

Progress Report

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Progress

So far I have completed a written specification of the P2P protocol that I will implement on top of Tor. It contains the message formats between hubs and clients and recommendations on how such a system should be implemented.

It was difficult to come up with a robust protocol. I'm sure I will be changing it as I implement it to make it more resilient to malicious users. I borrowed ideas from the (poorly documented) Direct Connect protocol until I can see how they actually work.

As far as the implementation goes, I have already been experimenting with ways to control Tor from Java. Right now, the configuration is written out in code to a file, then Tor is started. I would like to use the Tor control protocol as originally proposed to make the configuration more dynamic rather than using flat files.

I have also mocked up a user interface for the client presenting a list of online users, a chat area, a search area, and a file transfer area. The user interface does not currently do anything, though.

In the next two weeks I must complete the implementation of the hub and client.

Updated Schedule

I missed a couple of my original milestones, but I think I have enough half-completed work that I can complete all my goals on the following dates comfortably.

Date	Milestone
March 16	Protocols defined and documented
March 24	Progress report
March 30	Tor configuration library and hub complete
April 6	Client, user interface and installer completed
April 14	Complete draft report and draft presentation
April 21	Final presentation
May 5	Final report

Draft Report Outline

Introduction An overview of the paper.

Motivation This can be adapted from the project proposal.

Previous Work This can be adapted from the project proposal.

Design Overview A summary of the specification.

Implementation Overview A summary of the hub and client implementation of the specification.

Analysis A discussion of how the design and implementation solves the proposed problem.

Conclusion Wrap up the paper; discuss open problems.

Appendix: Protocol Specification An attached copy of one of the project's deliverables.

References

- [1] Direct connect messages. [Online; accessed 2008-March-23]. Available from: http://sourceforge.net/docman/display_doc.php?docid=8486&group_id=36589.
- [2] Nick Mathewson. Interfacing with tor: Clients and controllers. [Online; accessed 2008-March-23]. Available from: <https://www.torproject.org/svn/torctl/doc/howto.txt>.
- [3] Roger Dingledine, Nick Mathewson, and Paul Syverson. Tor: The second-generation onion router. In *Proceedings of the 13th USENIX Security Symposium*, August 2004.