

Twister (software)

Twister is a [decentralized](#) and experimental peer-to-peer [microblogging](#) program which uses [end-to-end encryption](#) to safeguard communications.^[6] Based on [BitTorrent](#) and [Bitcoin](#)-like protocols,^[7] it has been likened to a distributed version of [Twitter](#).^{[8][9][10]}

In 2020, original author Miguel Freitas said that he would no longer be leading Twister development for the "foreseeable future". The Twister network has continued functioning, however, and Freitas suggested that others might want to [fork](#) the project. It was also announced that the website might go offline, since its hosting was due to expire. The Twister core had been at version 0.9.40 since 2018.^[11] Its [source code](#) remains available on [GitHub](#).^[12]

Overview

Twister is a Twitter-like microblogging platform that utilizes the same blockchain technology as [Bitcoin](#) and the file-exchange method of [BitTorrent](#), both based on P2P technology.

Twister was alpha-phase experimental software in 2014, implemented as a distributed [file sharing](#) system. User registration and authentication are provided by a Bitcoin-like network, so it does not depend on a central authority. Distribution of posts uses a [Kademlia distributed hash table](#) (DHT) network and BitTorrent-like swarms, both provided by [libtorrent](#).^[13]

Miguel Freitas, aiming to build a censor-resistant public posting platform,^[14] began development of Twister in July 2013 to address free-speech and privacy concerns. Building on Bitcoin and Bittorrent, he built the core structure in October 2013. Lucas Leal was hired to create HTML and CSS for the user interface, with Freitas writing the required JavaScript code. Twenty-five hundred user accounts were registered in the platform's first six days of operation.^[15]

Twister cannot be incapacitated (since there is no central point to attack), and uses end-to-end encryption. As a consequence of decentralization, a user will be unable to regain access to their "account" if they lose access to their secret key.^[16]

History

Brazilian computer engineer and programmer Miguel Freitas started developing the social network after learning about the massive [surveillance](#) programs of the US's [National Security Agency](#) (NSA)

from NSA whistleblower [Edward Snowden](#). He began to worry about the accessibility of a large quantity of information controlled by a single entity under American jurisdiction.

According to Freitas, Twitter is the social network that has been the most prominent in promoting democracy and the organisation of protests. He built Twister based on privacy-preserving technology due to the risks involved in providing personal information on social networks in light of [mass surveillance](#) conducted by the NSA.

Freitas and his developer, Leal, built the application's alpha version for [Android](#), [Linux](#) and [OS X](#). First-party versions for [Windows](#) and [iOS](#) are not planned.

Technology

Twister is a distributed system that uses peer-to-peer architecture. Unlike other decentralised networks, it does not require the user to use their own server or trust a third-party server to use it. Distribution is achieved through the [Bitcoin](#) protocol, on a different network than that used by the [cryptocurrency](#). The protocol handles the registration of users, and the Twister network verifies the users' names and that a message posted by a user originated from that user. Messages are transmitted through the [BitTorrent](#) protocol. Because it is a peer-to-peer system, [there is no central server](#) from which information may be collected. Twister was developed in [Linux](#), and was [ported](#) to [Android](#) and [OS X](#).

Twister	
	
Original author	Miguel Freitas
Developers	Open-source on Github, Miguel Freitas, Lucas Leal
Initial release	December 30, 2013
Repository	github.com/miguelfreitas/twister-core (https://github.com/miguelfreitas/twister-core)
Written in	C++
Operating system	FreeBSD, ^[1] Linux, ^[2] Mac OS X, ^[3] Microsoft Windows, ^[4] and Android ^[5]
Size	1 MB
Available in	English, Russian
Type	Social network service , microblogging
License	MIT and BSD licenses
Website	twister.net.co (http://twister.net.co/)

Functionality

The first Twister prototype intended to reproduce the basic characteristics of [microblogging](#) platforms, including:

- Searching, following and unfollowing users
- Limiting the length of text-based messages to 140 characters
- Broadcasting and answering messages
- Browsing through mentions, [hashtags](#) and private messages

Private messages require the addressee to follow the speaker.

Security

Twister has no central node to mediate messages. It uses 256-bit [ECC](#) encryption with the same secp256k1 parameters as [Bitcoin](#), reportedly providing similar security to a 3072-bit [RSA](#) key.^[16] The direct message application is based on code published by Ladar Levison of [Lavabit](#). Peers' IP addresses are not recorded in the application, but network interception can identify data flow between devices.^[17]

See also

- [ActivityPub](#) – Decentralized social networking protocol
- [Nostr](#) – Decentralized social networking protocol

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17. According to Freitas, this guarantees anonymity but does not mean that the IP address will not be detected by the [ISP](#); rather, it means the content of the message will not be visible except to someone who can decrypt it.

External links

- [Official website \(http://twister.net.co/\)](http://twister.net.co/)