

**Week 1 Homework – CMSC405**

Pick your favorite High Performance Graphics card provider (NVIDIA, ATI, ...). Then choose at least 5 different models (you can mix and match graphics card suppliers) and determine frame buffer load time (in milliseconds) for a data input of 32-bits per pixel using for the given manufacturer bandwidth.

Prepare a table with the information including:

- Manufacturer
- Product
- OpenGL Version
- Max VGA resolution
- Memory Bandwidth (GB/s)
- Frame Buffer load time(ms)
- Cost (retail)
- URL reference

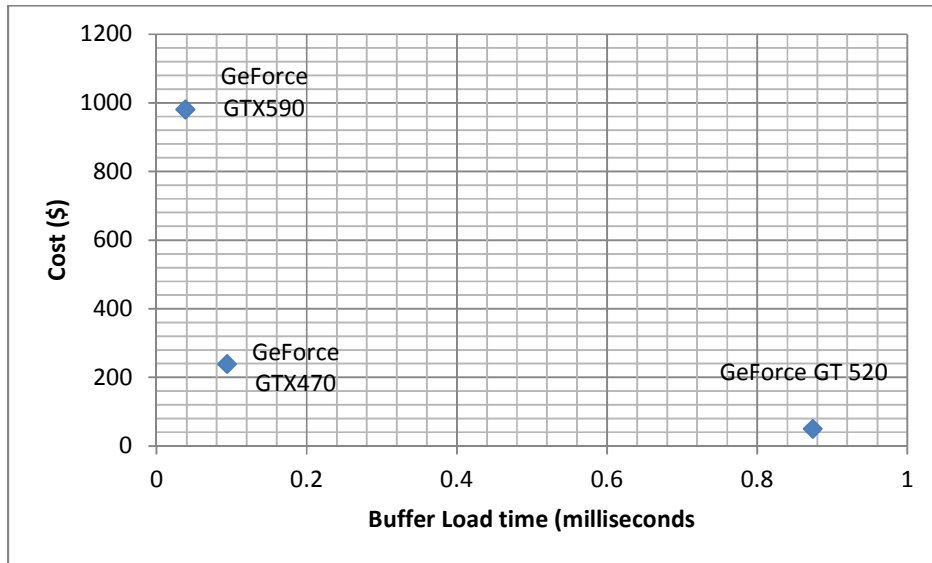
An example spreadsheet is shown below:

Manuf	Product	OpenG L	Max VGA		Mem. BW (GB/s)	Load time(ms)	Cost	URL
NVIDIA	GeForce GTX470	4	2048	1536	133.9	0.094	239.00	<a href="http://www.geforce.com/Hardware/GPUs/geforce-gtx-470/shopping">http://www.geforce.com/Hardware/GPUs/geforce-gtx-470/shopping</a>
NVIDIA	Geforce GT 520	4.1	2048	1536	14.4	0.874	50.00	<a href="http://www.geforce.com/Hardware/GPUs/geforce-gt-520/shopping">http://www.geforce.com/Hardware/GPUs/geforce-gt-520/shopping</a>
NVIDIA	Geforce GTX590	4.1	2048	1536	327.7	0.038	980.00	<a href="http://www.geforce.com/Hardware/GPUs/geforce-gtx-590/shopping">http://www.geforce.com/Hardware/GPUs/geforce-gtx-590/shopping</a>

...

Show the formula used to calculate your buffer load time and the calculation for your first Graphics card.

Plot your data (using excel is fine) within a scatter plot with Frame Buffer Load time in milliseconds versus graphics card cost in dollars. Be sure to label each data point with the graphics card model information. An example plot is shown below.



Finally, summarize and analyze your results and discuss the “value” related to the graphics cards you selected. Based on your needs (or a friend/family needs) discuss which graphic card(s) you would recommend and why.

**Deliverables:**

You should submit a word document that includes the results satisfying all of the requirements for this assignment. You should name your assignment “yournamehw1.doc” (or .docx). Be sure to submit your homework in the WebTycho assignments folder no later than the due date listed in the syllabus.