

Grand Central Dispatch

{ Alice Wang and Bryan Chen

Agenda

- ¶ What is GCD?
- ¶ Our project
 - ¤ Topic
 - ¤ Methodology
- ¶ Demonstration
- ¶ Questions

- Grand Central Dispatch optimizes application support for systems with multi-core processors.
- Managing threads at the operating system level rather than application level.
- Tasks that are run in parallel are queued for execution and can be expressed as “blocks”.
- Less code required for parallel programming.

What is GCD?

- ¶ Compare GCD performance with other threading approaches under different circumstances
 - ☒ Fine and course grained tasks
 - ☒ Number of tasks
 - ☒ Number of multithreaded applications running
- ¶ Compare code complexity of GCD against traditional multithreading programming.

Our Project

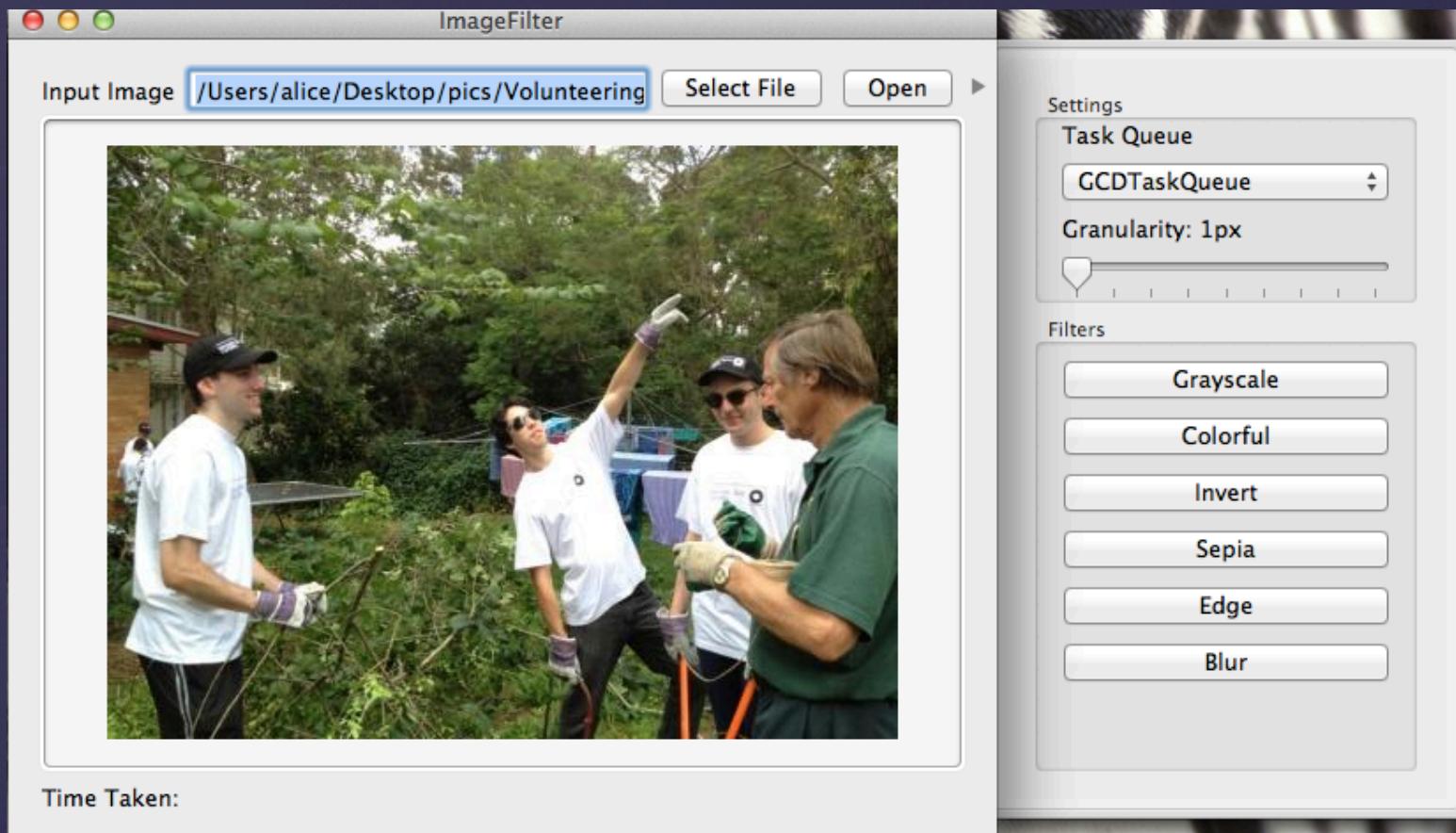


Image filtering application used to benchmark GCD performance

Demonstration

- Compare the performance of the different threading approaches when the number of tasks is increased.
- Compare the performance of the different threading approaches when the number of applications open is increased.
- Investigate CPU percentage usage

Future Work

Questions?