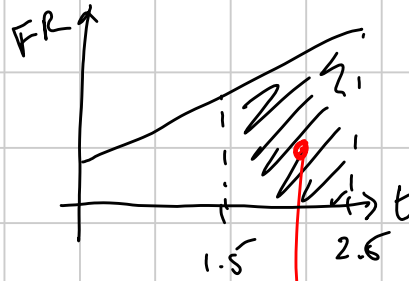
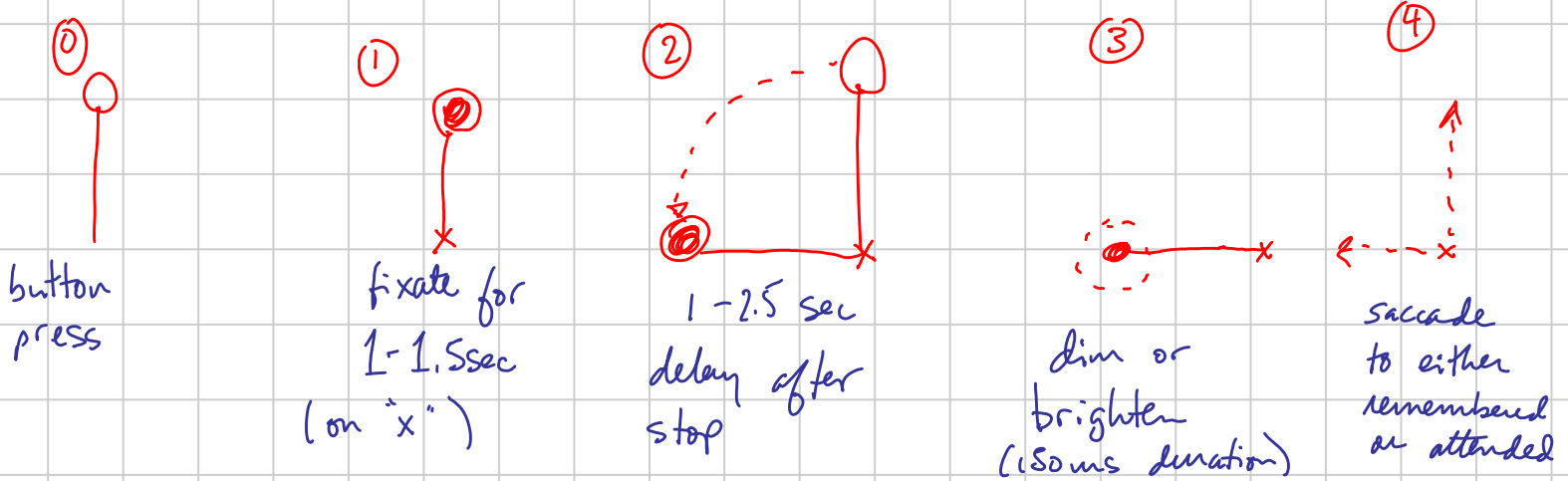


Notes with Joey

Note Title

8/9/2007

- identify neurons tuned to attention, memory, neither, or both. We are interested in both.



N1

10 A1 M1

12 A1 M2

N2

100

1000

○ ○ ○ ○

○ ○ ○ ○

○ ○ ○ ○

○ ○ ○ ○

are slopes different?

ANOVA?

at least 1

vertical & 1

check with a professional

horizontal sig different from 0

1 Assess tuning properties - select only doubly tuned neurons

2 Literature Review

3 Develop models

$$F = (\alpha x_1 + \beta y_1) + (\gamma x_2 + \delta y_2)$$

get more from literature

null model - one DOF tuned to Δ angle

4 Apply models to data and determine quality of fit

- Mean squared error (ie calculate residuals)

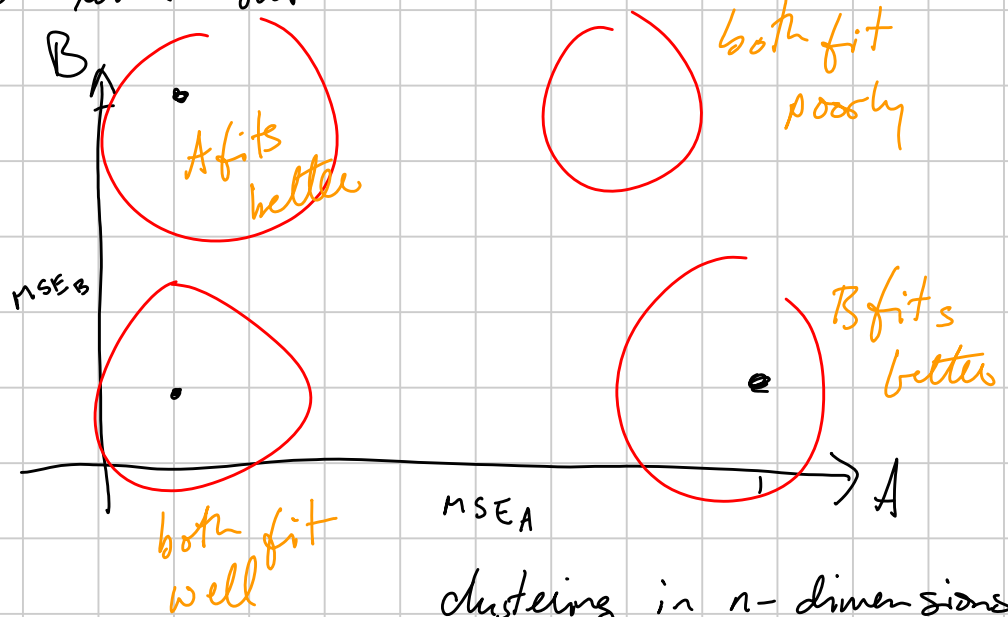
- Fit based on some directions, test prediction on remainder (cross validation)

- For each neuron, train on 95% of the trials, fit to the remaining 5%, quantify quality of fit. Repeat w/ another set until errors level out

for 1 neuron, try this w/ different amounts, 95/5 etc...

5

NI : MSE_A
 MSE_B



clustering in n-dimensions?

need a test of statistical significance

otherwise we don't know how much error is a ^{still} good fit?

talk to a statistician

6 Neural Model - perhaps explain results

7 Write Paper

digitizing wireless headstage 2MB/sec

Tim Hanson

32 channel

waveform detection & maybe PCA