

## 15-668: Final Project

### Cloudy with a Chance of Graphics



**Summary:** This class has looked at the possibility of implementing various graphics algorithms as a cloud service available to many people at once. This final project asks you to **implement** and **carefully evaluate** one such algorithm of your choice.

There are two ways to go about this project:

- (1) **Implement an amortized algorithm** (possibly using the amortization unit for p5) and measure performance for multiple users, or
- (2) come up with an **alternative measurement plan** (without a network implementation), which will provide nontrivial evaluation of your code.

\* **Step 1 (Due ASAP, but no later than Fri April 8th, 11:59:59 pm):** Submit a 1 paragraph (max) description of the **algorithm you want to implement (5 pts)** and your **evaluation plan (5 pts)** (see below). Submit your description to Adrien by e-mail at [treuille@cs.cmu.edu](mailto:treuille@cs.cmu.edu). Adrien will approve or not your project within a day or so. Do this as soon as possible. The earlier you do it, the sooner you can get started.

\* **Step 2 (Due Wed April 20th, 11:59:59 pm):** Submit your code and a 2 page writeup of your project and results in full expository English (no outlines). The writeup should roughly comprise the following sections:

- (1) Introduction and description of the algorithm (**10 pts**).
- (2) Description of the principal challenges and your solutions (**10 pts**).
- (3) Measurement results, answering the following questions:
  - (a) What are the critical performance bottlenecks (**10 pts**)?
  - (b) How many simultaneous users could your solution scale to (**10 pts**)?
- (4) Summary and future work, describing strengths and weaknesses of your design decisions, and possible avenues for improvement. End with some remarks on real-world feasibility based on your observations (**10 pts**).

Submit it to the directory `/afs/cs/academic/class/15668-s11/handin/YOUR_ANDREW_ID/p7`

\* **Step 3 (Due April 21, 26, or 28, in class):** Give a 7 minute presentation about what you've done. Your presentation time is given in the schedule on the next page. *However, you must show up for all presentations.* It is strongly recommended that your presentation have the same structure as your paper.

# 15-668: Final Project Schedule

Apr 21, 2011				Apr 26, 2011				Apr 28, 2011			
Name	Event	Time	Length	Name	Event	Time	Length	Name	Event	Time	Length
Perry, Frank	Presentation	1:30 PM	7	Lau, Andrew	Presentation	1:30 PM	7	Nesterov, Nikita	Presentation	1:30 PM	7
	Questions	1:37 PM	2		Questions	1:37 PM	2		Questions	1:37 PM	2
Boehle, Duncan	Presentation	1:39 PM	7	Chen, Desai	Presentation	1:39 PM	7	Sainz, Nicholas	Presentation	1:39 PM	7
	Questions	1:46 PM	2		Questions	1:46 PM	2		Questions	1:46 PM	2
	Break	1:48 PM	2		Break	1:48 PM	2		Break	1:48 PM	2
Htat, Hein	Presentation	1:50 PM	7	Poole, Benjamin	Presentation	1:50 PM	7	Tay, Yiling	Presentation	1:50 PM	7
	Questions	1:57 PM	2		Questions	1:57 PM	2		Questions	1:57 PM	2
Adelman, Ross	Presentation	1:59 PM	7	Mahitdiharn, Yoothana	Presentation	1:59 PM	7	Wan, Nathan	Presentation	1:59 PM	7
	Questions	2:06 PM	2		Questions	2:06 PM	2		Questions	2:06 PM	2
	Break	2:08 PM	2		Break	2:08 PM	2		Break	2:08 PM	2
Maurice, Anthony	Presentation	2:10 PM	7	Wesson, Andrew	Presentation	2:10 PM	7	Luban, Mitchell	Presentation	2:10 PM	7
	Questions	2:17 PM	2		Questions	2:17 PM	2		Questions	2:17 PM	2
Reznitskaya, Valeria	Presentation	2:19 PM	7	Kinney, Peter	Presentation	2:19 PM	7	Yang, Zizhuang	Presentation	2:19 PM	7
	Questions	2:26 PM	2		Questions	2:26 PM	2		Questions	2:26 PM	2
	Break	2:28 PM	2		Break	2:28 PM	2		Break	2:28 PM	2
Wang, Freeson	Presentation	2:30 PM	7	Barnat, Alfred	Presentation	2:30 PM	7	Farkas, Timothy	Presentation	2:30 PM	7
	Questions	2:37 PM	2		Questions	2:37 PM	2		Questions	2:37 PM	2
Luciani, Timothy	Presentation	2:39 PM	7	Kaemmerer, Matthew	Presentation	2:39 PM	7				
	Questions	2:46 PM	2		Questions	2:46 PM	2				