

## Spang Development Introduction

1. Fetch the git repository from <https://github.com/gustavAR/Spang>
2. Make sure you have the Android SDK, an Android (Virtual) Device and Java 5 SE development environment, a computer with Microsoft Windows and .NET 3.5

The API is divided into two parts; one part (currently only in C#) for the computer and one in Java for Android. The network library is available in both languages.

The network message protocols used is UDP and TCP. Currently messages are sent and decoded a one-byte message identifier. For a detailed look at the protocol, see

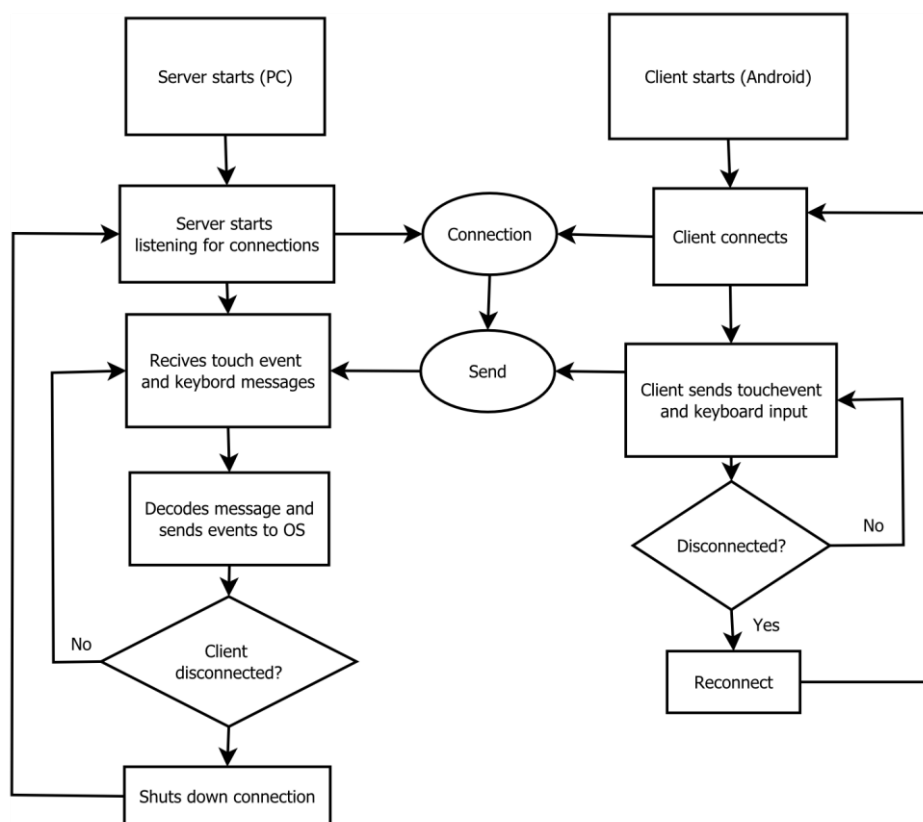


Figure 1 Overview of flow control

Table 1 Network protocol

Message	ID	Length (excluding ID)	Description
Heartbeat	N/A	0	A signal sent periodically to keep the connection alive
System	0x00	<1023 (Type: String)	Various messages, e.g. Shutdown command
Tap	0x01	0	Sent when user taps android screen
Long tap	0x02	0	Like Tap, but for a longer time
Touch move	0x03	8 (Type: int[2])	Sent when user moves finger on screen
Accelerometer	0x04	12 (Type: float[3])	Contains accelerometer data
Luminance	0x05	4 (Type: float)	Contains luminance data
Gyroscope	0x06	12 (Type: float[3])	Contains gyroscope data
Magnetic field	0x07	12 (Type: float[3])	Contains magnetic field data
Volume up	0x08	0	Sent when user presses volume up button
Volume down	0x09	0	Sent when user presses volume down button
Proximity	0x10	4 (Type: float)	Contains proximity data
Networked text	0x11	<1023 (Type: String)	Contains a string
Double move vertical	0x12	4 (Type: int)	Vertical dx
Double move horizontal	0x13	4 (Type: int)	Horizontal dy
Pressure	0x14	4 (Type: float)	Contains pressure data
Orientation	0x15	12 (Type: float[3])	Contains orientation data
GPS	0x16	12 (Type: float[3])	Contains GPS location data