CMSC 417 Computer Networks	Fall 2013
Bit-Torrent Project	
Assigned: Nov 20th	*Due: around Dec 16h*

1   Description

For this project you need to implement a BitTorrent client. Successful implementations need to interoperate with commercial/open-source BitTorrent clients. You need to demonstrate that your implementation downloads files within 10% of the speed of the official client using the same number of connections (Faster is OK). You need to devise an experiment to demonstrate that your client's performance is 'fast enough' and 'stable' in comparison to the official BitTorrent client.

Extra credit, given that you have implemented the core part of this project. You can choose one or many from the options below:

- Implement a DHT tracker.

- Implement PropShare [1], compare performance to official client.

- Implement under-reporting, compare performance to official client.

- Implement a protocol to detect under-reporting.

For this project:

- You may use a third-party bencode library, but must otherwise implement the entire protocol without using any other third party library.

- You can use a language of your choice.

- You may work in tems of two.

- The TA will announce the exact deadline on Piazza.

References

[1] Dave Levin, Katrina LaCurts, Neil Spring, and Bobby Bhattacharjee. Bittorrent is an auction: Analyzing and improving bittorrent's incentives. *SIGCOMM Comput. Commun. Rev.*, 38(4):243–254, August 2008.