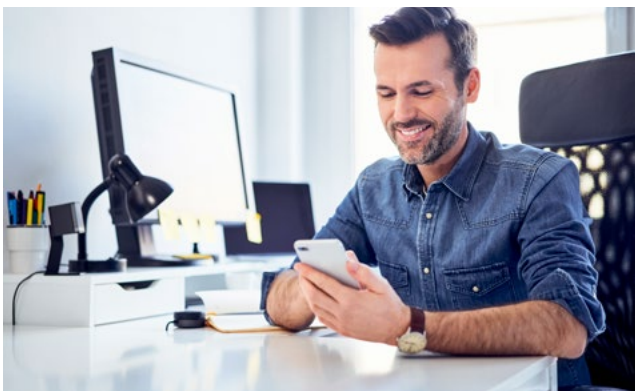


# Mastering SIM & USIM Cards

## Everything you need to know about (U)SIM Cards, Technologies, Security & Services

### Mobile Connectivity Solutions



(U)SIM cards play a larger role today, than simply **securing access** to mobile networks. They are also used as standard, secure and **portable platforms** for personal data & **value added services (VAS)**; remotely updateable in a standard & secure way "Over-The-Air" (OTA).

This training course will allow you to **easily understand** the main standards, technologies, features & security of these products. It will allow you to **analyze & manage** (U)SIM cards using state-of-the-art tools.

### At the end of the training you will:

- Understand (U)SIM card functionality to ease analysis of cards using SIM tools
- Have a clear overview on security mechanisms, and what subscriber-related information is stored in cards
- Understand the concepts & mechanisms around VAS toolkit technology
- Have a clear overview on the process & security around OTA, for remote management of (U)SIMs
- Benefit from real field feedback on what cards & services are currently deployed

### Who should attend?

- SIM Manager
- VAS Manager
- Handset Validation Team
- Project Manager
- Developer Staff
- Roaming Manager
- Forensic Team
- ...

### Pre-requisites:

- No specific pre-requisites for this course
- This course is held in English





## PROGRAM

### Introduction to the SIM & USIM Cards

- Standard & network evolution

### SIM & USIM Cards

- Characteristics & evolution of the Card
- Card Architecture & Standards
- Mobile – Card communication
- SIM/USIM modes
- File systems
- Logical channels & generic UICC commands
- Administrative commands
- Access Conditions
- UICC PIN Management
- 3G Authentication
- SIM/USIM Interworking
- 3G Phonebook
- Practicals:
  - SIM Files browsing
  - 2G & 3G PIN Management
  - 2G & 3G File creation & Access Conditions
  - Simulate GSM & 3G Authentication
  - USIM Files browsing
  - Record APDU trace
  - File Content Reports
  - Card Typing
  - Creating 3G Phonebook

### USIM Application Toolkit overview

- Examples of Toolkit Value added Services,
- USIM Toolkit concept & standards ETSI 102 223,
- SIM Toolkit protocols
- Practicals:
  - Demo on Toolkit applet loading & installation
  - Analyses of APDUs Exchanged with Mobile Simulator
  - Universal Tracer

### OTA Overview

- Introduction, concepts,
- "Enhanced Short Messages" – "GSM 23.048"
- Remote File & Applet Management Concept
- BIP-CAT TP Overview
- Practicals:
  - Demo on OTA
  - SMS received with data ciphered and not ciphered