

Smart Card Development in Taiwan **- *A Digital Transaction Project* -**

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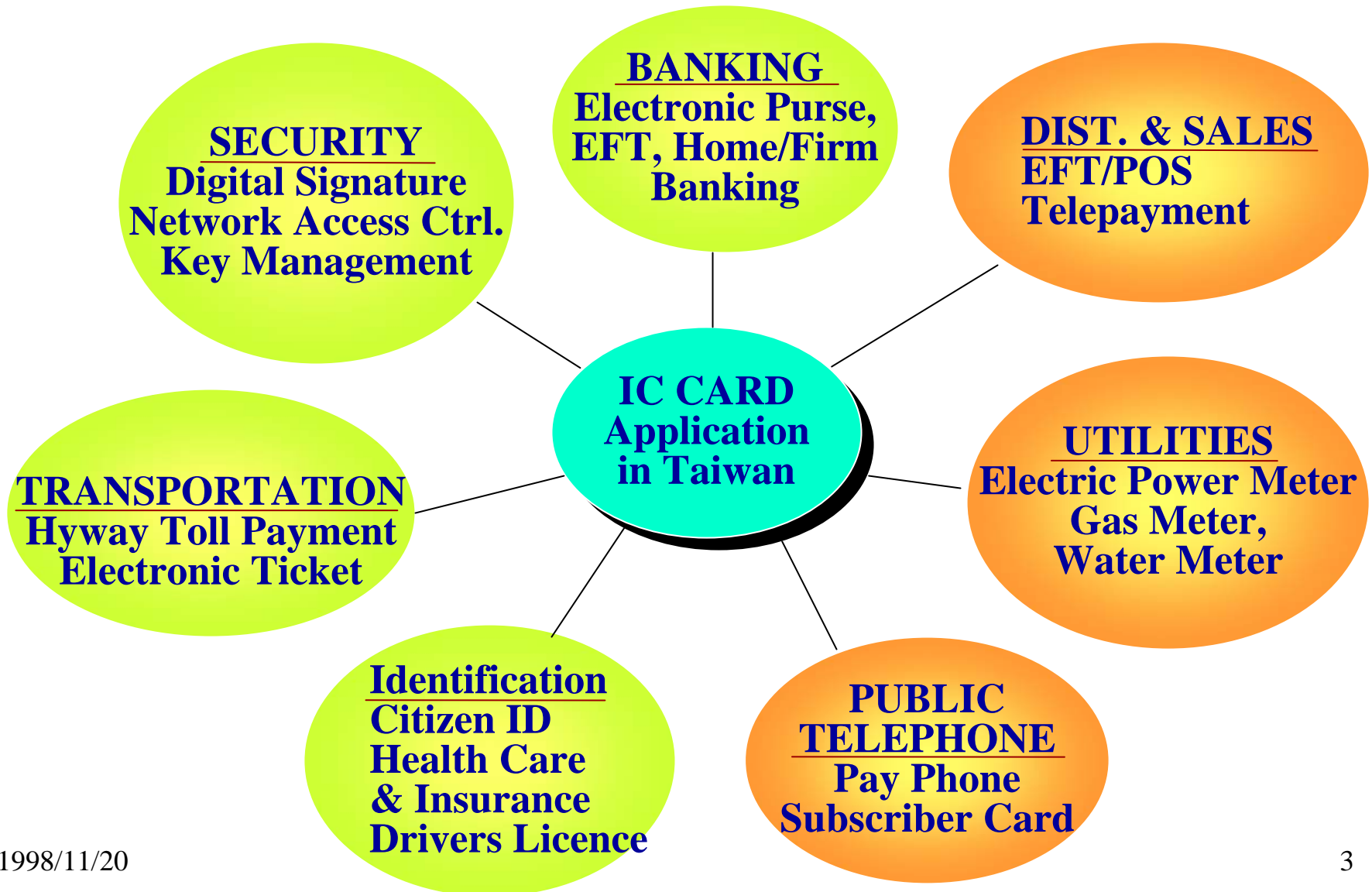
Background

- **In 1988, the ROC government organized a task force to promote the smart card applications in Taiwan, for**

Two Main Purposes:

- **Improving the efficiency of the society through the use of smart cards.**
- **Developing smart card-related industries**

Planned Applications of Smart Card In Taiwan



Current Smart Card Application Status

Smart Card is not a stranger in Taiwan. Currently, the major ones in-use are:

1. The “*Electronic Money*” Smart Card

- **The card was first introduced in September 93, by the Financial Information System Center of the Ministry of Finance, with**
- **the aim of using E-cash as payment vehicle**
- **Today, it supports the following functions -**
 - » **ATM Deposit/Withdrawal**
 - » **Direct Debit,**
 - » **Credit Charge,**
 - » **Prepaid Telephone Card**
- **Additionally, Home Banking, Security Transaction, Home Shopping, and Automatic Vending Machine applications will be among the next batch of applications**
- **Up to March 98, more than half a million cards have been issued.**

Current Smart Card Application Status

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2. Then, there is the Visa Cash

- Which is a stored-value, electronic-money smart card same as cash
- Great potential were projected. Many major banks are joining,

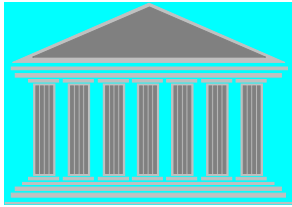
3. A multi-purpose Transportation Smart card issued by the Ministry of Communications in May 1998.

- The card is of ‘no-touch’ type, used for passage at super-highway toll booth and a number of selected bus routes.

Citizen's Card - A New Project

Currently, there is a new Citizen's card project. It is one of the major project under the electronic government program .

Citizen's Card — A Multi-purpose Identification IC Card



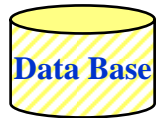
Individual Identity

National Identification Card



**Certificate for
Medical Services**

Health Insurance Card



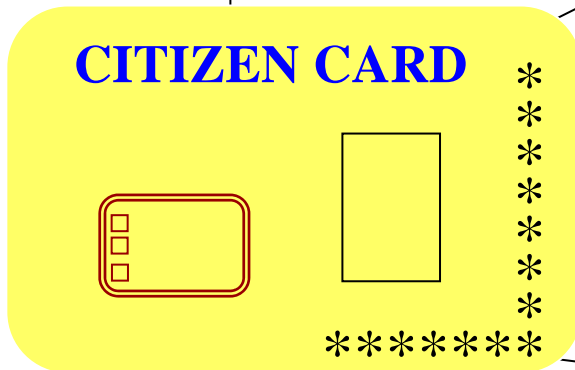
**On-line Application,
Electronic Commerce**

Electronic Signature



Electronic Purse

Stored Value(Optional)



Multi-purpose

Implementation Schedule



(13) Technical Requirements

The following are the basic technical requirements for the Citizen's Card.

- **Storage Requirement:** Must be sufficient to accommodate personal identification data, the National Health Insurance operations, electronic signature, and a space required for digi-cash operations.

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Technical Requirements

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- **Electronic Signature Mechanism:** Must be consistent with the defined standards.
- **Forgery- and Tampering-proof Mechanism:** Must provide at least two ways by which the human eye or a simple instrument may quickly and directly establish the authenticity.
- **Photos and Fingerprints:** Are to be contained in the card.
- **Card Material and Physical Characteristics:** The junction between the IC chip and the physical card must be as seamless as possible, and the use of materials that may harm the environment or generate toxic gasses should be avoided.
- **Communications Protocols and other Standards Compliance.**

(15) Conclusion

- ☐ **“Citizen's Card” is primarily designed to replace the existing “paper national ID card”, and the “paper national health insurance card” for 22 million citizens in ROC.**
- ☐ **The ‘one-card-does-all’ concept opens up the opportunity for the implementation of more value-added functions for the card, with the means for the contractor to offset the cost of the smart Citizen’s Card development.**
- ☐ **By ‘leasing out’ the valuable memory storage on the smart card to other service providers, such as Banking and Travelling industries, to provide their value-added services through the card, this card will be very attractive to both the service industries, and to the card holders.**
- ☐ **We have used wampum, beads, silver, gold, and now the paper which we call it ‘money’ for currencies. The next turn will be digital transaction by means of smart card.**
- ☐ **‘One-card-does-all’ was a dream of yesterday. We strongly believe it will become reality someday in the foreseeable future. And,**
- ☐ **Taiwan is moving toward that direction.**