COMS 6901: Projects in CS

Final Presentation

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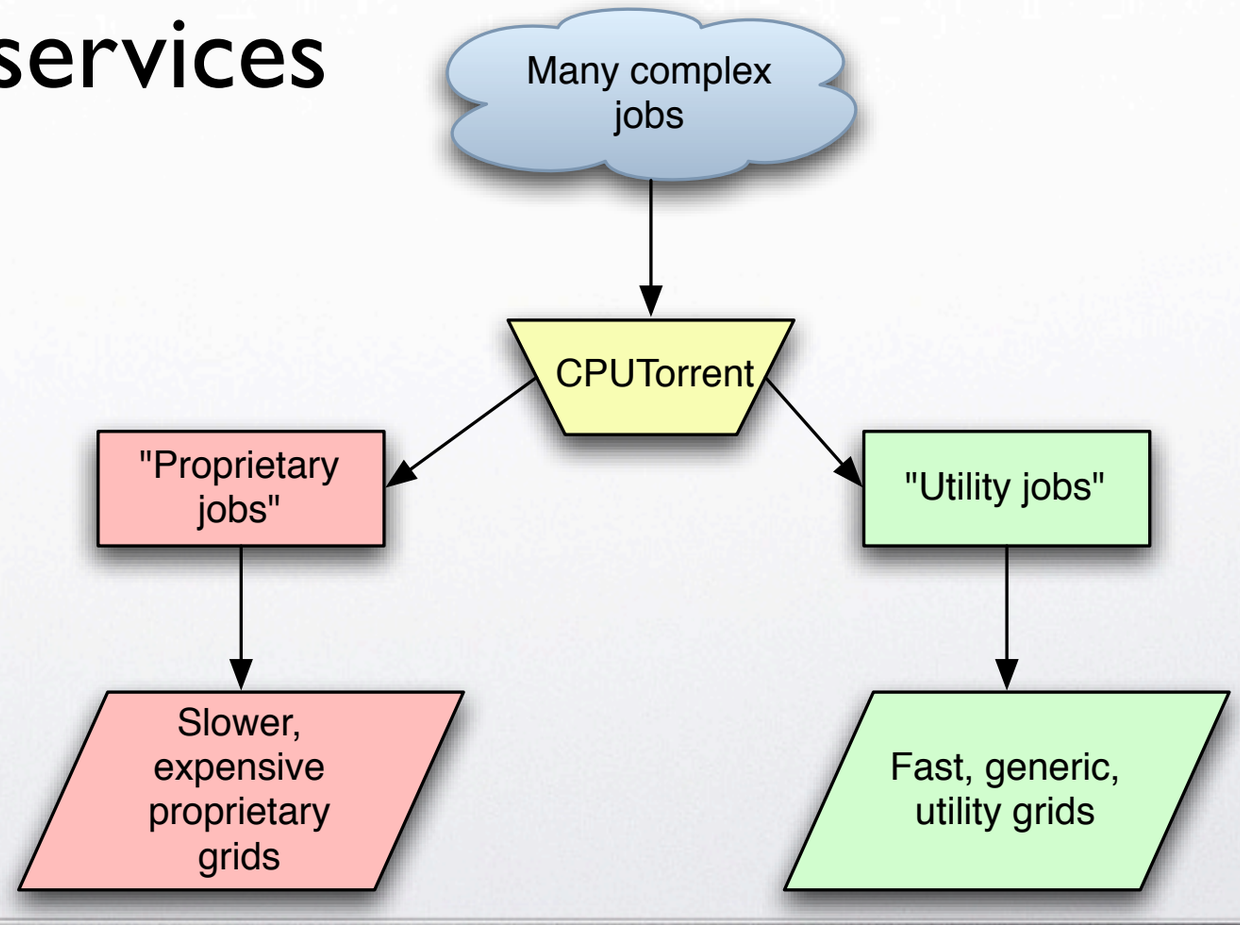
CPUTorrent

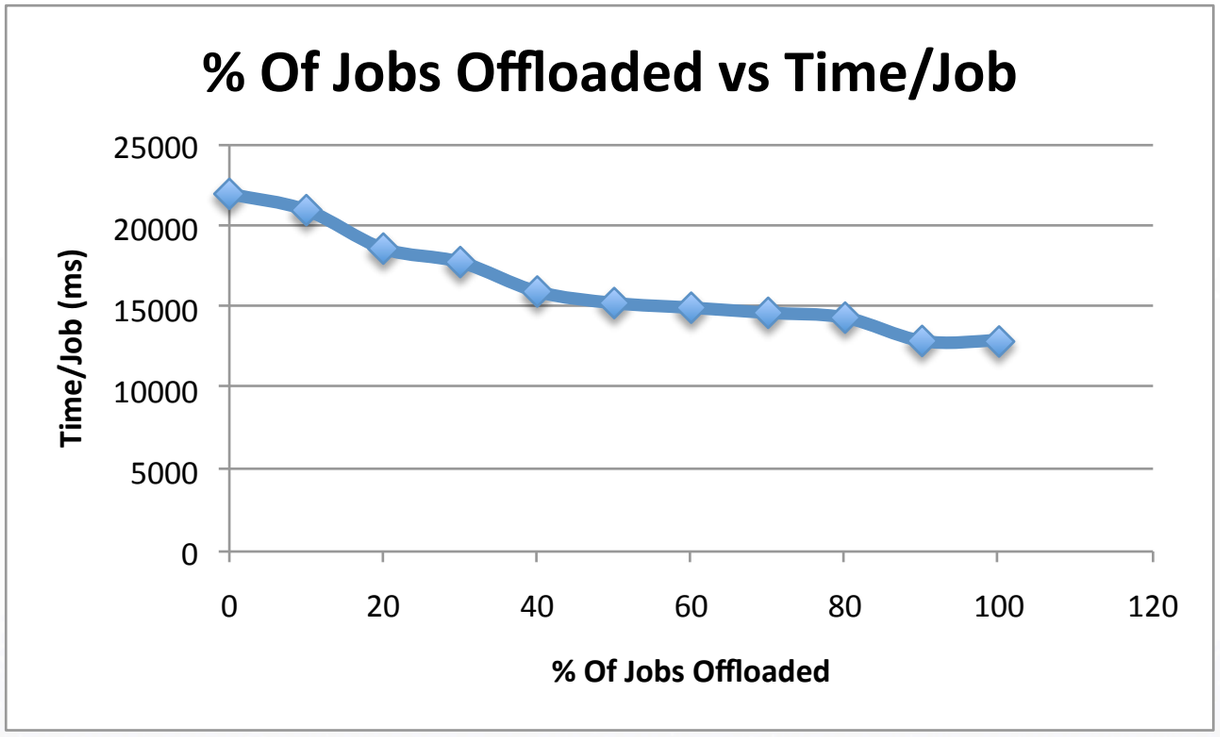
- CPUTorrent - A system to split up distributed jobs amongst multiple computational services



My Role - Simulation

- Will CPUTorrent really provide a speedup? If so, will it fit previously defined models?
- Original goal: Create a "fake" job processing agent
- Revised: Augment entire process with additional logging

Preliminary Results



Parameters:
"Proprietary job": Standard normal lengths, avg = 8 sec, std dev = 2 sec
"Utility job": Standard normal lengths, avg = 4 sec, std dev = 2 sec
Thread pool = 8
Benchmarked for 5 minutes at each of 10 configurations of offloading jobs
Running on 2.8ghz MacBook Pro, 4GB RAM, MacOS 10.5.7

Last steps for CPUTorrent

- Finally(!) have benchmarking ready to parallelize (and extra fuses)
- Need to run for larger data set, add 2 extra graphs
- **Also vary by time that jobs take (3 values?)**

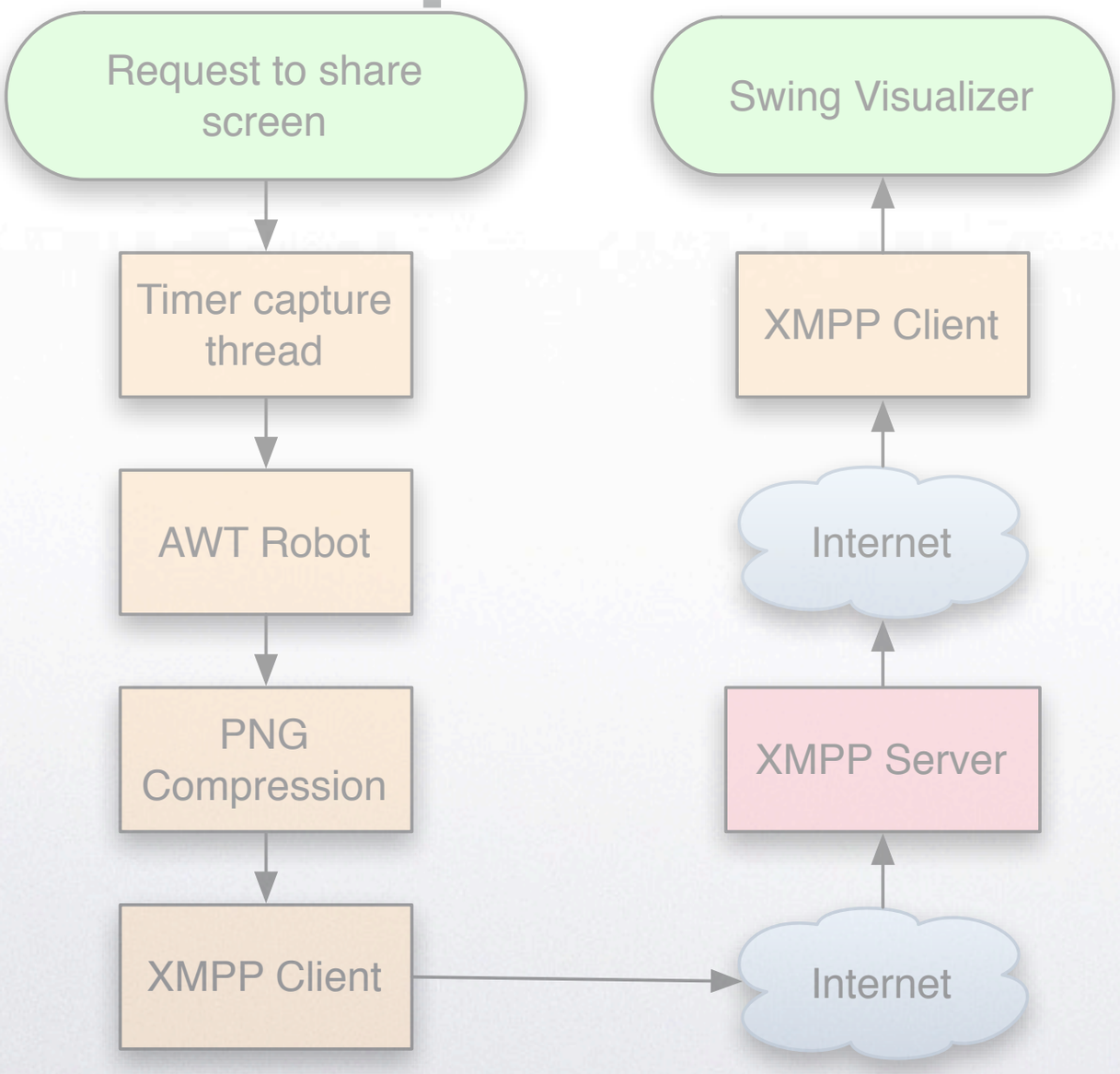
genSpace

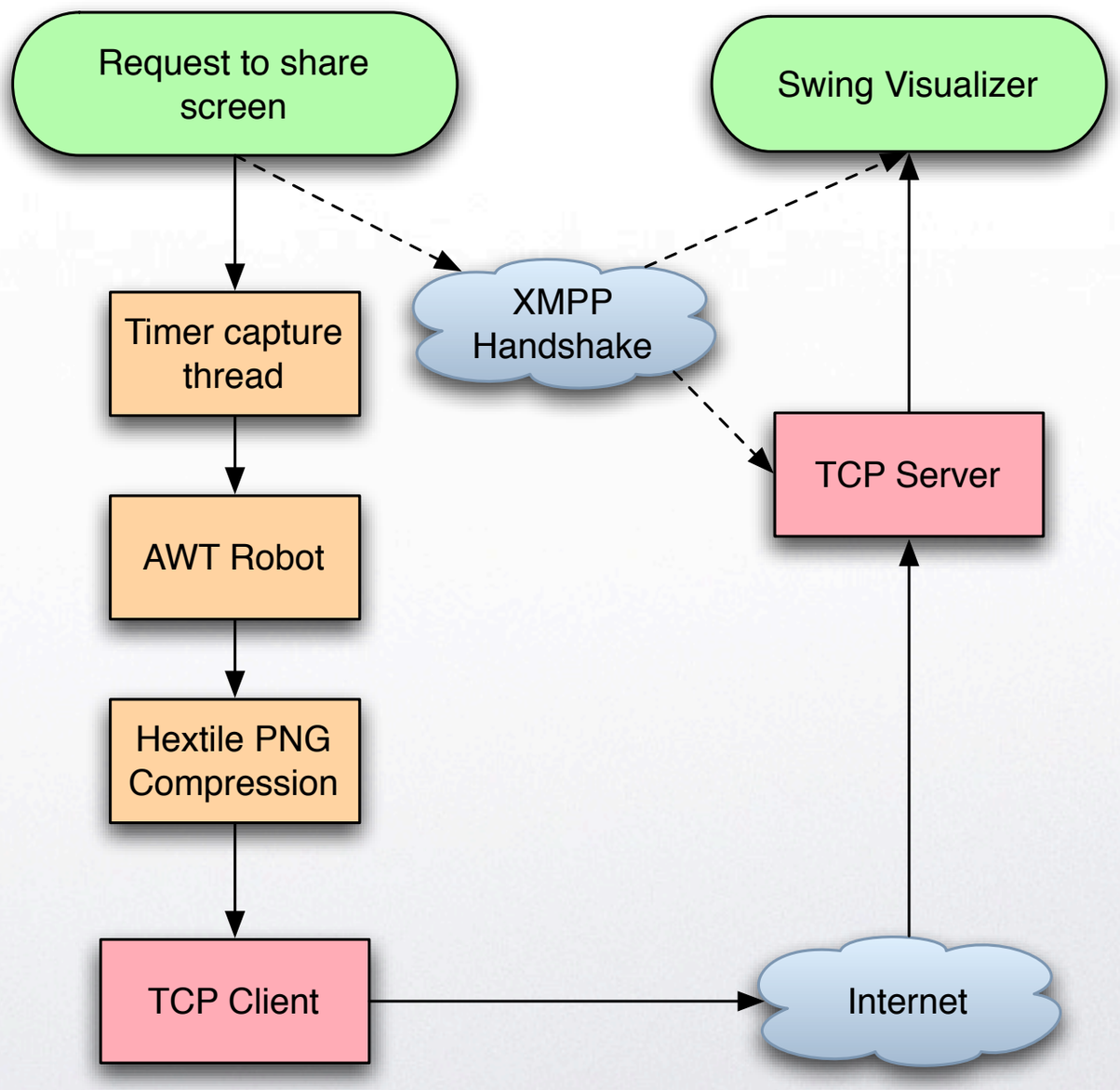
- Collaborative, social networking tools built upon bioinformatics tool *geWorkbench*
- My project: add a fully integrated chat feature that allows users to share their workflows and screen interfaces
- Other little things: change workflow visualization, wiki tutorial

Implementation

- Tigase XMPP Server, Smack XMPP client library
- Apache MINA network library for P2P screen sharing

Updated Architecture





Demo!

Final Steps for genSpace

- Verify that all use cases are covered for ending chats & screen shares
- Add "save to web" feature for chats
- **create proxy**
- **create drawable boxes over screens**
- Documentation (in code)
- Final report