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1st edition

Smart University

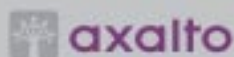
SC & e-ID educational program

Updating & Sharpening Skills In Smart Card & ID Technologies

September 20, 21 & 22 - Sophia Antipolis - French Riviera

2005 Program

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Welcome

to Smart University 2005

“Smart University” is an **educational program** about Smart Card and e-ID. It has a strong academic background, completed by recent real cases and live testimonials while keeping eyes wide open on evolutionary trends and future prospects. It addresses young engineers - researchers as well as executives - willing to widen and deepen the scope of their knowledge on new technological and strategic issues of Smart Cards and e-ID.

“Smart University” consists of **7 tracks, of 1 to 2 days**, most of them being limited to **30 registered participants**. Thanks to this limited size, sufficient time will be available for Q & A and for discussions. The adopted format will also allow a large interactivity between participants and teachers.

Most of the tracks are **designed and delivered by high level academics** and the quality of the program is controlled by program coordinators. The program is **endorsed by some of the best European universities, schools, institutes and labs** such as CNAM-CEDRIC, London School of Economics University of Malaga, Nimegue University, UCL University of Louvain, University of Twente, Institute for Prospective Technological Studies of Seville JRC, ...

For each track participants will receive at the end a **diploma signed by the teachers** and certifying of their active participation to the course.

“Smart University” is co-located with two other international events :

- “e-Smart 2005” (6th edition), the leading Smart Card Industry conference,
- “World e-ID 2005” (2nd edition), the conference devoted to main issues involved in trusted electronic identities.

Like “e-Smart 2005” and “World e-ID 2005”, it will take place in Sophia Antipolis at the International Center of Advanced Communication (CICA) from September 20 to 22, 2005.

This co-location will **facilitate and favour networking and exchanges with the conferences delegates as well as the attendance of the demos area.**

at a glance

	Morning	Afternoon
Sept. 20	Biometrics DRM & Content Protection Global Platform Specifications Advanced Java Technologies SC & ID Security	Biometrics DRM & Content Protection Global Platform Specifications Advanced Java Technologies SC & ID Security
Sept. 21	Biometrics DRM & Content Protection Advanced Java Technologies SC & ID Security ID Management Issues & Prospects New Emerging Standards	Biometrics DRM & Content Protection Advanced Java Technologies SC & ID Security ID Management Issues & Prospects New Emerging Standards
Sept. 22	New Emerging Standards	New Emerging Standards

Program Coordinators

- Pierre Paradinas, Professor, CNAM-CEDRIC
- Antonio Maña, Professor, University of Malaga
- Dr Sabine Delaitre, Institute for Prospective Technological Studies of Seville JRC, European Commission
- Richard Bricaire, Editorial Consultant, Stratégies Télécoms & Multimédia



Pierre Paradinas



Antonio Maña



Dr Sabine Delaitre



Richard Bricaire

MODULE 1

The biometric experience

from niche market to global impact
(2 days)

Sept. 20 & Sept. 21

Module designed and coordinated by
Max Snijder, President, Biometric Expertise Group



Biometrics: from niche market to global impact

If you don't come to the biometrics, the biometrics will certainly come to you. So, be prepared and learn what you might expect from biometrics entering your daily life. Learn what you need to know. From local applications to public deployments, from algorithms to world wide systems.

General Perspective

Due to a strong pull by police makers, biometrics will evolve from pilot stage towards general acceptance within a relative short period of time. After the 9-11 events the political pressure on creating more reliable identification and authentication procedures has increased significantly. This has resulted in the programming of large scale biometric deployments like the US Visit program, the biometric passports and many national e-ID programs. Pushed by the ICAO guidelines, there is a strong need for expertise on the deployment of biometrics. The Biometric Module of the Smart University gives insight in the technical aspects of biometrics, as well as deployment scenario's and financial impact.

I. How to get biometrics working, and why the choice for mainstream technologies fingerprint, face, and iris:

- Introduction : basic biometric processes (enrolment, verification, identification)
- Image capturing, feature extraction, template building, matching (1:1 & 1:n)
- main methodologies/vendors and their characteristics
- FAR and FRR: factors and impact
- The ICAO choice: face, finger, iris

lecturers:

Max Snijder, BEG (general introduction on biometrics)
Asker Bazen, University of Twente, BEG (face, finger, basic processes)
Sijbrand Spanenburg, Joh. Enschedé (iris)

II. New frontiers in application domains, Biometrics in everyday life:

- the impact of biometrics on processes and organisations
- cost/benefit: the biometric business case
- the three biometric business drivers: security, convenience, efficiency
- applications: examples of the present and the future
- public acceptance
- biometrics in the home environment
- legal aspects: privacy vs security

lecturers:

Michiel Kraak, BEG (business cases, drivers, decision frameworks, impact, application examples)
Raymond Veldhuis, University of Twente (home biometrics, transparent biometrics)
Simon Davis (legal aspects, privacy) (tbc)
Marek Rejman Greene, BT (public acceptance)

III. How policy makers direct the world towards biometrics standards, guidelines and directives:

- ICAO guidelines on passports: content and impact
- EU Counsel Regulation COM(2004)-116 on standards for security features and biometrics in EU citizens passports : content and impact
- ISO SC37 :
 - general activities: content and current status
 - scope and technical aspects (fingerprint, face, iris, CBEFF, X9.84)
 - liaisons with NIST and other standardisation bodies
- Standards testing and certification

lecturers:

Tom Kinneging, SDU Identification – tbc
Christopher Bush, Fraunhofer Institut (SC37 in general, testing, certification)

Consult regularly the “Smart University” website
for updated program
www.smart-university.net

MODULE 2

DRM and Content Protection (2 days)

Sept. 20 & Sept. 21



Module designed by
Professor Antonio Maña, University of Malaga

The term Digital Rights Management (DRM) refers to a complex problem involving different aspects, stakeholders and requirements. On the technical side it involves different technologies to support the management of intellectual property for digital resources, such as expression of rights and obligations, description, identification, trading, protection, monitoring and tracking of digital content. In particular, some of the most arduous problems in DRM have been proved to be impossible to solve with software-based solutions. For these problems, a trusted element must be introduced in the system in order to achieve a secure solution.

The goal of this module is to present a complete view of the different aspects and technologies related to DRM with a special emphasis on the role that secure hardware elements such as smart cards can play in this field. The module aims at providing its attendees with a deep knowledge of the state of the art and the different problems and opportunities related to DRM. The module is designed to provide a complete view of the DRM concept including different aspects and technologies and focusing on a wide model of DRM, not only as a technology for digital content commerce, but as a general tool to protect rights such as privacy or owner-retained control.

- What is DRM? The big picture

Antonio Maña, University of Malaga

- State of the art in DRM

Habtamu Abie, Norsk Regnesentral

- DRM Cryptography and Content Protection

Sigi Gürguens, Fraunhofer SIT

- Mobile DRM

Speaker tbc

- Access Control, Authentication, Authorization and Privacy

Mariemma Yagüe, University of Malaga

- DRM Challenges and Roadmap

Round table

Demonstrations Area

An innovative approach of the future of smart card and eID through live demonstrations

for updated demos program

www.smart-university.net

Register before July 8th
for
Early Bird
Preferential
Rates

MODULE 3

GlobalPlatform Specifications (1 day)

Sept. 20

Module designed by CMOOR Group
and delivered by the GlobalPlatform Committee Chairs

The GlobalPlatform Technical educational training program aims to provide an understanding on why GlobalPlatform is the solution to the business problems associated with the lack of a standardized smart card infrastructure.

It will explain the value that each of the three technology components (card, system and device) bring to the market place, why a standardized smart card infrastructure is essential for various stakeholders and more specifically, it will provide a basic technical understanding of each of GlobalPlatform's smart card specifications.

The conclusion will demonstrate the value of bringing all three components together to form the complete standardized smart card infrastructure and provide direction on how to get started.

The educational training program will be delivered as a full day workshop. Each attendee will receive a student guide that will serve as their take-away learning and will track with the information covered in the training.

The training will be structured as follows:

I. The Value of Standardization

Kevin Gillick, GlobalPlatform Marketing Center Chair, Datacard Group

II. Overview of Cards, Device, Systems

Kevin Gillick, GlobalPlatform Marketing Center Chair, Datacard Group

III. Card Specifications

Marc Kekicheff, GlobalPlatformCard Committee Chair, Visa international

IV. Device Specifications

Jean-Paul Billon, GlobalPlatform Device Committee Chair, Axalto
Alan Lucas, GlobalPlatform Device Committee Member
Calton Hill

V. System Specifications

Gil Bernabeu, Systems Committee Chair, Gemplus

VI. Conclusion

Kevin Gillick, GlobalPlatform Marketing Center Chair, Datacard Group

MODULE 4

New Emerging Standards (2 days)

Sept. 21 & Sept. 22



Module designed and coordinated by
Richard Bricaire, Editorial Consultant,
Stratégies Télécoms & Multimédia

In the changing universe of IT, standardisation appears more and more as the inescapable relay between the permanent process of technological innovation and its dissemination at both vertical and geographic levels (globalisation as it is called today) This is even more true when the involved technologies are quite recent as it is the case of Smart Card and electronic-ID. (because of the force of the globalisation process and aiming for interoperability on a real global scale of the fragility of the existing standards).

Discovering, learning and mastering these standards become therefore the preliminary condition of their implementation through new applications and new products.

The Smart University "emerging standards" module will cover in 2005 eight important emerging standards both in the e-ID and the Smart Card domains. Most of them will be delivered by those who are directly leading or participating to their design, elaboration and progress. This module addresses all engineers and developers that will have to deal with these issues in the near future .

3.1 - CWA eAuthentication N°15264 (workshop) part 1-3

Part 1 Marc Lange, Build in Europe

Part 2 Henry Ryan, Lios Geal Consultants

In relation to Part 3 : general presentation on end-user requirements with regard to eID, Kristina Unverricht - to be confirmed

3.2 - European Citizen Card (CEN 224 WG 15)

Part 1 Physical and electro-technical aspects : Lorenzo Gaston, Axalto

Part 2 Logical data and security issues :

Gisela Meister, Giesecke & Devrient

3.3 - Application interfaces for generic card services (SC 17 WG 4 TG 9 leading to ISO/IEC 24727)

This 3 part standard deals with global interoperability of general functions including electronic ID. The workshop will go into technical details and will offer discussions on its content.

Presentation by Mike Neumann, Project editir -Axalto

3.4 - The new US PIV Standard (on the basis of HSPD 12)

FIPS 201, SP 800-73 contains the interface specifications ;

Special Publication 800-76 will specify the biometric elements

- fingerprints - for the card.

Presentation by Neville Pattinson, Axalto

3.5 - The Narita Airport Passport interoperability Test (and other Japanese ID specifications)

Presentation by NMDA Speaker tbc

3.6 - The Trusted Platform Module Specifications

The Trusted Computing Group (tbc)

3.7 - The Near Field Communication standards

Presentation by Dominique Paret, Philips

3.8 - The Liberty Alliance technical specifications for digital identity : Speaker tbc

MODULE 5

ID Management Issues and Prospects (1 day)

Sept. 21



Module designed and coordinated by
Dr Sabine Delaitre, Institute for Prospective
Technological Studies of Seville,
European Commission

Identity is a key concept for individuals' life; indeed, identity allows each citizen to perform different roles (e.g. employee, voter, customer) in society. The flow of identity information proliferates through many different systems ; the increasing digitisation of authentication/identification processes in our private and professional spheres (access to PCs, on-line banking, e-administration services, and so on) creates new vulnerabilities.

Identity Management Systems (IMS) are considered to be the citizen's gateway to the Information Society. Because of the large number of services, IMS could even be presented as a critical tool for the citizen. Its utility as an almost unique access tool to many enhanced facilities of the Information Society will make it the "electronic" witness of a great part of the citizen's online life. However, the acceptance of such systems will be based not only on their usability or ease of use but also on their effectiveness in respecting and reserving the privacy of their users.

Identity protection is an important concern. The disclosure, misuse or abuse of identity may cause considerable inconvenience such as financial loss, damage to reputation, etc. and is often committed to facilitate other crimes (e.g., identification fraud, credit card fraud, computer fraud, mail theft, mail fraud, financial fraud and immigration document fraud).

Identity theft is becoming a very serious problem which compromises the safety of people and the integrity of the identity of each individual.

The track will deal with the following topics : Identity Management Systems, e-Identity, identity theft and solutions helping to deterring this crime.

- Identity Management Systems

Martin Heints, ICPP

- Authentication solution in the digital world

Lorenz Mueller, Axsionics

- eIdentification

Paul Smith, Hyperion (UK)

- Overview on e-Identity through TFI approach

Andrew Wallwork, London School of Economics

- Identity theft as a media and political issue

Michel Levi, Cardiff University

- Identity fraud with biometrics properties

Speaker tbc

MODULE 6

Advanced Java Technologies (2 days)
Sept. 20 & Sept. 21



Module designed and coordinated by
Professor Pierre Paradinas CNAM-CEDRIC

This module intends to provide information from industries and academics related to technology involved in the creation of Java card platform.

The lesson will cover different aspects of Java Card technologies, formal methods will be exposed and completed by a presentation related to evaluation of cards.

Evolution of Java Card technology will be also taken into account with Java Card forum update and presentation of emerging new protocols and services.

- Common Criteria, Protection Profile, Platforms Evaluation

Eric Vétillard, Trusted Labs (France)

- Formal Methods and Java Card Modelisation

Thomas Jensen, IRISA/CNRS (Rennes, France) and Erik Poll, University of Nimègue (The Netherlands)

- New Protocols, Webservices

Michael Montgomery, Axalto

- Status of Java3.0

Christian Goire, President, Java Card Forum

- Java Card Benchmark

Pierre Paradinas, CNAM-CEDRIC

MODULE 7

SC and e-ID Security (2 days)
Sept. 20 & Sept. 21



Module designed and coordinated by
Professor Jean-Jacques Quisquater, UCLA University of Louvain-la-Neuve, Belgium

The field of the security of the smart card evolves in a very fast way. This module will handle the main points about the state-in-the-art for the security: new results in cryptography and the impact on the field, the software side (Java card), the hardware evolution and the new attacks and countermeasures, the contactless specifics. A fresh view of a fast evolving domain.

Cryptography... last year news... and what it means for cryptographic protocols and functions

The last years were very important for the security of the smart card:

- . new algorithms: AES, ...
- . new cryptographic attacks: against the hash functions (SHA), ...
- . new physical attacks,
- . new countermeasures.

The talk will give a complete view of the news in cryptography and its consequences for the field of the smart card.

Jean-Jacques Quisquater, UCLA, University of Louvain-la-Neuve

- Smart card security software (software inside the card) Risks, threats and countermeasures for smart card OS and applications Java Card Platform Risks, threats and countermeasures

Gemplus, speaker to be confirmed

- Smart card security hardware:

State of the art of hardware attacks (SPA, SPA, SEMA,...) and countermeasures

François-Xavier Standaert, MIT, UCL/University of Louvain

- Contact-less specificity in term of security and RFID security

Gildas Avoine (EPFL, Lausanne)

Riviera Smart Event at a glance

Co-located with "Smart University" are two other international meetings :

- "e-Smart", the leading Smart Card Industry conference
- "World e-ID", the conference devoted to main issues involved in trusted electronic identities.

	Smart University Educational Program	e-Smart Conference	World e-ID Conference
	Morning	Afternoon	
Sept. 20	Biometrics DRM & Content Protection Global Platform Specifications Advanced Java Technologies SC & ID Security	Biometrics DRM & Content Protection Global Platform Specifications Advanced Java Technologies SC & ID Security	
Sept. 21	Opening Session	Systems Security (1)	Common transversal debate "Emergence of Systems Integrators in SC and e-ID"
	World & Regional Strategies (1)	Opening Session World & Regional Strategies (2)	
	Biometrics DRM & Content Protection Advanced Java Technologies SC & ID Security ID Management Issues & Prospects New Emerging Standards	Biometrics DRM & Content Protection Advanced Java Technologies SC & ID Security ID Management Issues & Prospects New Emerging Standards	
Sept. 22	Systems Security (2) Java & Operating systems	Product Security (1) Emerging Technologies (1) Terminals & Devices	
	Applications & e-Passports (1) National Implementations & Business Models (1)	Applications & e-Passports (2) National Implementations & Business Models (2)	
	New Emerging Standards	New Emerging Standards	
Sept. 23	Product Security (2) Emerging Technologies (2)		
	Biometrics Architectures & Standardisation		

Sponsors



Axalto is the world's leading provider of microprocessor cards (Gartner 2004, Frost & Sullivan 2004) - the key to digital networks - and a major supplier of point-of-sale terminals. Its 4500 employees serve customers in more than 100 countries, with worldwide sales reaching 3 billion smart cards to date. The company has more than 20 years' experience in smart card innovation and leads its industry in security technology and open systems.

Axalto continuously creates new generations of products for use in a variety of applications in the telecommunications, finance, retail, transport, entertainment, healthcare, personal identification, information technology and public sector markets. Smart card solutions provide convenience, security and privacy to public and private services operators, their customers and end users.

www.axalto.com



With sales of 450,8 million Euros in 2004, Oberthur Card Systems is one of the world's leading providers of card-based solutions, software and applications including SIM and multi-application smart cards as well as services ranging from consulting to personalization. Innovative products, security expertise and high quality services ensure Oberthur Card Systems' strong positioning in its main target markets:

- Payment & Services: 57% of 2004 revenues. World leader and number one supplier of Visa and MasterCard payment cards
- Mobile Communications : 33% of 2004 revenues, with open and interoperable solutions based on Java™ technology
- Identity: strong positions in ID projects throughout the world
- Multimedia: leading position in the Pay-TV market with an end-to-end expertise in the value chain: software development, manufacturing and personalization
- Transit: focus in the high-end segment with a microprocessor-based offer

Close to its customers, the company benefits from an industrial and commercial presence across all five continents. Listed on the Euronext Stock Exchange (ISIN: FR0000124133) since July 2000, Oberthur Card Systems is a subsidiary of the François-Charles Oberthur Group

www.oberthurcs.com



The Biometric Expertise Group is an independent group of 12-15 experts, who have gained their knowledge and skills by having worked in the field of biometrics for many years. They have distinguished themselves by showing great professionalism and devotion to this matter during their extensive work.

These experts know how to put biometrics in the right perspective, i.e. the perspective created by legislation, technical and industrial developments, politics, standardisation and current/future processes and procedures. With their complementary skills all relevant areas of expertise are covered.

This Dutch based network of excellence covers all aspects of biometric implementations, including project design (requirements, specifications, vendor selection), managerial skills (project management/coordination), cost/benefit analysis, business cases, legal, testing, evaluating, reviewing, etcetera.

Because the experts of the Biometric Expertise have experience with biometric implementations in the field, they are able to create the right decision framework for biometric investments. Main application areas of expertise are passports, ID cards/documents, Visa, SIS, border control, health care, video surveillance and access control.

www.biometricexpertisegroup.com

How to register ?

- through our e-commerce platform and secure payment: <http://www.smart-university.net>
- through any other way, please send your request to **Strategies Telecoms & Multimedia**
Fax N° + 33 1 70 07 05 05 or email to: lperron@strategiestm.com

Registration Rates in euros <u>without VAT</u> *	SMART UNIVERSITY		Full Event Package (1)
	1 Day ID Mangement or Global Platform modules only	2 Days	Smart University (1 or 2 days) + any combination of e-Smart 2005 & World e-ID 2005
Regular Attendees	500€	750€	1000€
Early Bird (until July, 8, 2005)	425€	650€	875€
Associated Members (2)	375€	525€	750€
Academics & Non Profit	300€	425€	625€
Academic Full Board (3)	400€	625€	925€

* European Community Members are submitted to VAT (19.60 %)

The fee includes lunch and coffee breaks, admission to the demos area, the CD-rom of proceedings which are given to each participant

(1) Each registered participant to Smart University has the opportunity to register for "e-Smart" or "World e-ID" conferences with an **important discount** on the regular rates. The conferences Proceedings cd-roms are not included, are proposed at 60 euros instead of 100 euros (before VAT).

(2) Members from the endorsing organizations of Smart University, e-Smart 2005 and World e-ID 2005. Are qualified for these preferential rates: CNAM, UCL University of Louvain, London School of Economics, University of Cardiff, University of Malaga, University of Nimegue, University of Twente, Fraunhofer Institute, GlobalPlatform, Java Card Forum, Institute for Prospective Technological Studies of Seville Joint Research Center/European Commission, Liberty Alliance, NFC, NMDA, Norsk Regnesentral, Trusted Computing Group, e-Forum, Eurosmart...

(3) Academic Full Board: hotel room in a **hotel, breakfast and dinner included (1 night for a 1 day registration, 2 nights for a 2 days registration, 3 nights for a full event registration)

The conference is held at the CICA - "Centre International de Communication Avancée" - 2229 route des Crêtes - 06560 Valbonne - Sophia Antipolis. An invitation together with all useful information will be sent to the registered delegates before the event. This brochure is not a contractual document.

The Organizers reserve the right to change the program or the identity of the speakers.

e-Smart	Program and registration rates: http://www.strategiestm.com/conferences/esmart/05
World e-ID	Program and registration rates: http://www.strategiestm.com/conferences/we-id/05

Best Reasons for Attending Smart University

European Excellence:

a high quality of content on major issues delivered by high-level academics from the best European universities and research labs.

Workshop format:

Workshops with limited size of classes brings quality of exchanges and high interactivity between teachers/lecturers and participants.

Total immersion:

These 2-4 training days on the main southern European Technological Park among 400 professional delegates coming from 35 countries and belonging to the major industry and institutional players from SC and e-ID, offer exceptional international networking opportunities

High Price/Quality Ratio:

By participating at very attractive conditions, after the Smart University modules, to both international conferences "e-Smart" and "World e-ID" you will get a unique combination of education and results.

Riviera environment:

September reveals the French Riviera at its best: tourists are gone while Indian summer parades its landscapes of blue sky and sea, its beaches, rocks and pines and all these beautiful region resources.