

## Mobile Banking with UniMate Authentication

### Introduction

Founded in 1987, China International Trust and Investment Corporation (CITIC) Bank, formerly known as CITIC Industrial Bank, is one of the earliest emerging commercial banks established during China's reform and opening up and among China's first commercial banks engaging in financing in domestic and international financial markets. It is famous at home and abroad for creating numerous number ones in Chinese contemporary financial history. With the rapid development of China's economy, CITIC Industrial Bank got a consistent growth in the tide of China's financial market reform, and had its name officially changed to China CITIC Bank in August 2005. In December 2006, China CITIC Bank Corporation Limited was set up with CITIC Group and CITIC International Financial Holdings Limited (CIFH) as shareholders. The year 2006 also witnessed China CITIC Bank's introduction of a strategic investor – Banco Bilbao Vizcaya Argentaria S.A. (BBVA), a leading bank in Europe, and established a reciprocal and complementary strategic cooperation relationship. On 27 April 2007, China CITIC Bank was successfully listed on both Shanghai Stock Exchange and The Stock Exchange of Hong Kong Limited. In 2009, China CITIC Bank successfully accomplished its acquisition of the 70.32% equity interest in CIFH. Over the past two decades, China CITIC Bank has grown to be one of the domestic commercial banks with strong capital base and become a fast growing national commercial bank with great comprehensive competitive edge.

### Challenges

As smartphone use grew in popularity along with CITIC's client base, CITIC saw the need to expand its services onto the mobile platform to provide the latest mobile banking experience for clients and a competitive edge over competing banks. While CITIC's USB port certificate-based authenticator proved very effective and were in widespread use by clients, its current authentication system lacked the ability to operate on mobile devices. As such, the bank required a solution to provide strong authentication on the mobile platform to accommodate the growing needs for its mobile bank users. However, finding the appropriate solution to meet CITIC's needs with minimal compromises in change and security was essential.

**Several solutions were proposed:**

1. A one-time password (OTP) token solution had the benefit of easily providing two-factor authentication regardless of the platform – use on the mobile platform, as well as extending to the desktop platform, without being concerned about hardware compatibility issues and easily providing compatibility for future platforms.

However, as the bank had put extensive time and resources into a functioning certification-based system, even though replacing the current system with an OTP solution would bring the aforementioned benefits and more, it would not be financially or logistically ideal. Moreover, as the bank's deployed authentication system made extensive use of certificates, switching to an OTP solution would be very costly, especially with costs involved in deploying keys to replace existing ones (or to use alongside, if not replace), integrating existing procedures with the OTP system and running two authentication systems in parallel. Since the projected costs would be too high, an OTP solution would have the potential risk to be time consuming and management mess.

#### CASE STUDY:

Mobile Banking with  
UniMate Authentication

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UNIMATE PRODUCTS  
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2. Development of a new two-factor token utilising certificate-based authentication and a data port compatible with mobile devices, for use by clients only for the mobile platform. Since the new token will use certificate technology, the approach had the benefit of working in conjunction the existing system without significant change and the need to deploy an additional system.

Research found the ideal data port to use, for instance iDock or micro-USB, could not be used by all devices at the host side, and the lack of a standard data port for mobile devices meant the token device would run into compatibility issues depending on mobile devices client were using. Moreover, if users wanted to perform online banking on both PC and mobile, they would require to possess two separate devices, and changing their mobile devices may also require replacing the token depending on the data ports present. Although this setup leveraged existing technology, compatibility issues and inconvenience to customers involved with multiple devices and management of each token's certificate to customers rendered the solution inadequate.

## Solution

The solution chosen by CITIC to deliver strong authentication on the mobile platform was SecuTech's UniMate STD and Flex.

UniMate STD, Flex complies with the PKI standard and therefore allowed the authentication token to leverage the existing certificate-based authentication system, a significant advantage in reducing project development time and costs and taking advantage of a functioning live system. UniMate also supports RSA, AES, Triple-DES, SHA-1 algorithms and more, a requirement that was necessary to provide the robust security required in online banking. Moreover, the TRRS audio jack and USB dualinterface provided compatibility on not only the PC platform, but on nearly all mobile platforms, eliminating the issue of multiple devices, interface incompatibilities with differing mobile devices and replacement of devices when changing interface. A significant advantage altogether was each client need only to hold on device, with all online banking and certificate management performable on either the PC or mobile platform, and minimal change in user habit as it functioned just as with the previous system.

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