

# Reader Elf Android Interface

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Serial number	version	contents	author	date
1	V1.0.0	New interface document	Wang Zhong Nan	2012-08-27
2	V1.0.2	Add adjustment process	Wang Zhong Nan	2012-11-15
3	V2.0.0	Add read double blocks method	Wang Zhong Nan	2013-03-01
4	V2.1.2	Add Ultralight/NFC support	rfid	2013-11-21

Security lever: third lever (limited share documents)

## 1- Interface notes

## 2- IvrJack.jar is one secondary development interface base on Android 2.1 and above platforms.

Interface is made up of:

- ◆ IvrJackService —communication control interface
- ◆ IvrJackAdapter —event interface
- ◆ IvrJackStatus — situation
- ◆ These three kinds.

### Notes:

Add *android.permission.RECORD\_AUDIO* for reference projects authority。

Detailed usage methods can see IvrJackExample example。

## 1- Interface definition

## 2- IvrJackService

### 1. Property uid

definition:

```
public int uid = 0;
```

Notes:

When read label successfully return back label UID

*Notes: this property has already been instead of IDS.*

## 2. Property cardType

### Definition:

```
public byte cardType;
```

### Notes:

Read label successfully return back to label card type (0- MifareClassic、1-Ultraright、255-this card is not recognized.)

## 3. Property ids

### Definition:

```
public byte[] ids = new byte[16];
```

### Notes:

Read label successfully return back to label UID, ids[0] means UID length.

## 4. Method open

### Definition:

```
public void open(Context context, IvJackAdapter adapter);
```

### Notes:

- \* open reader card elf service
- \* @param context Activity example
- \* @param adapter used for case interface
- \*/

### precautions:

**This method only can adjust one time in APP, or else may case program error.**

Method: close

### Definition:

```
public void close();
```

### Notes:

- \* close reader card elf service.
- \*/

### precautions:

**This method can only adjust one time in APP, or else case program error.**

Method : readTag

### Definition:

```
public int readTag ();
```

### Notes:

- \* open label identification
- \* @return 0 success, not 0 failure, please see return value definition

## 5. Method : getTagUID

### Definition:

```
public int getTagUID ();
```

### Notes:

Get label ID

\* @return 0 success, not 0 failure, please see return value definition; read uid property get label UID when success. \*/

## 6. Method: tagAuthenticate

### Definition:

```
public int tagAuthenticate(byte sector, byte[] pwds);
```

### Notes:

/\*\*

\*Verify block areas password.

\* @param sector block area numbers.

\* @param pwds 6 bytes sector passwords ( default is Key A)

\* @return 0 success, not 0 failure, please see return value definition.

## 7. Method : tagReadData

### Definition:

```
public int tagReadData(byte block, byte[] data);
```

### Notes:

\*Read label data

\* @param block sector block numbers (0-3)

\* @param data from sector block,length 16 types.

\* @return 0 success, not 0 failure, please see return value definition.

Method: tagReadBlockData

### Definitions:

```
public int tagReadBlockData(byte sector1, byte block1, byte sector2, byte block2, byte[] pwds,  
byte[] data);
```

### Notes:

\*Read label 2 blocks data.

\* @param sector1 sector numbers 1(0-31)

\* @param block1 sector block numbers1(0-3)

\* @param sector2 sector numbers 2(0-31)

\* @param block2 sector block numbers 2(0-3)

\* @param pwds 6 bytes sector password ( default is Key A)

\* @param data from sector block ,length is 32 bytes.

\* @return 0 success, not 0 failure

\*/

## 8. Method : tagWriteData

### Definitions:

```
public int tagWriteData(byte block, byte[] data);
```

### 说明:

```
/**
 *write label data
 * @param block numbers (0-3)
 * @param data wrote into sector, length 16 bytes.
 * @return 0 success, not 0 success, please see return value definition. */
```

## 9. Method: tagReadDataUL

### Definition:

```
public int tagReadDataUL(byte block, byte length, byte[] data);
```

### Notes:

- \* Read Ultraright label data.
- \* @param block numbers.
- \* @param length blocks number
- \* @param data read from sector block, length is 4 bytes.
- \* @return 0 success, not 0 success, please see return value definition.

### Method : tagWriteDataUL

### Definition:

```
public int tagWriteDataUL (byte block, byte length, byte[] data);
```

### Notes:

- \* Write Ultraright label data
  - \* @param block numbers
  - \* @param length blocks
  - \* @param data written in sector block, length is 4 bytes.
  - \* @return 0 success, not 0 failure, please see return value definition.
- 0    success
- 1    communication failure.
- 2    unknown exception error.
- 1   low battery
- 2   device is not connected.

## 3- lvrJackAdapter

### 1. Case: onConnect

### Definition:

```
void onConnect(String deviceSN);
```

### Notes:

```
/**
 * device connected
```

\* @param deviceSN serial numbers  
\*/

## 2. Case: onDisconnect

### definition:

```
void onDisconnect();
```

### notes:

\*Triggered when device is disconnected.

## 3. Case: onStatusChange

### Definition:

```
void onStatusChange(IvrJackStatus status);
```

### Notes:

\*device status change case.

\* @param status, please see IvrJackStatus

\*/

## 4- IvrJackStatus

- \* status: device being identified.ijsDetecting,
- \* status: device identified. ijsRecognized,
- \* status: device is not identified.ijsUnRecognized,
- \* status: device has been set aside. ijsPlugout

### (1) Calling process

### (2) Interface calling

1. Take IvrJack.jarfile copy into project directory.
2. Refer to project directory IvrJack.jar
3. At calling interface Activity, import below.

```
import com.xminnov.IvrJackAdapter;  
import com.xminnov.IvrJackService;  
import com.xminnov.IvrJackStatus;
```
4. Achieve IvrJackAdapter interface method (implements IvrJackAdapter)
5. Create IvrJackService kind

### (3) Others please see examples.

#### (4) Label operation

1. Calling readTag method.
2. Calling getTagUID method
3. Calling tagAuthenticate method (optional)
4. Calling tagReadData method (optional)
5. Calling tagWriteData method (optional)