

β Tap service integration in an Android application

Emilio Granell and Luis A. Leiva

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To use the β Tap service, developers only need to include the following code in the main activity of their applications.

1. Add the Handler and ServiceConnection declaration:

```
public Handler messageHandler = new MessageHandler();
protected ServiceConnection mServerConn = new ServiceConnection() {
    @Override
    public void onServiceConnected(ComponentName name, IBinder binder) {
        Log.i(TAG, "onServiceConnected");
    }
    @Override
    public void onServiceDisconnected(ComponentName name) {
        Log.i(TAG, "onServiceDisconnected");
    }
};
```

2. Start the β Tap service when creating the activity. For this add the following code in the onCreate declaration:

```
ComponentName componentName = new ComponentName("com.prhlt.aemus.BoDTapService",
        "com.prhlt.aemus.BoDTapService.BoDTapService");
Intent intent = new Intent();
intent.putExtra("MESSENGER", new Messenger(messageHandler));
intent.setComponent(componentName);

this.getActivity().getApplication().bindService(intent, mServerConn,
        Context.BIND_AUTO_CREATE);

ComponentName c = this.getActivity().getApplication().startService(intent);
if (c == null) {
    Toast.makeText(this.getActivity().getApplicationContext(),
        "Failed to start the BoDTap Service", Toast.LENGTH_LONG).show();
    Log.e(TAG, "Failed to start the BoDTapService with " + intent);
} else {
    Toast.makeText(this.getActivity().getApplicationContext(),
        "BoDTap Service started", Toast.LENGTH_LONG).show();
    Log.i(TAG, "BoDTapService started with " + intent);
}
```

3. Stop the β Tap service when destroying the activity. For this add the following code to the onDestroy declaration:

```
ComponentName componentName = new ComponentName("com.prhlt.aemus.BoDTapService",
        "com.prhlt.aemus.BoDTapService.BoDTapService");
Intent intent = new Intent();
intent.setComponent(componentName);
this.getActivity().getApplication().stopService(intent);
this.getActivity().getApplication().unbindService(mServerConn);
```

4. Define the Handler class in order to receive the messages from the β Tap service, and the actions to perform when a BTAP_SINGLE or BTAP_DOUBLE is detected:

```
public class MessageHandler extends Handler {
    @Override
    public void handleMessage(Message message) {
        JSONObject info = null;
        try {
            info = new JSONObject(message.getData().getString("data"));
        } catch (JSONException e) {
            e.printStackTrace();
        }

        int tap = 0;
        try {
            tap = info.getInt("tap");
        } catch (JSONException e) {
            e.printStackTrace();
        }
        switch (tapType) {
            case 0:
                Log.d(TAG, "No BTAP!");
                // No BTap action.
                break;
            case 1:
                Log.d(TAG, "BTAP_SINGLE!");
                // Single BTap action.
                break;
            case 2:
                Log.d(TAG, "BTAP_DOUBLE!");
                // Dobule BTap action.
                break;
            default:
                Log.e(TAG, "BTAP not recognised!");
                break;
        }
    }
}
```