**Case Scenario:** Downloading via Torrent(s)

Torrent allows the client machine to download content available on internet for peer-to-peer sharing. Working of Torrent involve various concurrent flows of activities:

User opens the browser and looks for the torrent file or the magnetic link available for downloading the desired content. After selecting the one from above available options tracker component gets activated, that further forks the four concurrent activity paths, namely looking for the seeders via trackers, getting information related to main file that is needed to be downloaded (also information related to allied files), looking for peers via trackers, and establishing the connection with Distributed Hash Tables (DHT) server for peer exchange.

Downloading will get started only after joining these above mentioned four concurrent activities. While file download the activity again get split into three sub-activities, which include receiving packets, upload packets and connection of tracker (some server machine at remote location) with user’s local machine (through IP address) for registering the machine itself as peer. These all activities consolidate to complete a download operation.

A hash checksum has been applied at the end to check the integrity of the data received.

Hyperlinks Referred for understanding the above given scenario and for generating its activity diagram using Rational Software Architect (RSA) tool:

1. <http://www.howtogeek.com/141257/htg-explains-how-does-bittorrent-work/>[as accessed on 14th August 2016]
2. <http://computer.howstuffworks.com/bittorrent.htm>[as accessed on 15th August 2016]
3. <https://www.quora.com/How-does-BitTorrent-work>[as accessed on 17th August 2016]
4. <http://stackoverflow.com/questions/1332107/how-does-dht-in-torrents-work> [as accessed on 20th August 2016]