New internet' looks to keep user data away from tech giants and bypass China censorship

Blockstack is a decentralised internet where users keep their data locally when they run apps, and a Hong Kong-based software engineer is helping get the project off the ground

[Harminder Singh](#)

this story

A Hong Kong-based software engineer is doing his bit to develop a "new internet" said to offer users complete control over their personal information and bypass mainland China's "Great Firewall".

Blockstack is a decentralised internet where users keep their data locally when they run apps. This is in contrast to the conventional internet which stores users' information in centralised servers – making it vulnerable to theft by cyberattack.

Larry Salibra, a cybersecurity expert, is the sole Blockstack developer in Hong Kong.

"It's a really big change from the current internet ... we [take] the value away from these big centralised companies like Facebook and Google and put data back into the users' control," he said.

Salibra considers himself "one of the earliest fans" of Blockstack. The project fit into his vision of what a blockchain can be used for.

A blockchain is a digital ledger distributed among users. There is no central authority verifying and recording transactions – instead it is done by a network of computers.

The network verifies and copies information to each user and a record is made on the blockchain.

"By using bitcoin transactions and putting some special data into each transaction, we're able to create a virtual blockchain on top of the bitcoin blockchain that just has Blockstack-specific data," he said.

[The three key things you need to know about blockchain technology](#)

This will allow users to buy a user ID and set up the ID to include only information the user wants to share when logging in to Blockstack apps.

When Blockstack apps are opened, every one gets its own virtual "cubbyhole" where user data is stored that can only be accessed by the app and the user, and not a third party.

The project has been in development, primarily in the United States, since 2013 and is entering a stage where people can begin using it.

Salibra believes that centralisation of information by tech giants such as Tencent, Alibaba, Facebook and Google is a threat to user privacy and cybersecurity.

These companies having vast amounts of customer information allows governments – either foreign or domestic – or malicious hackers to obtain that information from a single source.

Blockstack will remove data centralisation and place it with each individual user. Government spy agencies or hackers will need to target individuals if they wish to take information, which is time consuming and costly, Salibra said.

Censorship is another hurdle Blockstack is hoping to defeat. Domain registries, who allow people to register internet addresses, can deny websites with politically incorrect views from registering, which is common on the mainland.

[Blockchain adoption poised to go mainstream, say founders of HK start-up PassKit](#)

"[Bypassing the Great Firewall] was one of my motivations," Salibra said.

Mainland government censors can block unwelcome websites, such as Facebook, but they will not be able to bar Blockstack apps as these do not need to connect to the traditional internet to be used and will instead connect to a blockchain, Salibra said.

"We envision a world where ... if what they're doing is illegal, you get a court order and you enforce that against them in the real world. You don't want Google making its own decision about what's acceptable or governments going to them to delete domains," he said.

Currently, Blockstack apps are distributed through normal internet domain names. In the future, apps will not be required to operate through internet domain names and will instead operate by registering on a blockchain, which will not allow their removal by anyone other than the creator of the app.

Blockstack is also developing a different monetisation model for content developers.

It will use digital currencies, such as bitcoin, to reward developers – such as by paying a few cents to view a video or an article.

[Blockchain applications unlikely to take hold in business sector anytime soon, say finance experts](#)

Salibra said he did not expect established tech companies to develop an app for Blockstack, but independent developers would be incentivised to develop apps with similar or new functions.

In August, the project announced a US$25 million fund to jump-start app development for the "new internet".

Blockstack will first be released on desktop computers in the first quarter of next year. Users will be able to download a browser – developed mostly by Salibra – that will have apps for the system.

An app for mobile devices is being developed, but availability will depend on whether Google and Apple allow Blockstack to enter their app stores.

This article appeared in the South China Morning Post print edition as: 'New internet will safeguard data, bypass censorship'