

Mondex Electronic Cash

CALS/EC Korea Conference 2002
January, 2002
Seoul, Korea

© Mondex Electronic Cash 2002

MONDEX
ELECTRONIC CASH

Outline

Smart Card Basics
Mondex - The Product Proposition
The Market Environment
Mondex - Card & Devices
Future Directions

© Mondex Electronic Cash 2002

Smart Card

© Mondex Electronic Cash 2002

MONDEX
ELECTRONIC CASH

What is a Smart Card?

The smartcard is a processing platform & a store of data
it can perform calculations and run programs

It contains its own memory (RAM), storage (ROM and EEPROM), and (Central Processing Unit) CPU like a PC

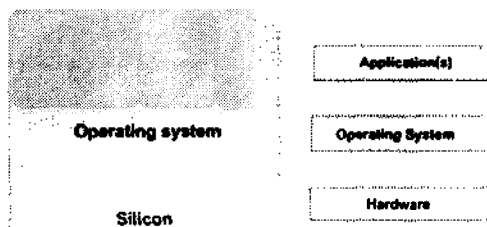
If it had its own power supply, keyboard and screen, it would be a fully independent computer

Requires an Interface Device (IFD) to supply the power and provide suitable input and display mechanisms.

Some examples of IFDs are:
point of sale terminal (POS)
telephone
ATM etc.

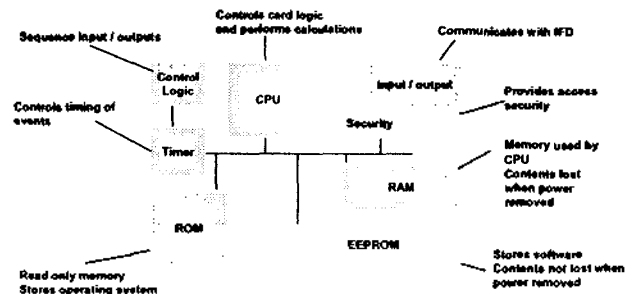
© Mondex Electronic Cash 2002

What does the Chip Architecture Look Like?



© Mondex Electronic Cash 2002

Components of the Chip



Depending on the sophistication of the chip various components are omitted

© Mondex Electronic Cash 2002

Mondex - The Product

MONDEX

© Mondex Limited 2002

What is Mondex?

Mondex is money
... But Mondex money is ELECTRONIC

Cash dominates retail payments
Cash handling costs retailers and banks
e.g. £4,500 million pa in the UK

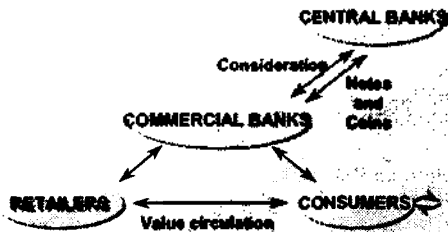
Features and benefits of cash
Immediate value transfer
Person to person
Cost effective at lowest values



Cash is the standard against which all stored value initiatives should be judged

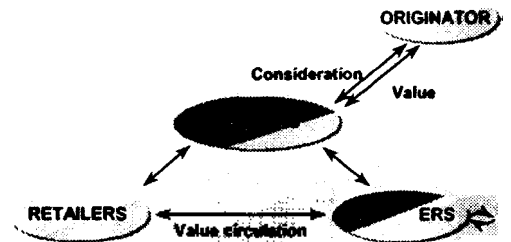
© Mondex Limited 2002

Traditional Cash



© Mondex Limited 2002

Mondex Electronic Cash



© Mondex Limited 2002

There are four key consumer benefits

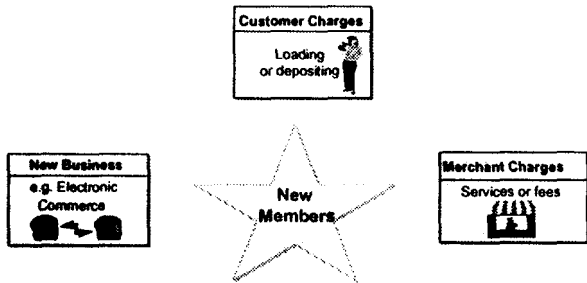
Convenience Telephone remote loading Quick and easy payment No need for change Portable		Control Budgeting
Flexibility Person to person Multi-currency		Safety Locking feature

There are four key benefits for Merchants

Savings Eliminates use for armored vehicles and cash protection Lower handling costs Space Saving		Security Ship funds to bank Less cash in till Less staff access to cash
Time saved Counting Up Efficiency Accurate Automatic		Marketing Co-branding/loyalty opportunities

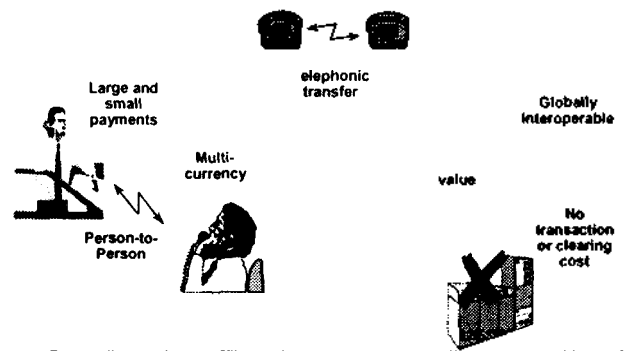
© Mondex Limited 2002

Sources of Revenue for New Members



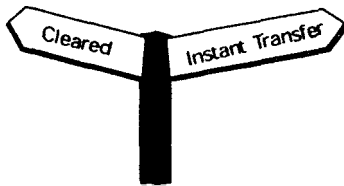
© Mondex Electronic Ltd 2001

Mondex is a Unique Product



© Mondex Electronic Ltd 2001

Clearing or Instant Value Transfer?



Fundamentally different concepts behind each approach

© Mondex Electronic Ltd 2001

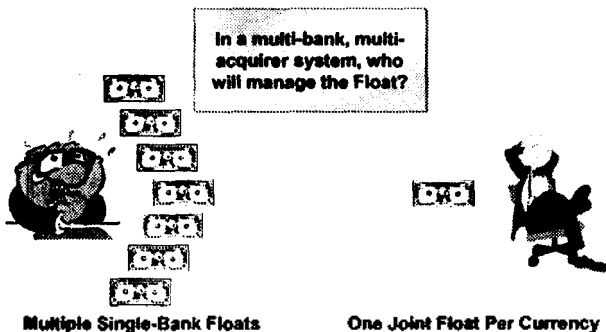
Money Supply – like physical cash, electronic cash must be controlled



For example, if electronic cash is created at the point of issue it raises fundamental Money Supply concerns

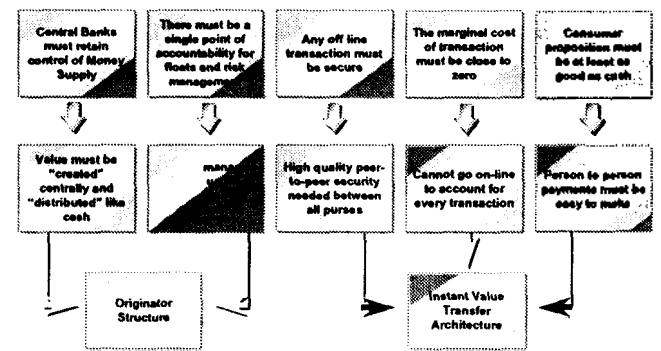
© Mondex Electronic Ltd 2001

The Manager of the "Float" has a Key Role in Securing and Guaranteeing Electronic Cash



© Mondex Electronic Ltd 2001

A Scheme Structure is Inevitable



© Mondex Electronic Ltd 2001

Mondex Cards & Devices

MONDEX

Mondex Trade Pass Card

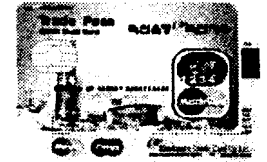
Issuer: Kookmin Bank &
Kookmin Credit Card

Launched in June, 2000

Multi-Function Cards

Contact: Mondex+M/Chip+Digital
Certificate

Contactless: Transportation



Features of Trade Pass Card

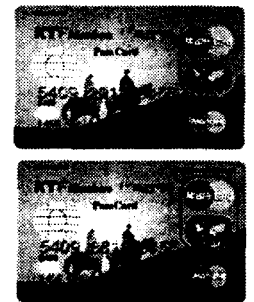
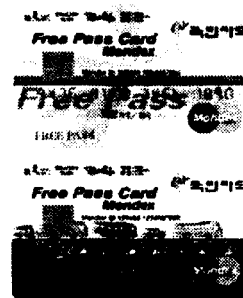
- ☐ IC Chip
 - ✓ Credit Card (M/Chip)
 - ✓ Electronic Cash (Mondex)
 - ✓ Digital Certificate

- ☐ Magnetic Stripe
 - ✓ Track II : Credit Function
 - ✓ Track III : ATM Function



- ☐ Mifare RF Chip
 - ✓ Kookmin Pass for Bus/Subway

Mondex Free Pass Card & KTF Card



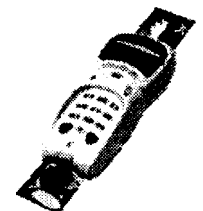
Mondex Devices: Balance Reader

- ✱ Displays balance in the default pocket of the Mondex card
- ✱ Low cost
- ✱ Easily portable



Mondex Devices: Point of Sale Terminal

- ✱ Range of potential devices
 - wallet
 - stand alone Mondex terminal
 - integrated EPOS terminal
 - networked system
- ✱ Possible link to bank



Mondex Devices: Wallet

Locking and unlocking of Mondex cards

Value transfer between two Mondex cards

Display

balance in all pockets

payment log

Set and change personal code PCN

Some wallets contain:

a calculator

an alarm



© Mondex Corp. Limited 2002

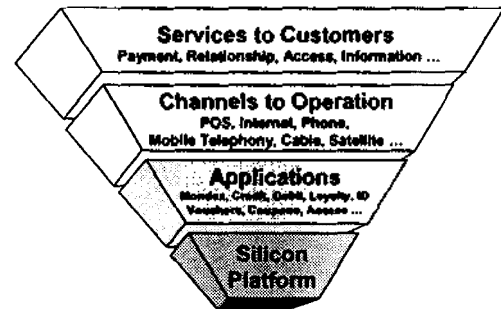


The Future Direction of Mondex

© Mondex Corp. Limited 2002

MONDEX

... Mondex is moving towards



© Mondex Corp. Limited 2002

Myself

Mr. Dohyung Kim

Technical Marketing manager, Mondex Korea

Tel: +82-2-399-7049

Fax: +82-2-399-7077

Email: dhkim@MondexKorea.com

© Mondex Corp. Limited 2002

Mondex Electronic Cash

CALS/EC Korea Conference 2002
January, 2002
Seoul, Korea

© Mondex Corp. Limited 2002

MONDEX