Instructions for the Fly tracking system

Creating single experiment fly objects:

1. Upload raw .mat files to GitHub\Fly\_Data\_Git\Suewei according to different conditions
2. Go to the addfile.m script and change the filename at line 28 (Suggestions: Use date and condition)
3. Go to Matlab, change the directory to the .mat files you want to add
4. Enter “addfile” at the Matlab command prompt
5. Enter conditions according to the prompt
6. The single condition file will be saved at GitHub\Fly\_Data\_Git\Lin\_DataBase

Merging the single experiment flies objects to the entire fly database:

This will merge every single experiment file at Lin\_DataBase into one flydatabase

1. Go to Matlab , change the directory to GitHub\Fly\_Data\_Git\Lin\_DataBase
2. Run “flymerge” at the command prompt
3. Select current directory
4. The final database is called “flydatabase”

To load the flydatabase, locate it at the Matlab file navigator and double click on it.

Functions:

“flygroup”:

To use this function, first load the “flydatabase”. Running flygroup will create boxplots and group flies according to different conditions.

“dbupdate”:

If you want to change the target zone size, go to the “dbupdate.m” script and change the target zone size at line 10 and run “dbupdate” at the Matlab command prompt

“mktable”:

After loading the flydatabase, you can create a table with detail parameters by entering “mktable” at the command prompt

Fly methods

To examine the parameters of a single fly:

Type “flydatabase(id\_number)” into the command prompt

You can either use the entire flydatabase id

Ex: “flydatabase(135)”

Or use condition id

Ex: “water\_thirsty(15)” (You need to run flygroup first)

Examine the trajectories:

Add “.displayresults” at the end of the flydatabase(id\_number)

Ex: “water\_thirsty(15). displayresults”

Replay trajectories:

Add “.replay” at the end of the flydatabase(id\_number)

Create diagrams such as distance to:

Add “.plotdiagrams” at the end of the flydatabase(id\_number)

Updating the program

Go to github desktop and click “sync” on the top right corner.