Smart University 2010 Trainers belong to:
Alcatel-Lucent Bell Labs, Bedfordshire University (UK), Berkeley (USA), CEESAR Research Center (France), City University of London (UK), CNAM (France), Ericsson, Eurosmart, European Centre for AIDC, German Research Center for Artificial Intelligence (Germany), Giesecke & Devrient, Hitachi Europe SAS, INRIA (France), ISG Smart Card Centre of Excellence - Royal Holloway (UK), Lucern University of Applied Science (Switzerland), Oberthur, Oracle Java Group, Polytech Nice Sophia-Antipolis (France), SAP Research, Smart Space Lab, StoLPaN, Supelec (France), Telecom Italia, University of Kent (UK), UCL Louvain-la-Neuve (Belgium), University of Malaga (Spain), University of Milan (Italy), University of Minho (Portugal), University of Rome "La Sapienza" (Italy), Visa Europe, WideTag.

Smart University

State-of-the-Art ICT Knowledge and Training-Workshops

European Program 2010

BRUSSELS (Belgium)
COPENHAGEN/LUND (Sweden)
LONDON (UK)
MALAGA (Spain)
NICE/SOPHIA-ANTIPOLIS (France)
ROME (Italy)

Sponsors : EUROSMART ORACLE Java

Welcome to Smart University, 2010 European Program

Smart University designs and delivers **high level training modules dedicated to latest advances in ICT technologies that will drive future growth and innovation of enterprises and organizations.**

SKILLED AUDIENCE

The Smart University 2010 European program is **intended to engineers, executives, academics and every professional involved in the design and implementation of projects leveraging latest ICT advances** to boost competitiveness, innovation and performance of their organizations.
Strongly technology-oriented, the trainings modules address **project managers who need to master the essential tools** to use and develop these new technologies within their organizations.

EUROPEAN SCALE

Smart University relies on over 30 European Universities, Schools, Institutes and Labs, and is placed under the supervision of its Steering Committee. This *international line-up of academics, researchers and seasoned professionals* added to **six different locations** across Europe ensure Smart University trainees fruitful exchanges of views and multiple networking opportunities.

FLEXIBLE FORMAT

Smart University delivers 1-day or 2-day training modules in two formats:
- **"Education": learning concepts and perspectives**
- **"Training workshops": learning the details and practicing "live".**

To foster **interactivity**, the training modules are limited to 20 participants. Smart University training modules include a panel and a closing discussion.

HIGH LEVEL CONTENT

Each training module is designed and delivered by a **module leader**, a renowned European Academic or Researcher, under the supervision of the **Steering Committee** (see below), and with the contribution of:
- **academics** for the education part of the training
- **IT practitioners** (market players and end users) to present/ discuss demos, case studies, exercises. The good balance between academics' lectures and professionals' expertise guarantees close connections with your markets, competitors, strategies, standards and legal environment.

A final assessment is performed and trainees receive a diploma.

AGENDA & LOCATIONS

Smart University 2010 modules are provided **in various locations through Europe**:

			Smart Event 2010		Aml-10 conference
May 4-6	June 14-16	Sept. 2-3	Sept. 21-24	Oct. 19-21	Nov. 10-11
BELGIUM	UNITED KINGDOM	ITALY	FRANCE	SWEDEN	SPAIN
KU Leuven ***Brussels***	Royal Holloway ***London***	University of ***Rome*** la Sapienza	Sophia-Antipolis ***- Nice***	***Copenhagen*** - Lund University	University of ***Malaga***

STEERING COMMITTEE:
Pr Ernesto Damiani, Head of the University of Milan's Ph.D. School in Computer Science, Italy
Pr Dr Jos Dumortier, Director, ICRI Interdisciplinary Centre for Law and Information & Communication Technology, KU Leuven, Belgium
Dr Antonio Maña Gomez, Professor, Computer Science Department University of Malaga, Spain
Pr Carlo Maria Medaglia, Director RFID Lab and Coordinator CATTID Lab, University of Rome la Sapienza, Italy
Pr Keith Mayes, Director of the ISG-Smart Card Centre at Royal Holloway, UK
Pr Pierre Paradinas, Chair of "Embedded and Mobile Systems" at CNAM, Paris France
Pr George Spanoudakis, Director of Software Engineering Group at City University of London, UK
Richard Bricaire, Editorial and Strategy Consultant, Strategies Telecoms & Multimedia, Paris, France

SMART UNIVERSITY PROGRAM 2010

Smart University 2010

BELGIUM - May 4-6

Brussels/K.U. Leuven, ICRI and COSIC

Situated in the heart of Western Europe, K.U.Leuven has been a centre of learning for almost six centuries. Today European surveys rank K.U.Leuven among the top ten European universities in terms of its scholarly output. 14 faculties, 50 departments, 34,940 students, 4410 Doctoral and Postdoctoral Researchers...

www.kuleuven.be

Modules scheduled
- Java Card 3.0 Programming
- Security and Privacy in the M to M ecosystem
- Smart Cards, RFID tags and pufs: is your smart hardware really secure?
- Exploiting Mobile Technologies and Applications
- Securing Mobile Technologies and Applications

ICRI - Interdisciplinary Centre for Law & ICT

The ICRI research centre at the Faculty of Law of K.U.Leuven is dedicated to advance and promote legal knowledge about the information society through research and teaching of the highest quality. ICRI is committed to contribute to a better and more efficient regulatory and policy framework for information & communication technologies (ICTs). Its research is focused on the design of innovative legal engineering techniques.

www.law.kuleuven.be/icri/

COSIC - COmputer Security and Industrial Cryptography research centre

COSIC's research activities aims to create a secure electronic equivalent for interactions in the physical world such as confidentiality, signatures, identification, anonymity, payment and elections. The research concentrates on the design, evaluation, and implementation of cryptographic algorithms and protocols, on the development of security architectures for information and communication systems and on the development of security mechanisms for embedded systems. www.esat.kuleuven.be/scd/researchers.

UNITED KINGDOM June 14-16

Royal Holloway - University of London, ISG-Smart Card Centre

Royal Holloway College was founded by the Victorian entrepreneur Thomas Holloway. Ranked in the top research-led universities in the UK, Royal Holloway has earned a world-class reputation for developing original research. Research is enhanced by successful relationships and collaborations with industry and commerce. 7,700 undergraduate and postgraduate students, 18 academic departments.

Modules scheduled
- Java Card 3.0 Programming
- Security and Privacy in the M to M ecosystem
- Smart Cards, RFID tags and pufs: is your smart hardware really secure?
- NFC for e-ticketing/e-couponing and other new usages
- Exploiting Mobile Technologies and Applications
- Securing Mobile Technologies and Applications
- ID Management State-of-the-Art
- Hands on Enterprise ID Management
- Security in Software Engineering
- Hands on Services-Oriented Architecture Design

ISG - Information Security Group

The Smart Card Centre was founded in October 2002 by Royal Holloway University of London, Vodafone and Giesecke & Devrient. The primary objective was to create a World-Wide centre of Excellence for training and research in the field of Smart Cards, applications and related technologies.

www.scc.rhul.ac.uk

ITALY - September 2-3

University of Rome La Sapienza, CATTID

With over 700 years of history and 145,000 students Sapienza - founded in 1303 by Pope Boniface VIII - is the first University in Rome and the largest University in Europe. Sapienza has over 4,500 professors and offers a wide range of academic programmes including over 300 degree programmes and 250 first and second level specialised qualifications.

Modules scheduled:
- Internet of Things: YES WE CAN: Integrating Technologies and Vision for New Services
- New frontiers for the mobile and payment systems

C. A. T. T. I. D.

(Centre of Applications for Television and Digital Technology Innovation), operates since 1988 as an inter-departmental research centre of the «Sapienza» University of Rome. The centre collaborates with other universities as well as with some of the most important enterprises affected by the digital convergence process and involved in research activities. CATTID Labs:
- RFID Lab, laboratory for the testing and integration of radio frequency identification technologies
- LUA, Laboratory of Usability and Accessibility of software
- Label, research laboratory on the topics concerning e-learning methods and technologies
- Multimedia lab, focused on the interactions of media and new technologies

www.cattid.uniroma1.it

Venues and Dates

FRANCE
September 21-24
Smart Event'10

Nice/Sophia-Antipolis Science Park

Smart University will take place during Smart Event (www.smart-event.eu) at the «Agora Einstein» conference centre, located on the Europe's leading international science and technology park of Sophia-Antipolis, French Riviera. Sophia-Antipolis counts 1400 high-tech enterprises, universities, research & development labs, international competitiveness clusters, with globally more than 30,000 direct employees. Labs of IT companies such as ITT, Hewlett-Packard, Thales, Orange, CR of Science, Siemens AG, NXM, SAP, ST Microelectronics, Accenture, Télésystems, Digital Equipment Corporation, Symantec... - Research centres from CNRS, INSERM, I3S, LEAT, INRIA, INRA, ParisTech...

Smart Event is renowned as a major Industry & Research Forum in e-ID, emobility and Smart Security. Thanks to its 3 international conferences, over 10 educational modules, exhibition, live demos and other SIG meetings, Smart Event has become a key meeting place for world-class researchers, innovators, developers and business decision-makers.

Modules scheduled

- Java Card 3.0 Programming
- Security and Privacy in the M to M ecosystem
- Technical essentials for M to M project management
- Smart Cards, RFID tags and pufs: is your smart hardware really secure?
- NFC for e-ticketing/e-couponing and other new usages
- Internet of Things: YES WE CAN: Integrating Technologies and Vision for New Services-New frontiers for the mobile and payment systems
- Exploiting Mobile Technologies and Applications
- Securing Mobile Technologies and Applications
- Security in LTE Networks
- Femtocells: Keys for a successful deplo ment
- ID Management State-of-the-Art
- Hands on Enterprise ID Management
- Security in Software Engineering
- Hands on Services-Oriented Architecture Design
- Software Security certification

SWEDEN - October 19-21

Lund University (near Copenhagen)

Founded in 1666, Lund University is an international centre for research and education that has approximately 38,000 students. With eight faculties and many research centres and specialised schools, Lund University is one of the largest institutes for research and higher education in Scandinavia; and is the strongest research university in Sweden.
Lund University is ranked as one of the best universities in Europe by several different, and respected, ranking studies. 498 Doctor (PhD) Degrees. Exchange agreements with over 600 universities from around the world.
www.lth.se

Modules scheduled

- Java Card 3.0 Programming-
- Smart Cards, RFID tags and pufs: is your smart hardware really secure?
- Exploiting Mobile Technologies and Applications
- Securing Mobile Technologies and Applications
- ID Management State-of-the-Art
- Hands on Enterprise ID Management

SPAIN - November 10-11
AmI-10 Conf.

University of Malaga, ETSII

Malaga University (UMA) is a public institution which promotes outstanding research and teaching within the European Higher Education Area. With little more than 25 years of existence, Malaga University has become a significant promoter of culture in the city, whilst providing a considerable basis for technology and research in the future. With a university community of just over 40,000 people, over the last decade UMA has sought to promote the internationalisation of its teaching and research and the mobility of its teachers and students.
www.uma.es

Modules scheduled

- Java Card 3.0 Programming
- Smart Cards, RFID tags and pufs: is your smart hardware really secure?
- Security in Software Engineering
- Hands on Services-Oriented Architecture Design

ETSII - Escuela Técnica Superior de Ingeniería Informática

The Escuela Técnica Superior de Ingeniería Informática has more than 3,200 students and 135 teachers from several departments, such as: Computer Architecture, Electronics, Applied Physics II, Systems and Robot Engineering, Languages and Computational Sciences, and Applied Mathematics. The Department of Languages and Computer Science's research groups works on artificial intelligence and applications, software engineering, computer technical in engineering, computational intelligence and image analysis, cooperative information systems.
www.informatica.uma.es

Smart Technologies and Devices

Java Card 3.0 Programming

2 Days
Training

Brussels, London, Sophia,
Lund, Malaga

Module designed and coordinated by *Michel Koenig, Professor at Polytech Nice-Sophia, France*

Where and when?

Brussels, May 4th-5th, 2010

London, June 15th-16th, 2010

Sophia-Antipolis, September 23rd-24th, 2010

Lund, October 19th-20th, 2010

Malaga, November 10th-11th, 2010

Key topics:

Java Card 3.0 - Smart Card Web Server - Security

Who should attend:

This session is dedicated to a large category of attendees, from Java Card beginners to Java Card specialists who want to improve their knowledge about the new specifications of the Java Card system 3.0. The session covers enough subjects to satisfy most ITs: developers, system architects, application architects, technology consultants, managers, technical columnists…

Pre-requisites: Java Card is a programming language, an elementary knowledge of any kind of language is enough to attend this session (C, Pascal, Fortran, Cobol...); an elementary knowledge of Java could be an advantage.

Java Card 3.0 is the last version of the Java Card standard. It is proposed with two flavours: the classical edition which is the continuation of the Java Card 2 version, and the connected edition which enhances the Smart Card Web Server concept and makes the Java Card language and system more consistent with the Java language itself.
This latest version is the result of constant enhancements. Java Card was introduced in 1996 to help the smart card industry to standardize the effort of the developers. The first version of Java Card was released very soon after the kick-off meeting in order to give to the smart card industry the first frame necessary to start the software developments.
This version was very soon enhanced to reach the version Java Card 2 which is the basis of most of the Java Cards issued in the world.
To satisfy the needs of the SIM card industry, some APIs were introduced and standardized by ETSI for the GSM world. The SIM Toolkit APIs have proved their efficiency in helping the telecom operators adding some features to the mobile telephony through the SIM Java Cards.
With the introduction of brilliant graphic user interfaces in telephony, the simplicity of the SIM Toolkit menus appears to be too poor. The Smart Card Web Server concept was then introduced to help the SIM card software developers to design more exciting interfaces for SIM card applications.

> DAY 1

9.00 - 12.30 am
Introductory session: « Getting started... »
by *Michel Koenig*
- Brief history
- ISO7816 standard
- Introduction to Java Card
- A first example : hands-on exercise

2.00 - 3.30 pm
Security aspects
by *Michel Koenig*
- Hardware and software tradeoffs
- PIN code handling
- Cryptographic aspects
- Extending the first example: hands-on exercise

3.45- 5.45 pm
SIM cards and SIM toolkit
by *Michel Koenig*
- SIM card standards
- Proactive commands
- Java Card APIs for SIM Toolkit
- Hands-on exercice

5.45 - 6.00 pm
Summary of the first day, questions and answers

> DAY 2

9.00 - 11.00 am
SCWS, hands-on exercise
by *Vincent Guérin, Java VM Group Manager, Oberthur*

11.00 - 12.30 am
SCWS with Java Card 3.0, connected edition
by *Vincent Guérin, Java VM Group Manager, Oberthur*

2.00 - 4.45 pm
Java Card 3.0, hands-on exercise
by *Thierry Violleau, Staff Engineer, Java Software, Oracle Java Group*

4.45 - 5.00 pm
Conclusion

Training's objectives

This training covers all the flavours of the Java Card system and language. Half time is dedicated to the lecture, and half time is devoted to hands on exercises. Attendees will practice on simulators for debugging purpose and on real smart cards.

You will learn:
- the technology of smart cards
- how to use Integrated Development Environment for simulation and real deployment
- how to program simple Java Card applet
- how to design Java Card applications for Business systems and Mobile telephony systems
- The specifications of the various flavours of Java Card
- How to design and program Java Card 3.0 applets and servlets
- The 6 rules of Java Card software design

Equipment: Attendees will use Java Card development kits to develop, deploy and test real application on real smart cards. They will use also simulators to learn how to debug and improve safety and quality for smart card applications. The software tools will be given to the attendees at the end of the training.

Smart Technologies and Devices

Security and Privacy in the Machine to Machine ecosystem

1 Day
Educational & Training

Brussels, London, Sophia

Module designed and coordinated by *Jean-Pierre Delesse, member of the Steering Committee of Eurosmart*

Where and when?

Brussels, May 6th, 2010

London, June 15th, 2010

Sophia-Antipolis, September 21st 2010

Key topics:

All technologies from interfacing with the analog world up to the transmitting data to application servers: M2M module (modem), analog interface (detectors, sensors, MEMs); Silicon Packaging; O/S, application software, personnalisation; Wireless network: (2G, 3G, 4G/LTE) and Data exchange. Security and privacy. Internet of things.

Who should attend:

Engineers, Project managers, Technical managers of System Integrators, Service Providers, Telecoms Operators as well as Security, RFID, Standardization Experts, Certification bodies, etc.

With millions of machines communicating with other machines, the M to M technology is still at its early stage. Environmental concerns, government regulations, rapid deployment of wireless networks will undoubtedly accelerate the take up of wireless M to M ecosystems covering a wide range of applications in our professional and personal everyday life. While M to M technologies will be deployed to match convenience, other factors like complexity of the value chain, reliability, cost optimization, privacy and security are still raising questions.
For instance, with no human secret like PIN code, with less possibility to control deviations on the spot, it is likely that there will be more security challenges when deploying M to M technologies compared to a more traditional Human to Machine (H2M) technologies.
With more than 10 years experience in the security industry and 2 years research on M to M technologies, Eurosmart share its findings on the key part of the M to M ecosystem which goes from the data acquisition up to data transmission, with a focus on security technologies to limit risks while respecting privacy. This session is also a way to anticipate another major technology development: Internet of Things.

9.00 - 10 am
Introduction: vision of M to M
by *Jean-Pierre Delesse, Eurosmart*
Why, when and where billions of machines will exchange data, and who will benefit from this deployment: a vision by Eurosmart.

10.00am - 11.30 am
From Smart Card to Smart M to M
by *Jean-Pierre Delesse, Eurosmart*
The technologies deployed by the digital security industry are paving the way for a successful deployment of M to M ecosystem

11.30 - 12.30 am
Security and Privacy Guidelines
by *Helmut Scherzer, Technology Manager, G&D*, or *Ricardo Moreira, Product Marketing Manager, Oberthur Card Systems*
Security is not always well understood and it will not improve in a system based on a long and complex value chain. This presentation will provide useful guidelines in term of security and privacy.

2.00 - 4.00 pm
Use cases
by *Helmut Scherzer, Technology Manager, G&D*, or *Ricardo Moreira, Product Marketing Manager, Oberthur Card Systems*
Safety and environmental concerns are pushing government to accelerate the deployment of M to M technologies in automotive, telematics and smart metering: these are interesting use cases which will be developed.

4.00 - 5.00 pm
Regulations and Standardization
by *Jean-Pierre Delesse, Eurosmart*
Like in other applications, standardization will facilitate the take up of M to M technologies by reducing cost and offering more guarantees. Some progresses have been made, although there is still a lot to do in this area. State-of-the-Art of the topic.

5.00 - 6.00 pm
M2M evolution, Internet of Things
by *Jean-Pierre Delesse , Eurosmart*

Training's objectives

The following questions will be answered by industry experts and illustrated through several use cases and practical examples, with a focus on security technologies to limit risks while respecting privacy:
- How to define, describe and categorize a M to M eco-system, what are the key applications?
- What are the key drivers and the main barriers for M to M deployment?
- What are the current technologies and their evolution, why more standardization is needed?
- Why SIM will play a dominant role in M to M?
- Who are the key players and key influencers, how they will interact, what will be the role of Mobile Operators, Service providers, System integrators?
- Which network for which applications? Will LTE accelerate the take up?
- What are the main security risks, how to prevent, how to balance security, cost and privacy?
- How to know more about M to M: forums, associations, conferences, certification bodies?

Smart Technologies and Devices

Technical Essentials for M to M Project Management

1 Day
Training

Sophia

Module designed and coordinated by *David Simplot-Ryl, Professor at the University of Lille, France*

Cellular communications from machine to machine will cover more and more vertical fields and will potentially imply more than two billions of machines in the world.
Wireless « Machine to Machine » (M to M) is about to know a huge growth in upcoming years or even months. 3G, Wi-Fi and RFID tags development contribute to the M to M expanding development and open new growth perspectives for companies and organizations.
You want to develop a M to M project and want to learn more on the actual trends?
You want to acquire technical essentials for the launching of your project?

Where and when?

Sophia-Antipolis, September 22nd, 2010

9.00 - 10.00 am
Welcome and short introduction
by *David Simplot-Ryl*

10.00 - 11.00 am
Internet of things, Internet of goods

11.30 - 1.00 pm
Wireless sensor and physical world networks

2.00 - 3.30 pm
P2P systems, principles and applications

3.45 - 4.45 pm
Intervehicular communications

4.45 - 5.30 pm
Smart Building and Ambient Intelligence

5.30-6.00pm
MtoM deploymeny methodologies: integration role and practise
by an intregrator representative or expert to be designated

Key topics:

Ambient intelligence - sensors - intervehicular communications

Who should attend:

Engineers, Project managers, Technical managers of System Integrators, Service Providers, Telecoms Operators... as well as Security, RFID, Standardization Experts.

Training's objectives

This module will focus on M to M principles and applications.
We will describe technologies and challenges like RFID, wireless sensor networks or P2P applications
in the domain of intervehicular communications, smart buildings and ambient intelligence.

Smart Technologies and Devices

Smart Cards, RFID Tags and Pufs: Is your Smart Hardware Really Secure?

2 Days
Educational

Brussels, London, Sophia, Lund, Malaga

Module designed and coordinated by *Jean-Jacques Quisquater, Head of the UCL Crypto Group, University of Louvain-la-Neuve, Belgium*

Where and when?

Brussels, May 4th-5th, 2010

London, June 15th-16th, 2010

Sophia-Antipolis, September 21st-22nd, 2010

Lund, October 19th-20th, 2010

Malaga, November 10th-11th, 2010

Key topics:

RFID security - cryptography - hardware

Who should attend:

IT developers and architects, Security/IT managers, project managers, researchers and academics.

Security is essential for smart card, RFID (contactless) and PUF (Physical Unclonable Function) devices mainly from the hardware and cryptographic views.
Hardware security is related to the problems of passive and active attacks and cryptographic security is related to the low resource requirements.
Physical devices are leaking information, including secret keys, passwords, aso, and it is important to know why, when and how to avoid it. Active attacks (faults) are also very important and we will address it. A large part of the module will be devoted to RFID security and their applications including e-passports, tags for commerce and identification.
The module will also give the new flavours from the main conferences related to the security of secure devices, including
CHES, CARDIS, e-Smart, CRYPTO, EUROCRYPT, PKC, FSE... with direct applications for the industry and the design of secure devices including attacks and solutions against recent applications.

Day 1

9.00 - 12.30 am
Introduction to Security of Smart Cards
by *François Koeune, UCL, Louvain-la-Neuve*

2.00 - 5.30 pm
Advanced Security for Smart Cards: from Theory to Practise
by *François-Xavier Standaert, UCL, Louvain-la-Neuve*

Day 2

9.00 - 12.30 am
RFID and Contactless Cards Security
by *Gildas Avoine, UCL, Louvain-la-Neuve*

2.00 - 3.30 pm
Introduction to the use of PUFs for Secure Key Storage and Anti-Counterfeiting

3.45 - 4.45 pm
Panel
by *Jean-Jacques Quisquater and others instructors*

4.45 - 5.30 pm
Smart Cards, RFID, PUF and Cryptography: Recent News about Security
by *Jean-Jacques Quisquater*

Training's objectives

This module is mainly devoted to the hardware (physical) and cryptographic security with a smooth side for software security. We assume that trainees know a little bit about smart cards (if no, contact us before the course, we will send you an introduction to the field). The remaining parts are self-containing.
An effective methodology to handle the main problems will be described.

Smart Technologies and Devices

NFC for e-ticketing/e-couponing and other new usages

1 Day
Educational & Training

London, Sophia

Module designed and coordinated by *Serge Miranda, Professor at the University of Nice Sophia-Antipolis, France*

We entered the Mobile Internet era. Near Field Communication (NFC) is a new short-range wireless connectivity technology with high expectations for innovative information services that emerged from the combination of contactless identification (RFID Radio Frequency Identification) and cell phones. NFC was launched in 2004 by Philips (NXP), Sony and Nokia. NFC can be used with a large variety of devices for touching connectivity: consumer electronics, mobile devices, locks, objects, printers, TV and PCs. Consumers will be able to easily access a variety of services (m-payment, transport, travel, infotainment, culture...) and conveniently exchange information with a simple touch gesture utilizing NFC technology. The NFC technology is revolutionizing the mobile services world and you have to know its technical aspects to exploit it today in your projects. The paper ticket or coupon is now a thing of the past. Our cell phone can be used to store virtual vouchers, transport ticket, coupons, etc.
Sky is the limit in terms of innovative content and services of our digital future where they will be location-based and touchbased!

Where and when?

London, June 16th, 2010

Sophia-Antipolis, September 21st, 2010

9.00 - 9.45 am
NFC State-of-the-art and strategic vision on mobiquitous NFC smart places
by *Serge Miranda*

9.45 - 11.00 am
e-ticketing and location-based marketing (POS marketing)
by *Jérémie Leroyer, CEO, AIRTAG*

11.15 - 1.00 pm
NFC standards and interoperability
by *Nicolas Pastorelly, Senior Project Manager, University of Nice Sophia-Antipolis*
- Radio Frequency Identification (RFID) NFC and Touch based services from an architectural point of view
- NFC standards comparison: Contactless 13,56Mhz, Type A, B and Sony - Mifare, Felica, Topaz formats
- Complementarity with Bluetooth
- Security SIM / Smart card
- Interoperability, standards, GSM association and ETSI

2.00 - 3.30 pm
Architecture and development kits JAVA / J2ME prerequisite
Nicolas Pastorelly, Senior Project Manager, University of Nice Sophia-Antipolis
- Development kits (SDK) and JSR 257
- Development platforms
- Present issues in NFC application development (certification...)

4.00 - 5.30 pm
Round Table - NFC and local authorities: experiences feedbacks
Moderator: *Serge Miranda*
François Lecomte, Managing Director, Forum des services mobiles sans contact (FSMSC)
Christophe Junac, Directeur de l'innovation numérique et des nouveaux usages, Communauté Urbaine Nice Côte d'Azur

Key topics:

Communicating objects, standards, architectures, industrial overview, proximity marketing.

Who should attend:

Marketing managers, project managers, mobile operators, service providers.

Training's objectives

This module will give you basic knowledge of the NFC technology, addressed from the e-ticketing / e-couponing perspective. It will offer you feedbacks from local authorities having already implemented and developed NFC. Its technical section will give you practical answers to integrate NFC in your development strategy.

Smart Technologies and Devices

Internet of Things - YES WE CAN: Integrating Technologies and Vision for New Services

2 Days
Educational & Training

Rome, Sophia

Module designed and coordinated by *Carlo-Maria Medaglia, Professor*, with *Dr Erjka Priori's assistance, University of Rome "La Sapienza", Italy*

The growth of the Internet is ongoing process and billions people are linked through computers and mobile devices. Real-time communication and the availability of information on the network enabled the explosion of the Internet, connecting people and services.
In a similar way, the current evolution of the Internet is moving towards the inclusion of everyday objects, integrating them in IT processes.
In this scenario, connected objects will act with a high degree of autonomy, fetching and providing information collected through sensors, processing it and interacting with the users and the environment. This is the Internet of Things scenario.
This seminar will provide an up-to-date view on the Internet of Things and related topics. Emphasis will be given to the use and capitalization of the opportunities provided by the "Internet of Things" as well as to the critical technical, business, social and governance issues regarding it.

Where and when?

Rome, September 2nd-3rd, 2010

Sophia-Antipolis, September 23rd-24th, 2010

Key topics:

RFID security - cryptography - hardware

Who should attend:

IT developers and architects, Security/IT managers, project managers, researchers and academics.

Day 1

VISION AND FUTURE OF THE INTERNET OF THINGS

9.30 - 11.00 am

Introduction and overview of the IoT evolution
by *Carlo Maria Medaglia*

11.30 - 12.30 am

Key services for the IoT
by *Alexandru Serbanati, IOT Project Manager, RFID Lab, University of Rome «Sapienza»*
Resource identification, long range routing/handover for nomadic devices, security infrastructure

2.00 - 3.30 pm

The future of IoT
by *David Orban, WideTag Chief Evangelist and Singularity University Advisor*

IOT: TECHNOLOGICAL STATE OF THE ART

4.00 - 5.30 pm

From connecting objects to a network of intelligent objects
by *Alessandro Bassi, Researcher, Hitachi Europe SAS*

Day 2

FROM RESEARCH TO MARKET: ROADMAP AND AWARENESS

9.30 - 10.30 am

European Commission's approach: the CASAGRAS project
by Anthony Furness, European Centre for AIDC (to be confirmed)

BUSINESS OPPORTUNITIES: SECTORIAL APPLICATIONS

11.00 - 12.30 am

A framework for healthcare monitoring applications in body sensor Networks
by Marco Sgroi, Berkeley WSN Lab

2.00 - 3.30 pm

Telecoms: Telecom Italia approach and initiatives
by *Antonio Manzalini, Telecom Italia*
Business opportunities, stakeholders, value proposition and business models

4.00 - 5.30 pm

Smart Homes and Environments
by Alexander Klapproth, Professor at the Lucern University of Applied Sciences and Arts and Head of the CEESAR Research Center (to be confirmed)

Training's objectives

The aims of this training are:
- to provide a new view of the Internet of Things concept and vision
- to explore the technologies that will support the "Internet of Things" development. Technologies such as Near Field Communications (NFC) and Wireless Sensor and Actuator Networks (WSAN) together with RFID will provide the atomic components that will link the real world with the digital world
- to explore potential applications for society and enterprise world. Healthcare, entertainment, transport, urban living, business processes and automation are all application spaces that can benefit from the IoT

Attendees should be able to answer the following questions by the end of the seminar:
- Concept/definition of the Internet of Things
- What will IoT change for business and companies, and when?
- How to get prepared to and tackle these new issues?
- What is the IoT roadmap for business and companies?
- Recommendations and next steps

Mobility and Wireless

New Frontiers for the Mobile and Payment Systems

2 Days
Educational

Rome, Sophia

Module designed and coordinated by *Carlo-Maria Medaglia, Professor*, with *Dr Erjka Priori's assistance, University of Rome "La Sapienza", Italy*

Transactions on mobile are increasing thanks to enabling technologies and important partnership between managers, operators and financial institutions, which want to transform the mobile technology in business tool and make transactions secure and interoperable.
In this seminar we examine the basic conditions to mobile payment with special regard to the European market. Based on this, we analyze the current deadlock on the mobile payment market in order to develop a set of requirements to an integrative solution in the form of a Universal Mobile Payment System UMPS.

Where and when?

Rome, September 2nd-3rd, 2010

Sophia-Antipolis, September 21st-22nd, 2010

Key topics:

NFC, Contactless Technology, Global Platform, Security, Standardization

Who should attend:

Engineers, Project managers, Technical managers of System Integrators, Service Providers, Telecoms Operators... as well as Security, RFID, Standardization Experts.

Day 1

9.30 - 11.00 am
Introduction and overview of Mobile Payments evolution
by *Carlo Maria Medaglia*

11.30- 1.00 pm
Mobile Payments application examples
by *Alice Moroni, NFC Project Manager, RFID Lab, University of Rome «Sapienza»*

2.00 - 3.30 pm
The Mobile Payments: business model and success story
by *Francesco Iarlori, International Business Developer, ICT Advisor Independent Journalist, TheBestAdvise.com project*

4.00 - 5.30 pm
The GSMA perspective on Mobile Payments evolution
by *Andrea Battisti, Telecom Italia (to be confirmed)*

Day 2

9.30 - 10.30 am
Mobile payments: perspective of the Ict industry
by Giorgio Andreoli, Director Business Development, Banking & Payment, Ericsson

11.00 - 12.30 am
The StoLPaN Project: an open environment for the implementation Mobile Financial services
by *Andras Vilmos, Project Manager, StoLPaN*

2.00 - 3.30 pm
How Has the Mobile Payment World Changed in the Last 12 Months?
by *Mary Carol Harris, Head of Mobile, Visa Europe (to be confirmed)*

4.00 - 5.30 pm
The SIM as the center of the mobile payment world
by *Giancarlo Celentano, Sales Director - Giesecke & Devrient Italy*

Training's objectives

- Have an overview of contactless technologies and standards and be aware of mobile contactless deployments worldwide (use cases, architectures, requirements)
- Have a clear vision of the security requirements
- Europe Mobile payment policy and management
- Payment business model

Mobility and Wireless

Exploiting Mobile Technologies and Applications

1 Day
Educational

Brussels, London, Sophia, Lund

Module designed and coordinated by *Keith Mayes, Director of the ISG-Smart Card Centre, UK*

Mobile communication is a ubiquitous part of modern line and utilized in an increasingly wide range of applications and services.

The desire to find a profitable "killer" application that is widely used by many mobile customers has never been stronger, yet in many cases the desire remains unfulfilled. Turning an application idea into a mass-market success (compared to a niche market failure) offering can be very difficult due to a combination of factors, including business aspects, technology, legacy devices, customer segmentation, marketing, open standardization, ownership, management and control.

Where and when?

Brussels, May 4th, 2010

London, June 14th, 2010

Sophia-Antipolis, September 22nd, 2010

Lund, October 19th, 2010

9.00 - 11.00 am
Introduction to Mobile Applications
- History and evolution of mobile applications
- Comparison with "conventional" applications
- Parties that have an interest in this business area
- Ownership and Control issues

11.15 - 12.45 am
An overview of technology choices for mobile applications
- Mobile phone platforms
- Subscriber Identity Module platforms
- On-line v off-line service architectures
- Management choices

2.15 - 3.45 pm
From Concept to Launch
- Product Proposition process
- Business case
- Implementation issues
- Legacy issues
- Fraud/Security/IP reviews
- Roll-out
- Support/monitoring

4.00 - 5.30 pm
Exploring case studies
- Introducing case study examples
- Team work to develop "pitch"
- Team "pitches"
- Worked examples

Key topics:

Mobile, communication, application, service, technology.

Who should attend:

The module is suitable for non-technical attendees, but is also recommended as a primer for the more technical module "Securing Mobile Technologies and Applications" and for anyone wishing to gain a rapid understanding of the wide range of issues in launching mobile services. The content is aimed at management/marketing level, although it should also appeal to technologists and engineers.
Target sectors: Mobile network operators, third party application/service providers (e.g. banks, transport, content providers, advertisers, ISPs, government etc.), application/service developers, equipment manufacturers, consultancies.

Training's objectives

The objective is to familiarise the audience with the issues associated with identifying, implementing, launching and managing a successful mobile application/service.

It will then become possible to understand the critical constraints, decisions and choices that affect the lifecycle of mobile applications and services. The learning objectives will be illustrated and strengthened by means of example case studies, drawn from extensive industry experience.

Mobility and Wireless

Securing Mobile Technologies and Applications

2 Days
Training

Brussels, London, Sophia, Lund

Module designed and coordinated by *Keith Mayes, Director of the ISG-Smart Card Centre, UK*

Mobile communication is an exciting channel for providing trustworthy applications and personalised services to over 2 billion end-users, any time, any place, anywhere. Companies and individuals working in this field should be aware of the various methods and tools for developing applications, however to maintain trust and security they also need knowledge of the underlying mobile technologies and their security mechanisms.

For example, there are numerous types of mobile phone platform, subscriber identity modules, modems and competing wireless standards. Furthermore, the underlying infrastructure may constrain security and performance and affect architectural choices such as off-line and on-line functionality.
Ensuring that the applications are secure and help resist fraud is often poorly handled by developers and so the range of potential attacks should be appreciated as well as the implementation measures to defeat them.

Where and when?

Brussels, May 5th-6th, 2010

London, June 15th-16th, 2010

Sophia-Antipolis, September 23rd-24th, 2010

Lund, October 20th-21st, 2010

> Day 1

9.00 - 11.00 am
Introduction to common mobile communication systems, infrastructure and functionality.
- GSM
- UMTS

11.15 - 12.45 am
Other common approaches to wireless communication
- WLAN
- Broadcast (Satellite-TV)

2.15 - 3.45 pm
Security Mechanisms in mobile communications
- SIM/USIM
- WEP/WPA
- Security Elements in NFC phones
- Mobile Security APIs

4.00 - 5.30 pm
Attacks and countermeasure techniques
- Classes of attack
- Practical examples
- Countermeasures

> Day 2

9.30 - 11.00 am
Secure Mobile Application Development/Test
- Tools/methods for mobile phone platforms
- Example application(s)

11.15 - 12.45 am
Secure Mobile Application Development/Test
- Tools/methods for SIM/SEs
- Example application(s)

2.15 - 3.45 pm
Practical application development/ test example(s)
- Handset application (client/server)
- SIM application

4.00 - 5.30 pm
Exploring case studies
- Introducing case study requirements
- Team work to design solutions against requirements
- Team presentations of solutions
- Discussion/feedback

Key topics:

Mobile, communication, application, service, technology, development, security.

Who should attend:

The module is suitable for attendees with some technical background and IT awareness, but will not rely on prior knowledge of mobile application development or security. Attendance of the earlier module “Exploiting Mobile Technologies and Applications” is recommended.
The content is aimed at engineers/ developers and security experts, however it should also appeal to managers wishing to get an overview of the development activities.
Target sectors: Mobile network operators, third party application/ service providers (e.g. banks, transport, content providers, advertisers, ISPs, government etc.), application/service developers, equipment manufacturers, consultancies, engineers, security experts.

Training’s objectives

The objective is to initially familiarise the audience with mobile communication systems and the options for developing and testing real-world applications. This will then be expanded to consider the implementation of secure/trustworthy applications in the mobile context. The learning objectives will be illustrated and strengthened by means of example case studies, drawn from extensive industry experience.

Mobility and Wireless

Security in LTE Networks and Services

1 Day
Educational

Rome, Sophia

Module designed and coordinated by *Guillaume de la Roche, PhD, Centre for Wireless Network Design, Bedfordshire University, UK*

Where and when?

Sophia-Antipolis, September 22nd, 2010

Key topics:

LTE, security, 4G, secured applications.

Who should attend:

Mobile operators, Manufacturers, Developer, Engineers in telecommunications, Researchers, Consultants

LTE (Long Term Evolution), which is standardized by 3GPP and 3GPP2, will enable cellular networks to support up to 10 times higher data rate and more users than existing HSPA networks. Hence, there is a great opportunity for operators and manufacturers to propose new data rate to consuming applications such as voice/data services.
However, in order to successfully deploy LTE applications in the future, it is important to carefully plan the security of such network and/or applications. LTE is an all-IP architecture, leading to security challenges at the application and operating level. Moreover, LTE will be a great platform for commercial applications where financial transactions will occur, that is why it must be done in a secured manner.
In this course all the aspects of security in LTE networks will be investigated.

9.00 - 11.00 am
General overview of LTE
- Introduction
- LTE technologies
- Network architecture

11.15 - 12.45 am
Threats, Hacking and Viruses in LTE
- Security challenges
- Classification of attacks
- Viruses

2.15 - 3.45 pm
Solutions for security in LTE
- Access control and authentication
- Secured protocols
- Application security

4.00 - 5.30 pm
LTE applications
- Examples of new applications
- Deployment of LTE services
- Community

Training's objectives

First a reminder of all the technologies used by LTE will be presented, and the architecture of LTE network and its components will be detailed, focusing more in particular on the security part. Then, the issues related to security in LTE will be presented, and existing solutions at the different layers of the network will be detailed. Finally, this course will be illustrated with examples of securely deployed applications.

Mobility and Wireless

Femtocells: Keys for a successful deployment

1 Day
Educational & Training

Sophia

Module designed and coordinated by *Guillaume de la Roche, PhD, Centre for Wireless Network Design, Bedfordshire University, UK*

Where and when?

Sophia-Antipolis, September 21st, 2010

Key topics:

Femtocells, HomeNodeB, Wireless communications

Who should attend:

Mobile operators, Manufacturers, Engineers in telecommunications, Researchers, Consultants.

Femtocells appear to be an optimal solution to ensure high radio coverage in home/office/SME environments. With such devices, mobile users benefit from a maximal capacity, thus allowing them to take advantage of new data/voice services and new applications. Compared to UMA (Unlicensed Mobile Access), femtocells are in favoured position since they save battery life and do not require the use of specific dual mode handsets. Moreover, femtocells are a low cost solution for operators to extend their coverage and save energy. Recently, advances related to the standardization of femtocells have been seen and femtocells have started to be commercialized in many countries. However, in order for large scale femtocell deployments to occur, many challenges still have to be solved. Interference will be reduced only if femtocells can configure automatically their parameters, that is why self-organization of femtocells (flexible femtocells) is an important issue. As suggested recently, femtocells could also be deployed outdoors leading to more challenges.
In this course, all the challenges related to large scale deployment of femtocells will be investigated.

9.15 - 10.45 am
Presentation of femtocells, advantages and drawbacks
by *Guillaume de la Roche*
- Introduction to femtocells
- Indoor coverage techniques
- Competing solutions
- Equipments and Architectures
- Standardization
- Applications
- Challenges

11.00 - 1.00 pm
Overview of the market and feedbacks
by *Alberto Conte, Research group leader, Alcatel- Lucent Bell Labs*
- Architecture and Applications
- Altcatel-Lucent strategy concerning femtocells
- Feedbacks related to 3G femtocells
- Perspectives concerning LTE?
- Evolution of femtocells: enterprise and outdoors
-Conclusion

2.30 - 4.00 pm
Challenges/solutions when deploying femtocells
by *Guillaume de la Roche*
- Access methods
- Interferences
- Self-organization
- Security
- Synchronisation
- Localisation

16h15 - 17h30 pm
Flexible outdoor femtocells : why and how to deploy them?
by *Prof. Merouane Debbah, SUPELEC, Holder of the Alcatel-Lucent chair.*
- Presentation
- Capacity of virtual MIMO femtocell networks
- Decentralized management of interference
- Distributed resource allocation

Training's objectives

The first aim of this course will be to present the state-of-the-art of the technologies currently used by femtocells, and to describe the current deployments. Then, challenges related to massive deployment will be investigated, and the solutions that both operators and manufacturers could implement will be evaluated.
Perspectives concerning flexible femtocells will be detailed. Home femtocells will be mainly studied, but results concerning enterprise and outdoor femtocells will also be presented.

Digital Identity Management

ID Management State-of-the-Art

1 Day
Educational

London, Sophia, Lund

Module designed and coordinated by *David Chadwick, Professor at the University of Kent, UK*

This is primarily a technical module that will introduce and explain the concepts and theories of federated identity management and the underlying technologies on which they are built. It will identify the strengths and weaknesses in current FIM systems and models and will look at the latestresearch that is attempting to address some of the deficiencies.

Where and when?

London, June 15th, 2010

Sophia-Antipolis, September 21st, 2010

Lund, October 19th, 2010

Key topics:

Federated Identity management – SAML 2.0, OpenID, XACML, Security

Who should attend:

IT and networking professionals, system designers, application architects, IT business managers… anyone who has an interest in federated identity management.

9.30 - 11.00 am
Background technologies and Issues
PKI, PMI, Blinded Credentials, SAML assertions, X.509 ACs, LOA, LDAP
Data protection legislation. Web Services and SOA

11.30 - 1.00 pm
Identity Management Technologies
CardSpace, Higgins, Shibboleth, SAMLv2, Liberty Alliance, OpenID, OAuth, 3-D secure

2.00 - 3.00 pm
Policy Based Systems
RBAC, ABAC, PEP, PDP, PIP, PAP, XACML, PERMIS, push, pull, obligations

3.30 - 5.00 pm
Latest Research, Expected Impacts
TAS3, PRIME-LIFE, SWIFT, PICOS, STORK

Training's objectives

Attendees should be familiar with the Internet and its underlying protocols (connectionless and
connection oriented, client server interactions etc.) and appreciate the security vulnerabilities and
risks that businesses undertake when connecting to the Internet.

Digital Identity Management

Hands on Enterprise ID Management

1 Day
Training

London, Sophia,
Lund

Module designed and coordinated by *David Chadwick, Professor at the University of Kent, UK and George Inman, School of Computing, University of Kent, UK*

Where and when?

London, June 16th, 2010

Sophia-Antipolis, September 22nd, 2010

Lund, October 20th, 2010

Key topics:

Federated Identity management – SAML 2.0, OpenID, XACML, Security

Who should attend:

Software Developers, System administrators, Application architects… anyone who has an interest in building federated Identity Management Systems.

This is primarily a practical workshop designed to give attendees a hands on example of how to quickly build an enterprise level federated Identity management system from the ground up using existing open source software.

A short talk will be given to explain the plethora of competing IdM standards and advice will be given throughout the day on how to avoid some of the common misconceptions and pitfalls encountered when moving systems towards a federated model.

9.00 - 10.00 am
Setting up your environment (Apache, Java, etc.)
- Making use of existing standards: SAML, OpenID, Ws-*, Facebook Connect …
- OpenSource software and libraries for creating federated services
- Setting up your software environment for the day
- Description of the scenario you will be following throughout the remainder of the workshop.

10:30 - 1.00 pm
Hands-on Session 1
- Basics of Constructing a SAML 2 federation – PKI and Metadata
- Setting up a SAML 2.0 IdP and interoperating with an existing SP
- Enabling OpenID as an authentication provider

2.00 - 5.00 pm
Hands-on Session 2
- Setting up a SAML SP to talk to your IDP
- Performing access control using an XACML conformant PDP
- Storing user preferences without knowing who the user is

5.00 - 5.30 pm
Wrap Up
Open discussion on the state of Identity management

Training's objectives

You will learn the differences between the major existing Identity Management standards, some of the common pitfalls encountered when federating software and how to build a basic SAML 2 federation.

Pre-requisites: It is recommended that all attendees also attend the companion IdM educational course. All attendees will require a laptop (Windows, Linux or Mac) upon which they can act as the system's administrator.

Preferably this laptop will also have the following software installed:
- Sun Java Development Library and JRE installed, preferably the Sun Jdk V.6.*.
- A C development environment (gcc, ld, make, sed, perl, tar, gunzip) and associated headers.
- OpenSSL

It would also save time in the workshop if attendees could install an Apache web server, with support for dynamic modules prior to attending.

Software Engineering

Security in Software Engineering

1 Day
Educational

London, Sophia, Malaga

Module designed and coordinated by *Pr. Antonio Maña, University of Malaga, Spain*

Where and when?

London, June 14th, 2010

Sophia-Antipolis, September 21st, 2010

Malaga, November 10th, 2010

Key topics:

Security Engineering, Security-aware Software Engineering, Development for Compliance, Development for Evolution

Who should attend:

The module is suitable for attendees with some technical background and IT awareness, but will only assume basic knowledge of security and software engineering.
The content is aimed at engineers/ developers and security experts, however it should also appeal to managers wishing to get an overview of the way security is treated in the development activities and in particular on compliance.

Target sectors:
Software developers, Software engineers, Security experts, IT managers.

Current practices for developing secure systems are still closer to art than to an engineering discipline. Security is still treated as an addon and is therefore not integrated into software development practices and tools. Experienced security artisans are still the key to achieving acceptable levels of security.
Traditionally, the term security engineering has been used to denote partial approaches that cover only small parts of the processes required to create a secure system, like modelling, verification, programming, etc. Even in the cases that the approach is closer to a methodology, and has achieved a certain level of maturity, the key concepts and workflows are highly influenced by the way they had been treated by the security artisans. Therefore, one finds in the literature that the main books about security engineering describe threat-based engineering approaches.
Today, the current trend towards distributed and open systems has revealed the important limitations of current threat-based security engineering approaches. In particular, threat-based security engineering creates systems that are very context-dependent. The high levels of heterogeneity, dynamism and autonomy, as well as the large scale of new computing paradigms force engineers to deal with runtime situations that are unpredictable at design time.
This module will introduce the current state of the art in Security in Software Engineering and will show how some of the latest developments can support the creation of secure and dependable systems for these new computing paradigms. Additionally we will present the SERENITY integrated engineering processes as the backbone of a new security engineering discipline.

9.00 - 12.30 am

INTRODUCTION TO SECURITY IN SOFTWARE ENGINEERING

by *Antonio Maña*

Security Engineering Fundamentals, Background and New Problems

Challenges of providing appropriate security and dependability solutions in Software Engineering. Challenges met in highly distributed computing scenarios, such as SOA and ambient intelligence.

The SERENITY Model of Secure and Dependable Ecosystems

The SERENITY model of secure and dependable ecosystems, introduction to the SERENITY Processes and tools.

14.00 - 15.30 pm

SECURITY ENGINEERING ELEMENTS

by *Antonio Maña*

Creation of Security and Dependability Solutions

Building reusable solutions for security and dependability problems, analyze and characterization of them.

Security Requirements: Definition and Management of S&D Properties

How to express S&D Requirements and relate requirements and solutions

15.45 - 17.45 pm

SECURITY IN SOFTWARE ENGINEERING

by *Pr. Ramesh Harjani, University of Minnesota*

Security-aware Software Engineering Processes

Software Engineering Processes description, inclusion of Security. Compliance with security regulations and policies Creation of Secure Applications
Creating secure and dependable applications dynamically adaptable to unpredictable context conditions with the support of a supervisor like the SERENITY Runtime Framework (SRF)

17.45 - 18.15 pm

DISCUSSION/FEEDBACK

Training's objectives

The objective is to initially familiarise the audience with the following topics
- Security Engineering
- Security-aware Software Engineering
- Security Requirement Specification
- Reconfigurable Security
- Dynamic and Context-aware Security

The learning objectives will be illustrated and strengthened by means of example case studies, drawn from extensive industry experience.

Software Engineering

Hands on Services-Oriented Architecture Design

2 Days Training

London, Sophia, Malaga

Module designed and coordinated by *Pr George Spanoudakis City University of London, UK*

Where and when?

London, June 15th-16th, 2010

Sophia-Antipolis, September 23rd-24th, 2010

Malaga, November 10th-11th, 2010

Key topics:

Service oriented architectures, SOA and Business Process Modelling, SOA in UML, Dynamic SOA and service discovery, SOA management and service level agreements

Who should attend:

The course has been designed for analysts and software architects who want to develop a comprehension of the foundations of service orientation in software systems design and the key technologies that enable the realization of the new system design paradigm. Attendees are expected to be familiar with the basic software development methodologies and programming. Basic familiarity with XML is also expected.

Service oriented design provides a uniform approach for specifying layered software architectures based on message and event driven communications. Such architectures are adequate for dynamic systems which may need to change at runtime. Furthermore, service oriented design and technology has proved to be an effective approach for integrating systems that cut across organizational and operational infrastructure boundaries, as well as for restructuring legacy systems and integrating them with external components. As a consequence, the new paradigm has become popular amongst practitioners and researchers and is increasingly supported by emerging standards and technologies.
The overarching aim of this course is to cover the fundamental principles of service oriented design and the core technologies and standards that underpin its realization, giving participants a balanced mix of the conceptual and practical elements required for engaging in the design of service oriented software system architectures.

Day 1

9.00 - 9.30 am
Introduction to Service Oriented Architectures

9.30 - 10.30 am
Basic SOA technologies
Overview of messaging protocols and middleware, SOAP, WSReliableMessaging

10.30 - 11.30 am
Specification of Software Services
WSDL

11.30 - 12.30 am
Service Oriented Architectures
General principles, Service types, Service layers, Dynamic SOAs (service providers, consumers and brokers), Middleware functionalities and the “Enterprise Service Bus”

2.00 - 2.30 pm
SOA Lifecycle
Analysis, Design, Construction, Provisioning, Deployment

2.30 - 3.30 pm
Service Oriented Architectures Design in UML
Why UML?, Early UML based approaches, SOAML

4.00 - 5.30 pm
Practical I
Development of Java clients for local and remote services using Eclipse, Apache Tomcat and Axis.
Development and deployment of web services using Axis.

Day 2

9.00 - 11.00 am
Service processes and workflows
SOA and business process modelling, Service choreographies, Specification of service orchestrations in WS-CDL, Service orchestrations, Specification of service orchestrations in BPEL

11.00 - 1.00 pm
Service Discovery and dynamic Adaptation of Service Oriented Architectures
Service publishing and standards, Service registry technologies, Service discovery (keyword, semantics, and model based approaches), Static vs dynamic service discovery, Complex forms of SOA adaptation

2.00 - 4.00 pm
SOA governance
Quality of service, Service level agreements, Related standards

4.30 - 5.30 pm
Practical II
Introduction to Eclipse BPEL designer add-on
Practical exercises with BPEL designer

Training’s objectives

At the end of an intensive 2-days programme of tutorial and practical sessions, participants will:
- Understand the basic principles of service orientation and how they can be applied in the design of software systems
- Learn how to specify, implement and deploy software services
- Learn how to design service oriented architectures
- Learn how to design and implement service orchestration workflows
- Develop an in-depth understanding of methods and techniques for enabling the dynamic adaptation of service oriented architectures
- Develop an in-depth understanding of methods and techniques for management and governance of service oriented architectures

Software Engineering

Software Security Certification

2 Days
Educational

Sophia

Module designed and coordinated by *Professor Ernesto Damiani, Department of Information Technologies, University of Milan, Italy*

Where and when?

Sophia-Antipolis, September 23rd-24th, 2010

Key topics:

Certification techniques - Common Criteria - VSE – Open Source Software

Who should attend:

IT developers and architects, Security/IT managers, Systems and Network administrators, researchers and academics.

The stringent requirements in terms of software security of mission critical platforms such as digital rights management, telecommunication and automotive raised the need for some form of security certification based on rigorous in depth system analysis conducted by independent, and internationally recognized organizations. This analysis is aimed at assessing the security level of software so that each organization can choose the software product that best meets its security requirements. Even though security certifications have their application still restricted to a small part of potential target systems, their diffusion is increasing and it is likely that in a near future they will become a prerequisite for many other industries.

Day 1

Module presentation: introduction
by *Prof. Ernesto Damiani Full Professor at Department of Information Technology, Università degli Studi di Milano*

9.00 - 11.00 am
Introduction to formal methods for software certification: the role of formal methods
by *Dieter Hutter, Principal Researcher, German Research Center for Artificial Intelligence*

11.30 - 12.30 am
VSE: Formal methods meet industrial needs
by *Werner Stephan, Researcher, German Research Center for Artificial Intelligence*

2.00 - 4.00 pm
Correct Design: an introduction to formal methods
by *Luis Barbosa, Associate Professor at Departamento de Informática, Universidade do Minho*

4.30 - 5.30 pm
Assurance policies for large scale software platforms
by *Massimo Banzi, Telecom Italia*

Day 2

9.00 - 10.00 am
Module presentation: introduction
by *Prof. Ernesto Damiani, Full Professor at Department of Information Technology, Università degli Studi di Milano*

10.00 - 11.00 am
State of the art of the software certification techniques
by *Volkmar Lotz, Research Program Manager for Security and Trust, SAP Research*

11.30 - 12.30 am
Introduction to test base certification on open source platforms
by *Claudio Ardagna, Assistant Professor at Department of Information Technology, Università degli Studi di Milano*

2.00 - 3.00 pm
Testing of securitycritical products based on CC/FIPS standards
by *Jan de Meer, Head of Embedded Systems Engineering, Smart Space Lab*

3.30 - 5.00 pm
Case studies: IFSA, CCR-EAL
by Chair Prof. Ernesto Damiani, Università degli Studi di Milano

5.00 - 5.30 pm
Discussion and lessons learned
by Chair Prof. Ernesto Damiani, Università degli Studi di Milano

Training's objectives

This module will start by reviewing past solutions to create a standard for security certifications. Then the training will focus on the problem of certifying IT products at an international level. Finally, this module will focus on discussing the application of security certifications to OSS scenario and on setting up a virtual certification facility for OSS in various applications scenarios, such as DRM, telecommunication and embedded systems.

This module covers 3 main issues:
- How to create a standard for security certifications,
- The new environment and challenges of IT products certification at an international level,
- Next security certification approaches and cases: application to OSS scenario from there setting up of virtual certification facility for OSS in DRM, telecommunications and embedded systems scenarios.

SMARTEVENT '10

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- Smart Mobility, The building of trusted mobile applications
- World e-ID, The next e-ID management technologies and services

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is at your disposal to answer any question you may have:
email: **vtreffel@strategiestm.com**
Cell: **33 6 87 70 09 99**

Registration

in Euros before vat (vat is depending on the country where your selected module takes place)

	1 day / 1 module	2 days / 1 or 2 modules	3 days / 2 modules	4 days / 2 or 4 modules
Standard	690	990	1290	1490
Associated partner	550	720	990	1150
Academic	400	550	700	850
Student	200	350	500	650

Check regularly our website to know the applicable rate and for exceptional promotions!
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