*Explore Task Data Produce Consume Transform*

Name of the Innovation: Bittorrent protocol

Data – “Data [are] distinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms — as numbers or text on pieces of paper, as bits and bytes stored in electronic memory, or as facts stored in a person's mind.” — Webopedia (<http://www.webopedia.com/TERM/D/data.html>)

**Answer two of the three following questions.**

List two ways computing innovation **consumes data** (as input). One way must come from an article you have chosen and needs to have the **author’s name** at the end of the statement in parentheses.

The BitTorrent protocol uses configurations from the users to specify how the file should be downloaded, where the file should be downloaded, and how the user will connect to the distributed network.

“If you're connected to your internet through a router, it's likely that many of your ports are closed, meaning your speeds will be much slower than you'd like. You'll need to let your router know which ones you want open for BitTorrent traffic, which is known as port forwarding. Furthermore, many ISPs or organizations (say, if your neighborhood or leasing company provides your internet) will block popular BitTorrent ports, so you'll want to switch up the port you use every once in a while to keep them guessing.”

(Whitson Gordon) <https://lifehacker.com/286607/intermediate-guide-to-bittorrent>

List two ways computing innovation **produces data** (as output). One way must come from an article you have chosen and needs to have the **author’s name** at the end of the statement in parentheses.

The protocol produces information on how users will connect to the seed file, and how the users will connect to the tracker file. The protocol also produces much cache data to help diagnose problems in the connection and help the network become more efficient.

“BitTorrent lets users quickly upload and download enormous amounts of data, files that are hundreds or thousands of times bigger than a single MP3.”

(Clive Thompson) <https://www.wired.com/2005/01/bittorrent-2/?scrlybrkr=e1a72ce4>

Using the details above, **explain** to the average reader how the **computing innovation consumes data (as input), produces data (as output), and/or transforms data** in approximately 100–200 words.  Write your response in the space below.

My chosen innovation, the BitTorrent protocol, consumes data by using configurations set by each user on how to download, store, protect, and find the files the users is searching for. The protocol also consumes data by reading information from the tracker file on how to direct users to other nodes on the network. The protocol produces data by caching activity on the server to help maintenance with seed file hosts, tracker file hosts, and the users who connect to the network. Data is cached only while a file is hosted and downloaded, otherwise the data is deleted and no longer poses a small threat to the privacy of all nodes on the network.