**Scatterplots**

DeltaFramesCMOPData.java (Please comment out the code to check for command-line arguments. )

– To calculate delta frames on fluorescence for the scatterplots for tow8/13/15/5/6/9. It can also be used for tow4 (similar to other datasets).

**Input** – delta value, Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001.csv

**Output** - Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_dflsp\_1000.csv

From the output, the scatterplot graph is mapped on depthAvg versus flspAvg.

DeltaFramesCMOPDataRevised.java *was written to process the delta frames on fluorescence for scatterplots on tow2.txt, tow2.cnv. These two datasets have the column names in different order.*

SampleEveryNthTuple.java was used to get the sampling results. This was used to create depth vs dye fluorescence graphs.

**Histograms and EMD – 3 steps**

* 1. Master\_CreateReferenceAndScientists.java

Creates the Scientist’s dataset(depth slice tuples with avg depth, avg flsp, avg density, depthDIProduct (dye mass) etc) for tow8/13/15/5/6/9. It can also be used for tow4 (similar to other datasets).

**Input** – delta value, Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001.csv

**Output** - Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_point5d\_scientists\_2.csv

ScientistsDepthSliceCMOPData.java *was written to process scientist’s dataset for tow2.cnv and tow2.txt.*

* 1. SumDyeConcOrDeltaDensityFramesCMOPData.java

Creates delta density or delta dye mass frames.

Input – delta value, Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001.csv

Output – They are output to console. Please refer to Notes on how to handle the output.

Delta frames on other attributes are created by the following: SumDyeConcFramesCMOPData.java, ThresholdDIFramesCMOPData.java, SegmentationThresholdFramesCMOPData.java

* 1. Master\_CreateWindows.java

Creates windows for tow8/13/15/5/6/9. It can also be used for tow4 (similar to other datasets).

**Input –** Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001.csv, Range depends on number of frames

**Output -** Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_windows\_x.csv

WindowOnScanNumberCMOPData\_Revised.java *was written to process windows for tow2.cnv and tow2.txt.*

d. FramesFromOptimalPartitions.java was used to form frame from optimal partitions results from Philip.

1. Master\_CreateHistogram.java

You should sort the densityAvg column in the windows/frames/scientist’s dataset first (I found it easy to sort it in excel!). Creates histogram data (pairs of avg density and dye mass total per bin).

**Input –** Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_point5d\_scientists\_2.csv or

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_2322windows.csv or

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_ddensity\_or\_ddyeconcsum\_2331frames.csv

**Output –**

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_point5d\_scientists\_histogram\_2.csv or

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_2322windows\_histogram.csv or

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_ddensity\_or\_ddyeconcsum\_2331frames\_histogram.csv

Steps to creat histogram graph in excel

1. Create a scatterplot with only markers
2. Change chart type to clustered column
3. Click on histogram bars and format data series to no gap for the gap width

(I don’t know a better way, sorry!)

1. ComputeEarthMoverDistance.java

Computes the emd between two histograms. Currently we have relaxed that the sum over the histograms needn’t be exactly equal.

**Input-**

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_point5d\_scientists\_histogram.csv

And

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_2322windows\_histogram.csv or

Y:\\w0908b\_towdata\\tow09\\tow09\_pruned\_start5001\_ddensity\_or\_ddyeconcsum\_2331frames\_histogram.csv

**Output -** Emd value

Notes:

Some of the windows/frames code I have borrowed from James. The following is how I have handled them. (credits to James).

The output of this program will be lots of csv text in the console as well as some messages indicating progress. I would just copy/paste the output into Notepad++, trim off the progress messages at the top, and save it as a csv to use in excel.

You should make sure that your console isn't limiting the number of lines it will display, you can turn that off using:

Window -> Preferences -> Run/Debug -> Console, uncheck the "limit console output"

**Evaluation code for Episodes paper:**

ExistenceErrorDurationErrorFramesWindows.java

ExistenceErrorDurationErrorFramesWindowsTraffic.java

ExistenceErrorDurationErrorSegmentingFramesWindows.java

FillGapsTrafficData.java

WindowMaxMinDIOnScanNumberCMOPData.java

WindowMaxMinSpeedTrafficData.java