.40.3.14 void cs.usense.inferenceModule.SocialityDetails.setmPropEMA (double mPropEMA)

This method set the propinquity EMA

Parameters

<i>mPropEMA</i>	the propinquity EMA
-----------------	---------------------

6.40.3.15 void cs.usense.inferenceModule.SocialityDetails.setmPropinquity (double *mPropinquity*)

This method set the propinquity

Parameters

<i>mPropinquity</i>	the propinquity
---------------------	-----------------

6.40.3.16 void cs.usense.inferenceModule.SocialityDetails.setmSI (double *mSI*)

This method set the social interaction

Parameters

<i>mSI</i>	the social interaction
------------	------------------------

6.40.3.17 void cs.usense.inferenceModule.SocialityDetails.setmSiEMA (double *mSiEMA*)

This method set the social interaction EMA

Parameters

<i>mSiEMA</i>	the social interaction EMA
---------------	----------------------------

6.40.3.18 void cs.usense.inferenceModule.SocialityDetails.writeToParcel (Parcel *dest*, int *flags*)

This method writes to the parable with sociality details

Parameters

<i>dest</i>	The Parcel in which the Sociality details should be written.
<i>flags</i>	Flags about how the object should be written. May be 0 or PARCELABLE_WRITE_RETURN_VALUE.

6.40.4 Member Data Documentation

6.40.4.1 final Parcelable.Creator<SocialityDetails> cs.usense.inferenceModule.SocialityDetails.CREATOR [static]

Initial value:

```
= new Parcelable.Creator<SocialityDetails>() {
    public SocialityDetails createFromParcel(Parcel in) {
        return new SocialityDetails(in);
    }

    public SocialityDetails[] newArray(int size) {
        return new SocialityDetails[size];
    }
}
```

This method creates the parcelable with sociality details object

6.40.4.2 String cs.usense.inferenceModule.SocialityDetails.devName

Device name variable of the [SocialityDetails](#) object

6.40.4.3 double cs.usense.inferenceModule.SocialityDetails.mDistance

Distance variable of the [SocialityDetails](#) object

6.40.4.4 double cs.usense.inferenceModule.SocialityDetails.mPrevPropEMA

Previous Propinquity EMA variable of the [SocialityDetails](#) object

6.40.4.5 double cs.usense.inferenceModule.SocialityDetails.mPrevSiEMA

Previous Social Interaction EMA variable of the [SocialityDetails](#) object

6.40.4.6 double cs.usense.inferenceModule.SocialityDetails.mPropEMA

Propinquity EMA variable of the [SocialityDetails](#) object

6.40.4.7 double cs.usense.inferenceModule.SocialityDetails.mPropinquity

Propinquity variable of the [SocialityDetails](#) object

6.40.4.8 double cs.usense.inferenceModule.SocialityDetails.mSI

Social Interaction variable of the [SocialityDetails](#) object

6.40.4.9 double cs.usense.inferenceModule.SocialityDetails.mSiEMA

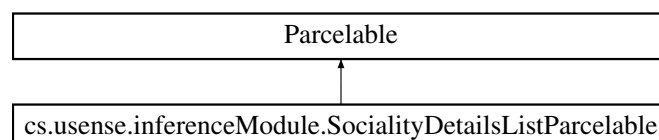
Social Interaction EMA variable of the [SocialityDetails](#) object

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

- [src/cs/usense/inferenceModule/SocialityDetails.java](#)

6.41 cs.usense.inferenceModule.SocialityDetailsListParcelable Class Reference

Inheritance diagram for cs.usense.inferenceModule.SocialityDetailsListParcelable:



Public Member Functions

- [SocialityDetailsListParcelable](#) ()
- List< [SocialityDetails](#) > [getSocialityDetailsList](#) ()

- void [setSocialityDetailsList](#) (List< [SocialityDetails](#) > socialityList)
- int [describeContents](#) ()
- void [writeToParcel](#) (Parcel dest, int flags)
- [SocialityDetailsListParcelable](#) (Parcel in)

Static Public Attributes

- static final Parcelable.Creator< [SocialityDetailsListParcelable](#) > [CREATOR](#)

6.41.1 Detailed Description

This class provides Parcelable for [SocialityDetails](#) object

6.41.2 Constructor & Destructor Documentation

6.41.2.1 `cs.usense.inferenceModule.SocialityDetailsListParcelable.SocialityDetailsListParcelable ()`

The constructor of [SocialityDetailsListParcelable](#)

6.41.2.2 `cs.usense.inferenceModule.SocialityDetailsListParcelable.SocialityDetailsListParcelable (Parcel in)`

This method initialize the Sociality DetailsList Parcelable

Parameters

<i>in</i>	The Parcel in which the object should be written.
-----------	---

6.41.3 Member Function Documentation

6.41.3.1 `int cs.usense.inferenceModule.SocialityDetailsListParcelable.describeContents ()`

6.41.3.2 `List<SocialityDetails> cs.usense.inferenceModule.SocialityDetailsListParcelable.getSocialityDetailsList ()`

This method get the sociality details list

Returns

socialityDetailsList List of sociality details object

6.41.3.3 `void cs.usense.inferenceModule.SocialityDetailsListParcelable.setSocialityDetailsList (List< SocialityDetails > socialityList)`

This method set the sociality details list

Parameters

<i>socialityList</i>	List of SocialityDetails objects
----------------------	--

6.41.3.4 `void cs.usense.inferenceModule.SocialityDetailsListParcelable.writeToParcel (Parcel dest, int flags)`

This method write to the parcel list

Parameters

<i>dest</i>	The Parcel in which the Sociality details should be written.
<i>flags</i>	Flags about how the object should be written. May be 0 or PARCELABLE_WRITE_RETURN_VALUE.

6.41.4 Member Data Documentation

6.41.4.1 `final Parcelable.Creator<SocialityDetailsListParcelable> cs.usense.inferenceModule.SocialityDetailsListParcelable.CREATOR [static]`

Initial value:

```
=
    new Parcelable.Creator<SocialityDetailsListParcelable>() {
    public SocialityDetailsListParcelable createFromParcel(Parcel in) {
        return new SocialityDetailsListParcelable(in);
    }

    public SocialityDetailsListParcelable[] newArray(int size) {
        return new SocialityDetailsListParcelable[size];
    }
}
```

This method creates the Parcelable

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

- [src/cs/usense/inferenceModule/SocialityDetailsListParcelable.java](#)

6.42 cs.usense.bluetooth.BluetoothCore.socialWeight Class Reference

Public Member Functions

- String [getmMacAddress](#) ()
- String [getmDeviceName](#) ()
- int [getmSocialWeight](#) ()

Public Attributes

- String [mMacAddress](#)
- String [mDeviceName](#)
- int [mSocialWeight](#)

6.42.1 Detailed Description

This class holds information about a device: name, MAC address, and social weight towards it.

6.42.2 Member Function Documentation

6.42.2.1 String `cs.usense.bluetooth.BluetoothCore.socialWeight.getmDeviceName ()`

This method returns the Device name

Parameters

<i>mDeviceName</i>	Device name from the socialWeight object
--------------------	--

6.42.2.2 String cs.usense.bluetooth.BluetoothCore.socialWeight.getmMacAddress ()

This method returns the MAC Address

Parameters

<i>mMacAddress</i>	Bluetooth MAC address from the socialWeight object
--------------------	--

6.42.2.3 int cs.usense.bluetooth.BluetoothCore.socialWeight.getmSocialWeight ()

This method returns the Social weight

Parameters

<i>mSocialWeight</i>	Device name from the socialWeight object
----------------------	--

6.42.3 Member Data Documentation

6.42.3.1 String cs.usense.bluetooth.BluetoothCore.socialWeight.mDeviceName

6.42.3.2 String cs.usense.bluetooth.BluetoothCore.socialWeight.mMacAddress

6.42.3.3 int cs.usense.bluetooth.BluetoothCore.socialWeight.mSocialWeight

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

- src/cs/usense/bluetooth/[BluetoothCore.java](#)

6.43 cs.usense.microphone.SoundLevel Class Reference

Public Member Functions

- [SoundLevel](#) ()
- String [toString](#) ()
- int [getRowID](#) ()
- void [setRowID](#) (int rowID)
- void [setSoundDate](#) (int l)
- void [setQuietTime](#) (long quietTime)
- void [setNormalTime](#) (long normalTime)
- void [setAlertTime](#) (long alertTime)
- void [setNoiseTime](#) (long noiseTime)
- long [getSoundDate](#) ()
- long [getQuietTime](#) ()
- long [getNormalTime](#) ()
- long [getAlertTime](#) ()
- long [getNoiseTime](#) ()

Public Attributes

- int [RowID](#)
- long [SoundDate](#)
- long [QuietTime](#)
- long [NormalTime](#)
- long [AlertTime](#)
- long [NoiseTime](#)

6.43.1 Detailed Description

This class extracts the different sound levels such as Quite, Normal, Alert, and Noisy based on the sound frequency levels.

6.43.2 Constructor & Destructor Documentation

6.43.2.1 cs.usense.microphone.SoundLevel.SoundLevel ()

This class Construct the [SoundLevel](#)

6.43.3 Member Function Documentation

6.43.3.1 long cs.usense.microphone.SoundLevel.getAlertTime ()

This method get the Alert Time

Returns

AlertTime the time duration of Alert Level

6.43.3.2 long cs.usense.microphone.SoundLevel.getNoiseTime ()

This method get the Noise Time

Returns

NoiseTime the time duration of Noise Level

6.43.3.3 long cs.usense.microphone.SoundLevel.getNormalTime ()

This method get the Normal Time

Returns

NormalTime the time duration of Normal Level

6.43.3.4 long cs.usense.microphone.SoundLevel.getQuietTime ()

This method get the QUITE Time

Returns

QuietTime the time duration of Quite Level

6.43.3.5 int cs.usense.microphone.SoundLevel.getRowID ()

This method get the rowID

Returns

RowID the rowID

6.43.3.6 long cs.usense.microphone.SoundLevel.getSoundDate ()

This method get the current date

Returns

SoundDate the system date

6.43.3.7 void cs.usense.microphone.SoundLevel.setAlertTime (long *alertTime*)

This method set the time duration in Alert

Parameters

<i>alertTime</i>	AlertTime into SoundLevel object
------------------	--

6.43.3.8 void cs.usense.microphone.SoundLevel.setNoiseTime (long *noiseTime*)

This method set the time duration in Noisy

Parameters

<i>noiseTime</i>	NoiseTime into SoundLevel object
------------------	--

6.43.3.9 void cs.usense.microphone.SoundLevel.setNormalTime (long *normalTime*)

This method Set the time duration in Normal

Parameters

<i>normalTime</i>	NormalTime into SoundLevel object
-------------------	---

6.43.3.10 void cs.usense.microphone.SoundLevel.setQuietTime (long *quietTime*)

This method set the time duration in Quite

Parameters

<i>quietTime</i>	QuiteTime into SoundLevel object
------------------	--

6.43.3.11 void cs.usense.microphone.SoundLevel.setRowID (int *rowID*)

This method set the row ID

Parameters

<i>rowID</i>	RowId into SoundLevel object
--------------	--

6.43.3.12 void cs.usense.microphone.SoundLevel.setSoundDate (int /)

This method set the date on which the time duration of each sound level

Parameters

/	SoundDate into SoundLevel object
---	--

6.43.3.13 String cs.usense.microphone.SoundLevel.toString ()

This method return a string containing the RowID, SoundDate, QuietTime, NormalTime, AlertTime and NoiseTime.

Returns

string String with RowID, SoundDate, QuietTime, NormalTime, AlertTime and NoiseTime values

6.43.4 Member Data Documentation

6.43.4.1 long cs.usense.microphone.SoundLevel.AlertTime

AlertTime variable of the [SoundLevel](#) object

6.43.4.2 long cs.usense.microphone.SoundLevel.NoiseTime

NoiseTime variable of the [SoundLevel](#) object

6.43.4.3 long cs.usense.microphone.SoundLevel.NormalTime

NormalTime variable of the [SoundLevel](#) object

6.43.4.4 long cs.usense.microphone.SoundLevel.QuietTime

QuietTime variable of the [SoundLevel](#) object

6.43.4.5 int cs.usense.microphone.SoundLevel.RowID

RowID variable of the [SoundLevel](#) object

6.43.4.6 long cs.usense.microphone.SoundLevel.SoundDate

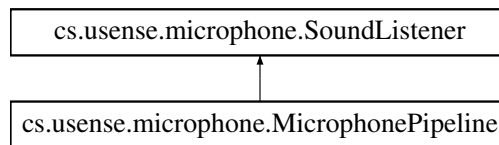
SoundDate variable of the [SoundLevel](#) object

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

- src/cs/usense/microphone/[SoundLevel.java](#)

6.44 cs.usense.microphone.SoundListener Interface Reference

Inheritance diagram for cs.usense.microphone.SoundListener:



Public Member Functions

- void [updateSoundLevel](#) ([SoundLevel](#) soundLevel)

6.44.1 Detailed Description

This class is the listener class to update sound levels in the application.

6.44.2 Member Function Documentation

6.44.2.1 void cs.usense.microphone.SoundListener.updateSoundLevel ([SoundLevel](#) *soundLevel*)

This method called when [SoundLevel](#) table has been updated in the database

Parameters

<i>soundLevel</i>	SoundLevel object
-------------------	-----------------------------------

Implemented in [cs.usense.microphone.MicrophonePipeline](#).

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

- src/cs/usense/microphone/[SoundListener.java](#)

6.45 cs.usense.microphone.SoundManager Class Reference

Public Member Functions

- [SoundManager](#) ([UsenseService](#) callback)
- void [start](#) ()
- void [stop](#) ()
- double [soundDb](#) ()
- double [getMaxAmplitude](#) ()
- double [getAmplitudeHPF](#) ()
- void [setSoundListener](#) ([SoundListener](#) listener)

Static Public Member Functions

- static boolean [micExist](#) (Context context)
- static boolean [isCapturing](#) ()

Static Public Attributes

- static final double [AMP](#) = 1.0

Static Protected Member Functions

- static Dialog [showDialog](#) (String id)
- static void [finish](#) ()

Protected Attributes

- double [avgdB](#)

Static Private Member Functions

- static PackageManager [getPackageManager](#) ()

Private Attributes

- MediaRecorder [mRecorder](#) = null
- double [hpf](#) = 0.0
- Runnable [mRunPool](#)

Static Private Attributes

- static Context [mContext](#)
- static final double [HPF_FILTER](#) = 0.97
- static final String [FEATURE_NOT_AVAILABLE](#) = null
- static final int [POLL_INTERVAL](#) = 300
- static Boolean [micExist](#)
- static boolean [capturing](#) = false

6.45.1 Detailed Description

This gives us the filtered sound frequency, and conversion to amplitude. In this class we implement two filters which are EMA and HPF filters.

6.45.2 Constructor & Destructor Documentation

6.45.2.1 cs.usense.microphone.SoundManager.SoundManager ([UsenseService](#) *callback*)

This method constructs the [SoundManager](#)

Parameters

<i>callback</i>	Supply functionality for UsenseActivity to use
-----------------	--

6.45.3 Member Function Documentation

6.45.3.1 static void cs.usense.microphone.SoundManager.finish () [static], [protected]

This method to finish

6.45.3.2 double cs.usense.microphone.SoundManager.getAmplitudeHPF ()

This method is to apply the sound filter to suppress some noise on the captured sound wave. In this method, implemented two filters, namely EMA and HPF. Either the filter we can choose:

Highpass Pre-emphasizing Filter hPF $y(n) = x(n) - 0.97 * x(n-1)$

EMA Filter EMA $y_k = a * x_k + (1-a)y_{k-1}$

Returns

hpf Highpass Pre-emphasizing Filter

6.45.3.3 double cs.usense.microphone.SoundManager.getMaxAmplitude ()

This method extracts the maximum sound amplitude by using the Android method [getMaxAmplitude\(\)](#)

Returns

getMaxAmplitude null or maximum amplitude of captured sound wave

6.45.3.4 static PackageManager cs.usense.microphone.SoundManager.getPackageManager () [static], [private]

6.45.3.5 static boolean cs.usense.microphone.SoundManager.isCapturing () [static]

This method returns true if capturing the sound

Returns

capturing Checks whether it is capturing or not

6.45.3.6 static boolean cs.usense.microphone.SoundManager.micExist (Context context) [static]

This method checks whether the microphone exists in the device or not

Parameters

<i>context</i>	Interface to global information about an application environment
----------------	--

Returns

true if device exists, false otherwise

6.45.3.7 void cs.usense.microphone.SoundManager.setSoundListener (SoundListener listener)

This method sets the [SoundListener](#)

Parameters

<i>listener</i>	the SoundListener
-----------------	-----------------------------------

6.45.3.8 static Dialog cs.usense.microphone.SoundManager.showDialog (String id) [static], [protected]

This method shows the dialog

Parameters

<i>id</i>	String which provide the availability of feature
-----------	--

Returns

True/False if Feature not available/Feature is available

6.45.3.9 double cs.usense.microphone.SoundManager.soundDb ()

This method convert the received sound apmlitude into decibels by using acustic wave equation

Returns

sound in amplitude

6.45.3.10 void cs.usense.microphone.SoundManager.start ()

This method intialise the Media recorder. Media Recorder is used to start microhphone activity by collecting sound samples captured dynamically. The process takes place in the temporary file of the users device.

6.45.3.11 void cs.usense.microphone.SoundManager.stop ()

This method stop the media recorder

6.45.4 Member Data Documentation

6.45.4.1 final double cs.usense.microphone.SoundManager.AMP = 1.0 [static]

This variable to set the Amplitude

6.45.4.2 double cs.usense.microphone.SoundManager.avgdB [protected]

This variable to access average decibles

6.45.4.3 boolean cs.usense.microphone.SoundManager.capturing = false [static],[private]

This variable to check the capturing

6.45.4.4 final String cs.usense.microphone.SoundManager.FEATURE_NOT_AVAILBLE = null [static],[private]

This variable to check the Feature is not available

6.45.4.5 double cs.usense.microphone.SoundManager.hPF = 0.0 [private]

This variable to set the High pass filter

6.45.4.6 final double cs.usense.microphone.SoundManager.HPF_FILTER = 0.97 [static],[private]

This variable to set the filter for High pass filter

6.45.4.7 Context `cs.usense.microphone.SoundManager.mContext` [static],[private]

Interface to global information about an application environment.

6.45.4.8 Boolean `cs.usense.microphone.SoundManager.micExist` [static],[private]

This variable to check the microphone is exist

6.45.4.9 MediaRecorder `cs.usense.microphone.SoundManager.mRecorder = null` [private]

This class is Used to record audio.

6.45.4.10 Runnable `cs.usense.microphone.SoundManager.mRunPool` [private]

Initial value:

```
= new Runnable() {
    @Override
    public void run() {
        if(isCapturing()){
            stop();
        }else{
            Toast.makeText(mContext, "Error enabling Microphone Closing...", Toast.LENGTH_SHORT)
                .show();
            stop();
        }
    }
}
```

6.45.4.11 final int `cs.usense.microphone.SoundManager.POLL_INTERVAL = 300` [static],[private]

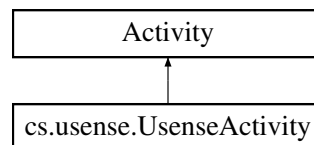
This variable to set the poll interval

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

- `src/cs/usense/microphone/SoundManager.java`

6.46 cs.usense.UsenseActivity Class Reference

Inheritance diagram for `cs.usense.UsenseActivity`:



Classes

- class [CustomComparator](#)
- class [OnSwipeTouchListener](#)

Public Member Functions

- void [onBackPressed](#) ()

Static Public Attributes

- static final String `PKG` = "cs.usense"
- static String `actionMessage` = ""

Protected Member Functions

- void `onCreate` (Bundle savedInstanceState)
- void `onDestroy` ()
- void `onStart` ()
- void `onStop` ()

Private Member Functions

- boolean `isMyServiceRunning` (Class< `UsenseService` > usenseService)
- ArrayList< `SensorProduct` > `parseXML` (XmlPullParser parser) throws XmlPullParserException, IOException

Private Attributes

- `UsenseService` `mBoundService`
- boolean `mRequestToBound` = false
- boolean `mIsServiceBound`
- String `sensorname`
- String `sensorinterval`
- ListView `siListView`
- `SIAdapter` `mSIAdapter`
- ServiceConnection `mConnection`

Static Private Attributes

- static final String `TAG` = "USENSE"
- static ArrayList< `SocialityDetails` > `listHistory`

6.46.1 Detailed Description

This class provides the layout of USense application and initialize the USense Service

6.46.2 Member Function Documentation

6.46.2.1 boolean cs.usense.UsenseActivity.isMyServiceRunning (Class< `UsenseService` > *usenseService*)
[private]

This method returns True/false if the USense service is running/not

Parameters

<i>usenseService</i>	<code>UsenseService</code> class
----------------------	----------------------------------

Returns

true/false

6.46.2.2 void `cs.usense.UsenseActivity.onBackPressed ()`

6.46.2.3 void `cs.usense.UsenseActivity.onCreate (Bundle savedInstanceState)` `[protected]`

Find the ListView resource.

6.46.2.4 void `cs.usense.UsenseActivity.onDestroy ()` `[protected]`

This method close the USense service

6.46.2.5 void `cs.usense.UsenseActivity.onStart ()` `[protected]`

This method start the USense activity

6.46.2.6 void `cs.usense.UsenseActivity.onStop ()` `[protected]`

This method stop the USense activity

6.46.2.7 `ArrayList<SensorProduct> cs.usense.UsenseActivity.parseXML (XmlPullParser parser)` throws `XmlPullParserException, IOException` `[private]`

This method parse the XML data

Parameters

<i>parser</i>	The Xml Pull Parser with list of sensors
---------------	--

Returns

products List of sensors from [SensorProduct](#)

Exceptions

<i>XmlPullParserException</i>	Xml Pull Parser Exception
<i>IOException</i>	Input, Output Exception

6.46.3 Member Data Documentation

6.46.3.1 String `cs.usense.UsenseActivity.actionMessage = ""` `[static]`

This variable is to store the action message

6.46.3.2 `ArrayList<SocialityDetails> cs.usense.UsenseActivity.listHistory` `[static], [private]`

This list of SocialityDetails objects to get the History list of SocialityDetails

6.46.3.3 `UsenseService cs.usense.UsenseActivity.mBoundService` `[private]`

This class provides the Usense Service to bound service

6.46.3.4 `ServiceConnection cs.usense.UsenseActivity.mConnection` `[private]`

This method creates the service connection, which can be used to bind the USense service

6.46.3.5 `boolean cs.usense.UsenseActivity.mIsServiceBound` [private]

This variable is request to bound service

6.46.3.6 `boolean cs.usense.UsenseActivity.mRequestToBound = false` [private]

This variable is to bound request

6.46.3.7 `SIAdapter cs.usense.UsenseActivity.mSIAdapter` [private]

This class is to get SocialityDetails object

6.46.3.8 `final String cs.usense.UsenseActivity.PKG = "cs.usense"` [static]

6.46.3.9 `String cs.usense.UsenseActivity.sensorinterval` [private]

This variable is to provide sensor interval

6.46.3.10 `String cs.usense.UsenseActivity.sensorname` [private]

This variable is to provide the sensor name

6.46.3.11 `ListView cs.usense.UsenseActivity.siListView` [private]

This class is to provide ListView

6.46.3.12 `final String cs.usense.UsenseActivity.TAG = "USENSE"` [static], [private]

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

- [src/cs/usense/UsenseActivity.java](#)

6.47 cs.usense.db.UsenseDataSource Class Reference

Public Member Functions

- [UsenseDataSource](#) (Context context)
- void [openDB](#) (boolean writable) throws SQLException
- void [closeDB](#) ()
- long [getNumAP](#) ()
- long [getNumActionEntry](#) ()
- long [registerNewActionEntry](#) ([ActionsEntry](#) ae)
- boolean [updateActionEntry](#) ([ActionsEntry](#) ae)
- [ActionsEntry](#) [getActionEntry](#) (String actionentry)
- boolean [hasActionEntry](#) (String actionType)
- Map< String, [ActionsEntry](#) > [getAllActionEntry](#) ()
- long [getNumBTDevice](#) ()
- void [registerNewBTDevice](#) ([BTUserDevice](#) btDev, [BTUserDevEncounterDuration](#) duration, [BTUserDevAverageEncounterDuration](#) averageDuration, [BTUserDevSocialWeight](#) socialWeight)
- void [updateBTDeviceAndDuration](#) ([BTUserDevice](#) btDev, [BTUserDevEncounterDuration](#) duration)
- void [updateBTDevAvgEncounterDuration](#) ([BTUserDevAverageEncounterDuration](#) averageDuration)

- void [updateBTDevSocialWeight](#) ([BTUserDevSocialWeight](#) socialWeight)
- [BTUserDevice](#) [getBTDevice](#) (String btDevice)
- [BTUserDevEncounterDuration](#) [getBTDeviceEncounterDuration](#) (String btDevEncounterDuration)
- [BTUserDevAverageEncounterDuration](#) [getBTDeviceAverageEncounterDuration](#) (String btDevAverageEncounterDuration)
- [BTUserDevSocialWeight](#) [getBTDeviceSocialWeight](#) (String btDevSocialWeight)
- boolean [hasBTDevice](#) (String btDev)
- Map< String, [BTUserDevice](#) > [getAllBTDevice](#) ()
- Map< String, [BTUserDevEncounterDuration](#) > [getAllBTDevEncounterDuration](#) ()
- Map< String, [BTUserDevAverageEncounterDuration](#) > [getAllBTDevAverageEncounterDuration](#) ()
- Map< String, [BTUserDevSocialWeight](#) > [getAllBTDevSocialWeight](#) ()
- long [getNumEntries](#) ()
- long [registerLocationEntry](#) ([LocationEntry](#) entry)
- boolean [updateLocationEntry](#) ([LocationEntry](#) entry)
- int [removeLocationEntry](#) ([LocationEntry](#) entry)
- [LocationEntry](#) [getLocationEntry](#) (String bssid)
- boolean [hasLocationEntry](#) (String bssid)
- Map< String, [LocationEntry](#) > [getAllLocationEntries](#) ()
- void [cleanLocationTable](#) ()
- long [getNumSoundLevel](#) ()
- long [registerNewSoundLevel](#) ([SoundLevel](#) sl)
- boolean [updateSoundLevel](#) ([SoundLevel](#) sl)
- [SoundLevel](#) [getSoundLevel](#) (long todayMillis)
- boolean [hasSoundLevel](#) (long soundDate)
- Map< String, [SoundLevel](#) > [getAllSoundLevel](#) ()

Public Attributes

- String[] [allColumnsSound](#)

Private Member Functions

- [ActionsEntry](#) [cursorToActions](#) (Cursor cursor)
- [BTUserDevice](#) [cursorToBTDevice](#) (Cursor cursor)
- [BTUserDevEncounterDuration](#) [cursorToBTDevEncounterDuration](#) (Cursor cursor)
- [BTUserDevAverageEncounterDuration](#) [cursorToBTDevAverageEncounterDuration](#) (Cursor cursor)
- [BTUserDevSocialWeight](#) [cursorToBTDevSocialWeight](#) (Cursor cursor)
- [LocationEntry](#) [cursorToLocation](#) (Cursor cursor)
- [SoundLevel](#) [cursorToSound](#) (Cursor cursor)

Private Attributes

- SQLiteDatabase [db](#)
- [UsenseSQLiteHelper](#) [dbHelper](#)
- boolean [isDbOpen](#)
- String[] [allColumnsActionsEntry](#)
- String[] [allColumnsBTDevices](#)
- String[] [allColumnsBTDeviceEncounterDuration](#)
- String[] [allColumnsBTDeviceAverageEncounterDuration](#)
- String[] [allColumnsBTDeviceSocialWeight](#)
- String[] [allColumnsLocation](#)

6.47.1 Detailed Description

This class provides various methods and information of the USense Data base. Methods include, open database, close database, access to the tables

6.47.2 Constructor & Destructor Documentation

6.47.2.1 cs.usense.db.UsenseDataSource.UsenseDataSource (Context *context*)

This method Construct the context. which takes Android Context as input.

Parameters

<i>context</i>	Interface to global information about an application environment.
----------------	---

6.47.3 Member Function Documentation

6.47.3.1 void cs.usense.db.UsenseDataSource.cleanLocationTable ()

This method clean the TABLE_LOCATION table

6.47.3.2 void cs.usense.db.UsenseDataSource.closeDB ()

This method close the predefined USense database.

6.47.3.3 ActionsEntry cs.usense.db.UsenseDataSource.cursorToActions (Cursor *cursor*) [private]

This method converts a cursor pointing to a record in the ACTIONS table to a ActionsEntry object.

Parameters

<i>cursor</i>	Cursor pointing to a record of the ACTIONS table.
---------------	---

Returns

ae the ActionsEntry object

6.47.3.4 BTUserDevAverageEncounterDuration cs.usense.db.UsenseDataSource.cursorToBTDevAverageEncounter↵ Duration (Cursor *cursor*) [private]

This method converts a cursor pointing to a record in the BTDEVICEAVERAGEENCOUNTERDURATION table to a BTUserDevAverageEncounterDuration object.

Parameters

<i>cursor</i>	The cursor pointing to a record of the BTDEVICEAVERAGEENCOUNTERDURATION table.
---------------	--

Returns

averageDuration The BTUserDevAverageEncounterDuration object.

6.47.3.5 BTUserDevEncounterDuration cs.usense.db.UsenseDataSource.cursorToBTDevEncounterDuration (Cursor *cursor*) [private]

This method converts a cursor pointing to a record in the BTDEVICEENCOUNTERDURATION table to a BTUser↵
DevEncounterDuration object.

Parameters

<i>cursor</i>	The cursor pointing to a record of the BTDEVICEENCOUNTERDURATION table.
---------------	---

Returns

duration The BTUserDevEncounterDuration object.

6.47.3.6 **BTUserDevice** `cs.usense.db.UsenseDataSource.cursorToBTDevice (Cursor cursor) [private]`

This method converts a cursor pointing to a record in the BTDEVICE table to a BTDevice object.

Parameters

<i>cursor</i>	The cursor pointing to a record of the BTDEVICE table.
---------------	--

Returns

btDev The BTDevice object

6.47.3.7 **BTUserDevSocialWeight** `cs.usense.db.UsenseDataSource.cursorToBTDevSocialWeight (Cursor cursor) [private]`

This method converts a cursor pointing to a record in the BTDEVICESOCIALWEIGHT table to a BTUserDev↵ SocialWeight object.

Parameters

<i>cursor</i>	The cursor pointing to a record of the BTDEVICEAVERAGEENCOUNTERDURATION table.
---------------	--

Returns

socialWeight The BTUserDevSocialWeight object.

6.47.3.8 **LocationEntry** `cs.usense.db.UsenseDataSource.cursorToLocation (Cursor cursor) [private]`

This method converts a cursor pointing to a record in the TABLE_LOCATION table to a LocationEntry object.

Parameters

<i>cursor</i>	Cursor pointing to a record of the TABLE_LOCATION table.
---------------	--

Returns

entry the LocationEntry object

6.47.3.9 **SoundLevel** `cs.usense.db.UsenseDataSource.cursorToSound (Cursor cursor) [private]`

This method provides cursor to the TABLE_SOUND table

Parameters

<i>cursor</i>	Cursor pointing to a record of the TABLE_SOUND table.
---------------	---

Returns

sl SoundLevel

6.47.3.10 ActionsEntry cs.usense.db.UsenseDataSource.getActionEntry (String *actionentry*)

This method gets an Actions already registered by the application.

Parameters

<i>actionentry</i>	Actions which information should be returned
--------------------	--

Returns

ae the ActionsEntry object, null if not found.

6.47.3.11 Map<String, ActionsEntry> cs.usense.db.UsenseDataSource.getAllActionEntry ()

This method gets the all the Actions recorded by the application on the ACCESS_POINTS table.

Returns

aeMap A map with the Actions objects, and the actiontype as key.

6.47.3.12 Map<String, BTUserDevAverageEncounterDuration> cs.usense.db.UsenseDataSource.getAllBTDevAverageEncounterDuration ()

This method gets the all the BTUserDevAverageEncounterDuration recorded by the application on the BTDEVICEAVERAGEENCOUNTERDURATION table.

Returns

btDevAverageEncounterDurationMap The map with the BTUserDevAverageEncounterDuration objects, and the BTDEV_MAC_ADDRESS as key.

6.47.3.13 Map<String, BTUserDevEncounterDuration> cs.usense.db.UsenseDataSource.getAllBTDevEncounterDuration ()

This method gets the all the BTUserDevEncounterDuration recorded by the application on the BTDEVICEENCOUNTERDURATION table.

Returns

btDevEncounterDurationMap The map with the BTUserDevEncounterDuration objects, and the BTDEV_MAC_ADDRESS as key.

6.47.3.14 Map<String, BTUserDevice> cs.usense.db.UsenseDataSource.getAllBTDevice ()

This method gets the all the BTDevice recorded by the application on the BTDEVICE table.

Returns

btDevMap The map with the BTUserDevice objects, and the BTDEV_MAC_ADDRESS as key.

6.47.3.15 Map<String, BTUserDevSocialWeight> cs.usense.db.UsenseDataSource.getAllBTDevSocialWeight ()

This method gets the all the BTUserDevSocialWeight recorded by the application on the BTDEVICESOCIALWEIGHT table.

Returns

btDevSocialWeightMap The map with the BTUserDevSocialWeight objects, and the BTDEV_MAC_ADDRESS as key.

6.47.3.16 Map<String, LocationEntry> cs.usense.db.UsenseDataSource.getAllLocationEntries ()

This method gets the all the location entries recorded by the application on the TABLE_LOCATION table.

Returns

mLocationMap A map with the LocationEntry objects.

6.47.3.17 Map<String, SoundLevel> cs.usense.db.UsenseDataSource.getAllSoundLevel ()

This method gets the all the sound level entries recorded by the application on the TABLE_SOUND table.

Returns

slMap A map with the SoundLevel objects.

6.47.3.18 BTUserDevice cs.usense.db.UsenseDataSource.getBTDevice (String *btDevice*)

This method gets information about a BTDevice already registered by the application.

Parameters

<i>mac</i>	The MAC address of the BTDevice which information should be returned.
------------	---

Returns

btDev The btDev object, null if not found.

6.47.3.19 BTUserDevAverageEncounterDuration cs.usense.db.UsenseDataSource.getBTDeviceAverageEncounterDuration (String *btDevAverageEncounterDuration*)↔

This method gets average encounter duration information of a BTDevice already registered by the application.

Parameters

<i>mac</i>	The MAC address of the BTDevice which information should be returned.
------------	---

Returns

btDevAvgEncDur The btDevAvgEncDur object, null if not found.

6.47.3.20 BTUserDevEncounterDuration cs.usense.db.UsenseDataSource.getBTDeviceEncounterDuration (String *btDevEncounterDuration*)

This method gets encounter duration information of a BTDevice already registered by the application.

Parameters

<i>mac</i>	The MAC address of the BTDevice which information should be returned.
------------	---

Returns

btDevEncDur The btDevEncDur object, null if not found.

6.47.3.21 BTUserDevSocialWeight cs.usense.db.UsenseDataSource.getBTDeviceSocialWeight (String *btDevSocialWeight*)

This method gets social weight information of a BTDevice already registered by the application.

Parameters

<i>mac</i>	The MAC address of the BTDevice which information should be returned.
------------	---

Returns

btDevSocWeight The btDevSocWeight object, null if not found.

6.47.3.22 LocationEntry cs.usense.db.UsenseDataSource.getLocationEntry (String *bssid*)

This method get the location entries from the TABLE_LOCATION

Parameters

<i>bssid</i>	location id
--------------	-------------

Returns

ap location entry object

6.47.3.23 long cs.usense.db.UsenseDataSource.getNumActionEntry ()

This method gets the number of records in the ACTION_ENTRY table. This is, the number of Actions registered on the application.

Returns

the number of Actions registered by the application.

6.47.3.24 long cs.usense.db.UsenseDataSource.getNumAP ()

This method gets the number of records in the ACCESS_POINTS table. This is, the number of AP registered on the application.

Returns

number of AP registered by the application.

6.47.3.25 long cs.usense.db.UsenseDataSource.getNumBTDevice ()

This method gets the number of records in the BTDEVICE table. This is, the number of BTDevice registered on the application.

Returns

The number of BTDevice registered by the application.

6.47.3.26 long cs.usense.db.UsenseDataSource.getNumEntries ()

This method gets the number of records in the TABLE_LOCATION table. This is, the number of locations registered on the application.

Returns

the number of locations registered by the application.

6.47.3.27 long cs.usense.db.UsenseDataSource.getNumSoundLevel ()

This method get the entries in TABLE_SOUND table

Returns

SoundLevel The number of rows in the table

6.47.3.28 SoundLevel cs.usense.db.UsenseDataSource.getSoundLevel (long *todayMillis*)

This method provides the sound level

Parameters

<i>todayMillis</i>	Time in milliseconds
--------------------	----------------------

Returns

sl SoundLevel with time in milliseconds

6.47.3.29 boolean cs.usense.db.UsenseDataSource.hasActionEntry (String *actionType*)

This method checks if a given Actions has already been registered by the application.

Parameters

<i>actionType</i>	Actions of the Actions
-------------------	------------------------

Returns

true if Actions has already been registered by the application, false otherwise.

6.47.3.30 boolean cs.usense.db.UsenseDataSource.hasBTDevice (String *btDev*)

This method checks if a given BTDevice has already been registered by the application.

Parameters

<i>mac</i>	The MAC address of the BTDevice.
------------	----------------------------------

Returns

true, if BTDevice has already been registered by the application, false otherwise.

6.47.3.31 boolean cs.usense.db.UsenseDataSource.hasLocationEntry (String *bssid*)

This method checks whether the bssid is available in TABLE_LOCATION table

Parameters

<i>bssid</i>	location id
--------------	-------------

Returns

true if location id is in location ebtry object

6.47.3.32 `boolean cs.usense.db.UsenseDataSource.hasSoundLevel (long soundDate)`

This method check whether the entry is available or not from TABLE_SOUND table

Parameters

<i>soundDate</i>	Date of the sound level
------------------	-------------------------

Returns

true If the entry is available

6.47.3.33 void cs.usense.db.UsenseDataSource.openDB (boolean *writable*) throws SQLException

This method opens the predefined USense database.

Parameters

<i>writable</i>	The first time this is called, the database will be opened.
-----------------	---

Exceptions

<i>SQLException</i>	Throws SQL Exception
---------------------	----------------------

6.47.3.34 long cs.usense.db.UsenseDataSource.registerLocationEntry (LocationEntry *entry*)

This method register a new LocationEntry in the application. It creates a new record on the TABLE_LOCATION table, with the information passed as MTrackerAP.

Parameters

<i>entry</i>	Location Entry information.
--------------	-----------------------------

Returns

rowID of the newly inserted row, or -1 if an error occurred.

6.47.3.35 long cs.usense.db.UsenseDataSource.registerNewActionEntry (ActionsEntry *ae*)

This method register a new ActionEntry in the application. It creates a new record on the Action Entry table, with the information passed as ActionEntry.

Parameters

<i>ae</i>	Action entry information.
-----------	---------------------------

Returns

the action type of the newly inserted row, or -1 if an error occurred.

6.47.3.36 void cs.usense.db.UsenseDataSource.registerNewBTDevice (BTUserDevice *btDev*, BTUserDevEncounter↔
Duration *duration*, BTUserDevAverageEncounterDuration *averageDuration*, BTUserDevSocialWeight
socialWeight)

This method registers a new BTDevice in the application. It creates a new record on the BTDEVICE, BTDEV↔ICEENCOUNTERDURATION, BTDEVICEAVERAGEENCOUNTERDURATION, and BTDEVICESOCIALWEIGHT tables, with the information passed as BTDevice.

Parameters

<i>btDev</i>	The Bluetooth device information.
<i>duration</i>	The Bluetooth device information regarding the duration that the BT device is within communication range of others.
<i>averageDuration</i>	The Bluetooth device information regarding the average duration of encounter between the BT device and other devices.
<i>socialWeight</i>	The Bluetooth device information regarding the social weight of the BT device towards others.

6.47.3.37 long cs.usense.db.UsenseDataSource.registerNewSoundLevel (**SoundLevel** *s/*)

This method register the new entry into TABLE_SOUND table

Parameters

<i>s/</i>	Sound level object
-----------	--------------------

Returns

numberOfRows number of rows are inserted in the table

6.47.3.38 int cs.usense.db.UsenseDataSource.removeLocationEntry (**LocationEntry** *entry*)

This method checks whether entry is removed from the location entry

Parameters

<i>entry</i>	Location Entry
--------------	----------------

Returns

true if successful

6.47.3.39 boolean cs.usense.db.UsenseDataSource.updateActionEntry (**ActionsEntry** *ae*)

This method update an ActionEntry already registered by the application. This modifies the corresponding record to the Entry in the ACTIONENTRY table.

Parameters

<i>ap</i>	action entry information.
-----------	---------------------------

Returns

true if successful.

6.47.3.40 void cs.usense.db.UsenseDataSource.updateBTDevAvgEncounterDuration (**BTUserDevAverageEncounter**↔
Duration *averageDuration*)

This method updates a BTDevice already registered by the application. This modifies the corresponding record to the BTDevice in the BTDEVICEAVERAGEENCOUNTERDURATION table.

Parameters

<i>averageDuration</i>	The Bluetooth device information regarding its average encounter duration.
------------------------	--

6.47.3.41 void cs.usense.db.UsenseDataSource.updateBTDeviceAndDuration (**BTUserDevice** *btDev*, **BTUserDevEncounterDuration** *duration*)

This method updates a BTDevice already registered by the application. This modifies the corresponding record to the BTDevice in the BTDEVICE, BTDEVICEENCOUNTERDURATION, BTDEVICEAVERAGEENCOUNTERDURATION, and BTDEVICESOCIALWEIGHT tables.

Parameters

<i>btDev</i>	The Bluetooth device information.
<i>duration</i>	The Bluetooth device information regarding the duration that the BT device is within communication range of others.

6.47.3.42 void cs.usense.db.UsenseDataSource.updateBTDevSocialWeight (**BTUserDevSocialWeight** *socialWeight*)

This method updates a BTDevice already registered by the application. This modifies the corresponding record to the BTDevice in the BTDEVICESOCIALWEIGHT table.

Parameters

<i>socialWeight</i>	The Bluetooth device information regarding its social weight.
---------------------	---

6.47.3.43 boolean cs.usense.db.UsenseDataSource.updateLocationEntry (**LocationEntry** *entry*)

This method update an Location Entry already registered by the application. This modifies the corresponding record to the Location Entry in the TABLE_LOCATION table.

Parameters

<i>location</i>	Location Entry information.
-----------------	-----------------------------

Returns

true if successful.

6.47.3.44 boolean cs.usense.db.UsenseDataSource.updateSoundLevel (**SoundLevel** *sl*)

This method update the sound level into TABLE_SOUND table

Parameters

<i>sl</i>	Sound level object
-----------	--------------------

Returns

true The number of rows are updated in the table

6.47.4 Member Data Documentation

6.47.4.1 String [] cs.usense.db.UsenseDataSource.allColumnsActionsEntry [private]

Initial value:

```
= {
    UsenseSQLiteHelper.COLUMN_ACTIONTYPE,
    UsenseSQLiteHelper.COLUMN_TIMESTAMP,
    UsenseSQLiteHelper.COLUMN_ENDTIMESTAMP,
    UsenseSQLiteHelper.COLUMN_AVGDURATION,
    UsenseSQLiteHelper.COLUMN_HOUR,
    UsenseSQLiteHelper.COLUMN_ACTIONCOUNTER,
    UsenseSQLiteHelper.COLUMN_DAY,
    UsenseSQLiteHelper.COLUMN_TIMEFRAME
}
```

ACTIONS TABLE: This table stores information regarding ACTIONS. The information stored is:

- ACTIONTYPE
- TIMESTAMP
- DURATION
- LASTACTION
- ACTIONTIMEGAP
- ACTIONCOUNTER List of all columns on the ACCESS_POINTS table.

6.47.4.2 String [] cs.usense.db.UsenseDataSource.allColumnsBTDeviceAverageEncounterDuration [private]

Initial value:

```
= {
    UsenseSQLiteHelper.COLUMN_BTDEV_MAC_ADDRESS,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT1,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT2,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT3,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT4,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT5,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT6,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT7,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT8,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT9,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT10,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT11,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT12,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT13,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT14,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT15,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT16,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT17,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT18,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT19,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT20,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT21,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT22,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT23,
    UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT24,
}
```

List of all columns on the BTDEVICEAVERAGEENCOUNTERDURATION table.

6.47.4.3 String [] cs.usense.db.UsenseDataSource.allColumnsBTDeviceEncounterDuration [private]

Initial value:

```
= {
    UsenseSQLiteHelper.COLUMN_BTDEV_MAC_ADDRESS,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT1,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT2,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT3,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT4,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT5,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT6,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT7,
}
```

```

        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT8,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT9,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT10,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT11,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT12,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT13,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT14,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT15,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT16,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT17,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT18,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT19,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT20,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT21,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT22,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT23,
        UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT24,
    }

```

List of all columns on the BTDEVICEENCOUNTERDURATION table.

6.47.4.4 String [] cs.usense.db.UsenseDataSource.allColumnsBTDevices [private]

Initial value:

```

= {
    UsenseSQLiteHelper.COLUMN_BTDEV_MAC_ADDRESS,
    UsenseSQLiteHelper.COLUMN_BTDEV_NAME,
    UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERSTART,
}

```

Bluetooth pipeline BTDEVICE TABLE: This table stores information regarding BTDEVICES. The information stored is:

- BTDEV_MAC_ADDRESS
- BTDEV_NAME
- BTDEV_ENCOUNTERTIME

BTDEVICEENCOUNTERDURATION TABLE: This table stores information regarding the duration that found BT↔ DEVICES are within communication range. The information stored is:

- BTDEV_MAC_ADDRESS
- BTDEV_ENCOUNTERDURATION

BTDEVICEAVERAGEENCOUNTERDURATION TABLE: This table stores information regarding the average duration of encounters towards found BTDEVICES. The information stored is:

- BTDEV_MAC_ADDRESS
- BTDEV_AVGENCOUNTERDURATION

BTDEVICESOCIALWEIGHT TABLE: This table stores information regarding the social weight towards found BT↔ DEVICES. The information stored is:

- BTDEV_MAC_ADDRESS
- BTDEV_SOCIALWEIGHT List of all columns on the BTDEVICE table.

6.47.4.5 String [] cs.usense.db.UsenseDataSource.allColumnsBTDeviceSocialWeight [private]

Initial value:

```
= {
    UsenseSQLiteHelper.COLUMN_BTDEV_MAC_ADDRESS,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT1,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT2,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT3,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT4,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT5,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT6,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT7,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT8,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT9,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT10,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT11,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT12,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT13,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT14,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT15,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT16,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT17,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT18,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT19,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT20,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT21,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT22,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT23,
    UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT24,
}
```

List of all columns on the BTDEVICESOCIALWEIGHT table.

6.47.4.6 String [] cs.usense.db.UsenseDataSource.allColumnsLocation [private]

Initial value:

```
= {
    UsenseSQLiteHelper.COLUMN_MAC_ADDRESS,
    UsenseSQLiteHelper.COLUMN_DEVICE_NAME,
    UsenseSQLiteHelper.COLUMN_DISTANCE,
    UsenseSQLiteHelper.COLUMN_LAST_UPDATE
}
```

LOCATION TABLE: This table stores information regarding each access point visited in the past. The information stored is:

- BSSID of the device
- Device Name

Distance

- Last update List of all columns on the ACCESS_POINTS table.

6.47.4.7 String [] cs.usense.db.UsenseDataSource.allColumnsSound

Initial value:

```
= {
    UsenseSQLiteHelper.KEY_ROWID,
    UsenseSQLiteHelper.SOUND_DATE ,
    UsenseSQLiteHelper.QUIET_MILLIS,
    UsenseSQLiteHelper.NORMAL_MILLIS,
    UsenseSQLiteHelper.ALERT_MILLIS,
    UsenseSQLiteHelper.NOISE_MILLIS
}
```


Sound SOUND TABLE: This table stores information regarding user's pattern spent in each stste (quiet, normal/loud, noisy). The information stored is:

- Date
- Time spent in Queit
- Time spent in Normal
- Time spent in Alert
- Time spent in Noisy List of all columns on the Sound table.

6.47.4.8 SQLiteDatabase cs.usense.db.UsenseDataSource.db [private]

COMMON OPERATIONS

6.47.4.9 UsenseSQLiteHelper cs.usense.db.UsenseDataSource.dbHelper [private]

6.47.4.10 boolean cs.usense.db.UsenseDataSource.isDbOpen [private]

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

- src/cs/usense/db/[UsenseDataSource.java](#)

6.48 cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice Class Reference

Public Attributes

- String [mWiFiDirectMACAddress](#)
- String [mWiFiAPMACAddress](#) = ""
- String [mSSID](#)
- String [mDeviceName](#)
- int [mCountNotFound](#) = 0

6.48.1 Detailed Description

Class that holds all the information about a device found by the WiFi P2P

Author

Luis Amaral Lopes (COPELABS/ULHT)

6.48.2 Member Data Documentation

6.48.2.1 int cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice.mCountNotFound = 0

Number of times this device was not found at the WiFi scans.

6.48.2.2 String cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice.mDeviceName

Device Name

6.48.2.3 String `cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice.mSSID`

Access Point SSID

6.48.2.4 String `cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice.mWiFiAPMACAddress = ""`

MAC address from the AP received from the wifi manager

6.48.2.5 String `cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice.mWiFiDirectMACAddress`

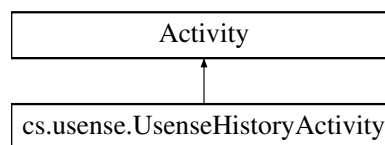
MAC address received from the discover process (Wi-Fi Direct)

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

- `src/cs/usense/location/RelativePositionWiFiNoConnection.java`

6.49 `cs.usense.UsenseHistoryActivity` Class Reference

Inheritance diagram for `cs.usense.UsenseHistoryActivity`:



Static Public Attributes

- static ArrayList< [SocialityDetails](#) > `listHistory`

Protected Member Functions

- void [onCreate](#) (Bundle savedInstanceState)

Private Attributes

- ListView [historyListView](#)

Static Private Attributes

- static final String [TAG](#) = "UsenseHistoryActivity"

6.49.1 Detailed Description

This class provides layout of the [UsenseHistoryActivity](#)

6.49.2 Member Function Documentation

6.49.2.1 void cs.usense.UsenseHistoryActivity.onCreate (Bundle *savedInstanceState*) [protected]

6.49.3 Member Data Documentation

6.49.3.1 ListView cs.usense.UsenseHistoryActivity.historyListView [private]

This class is to get History Listview

6.49.3.2 ArrayList<SocialityDetails> cs.usense.UsenseHistoryActivity.listHistory [static]

This list of SocialityDetails objects to get the History list of SocialityDetails

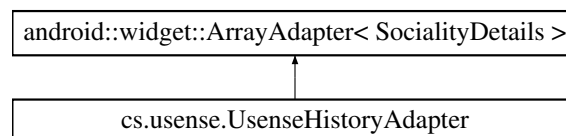
6.49.3.3 final String cs.usense.UsenseHistoryActivity.TAG = "UsenseHistoryActivity" [static], [private]

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

- src/cs/usense/UsenseHistoryActivity.java

6.50 cs.usense.UsenseHistoryAdapter Class Reference

Inheritance diagram for cs.usense.UsenseHistoryAdapter:



Classes

- class **EntryHolder**

Public Member Functions

- [UsenseHistoryAdapter](#) (Context context, List< [SocialityDetails](#) > data, int layoutResourceId, [UsenseActivity](#) listActivity)
- View [getView](#) (int position, View convertView, ViewGroup parent)

Static Private Attributes

- static final String [TAG](#) = "UsenseHistoryAdapter"

6.50.1 Detailed Description

This class provides adapter details to the [UsenseHistoryActivity](#)

6.50.2 Constructor & Destructor Documentation

6.50.2.1 `cs.usense.UsenseHistoryAdapter.UsenseHistoryAdapter (Context context, List< SocialityDetails > data, int layoutResourceId, UsenseActivity listActivity)`

This method construct the [UsenseHistoryAdapter](#) with the context provided by USense Activity class

Parameters

<i>context</i>	Interface to global information about an application environment
<i>data</i>	List with SocialityDetails
<i>layoutResourceId</i>	Layout of the SocialityDetails
<i>listActivity</i>	UsenseActivity

6.50.3 Member Function Documentation

6.50.3.1 View `cs.usense.UsenseHistoryAdapter.getView (int position, View convertView, ViewGroup parent)`

6.50.4 Member Data Documentation

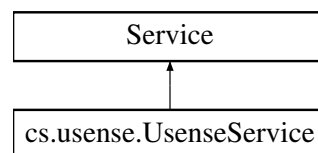
6.50.4.1 `final String cs.usense.UsenseHistoryAdapter.TAG = "UsenseHistoryAdapter" [static], [private]`

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

- `src/cs/usense/UsenseHistoryAdapter.java`

6.51 cs.usense.UsenseService Class Reference

Inheritance diagram for `cs.usense.UsenseService`:



Classes

- class [LocalBinder](#)
- interface [NOTIFICATION_ID](#)

Public Member Functions

- [UsenseService](#) ()
- void [appendLogs](#) (String currentTime, String batteryLevel)
- [IBinder](#) [onBind](#) (Intent intent)
- int [onStartCommand](#) (Intent intent, int i, int j)
- void [runAsForeground](#) ()
- void [closeAll](#) ()
- void [onCreate](#) ()
- void [onDestroy](#) ()
- void [setOnStateChangeListener](#) ([ChangeListener](#) listener)
- void [notifyLocationOutdoor](#) (String newMessage)
- void [notifyLocationIndoor](#) (ArrayList< [LocationEntry](#) > arrayList)
- void [notifyAction](#) (String newMessage)
- void [notifySocialWeight](#) (ArrayList< [socialWeight](#) > arrayList)
- void [notifySoundLevel](#) (String newMessage)
- void [notifySociality](#) (ArrayList< [SocialityDetails](#) > arrayList)
- void [notifyAvgSI](#) (double avgSI)
- void [notifyAvgProp](#) (double avgProp)

Protected Attributes

- GoogleApiClient [mGoogleApiClient](#)
- DetectedActivity [mdetectdActivity](#)

Private Attributes

- ArrayList< [ChangeListener](#) > [listeners](#) = new ArrayList<[ChangeListener](#)> ()
- SensorManager [mSensorManager](#)
- [LocationPipeline](#) [mLocationPipeline](#)
- [BluetoothCore](#) [bluetooth](#)
- [AccelerometerPipeline](#) [mAccelerometerPipeline](#)
- [MicrophonePipeline](#) [mlcrophone](#)
- final IBinder [mBinder](#) = new [LocalBinder](#)()
- [UsenseDataSource](#) [dataSource](#)
- [SocialInteraction](#) [mSocialInteraction](#)

Static Private Attributes

- static final String [TAG](#) = "USENSE"
- static final String [Accelerometer](#) = "Accelerometer"
- static final String [GPS](#) = "GPS"
- static final Object [BT](#) = "BT"
- static final Object [Microphone](#) ="Microphone"
- static final Timer [timer](#) = new Timer()

6.51.1 Detailed Description

This class provides methods to initialize all the pipelines, data base and get the data from all pipelines

6.51.2 Constructor & Destructor Documentation

6.51.2.1 `cs.usense.UsenseService.UsenseService ()`

6.51.3 Member Function Documentation

6.51.3.1 `void cs.usense.UsenseService.appendLogs (String currentTime, String batteryLevel)`

This method stores the the battery level and time

Parameters

<i>currentTime</i>	Current time
<i>batteryLevel</i>	Battery level

BufferedWriter for performance, true to set append to file flag

6.51.3.2 `void cs.usense.UsenseService.closeAll ()`

This method close the USense service if it is running on foreground

- 6.51.3.3 void cs.usense.UsenseService.notifyAction (String *newMessage*)
- 6.51.3.4 void cs.usense.UsenseService.notifyAvgProp (double *avgProp*)
- 6.51.3.5 void cs.usense.UsenseService.notifyAvgSI (double *avgSI*)
- 6.51.3.6 void cs.usense.UsenseService.notifyLocationIndoor (ArrayList< LocationEntry > *arrayList*)
- 6.51.3.7 void cs.usense.UsenseService.notifyLocationOutdoor (String *newMessage*)
- 6.51.3.8 void cs.usense.UsenseService.notifySociality (ArrayList< SocialityDetails > *arrayList*)
- 6.51.3.9 void cs.usense.UsenseService.notifySocialWeight (ArrayList< socialWeight > *arrayList*)
- 6.51.3.10 void cs.usense.UsenseService.notifySoundLevel (String *newMessage*)
- 6.51.3.11 IBinder cs.usense.UsenseService.onBind (Intent *intent*)
- 6.51.3.12 void cs.usense.UsenseService.onCreate ()
- 6.51.3.13 void cs.usense.UsenseService.onDestroy ()

This method close all the pipelines from the USense Service

- 6.51.3.14 int cs.usense.UsenseService.onStartCommand (Intent *intent*, int *i*, int *j*)

Creates a file for Bluetooth debugging

handle case of no SDCARD present

create folder

create file

Run this service as foreground

- 6.51.3.15 void cs.usense.UsenseService.runAsForeground ()

This method provides the functionality to run the service as Foreground

- 6.51.3.16 void cs.usense.UsenseService.setOnStateChangeListener (ChangeListener *listener*)

Listener Methods of all the pipelines to get data

6.51.4 Member Data Documentation

- 6.51.4.1 final String cs.usense.UsenseService.Accelerometer = "Accelerometer" [static], [private]

This variable is to check Accelerometer module to be initiated

- 6.51.4.2 BluetoothCore cs.usense.UsenseService.bluetooth [private]

This class is to access core functionality of Bluetooth pipeline

6.51.4.3 `final Object cs.usense.UsenseService.BT = "BT"` `[static], [private]`

This variable is to check Bluetooth module to be initiated

6.51.4.4 `UsenseDataSource cs.usense.UsenseService.dataSource` `[private]`

This class is to access functionality of Usense Data base

6.51.4.5 `final String cs.usense.UsenseService.GPS = "GPS"` `[static], [private]`

This variable is to check Location module to be initiated

6.51.4.6 `ArrayList<ChangeListener> cs.usense.UsenseService.listeners = new ArrayList<ChangeListener> ()`
`[private]`

This variable is used to access the listeners

6.51.4.7 `AccelerometerPipeline cs.usense.UsenseService.mAccelerometerPipeline` `[private]`

This class is to access functionality of Accelerometer pipeline

6.51.4.8 `final IBinder cs.usense.UsenseService.mBinder = new LocalBinder()` `[private]`

This variable to get functionality of IBinder

6.51.4.9 `DetectedActivity cs.usense.UsenseService.mdetectedActivity` `[protected]`

This variable to store the detected activity

6.51.4.10 `GoogleApiClient cs.usense.UsenseService.mGoogleApiClient` `[protected]`

This class is to access functionality of Google Client API

6.51.4.11 `final Object cs.usense.UsenseService.Microphone = "Microphone"` `[static], [private]`

This variable is to check Microphone module to be initiated

6.51.4.12 `MicrophonePipeline cs.usense.UsenseService.microphone` `[private]`

This class is to access functionality of Microphone pipeline

6.51.4.13 `LocationPipeline cs.usense.UsenseService.mLocationPipeline` `[private]`

This class is to access functionality of Location pipeline

6.51.4.14 `SensorManager cs.usense.UsenseService.mSensorManager` `[private]`

This class is to access functionality of Sensor Manager from accelerometer pipeline

6.51.4.15 **SocialInteraction** cs.usense.UsenseService.mSocialInteraction [private]

This class is to access functionality of Social Interaction details

6.51.4.16 **final String** cs.usense.UsenseService.TAG = "USENSE" [static],[private]6.51.4.17 **final Timer** cs.usense.UsenseService.timer = new Timer() [static],[private]

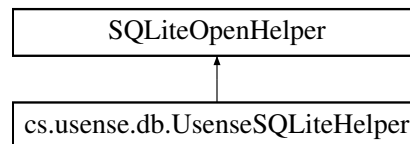
This variable to get the timer

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

- src/cs/usense/[UsenseService.java](#)

6.52 cs.usense.db.UsenseSQLiteHelper Class Reference

Inheritance diagram for cs.usense.db.UsenseSQLiteHelper:



Public Member Functions

- [UsenseSQLiteHelper](#) (Context context)
- void [onCreate](#) (SQLiteDatabase dataBase)
- void [onUpgrade](#) (SQLiteDatabase dataBase, int oldVersion, int newVersion)

Static Public Attributes

- static final String [DATABASE_NAME](#) = "usense.db"
- static final int [DATABASE_VERSION](#) = 1
- static final String [TABLE_ACCESSPOINTS](#) = "accesspoints"
- static final String [TABLE_ACTIONS](#) = "actions"
- static final String [TABLE_BTDEVICE](#) = "btdevices"
- static final String [TABLE_BTDEVICEENCOUNTERDURATION](#) = "btdevice_encounterduration"
- static final String [TABLE_BTDEVICEAVERAGEENCOUNTERDURATION](#) = "btdevice_averageencounterduration"
- static final String [TABLE_BTDEVICESOCIALWEIGHT](#) = "btdevice_socialweight"
- static final String [TABLE_LOCATION](#) = "location"
- static final String [TABLE_SOUND](#) = "environment_sound"
- static final String [COLUMN_ID](#) = "_id"
- static final String [COLUMN_BSSID](#) = "bssid"
- static final String [COLUMN_ACTIONTYPE](#) = "actiontype"
- static final String [COLUMN_TIMESTAMP](#) = "timestamp"
- static final String [COLUMN_ENDTIMESTAMP](#) = "endtimestamp"
- static final String [COLUMN_AVGDURATION](#) = "avgduration"
- static final String [COLUMN_ACTIONCOUNTER](#) = "actioncounter"
- static final String [COLUMN_TIMEFRAME](#) = "timeframe"
- static final String [COLUMN_BTDEV_MAC_ADDRESS](#) = "devBtMacAdd"
- static final String [COLUMN_BTDEV_NAME](#) = "devName"

- static final String [COLUMN_BTDEV_ENCOUNTERSTART](#) = "devEncounterStart"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT1](#) = "devEncounterDuration_slot1"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT2](#) = "devEncounterDuration_slot2"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT3](#) = "devEncounterDuration_slot3"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT4](#) = "devEncounterDuration_slot4"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT5](#) = "devEncounterDuration_slot5"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT6](#) = "devEncounterDuration_slot6"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT7](#) = "devEncounterDuration_slot7"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT8](#) = "devEncounterDuration_slot8"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT9](#) = "devEncounterDuration_slot9"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT10](#) = "devEncounterDuration_slot10"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT11](#) = "devEncounterDuration_slot11"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT12](#) = "devEncounterDuration_slot12"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT13](#) = "devEncounterDuration_slot13"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT14](#) = "devEncounterDuration_slot14"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT15](#) = "devEncounterDuration_slot15"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT16](#) = "devEncounterDuration_slot16"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT17](#) = "devEncounterDuration_slot17"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT18](#) = "devEncounterDuration_slot18"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT19](#) = "devEncounterDuration_slot19"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT20](#) = "devEncounterDuration_slot20"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT21](#) = "devEncounterDuration_slot21"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT22](#) = "devEncounterDuration_slot22"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT23](#) = "devEncounterDuration_slot23"
- static final String [COLUMN_BTDEV_ENCOUNTERDURATION_SLOT24](#) = "devEncounterDuration_slot24"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT1](#) = "devAvgEncounterDuration_↵_slot1"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT2](#) = "devAvgEncounterDuration_↵_slot2"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT3](#) = "devAvgEncounterDuration_↵_slot3"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT4](#) = "devAvgEncounterDuration_↵_slot4"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT5](#) = "devAvgEncounterDuration_↵_slot5"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT6](#) = "devAvgEncounterDuration_↵_slot6"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT7](#) = "devAvgEncounterDuration_↵_slot7"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT8](#) = "devAvgEncounterDuration_↵_slot8"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT9](#) = "devAvgEncounterDuration_↵_slot9"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT10](#) = "devAvgEncounter_↵Duration_slot10"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT11](#) = "devAvgEncounter_↵Duration_slot11"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT12](#) = "devAvgEncounter_↵Duration_slot12"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT13](#) = "devAvgEncounter_↵Duration_slot13"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT14](#) = "devAvgEncounter_↵Duration_slot14"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT15](#) = "devAvgEncounter_↵Duration_slot15"

- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT16](#) = "devAvgEncounter↵
Duration_slot16"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT17](#) = "devAvgEncounter↵
Duration_slot17"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT18](#) = "devAvgEncounter↵
Duration_slot18"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT19](#) = "devAvgEncounter↵
Duration_slot19"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT20](#) = "devAvgEncounter↵
Duration_slot20"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT21](#) = "devAvgEncounter↵
Duration_slot21"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT22](#) = "devAvgEncounter↵
Duration_slot22"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT23](#) = "devAvgEncounter↵
Duration_slot23"
- static final String [COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT24](#) = "devAvgEncounter↵
Duration_slot24"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT1](#) = "devSocialWeight_slot1"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT2](#) = "devSocialWeight_slot2"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT3](#) = "devSocialWeight_slot3"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT4](#) = "devSocialWeight_slot4"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT5](#) = "devSocialWeight_slot5"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT6](#) = "devSocialWeight_slot6"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT7](#) = "devSocialWeight_slot7"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT8](#) = "devSocialWeight_slot8"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT9](#) = "devSocialWeight_slot9"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT10](#) = "devSocialWeight_slot10"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT11](#) = "devSocialWeight_slot11"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT12](#) = "devSocialWeight_slot12"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT13](#) = "devSocialWeight_slot13"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT14](#) = "devSocialWeight_slot14"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT15](#) = "devSocialWeight_slot15"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT16](#) = "devSocialWeight_slot16"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT17](#) = "devSocialWeight_slot17"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT18](#) = "devSocialWeight_slot18"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT19](#) = "devSocialWeight_slot19"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT20](#) = "devSocialWeight_slot20"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT21](#) = "devSocialWeight_slot21"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT22](#) = "devSocialWeight_slot22"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT23](#) = "devSocialWeight_slot23"
- static final String [COLUMN_BTDEV_SOCIALWEIGHT_SLOT24](#) = "devSocialWeight_slot24"
- static final String [COLUMN_MAC_ADDRESS](#) = "bssid"
- static final String [COLUMN_DEVICE_NAME](#) = "name"
- static final String [COLUMN_DISTANCE](#) = "distance"
- static final String [COLUMN_LAST_UPDATE](#) = "lastupdate"
- static final String [COLUMN_LATITUDE](#) = "lat"
- static final String [COLUMN_LONGITUDE](#) = "lng"
- static final String [COLUMN_DURATION](#) = "duration"
- static final String [COLUMN_DAY](#) = "day"
- static final String [COLUMN_HOUR](#) = "hour"
- static final String [KEY_ROWID](#) = "key_row_id"
- static final String [SOUND_DATE](#) = "date_millis"
- static final String [QUIET_MILLIS](#) = "quiet_millis"
- static final String [NORMAL_MILLIS](#) = "normal_millis"
- static final String [ALERT_MILLIS](#) = "alert_millis"
- static final String [NOISE_MILLIS](#) = "noise_millis"

Static Private Attributes

- static final String [CREATE_ACTIONS_TABLE](#)
- static final String [CREATE_BTDEVICE_TABLE](#)
- static final String [CREATE_BTDEVICEENCOUNTERDURATION_TABLE](#)
- static final String [CREATE_BTDEVICEAVERAGEENCOUNTERDURATION_TABLE](#)
- static final String [CREATE_BTDEVICESOCIALWEIGHT_TABLE](#)
- static final String [CREATE_LOCATION_TABLE](#)
- static final String [CREATE_SOUND_TABLE](#)

6.52.1 Detailed Description

This class provides various methods and information of the USense Data base. Methods include, defining the tables, listing the columns, creating the tables, upgrading the tables

6.52.2 Constructor & Destructor Documentation

6.52.2.1 `cs.usense.db.UsenseSQLiteHelper.UsenseSQLiteHelper (Context context)`

This method construct the [UsenseSQLiteHelper](#) with the help of Android Context

Parameters

<i>context</i>	Interface to global information about an application environment.
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6.52.3 Member Function Documentation

6.52.3.1 `void cs.usense.db.UsenseSQLiteHelper.onCreate (SQLiteDatabase dataBase)`

This method create the SQLiteDatabase with the predefined tables

Parameters

<i>dataBase</i>	SQLiteDatabase
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Firdose

Bluetooth pipeline

Location

Microphone

6.52.3.2 `void cs.usense.db.UsenseSQLiteHelper.onUpgrade (SQLiteDatabase dataBase, int oldVersion, int newVersion)`

This method update the SQLiteDatabase with the predefined tables

Parameters

<i>database</i>	SQLiteDatabase
<i>oldVersion</i>	Old version of SQLiteDatabase
<i>newVersion</i>	New version of SQLiteDatabase

Firdose

Bluetooth pipeline

Location

Microphone

6.52.4 Member Data Documentation

6.52.4.1 `final String cs.usense.db.UsenseSQLiteHelper.ALERT_MILLIS = "alert_millis" [static]`

6.52.4.2 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_ACTIONCOUNTER = "actioncounter" [static]`

6.52.4.3 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_ACTIONTYPE = "actiontype" [static]`

Accelerometer

6.52.4.4 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_AVGDURATION = "avgduration" [static]`

6.52.4.5 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BSSID = "bssid" [static]`

6.52.4.6 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT1 = "devAvgEncounterDuration_slot1" [static]`

Average Encounter Duration

6.52.4.7 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT10 = "devAvgEncounterDuration_slot10" [static]`

6.52.4.8 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT11 = "devAvgEncounterDuration_slot11" [static]`

6.52.4.9 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT12 = "devAvgEncounterDuration_slot12" [static]`

6.52.4.10 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT13 = "devAvgEncounterDuration_slot13" [static]`

6.52.4.11 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT14 = "devAvgEncounterDuration_slot14" [static]`

6.52.4.12 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT15 = "devAvgEncounterDuration_slot15" [static]`

6.52.4.13 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT16 = "devAvgEncounterDuration_slot16" [static]`

6.52.4.14 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT17 = "devAvgEncounterDuration_slot17" [static]`

6.52.4.15 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT18 = "devAvgEncounterDuration_slot18" [static]`

6.52.4.16 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT19 = "devAvgEncounterDuration_slot19" [static]`

6.52.4.17 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT2 = "devAvgEncounterDuration_slot2" [static]`

6.52.4.18 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT20 = "devAvgEncounterDuration_slot20" [static]`

- 6.52.4.19 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT21 = "devAvgEncounterDuration_slot21" [static]`
- 6.52.4.20 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT22 = "devAvgEncounterDuration_slot22" [static]`
- 6.52.4.21 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT23 = "devAvgEncounterDuration_slot23" [static]`
- 6.52.4.22 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT24 = "devAvgEncounterDuration_slot24" [static]`
- 6.52.4.23 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT3 = "devAvgEncounterDuration_slot3" [static]`
- 6.52.4.24 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT4 = "devAvgEncounterDuration_slot4" [static]`
- 6.52.4.25 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT5 = "devAvgEncounterDuration_slot5" [static]`
- 6.52.4.26 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT6 = "devAvgEncounterDuration_slot6" [static]`
- 6.52.4.27 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT7 = "devAvgEncounterDuration_slot7" [static]`
- 6.52.4.28 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT8 = "devAvgEncounterDuration_slot8" [static]`
- 6.52.4.29 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT9 = "devAvgEncounterDuration_slot9" [static]`
- 6.52.4.30 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT1 = "devEncounterDuration_slot1" [static]`

Encounter Duration

- 6.52.4.31 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT10 = "devEncounterDuration_slot10" [static]`
- 6.52.4.32 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT11 = "devEncounterDuration_slot11" [static]`
- 6.52.4.33 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT12 = "devEncounterDuration_slot12" [static]`
- 6.52.4.34 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT13 = "devEncounterDuration_slot13" [static]`
- 6.52.4.35 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT14 = "devEncounterDuration_slot14" [static]`
- 6.52.4.36 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT15 = "devEncounterDuration_slot15" [static]`

- 6.52.4.37 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT16 = "devEncounterDuration_slot16" [static]`
- 6.52.4.38 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT17 = "devEncounterDuration_slot17" [static]`
- 6.52.4.39 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT18 = "devEncounterDuration_slot18" [static]`
- 6.52.4.40 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT19 = "devEncounterDuration_slot19" [static]`
- 6.52.4.41 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT2 = "devEncounterDuration_slot2" [static]`
- 6.52.4.42 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT20 = "devEncounterDuration_slot20" [static]`
- 6.52.4.43 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT21 = "devEncounterDuration_slot21" [static]`
- 6.52.4.44 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT22 = "devEncounterDuration_slot22" [static]`
- 6.52.4.45 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT23 = "devEncounterDuration_slot23" [static]`
- 6.52.4.46 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT24 = "devEncounterDuration_slot24" [static]`
- 6.52.4.47 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT3 = "devEncounterDuration_slot3" [static]`
- 6.52.4.48 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT4 = "devEncounterDuration_slot4" [static]`
- 6.52.4.49 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT5 = "devEncounterDuration_slot5" [static]`
- 6.52.4.50 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT6 = "devEncounterDuration_slot6" [static]`
- 6.52.4.51 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT7 = "devEncounterDuration_slot7" [static]`
- 6.52.4.52 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT8 = "devEncounterDuration_slot8" [static]`
- 6.52.4.53 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERDURATION_SLOT9 = "devEncounterDuration_slot9" [static]`
- 6.52.4.54 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_ENCOUNTERSTART = "devEncounterStart" [static]`
- 6.52.4.55 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_MAC_ADDRESS = "devBtMacAdd" [static]`

Bluetooth pipeline

6.52.4.56 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_NAME = "devName" [static]`

6.52.4.57 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT1 = "devSocialWeight_slot1" [static]`

Social Weight

6.52.4.58 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT10 = "devSocialWeight_slot10" [static]`

6.52.4.59 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT11 = "devSocialWeight_slot11" [static]`

6.52.4.60 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT12 = "devSocialWeight_slot12" [static]`

6.52.4.61 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT13 = "devSocialWeight_slot13" [static]`

6.52.4.62 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT14 = "devSocialWeight_slot14" [static]`

6.52.4.63 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT15 = "devSocialWeight_slot15" [static]`

6.52.4.64 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT16 = "devSocialWeight_slot16" [static]`

6.52.4.65 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT17 = "devSocialWeight_slot17" [static]`

6.52.4.66 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT18 = "devSocialWeight_slot18" [static]`

6.52.4.67 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT19 = "devSocialWeight_slot19" [static]`

6.52.4.68 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT2 = "devSocialWeight_slot2" [static]`

6.52.4.69 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT20 = "devSocialWeight_slot20" [static]`

6.52.4.70 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT21 = "devSocialWeight_slot21" [static]`

6.52.4.71 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT22 = "devSocialWeight_slot22" [static]`

6.52.4.72 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT23 = "devSocialWeight_slot23" [static]`

6.52.4.73 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT24 = "devSocialWeight_slot24" [static]`

- 6.52.4.74 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT3 = "devSocialWeight_slot3"`
[static]
- 6.52.4.75 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT4 = "devSocialWeight_slot4"`
[static]
- 6.52.4.76 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT5 = "devSocialWeight_slot5"`
[static]
- 6.52.4.77 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT6 = "devSocialWeight_slot6"`
[static]
- 6.52.4.78 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT7 = "devSocialWeight_slot7"`
[static]
- 6.52.4.79 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT8 = "devSocialWeight_slot8"`
[static]
- 6.52.4.80 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_BTDEV_SOCIALWEIGHT_SLOT9 = "devSocialWeight_slot9"`
[static]
- 6.52.4.81 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_DAY = "day"` [static]
- 6.52.4.82 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_DEVICE_NAME = "name"` [static]
- 6.52.4.83 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_DISTANCE = "distance"` [static]
- 6.52.4.84 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_DURATION = "duration"` [static]
- 6.52.4.85 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_ENDTIMESTAMP = "endtimestamp"` [static]
- 6.52.4.86 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_HOUR = "hour"` [static]
- 6.52.4.87 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_ID = "_id"` [static]

Location

- 6.52.4.88 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_LAST_UPDATE = "lastupdate"` [static]
- 6.52.4.89 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_LATITUDE = "lat"` [static]

Outdoor Location Table

- 6.52.4.90 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_LONGITUDE = "lng"` [static]
- 6.52.4.91 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_MAC_ADDRESS = "bssid"` [static]

Location Table

- 6.52.4.92 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_TIMEFRAME = "timeframe"` [static]
- 6.52.4.93 `final String cs.usense.db.UsenseSQLiteHelper.COLUMN_TIMESTAMP = "timestamp"` [static]

6.52.4.94 final String cs.usense.db.UsenseSQLiteHelper.CREATE_ACTIONS_TABLE [static],[private]

Initial value:

```
= "create table "
    + TABLE_ACTIONS + "("
    + COLUMN_ID + " integer primary key autoincrement, "
    + COLUMN_ACTIONTYPE + " text not null, "
    + COLUMN_TIMESTAMP + " text not null, "
    + COLUMN_ENDTIMESTAMP + " text not null, "
    + COLUMN_AVGDURATION + " double not null, "
    + COLUMN_HOUR + " integer not null, "
    + COLUMN_ACTIONCOUNTER + " integer not null, "
    + COLUMN_DAY + " integer not null, "
    + COLUMN_TIMEFRAME + " text not null"
    + ");"
```

Firdose

6.52.4.95 final String cs.usense.db.UsenseSQLiteHelper.CREATE_BTDEVICE_TABLE [static],[private]

Initial value:

```
= "create table "
    + TABLE_BTDEVICE + "("
    + COLUMN_ID + " integer primary key autoincrement, "
    + COLUMN_BTDEV_MAC_ADDRESS + " text not null unique, "
    + COLUMN_BTDEV_NAME + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERSTART + " text not null"
    + ");"
```

Bluetooth pipeline

6.52.4.96 final String cs.usense.db.UsenseSQLiteHelper.CREATE_BTDEVICEAVERAGEENCOUNTERDURATION_TABLE [static],[private]

Initial value:

```
= "create table "
    + TABLE_BTDEVICEAVERAGEENCOUNTERDURATION + "("
    + COLUMN_ID + " integer primary key autoincrement, "
    + COLUMN_BTDEV_MAC_ADDRESS + " text not null unique, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT1 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT2 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT3 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT4 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT5 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT6 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT7 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT8 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT9 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT10 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT11 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT12 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT13 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT14 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT15 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT16 + " text not
null, "
```

```

    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT17 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT18 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT19 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT20 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT21 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT22 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT23 + " text not
null, "
    + COLUMN_BTDEV_AVGENCOUNTERDURATION_SLOT24 + " text not
null"
    + ");"

```

6.52.4.97 final String cs.usense.db.UsenseSQLiteHelper.CREATE_BTDEVICEENCOUNTERDURATION_TABLE [static],
[private]

Initial value:

```

= "create table "
    + TABLE_BTDEVICEENCOUNTERDURATION + "("
    + COLUMN_ID + " integer primary key autoincrement, "
    + COLUMN_BTDEV_MAC_ADDRESS + " text not null unique, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT1 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT2 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT3 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT4 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT5 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT6 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT7 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT8 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT9 + " text not null, "
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT10 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT11 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT12 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT13 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT14 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT15 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT16 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT17 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT18 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT19 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT20 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT21 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT22 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT23 + " text not null,
"
    + COLUMN_BTDEV_ENCOUNTERDURATION_SLOT24 + " text not null"
    + ");"

```

6.52.4.98 final String cs.usense.db.UsenseSQLiteHelper.CREATE_BTDEVICESOCIALWEIGHT_TABLE [static],
[private]

Initial value:

```

= "create table "
    + TABLE_BTDEVICESOCIALWEIGHT + "("
    + COLUMN_ID + " integer primary key autoincrement, "
    + COLUMN_BTDEV_MAC_ADDRESS + " text not null unique, "

```

```

+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT1 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT2 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT3 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT4 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT5 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT6 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT7 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT8 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT9 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT10 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT11 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT12 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT13 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT14 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT15 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT16 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT17 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT18 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT19 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT20 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT21 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT22 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT23 + " text not null, "
+ COLUMN_BTDEV_SOCIALWEIGHT_SLOT24 + " text not null"
+ ");"

```

6.52.4.99 final String cs.usense.db.UsenseSQLiteHelper.CREATE_LOCATION_TABLE [static],[private]

Initial value:

```

= "create table "
+ TABLE_LOCATION + "("
+ COLUMN_ID + " integer primary key autoincrement, "
+ COLUMN_MAC_ADDRESS + " text not null unique, "
+ COLUMN_DEVICE_NAME + " text not null, "
+ COLUMN_DISTANCE + " double not null, "
+ COLUMN_LAST_UPDATE + " text not null"
+ ");"

```

Location Table

6.52.4.100 final String cs.usense.db.UsenseSQLiteHelper.CREATE_SOUND_TABLE [static],[private]

Initial value:

```

= "create table "
+ TABLE_SOUND + "("
+ KEY_ROWID + " integer primary key autoincrement, "
+ SOUND_DATE + " long not null, "
+ QUIET_MILLIS + " long, "
+ NORMAL_MILLIS + " long, "
+ ALERT_MILLIS + " long, "
+ NOISE_MILLIS + " long "
+ ");"

```

Microphone

6.52.4.101 final String cs.usense.db.UsenseSQLiteHelper.DATABASE_NAME = "usense.db" [static]

6.52.4.102 final int cs.usense.db.UsenseSQLiteHelper.DATABASE_VERSION = 1 [static]

6.52.4.103 final String cs.usense.db.UsenseSQLiteHelper.KEY_ROWID = "key_row_id" [static]

Microphone

6.52.4.104 final String cs.usense.db.UsenseSQLiteHelper.NOISE_MILLIS = "noise_millis" [static]

6.52.4.105 final String cs.usense.db.UsenseSQLiteHelper.NORMAL_MILLIS = "normal_millis" [static]

6.52.4.106 final String cs.usense.db.UsenseSQLiteHelper.QUiet_MILLIS = "quiet_millis" [static]

6.52.4.107 final String cs.usense.db.UsenseSQLiteHelper.SOUND_DATE = "date_millis" [static]

6.52.4.108 final String cs.usense.db.UsenseSQLiteHelper.TABLE_ACCESSPOINTS = "accesspoints" [static]

MTracker

6.52.4.109 final String cs.usense.db.UsenseSQLiteHelper.TABLE_ACTIONS = "actions" [static]

Firdose

6.52.4.110 final String cs.usense.db.UsenseSQLiteHelper.TABLE_BTDEVICE = "btdevices" [static]

Bluetooth pipeline

6.52.4.111 final String cs.usense.db.UsenseSQLiteHelper.TABLE_BTDEVICEAVERAGEENCOUNTERDURATION = "btdevice_averageencounterduration" [static]

6.52.4.112 final String cs.usense.db.UsenseSQLiteHelper.TABLE_BTDEVICEENCOUNTERDURATION = "btdevice_encounterduration" [static]

6.52.4.113 final String cs.usense.db.UsenseSQLiteHelper.TABLE_BTDEVICESOCIALWEIGHT = "btdevice_socialweight" [static]

6.52.4.114 final String cs.usense.db.UsenseSQLiteHelper.TABLE_LOCATION = "location" [static]

Location Table

6.52.4.115 final String cs.usense.db.UsenseSQLiteHelper.TABLE_SOUND = "environment_sound" [static]

Microphone

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

- src/cs/usense/db/[UsenseSQLiteHelper.java](#)

6.53 cs.usense.CircleDisplay.Utils Class Reference

Static Public Member Functions

- static float [convertDpToPixel](#) (Resources r, float dp)

6.53.1 Member Function Documentation

6.53.1.1 static float cs.usense.CircleDisplay.Utils.convertDpToPixel (Resources r, float dp) [static]

This method converts dp unit to equivalent pixels, depending on device density.

Parameters

<i>r</i>	Resource
<i>dp</i>	A value in dp (density independent pixels) unit. Which we need to convert into pixels

Returns

px A float value to represent px equivalent to dp depending on device density

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

- [src/cs/usense/CircleDisplay.java](#)

6.54 cs.usense.accelerometer.WekaClassifier Class Reference

Static Public Member Functions

- static double [classify1](#) (Object[] i) throws Exception
- static double [classify](#) (Object[] i) throws Exception

6.54.1 Detailed Description

This class provides some objects to classify the real time activities based on trained data set

6.54.2 Member Function Documentation

6.54.2.1 static double `cs.usense.accelerometer.WekaClassifier.classify (Object[] i)` throws Exception [static]

This method classify the activities

Parameters

<i>Object</i>	Object with activity instances
---------------	--------------------------------

Returns

activity The current activity

6.54.2.2 static double `cs.usense.accelerometer.WekaClassifier.classify1 (Object[] i)` throws Exception [static]

This method classify the activities

Parameters

<i>Object</i>	Object with activity instances
---------------	--------------------------------

Returns

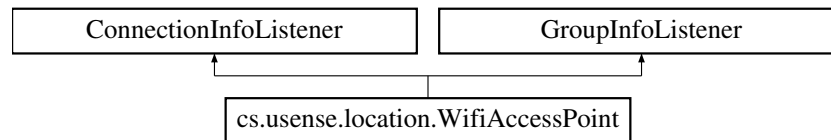
activity The current activity

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

- [src/cs/usense/accelerometer/WekaClassifier.java](#)

6.55 cs.usense.location.WifiAccessPoint Class Reference

Inheritance diagram for cs.usense.location.WifiAccessPoint:



Classes

- class [AccessPointReceiver](#)
- class [WifiScanReceiverLocation](#)

Public Member Functions

- [WifiAccessPoint](#) (Context Context, [RelativePositionWiFiNoConnection](#) callback, [UsenseDataSource](#) data↔
Source)
- void [restartDiscover](#) ()
- void [doScan](#) ()
- void [Start](#) ()
- void [createGroup](#) ()
- void [Stop](#) ()
- void [removeGroup](#) ()
- String [getWFAPMacAddress](#) ()
- void [onGroupInfoAvailable](#) (WifiP2pGroup group)
- void [startLocalService](#) (String instance, String mMACAddress)
- void [stopLocalServices](#) ()
- void [onConnectionInfoAvailable](#) (WifiP2pInfo info)
- double [calculateDistance](#) (double signalLevelInDb, double freqInMHz)

Private Member Functions

- void [saveDistance](#) (double mDistance, String mWiFiDirectMAC, String mDeviceName)

Private Attributes

- String [TAG](#) = "WifiAccessPoint"
- [WifiAccessPoint](#) [that](#) = this
- Context [context](#)
- [UsenseDataSource](#) [dataSource](#)
- WifiP2pManager [p2p](#)
- WifiP2pManager.Channel [channel](#)
- String [mNetworkName](#) = ""
- String [mMACAddress](#) = ""
- WifiP2pDnsSdServiceInfo [service](#)
- BroadcastReceiver [receiver](#)
- IntentFilter [filter](#)
- [RelativePositionWiFiNoConnection](#) [callback](#)
- Boolean [toScan](#) = false
- WifiManager [wifiManager](#) = null
- [WifiScanReceiverLocation](#) [wifiReceiver](#) = null
- boolean [mRequestConnectionInfo](#) = false

6.55.1 Constructor & Destructor Documentation

6.55.1.1 `cs.usense.location.WifiAccessPoint.WifiAccessPoint (Context Context, RelativePositionWiFiNoConnection callback, UsenseDataSource dataSource)`

[WifiAccessPoint](#) constructor

Parameters

<i>Context</i>	-Interface to global information about an application environment.
<i>callback</i>	- RelativePositionWiFiNoConnection module.
<i>dataSource</i>	- Usense data base.

6.55.2 Member Function Documentation

6.55.2.1 `double cs.usense.location.WifiAccessPoint.calculateDistance (double signalLevelInDb, double freqInMHz)`

Computes the distance to a device.

Parameters

<i>signalLevelInDb</i>	- The detected signal level in dBm, also known as the RSSI.
<i>freqInMHz</i>	- The frequency in MHz of the channel over which the client is communicating with the access point.

Returns

6.55.2.2 `void cs.usense.location.WifiAccessPoint.createGroup ()`

Create a Group Owner. It creates a Access point in this device.

6.55.2.3 `void cs.usense.location.WifiAccessPoint.doScan ()`

Requests a WiFi scan

6.55.2.4 `String cs.usense.location.WifiAccessPoint.getWFAPMacAddress ()`

Provides the Group owner MAC address (Wifi P2P interface created for the group owner)

Returns

the Group owner MAC address

6.55.2.5 `void cs.usense.location.WifiAccessPoint.onConnectionInfoAvailable (WifiP2pInfo info)`

Request group information

6.55.2.6 `void cs.usense.location.WifiAccessPoint.onGroupInfoAvailable (WifiP2pGroup group)`

Provides information about the Group Owner created (Access Point) This information include the SSID and the MAC address.

6.55.2.7 void cs.usense.location.WifiAccessPoint.removeGroup ()

Remove the group created. It stops the access point created in this device.

6.55.2.8 void cs.usense.location.WifiAccessPoint.restartDiscover ()

Sends a request to the [RelativePositionWiFiNoConnection](#) to restart the WiFi p2p discover mechanism.

6.55.2.9 void cs.usense.location.WifiAccessPoint.saveDistance (double *mDistance*, String *mWiFiDirectMAC*, String *mDeviceName*) [private]

Saves the computed distance to a specific device to the database.

Parameters

<i>mDistance</i>	- Computed distance to the device
<i>mWiFiDirectMAC</i>	- MAC Address of the device
<i>mDeviceName</i>	- Device Name

Save Distance into DB

Device exists

New Device

6.55.2.10 void cs.usense.location.WifiAccessPoint.Start ()

It initializes the WiFi P2P and register a receiver to receive all info about the WiFi state and connection state.

6.55.2.11 void cs.usense.location.WifiAccessPoint.startLocalService (String *instance*, String *mMACAddress*)

Register a local service with the name of the SSID and the MAC address of the group owner created

Parameters

<i>instance</i>	- ID that identifies the application
<i>mMACAddress</i>	- the Group Owner MAC address

6.55.2.12 void cs.usense.location.WifiAccessPoint.Stop ()

It cleans the local services registered in WiFi p2p and remove the receiver.

6.55.2.13 void cs.usense.location.WifiAccessPoint.stopLocalServices ()

Removes all local services created.

6.55.3 Member Data Documentation

6.55.3.1 [RelativePositionWiFiNoConnection](#) cs.usense.location.WifiAccessPoint.callback [private]

[RelativePositionWiFiNoConnection](#) module

6.55.3.2 `WifiP2pManager.Channel cs.usense.location.WifiAccessPoint.channel` [private]

A channel that connects the application to the Wifi p2p framework.

6.55.3.3 `Context cs.usense.location.WifiAccessPoint.context` [private]

Interface to global information about an application environment.

6.55.3.4 `UsenseDataSource cs.usense.location.WifiAccessPoint.dataSource` [private]

Usense Data base

6.55.3.5 `IntentFilter cs.usense.location.WifiAccessPoint.filter` [private]

Structured description of Intent values to be matched.

6.55.3.6 `String cs.usense.location.WifiAccessPoint.mMACAddress = ""` [private]

MAC Address of the AP created on this device (Group Owner)

6.55.3.7 `String cs.usense.location.WifiAccessPoint.mNetworkName = ""` [private]

SSID of the AP created on this device (Group Owner)

6.55.3.8 `boolean cs.usense.location.WifiAccessPoint.mRequestConnectionInfo = false` [private]

Flag to inform if a request was already performed and it is still waiting for a result.

6.55.3.9 `WifiP2pManager cs.usense.location.WifiAccessPoint.p2p` [private]

Android WiFi P2P Manager

6.55.3.10 `BroadcastReceiver cs.usense.location.WifiAccessPoint.receiver` [private]

Base class for code that will receive intents sent by sendBroadcast().

6.55.3.11 `WifiP2pDnsSdServiceInfo cs.usense.location.WifiAccessPoint.service` [private]

A class for storing Bonjour service information that is advertised over a Wi-Fi peer-to-peer setup.

6.55.3.12 `String cs.usense.location.WifiAccessPoint.TAG = "WifiAccessPoint"` [private]

6.55.3.13 `WifiAccessPoint cs.usense.location.WifiAccessPoint.that = this` [private]

[WifiAccessPoint](#) Module

6.55.3.14 `Boolean cs.usense.location.WifiAccessPoint.toScan = false` [private]

Flag about if it is necessary to do a WiFi scan

6.55.3.15 **WifiManager** `cs.usense.location.WifiAccessPoint.wifiManager = null` [private]

This class provides the primary API for managing all aspects of Wi-Fi connectivity.

6.55.3.16 **WifiScanReceiverLocation** `cs.usense.location.WifiAccessPoint.wifiReceiver = null` [private]

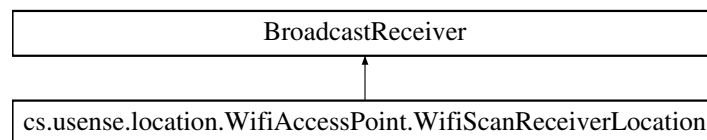
BroadcastReceiver that receives a WiFi scan result.

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

- [src/cs/usense/location/WifiAccessPoint.java](#)

6.56 cs.usense.location.WifiAccessPoint.WifiScanReceiverLocation Class Reference

Inheritance diagram for `cs.usense.location.WifiAccessPoint.WifiScanReceiverLocation`:



Public Member Functions

- void [onReceive](#) (Context c, Intent intent)

6.56.1 Detailed Description

BroadcastReceiver that receives a WiFi scan result.

Author

Luis Amaral Lopes (COPELABS/ULHT)

6.56.2 Member Function Documentation

6.56.2.1 void `cs.usense.location.WifiAccessPoint.WifiScanReceiverLocation.onReceive (Context c, Intent intent)`

AP Found

Get the SSID

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

- [src/cs/usense/location/WifiAccessPoint.java](#)

6.57 cs.usense.location.WifiServiceSearcher Class Reference

Classes

- class **TxTInfoReceived**

Public Member Functions

- [WifiServiceSearcher](#) (Context Context, [RelativePositionWiFiNoConnection](#) callback, [UsenseDataSource](#) dataSource)
- void [Start](#) ()
- void [Stop](#) ()
- void [startServiceDiscovery](#) ()
- void [restartWifiP2P](#) ()
- void [stopDiscovery](#) ()

Private Attributes

- String [TAG](#) = "WifiServiceSearcher"
- Context [mContext](#)
- [UsenseDataSource](#) [dataSource](#)
- [WifiP2pManager](#) [p2p](#)
- [WifiP2pManager.Channel](#) [channel](#)
- [WifiP2pDnsSdServiceRequest](#) [serviceRequest](#)
- [RelativePositionWiFiNoConnection](#) [callback](#)
- [TxTInfoReceived](#) [mTxTInfoReceived](#) = null

6.57.1 Constructor & Destructor Documentation

6.57.1.1 [cs.usense.location.WifiServiceSearcher.WifiServiceSearcher](#) (Context Context, [RelativePositionWiFiNoConnection](#) callback, [UsenseDataSource](#) dataSource)

[WifiServiceSearcher](#) constructor

Parameters

<i>Context</i>	- Interface to global information about an application environment.
<i>callback</i>	- RelativePositionWiFiNoConnection module.
<i>dataSource</i>	- Usense data base.

6.57.2 Member Function Documentation

6.57.2.1 void [cs.usense.location.WifiServiceSearcher.restartWifiP2P](#) ()

Removes all services request and start a new service request.

6.57.2.2 void [cs.usense.location.WifiServiceSearcher.Start](#) ()

It initializes the WiFi p2p and gets a channel.

6.57.2.3 void [cs.usense.location.WifiServiceSearcher.startServiceDiscovery](#) ()

Requests a service discovery. Register listeners for DNS-SD services. These are callbacks invoked by the system when a service is actually discovered.

A service has been discovered. Is this our app?

update the UI and add the item the discovered

device.

Known Device - Just update the SSID

Save Distance into DB

New Device

A new TXT record is available. Pick up the advertised buddy name.

After attaching listeners, create a service request and initiate discovery.

6.57.2.4 void cs.usense.location.WifiServiceSearcher.Stop ()

Stops any discovery request running.

6.57.2.5 void cs.usense.location.WifiServiceSearcher.stopDiscovery ()

Stops any discovery request running.

6.57.3 Member Data Documentation

6.57.3.1 RelativePositionWiFiNoConnection cs.usense.location.WifiServiceSearcher.callback [private]

[RelativePositionWiFiNoConnection](#) module.

6.57.3.2 WifiP2pManager.Channel cs.usense.location.WifiServiceSearcher.channel [private]

A channel that connects the application to the Wifi p2p framework.

6.57.3.3 UsenseDataSource cs.usense.location.WifiServiceSearcher.dataSource [private]

Usense Data base.

6.57.3.4 Context cs.usense.location.WifiServiceSearcher.mContext [private]

Interface to global information about an application environment.

6.57.3.5 TxTInfoReceived cs.usense.location.WifiServiceSearcher.mTxTInfoReceived = null [private]

Object that contains info from the TXT of the device found.

6.57.3.6 WifiP2pManager cs.usense.location.WifiServiceSearcher.p2p [private]

This class provides the API for managing Wi-Fi peer-to-peer connectivity.

6.57.3.7 WifiP2pDnsSdServiceRequest cs.usense.location.WifiServiceSearcher.serviceRequest [private]

A class for creating a Bonjour service discovery request.

6.57.3.8 String cs.usense.location.WifiServiceSearcher.TAG = "WifiServiceSearcher" [private]

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

- [src/cs/usense/location/WifiServiceSearcher.java](#)

Chapter 7

File Documentation

7.1 `src/com/meapsoft/FFT.java` File Reference

Classes

- class [com.meapsoft.FFT](#)

Packages

- package [com.meapsoft](#)

7.2 `src/cs/usense/accelerometer/AccelerometerListener.java` File Reference

Classes

- interface [cs.usense.accelerometer.AccelerometerListener](#)

Packages

- package [cs.usense.accelerometer](#)

7.3 `src/cs/usense/accelerometer/AccelerometerPipeline.java` File Reference

Classes

- class [cs.usense.accelerometer.AccelerometerPipeline](#)
- class [cs.usense.accelerometer.AccelerometerPipeline.PreviousAction](#)
- class [cs.usense.accelerometer.AccelerometerPipeline.ActivityClassificationTask](#)
- class [cs.usense.accelerometer.AccelerometerPipeline.AccListener](#)
- class [cs.usense.accelerometer.AccelerometerPipeline.HourChangeAlarmReceiver](#)

Packages

- package [cs.usense.accelerometer](#)

7.4 `src/cs/usense/accelerometer/AccelerSenManager.java` File Reference

Classes

- class [cs.usense.accelerometer.AccelerSenManager](#)

Packages

- package [cs.usense.accelerometer](#)

7.5 `src/cs/usense/accelerometer/ActionsEntry.java` File Reference

Classes

- class [cs.usense.accelerometer.ActionsEntry](#)

Packages

- package [cs.usense.accelerometer](#)

7.6 `src/cs/usense/accelerometer/Globals.java` File Reference

Classes

- class [cs.usense.accelerometer.Globals](#)

Packages

- package [cs.usense.accelerometer](#)

7.7 `src/cs/usense/accelerometer/WekaClassifier.java` File Reference

Classes

- class [cs.usense.accelerometer.WekaClassifier](#)

Packages

- package [cs.usense.accelerometer](#)

7.8 `src/cs/usense/bluetooth/BluetoothCore.java` File Reference

Classes

- class [cs.usense.bluetooth.BluetoothCore](#)
- class [cs.usense.bluetooth.BluetoothCore.socialWeight](#)
- class [cs.usense.bluetooth.BluetoothCore.CustomComparator](#)
- class [cs.usense.bluetooth.BluetoothCore.ServiceBTListener](#)

Packages

- package [cs.usense.bluetooth](#)

7.9 src/cs/usense/bluetooth/BTDeviceFinder.java File Reference

Classes

- interface [cs.usense.bluetooth.BTDeviceFinder](#)

Packages

- package [cs.usense.bluetooth](#)

7.10 src/cs/usense/bluetooth/BTManager.java File Reference

Classes

- class [cs.usense.bluetooth.BTManager](#)
- class **cs.usense.bluetooth.BTManager.FindBluetoothDevice**
- class **cs.usense.bluetooth.BTManager.adapterBroadcastReceiver**

Packages

- package [cs.usense.bluetooth](#)

7.11 src/cs/usense/bluetooth/BTUserDevAverageEncounterDuration.java File Reference

Classes

- class [cs.usense.bluetooth.BTUserDevAverageEncounterDuration](#)

Packages

- package [cs.usense.bluetooth](#)

7.12 src/cs/usense/bluetooth/BTUserDevEncounterDuration.java File Reference

Classes

- class [cs.usense.bluetooth.BTUserDevEncounterDuration](#)

Packages

- package [cs.usense.bluetooth](#)

7.13 `src/cs/usense/bluetooth/BTUserDevice.java` File Reference

Classes

- class [cs.usense.bluetooth.BTUserDevice](#)

Packages

- package [cs.usense.bluetooth](#)

7.14 `src/cs/usense/bluetooth/BTUserDevSocialWeight.java` File Reference

Classes

- class [cs.usense.bluetooth.BTUserDevSocialWeight](#)

Packages

- package [cs.usense.bluetooth](#)

7.15 `src/cs/usense/bluetooth/OnNewHourUpdate.java` File Reference

Classes

- class [cs.usense.bluetooth.OnNewHourUpdate](#)

Packages

- package [cs.usense.bluetooth](#)

7.16 `src/cs/usense/ChangeListener.java` File Reference

Classes

- interface [cs.usense.ChangeListener](#)

Packages

- package [cs.usense](#)

7.17 `src/cs/usense/CircleDisplay.java` File Reference

Classes

- class [cs.usense.CircleDisplay](#)
- interface [cs.usense.CircleDisplay.SelectionListener](#)
- class [cs.usense.CircleDisplay.Utils](#)

Packages

- package [cs.usense](#)

7.18 src/cs/usense/db/DataBaseChangeListener.java File Reference

Classes

- interface [cs.usense.db.DataBaseChangeListener](#)

Packages

- package [cs.usense.db](#)

7.19 src/cs/usense/db/UsenseDataSource.java File Reference

Classes

- class [cs.usense.db.UsenseDataSource](#)

Packages

- package [cs.usense.db](#)

7.20 src/cs/usense/db/UsenseSQLiteHelper.java File Reference

Classes

- class [cs.usense.db.UsenseSQLiteHelper](#)

Packages

- package [cs.usense.db](#)

7.21 src/cs/usense/inferenceModule/SocialInteraction.java File Reference

Classes

- class [cs.usense.inferenceModule.SocialInteraction](#)
- class [cs.usense.inferenceModule.SocialInteraction.DeviceDetails](#)
- class [cs.usense.inferenceModule.SocialInteraction.CustomComparator](#)

Packages

- package [cs.usense.inferenceModule](#)

7.22 `src/cs/usense/inferenceModule/SocialityDetails.java` File Reference

Classes

- class [cs.usense.inferenceModule.SocialityDetails](#)

Packages

- package [cs.usense.inferenceModule](#)

7.23 `src/cs/usense/inferenceModule/SocialityDetailsListParcelable.java` File Reference

Classes

- class [cs.usense.inferenceModule.SocialityDetailsListParcelable](#)

Packages

- package [cs.usense.inferenceModule](#)

7.24 `src/cs/usense/location/CleanTask.java` File Reference

Classes

- class [cs.usense.location.CleanTask](#)

Packages

- package [cs.usense.location](#)

7.25 `src/cs/usense/location/LocationEntry.java` File Reference

Classes

- class [cs.usense.location.LocationEntry](#)

Packages

- package [cs.usense.location](#)

7.26 `src/cs/usense/location/LocationPipeline.java` File Reference

Classes

- class [cs.usense.location.LocationPipeline](#)

Packages

- package [cs.usense.location](#)

7.27 src/cs/usense/location/RelativePositionWiFiNoConnection.java File Reference

Classes

- class [cs.usense.location.RelativePositionWiFiNoConnection](#)
- class [cs.usense.location.RelativePositionWiFiNoConnection.UsenseDevice](#)

Packages

- package [cs.usense.location](#)

7.28 src/cs/usense/location/WifiAccessPoint.java File Reference

Classes

- class [cs.usense.location.WifiAccessPoint](#)
- class [cs.usense.location.WifiAccessPoint.AccessPointReceiver](#)
- class [cs.usense.location.WifiAccessPoint.WifiScanReceiverLocation](#)

Packages

- package [cs.usense.location](#)

7.29 src/cs/usense/location/WifiServiceSearcher.java File Reference

Classes

- class [cs.usense.location.WifiServiceSearcher](#)
- class **[cs.usense.location.WifiServiceSearcher.TxTInfoReceived](#)**

Packages

- package [cs.usense.location](#)

7.30 src/cs/usense/microphone/MicrophonePipeline.java File Reference

Classes

- class [cs.usense.microphone.MicrophonePipeline](#)

Packages

- package [cs.usense.microphone](#)

7.31 `src/cs/usense/microphone/SoundLevel.java` File Reference

Classes

- class [cs.usense.microphone.SoundLevel](#)

Packages

- package [cs.usense.microphone](#)

7.32 `src/cs/usense/microphone/SoundListener.java` File Reference

Classes

- interface [cs.usense.microphone.SoundListener](#)

Packages

- package [cs.usense.microphone](#)

7.33 `src/cs/usense/microphone/SoundManager.java` File Reference

Classes

- class [cs.usense.microphone.SoundManager](#)

Packages

- package [cs.usense.microphone](#)

7.34 `src/cs/usense/SensorProduct.java` File Reference

Classes

- class [cs.usense.SensorProduct](#)

Packages

- package [cs.usense](#)

7.35 `src/cs/usense/SIAdapter.java` File Reference

Classes

- class [cs.usense.SIAdapter](#)
- class [cs.usense.SIAdapter.EntryHolder](#)

Packages

- package [cs.usense](#)

7.36 src/cs/usense/UsenseActivity.java File Reference

Classes

- class [cs.usense.UsenseActivity](#)
- class [cs.usense.UsenseActivity.CustomComparator](#)
- class [cs.usense.UsenseActivity.OnSwipeTouchListener](#)
- class [cs.usense.UsenseActivity.OnSwipeTouchListener.GestureListener](#)

Packages

- package [cs.usense](#)

7.37 src/cs/usense/UsenseHistoryActivity.java File Reference

Classes

- class [cs.usense.UsenseHistoryActivity](#)

Packages

- package [cs.usense](#)

7.38 src/cs/usense/UsenseHistoryAdapter.java File Reference

Classes

- class [cs.usense.UsenseHistoryAdapter](#)
- class **cs.usense.UsenseHistoryAdapter.EntryHolder**

Packages

- package [cs.usense](#)

7.39 src/cs/usense/UsenseService.java File Reference

Classes

- class [cs.usense.UsenseService](#)
- interface [cs.usense.UsenseService.NOTIFICATION_ID](#)
- class [cs.usense.UsenseService.LocalBinder](#)

Packages

- package [cs.usense](#)

