

## **Fast and Secure - The New Cheque Clearing System**

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THE NEW cheque-clearing system has been developed by the Bank of Thailand with the objectives of replacing the current system, which is already outdated, and enhancing the capacity for cheque clearing and settlement.

The Imaged Cheque-Clearing and Archive System (ICAS) utilises imaging technology to achieve fast and efficient cheque clearing. Originally, physical cheques are required to be transported between depository banks and paying banks for verification before payment could be authorised. The old cheque-clearing process is burdened by high operating and transportation costs.

With ICAS, verifications are allowed to be performed on cheque images. Each cheque is represented by three images. The first is a greyscale image of the front of the cheque, while the second and the third are black-and-white images of both the front and the back of the cheque. The greyscale image is intended for fraud detection, as small changes in colour and contrast are visible in this mode. The black-and-white images are meant for verification of handwritten information, such as signature, as the content is more legible due to the clear-cut difference between black and white colours.

With ICAS, cheque images are sent via a highly secured online system, allowing the cheque-clearing process to be truncated by having physical cheques stored at the depository banks. The cost of transportation may be eliminated and the operating time of the cheque counter may be extended.

To ensure the security of the system, ICAS utilises a formula called the 'hash function' to derive hash values that are used to detect any changes in data, ensuring that the data are complete and no modifications have been made. Digital signatures are also applied in order to identify the entities responsible for creating and transmitting the data. Data transmission channels in ICAS are encrypted.

Cheque drawers are discouraged from using seals, embossed seals or coloured seals not only because the cheque images do not facilitate embossment and colour verification but also because image quality deteriorates. The lack of the seals would not increase the level of risk for the cheque drawers as technology nowadays allows seals to be easily duplicated. It is also crucial for cheque images to be archived at the highest quality level, as they may serve as legal evidence.

Many countries have implemented imaging technology in their cheque-clearing industry as its benefits are well recognised. In the past decade, countries like Singapore, Hong Kong, Sri Lanka, the US, India and Malaysia have adopted cheque-imaging technology.

The Bank of Thailand has also developed the ICAS by adapting the successful systems of other countries. The central bank is closely collaborating with banks to complete the rules and regulations and to upgrade the banks' systems to support ICAS. ICAS is scheduled for launch this year.

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**(The views expressed in this column are the writer's own.)**

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