

Deployment of Interoperable Mobile Near Field Communication (NFC) Infrastructure and Payment Services Call-for-Collaboration (CFC)

Background

IDA issued the Deployment of Interoperable Mobile Near Field Communication (NFC) Infrastructure and Payment Services Call-for-Collaboration (CFC) from Nov 10 to Mar 2011 to accelerate the proliferation and adoption of mobile payment services using the NFC technology.

The CFC is an initiative under the Next Generation e-Payment Programme administered by the Infocomm Development Authority of Singapore (IDA).

This CFC aims to:

- a. Establish a secure, interoperable and scalable NFC infrastructure that provides an open and cost effective means for Service Providers to provide NFC mobile services to any mobile subscriber;
- b. Develop a vibrant and sustainable multi-application NFC environment, beginning with development of NFC mobile payment services; and
- c. Encourage adoption of NFC mobile services by merchants and consumers.

Programme Background

This initiative is amongst the first in the world to create an interoperable NFC environment at the national level. It aims to spur industry participation, leading to the development of a vibrant and self-sustaining NFC eco-system.

Recognising the need for industry collaboration for a successful and sustainable NFC deployment, IDA formed a industry Roundtable comprising MAS, LTA, MOF and 11 key industry players from mobile operators, banks and payment service providers (PSP) in 2008. In Feb 09, IDA together with the NFC Roundtable agreed to collaborate on the deployment of an interoperable NFC mobile payment system through a Trusted Third Party (TTP) infrastructure.

As illustrated in Figure 1, the TTP would serve as the neutral party, connecting banks/ payment providers and other service providers on one hand, and mobile

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operators on the other. This would allow mobile subscribers to access any service of choice, and not be limited by who his mobile operator is partnering with. It also eliminates duplication of infrastructure and satisfies the trust requirements of all parties for secure NFC services, starting with payment services.

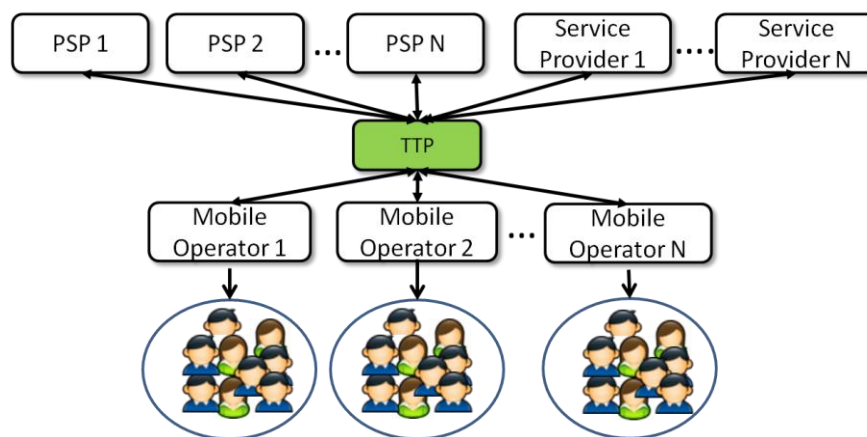


Figure 1. Role of TTP in the NFC ecosystem.

Through collaboration with industry, IDA has been actively working to lay the foundation for deployment of NFC services. In November 2009, IDA started an initiative to proliferate CEPAS contactless payment terminals in retail and other segments across Singapore. In April 10, IDA also established an Over-the-air framework and standards for deployment of CEPAS on NFC devices through a technical feasibility study.

Globally, a number of technology vendors have developed interim NFC devices as “add-ons” to existing phones, to bridge the gap created by the delay in the production of fully integrated NFC mobile phones. Major manufacturers such as Nokia, Samsung and RIM have begun to launch NFC mobile phones starting mid 2011. It is an opportune time for IDA to commence the development of the infrastructure and services with industry in anticipation of the rollout of NFC mobile phones.

Programme Approach

IDA’s key requirements for the CFC are centred on 3 key pillars to create a vibrant and self-sustaining NFC eco-system:

- a) Establishment of an interoperable infrastructure;
- b) Promotion of an open access business model; and

- c) Emphasis on a rich yet intuitive consumer experience.

The CFC is designed to encourage and spur the innovation and adoption of new payment and value-added services. IDA believes that the open access business model of the TTP will foster widespread participation by industry to harness the TTP's ability to deliver not just mobile payment, but other value-added services such as coupons, loyalty, rewards redemption, rebates and more.

Industry is also strongly encouraged to leverage the mobile enablers under IDA's Digital Concierge¹ (DC) programme, such as ticketing, directory service and location-based technologies. By combining the content and location detection capabilities from DC with the secured, proximity-based transaction capabilities of NFC, the industry will be able to deliver new compelling services.

Implementation is expected to take up to 8 months with the TTP launch targeted by mid 2012, together with 3 NFC mobile payment services. A total of 10 NFC services, comprising 3 additional NFC mobile payment services and 4 value-added services, will be rolled out progressively by 2014.

Benefits for Consumers

When the rollout of NFC services commences in mid 2012, consumers can look forward to using their NFC-enabled mobile phones² to pay for their purchases at retailers, meals at restaurants and F&B outlets, taxi rides etc.

IDA envisions that the NFC mobile phone will further simplify, streamline and enrich the consumer experience. Example scenarios include:

- a) Consumers can perform multiple transactions with a single tap using their NFC-enabled mobile phones. For example, at the supermarket, a single NFC application can combine multiple transactions into one, saving the customer the hassle of presenting separate loyalty and payment cards;
- b) Using NFC-enabled mobile phones to identify the consumer's physical location, it will also be possible for consumers to enjoy a highly targeted and personalized retail experience while on the move. For example, when making a payment using NFC, they can receive real-time personalized

¹ The Digital Concierge homepage is located at <http://www.digitalconciierge.sg>

² NFC-enabled mobile phone refers to any existing mobile phone affixed with a NFC device.

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offers and discounts from their favourite shops and restaurants in the vicinity;

- c) Consumers can instantly load coupons, discount vouchers and tickets into their NFC mobile phone by tapping the NFC mobile phone against a smart poster.

Consumers can also be assured that NFC mobile payment services are as secure as physical cards. In the event that their mobile phones are lost or stolen, NFC payment services on the mobile phone can be immediately deactivated remotely.

To enjoy the convenience and benefits of NFC, consumers only need to NFC-enable their existing mobile phone (or own a NFC mobile phone), hold a Credit Card account or a stored-value purse (such as CEPAS) and have an active mobile subscription with a participating mobile operator.

Benefits for Banks, Payment Service Providers and Other Businesses

Banks, payment service providers and businesses will be able to leverage on the TTP to deliver their NFC services to the widest possible mobile subscriber base. They will also enjoy a shorter time-to-market due to the ease of integration with a single TTP via open standards, as compared with having to connect to each mobile operator individually.

Businesses in the retail and F&B segments can look forward to leveraging the convergence of NFC, mobile and social network technologies to enhance customer loyalty, exploiting a combination of content and technology to drive customers and their friends to the physical store.

Businesses can also turn their contactless payment terminals into a channel for advertising media, and deliver personalized coupons and special offers to their customers to encourage repeat visits.

Programme Status

The CFC has been awarded to 7 companies – Gemalto Pte Ltd, Citibank Singapore Ltd, DBS Bank Ltd, EZ-Link Pte Ltd, M1 Limited, SingTel Mobile Singapore Pte Ltd and StarHub Mobile Ltd – in Oct 2011. NFC mobile services are expected to be launched from mid 2012.