

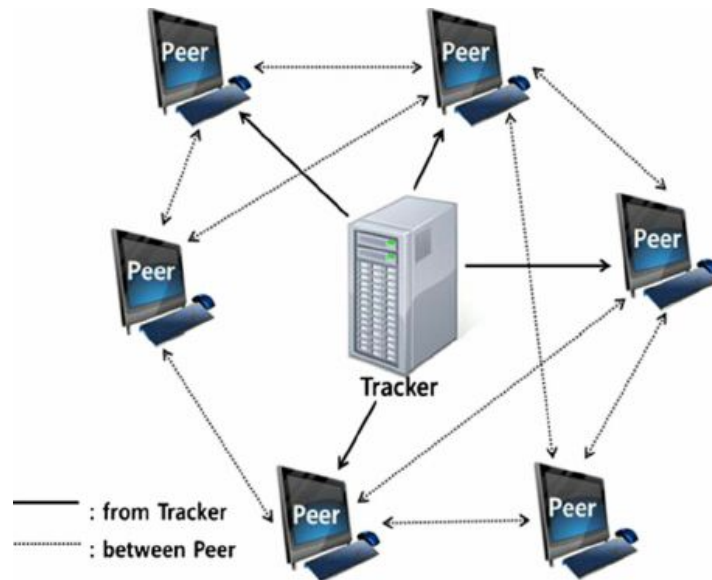
OwlTorrent

A BitTorrent Client for the Ages

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BitTorrent Background

- Distributed file sharing system that uses P2P (peer-to-peer) protocol.
- Each file is split into multiple pieces which are distributed across multiple machines.
- Each peer in network not only downloads content but must upload as well (2 way communication).
- Trackers/ DHT's act as centralized controllers to help peers discover adjacent peers to download from in the swarm.



BitTorrent Advantage

- The decentralized process used by P2P v.s. centralized servers.
- More available sources, faster speed and load balancing
- Resume from where you stopped



OwlTorrent Introduction

- OwlTorrent is a BitTorrent **client** meaning that it should allow users to access the BitTorrent network.
- Users should be able to submit a Torrent file to OwlTorrent for what they're trying to download and OwlTorrent will fetch the necessary file pieces + assemble them in the correct order.
- OwlTorrent should also seed (upload file pieces) simultaneously so that the user's machine isn't blocked for leeching off the network.



Demo

What our rigged demo demonstrated:

- Our client is BitTorrent Protocol compliant
- Our client can download a multi pieced file




OwlTorrent Motivations/ Goals

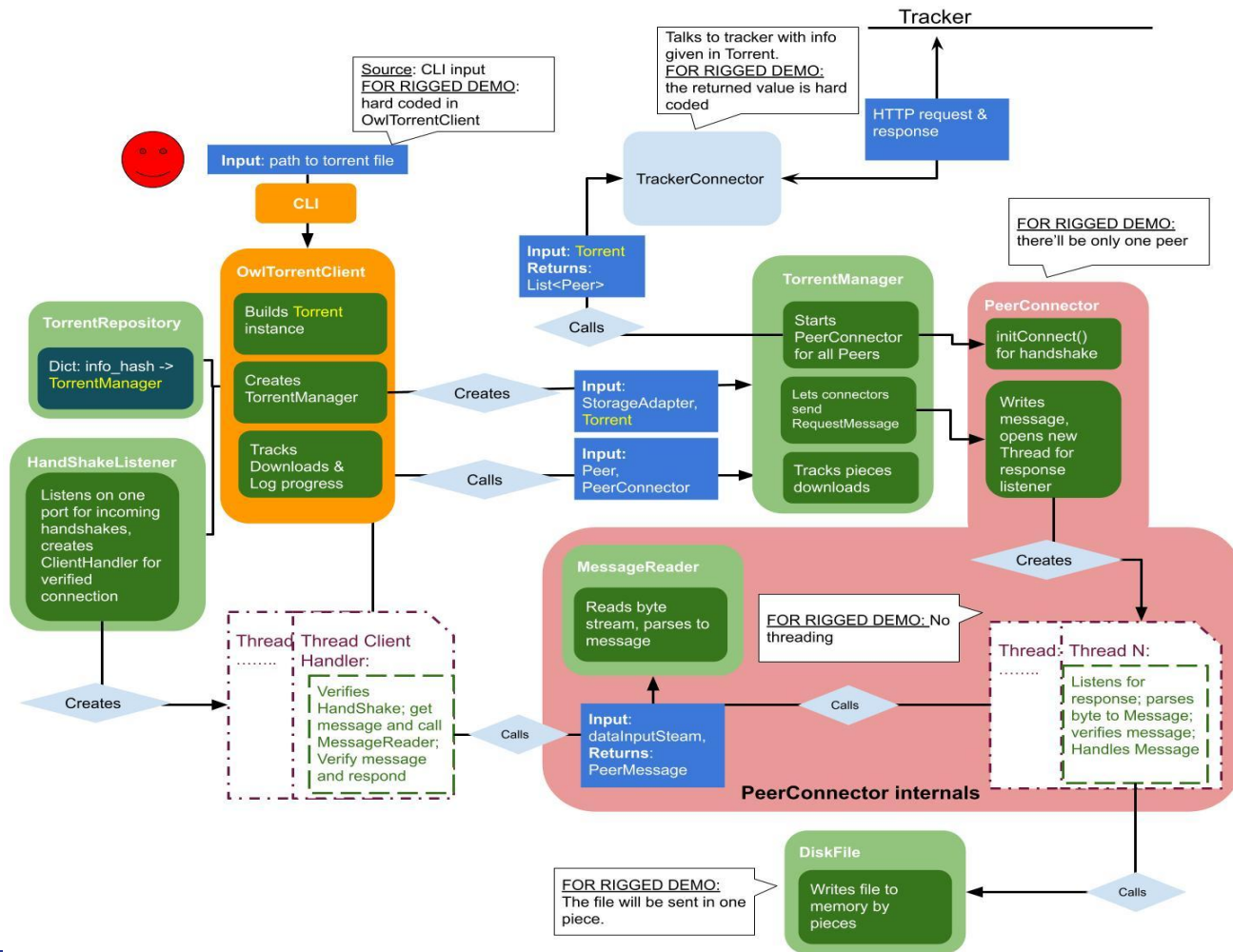
Motivations:

- Learn about distributed file sharing and P2P networks
- Learn about building around existing systems

Goals:

- Build a production ready BitTorrent client
 - Be fully API compliant
 - Download and seed multiple files at once.
 - Stretch: use DHT instead of trackers.
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Low Level Design



Next Steps

- Seeding
- Proper tracker connection
- Tit-for-tat

