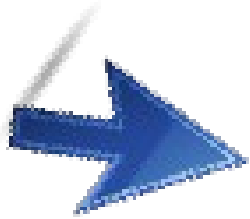
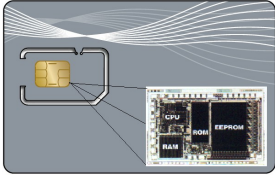


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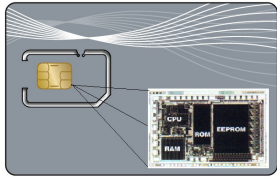
SIM Card, SIM based Applications & Solutions

*June 8th, 2010
Dakar, Senegal*

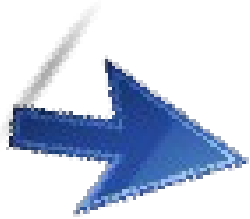
Presented by: Assane KEBE
Mobile Technical Consultant
Oberthur Technologies Senegal
assanekebe@gmail.com / +221 77 450 8354



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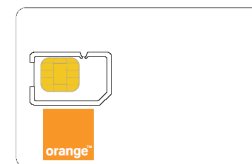
SIM Card, SIM based Applications & Solutions

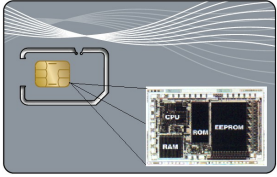


(U)SIM Applications and Solutions

AGENDA

- **STK Application**
- **Javacard**
- **Applications & Solutions overview**
- **Innovation and convergence**

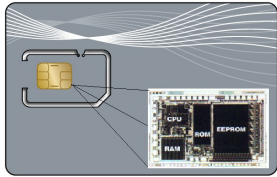




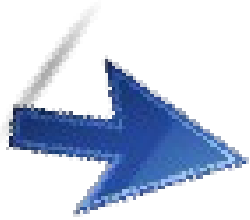
(U)SIM applications – STK application

- **STK application = Sim ToolKit application**
 - **Application such as SIM or USIM**
 - **Provides STK commands for VAS handling**
 - *Menu select, get input, Send SMS, Setup Call, etc.*
 - *3GPP 11.14 standard*
 - **Talks to SIM, USIM applications**
 - **Several applets can be handled**
 - *Thanks to the AID (Application ID)*

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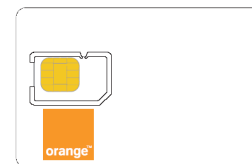
SIM Card, SIM based Applications & Solutions



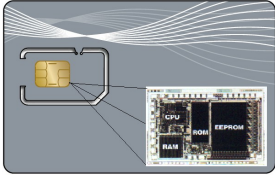
(U)SIM Applications and Solutions

AGENDA

- STK Application
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(U)SIM applications – Javacard



Terminology

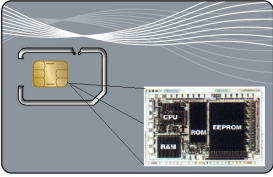
- The Javacard technology
- The Javacard language
- A Javacard compliant card

SUN issue

- Specs, JDK, standard tests
- Latest version is 2.2

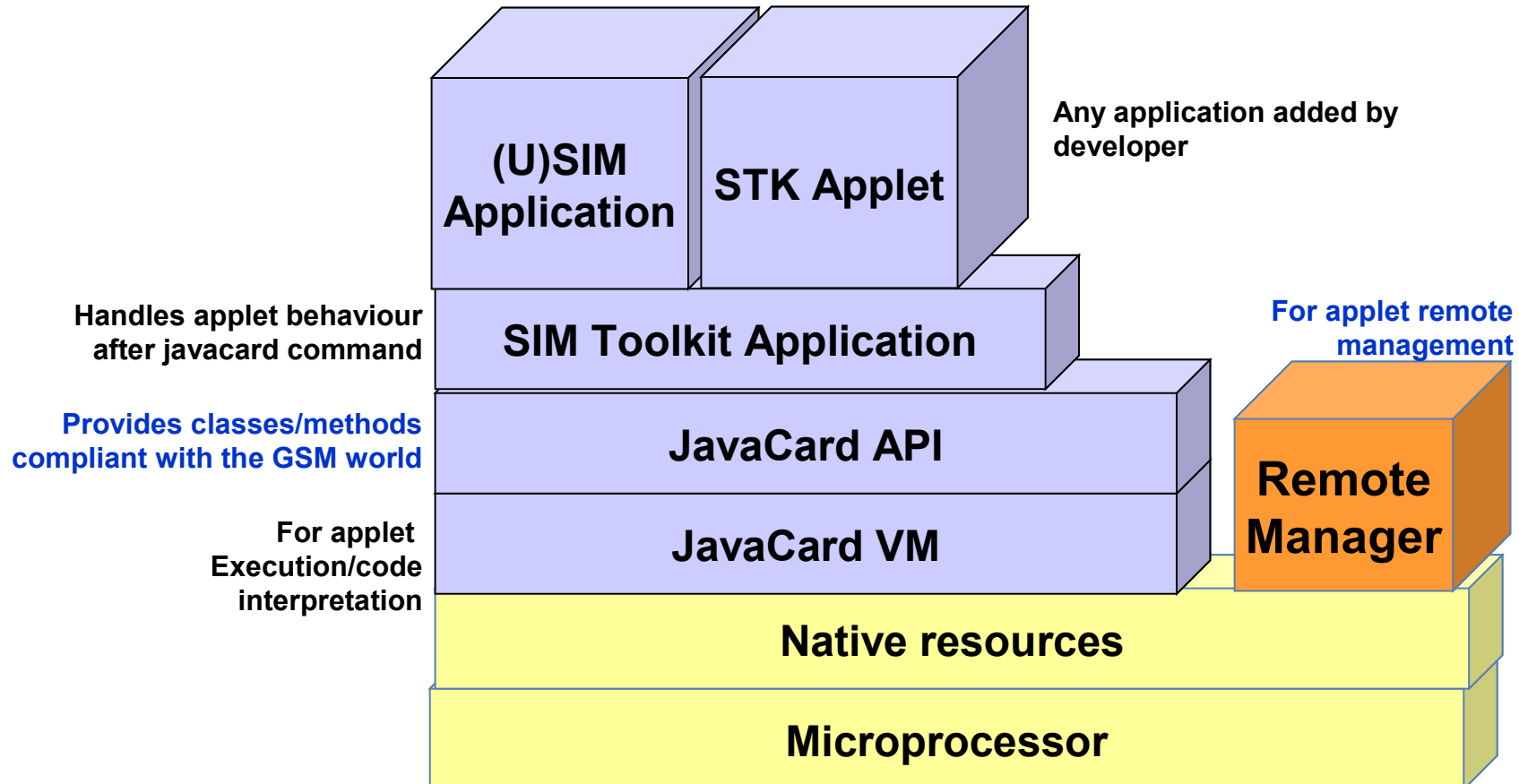
JCF

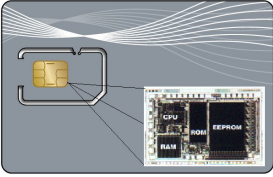
- Standards evolvment



(U)SIM applications – Javacard

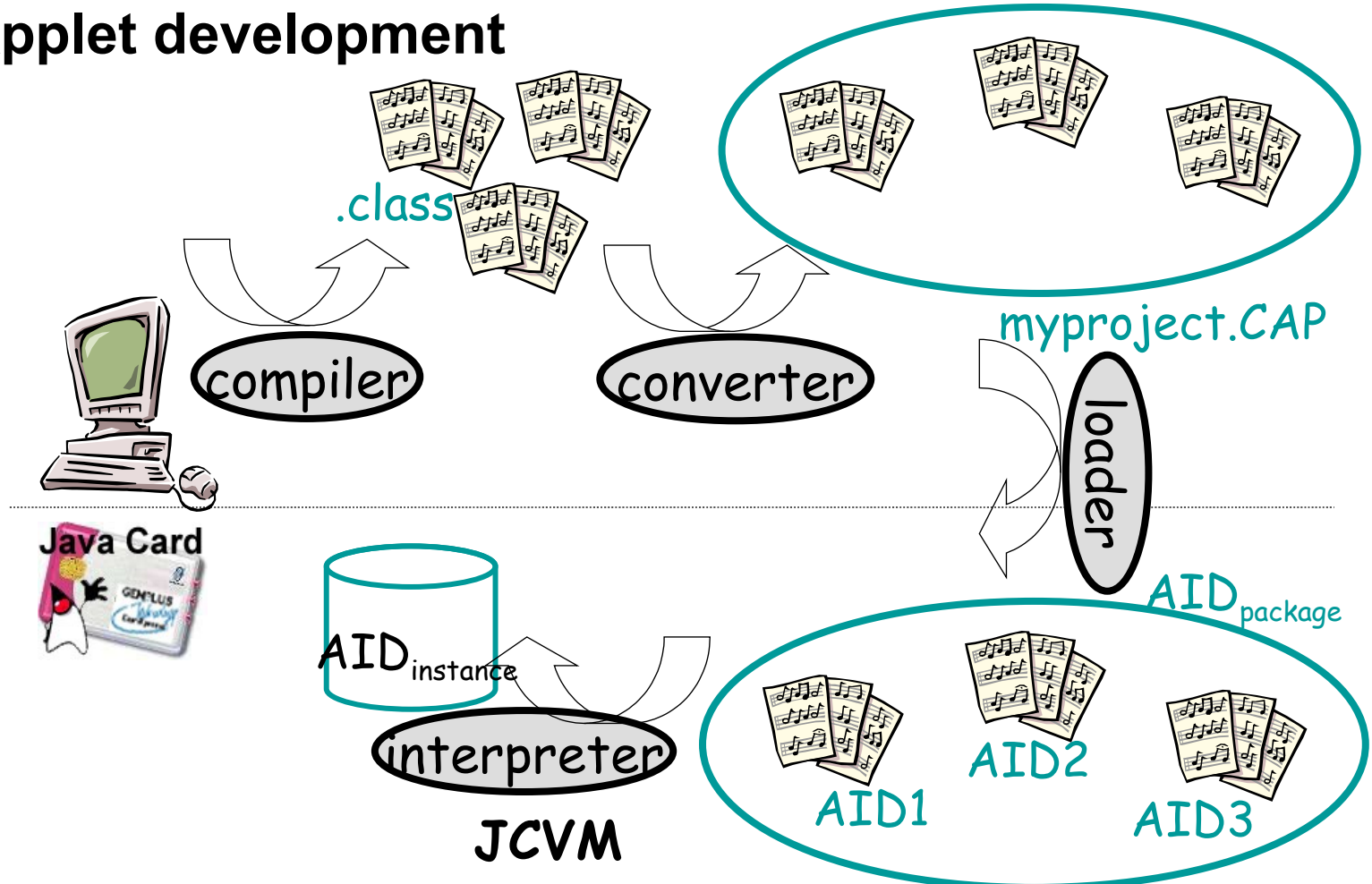
Java (U)SIM card Architecture overview



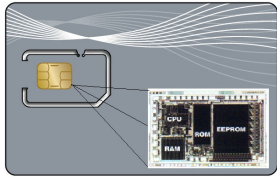


(U)SIM applications – Javacard

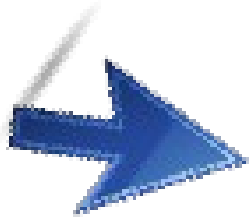
Applet development



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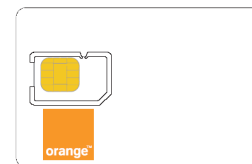
SIM Card, SIM based Applications & Solutions

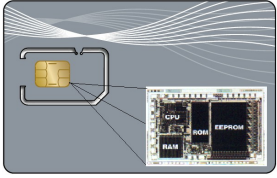


(U)SIM Applications and Solutions

AGENDA

- STK Application
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(U)SIM applications & solutions overview

(1/3)



Contact Management

Extended PhoneBook

- ◆ 3G phonebook on 2G card

Renumbering

Reformat SIM contacts according to provided rule

Phonebook backup

Save/Restore
SIM+phone contacts

Data Management

Extended SMS

Better SMS management

SIM Vault

Single code for all sensitive data

Connectivity

IMEI Tracking

Server notification

GPRS configs Auto download

IMEI Blocking

SIM/Terminal pairing

Street reload

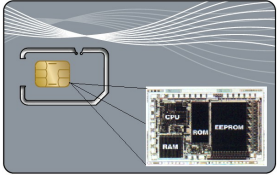
Airtime reload SIM to SIM (Seddoo/Easy)

Home Zone

Location based message/billing

Dual IMSI

2 lines on a single SIM card



(U)SIM applications & solutions overview

(2/3)

Call Control

Advanced Control

Call blocking, rejection
PIN Protection

Busy Calls

Predefined SMS when user
is busy

Roaming

Smart Roaming

Connexion to preferred
network while roaming

Roaming Broker

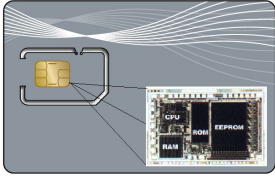
Roaming line available
on same card

Miscellaneous

SIM Shortcut

Launches STK via a
shortcode



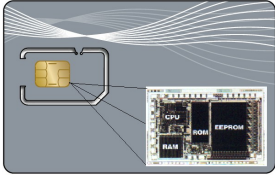


(U)SIM applications & solutions overview (3/3)

(U)SIM Browsers

- **Browser to deliver VAS**
- **Send SMS/USSD/Setup Call**
- **Requests sent to content provider**
 - *Operator USSD platform or external provider*
- **Closed browser**
 - *Static content, No communication with gateway*
- **Open Broser**
 - *Dynamic content updated by a gateway*
 - *In-house or ASP mode*

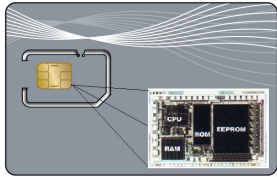
(U)SIM applications & solutions overview (3/3)



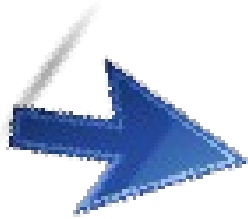
Main issues for a competitive operator

- **Browser on the card (Open or closed)**
- **Phonebook backup Solution**
 - *On-card application + remote server*
- **OTA management capability**
 - *Either in-house or ASP*

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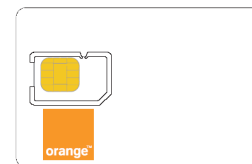
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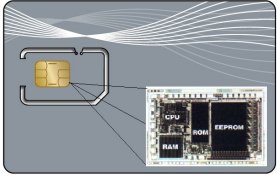


(U)SIM Applications and Solutions

AGENDA

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(U)SIM applications & solutions overview

(3/3)



(U)SIM Innovation & Convergence

NFC (Near Field Communication)

Contactless applications

Standards by ETSI/3GPP/OMA

Identity (office, subway access)

Payment

Media identification

Handset dependent (emulation)

SCWS

WebSIM

WEBServer implemented onto the SIM card

Resources stored inside the SIM

(HTML, images, icons ...)

Servlets based on SCWS (ETSI standards)

Contents updated via a server