Gemalto Explains

The Role of the Trusted Service Manager

Source: Gemalto
How it works
Trusted Service Manager

How can we facilitate mobile payments?

Mobile operators have expertise with over-the-air phone subscriptions, but not banking.

Banks have expertise with credit cards, but not mobile subscriptions.

To facilitate mobile payments, Banks and Mobile Network Operators need a go-between: a Trusted Service Manager (TSM)...

...That can place credit card numbers on mobile phones, while ensuring that the consumers’ credit card information is completely secure.

The TSM is a bridge between...

- Multiple banks
- Multiple MNOs
- Multiple transport authorities
- Multiple marketing companies

Gemalto has the expertise to fill the role of the Trusted Service Manager (TSM)

Here’s how it works:

Banks generate cardholder account data.

Secure payment accounts are produced. They include the name, account number and secret unique keys.

Gemalto takes the contactless payment account data, and converts it into an NFC data package formatted for secure elements in cell phones.

The data is encrypted and transferred over-the-air to Mobile Network Operators [MNOs] and then to individual mobile phones.

Acting as the Trusted Service Manager, Gemalto prepares the NFC package for download to the phone.

The UICC/SIM handset checks and confirms that the data is going to the correct mobile phone.

The data is decrypted and installed on the phone.

Mobile subscribers can now use their bank card on their mobile device.

...The TSM manages the payment account throughout its life cycle
How it works

Trusted Service Manager

Benefits:

- The Gemalto TSM process ensures end-to-end security encryption between banks and SIM/UICC cards and mobile phones.
- The data only works on the right phone.
- The encrypted data package cannot be used if intercepted.
- Can be securely loaded over-the-air.
- No human ever sees any account data, numbers or keys.

What is an NFC Secure Element?

A smart card chip that stores information, manages security and provides a firewall between NFC applications and other elements in the phone. It is installed in one of three ways:

1. SIM/UICC cards
   - Cards are removable
2. Micro SD cards
   - Cards are removable
3. Embedded chip
   - Chip wired into phone