

# How to cheat BitTorrent and why nobody does



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# BitTorrent Recap

- P2P
- Torrent file - Specific description file
- Swarm - Group of users with common interest
- Tracker - Keeps track of all peers interested in a specific file
- Choking - The peers that won't be served
- TitForTat strategy - Starts by selecting cooperation and then for subsequent moves copies the last move made by the opponent
- Shadow of the future - Selfish opponent defects at first, it can be punished in the future
- The best strategy depends of the population

# Why does BitTorrent even work?

- Easy to cheat with faking identity
- People are more altruistic and cooperative than expected
- Leaving meta-data to users
- Like-minded users with common interest and isolating them from casual users
- Each swarm is logically isolated from all other swarms, even sharing the same file with a different torrent file - you can leave the swarm if it does not perform well
- Tribal systems

# Implications and conclusion

- Chance to switch to pure selfishness or pure altruistic client -> improve performance
- Meta search integration into BitTorrent may damage the whole system in terms of performance
- BitTorrent is not so successful because of TFT but it's lack of meta-data search within the system

**Thanks for your attention!**