



**gemalto**  
security to be free

## Telecom Product & Technology Training Catalog

*“The fastest way to get up to speed”*

Gemalto Product Training Department



## **GEMALTO TELECOM TRAINING OFFER**

### **- A word from Olivier Piou**



With well over a billion SIMs, USIMs and RUIMs provided to mobile network operators' since the birth of modern digital wireless telecommunication systems, Gemalto is really experienced in the mobile telecoms market. We have a strong track record in providing our customers with field proven solutions to help raise revenue and create customer loyalty. These solutions are based on both our own products and services and those of our partners, with numerous different combinations of cards, software, personalization and services.

The role of Gemalto's training department is to communicate to your company, employees and partners on how smart card technology works, and how to get the most from its potential, in your specific environment, by delivering professional training.

We use well established teaching techniques to ensure the fastest way for our delegates to become operational. And help you discover SIM, USIM and RUIM card environments, for a rapid practical launch of effective SIM-based services.

We have dedicated trainers to explore the full potential of these smart-card-centric products and services, to discover the maximum benefit from the products and solutions in the minimum amount of time, and efficient methods on product usage to simplify your day-to-day job.

We insist on quality in the design and delivery of our courses and rely on strong processes to ensure customer satisfaction

This catalogue lists the most extensive range of smart card training in the industry.

If you would like to find out more, please contact our sales team or visit us on-line at: [www.gemalto.com/training](http://www.gemalto.com/training)

Gemalto is committed to providing excellent value for money and the best smart-card-based training around.

To make you and your company successful.

**Olivier Piou**  
Gemalto CEO

## Dedicated training teams and training centers

### Dedicated Training Facilities

- ✦ Located in France, Singapore.
- ✦ Hotels & Restaurants close by offer the possibility to relax after a stimulating day of training.
- ✦ Next to Gemalto's main R&D facilities, with possibilities to visit our close-by production sites, and to organize meetings with local staff from marketing, product management, services, or other teams.
- ✦ With fully equipped rooms including integrated PCs in a quiet and discreet learning environment, away from the day-to-day bustle of the office.
- ✦ Travel & Accommodation assistance can be provided.

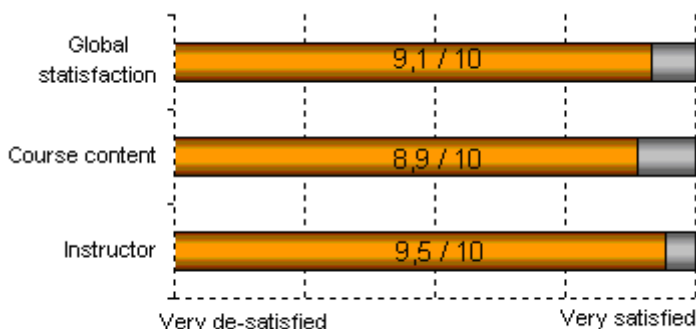


### A dedicated training team:

- ✦ Dedicated trainers working closely with Gemalto analysts, R&D and development teams to continually update their market and technical product knowledge; ensuring that seminar delegates get the most from their Gemalto training experience.

### Customer Satisfaction:

- ✦ Customer satisfaction is of utmost importance to Gemalto. We are always listening to our customers and feedback is retrieved through training evaluation, to ensure continuous improvement.



Our customer's satisfaction has been above 9 out of 10, with almost 1100 people trained in 120 sessions, addressing more than 80 Mobile network key contributor companies.

Source Gemalto

## A complete training offer for smart-card-based solutions & technologies



Gemalto can help you **get up to speed in the fastest possible time** with high-quality training courses, to discover new possibilities, speed up time-to-market, and rapidly get the most from your solutions

### **Benefit from Gemalto's professional team**

#### **Experience in wireless services**

Each year, operators, infrastructure manufacturers and application development companies benefited from training at Gemalto or in-house.

#### **Complete training offer**

Includes fundamentals & technology, usage & administration, development & support courses.

#### **Technologies covered:**

SIM, USIM, RUIM, Java Card, OTA platform solutions, Security & Cryptography, Services development, etc

#### **Who should attend:**

Courses are adapted to specific audiences such as decision makers, project & SIM managers, administrators, developers, etc.

#### **Adapted to your needs**

Standard courses are regularly scheduled at Gemalto or on-site. Customized training adapted to your specific needs can also be proposed.

## E-LEARNING offer



Learn about smartcards anytime, anywhere, with the Gemalto on-line e-learning offer on [www.gemalto.com/training](http://www.gemalto.com/training)

All our web-based modules include animated presentations, commented by professional trainers, with demos and interactive quizzes, so you can measure your own progression.

E-Vouchers can be purchased on line from our webstore on Gemalto.com, or from your Gemalto representative.

Your e-voucher will give you a 1 year access.

See below, currently available courses:

Web Based Training	Validity
<b>e-Learning</b>	
SIM, STK & OTA Basics (e1001I)	1 year validity, Anytime, from Anywhere
USIM in 3G Networks (e1002I)	1 year validity, Anytime, from Anywhere
USIM Standards "Release 6" Evolutions (e10015S)	1 year validity, Anytime, from Anywhere

For more details or a free preview, visit us on [www.gemalto.com/training/e-learning.html](http://www.gemalto.com/training/e-learning.html)

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# Fundamentals & technology



## SIM & Mobile Services – a crash course

### Objectives:

At the end of this course you will:

- ★ **Have an overview on VAS & related technologies**
- ★ **Benefit from field experience on existing VAS solutions**
- ★ **Understand issues for secure delivery**
- ★ **Be able to evaluate future State-of-the-Art technologies & Services**

### Key Topics:

- ★ USIM
- ★ UICC
- ★ SIM
- ★ UICC & USIM
- ★ 2G - 2.5G - 3G
- ★ Java Card
- ★ J2ME
- ★ OTA
- ★ Security & M-Commerce
- ★ SIM Toolkit Applications

### Who should attend:

- ★ Marketing Staff
- ★ Project Managers
- ★ IT Managers



*To provide an attractive Value-Added-Services (VAS) offer to your customers, you need to understand the important role of smart card technologies in their implementation, operation and security. Benefit from Gemalto's expertise in VAS design and long experience in the Wireless arena*

*This one-day seminar allows you to study recent services and imagine new kinds of services testing your own services*

### Each training session consists of:

- ★ A complete course manual

### Pre-requisites:

- ★ None
- ★ This course is held in English

**Duration:** 1 Day

### Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

### Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

### Day 1

#### Role of the SIM Card in Wireless Networks

- ✦ Basic functions of the SIM
- ✦ Subscriber Identification & Authentication in the GSM network
- ✦ Basic services provided by the SIM
- ✦ Value Added Services (VAS) in the SIM

#### SIM Card Architecture, Operation & Applications

- ✦ SIM card architecture
- ✦ Pre & post-issuance data overview
- ✦ Operation modes: GSM; VAS; Over-The-Air remote SIM access

#### Security in Wireless Networks

- ✦ Security concepts: Identification, Authentication, Integrity, Confidentiality, Non-Repudiation
- ✦ Current Role of SIM card in Security:  
PIN codes, Authentication & voice encryption ; OTA ; Mobile Commerce...
- ✦ Evolving Security Roles: PKI; WLAN

#### Technologies & Standards

- ✦ Introduction to Main technologies, standards and governing organizations
- ✦ Main smart-card related technologies: SIM Toolkit, Java Card, SIM browsing, OTA, GP...

#### Today's Value Added Services: Examples and Benefits

- ✦ Real-life examples of deployed services: Architecture and different actors
- ✦ Benefits for Network operators, subscribers, content providers

#### The Evolving Technologies & Services

- ✦ Introduction to future developments in network and card-related standards & technologies:  
High Capacity & High speed SIMs; Smart Card Web Server; NFC...



# Usage & Benefits of SIM Card for MVNO

## Objectives:

At the end of this course you will:

- ✦ Understand the role of the SIM in a wireless environment for differentiation purposes
- ✦ Be able to optimize cost of operation, distribution & logistics
- ✦ Have an overview on Value-added-Services & their related technologies
- ✦ Benefit from field experience on existing VAS solutions
- ✦ Be able to evaluate future State-of-the-Art technologies & Services

## Key Topics:

- ✦ SIM
- ✦ USIM / 3G
- ✦ SIM Application Toolkit & Value-Added-Services
- ✦ Distribution of SIMs & Services
- ✦ Handset provisioning
- ✦ OTA : Remote Management & Security
- ✦ ETSI – 3GPP Standards Overview

## Who should attend:

- ✦ Marketing Staff
- ✦ Project Managers



*As a Mobile Virtual Network Operator (MVNO), it is instrumental to differentiate your offer in a cost-efficient way. To achieve this, a key asset for you is the SIM & its related Value Added Services (VAS) and Applications*

*This one-day seminar allows you to fully understand and optimize the role of the SIM in wireless environments and to evaluate services already on the market, also to understand forthcoming state-of-the-art technologies to imagine new kinds of SIM usages*

## Each training session consists of:

- ✦ A complete course manual

## Pre-requisites:

- ✦ Understanding of the wireless market
- ✦ This course is held in English

**Duration:** 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

### Day 1

#### Role of the SIM Card in your mobile environment

- ★ Basic functions of the SIM
- ★ Subscriber Identification & Authentication in the GSM network
- ★ Basic Services provided by the SIM
- ★ Value Added Services (VAS) in the SIM

#### SIM Card Architecture, Operation & Applications

- ★ SIM card architecture
- ★ Manufacturing: Pre & post-issuance data overview
- ★ Operation Modes & Security:
  - GSM with a focus on MVNO specific services & features (SPN, Roaming)
  - VAS with SIM Application Toolkit
  - Securing VAS with the SIM Card
  - Over-The-Air (OTA) remote SIM management process

#### What you should know about Technologies & Standards

- ★ Introduction to Main standards and governing organizations
- ★ Main smart-card related technologies: SIM Toolkit, Java Card, SIM browsing, OTA
- ★ Positioning of the technologies and related services

#### Today's Value Added Services in SIM: Examples and Benefits

- ★ Real-life examples of deployed services: Architecture and different actors
- Benefits for operators, subscribers, content providers.

#### How to optimize cost of Operation, Distribution & Logistics

- ★ SIM distribution to minimize logistic cost
- ★ Outsourced OTA VAS & SIM management...

#### Evolving Technologies & Services

- ★ Future developments in network and card-related standards & technologies
- ★ Potential services and role of the smart card



# SIM, STK & OTA Basics

## Objectives:

At the end of this course you will:

- ★ Have an overview of the main GSM SIM card standards.
- ★ Understand SIM card functionality.
- ★ Have an introduction on how “SIM Toolkit” applications work.
- ★ Be able to understand the “Over-The-Air” (OTA) process

## Key Topics:

- ★ SIM
- ★ ISO 7816
- ★ GSM 11.11/ 3GPP 51.011
- ★ GSM 11.14
- ★ GSM 03.48 / 3GPP 23.048
- ★ SIM APPLICATION TOOLKIT
- ★ SMS & “OTA”
- ★ AUTHENTICATION

## Who should attend:

- ★ Project Managers
- ★ IT Managers
- ★ System Implementers
- ★ Development Staff



*SIM cards play a larger role today, than simply securing access to a GSM network. They are also used as standard, secure and portable, platforms for Value added services, remotely updateable in a standard & secure way “Over-The-Air”.*

*This training course will allow you to rapidly get to know the main technologies & features of these products and begin managing your own SIM cards & Applications*

## Each training session consists of:

- ★ A Complete course manual
- ★ Practical Exercises

## Pre-requisites:

- ★ This course requires participants to have a basic knowledge of the GSM networks, as well as an electronic or computer background
- ★ This course is held in English

**Duration:** 2 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers  
 For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Trainees registration and training overview</p> <p>Gemalto in GSM                      Gemalto cards &amp; software                      Gemalto services</p> <p>Understanding SIM Cards using GXXV3 cards                      GSM 11.11 standards</p> <ul style="list-style-type: none"> <li>+ Card architecture</li> <li>+ Card life phases</li> <li>+ Memory organization</li> <li>+ Access conditions</li> <li>+ Security features</li> <li>+ Special features</li> <li>+ Command set</li> </ul> <p>Understanding SIM Application Toolkit                      GSM 11.14 Standards</p> <ul style="list-style-type: none"> <li>+ SIM Toolkit definition</li> <li>+ Use of STK applications</li> </ul>	<p>SIM Files browsing                      PIN management                      File creation</p>

Day 2	Practice
<ul style="list-style-type: none"> <li>+ SIM toolkit commands</li> <li>+ SIM toolkit protocols</li> </ul> <p>Remote management of services                      Introduction                      "Enhanced Short Messages" – GSM 23.048                      "Enhanced SMS journey" for SIM cards                      Security features</p>	<p>STK application loading &amp; testing                      with ADMIN &amp; SIM software</p> <p>Mobile &amp; network                      acknowledgement                      OTA testing using SIMu tools:                      Downloading securely GSM data                      Over-The-Air</p>



# USIM in 3G Networks

## Objectives:

At the end of this course you will:

- ✦ Understand the basic technologies, features and standards for 3G systems.
- ✦ Understand the functionality of the USIM and difference with 2G cards.
- ✦ Manage the contents of the card, simulate 3G authentication and design advanced phonebooks



*Since 3G is expected to become the dominant mode of communication system within the next couple of years, the USIM (Universal Subscriber Identity Module) implemented on the Gemalto 3G cards can be your passport to 3G networks.*

*This training allows you to understand and begin working on the USIM smart card application.*

## Key Topics:

- ✦ USIM
- ✦ UICC
- ✦ USAT
- ✦ CAT
- ✦ OTA
- ✦ Authentication, Milenage Algorithm
- ✦ GSM/3G INTERWORKING
- ✦ 3GPP & ETSI-SCP

## Who should attend:

- ✦ Project Managers
- ✦ IT Managers
- ✦ System Implementers
- ✦ Development Staff

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - GSM SIM cards
  - GSM 11.11 & 11.14 standards
- ✦ This course is held in English

**Duration:** 2 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Trainees registration and training overview</p> <p>Introduction to 3G</p> <ul style="list-style-type: none"> <li>✦ Evolution of mobile communication systems</li> <li>✦ Key points of 3G cellular System</li> </ul> <p>3G Standards</p> <ul style="list-style-type: none"> <li>✦ 3G Standards Organisations</li> <li>✦ 3G Standards Documents</li> </ul> <p>Understanding 3G Cards (Part 1)</p> <ul style="list-style-type: none"> <li>✦ UICC the 3G Card platform</li> <li>✦ Physical, Elec. &amp; trans. protocols Char.</li> <li>✦ File System</li> <li>✦ Commands</li> <li>✦ Access conditions</li> </ul>	<p>ADMIN &amp; SIMu 3G Software</p> <p>Getting started</p> <p>GSM/3G file browsing</p> <p>Access conditions assignment</p> <p>File Creation</p>
Day 2	Practice
<p>Understanding 3G Cards (Part 2)</p> <ul style="list-style-type: none"> <li>✦ USIM the 3G Application</li> <li>✦ Security Features</li> <li>✦ Authentication &amp; Key Agreement (AKA)</li> <li>✦ The 3G phonebook</li> <li>✦ USAT (basics)</li> <li>✦ OTA (basics)</li> <li>✦ 3G/GSM interworking</li> </ul> <p>Introduction to migration path to 3G</p> <p>Questions &amp; Answers session</p>	<p>3G milenage AKA Simulation</p> <p>3G phonebook design with e-mail, groups, etc.</p>



# R-UIM Cards in CDMA Networks

## Objectives:

At the end of this course you will:

- ✦ Know how to use the card administration tools to manage & help validate R-UIM Card profiles.
- ✦ Understand how to explode the R-UIM card as a VAS platform using CCAT – UTK.
- ✦ Understand how to perform Remote Administration of the R-UIM parameters.
- ✦ Understand what are the coming evolutions around this technology



*Optimize the management of your R-UIM cards to ease the commercial launch of CDMA cards & their services. Take the most from the R-UIM platform in a CDMA – GSM environment*

*This 2-day training session includes many practical sessions with CDMA Cards & Card administration tool*

## Key Topics:

- ✦ R-UIM File Systems & Commands
- ✦ File Security (Access Conditions)
- ✦ CCAT, UTK
- ✦ OTAF (OTAPA/OTASP)
- ✦ Roaming in GSM

## Who should attend:

- ✦ Project managers
- ✦ R-UIM manager
- ✦ Validation teams

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - CDMA Networks
- ✦ This course is held in English

**Duration:** 2 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Introduction to CDMA</p> <ul style="list-style-type: none"> <li>✦ Wireless Technologies</li> <li>✦ CDMA Technology</li> <li>✦ Standards</li> </ul> <p>R-UIM Basics (C.S0023)</p> <ul style="list-style-type: none"> <li>✦ R-UIM card Architecture / Basic procedures</li> <li>✦ Subscriber Identification &amp; Authentication on the CDMA network</li> <li>✦ GUIMID</li> <li>✦ R-UIM Card Commands</li> <li>✦ Basic profile example</li> </ul> <p>R-UIM and VAS (CCAT – UTK)</p> <ul style="list-style-type: none"> <li>✦ CCAT Standard (C.S0035)</li> <li>✦ UTK</li> <li>✦ CCAT vs. UTK</li> <li>✦ Real use cases</li> </ul> <p>CDMA Data networks and the R-UIM</p> <ul style="list-style-type: none"> <li>✦ EVDO and the R-UIM role</li> <li>✦ SimpleIP and the R-UIM role</li> <li>✦ MobileIP and the R-UIM role</li> </ul>	<p>Explore &amp; Manage the files and content of R-UIM cards</p> <p>Test the authentication method of the card and the CDMA network</p> <p>Identify the main R-UIM files</p> <p>Demo about CCAT/UTK applet Loading an applet to the R-UIM Card</p> <p>Browse the R-UIM files needed and perform the authentication for these use cases</p>

Day 2	Practice
<p>CDMA Remote Management</p> <ul style="list-style-type: none"> <li>✦ OTAF (OTAPA/OTASP) mechanism</li> <li>✦ OSMS mechanism</li> </ul> <p>Roaming: Introduction to GSM</p> <ul style="list-style-type: none"> <li>✦ 2G GSM Technology</li> <li>✦ 2G Standards</li> <li>✦ Authentication (parameters needed)</li> <li>✦ GSM Features: STK, OTA Capability</li> </ul> <p>What's next?</p> <ul style="list-style-type: none"> <li>✦ CSIM Application</li> <li>✦ Open Market Handset Specifications</li> <li>✦ AKA process for CDMA (WCDMA Roaming)</li> <li>✦ Enhanced Phonebook</li> <li>✦ ISIM for CDMA</li> </ul>	<p>Perform OTAF updates using the OTAPA/OTASP Simulator</p> <p>Explore the GSM file system Perform GSM authentication</p>



# (U)SIM Standards Evolutions: Telecom “Rel-6”- Java Card - Global Platform

**Objectives:**

At the end of this course you will:

- ✦ Be able to state the main evolutions of Telecom Card ETSI-3GPP “Rel-6” standards
- ✦ Have an overview of the new smart card’s: Java Card 2.2.1 & Global Platform 2.1.1 functionalities
- ✦ Understand the benefits that new products will bring to: deployment; administration; and evolution-proof issues
- ✦ Have examples of future services based on new standards and Gemalto card features

**Key Topics:**

- ✦ ETSI-3GPP Standards
- ✦ Global Platform 2.1
- ✦ Java Card 2.2 (RMI, Garbage Collector)
- ✦ UICC/SIM/USIM
- ✦ Toolkit
- ✦ “OTA”
- ✦ Logical Channels
- ✦ CAT-TP
- ✦ Advanced Services (Device Management, DRM, J2ME, Phonebook )



New SIM card standards & specifications naming and evolutions are often confusing and finding information, or anticipating new service opportunities becomes more & more difficult.

This training course will give you an overview on the new standards evolutions, soon to be released product features, and future service opportunities.

**Who should attend:**

- ✦ R&D Managers
- ✦ Project Managers
- ✦ IT Managers
- ✦ Development Staff

**Each training session consists of:**

- ✦ A Complete course manual

**Pre-requisites:**

- ✦ Understanding This course requires participants to have a working knowledge of: “Release 5” ETSI/3GPP/ GP
- ✦ This course is held in English

**Duration:** 1 Day

**Course fee:**

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

**Location:**

Gemalto Training Centers. For on-site training, please contact us.

## Course Schedule:

### Morning

#### Introduction

##### Major Evolutions of Telecom Card Standards

- ★ What are changes in standards versions: ETSI/3GPP/Global Platform/Java Card

##### Structure & Naming of New Card Standards

- ★ Java Card “2.2.1” Standards
- ★ Global Platform “2.1.1” Standards
- ★ ETSI/3GPP “Release 6” Standards

##### Implementation of Standards in Telecom Cards

- ★ File System & Administration
- ★ Toolkit features & API
- ★ OTA security and remote card administration
- ★ Transport Protocol (CAT-TP)

#### Detailed Descriptions

##### New Java Card Features

- ★ Garbage Collector
- ★ Remote Method Invocation

##### New Global Platform Features

- ★ Extradition

### Afternoon

##### UICC, SIM, USIM: NAA, File Systems & Admin

- ★ Create/Delete/Re-size APDU Commands
- ★ Large Files

##### New Toolkit Events & Proactive Commands

- ★ File Update/NAA Change...
- ★ Retrieve & Submit MM

##### Latest API Functions

##### New OTA Features

- ★ Transport Protocol (CAT-TP)
- ★ Security (MSL...)
- ★ Expanded Format



# Understanding ISIM Cards for IMS Networks

## Objectives:

At the end of this course you will:

- ✦ Have a clear understanding of what is ISIM
- ✦ Understand the Role that ISIM plays in an IMS
- ✦ Have real examples what can be done with IMS

## Key Topics:

- ✦ IMS
- ✦ ISIM
- ✦ TCP/IP
- ✦ SIP

## Who should attend:

- ✦ Technical Marketer
- ✦ R&D Managers
- ✦ Project Managers
- ✦ IT Managers
- ✦ Development Staff



*IMS is the network architecture that will shortly allow convergence between mobile and fixed networks. Understanding the overall architecture, protocol, and security around the ISIM smart card, will allow you to anticipate future service opportunities.*

*This training course provides an overview of the IMS network, including use cases and details on the role that the UICC plays*

## Each training session consists of:

- ✦ A complete course manual

## Pre-requisites:

- ✦ Basic understanding of:
  - IP protocol & network
- ✦ This course is held in English

## Duration: 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Morning
Introduction
Services Offer via IMS
★ Presence Management
★ Media Switching
★ Caller add-on information
Gemalto value proposal
★ ISIM authentication
★ On card SIP user agent
★ Call processing repository
IMS Technologies
★ IMS role
★ IMS and mobility

Afternoon
IMS Technologies
★ IMS Network Components
★ IMS Protocols
★ SIP
IMS and UICC standardisation



# Understanding BIP

## Bearer Independent Protocol

### Objectives:

At the end of this course you will:

- ✦ Have a clear understanding of the new capacity of data exchange using BIP & CAT-TP standards
- ✦ Understand the BIP & CAT-TP implementation in the Gemalto cards
- ✦ Have examples of data communication between a server and a card



*Over-the-Air access to USIM cards has relied on the low-bandwidth SMS channel for several years. With the standardised BIP protocol, faster data exchanges can be made to access card content.*

*This training course will give you an overview of the BIP and CAT-TP standards, and how this new high speed packet protocol will help download applications & remotely manage your card content more efficiently*

### Key Topics:

- ✦ BIP & CAT-TP Standards
- ✦ GPRS/UMTS
- ✦ UDP/IP
- ✦ Toolkit
- ✦ SDU/PDU
- ✦ Segmentation
- ✦ CAT-TP security layer

### Who should attend:

- ✦ R&D Managers
- ✦ Project Managers
- ✦ IT Managers
- ✦ Development Staff

### Each training session consists of:

- ✦ A complete course manual

### Pre-requisites:

- ✦ GSM SIM cards
- ✦ Toolkit mechanism
- ✦ Over The Air mechanism & security
- ✦ This course is held in English

**Duration:** 1 Day

### Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

### Location:

Gemalto Training Centers. For on-site training, please contact us.

## Course Schedule:

### Morning

#### Introduction

- ✦ What is BIP & CAT-TP?
- ✦ Card Standards dedicated to BIP
- ✦ Key benefits for network operators

#### The BIP communication

- ✦ Proactive commands and events
- ✦ BIP buffers
- ✦ Open & close channel
- ✦ Send & receive data

#### CAT-TP

- ✦ CAT-TP messages
- ✦ Opening a CAT-TP session
- ✦ What is the segmentation
- ✦ Sequence and acknowledgement number
- ✦ Re-transmission and time-out mechanisms
- ✦ Window management

### Afternoon

#### Secured packet

- ✦ How to secure your CAT-TP messages

#### The PUSH mechanism + RAM + RFM

- ✦ The Push mechanism to open a BIP channel from the platform
- ✦ The available commands for RAM & RFM

#### Configuration

- ✦ How to configure the EF GPRS

#### Performances

- ✦ BIP performances vs SMS

#### Mobiles

- ✦ Available mobiles on the market



# Understanding Smart Card Web Server Technology

## Objectives:

At the end of this course you will:

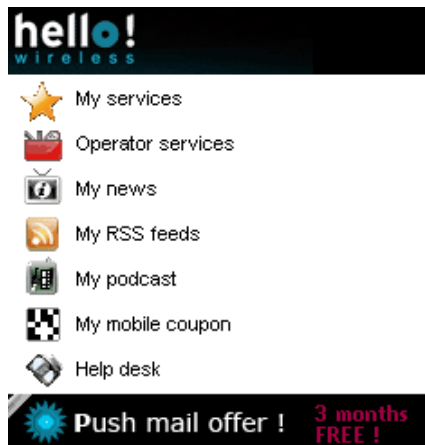
- ★ **Have an overview on SCWS technology, how it works & what it's used for**
- ★ **Understand the card & network architecture and associated standards for an SCWS solution**
- ★ **Have an overview of remote management of SCWS content**
- ★ **Be able to describe examples of SCWS use cases**

## Key Topics:

- ★ Smart Card Web Server
- ★ SIM Visual Interface
- ★ Remote Card Administration over TCP-IP
- ★ OMA, ETSI Standards
- ★ SCWS & Card Memory (NAND...)
- ★ Servlet customisation overview

## Who should attend:

- ★ Marketing Staff
- ★ Project Managers
- ★ IT Managers



*Boost service usage via a user-friendly interface allowing service discovery and easy access to content. Operators now have the opportunity to present all their services, from whichever location (network or local), in the same place, thanks to the Smart Card Web Server (SCWS) technology. This one day seminar will allow you to understand what we can do with this technology, how the solutions can be implemented, and gives examples of real-life use cases*

## Each training session consists of:

- ★ A complete course manual
- ★ Demonstrations

## Pre-requisites:

- ★ A basic knowledge of mobile networks would be useful
- ★ This course is held in English

**Duration:** 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Demos
<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>✦ What is Smart Card Web Server (SCWS) technology</li> <li>✦ What is SCWS technology used for:                             <ul style="list-style-type: none"> <li>- Handset Home-screen management; SIM Visual Interface (SVI) FOR Services Portal, Contactless User Interface...</li> </ul> </li> <li>✦ Overall Architecture (Card-Handset-Server...)</li> <li>✦ Remote management of SCWS solutions</li> </ul> <p><b>SCWS Technology in the Card</b></p> <ul style="list-style-type: none"> <li>✦ How SCWS fits into the SIM card: Positioning of the solution within OS</li> <li>✦ SIM – Mobile Protocols</li> <li>✦ Standards: OMA, ETSI, Servlet API</li> <li>✦ Handset Specifics &amp; Requirements</li> <li>✦ How data (web pages) is stored in File systems                             <ul style="list-style-type: none"> <li>- Non-NAND Flash cards (MM ready)</li> <li>- NAND Flash “Multimedia SIM” cards (Full MM)</li> </ul> </li> <li>✦ What are Servlets and what are they used for?</li> </ul> <p><b>Remote Management of SCWS-based Solutions</b></p> <ul style="list-style-type: none"> <li>✦ Classic OTA architecture: Push vs Pull mechanism</li> <li>✦ Remote Management Security Protocols                             <ul style="list-style-type: none"> <li>- 23.048 to https</li> </ul> </li> <li>✦ OTA Proxy overview</li> <li>✦ Applet Polling overview</li> <li>✦ “LiveServices” for remote management of SCWS solutions                             <ul style="list-style-type: none"> <li>- Overview of solution: Auto-provisioning; SVI &amp; Home-screen Segmentation management...</li> <li>- Service Rendering &amp; Usage tracking overview</li> </ul> </li> </ul> <p><b>SCWS Use Cases: Presentation &amp; Demos</b></p> <ul style="list-style-type: none"> <li>✦ Segmented Services Portal; Handset Home-screen; Advertising; Content Store, TV-voting; News Updates; Remote Management of SCWS use cases</li> </ul>	<p>Demo: Loading static pages in the card using Card Administration Tool</p> <p>Demos: Browsing Static pages (FAQ, News) offline &amp; online</p> <p>Demo of LiveServices solution</p> <p>Demos: Operator services show-case: Advertising; TV-voting; News...</p>



# NFC Technologies

## Objectives:

At the end of this course you will:

- ✦ **Have an overview of NFC (Near Field Communication) use cases, architectures, requirements.**
- ✦ **Learn the various contactless technologies (mifare, type A, type B, felica) and RFID (ISO 15693)**
- ✦ **Have a clear vision of the security requirements**
- ✦ **Understand the Over The Air personalization**

## Key Topics:

- ✦ Contactless technologies
- ✦ NFC (Near Field Communication)
- ✦ OTA
- ✦ RFID
- ✦ Co-operation between mobile operators, transport and banks.
- ✦ Global platform
- ✦ Security
- ✦ Standardization

## Who should attend:

Bank, Telecom, transport staff:

- ✦ Marketing Managers
- ✦ Project Managers
- ✦ Technical team just assigned to NFC and want an introduction



*Mobile Contactless offers new opportunities to mobile operators, banks, transport companies and other service providers.*

*This training will help mobile operators and service providers to better understand the ecosystem and solutions available for proper deployment.*

## Each training session consists of:

- ✦ A complete course manual

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge on telecommunications, banking or transport applications.
- ✦ This course is held in English

**Duration:** 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1
<p>Introduction to NFC</p> <p>NFC use cases</p> <ul style="list-style-type: none"><li>★ card emulation mode</li><li>★ reader mode</li><li>★ P2P mode</li></ul> <p>Overview of the contactless market in transportation, payment, identity, access control</p> <p>Contactless technologies</p> <ul style="list-style-type: none"><li>★ ISO 14443 type A, mifare®</li><li>★ ISO 14443 type B, B'</li><li>★ Felica</li></ul> <p>Possible architectures for Mobile contactless</p> <ul style="list-style-type: none"><li>★ Embedded secured element</li><li>★ SIM card</li><li>★ Removable secured element</li><li>★ Role of HCI (host controller interface)</li></ul> <p>Multi application architecture</p> <ul style="list-style-type: none"><li>★ Global Platform</li><li>★ OTA management: requirements, challenges, roles and responsibilities</li></ul> <p>Security requirements</p> <ul style="list-style-type: none"><li>★ transport</li><li>★ payment</li><li>★ other applications</li></ul> <p>Standardization status</p> <ul style="list-style-type: none"><li>★ NFC forum</li><li>★ ETSI</li><li>★ GP</li></ul> <p>Outlook of the NFC deployments</p> <ul style="list-style-type: none"><li>★ Overview of the current NFC pilots</li><li>★ Examples of Japan and France</li></ul>



# Global Platform 2.1.1 / 2.2

## Objectives:

At the end of this course you will:

- ✦ Understand what the **Global Platform 2.1.1 functionalities** are.
- ✦ Understand how the **different actors (Mobile Operator, MVNO, Bank, and Transport Operator) can share the same card.**
- ✦ Understand how to **access a GP card and its applications ‘Over The Air’**
- ✦ **Have a overview of the Global Platform 2.2 functionalities**



*Mobile contactless requires trusted co-operation between mobile operators, banks, transport companies and other service providers.*

*The multi-player and multi-application nature makes it essential to provide high levels of security and trust between parties.*

## Each training session consists of:

- ✦ A complete course manual

## Pre-requisites:

- ✦ This course requires participants to have technical knowledge on smart cards or on payment system applications
- ✦ This course is held in English

**Duration:** 1 Day

## Key Topics:

- ✦ Multiapplication Card
- ✦ OTA “Over The Air”
- ✦ SCP
- ✦ Security Domain / ISD
- ✦ Delegated management
- ✦ DAP verification
- ✦ Mandated DAP verification

## Who should attend:

Bank, Telecom, transport staff:

- ✦ Project Managers
- ✦ Security Managers
- ✦ SIM managers
- ✦ System developers

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.

## Course Schedule:

Day 1
<p>Telecom Card</p> <ul style="list-style-type: none"><li>★ Architecture of a telecom card</li><li>★ File system and commands</li><li>★ Access conditions &amp; pin system</li><li>★ Toolkit commands</li></ul>
<p>Global Platform 2.1.1</p> <ul style="list-style-type: none"><li>★ Introduction and standards history</li><li>★ Actors and Business cases<ul style="list-style-type: none"><li>○ Delegated management</li><li>○ DAP verification</li><li>○ Mandated DAP verification</li></ul></li><li>★ Few words about GP systems</li><li>★ GP cards internals</li><li>★ ISD and SDs</li><li>★ Other applets and SD association</li><li>★ Key management</li><li>★ Secure Channel Protocols</li><li>★ Card content management</li><li>★ GP2.1.1 registry</li><li>★ GP2.2 functionalities</li></ul>
<p>Telecom Card</p> <ul style="list-style-type: none"><li>★ SMS Header &amp; Security</li><li>★ Remote applet &amp; file management</li></ul>



# Mobile Television

## When broadcasting, mobile TV requires a high level of security

Our Mobile-TV solution enables mobile operators to position with differentiating values and offers such as secure access to digital TV, management of menus & contents and interactive services

Mobile-TV (m-TV) now captivates end-users worldwide and currently represents a significant potential business model value for mobile operators. This technology requires a high level of security for mobile operators to act as new pay-TV players. To address this need, Gemalto proposes a m-TV solution with SIM- based Conditional Access (CA).

### > The m-TV technology

Two main options are available in adopting m-TV: one is based on the UMTS network and the other on Broadcast, which is dependent on country regulation as well as on the choice of m-TV standards.

- A m-TV solution based on the UMTS network offers a point to point technology but can be high bandwidth capacity consuming, thus limiting the contents and the number of simultaneous channels.
- An alternative to this is broadcast using a USIM-based solution as CAS (Conditional Access Solution) or MBMS (Multimedia Broadcast Multicast Service), which offers operators a wider range of possibilities.

### > The USIM's key role in m-TV multimedia services

Whatever the broadcast technology, m-TV multimedia services require the highest level of security. Broadcasters for example already use a security scheme based on smart card technology for Pay-TV while operators control the USIM. The USIM thus plays a key role in this business, ensuring security access to digital broadcast mobile pay TV program through Conditional Access and brings innovative high value added services to operators.



### > The Gemalto versatile m-TV solution

By hosting mobile pay-TV applications on the USIM, the Gemalto solution, compliant with standard, allows operators and broadcasters to safely enter the m-TV world. It empowers the operator to effectively position itself with a differentiating business model and interactive multimedia services (content downloading and voting, among others). Within the Gemalto solution, OTA services are used to their full advantage in order to manage user rights and permits to maintain security level over time. The Gemalto mobile TV solution:

- Administers and stores connectivity settings for service access
- Manages services security: delivers user permissions, hosts rights, generates decryption key, hosts e-purses for impulsive pay-per-view or pre-paid offers
- Offers support for dynamic end-user profile and direct marketing campaigns through "Electronic Service Guide"
- Assures management of unified ESG graphical user interface presentation
- Securely upgrades mobile TV services (OTA capability for security, flexibility and delivery)

### > Operator benefits

- Gemalto m-TV solution is fully handled by the operator
- Control of revenues and user interface, and others
- Maintain security over time via OTA
- Generic and portable
- New business models: impulsive, free preview, pre-loaded
- Pay-TV proven solution experience
- Evolution towards DRM
- Network bandwidth savings

### > End-user benefits

- Unified presentation, easy access and use
- User interface personalization
- ESG controlled by the SIM
- Interactive services (e.g: voting)
- Secure recording of m-TV in video, privacy
- Easy transfer and exchange with the PC

### > OTA Technology

- From "point to point technology" (GPRS, EDGE, UMTS) to digital broadcast technologies (DVB-H, T-DMB, MBMS, etc.)

### > Standards

- ETSI DVB-CBMS (Open Security Framework)
- ETSI 3GPP (MBMS)
- OMA Bcast (Smart Card Profile)

The Gemalto mobile-TV solution integrates Conditional Access System (CAS) and Electronic Service Guide (ESG) applications from partners.

**In 2006, Gemalto launched in Italy the first USIM-based mobile TV solution using the DVB-H technology.**



To understand the standards, the different solutions available and why the security of the smart card has to be enhanced for M-TV smartcards, a 1 day **workshop** can be organized at your premises or on Gemalto offices.

## Course Schedule Abstract :

Day 1
Standards overview <ul style="list-style-type: none"><li>+ ETSI DVB-CBMS (Open Security Framework overview)</li><li>+ ETSI 3GPP (MBMS)</li><li>+ OMA Bcast (Smart Card Profile)</li></ul>
Why the security of the smart card has been enhanced <ul style="list-style-type: none"><li>+ The new Smart Card security features</li></ul>
Manufacturing process

## At the end of this course you will:

- Understand the standards involved in M-TV.
- Have an overview of the different solutions available.
- Understand why the security of the smart card has to be enhanced for M-TV.
- Understand the new business models.

# Usage & administration



## Java SIM Card Administration

### Objectives:

At the end of this course you will:

- ✦ Understand JavaCard, 23.048 and Global Platform specifications,
- ✦ Understand the STK applet development process,
- ✦ Manage the JavaCard based SIM Cards and the associated security

### Key Topics:

- ✦ Applet
- ✦ Java Card Virtual Machine
- ✦ Over the Air security
- ✦ Remote File Management
- ✦ Remote Applet Management
- ✦ Secure Channel

### Who should attend:

- ✦ Project managers
- ✦ SIM manager
- ✦ Development staff

### Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises



*Learn how to use Java Card based SIM cards and Gemalto SIM Administration & Simulation Tools.*

*This training course will allow you to rapidly get to know the main features of these products and begin managing and testing your own applications*

### Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
- ✦ - a basic knowledge of the GSM standards 11.11, 11.14 (SIM Toolkit), 03.48.
- ✦ - It is strongly recommended that you follow the “SIM, STK & OTA Basics” course before attending this course
- ✦ This course is held in English

**Duration:** 2 Days

### Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

### Location:

Gemalto Training Centers  
For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Trainees registration and training overview</p> <p>Introduction                      Gemalto offer</p> <ul style="list-style-type: none"> <li>+ SIM card architecture</li> <li>+ Applet development</li> <li>+ Software development</li> </ul> <p>Javacard based smart card</p> <ul style="list-style-type: none"> <li>+ Introduction</li> <li>+ Architecture</li> <li>+ Applet management</li> <li>+ Security</li> <li>+ JavaCard Based SIM Card</li> </ul>	<p>Follow applet process development, from a java file to an applet in the card</p>
Day 2	Practice
<p>STK and Javacard based SIM card</p> <ul style="list-style-type: none"> <li>+ STK reminder</li> <li>+ GSM application</li> <li>+ Event management,</li> <li>+ Proactive commands</li> </ul> <p>Remote Management</p> <ul style="list-style-type: none"> <li>+ General Card Architecture</li> <li>+ RAM, RFM, CM, Security Domain</li> </ul> <p>Management commands (23.048 &amp; GP)</p>	<p>Test a basic STK applet.                      Test applet with different STK Events</p> <p>Manage secure applet downloading: personalise the security of your OTA message /Java SIM Card.</p> <p>Simulate the OTA communication chain, from the Server to the card</p>

# Java 3G Card Administration

## Objectives:

At the end of this course you will:

- ✦ Understand USIM Java Card Architecture & Security,
- ✦ Be able to load and test card applications using the Gemalto software tools.
- ✦ Understand how to manage 2G/3G files and applets Over The Air (OTA)



*Be ready to launch your 3G commercial card-based services thanks to this 2 day training session including many practical sessions.*

## Key Topics:

- ✦ Native to Java Card Migration
- ✦ Global platform
- ✦ UICC/USIM/SIM APIs
- ✦ OTA concept
- ✦ 3GPP TS 23.040
- ✦ 3GPP TS 23.048
- ✦ Remote File Management
- ✦ Remote Applet Management
- ✦ Applet download

## Who should attend:

- ✦ Project managers
- ✦ SIM manager
- ✦ Development staf

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - GSM standards (“SIM, STK, OTA Basics” training recommended)
  - 3G standards (“USIM in 3G networks” training recommended)
- ✦ This course is held in English

**Duration:** 2 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Fundamentals of Telecom Java Card</p> <p>Introduction</p> <p>Applet definition</p> <ul style="list-style-type: none"> <li>+ Package-Instance-Class</li> </ul> <p>Java Card in a nutshell</p> <ul style="list-style-type: none"> <li>+ JCRE - Virtual machine – APIs - interoperability</li> </ul>	<p>Explore the architecture of a Java USIM card</p>
<p>Card Content Management</p> <p>Global platform</p> <ul style="list-style-type: none"> <li>+ Card Manager - Security Domain - Secure Channel</li> </ul>	<p>Applet Management</p>
Day 2	Practice
<p>Card Content Management</p> <p>Text SMS</p> <ul style="list-style-type: none"> <li>+ SMS 23.040 Concepts</li> </ul> <p>Data SMS</p> <ul style="list-style-type: none"> <li>+ 23.048 Secured Packets - Transfer Mechanism</li> </ul> <p>Remote File Management</p> <ul style="list-style-type: none"> <li>+ GSM files - 3G files - Command set</li> </ul> <p>Remote Applet Management</p> <ul style="list-style-type: none"> <li>+ Principle - Command Set</li> </ul> <p>Download and installation of 3G Applet</p> <ul style="list-style-type: none"> <li>+ GSM parameters - Access conditions</li> </ul>	<p>23 048 management</p> <p>Manage minimum security level</p> <p>Select, Read, Update GSM &amp; 3G files OTA</p> <p>Delete applets and retrieve memory amount</p> <p>Download a STK applet</p>

# Using Card Admin & Simulation Tools for SIM Management

## Objectives:

At the end of this course you will:

- ✦ Know how to use Card Admin software tool to manage & help validate (U)SIM Card profiles
- ✦ Be able to load and test (U)SIM Toolkit applets using Card Admin & Simulation tools.
- ✦ Be able to simulate the secure management of 2G/3G files and applets Over-The-Air (OTA)



*Optimise the management of your (U)SIM cards to ease the commercial launch of 2G & 3G cards & their services.*

*This 2-day training session includes many practical sessions with Gemalto Telecom Card Admin & Simulation Tools*

## Key Topics:

- ✦ (U)SIM File Systems & Commands
- ✦ File Security (Access Conditions)
- ✦ UICC/USIM/SIM
- ✦ Java Card Architecture
- ✦ Toolkit Applet Management & Testing
- ✦ OTA Secure Card Management Simulation
- ✦ 3GPP TS 23.048
- ✦ Remote File Management
- ✦ Remote Applet Management

## Who should attend:

- ✦ Project managers
- ✦ (U)SIM manager
- ✦ Validation teams
- ✦ Development staff

## Each training session consists of:

- ✦ A complete course manual
- ✦ Many practical exercises

## Pre-requisites:

This course requires participants to have a working knowledge of the following technologies:

- ✦ GSM standards: 11.11, 11.14, 03.48 (“SIM, STK, OTA Basics” training recommended)
- ✦ 3G standards (“USIM in 3G networks” training recommended)
- ✦ Java SIM Card Architecture & Security (“Java SIM Card Administration” training recommended)
- ✦ This course is held in English

**Duration:** 2 Days

## Course fee:

Please refer to regional schedules on

[www.gemalto.com/training](http://www.gemalto.com/training)

or contact us:

<http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Role of the SIM Card in your mobile environment</p> <ul style="list-style-type: none"> <li>✦ Basic functions of the SIM</li> <li>✦ Subscriber Identification &amp; Authentication in the GSM network</li> <li>✦ Basic Services provided by the SIM</li> <li>✦ Value Added Services (VAS) in the SIM</li> </ul> <p>(U)SIM Card File Systems, Access Conditions, File Content</p> <ul style="list-style-type: none"> <li>✦ Practical 1: Using tools for 2G File Management</li> <li>✦ Practical 2: Using tools for 3G File Management &amp; Advanced Phone Book</li> <li>✦ Practical 3: Generate APDU scripts, File Content Reports &amp; Card Typing for non-Gemalto cards</li> </ul> <p>(U)SIM Java Card Architecture &amp; Applets</p> <ul style="list-style-type: none"> <li>✦ Practical 4: Card Applet scanning</li> </ul>	<p>- Explore &amp; Manage the files and content of (U)SIM cards</p> <p>- Generate Content Reports</p> <p>- Card typing for non-Gemalto cards</p> <p>- Explore the architecture of a Java (U)SIM card</p>
Day 2	Practice
<p>STK Applet Management &amp; Installation Parameters</p> <ul style="list-style-type: none"> <li>✦ Practical 5: SIM Toolkit applet loading &amp; Testing</li> </ul> <p>OTA Security for remote card management</p> <ul style="list-style-type: none"> <li>✦ Practical 6: Test 23.048 parameters with OTA simulation tools</li> </ul> <p>Remote Managers (RFMs &amp; RAM)</p> <ul style="list-style-type: none"> <li>✦ Practical 7: Remote File &amp; Applet management using OTA tools</li> </ul>	<p>- Applet Management: Download an STK applet</p> <p>- 23 048 management</p> <p>- Manage minimum security level</p> <p>- Select, Read, Update GSM &amp; 3G files OTA</p> <p>- Delete applets and retrieve memory amount</p>

# OTA Platform Introduction & Usage

## Objectives:

At the end of this course you will:

- ✦ Deliver Services to subscribers
- ✦ Perform SIM Card updates
- ✦ Schedule Campaigns and issue multiple updates
- ✦ Schedule with the XCT the Campaigns and issue multiple updates
- ✦ Perform SIM Card audits



*Giving your subscribers after sales satisfaction is the key to the future of your business.*

*Having dedicated Customer Care agents operating your Over The Air (OTA) platform means that you have a strong and continuous connection with them.*

*What is needed is a course on Usage principles and to give practical advice on the platform and the services held within it.*

## Key Topics:

- ✦ What is over-the-air?
- ✦ Submitting a service request
- ✦ Monitoring service requests
- ✦ Viewing SIM card content
- ✦ Managing campaigns
- ✦ Managing XCT campaigns

## Who should attend:

- ✦ Customer Service Managers
- ✦ Customer Care Agents

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - GSM SIM Card Structure
  - ETSI & GSM Standards
  
- ✦ This course is held in English

**Duration:** 1,5 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers  
For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Introduction/Overview</p> <ul style="list-style-type: none"> <li>+ What is OTA</li> </ul> <p>LinqUs Graphical User Interface</p> <ul style="list-style-type: none"> <li>+ Presentation of the LinqUs GUI</li> </ul> <p>Submit a Service Request</p> <ul style="list-style-type: none"> <li>+ Submit the different services within your OTA platform and view the results</li> </ul> <p>Monitor Service Requests</p> <ul style="list-style-type: none"> <li>+ Follow the history of your requests</li> <li>+ Understand what may have gone wrong</li> </ul> <p>Campaign Management</p> <ul style="list-style-type: none"> <li>+ How to build a successful campaign</li> <li>+ Follow the status of the campaign in progress</li> <li>+ Create reports of the campaign</li> </ul>	<p>Execute services on a single SIM Card</p> <p>Analyze the result of services execution</p> <p>Create, schedule and monitor a campaign</p>

Day 2	Practice
<p>XCT Campaign Management</p> <ul style="list-style-type: none"> <li>+ How to build a successful XCT campaign</li> <li>+ Follow the status of the XCT campaign in progress</li> <li>+ How to modify in real time your XCT campaign</li> <li>+ Create reports of the XCT campaign</li> </ul> <p>Card audit services</p> <ul style="list-style-type: none"> <li>+ How to gather data coming from cards on the field</li> </ul> <p>Group management</p> <ul style="list-style-type: none"> <li>+ How to group cards</li> </ul>	<p>Create, schedule and monitor a XCT campaign</p> <p>Execute audit services on a single SIM card</p> <p>Create groups</p>

# OTA Platform Administration

## Objectives:

At the end of this course you will:

- ✦ **Control and Manage the multiple users on the platform**
- ✦ **Administrate & maintain a fully functional OTA platform.**
- ✦ **Manage billing facilities.**
- ✦ **Have an overview on the card provisioning.**

## Key Topics:

- ✦ Architecture
- ✦ Security & Management
- ✦ File Structures
- ✦ Platform supervision
- ✦ Troubleshooting
- ✦ Billing management

## Who should attend:

- ✦ System Administrators
- ✦ SIM Managers
- ✦ Telecom Operators
- ✦ Customer Service Managers



*Having an Over The Air (OTA) platform, is your gateway as a Telecom Operator, for supplying Value Added Services (VAS) to your many existing subscribers and also gaining new ones.*

*Keeping your OTA system running at its optimum performance level is a must. With downtime and system hang ups always being a major concern, what is needed is a course on administration principles and to give practical advice on the OTA platform.*

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - Unix
  - GSM SIM Card Structure
  - ETSI & GSM Standards
- ✦ This course is held in English

**Duration:** 1 Days

## Course fee:

Please refer to regional schedules on

[www.gemalto.com/training](http://www.gemalto.com/training)

or contact us:

<http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers  
For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<p>Architecture</p> <ul style="list-style-type: none"> <li>+ High level overview of the internal modules</li> <li>+ </li> </ul> <p>Unix Environment</p> <ul style="list-style-type: none"> <li>+ Start &amp; Stop sequence of the platform</li> </ul> <p>User Profile &amp; Account</p> <ul style="list-style-type: none"> <li>+ Create Profiles &amp; Accounts</li> <li>+ Specify what service/applets to deliver</li> <li>+ Choose the default SMSC</li> </ul> <p>Platform Supervision</p> <ul style="list-style-type: none"> <li>+ SNMP</li> <li>+ Billing files</li> <li>+ Log files</li> <li>+ Audit Trail</li> </ul> <p>Product Configuration &amp; Parameters</p> <ul style="list-style-type: none"> <li>+ Product configuration and parameters</li> <li>+ How to setup the logs content</li> </ul> <p>Unix Environment</p> <ul style="list-style-type: none"> <li>+ File locations</li> </ul> <p>How to fine tune campaigns</p> <ul style="list-style-type: none"> <li>+ Classical</li> <li>+ XCT campaigns</li> </ul> <p>Billing management</p> <ul style="list-style-type: none"> <li>+ Setting up</li> <li>+ Gather billing file</li> </ul> <p>Overview of how to set up SIM card data within OTA</p> <ul style="list-style-type: none"> <li>+ What is the card provisioning</li> <li>+ Main steps of provisioning</li> </ul>	<p>Start / Stop the OTA platform</p> <p>Creation of User Profile and account</p> <p>Activate / Deactivate platform supervision systems</p> <p>Product configuration and parameters Analyzing the Log File</p> <p>Linux / Windows browsing</p> <p>Campaign executions</p> <p>Billing file generation</p>

# OTA Platform Card and Applet provisioning

## Objectives:

At the end of this course you will be able to:

- ✦ **Perform the card provisioning.**
- ✦ **Manage the security features of your subscribers.**
- ✦ **Perform the applet provisioning**

## Key Topics:

- ✦ Card repository
- ✦ Card security
- ✦ Applet Repository

## Who should attend:

- ✦ SIM Managers
- ✦ Product manager
- ✦ Customer Service Managers

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises



*Having an Over The Air (OTA) platform, is your gateway as a Telecom Operator, for supplying Value Added Services (VAS) to your many existing subscribers and also gaining new ones.*

*This course allows you to understand how to create a new Subscriber's (U)SIM Card and how to add new applet in the OTA platform repository.*

## Pre-requisites:

- ✦ This course requires participants to have a good knowledge of the following technologies:
  - GSM SIM Card Structure
  - ETSI & GSM Standards
- ✦ This course is held in English

**Duration:** 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers  
For on-site training, please contact us.





# Device Management Platform Administration

## Objectives:

At the end of this course you will:

- ✦ **Manage the handset configuration of your subscribers**
- ✦ **Provision the platform**
- ✦ **Configure & monitor the platform**
- ✦ **Manage the different platform user types**

## Key Topics:

- ✦ Configuration of Mobile Data Services
- ✦ Over the Air (OTA) Configuration
- ✦ Automatic Device Detection & Configuration
- ✦ Platform Supervision & Maintenance

## Who should attend:

- ✦ Telecom Operators
- ✦ Customers Service Representatives
- ✦ System Administrators



*Addressing your customers' needs regarding hassle-free and reliable mobile phone configuration is a major concern. Device Management is a state-of-the-art platform, which quickly and effectively manages device configuration settings Over The Air (OTA), so that end-users can use straight away your value-added data services without worrying about how to configure their mobile phone. With all this in mind, this course covers both platform usage and administration and is ideally suited for Customer Service Representatives and System Administrators.*

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - OTA platform
  - GSM standards
  - Wireless services
- ✦ This course is held in English

**Duration:** 3 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
Introduction/Overview + Wireless service offer + Device Management Overview & use cases	✓
Menus of GCDM + Device Set, Setting Set, Notification, Subscriber	✓
Over The Air Configuration (Transaction) Management + One-shot /Automatic device detection /Monitoring	✓
Campaign Management + Scenarios, Targets + Creation and Scheduling + Monitoring	✓

Day 2	Practice
Device Manager Provisioning + Repository Management:	✓
Account /Device /Device Set /Notification /Setting Set /Subscriber + Repository Management: GUI and file batch loading (XML files)	✓
Device Manager Solution Components + Architecture Overview + Framework + GCDM components + Campaign Manager	✓
Over The Air Configuration (Transaction) Flow	✓

Day 3	Practice
File Locations Commands & Key Scripts	✓
Platform supervision	✓
System Monitoring (Trails, SNMP & Logs)	✓
Platform User Profiles & Accounts	✓



# Unified Personal Data Management Platform Introduction & Usage

## Objectives:

At the end of this course you will:

- ★ Manage the phonebook of the users in the (U)SIM card or the handset using user-friendly interfaces
- ★ Manage personal data on the handset such as calendars, notes, tasks, videos, pictures, ringtones, SMSs, MMSs and email messages

## Key Topics:

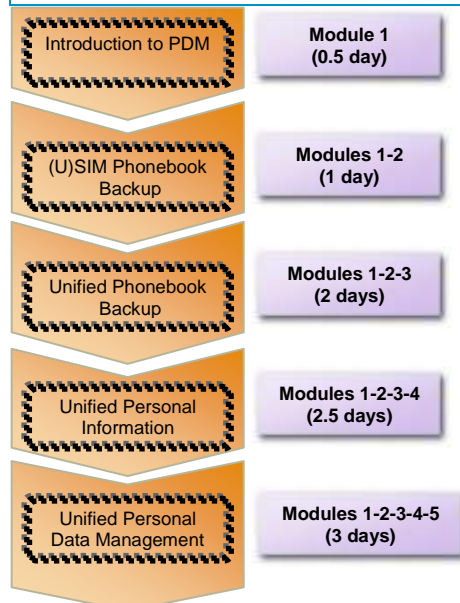
- ★ Customer Care Interface
- ★ Self Care Interface
- ★ Phonebook backup
- ★ PIM backup
- ★ Multimedia data backup

## Who should attend:

- ★ System Administrators
- ★ SIM Managers
- ★ Telecom Operators
- ★ Customer Service Managers



*Unified Personal Data Management (UPDM) solution is bringing today a lot of benefits for Telecom Operators and end users by providing a secure place where end users can store their personal information such as phonebook, Calendar, tasks, ringtones, pictures and MMS. Going from the (U)SIM phonebook backup to the Unified Personal Data Management Solution. This course delivers the usage principles and user experience so you will fully understand your UPDM solution.*



## Each training session consists of:

- ★ A complete course manual
- ★ Practical exercises

## Pre-requisites:

- ★ This course requires participants to have a basic knowledge of the following technologies:
  - OTA
  - (U) SIM Card Phonebook
- ★ This course is held in English

**Duration:** 0.5 to 3 Days  
 (Depending on which Backup solutions are activated - See Next page)

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Module 1: Introduction to PDM (0.5 days)	Practice
Introduction: What is Unified Phonebook Backup Solution?  Use Cases for Contacts Management (Backup, Synchronization, Restore)  Use Cases for PIM (Personal Information Manager)  General Use Cases (Registration, User life cycle).	

Module 2: (U)SIM Phonebook Backup (0.5 days)	Practice
SIM Contacts management <i>via Unified Web Self Care Interface</i> (Backup, Synchronization, etc)	✓
SIM Contacts management <i>via Customer Care Interface</i>	

Module 3: Unified Phonebook Backup (1 days)	Practice
Handset Contacts management <i>via Unified Web Self Care Interface</i> for handsets compliant with SyncML1.2 or with a mobile agent	✓
Handset Contacts management <i>via handset</i> for handsets compliant with SyncML1.2 or with a mobile agent	✓

Module 4: Unified Personal Information (0.5 days)	Practice
Restore PIM contact management including calendars, tasks, notes <i>via Self Care Interface</i>	✓
PIM contact management including calendars, tasks, notes <i>via Handset</i>	✓

Module 5: Unified Personal Data Management (0,5 days)	Practice
Restore Multimedia data such as pictures, ringtones, SMSs <i>via Self Care Interface</i>	✓
Restore Multimedia data such as pictures, ringtones, SMSs <i>via Handset</i>	✓

# Unified Personal Data Management Platform Administration

## Objectives:

At the end of this course you will:

- ✦ **Administrate & maintain a fully functional platform**
- ✦ **Configure and manage the applet on the users SIM card**



## Key Topics:

- ✦ Architecture
- ✦ Platform configuration
- ✦ Applet configuration
- ✦ OTA interaction

## Who should attend:

- ✦ System Administrators
- ✦ SIM Managers
- ✦ Telecom Operators
- ✦ Customer Service Managers

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

*Phonebooks are the most popular “data” application used by subscribers. When a subscriber changes their subscription or loses their Mobile phone, this is where the highest risk of churn can be expected. The Unified Personal Data Management platform, through your OTA platform, is your new solution to prevent subscriber churn and the loss of potential business. Personal data such as calendars, tasks, pictures, videos, SMSs, and MMSs can also be saved on the server. This course delivers the administration principles and gives hands on practical advice.*

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - OTA
  - GSM SIM Card Structure
  - ETSI & GSM Standards
  - 03.40 & 03.48 Header Structures
  - It is strongly recommended that you follow the “UPDM Platform Introduction & Usage” course before attending this course
- ✦ This course is held in English

**Duration:** 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
Platform Administration & Management	
Managing user profiles and accounts	✓
✦ Creating an administrator profile	
✦ Creating a customer care agent profile	
✦ Creating a subscriber profile	
✦ User Account management	
Statistics	✓
Files, locations and commands	✓
Platform information	
✦ SNMP & JMX configuration	
✦ Billing, logging and audit trail configuration	
✦ Log files	

# Service Management Offer

## Service Manager

### Objectives:

At the end of this course you will:

- ✦ **Manage the SIM-based services of your subscribers over time**
- ✦ **Provision the platform with services, portal (e.g. prepaid, corporate etc...)**
- ✦ **Run and monitor campaigns**
- ✦ **Administrate & maintain a fully functional service management platform**
- ✦ **Manage the different platform user types**

### Key Topics:

- ✦ Service Structure definition
- ✦ OTA Service Management
- ✦ Platform Supervision & Maintenance

### Who should attend:

- ✦ Telecom Operators
- ✦ Customer Service Representatives
- ✦ System Administrators



*Increasing the revenue generated by SIM based service usage is a major concern. In that regard, Service Manager is a state-of-the-art platform using Over The Air technology, which enables telecom operators to accurately manage SIM-based services throughout the life of their SIM cards, while providing operators detailed information on user profiles, user service content and usage tracking. This course ideally covers both platform usage and administration tasks.*

### Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

### Pre-requisites:

- ✦ This course requires participants to have a working knowledge of the following technologies:
  - OTA platform
  - GSM standards
  - Wireless services
  - Service development with STKML
- ✦ This course is held in English

**Duration:** 3 Days

### Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

### Location:

Gemalto site or client's site



# Service Management Offer Online Service Gateway

## Objectives:

At the end of this course you will:

- ✦ **Administrate & maintain a fully functional S@T platform.**
- ✦ **Control and manage the multiple services delivered by the platform.**
- ✦ **Manage the users who access the platform.**

## Key Topics:

- ✦ Architecture
- ✦ File Locations
- ✦ User Management
- ✦ Service Management & Deployment
- ✦ Sending a "Push" Service
- ✦ Billing Information

## Who should attend:

- ✦ System Administrators
- ✦ SIM Managers
- ✦ Telecom Operators

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises



*Being able to deliver "on-demand" services to your subscribers is the next item in the chain of Value Added Services (VAS). This course shows you how to set-up and add services onto your S@T portal, giving you a more diverse tool to communicate with the S@T browser housed inside your predefined SIM Card.*

*On-line Service Gateway (OSG) is an interoperable dynamic SIM Toolkit solution that helps operators generate immediate revenues. It eases and speeds up the deployment of SMS-based services and the renewing existing services.*

*Whether a novice or an expert, OSG gives you the freedom to start from scratch or improve the mobile internet services already on offer.*

*Gemalto proposes solutions based on the On-line Service Gateway and its family of browsers, using the latest S@T technology*

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - Unix
  - Oracle
  - GSM SIM Card Structure
  - ETSI & GSM Standards
  - XML or HTML
- ✦ This course is held in English

**Duration:** 1 Day

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

Day 1	Practice
<ul style="list-style-type: none"> <li>✦ Introduction                             <ul style="list-style-type: none"> <li>▪ What is OTA &amp; Dynamic STK</li> <li>▪ OSG Overview</li> </ul> </li> <li>✦ OSG Presentation                             <ul style="list-style-type: none"> <li>▪ Main use cases</li> <li>▪ Functional Architecture</li> <li>▪ Data Flow</li> </ul> </li> <li>✦ Service Architecture</li> <li>✦ Mark-Up language                             <ul style="list-style-type: none"> <li>▪ S@TML</li> <li>▪ STKML</li> </ul> </li> <li>✦ DSTK card range</li> <li>✦ Features                             <ul style="list-style-type: none"> <li>▪ Traffic overflow management</li> <li>▪ Session Time Out</li> <li>▪ Monitoring</li> <li>▪ Security</li> <li>▪ Configuration and Administration GUI</li> </ul> </li> <li>✦ Configuration and Administration GUI                             <ul style="list-style-type: none"> <li>▪ General Settings                                     <ul style="list-style-type: none"> <li>– Proxies</li> <li>– SNMP</li> <li>– Database</li> <li>– Alias Table</li> <li>– URL Timeout</li> </ul> </li> <li>▪ Browser Management</li> <li>▪ Users</li> <li>▪ Platform Design</li> <li>▪ Instance Control</li> <li>▪ Setup</li> </ul> </li> <li>✦ Platform Operation                             <ul style="list-style-type: none"> <li>▪ Administration GUI</li> <li>▪ Setting up a new service</li> <li>▪ Sending a push command</li> <li>▪ Checking logs / status and main files</li> </ul> </li> <li>✦ Design an OSG Solution</li> <li>✦ Troubleshooting</li> </ul>	<div style="margin-top: 400px;">✓</div> <div style="margin-top: 100px;">✓</div>

# Development & support



## Java SIM Applet Development

### Objectives:

At the end of this course you will:

- ✦ Be able to design and write your own 'interoperable' STK applet.
- ✦ Be able to test, debug and improve your STK applet
- ✦ Have an overview on how to optimize your source code to gain in time and speed



*Creating new services has until now required long development cycles and proprietary implementation. Using Java Card based SIM cards and Gemalto development & testing tools, you can now work in-house, and transform ideas into applications in a matter of days.*

*This training course will allow you to rapidly get to know the main features of these products and begin developing and testing your own applications*

### Key Topics:

- ✦ CLASS CONVERSION
- ✦ JAR AND CAP FILES
- ✦ 43.019 API
- ✦ HANDLERS

### Who should attend:

- ✦ Development staff

### Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

### Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - ✦ - a basic knowledge of the GSM standards 11.11, 11.14 (SIM Toolkit), 03.48.
  - ✦ - a basic knowledge of object-oriented programming.
  - ✦ - It is strongly recommended that you follow the "Java SIM Card Administration" course before attending this course
- ✦ This course is held in English

**Duration:** 2 Days

### Course fee:

Please refer to regional schedules on

[www.gemalto.com/training](http://www.gemalto.com/training)

or contact us:

<http://www.gemalto.com/training/contact.html>

### Location:

Gemalto Training Centers. For on-site training, please contact us.



**Course Schedule:**

Day 1	Practice
<p>Trainees registration and training overview</p> <p>Reminder on Java card architecture (JCRE, VM..),</p> <p>Description of Java card API</p> <p>Description of 43.019 API</p> <p>Practical Exercises</p>	<p>Add a new STK menu to an applet implementing a proactive command, compile/convert/load/install/test</p>

Day 2	Practice
<p>Overview on Optimisation of code in size and speed</p> <p>Practical Exercises</p>	<p>Add a new service in an applet using the event SMS_PP and other proactive commands.</p> <p>Optimise your applet code.</p> <p>Configure an OTA communication chain to test and debug your applet.</p>

# Advanced Java SIM Applet Development

## Objectives:

At the end of this course you will:

- ✦ **Be able to design, write & validate 'interoperable' STK applets.**
- ✦ **Understand the constraints of designing applications in Java for a smart card**
- ✦ **Be able to optimize your source code to gain in time and speed and robustness**
- ✦ **Optionally: Be able to design & run a Test Plan before large scale deployment. To validate application-handset-network operation**

## Key Topics:

- ✦ CLASS CONVERSION
- ✦ JAR AND CAP FILES
- ✦ 43.019 API
- ✦ HANDLERS
- ✦ APPLICATION DESIGN PROCESS

## Who should attend:

- ✦ Development Staff

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises



*Creating new services has until now required long development cycles and proprietary implementation. Using Java Card based SIM cards and Gemalto Development & Simulation Tools, based on the latest ETSI standards; you can now work in-house, and transform ideas into applications in a matter of days. This training course will allow you to benefit from Gemalto's wide experience in designing and deploying applications on the field, and rapidly begin developing and testing your own service*

## Pre-requisites:

This course requires participants to have a good knowledge of the following:

- ✦ GSM standards 11.11, 11.14 (SIM Toolkit), 23.048.
- ✦ A working knowledge of object-oriented programming.
- ✦ It is strongly recommended that you follow the "Java SIM Card Administration" course before attending this course
- ✦ This course is held in English

**Duration:** 3 Days  
(Optional 4<sup>th</sup> Day for Validation process)

## Course fee:

Please refer to regional schedules on

[www.gemalto.com/training](http://www.gemalto.com/training)

or contact us:

<http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



**Course Schedule:**

Day 1	Practice
<p>Reminder on Java card architecture</p> <ul style="list-style-type: none"> <li>✦ Introduction</li> <li>✦ Architecture</li> <li>✦ JCRE, VM</li> </ul> <p>Description of Java card 2.1 API</p> <ul style="list-style-type: none"> <li>✦ javacard.framework</li> <li>✦ java.lang</li> <li>✦ javacard.security</li> <li>✦ javacardx.crypto</li> </ul> <p>Description of Toolkit API</p> <ul style="list-style-type: none"> <li>✦ sim.access</li> <li>✦ sim.toolkit</li> <li>✦ Developing toolkit applications</li> <li>✦ Examples of coding</li> </ul>	<p>- Modifying source code of pre-written javacard applet. Loading &amp; Testing in a smart card using tools</p> <p>- Add a new STK menu to an applet implementing a proactive command, compile/convert/load/install/test</p> <p>- Add a new service in an applet using the event SMS_PP and other proactive commands.</p> <p>- Configure an OTA communication chain to test and debug your applet.</p>
Day 2 & 3	Practice
<p>Development guidelines</p> <ul style="list-style-type: none"> <li>✦ Constraints of smart card environment</li> <li>✦ Optimisation of code in size and speed</li> <li>✦ Advanced Debugging techniques</li> </ul> <p>Dummy project (1,5 days)</p> <p>The scope of this dummy project is to focus on the 43.019 API ( java framework and SIM toolkit commands)</p> <ul style="list-style-type: none"> <li>✦ Starting from a Functional Requirement Specifications</li> <li>✦ Development of the application</li> <li>✦ Debugging using Developer Suite tool</li> </ul>	<p>- Optimise your applet code.</p> <p>- Development of the application</p> <p>- Debugging using Developer Suite tool &amp; advanced techniques</p>
OPTIONAL - Day 4	Practice
<p>Introduction to validation method for SIM card</p> <ul style="list-style-type: none"> <li>✦ How to build a Test Policy Plan</li> </ul> <p>Integration Test Method for SIM Toolkit application</p> <ul style="list-style-type: none"> <li>✦ How to build an Integration Test Plan</li> </ul>	<p>- Define a validation strategy for a SIM toolkit application</p> <p>- Defining a test policy plan and a Integration test plan</p> <p>- Usage of Views Detective tool for integration tests</p>

# Smart Card Web Server - Servlet Development

## Objectives:

At the end of this course you will:

- ✦ **Have an overview on SCWS Servlet development**
- ✦ **Have an introduction on how to design, load, test & debug Servlets in the SCWS card**

## Key Topics:

- ✦ SCWS Servlets
- ✦ OMA, ETSI Standards
- ✦ Servlet customisation
- ✦ Development techniques

## Who should attend:

- ✦ Development staff
- ✦ Technical Experts

## This training session consists of:

- ✦ A complete course manual
- ✦ Demonstrations & Practice using Gemalto Tools (provided)



*Boost service usage via a user-friendly interface allowing service discovery and easy access to dynamic content. Operators now have the opportunity to present all their services, from whichever location (network or local), in the same place, thanks to the Smart Card Web Server (SCWS) technology*

*This training course will allow you to understand how the solutions can be developed & implemented*

## Pre-requisites:

- ✦ SIM Card Basics
- ✦ Java Card Toolkit
- ✦ Development experience
- ✦ SCWS basics. Recommended to follow "Understanding SCWS Technology" course
- ✦ This course is held in English

**Duration:** 2 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers. For on-site training, please contact us.



**Course Schedule:**

Day 1	Practice
<p>Introduction</p> <ul style="list-style-type: none"> <li>+ What is a servlet?</li> </ul> <p>Servlet presentation</p> <ul style="list-style-type: none"> <li>+ Different types of servlets: Content Providing Applications or Interception servlets</li> <li>+ Servlet mapping</li> <li>+ API introduction</li> </ul> <p>Mapping &amp; Registering of Servlets</p> <ul style="list-style-type: none"> <li>+ Gemalto API</li> <li>+ ETSI API</li> </ul> <p>Description of Gemalto Servlet API</p> <ul style="list-style-type: none"> <li>+ Description of Classes &amp; Methods</li> <li>+ Example of "Hello World" Servlet</li> <li>+ Development Constraints</li> </ul> <p>Other Development possibilities</p> <ul style="list-style-type: none"> <li>+ Example of Servlet to trigger Remote session</li> <li>+ Gemalto Multimedia API</li> <li>+ ETSI Servlet API – TS 102 588, example of "Hello World" Servlet</li> </ul> <p>Tools overview</p> <ul style="list-style-type: none"> <li>+ Developer Suite 3.1 tool to develop, debug, load &amp; test SCWS servlets</li> </ul> <p>Servlet development</p> <ul style="list-style-type: none"> <li>+ How to develop a SCWS servlet</li> <li>+ Load and install servlet</li> <li>+ Test and Debug servlet</li> </ul>	<p>Develop basic servlet Load, test &amp; debug using developer suite tool</p>
Day 2	Practice
<p>Servlet development</p> <ul style="list-style-type: none"> <li>+ Constraints &amp; recommendations</li> </ul>	<p>Practical exercises to progressively build a complete servlet application</p>

# OTA Platform Development

## Objectives:

At the end of this course you will:

- ✦ Understand interaction with OTA Platform.
- ✦ Be able to develop clients with the Platform's API
- ✦ Be able to create and integrate new value added services to the platform
- ✦ Be able to customise the Platform's web interface



*Developing external applications to interact with your Over The Air (OTA) platform, is an additional way to deliver Value Added Services (VAS) to your many existing subscribers and also gaining new ones.*

*Being able to communicate with the OTA platform and treat the many different services and add new applications makes sure that your OTA Platform is always at the cutting edge in service delivery*

## Key Topics:

- ✦ Architecture
- ✦ File Structures
- ✦ Security & Management
- ✦ Graphical User Interface
- ✦ OTA Services

## Who should attend:

- ✦ System Developers
- ✦ Service Developers
- ✦ System Administrators
- ✦ SIM Managers

## Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - Unix
  - GSM SIM Card Structure
  - ETSI & GSM Standards
  - Java
  - HTML & JSP
- ✦ This course is held in English

**Duration:** 3 Days

## Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Gemalto Training Centers  
For on-site training, please contact us.



**Course Schedule:**

Day 1	Practice
<p>Architecture &amp; APIs</p> <ul style="list-style-type: none"> <li>+ Platform module explanation</li> </ul> <p>Core API presentation</p> <ul style="list-style-type: none"> <li>+ Presentation</li> <li>+ Modules</li> </ul> <p>Core API development</p> <ul style="list-style-type: none"> <li>+ Create a Java Client to operate with the Core API</li> </ul>	<p>Customs practices</p>
Day 2	Practice
<p>Gemalto generic 0348 library</p> <ul style="list-style-type: none"> <li>+ Description of the Library</li> </ul> <p>Developing new OTA value added services</p> <ul style="list-style-type: none"> <li>+ Coding APDU script (Macro language)</li> <li>+ Advanced service (Parameters, card content check/update, dynamic script)</li> </ul> <p>GUI Modification</p> <ul style="list-style-type: none"> <li>+ How to Modify the Web pages in your language</li> </ul>	<p>Customs practices</p>
Day 3	Practice
<p>Open Workshop (Ex: GUI localization)</p> <p>Develop your ideas</p> <ul style="list-style-type: none"> <li>+ This part of the course is driven by the customer and their requirements</li> </ul>	<p>Customs practices</p>

# Service Management Offer

## Service Studio

### Objectives:

At the end of this course you will:

- ✦ Understand what **Dynamic SIM Toolkit technology** is
- ✦ Understand the different methods and practices in building and managing a service
- ✦ Build a set of services using **Service Designer Studio**
- ✦ Test those services from end to end: from service design with **Service Designer Studio**, export them into **stkml** format and load them onto the subscriber's card

### Key Topics:

- ✦ Language & File Structures:
- ✦ Creating services
- ✦ Local pages
- ✦ Pages with choice
- ✦ Distant pages
- ✦ Dynamic services
- ✦ Service administration
- ✦ Managing services

### Who should attend:

- ✦ Telecom Operators
- ✦ Wireless Application Developers



*One of the best ways for mobile operators to retain their customers is to differentiate the services offered from those of the competitors. Whilst providing mobile data services to their customers, operators are also willing to enhance their 3G offers. The implementation of m-services based on Java dynamic SIM Toolkit is the first and fastest step in that moving from a simple transport network business, to a transport and value added services business*

### Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

### Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - SIM card structure
  - ETSI and GSM standards
  - Practical knowledge of any computer language or service development with STKML
- ✦ This course is held in English

**Duration:** 2 Days

### Course fee:

Please refer to regional schedules on

[www.gemalto.com/training](http://www.gemalto.com/training)

or contact us:

<http://www.gemalto.com/training/contact.html>

### Location:

Gemalto site or client's site.



# Service Management Offer

## Dynamic STK Service Development

### Objectives:

At the end of this course you will:

- ✦ Understand what is Dynamic SIM Toolkit technology
- ✦ Understand the different methods and practices in building a service
- ✦ Build a set of services
- ✦ Test those services from end to end and see the results
- ✦ Understand the different methods in service management (third day)

### Key Topics:

- ✦ Language & File Structures:
- ✦ S@TML, WML, STKML
- ✦ Creating services
- ✦ Local pages
- ✦ Pages with choice
- ✦ Distant pages
- ✦ Dynamic services
- ✦ Service administration
- ✦ Managing services

### Who should attend:

- ✦ Telecom Operators
- ✦ Wireless Application Developers



*One of the best ways to retain customers is in differentiating the service offering from that of the competition. Whilst providing mobile data services to their customers, operators are also willing to enhance their 3G offers. The implementation of m-services based on Java dynamic SIM Toolkit is the first and fastest step in that moving from a simple transport network business, to a transport and value added services business*

### Each training session consists of:

- ✦ A complete course manual
- ✦ Practical exercises

### Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - SIM card structure
  - ETSI and GSM standards
  - Practical knowledge of any computer language
- ✦ This course is held in English

**Duration:** 3 Days

### Course fee:

Please refer to regional schedules on

[www.gemalto.com/training](http://www.gemalto.com/training)

or contact us:

<http://www.gemalto.com/training/contact.html>

### Location:

Gemalto Training Centers. For on-site training, please contact us.



# Security Courses



## Security & Cryptography

### Objectives:

At the end of this course you will:

- ✦ Understand smart card security, smart card oriented cryptography and related issues

### Key Topics:

- ✦ Basics of security and cryptography
- ✦ Key management
- ✦ Open OS card security
- ✦ Side channel attacks
- ✦ SPA attacks
- ✦ DPA attacks
- ✦ DFA attacks
- ✦ Fraud control

### Who should attend:

- ✦ R&D personnel
- ✦ - to implement cryptographic procedures
- ✦ - to take smart card cryptographic aspects into account



*Cryptography is the science of secure communication. In addition to providing confidentiality, cryptography provides authentication, integrity & non repudiation. Gemalto has a long history and recognised expertise in cryptography-based solutions around smart cards.*

*This training seminar will allow you to benefit from this experience*

### Each training session consists of:

- ✦ A complete course manual

### Pre-requisites:

- This course requires participants to have a basic knowledge in hardware and software development, mathematics and computer science
- ✦ This course is held in English

**Duration:** 3 Days

### Course fee:

Please refer to regional schedules on [www.gemalto.com/training](http://www.gemalto.com/training) or contact us: <http://www.gemalto.com/training/contact.html>

### Location:

Gemalto Training Centers. For on-site training, please contact us.



## Course Schedule:

### Day 1

Welcome and training overview

#### FOUNDATIONS

- + Information Security
- + Cryptography Basics
- + Common cryptographic protocols
- + Key Management
- + ISO-15408 standard: Common Criteria
- + Open Card OS Security

### Day 2

#### SMART-CARDS AND SECURITY

- + Introduction to Smart Card
- + Side Chanel Attack
- + SPA Attacks and counter measures
- + DPA Attacks and counter measures
- + DFA Attacks and counter measures
- + Demos if possible

### Day 3

#### OTHER SECURITY ASPECTS

- + Smart Card Fraud Control & Real Life Scenario
- + GSM security overview
- + Secure programming techniques overview
- + Secure System Administration
- + Smart Card Security : managing the risks
- + Overall conclusion

Presentations done during the third day can be adapted to the client's need and background.

# Web-Based Training Courses



## E-LEARNING: SIM, STK & OTA Basics

### Objectives:

At the end of this course you will:

- ✦ Have an overview of the main GSM SIM card standards
- ✦ Understand SIM card functionality and potential value added services
- ✦ Be able to understand the “Over-The-Air” (OTA) remote SIM card management process



*SIM cards allow secure network access of subscribers to network operator’s networks, but also Value Added Service deployment, on a future proof platform*

*This e-learning module allows you to study when & where you want, at your own pace...*

*...and easily understand the role of SIM cards in GSM network, value added services with “SIM Toolkit” & remote management of SIM content “Over-The-Air”*

### Key Topics:

- ✦ SIM
- ✦ 3GPP 51.011 (GSM 11.11)
- ✦ 3GPP 51.014 (GSM 11.14)
- ✦ 3GPP 23.048 (GSM 03.48)
- ✦ SIM Application Toolkit
- ✦ SMS & “OTA”
- ✦ Authentication

### Who should attend:

- ✦ SIM Managers
- ✦ Project Managers
- ✦ Developers
- ✦ IT department staff
- ✦ ...

### Each training session consists of:

- ✦ An e-Voucher giving access to web based training module for 1 year comprising...
- ✦ ...User-friendly presentations, demos & quizzes

### Pre-requisites:

- ✦ An understanding of the GSM network, as well as an electronic or computer background would be useful
- ✦ This course is held in English

**Duration:** Self-paced (3 hours of presentation & demos)

### Course fee:

Please refer to our webstore [www.gemalto.com/training/e-learning.html](http://www.gemalto.com/training/e-learning.html) or contact us: <http://www.gemalto.com/training/contact.html>

### Location:

Anywhere you have broadband internet access



**Course Schedule:**

Presentations	Demos
<p>ACTIVITY 1: SIM Card Basics</p> <ul style="list-style-type: none"> <li>✦ Role of SIM card &amp; Standards</li> <li>✦ SIM architecture &amp; Manufacturing process</li> <li>✦ SIM Files and Access Conditions</li> <li>✦ PIN codes</li> <li>✦ Network Authentication with secret key</li> <li>✦ Special Features &amp; SIM command summary</li> <li>✦ Demo</li> </ul>	<p>Managing SIM card content                      Network authentication simulation</p>
<p>ACTIVITY 2: SIM Toolkit &amp; Value Added Services</p> <ul style="list-style-type: none"> <li>✦ Introduction to SIM Application Toolkit</li> <li>✦ SIM Toolkit “STK” concepts</li> <li>✦ SIM Application Toolkit standards</li> <li>✦ Proactive Commands</li> <li>✦ Event Commands</li> <li>✦ STK Protocol</li> <li>✦ Demo</li> </ul>	<p>Running a SIM Toolkit Value added service application</p>
<p>ACTIVITY 3: Remote management of SIM “Over-the-Air”</p> <ul style="list-style-type: none"> <li>✦ How &amp; Why SIM accessed remotely</li> <li>✦ SMS Network access to SIM</li> <li>✦ Security for OTA SIM access</li> <li>✦ SIM execution of OTA commands</li> <li>✦ Notification &amp; Network Response (Proof of Receipt...)</li> </ul>	<p>OTA simulation tools with/without encryption</p>



# E-LEARNING: USIM in 3G Networks

## Objectives:

At the end of this course you will:

- ✦ Be able to state the main evolutions of Telecom Card ETSI-3GPP “Rel-6” standards
- ✦ Understand the basic technologies, features and standards around 3G cards.
- ✦ Understand the functionality of the USIM and difference with 2G cards.
- ✦ Have an overview on the architecture & contents of the card, security of data in file systems, 3G authentication advanced phonebooks



*3G is becoming a more predominant mode of mobile communication, and the USIM (Universal Subscriber Identity Module) implemented on Gemalto 3G cards, can be your passport to 3G networks.*

*This e-learning module allows you to study when & where you want, at your own pace...  
 ...and gives you a comprehensive overview on the USIM card features & functionalities to secure 3G networks.*

## Each training session consists of:

- ✦ An e-Voucher giving access to web based training module for 1 year comprising...
- ✦ ...User-friendly presentations, demos & quizzes

## Pre-requisites:

- ✦ This course requires participants to have a basic knowledge of the following technologies:
  - GSM SIM cards
  - GSM 11.11 & 11.14 standards
- ✦ This course is held in English

## Key Topics:

- ✦ USIM
- ✦ UICC
- ✦ USAT
- ✦ CAT
- ✦ OTA
- ✦ Milenage Algorithm
- ✦ GSM/3G Interworking
- ✦ 3GPP & ETSI-SCP Standards

## Who should attend:

- ✦ SIM Managers
- ✦ Project Managers
- ✦ Developers
- ✦ IT department staff

**Duration:** Self-paced  
 (Several hours of presentation & demos)

## Course fee:

Please refer to our webstore [www.gemalto.com/training/e-learning.html](http://www.gemalto.com/training/e-learning.html) or contact us:  
<http://www.gemalto.com/training/contact.html>

## Location:

Anywhere you have broadband internet access.

**Course Schedule:****Presentations****ACTIVITY 1: Introduction to 3G**

- + Introduction to 3G Technology & cards
- + Standards

**ACTIVITY 2: UICC: 3G Card Platform**

- + Physical characteristics & File system
- + Logical channels
- + Commands

**ACTIVITY 3: UICC: Access Conditions**

- + Access Conditions Introduction
- + Access mode and security conditions
- + UICC PIN system

**ACTIVITY 4: USIM: 3G Authentication**

- + Authentication and Key Agreement
- + Authentication token & Synchronization
- + Milenage Algorithm

**ACTIVITY 5: USIM: Phonebook**

- + Phonebook principle
- + Designing a Phonebook



# E-LEARNING: USIM Standards Evolutions

## Objectives:

At the end of this course you will:

- ✦ Be able to state the main evolutions of Telecom Card ETSI-3GPP “Rel-6” standards
- ✦ Have an overview of the new smart card’s: Java Card 2.2.1 & Global Platform 2.1.1 functionalities
- ✦ Have examples of future services based on new standards and cards



*New SIM card standards & specifications naming and evolutions are often confusing and finding information or anticipating new service opportunities becomes more & more difficult.*

*This e-learning module allows you to study when & where you want, at your own pace ...  
 ...and gives you a comprehensive overview on the new standards evolutions, associated product features, and future service opportunities.*

## Key Topics:

- ✦ ETSI-3GPP Standards
- ✦ Global Platform 2.1
- ✦ Java Card 2.2 (RMI, Garbage Collector)
- ✦ UICC/SIM/USIM
- ✦ Toolkit
- ✦ Logical Channels
- ✦ “OTA”
- ✦ CAT-TP
- ✦ Advanced Services (Device Management, DRM, J2ME, Phonebook)

## Who should attend:

- ✦ SIM Managers
- ✦ Project Managers
- ✦ Developers
- ✦ IT department staff
- ✦ ...

## Each training session consists of:

- ✦ An e-Voucher giving access to web based training module for 1 year comprising...
- ✦ ...User-friendly presentations, demos & quizzes

## Pre-requisites:

- ✦ An understanding of GSM Network
- ✦ A working knowledge of:
  - “Release 5” ETSI/3GPP /GP/Java Card Standards & USIM Characteristics
- ✦ This course is held in English

**Duration:** Self-paced (3 hours of presentation & demos)

## Course fee:

Please refer to our webstore [www.gemalto.com/training/e-learning.html](http://www.gemalto.com/training/e-learning.html) or contact us: <http://www.gemalto.com/training/contact.html>

## Location:

Anywhere you have broadband internet access



## Course Schedule:

### Presentations

#### ACTIVITY 1: Introduction to USIM Standards Evolutions

- ★ Changes in USIM Standards

#### ACTIVITY 2: Java Card 2.2.1

- ★ New Features & Logical Channels
- ★ Remote Method Invocation & SATSA

#### ACTIVITY 3: Global Platform 2.1.1

- ★ Reminder: Security Domains
- ★ New Global Platform (GP) Features
- ★ Security Domains with Privileges

#### ACTIVITY 4: ETSI - 3GPP Release 6

- ★ File Systems & Mechanisms [ETSI102 221-3GPP 31.101/2]
- ★ File Administration [ETSI 102 222]
- ★ Toolkit Evolutions [ETSI 102 223 - 3GPP 31.111]
- ★ BIP & CAT-TP [ETSI 102 227]
- ★ Toolkit APIs [ETSI 102 241 & 3GPP 31.130]
- ★ OTA Secure Remote Management [ETSI 102 225/6-3GPP 31.115/6]
- ★ ISIM (IMS Subscriber Identity Module)



## Course registration form

Booking Form	
Please complete your details below and then either fax, e-mail back or return the form by post to your training center. You may also reserve your course online on <a href="http://gemalto.com/training">gemalto.com/training</a> .	
Course name:	Course Code:
City:	Date:
Fee €:	
Total €:	Plus VAT 19,6%:
Ms <input type="checkbox"/>	Mrs <input type="checkbox"/> Mr <input type="checkbox"/>
First Name:	Family Name:
Company:	
Address:	City
	ZIP
	Country
Phone	Fax
e-mail	
If you wish to include more delegates, please photocopy this form.	

Travel and accommodation assistance	
<p>In partnership with <b>Gemalto</b>, <b>BBA</b> can handle the reservation of your accommodation, free of charge. We select and propose the hotel, which corresponds as closely as possible to your criteria, and that is easily accessible from the <b>Gemalto</b> training centers.            Simply fill in your details below and send this form by email or Fax to <b>BBA</b> :            FAX : +33 1 49 21 55 99            EMAIL : <a href="mailto:solution@netbba.com">solution@netbba.com</a></p>	
Arrival date	Arrival time
Flight number:	Airport:
Departure date	Departure time
<b>Accommodation:</b> YES <input type="checkbox"/> NO <input type="checkbox"/>	Hotel categories: 2** <input type="checkbox"/> 3*** <input type="checkbox"/> 4**** <input type="checkbox"/>
	Or Budget per night :
Single room <input type="checkbox"/> double room <input type="checkbox"/> Twin room <input type="checkbox"/>	Smoker : YES <input type="checkbox"/> NO <input type="checkbox"/>
<b>Car rental:</b> YES <input type="checkbox"/> NO <input type="checkbox"/>	ategory : A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/>
<b>Taxi:</b> YES <input type="checkbox"/> NO <input type="checkbox"/>	
<b>Guarantee: (use only as a guarantee not for payment)</b>	
International Credit Card : American Express <input type="checkbox"/> Visa <input type="checkbox"/> EurocardMastercard <input type="checkbox"/>	
Number: ..... Validity date: ..... Card holder: .....	
<b>Booking confirmation required:</b>	By mail <input type="checkbox"/> By fax <input type="checkbox"/>



## Contact Us

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