

Blockchain unlocks travel

Blockchain technology allowed 17 million people to travel between China's Guangdong province and Macau amid the coronavirus pandemic.

By COCO FENG

EVEN amid a global travel standstill due to the coronavirus, more than 17 million people travelled between Macau and China's southern Guangdong province since May. This is thanks to a mutually recognised QR health code system using a crucial piece of technology: blockchain.

Blockchain technology is seen as a secure way to transfer data as it stores records in a network of computers instead of a centralised system. Each new record is linked to previous ones, making it extremely difficult for anyone to make changes.

The mainland China-Macau health code system, based on technology by Chinese open-sourced blockchain platform Fisco Bcos and WeBank, a fintech developer backed by Chinese Internet giant Tencent Holdings, provides a solution to a major challenge to cross-border travel, Fisco Bcos said in a press release.

"Health authorities in Chinese mainland and Macau need to verify the health information submitted by users crossing the border and yet they are not supposed to exchange data directly with each other to stay in compliance with their corresponding regulations," the blockchain platform said.

The health code system uses blockchain to encrypt the identification and personal health information of travellers, storing it in a consortium blockchain network which grants access only to authorised organisations.

This way, health authorities on both sides are able to verify whether travellers are in good health and have been in contact with any known Covid-19 cases without actually accessing personal data, thus complying with privacy regulations on both sides of the border that prohibit the direct exchange of such information.

With the code and valid negative coronavirus test results, Macau travellers are now exempt from a 14-day quaran-



Macau and the Guangdong province have a mutually recognised health code system powered by blockchain. — SCMP

tine when entering China.

Chinese travellers from outside Guangdong province can also participate in the system to travel into Macau without quarantine requirements as long as they allow Guangdong authorities to access their data.

"The whole process does not involve transmission of data between back-end platforms," said Fan Ruibin, head of blockchain technology at WeBank.

"The original data is still stored in the local authority's data centre."

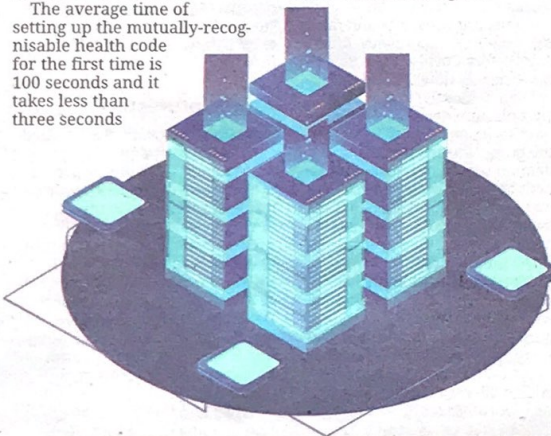
The technology "greatly improves the efficiency and accuracy of information verification across borders" and saves travellers the trouble of filling in personal information repeatedly on different platforms, Fisco Bcos said.

The average time of setting up the mutually-recognisable health code for the first time is 100 seconds and it takes less than three seconds

to repeat the procedure thereafter, according to the statement.

Technically speaking, the system allows "both authorities to recognise a person's health conditions through asymmetric cryptographic technology", which uses a pair of related keys to encrypt and decrypt a message and protect it from unauthorised access or use, said Gao Chengshi, a cryptography expert and a member of the Blockchain Committee of the China Computer Federation.

"The technology itself isn't complicated, and can be easily introduced to other countries and regions as long as the authorities are willing to conduct such mutual recognition of health identities," Gao said. — South China Morning Post



The CommonPass project aims to establish standard ways to verify lab results and, later, vaccination records. — AP

Health pass could get airlines off the ground

By DAVID MCHUGH

A NON-PROFIT foundation is testing a smartphone app that could make it easier for international airline passengers to securely show they've complied with Covid-19 testing requirements.

It's an attempt to help get people back to flying after the pandemic sent global air travel down by 92%.

The Switzerland-based Commons Project Foundation conducted a test of its CommonPass digital health pass on United Airlines Flight 15 from London's Heathrow to Newark Liberty International Airport, using volunteers carrying the app on their smartphones.

Officials from the US Centers for Disease Control and Prevention and Customs and Border Protection were observing the test.

The foundation looks forward to the day when travel may be determined not only by testing but by the need to show vaccination records.

The World Health Organisation says vaccines may start becoming available by mid-2021, though efficacy and availability to broad parts of the global population remain large question marks.

Foundation CEO Paul Meyer said the pass is "intended to give people the ability to travel again by documenting that they meet the requirements of the places they want to go ... This is a way to get things moving again".

The problem: the pandemic has led to a patchwork of travel bans, quarantines and testing requirements, with each country imposing its own rules.

Testing is seen by airlines as a way to reassure passengers and allow people to skip quarantines, but there's no common approach.

When it comes to testing, passengers may present paper documents in different languages and from labs unknown to authorities in a given country.

The CommonPass project, carried out in cooperation with the

Switzerland-based World Economic Forum, aims to establish standard ways to verify lab results and, later, vaccination records, even if governments continue to set different health criteria.

Scientists warn there are concerns about the accuracy of some rapid tests. People can be infectious for several days before they show symptoms, and these people may also test negative.

The project's chief medical officer, Dr Brad Perkins, said that two tests during long-distance travel — one 72 hours before departure and one on arrival — would cover the incubation period. Testing technology may continue to evolve during the pandemic.

Passengers can use the app to find participating labs and testing sites, retrieve lab results and complete health attestations.

The app and its associated data platform can confirm their results are in line with the destination's requirements and generates a QR code that authorities can use to confirm compliance.

The foundation says this system protects privacy because people do not need to share their health information, only compliance or non-compliance.

Additionally, CommonPass could be deployed by countries without waiting for a broader international agreement.

The system is intended to be adaptable whenever requirements change.

Meyer said that capability would be important after the arrival of vaccines, which may differ as to the number of doses and length of time they're effective.

"Let's put the foundational infrastructure in place that gives countries the flexibility to adapt those rules over time, and then allow travellers to effectively bring their information with them and demonstrate that they satisfied the rules that are in place at the time they want to travel," he said. — AP