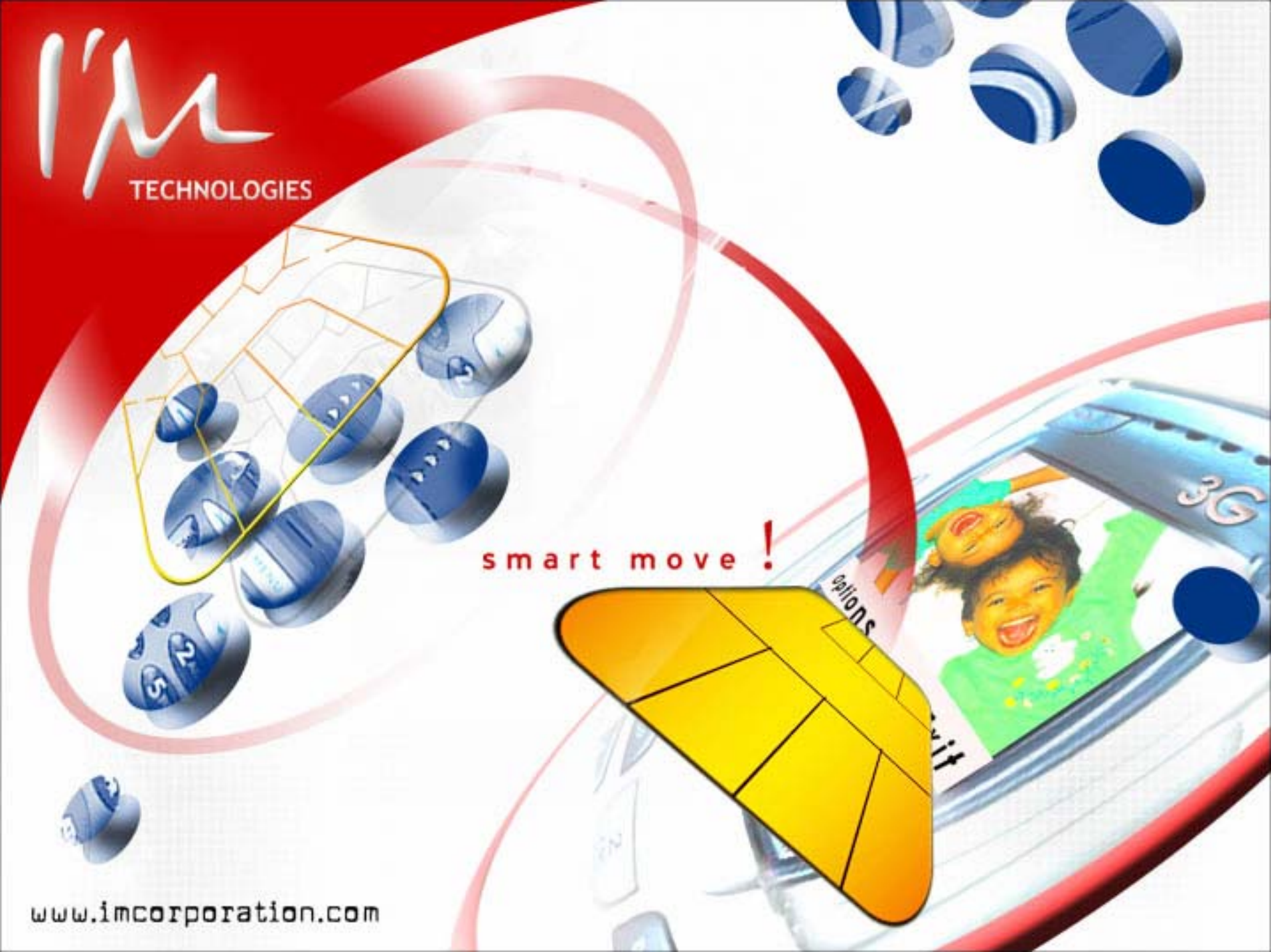


im

TECHNOLOGIES

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## Agenda

1. Introduction of I'M Tech
2. Evolution of PHS
3. The importance of PHS SIM
4. The application on PHS SIM
5. The needs for standardization of PHS SIM
6. Interoperability of PHS / GSM / CDMA2000
7. The effort of PHS MoU community on PHS SIM
8. How to get started on PHS SIM?
9. Issue of proprietary PHS SIM
10. How to get started on standardization of PHS SIM

## 1. Introduction of I'M Technologies

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- Editor of 3GPP2 C.S0023-B R-UIM specification
- Contributor of S.P0049 R-UIM test conformance
- Contributor of 3GPP TS11.10 rel99 STK test conformance.

## 1. Introduction of I'M Technologies

I'M TECHNOLOGIES was founded in Aug 2000.  
Specialized on,

- |          |                    |
|----------|--------------------|
| GSM      | - SIM Card         |
| CDMA2000 | - R-UIM Card       |
| W-CDMA   | - UICC/USIM Card   |
| Java™    | - Java Card for 3G |
| Wifi     | - WLAN Smart Card  |
| Banking  | - EMV Card         |
| IDCard   | - GOS Card         |

## 1. Introduction of I'M Technologies

Specifications contributed,

3GPP TS 11.10 rel 99 Sim toolkit test conformance

3GPP TS 31.122 rel6 USIM test conformance

ETSI SCP TS102.230 rel7 UICC test conformance

3GPP2 S.C0023-B R-UIM specification

3GPP2 S.P0049-0 R-UIM test conformance

## 2. Evolution of PHS

The subscribers of PHS have grown tremendously over the last few years.

This new technology is becoming a real threat to existing GSM and CDMA service operators.

PHS operator will expect the implementation of SIM card into the PHS device.

The benefit is to enable the portability of subscriber's identity information and reduce PHS devices investment.

### 3. The importance of PHS SIM

- Subscriber information is portable.
- Secret key is kept confidential inside the card.
- The PHS - authentication algorithm is kept within the card.
- Ability to provision subscriber services over the air.
- Ability to provide Value-Added Service (SIM TOOLKIT) to PHS device.
- Allow Service Provider to manage PHS SIM inventory than handset inventory. Therefore, reduce the investment of handsets.
- To ensure readability of the content/format of file is consistent..

#### 4. The applications on PHS SIM.

- Phonebook and SMS portability
- Dynamic Menu residing on SIM.
- Secure SMS.
- Preferred Roaming Partner Services
- Tri-Mode – PHS/CDMA/GSM SIM Card.
- SIM locked/unlocked capability
- 5V-1.8V (6mA ~ 200uA) SIM capability

## 5. The needs for standardization of PHS SIM

Standardization will ensure the openness of the PHS SIM technology and the expertise advice from international smart card player.

Standardization of PHS SIM will provide public more information and confident to the PHS technology.

Continuous improvement and up to date information can be provided through the technical working group.

## 6. Interoperability of PHS/GSM/CDMA2000

Dual Mode or Tri Mode SIM card is becoming a popular requirement for service provider.

With the standardization of PHS SIM card, Service Provider who has Dual/Tri mode Technology can provide a PHS SIM with R-UIM and GSM capable card.

This will tremendously reduced the logistic issue of providing multiple types of SIM card to subscriber.

## 7. The effort of PHS MoU community on PHS SIM.

We need the supports of PHS

- service provider
- network provider
- device provider
- sim card provider

## 8. Lessons on CDMA2000 R-UIM

R-UIM standardization is driven by China Unicom requirement and Qualcomm continuous contribution of standards.

It is actively participated by sim card vendors and handsets manufacturers.

Over the last 2 years, there is an increased demand of applications that R-UIM card can support.

CDMA2000 Service providers are able to compete aggressively with GSM market and capture a significant amount of GSM subscriber base.

## 9. Issue of proprietary PHS SIM.

Threat arises, if PHS MoU is unable to bring partners into believing the importance of contributing and standardization of PHS SIM card.

Threat 1 – close door development will lead to proprietary implementation, result in several versions of PHS SIM cards available in the market. This will confuse PHS service provider and enable industrial watchers to capitalize on the weakness of PHS service provider.

Threat 2 – Inexperience implementation of PHS SIM behaviour will result in suicide technology and limit the growth of PHS SIM.

Threat 3 – Service Provider will be unable to realize the benefit of the PHS SIM card if card A is only workable on handset A and etc. therefore, logistic will become an issue to Service provider.

## 10. How to get started on standardization of PHS SIM.

Existing company who has started any close-door PHS SIM should submit their specification for review and comment.

Members who have any IPR of PHS SIM must declare to the TWG.

PHS MoU must elect a chairman to host the PHS SIM TWG ad-hoc.

The chairman is task to ensure active member's contribution is taken care and PHS SIM specification is up to date.

## The immediate work items –

- To standardize the PHS authentication command and the secret key format
- To standardize the Dedicate File and Elementary Files IDs.
- To agree on the content of each EF files
- To standardize the PHS SIM test conformance.
- To educate service provider the new PHS SIM benefit and any new requirement.

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Thank You !