Android Click to Call

Example of Click to Call application for Android

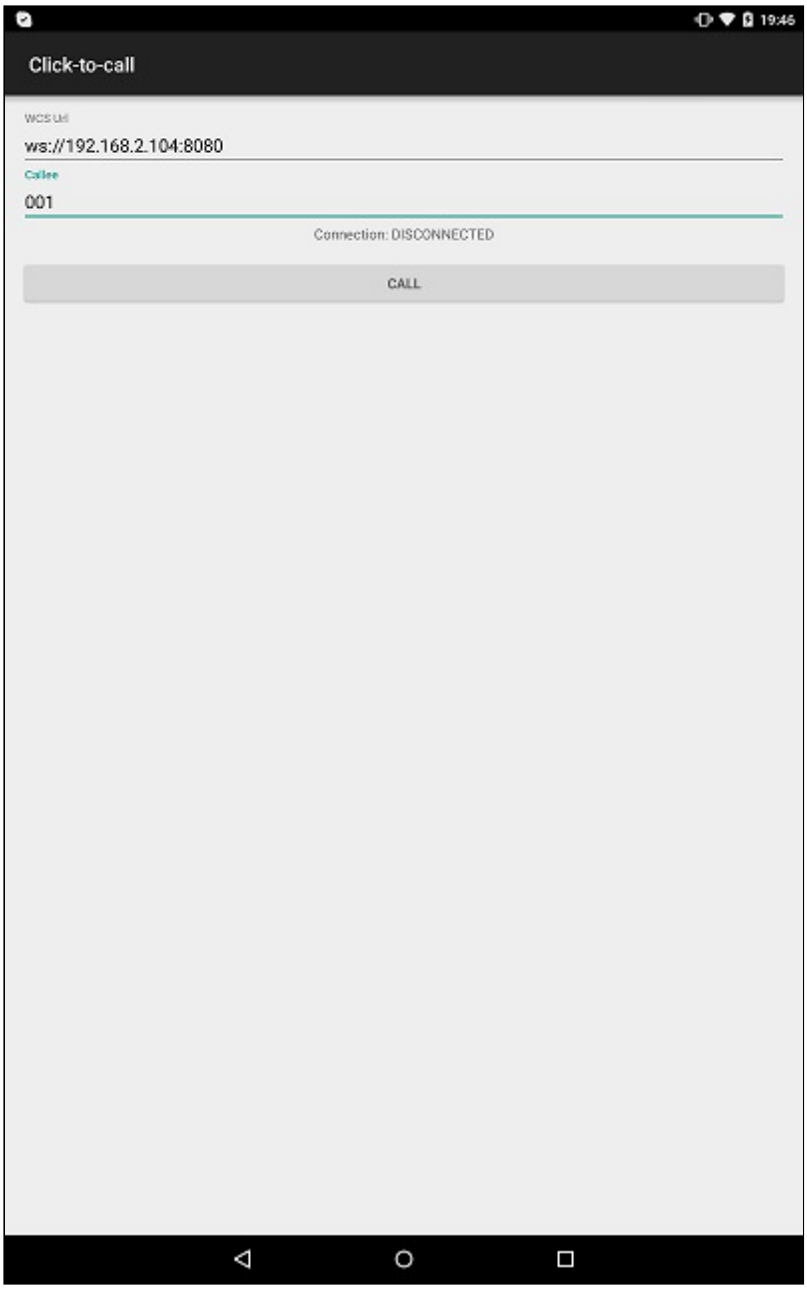
This example allows to place outgoing audio call with one button click using account specified in server config file

/usr/local/FlashphonerWebCallServer/conf/apps/click-to-call/accounts.xml

On the screenshot below the example is displayed after terminating a call and closing connection to server.

Input fields required for connecting to WCS server and placing a call

- `WCS URL`, where `192.168.2.104` is the address of the WCS server
- `Callee`, where `001` is the SIP username of the callee



Analyzing the example code

To analyze the code, let's take class ClickToCallActivity.java of the `click-to-call` example, which can be downloaded with corresponding build 1.0.1.38.

1. Initialization of the API

`Flashphoner.init()` code

For initialization, `Context` object is passed to the `init()` method.

```
Flashphoner.init(this);
```

2. Session creation

`Flashphoner.createSession()` code

`SessionOptions` object with URL of WCS server is passed to `createSession` method

```
SessionOptions sessionOptions = new
SessionOptions(mWcsUrlView.getText().toString());
session = Flashphoner.createSession(sessionOptions);
```

3. Connection to the server.

`Session.connect()` code

`Connection` object with appKey of internal server-side application `clickToCallApp` is passed to the method

```
Connection connection = new Connection();
connection.setAppKey("clickToCallApp");
/**
  * Connect to WCS server
  */
session.connect(connection);
```

4. Receiving the event confirming successful connection

`Session.onConnected()`, `Session.createCall()` code

On this event, outgoung call is created with `Session.createCall()` method. `CallOptions` object with callee SIP username is passed to the method.

```
@Override
public void onConnected(final Connection connection) {
    runOnUiThread(new Runnable() {
        @Override
        public void run() {
            mCallButton.setText(R.string.action_hangup);
            mCallButton.setTag(R.string.action_hangup);
            mCallButton.setEnabled(true);
            mCallStatus.setText("Connection: " + connection.getStatus());

            /**
              * Pass 'callee' to the callOptions and create a new call object
              */
            CallOptions callOptions = new
CallOptions(mCalleeView.getText().toString());
            call = session.createCall(callOptions);
            call.on(new CallStatusEvent() {
                ...
            });
```

```
            ActivityCompat.requestPermissions(ClickToCallActivity.this,
                  new String[]{Manifest.permission.RECORD_AUDIO},
                  CALL_REQUEST_CODE);
            ...
        }
    });
}
```

5. Making outgoing call when permissions are granted.

`Call.call()` code

```
case CALL_REQUEST_CODE: {
    if (grantResults.length == 0 ||
          grantResults[0] != PackageManager.PERMISSION_GRANTED) {
        mCallButton.setEnabled(false);
        session.disconnect();
        Log.i(TAG, "Permission has been denied by user");
    } else {
        /**
          * Make the outgoing call
          */
        call.call();
        Log.i(TAG, "Permission has been granted by user");
    }
}
```

6. Disconnection

`Session.disconnect()` code

```
mCallButton.setEnabled(false);
session.disconnect();
```

7. Receiving the event confirming successful disconnection

`session.onDisconnection()` code

```
@Override
public void onDisconnection(final Connection connection) {
    runOnUiThread(new Runnable() {
        @Override
        public void run() {
            mCallButton.setText(R.string.action_call);
            mCallButton.setTag(R.string.action_call);
            mCallButton.setEnabled(true);
            mCallStatus.setText("Connection: " + connection.getStatus());
        }
    });
}
```