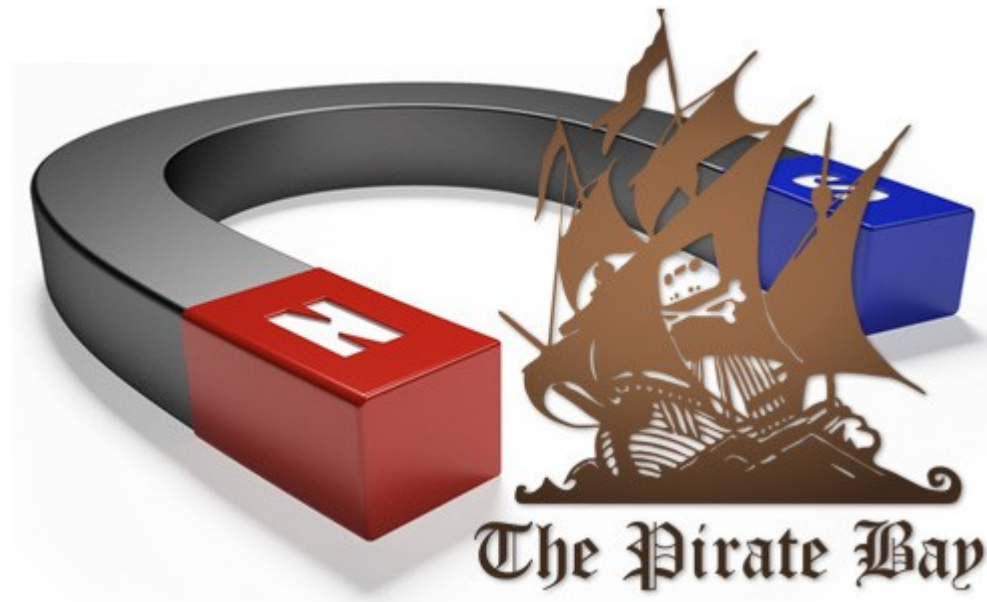


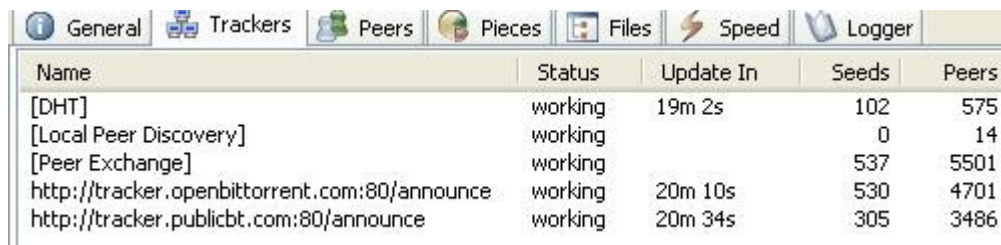
# TrackerLess torrents

## DHT, PEX, Magnet Links



# Main Technologies

- DHT : is used to find the IP address of node storing some data.
- Magnet links : torrent files hashes.
- PEX : Peer EXchange : another means of finding IP addresses, it leverages the knowledge of peers you are connected to, by asking them in turn for the addresses of peers they are connected to.



The screenshot shows the 'Trackers' tab in a BitTorrent client. It displays a table with five columns: Name, Status, Update In, Seeds, and Peers. The table lists several trackers, including DHT, Local Peer Discovery, Peer Exchange, and two public trackers (openbittorrent.com and publicbt.com).

Name	Status	Update In	Seeds	Peers
[DHT]	working	19m 2s	102	575
[Local Peer Discovery]	working		0	14
[Peer Exchange]	working		537	5501
<a href="http://tracker.openbittorrent.com:80/announce">http://tracker.openbittorrent.com:80/announce</a>	working	20m 10s	530	4701
<a href="http://tracker.publicbt.com:80/announce">http://tracker.publicbt.com:80/announce</a>	working	20m 34s	305	3486

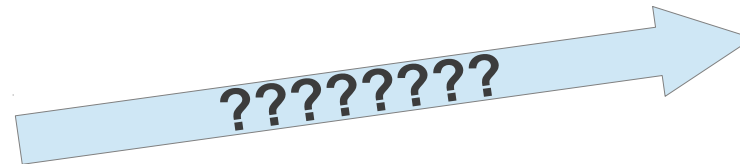
# Magnet Links

- Traditionally, .torrent files are downloaded from torrent sites. A torrent client seeks the addresses of peers from a tracker before connecting to those peers and downloading the desired content.
- Given the torrent hash – passed as a parameter within a Magnet link – clients immediately seek the addresses of peers from the DHT network and connect to them to download first the torrent file, and then the desired content.

How it works ?

# Client want to get Data.file

Client



Data.file

# With torrent file

## Client contact a tracker

Client



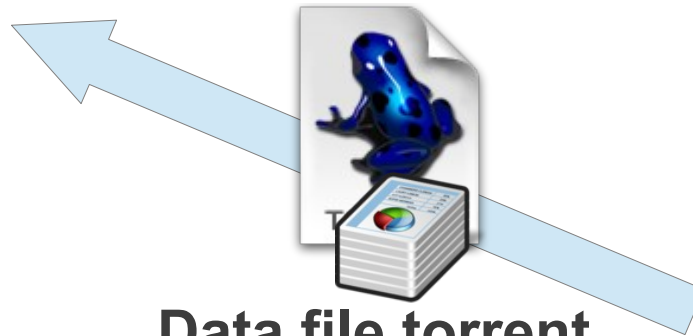
Data.file



The Pirate Bay

# Client receive a torrent file as response

Client

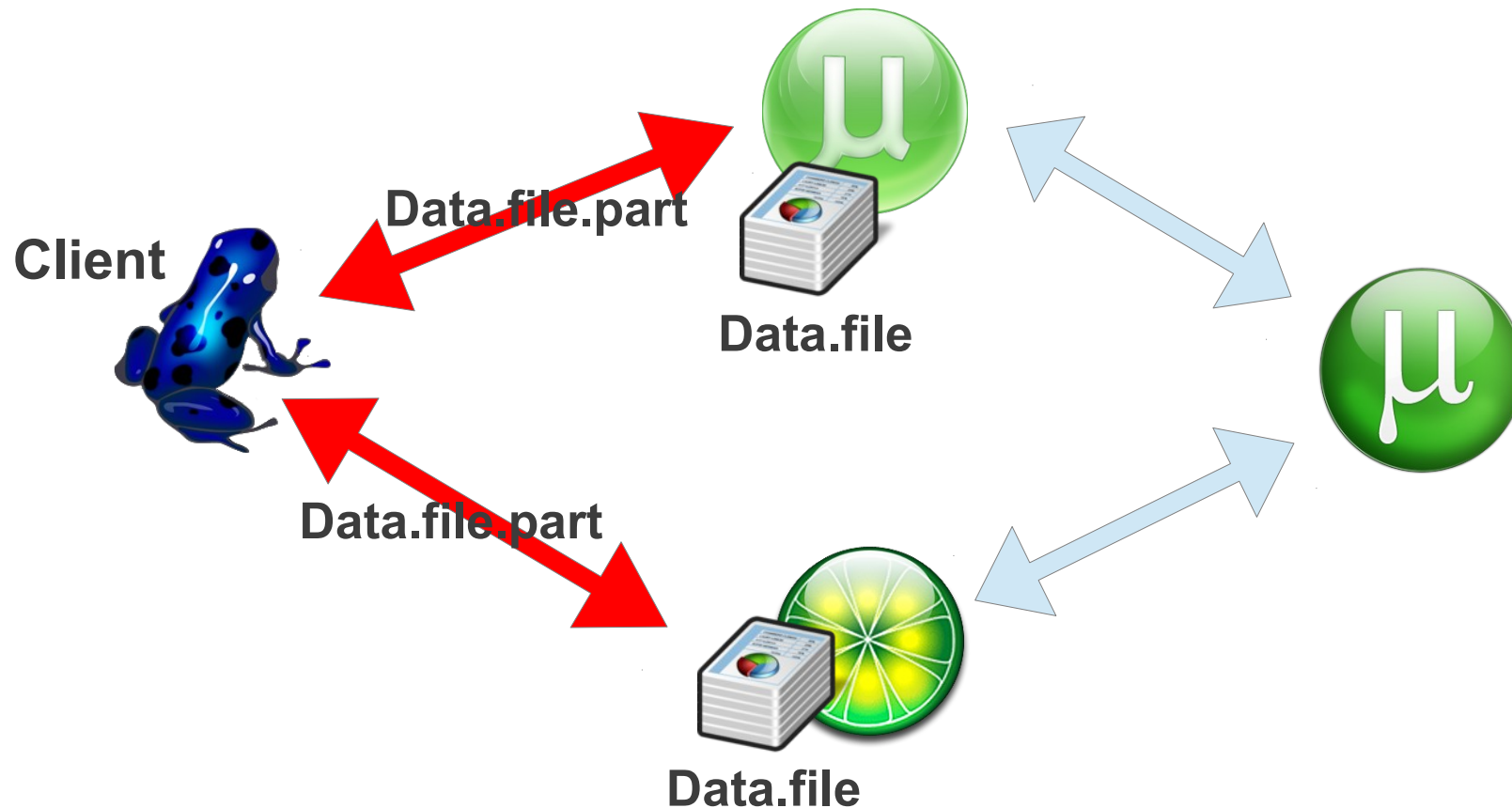


Data.file.torrent



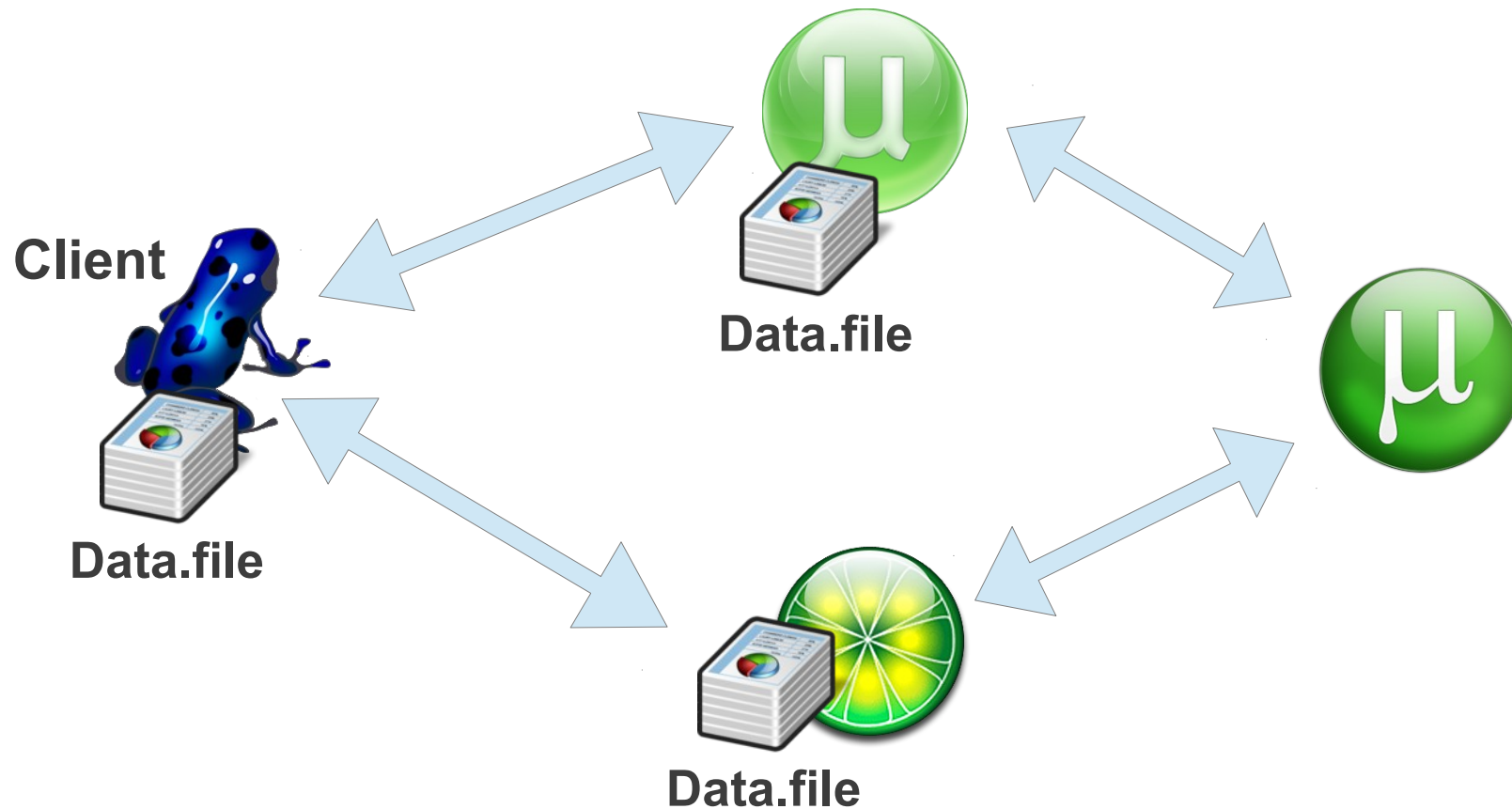
The Pirate Bay

# Client start downloading from other peers



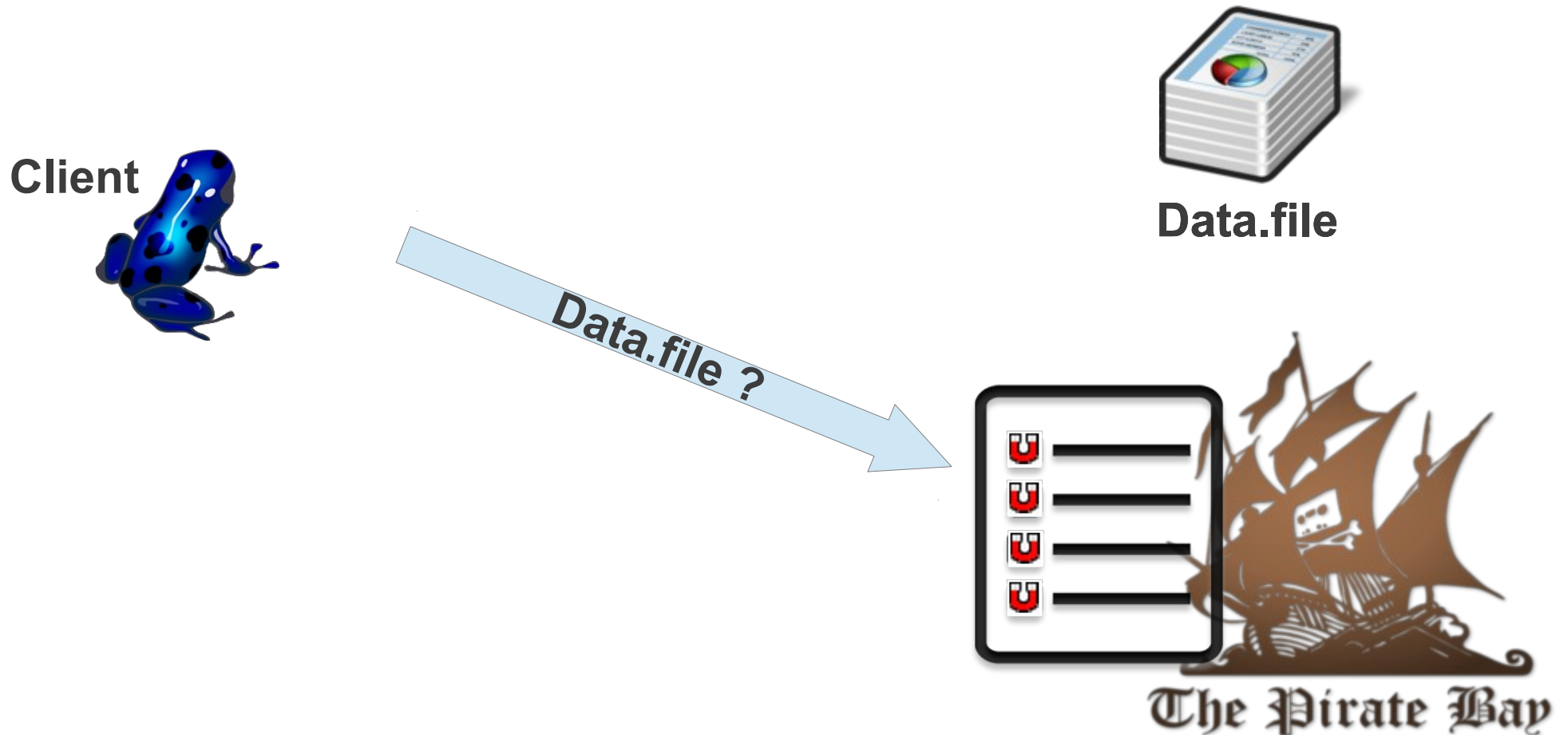


# Client get the asked file

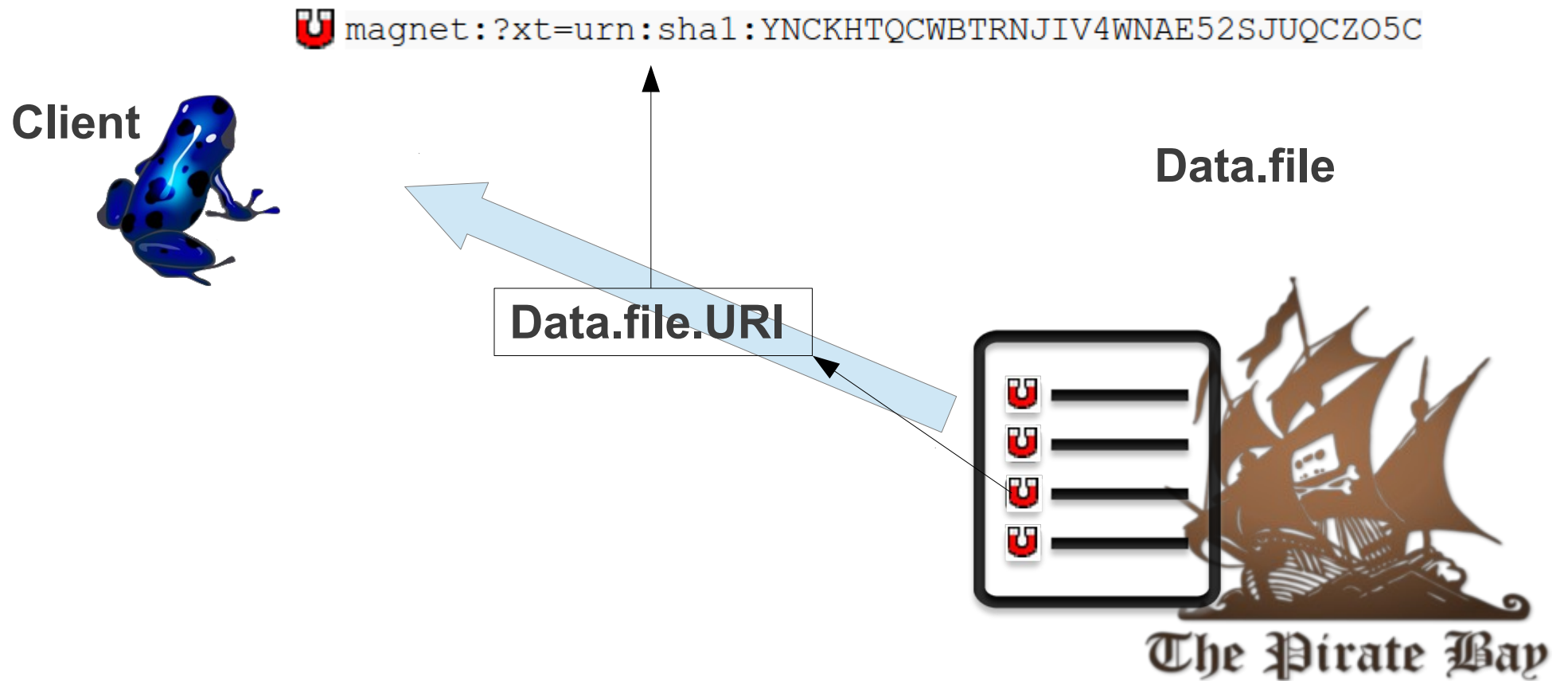


# With Magnet Link

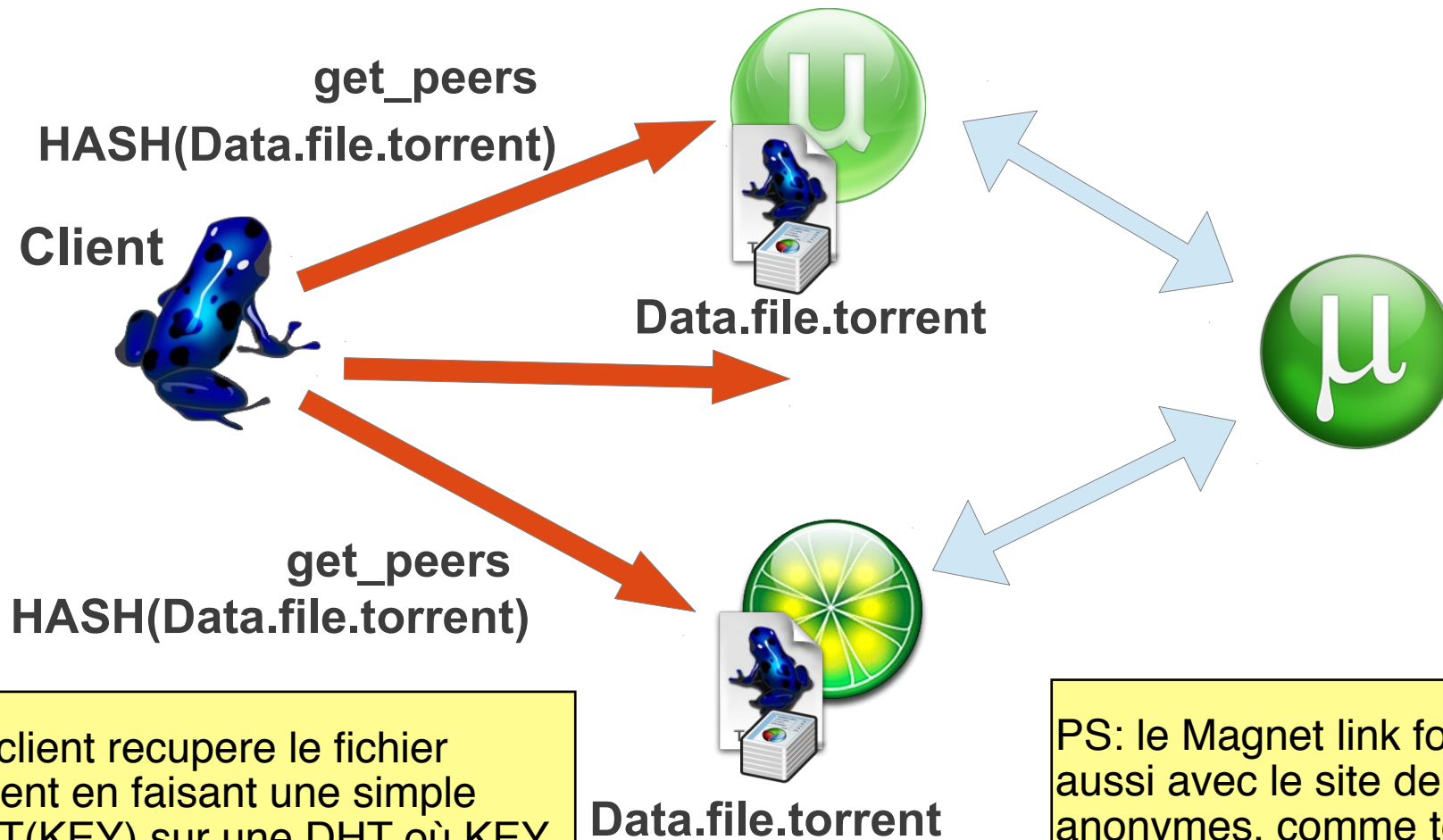
## Client contact Indexer



# Client will receive an URI



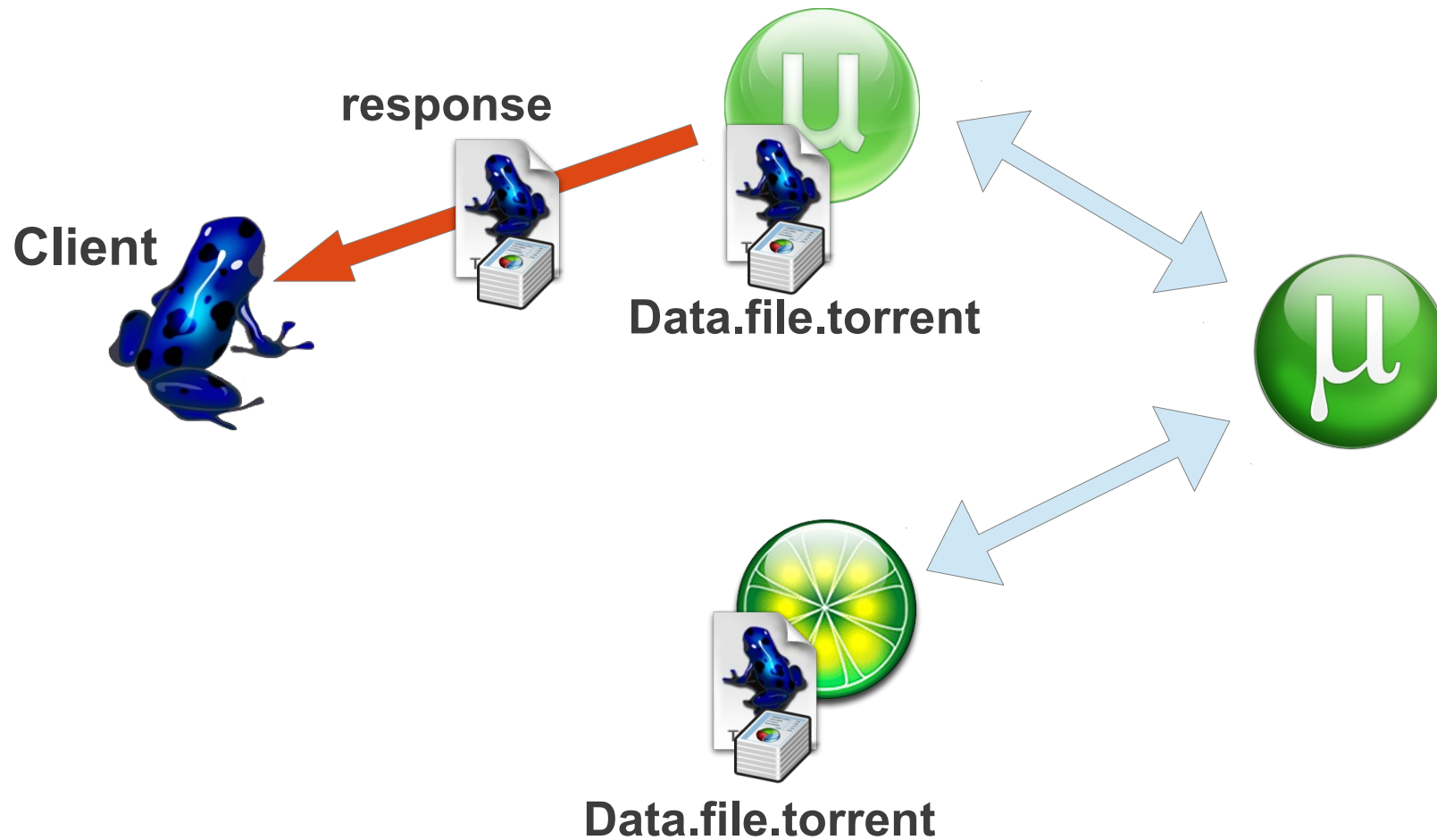
# Client ask for the torrent file corresponding to the received URI



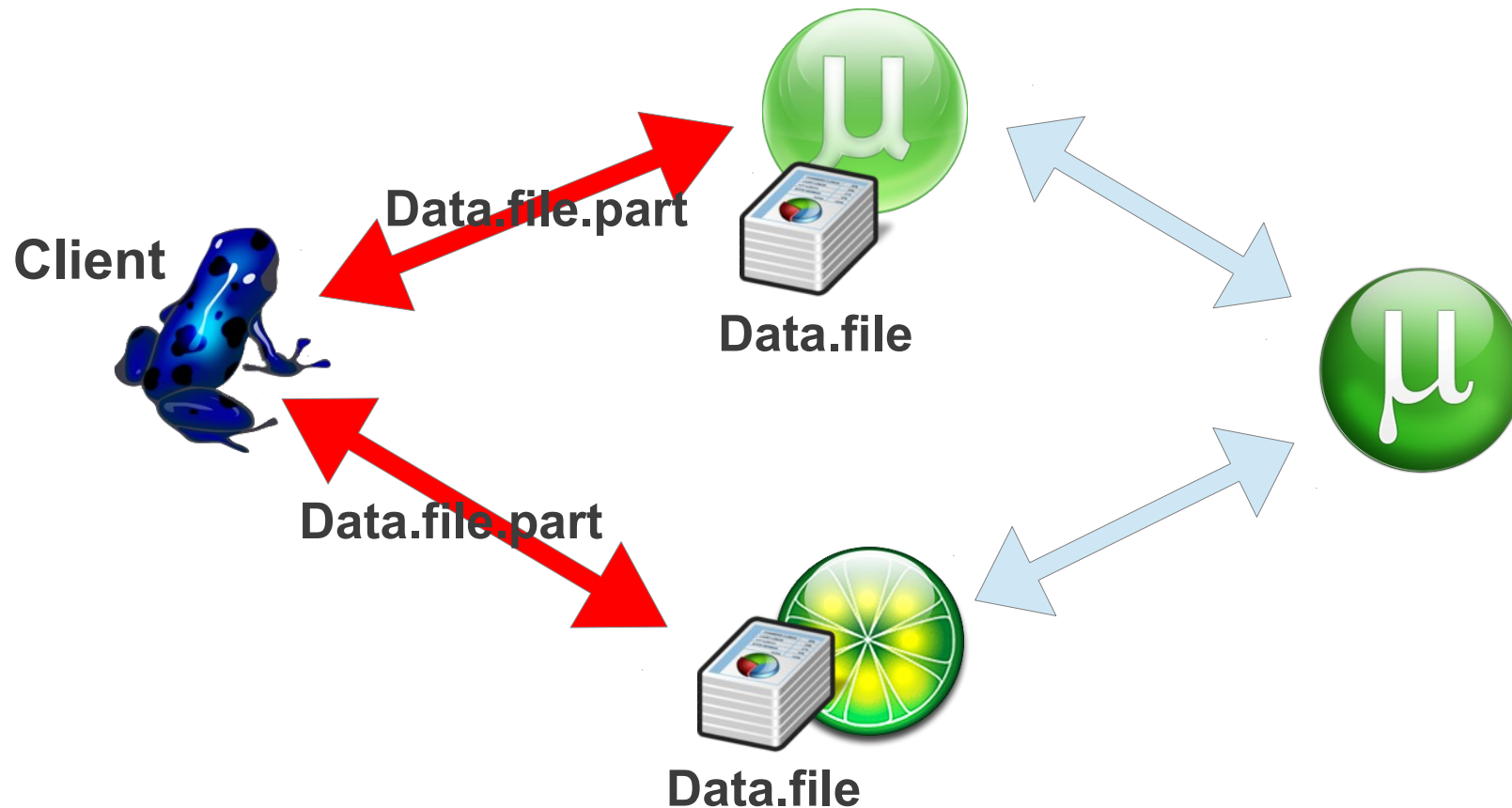
Le client recupere le fichier torrent en faisant une simple GET(KEY) sur une DHT où KEY est le SHA1 du nom du fichier torrent que l'on cherche.

PS: le Magnet link fonctionne aussi avec le site de hosting web anonymes, comme torchache, voir point 1

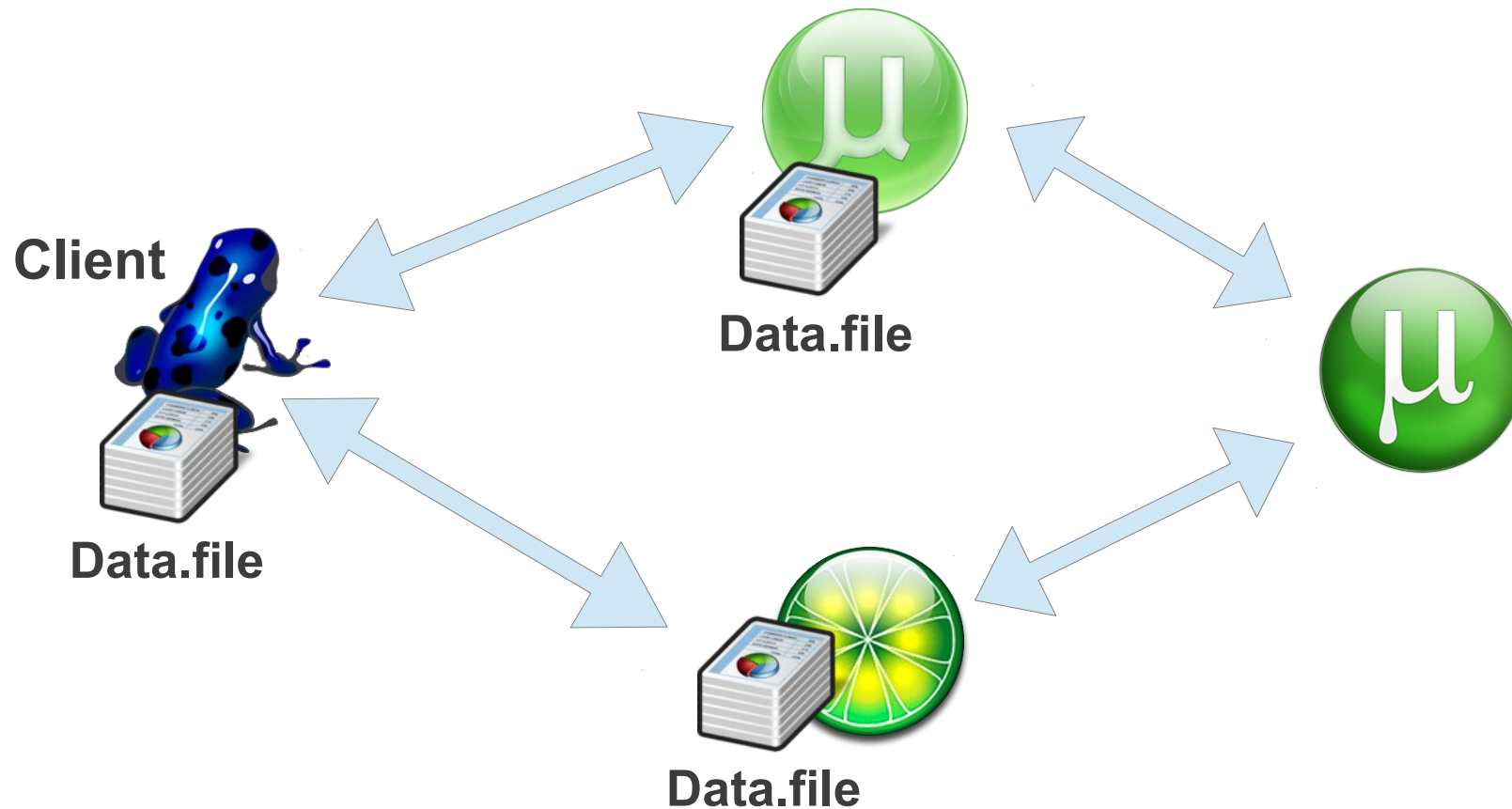
# Client download torrent file from peer



# Client start downloading requested data from Peers



# Client get the requested data



# References

- Magnet URI Scheme:  
[http://en.wikipedia.org/wiki/Magnet\\_URI\\_scheme](http://en.wikipedia.org/wiki/Magnet_URI_scheme)
- BitTorrent DHT Protocol :  
[http://www.bittorrent.org/beps/bep\\_0005.html](http://www.bittorrent.org/beps/bep_0005.html)
- Magnet Link tutorial :  
<http://www.ghacks.net/2010/06/05/what-is-a-magnet-link-and-how-does-it-differ-from-torrents/>