

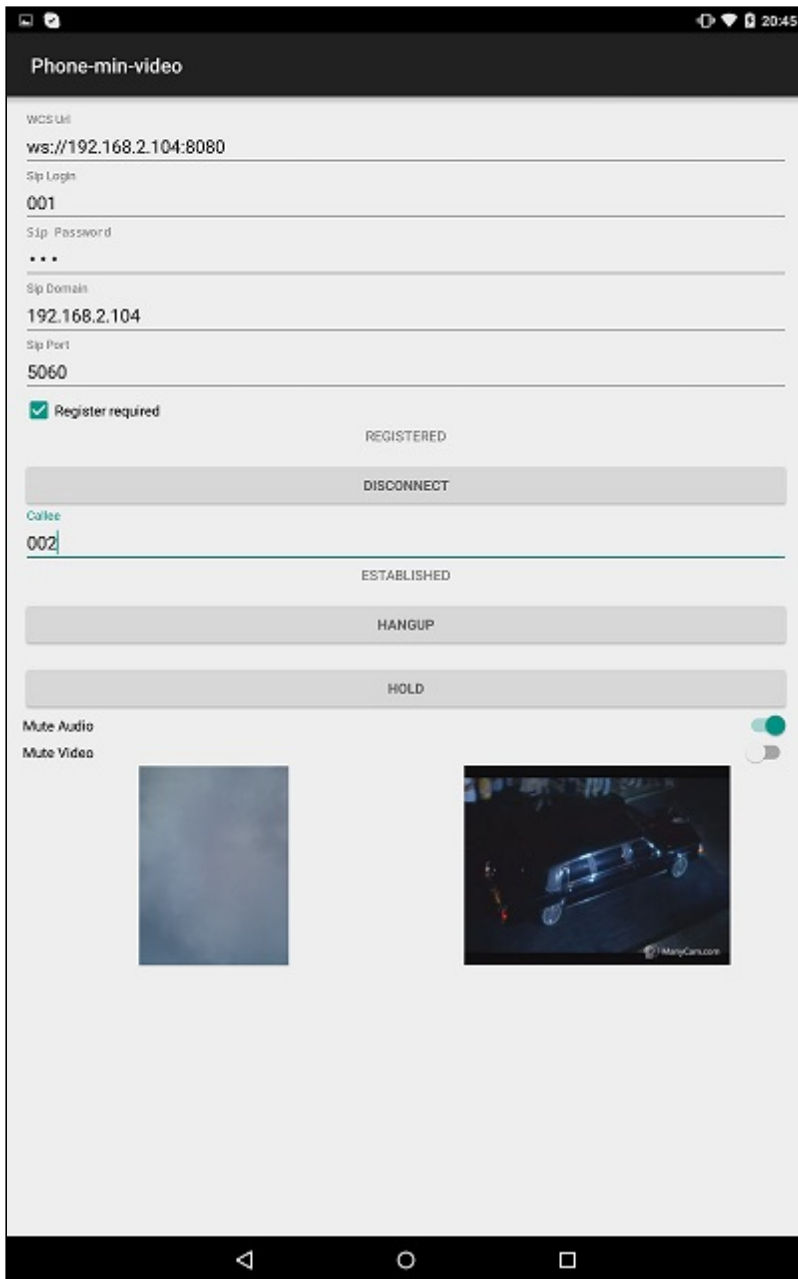
Android Phone Video

Example of Android application for video calls

On the screenshot below the example is displayed when a call is established.

The interface of the application is the same as in the example [Phone](#), except that controls for muting/unmuting audio and video are added and two videos are played

- left - video from the camera of this user
- right - video from the other call party



Analyzing the example code

To analyze the code, let's take class `PhoneMinVideoActivity.java` of the `phone-min-video` example, which can be downloaded with corresponding build `1.0.1.38`.

Functions of initialization, placing an outgoing call and answering incoming call work the same as described in the example `Phone`.

Differences from the example `Phone`:

1. Session creation

`Flashphoner.createSession()` code

`SessionOptions` object with the following parameters is passed to method `createSession()` when session for connection to WCS server is created

- URL of WCS server
- `SurfaceViewRenderer`, which will be used to display video from the camera
- `SurfaceViewRenderer`, which will be used to play video from the other party

```
SessionOptions sessionOptions = new
SessionOptions(mWcsUrlView.getText().toString());
sessionOptions.setLocalRenderer(localRender);
sessionOptions.setRemoteRenderer(remoteRender);
session = Flashphoner.createSession(sessionOptions);
```

2. Outgoing call

`Session.createCall()`, `Call.call()` code

`CallOptions` object with the following parameters is passed to `createCall()` method:

- callee SIP username
- video constraints

```
case CALL_REQUEST_CODE: {
    if (grantResults.length == 0 ||
        grantResults[0] != PackageManager.PERMISSION_GRANTED ||
        grantResults[1] != PackageManager.PERMISSION_GRANTED ) {
        Log.i(TAG, "Permission has been denied by user");
    } else {
        mCallButton.setEnabled(false);
        /**
         * Get call options from the callee text field
         */
        CallOptions callOptions = new
CallOptions(mCalleeView.getText().toString());
        callOptions.getConstraints().updateVideo(true);
        call = session.createCall(callOptions);
        call.on(callStatusEvent);
        /**
         * Make a new outgoing call
         */
        call.call();
        Log.i(TAG, "Permission has been granted by user");
    }
    break;
}
```

3. Answering incoming call

`Call.answer()` code

```
case INCOMING_CALL_REQUEST_CODE: {
    if (grantResults.length == 0 ||
        grantResults[0] != PackageManager.PERMISSION_GRANTED ||
        grantResults[1] != PackageManager.PERMISSION_GRANTED ) {
        call.hangup();
        incomingCallAlert = null;
        Log.i(TAG, "Permission has been denied by user");
    } else {
        mCallButton.setText(R.string.action_hangup);
        mCallButton.setTag(R.string.action_hangup);
        mCallButton.setEnabled(true);
        mCallStatus.setText(call.getStatus());
        call.getCallOptions().getConstraints().updateVideo(true);
        call.getCallObject().setHasVideo(true);
        call.answer();
        incomingCallAlert = null;
        Log.i(TAG, "Permission has been granted by user");
    }
}
```

4. Mute/unmute audio and video

`Call.unmuteAudio()`, `Call.muteAudio()`, `Call.unmuteVideo()`, `Call.muteVideo()` code

```
mMuteAudio = (Switch) findViewById(R.id.mute_audio);
/**
 * Mute or Unmute audio for the SIP call
 * Mute if it is not muted.
 * Unmute if it is muted.
 */
mMuteAudio.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
    public void onCheckedChanged(CompoundButton buttonView, boolean
isChecked) {
        if (call != null) {
            if (isChecked) {
                call.muteAudio();
            } else {
                call.unmuteAudio();
            }
        }
    }
});
mMuteVideo = (Switch) findViewById(R.id.mute_video);
/**
 * Mute or Unmute video for the SIP call
 * Mute if it is not muted.
 * Unmute if it is muted.
 */
mMuteVideo.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
    public void onCheckedChanged(CompoundButton buttonView, boolean
isChecked) {
```

```
    if (call != null) {
        if (isChecked) {
            call.muteVideo();
        } else {
            call.unmuteVideo();
        }
    }
}
});
```