

TOPPAN FORMS

February 15, 2011

NEWS RELEASE

Toppan Forms and HP Japan Partners Expand Contactless Payment Services

Two companies will build a cloud based payment platform using NFC global standard technology

Toppan Forms Co., Ltd. (Toppan Forms hereunder) and Hewlett-Packard Japan, Ltd. (HP Japan hereunder) today announced collaboration to improve contactless payment technologies with IC cards. These services offer a more convenient and efficient payment solution for customers.

By using Toppan Forms' system equipment development technology for contact-less smart card and HP Japan's middleware – HP IC Chip Access Server for FeliCa (ICAS hereunder) – that access to FeliCa chip, both companies will provide a cloud service based e-Money payment platform that allows provision of convenient and efficient payment method.

Toppan Forms has been focusing on development and provision of Near Field Communication products that comply with NFC global standard. HP Japan has been granted the license to solely develop and provide ICAS middleware that can access FeliCa chip safely via the network.

The partnership allows e-Money related business, merchant, and mail order house to implement contact-less smart card payment system without having to make heavy upfront investment by using the cloud service. Toppan Forms will contribute by “developing payment terminal based on NFC reader writer through partnership with electronic device manufacturers” and “providing acquisition service to cultivate and manage merchants through partnership with payment companies” and HP Japan will contribute by “development and operation of payment cloud system based on ICAS”.

Toppan Forms started the preparation of the new venture in February 7, 2011 with the participation of HP Japan. For the near term, two companies will focus on e-Money payment service based on FeliCa that is widely used as a contact-less smart card for e-Money application. October 2011 will be the start of the service provision. In the future, the partnership expects to form a coalition with “Regional Cards and Payments Utility” – a credit payment platform service with 68 million card

members across 22 countries that HP serves globally – which will allow contact-less smart credit card payment on the single terminal.

Toppan Forms and HP Japan, by providing such platform will aim to establish payment service that can be used commonly and safely across countries world wide.

【Additional Reference Information】

■ About HP IC-Chip Access Server for FeliCa

HP IC-Chip Access Server for FeliCa is a server middleware that allows safe FeliCa chip access via the network. The license is granted to HP by FeliCa Networks, Inc. to develop, manufacture, and market the product.

■ About NFC (Near Field Communication: ISO 18092, 21481)

NFC - a near field communication standard that uses 13.56 MHz frequency band which has been certified by ISO/IEC as an international standard in December 2003 - is co-developed by NXP Semiconductor that developed MIFARE of which 1.8 billion chips has been shipped globally, and Sony Corporation that developed FeliCa of which 400 million chips has been shipped.

【NFC Basic Functions】

1. Card Emulation

It will function as “FeliCa” and “MIFARE” smart card.

2. Reader Writer Emulation

It will function as “FeliCa” and “MIFARE” reader writer.

3. Peer to Peer

NFC devices can interactively be communicated without the hassle of verification between devices. Also it also has a “Hand Over” functionality where NFC devices verifies each other and actual communication are handed over to Bluetooth and WIFI communication for faster data transfer.

■ About Toppan Forms Co., Ltd.

Company Name: Toppan Forms Co., Ltd.

HQ Address: 1-7-3 Higashi Shimbashi Minato-ku Tokyo Japan

Established: May 1955

Representative: Shu Sakurai CEO and President

Business: Business Forms, Data Print Service, Information Media such as RFID and IC, Development, Production, and Sales of Products using Printed Electronics technologies

URL: <http://www.nfc-world.com/en/>

URL: <http://www.toppan-f.co.jp/>

■ About Hewlett Packard Japan, Ltd.

Company Name: Hewlett Packard Japan, Ltd. (HP Japan)

HQ Address: 2-2-1 Ohshima Koto-ku Tokyo Japan

Established: July 1999

Representative: Shinichi Koide Representative Director, President, and Active Director

Business: Computer, Computer System, Computer Peripheral Equipment, Development, production, import, sales, lease, rental and support of software products

URL: <http://www.hp.com/jp>

- "MIFARE" is a registered trademark of NXP Semiconductors
- "FeliCa" is a registered trademark of Sony Corporations.
- "FeliCa" is a contact-less smart card technology method developed by Sony Corporation.
- "Bluetooth" is a registered trademark of Bluetooth SIG Inc., U.S.A.
- Indicated product name is registered trademark or trademark of each company.

Legacy Felica Systems Vs. ICAS System

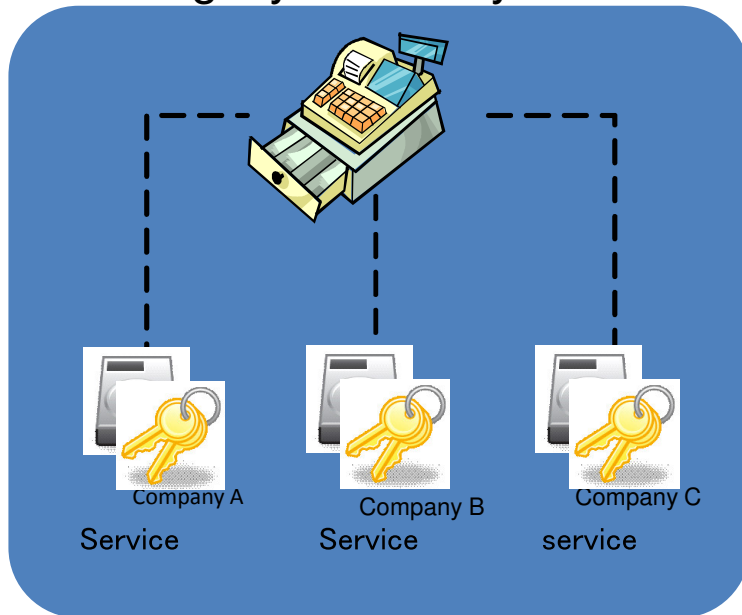
For Legacy FeliCa systems, the reader is equipped with encryption/decryption processors and encryption key management software for a single eMoney service, because of this, each reader is relatively expensive (ranging between 1000-3000 USD). Furthermore, for each of these proprietary readers key management is required at the reader level which makes it a difficult system to maintain.

The ICAS system provides an alternative method of handling payments. The ICAS system uses readers with out the encryption hardware and software allowing for centralized key and encryption management. This creates the following benefits:

1. As the reader terminal does not have key management, it is not locked into a single eMoney service.
2. Due to the terminals having no need for encryption/decryption hardware it decrease the cost of the readers significantly.
3. Centralized key management simplifies the key management process considerably.

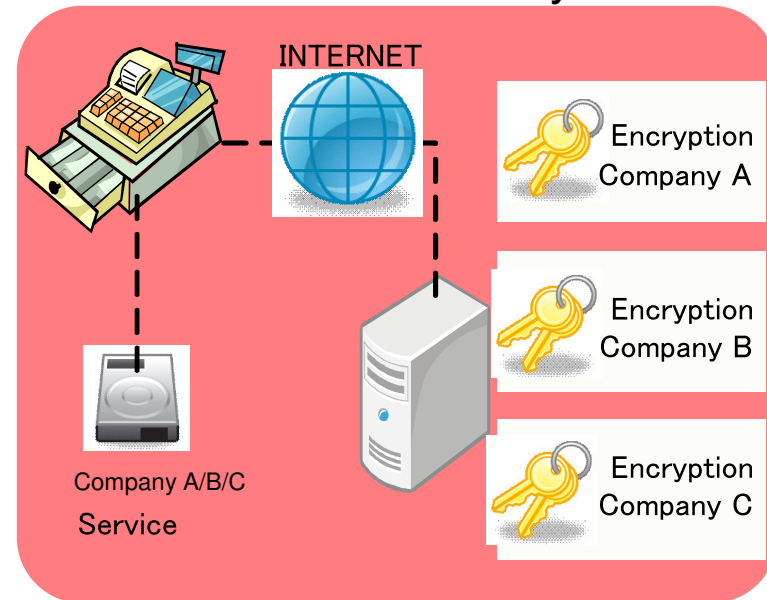
The diagrams below highlight how the ICAS system could be implemented.

Legacy FeliCa System



- For each eMoney service a different reader is required
- Each reader holds an encryption key and encryption/decryption processor, making the terminal expensive

ICAS based FeliCa System



- With centralised key management handled on the ICAS server, this significantly reduces the costs of the NFC terminal
- Each reader can handle several eMoney services, freeing up space at point of sale