## Gesture Recording , 5.6.14, Lorenz Gruber, Final Year Project

### Gesture to be Recorded:

05 – Z 20

06 – A 20

07 – B 20

08 – C 10

09 – D 10

10 – E 10

11 – F 10

12 – G 20

Writing the letters in the air.

20 🡪 20 samples in dataset.

### Test Persons

L2 – recorded on 5.6. with all gestues

L3 – recorded on 19.6. with A, B and G.

L1 and L2 gesture 05, added from discrete dataset

### Total samples

### Position of phone:

The phone is held in the users right hand. It is held with screen faces up. Homebutton towards user. An I-Phone 4 with iOS 6.1.3 was used to record. The recording was done using a web application running in the Safari browser.

### Start position of hand:

Hold the as if one was using in. In the right hand.

### Start and stop sound:

The phone makes a start and stop sound to indicate to the user when to start…

### Recording details:

Recording period: 2s

Pause: 2s

FSample: 20 Hz

Repetitions per Gesture: 10

The gestures were recorded in the same order. 1 through to 5.

The acell data from the I – Phone is at maximum +/- 2g. Not sure why that is.

### Recording Procedure:

### File name structure in csvData:

Each .csv file is named as g[XX]\_[YY]\_t[ZZ].mat:

[XX]: gesture index

[YY]: tester ID

[ZZ]: trial index

Each .csv file has 8 columns (the gyro data was recorded as well. )

t epoch time in ms

tRel relative time in s

x in g

y in g

z in g

alpha

beta

gamma

### Json structure in jsonData

IMPORANT: the acceleration data is the raw data from the phone. It needs to be devided by 10 for the correct acceleration in Gs. For the CSV files this has been done.

**UPDATE 5.6.14, this json structure was changed to allow more general inputs**

The json files contains all recordings from one person:

Top level: Array / List containing individual gesture Objects / Dict

[ g0, g1, g2, g3, g4, g5] 🡪 might not be in order

gx: Object/Dict containing info about recording

{

origSampleFrequ: 60,

startTime: 1396897906944,

repetitions: Array[10],

gesture: "1",

user: "XX",

periodGesture: 2000, // in ms

noOfRepetiontion: 10

}

repetitions: Array/ List containing containing individual repetition Objects / Dict

[ r0, r1, r2, r3, r4, r5, r6, r7, r8, r9] 🡪 might not be in order

rx: Object/ Dict containing raw data.

{

alpha: Array[121]

beta: Array[121]

gamma: Array[121]

rep: 0

t: Array[121]

x: Array[121]

y: Array[121]

z: Array[121]

}