

Profile: **expert consultant in card systems, applied cryptography & fighting against fraud**

Eric is an expert in everything connected to payment card systems, both from an issuer, from an acceptor and from an acquirer point of view, as well as everything connected to payment card security, including cryptographic issues.

He also has good financial knowledge based on former academic education and experience, familiarity with prudential requirements compliance, and broad skills applicable to everything related to fraud prevention issues in general.

Industry Experience

- Card payment systems
- Banking
- Leasing

Skills & Competencies

- Bank cards, fuel cards
- EMV, MChip, CPA, VIS, PURE...
- Internet secured payment: 3D-Secure...
- Contactless: PayPass, VCPS, mobile phone payment, μSD, HCE, wallets...
- Cryptography (symmetric, asymmetric, PKI, HSM devices...)
- Payment by ISO2 track
- Decisional analysis tools to secure transactions against fraud
- Surveys, analysis and design
- Security and compliance rules and standards: PCI, related to SEPA, IFSF, ISO, NIST, ANSI...
- General knowledge in finance, accounting, budget control and operational risk management
- Project support and organization

Career Summary

2005 to date	Card & security senior consultant, manager and in charge of the card and security business lines of sequentially several IT consulting companies, eventually Alti Conseil, a TATA Consultancy Services company
1997 to 2005	CEDICAM (now CREDIT AGRICOLE CARDS & PAYMENTS)
1991 to 1997	Crédit Agricole Leasing (Crédit Agricole SA Group)

Career History

Sept 2005 to date **Senior Consultant in card systems, cryptography & fighting against fraud alongside with being head of consulting company business lines.**

Achievements for the clients:

ONE OF THE WORLD MAJOR OIL COMPANIES – 2005 to date

- On mission (110 days per year) as card cryptography expert and organiser for the Card European Operations Direction (“Monetics Safety Department”) of this international oil company. This Direction manages over 3 000 000 of the client’s issued purchasing cards.

Summary of this **Card cryptography redesigning and setting up** mission:

Addressing security issues of all card related project within European branches.

Redesign of all the client card cryptographic system:

- chose of new cryptographic algorithms,
- Organisation and setting up of these algorithms,
- Related technical choices and organisation.

Main targets are:

- To improve security,
- To allow new customer service functionality.

This mission includes also:

- Whole client card cryptographic infrastructure design and subsequent processing: keys organization, choice of primitives (3DES vs AES...), PKI, HSM network setting...
- Choices of enciphering techniques for sensitive transported card data,
- Project organisation and expertise support to development of the proposed card system,
- Proposition of short term solutions to cope with complex legacy issues: high diversity of (sometimes aged) POS devices from Portugal to Russia and from Scandinavia to South Africa,
- Impact surveys of possible consequences of longer term card system proposed evolutions. Participation in the client’s choice between several possible middle term evolution solutions,
- Complete writing of a cryptographic keys management procedure,
- Short-listing of cryptographic devices suppliers and support to eventual selection,
- Conception of an innovating solution for card and cardholder authentications,
- Expert consultancy on various card business related issues about the existing old system: organization, procedures...

VARIOUS CLIENTS – 2015 to date

- Short time security related missions for several clients, mostly little size innovative enterprises.
 - Exact content confidential because related to new products / markets: security evaluation and/or operational policy toward security regulation consultancy.

CARD DEPARTMENT OF ONE OF THE LARGEST EUROPEAN BANKS – 2013-2014

- Cryptographic key management (for EMV issuing and transaction encryption)
 - Issuing test keys.
 - Detailing production key ceremony “to do lists”.
 - Creating related procedures.
- Implementing a remotely processed multi-site HSM network.
 - Documenting installation and connexion parameters.
 - Writing of user documentation.
 - Technical assistance to implementers.
- General related to security and cryptography consultancy.

A PAYMENT CARD ISSUER – 2013-2014

- Consultancy for issuing a new card product
 - Global design of the new card, technological choices and change recommendations on previous choices
 - Management of another senior consultant working full time on the project
 - Set up of a PKI

CARD DEPARTMENT OF ONE OF THE LARGEST EUROPEAN BANKS – 2012-2013

- PCI-DSS compliance of the regional banks and of the foreign subsidiaries of the Group :
 - Consultancy to help these organizations to reach PCI-DSS compliance.
 - Gap analysis on some regional card systems.
 - Training.
- Update of the client security policy.
- Reporting and advocacy.
- Consultancy related to supply of card systems and solutions.
- Operating alone in 2012 and through the coaching of another consultant in 2013.

MASTERCARD France – 2011

- Security Policy updating
 - Collect of all the internal security documents (MASTERCARD France & MASTERCARD Worldwide Security Policies and related procedures)
 - Indexing and organizing this wide documentation
 - Completing/correcting the documentation to comply with the up to date security national and international standards (PCI-DSS...)

CARD DEPARTMENT OF ONE OF THE LARGEST EUROPEAN BANKS – 2011

- Temporary replacement of a resident security expert.
- Risk assessment for a new type of payment device (mobile payment with µSD card) and choice of the device parameters.
- 3D-Secure development monitoring.
- 3D-Secure implementation evolution with security purpose.
- Consultancy with contact and contactless EMV security improvement.

PMU (French leader with horse race gambling) – 2010-2011

- Risk issues consultancy, related with a large project management.
- Risk assessments.
- Assist with purchase of IT solutions.
- ARJEL and other compliance consultancy.

CARD DEPARTMENT OF ONE OF THE LARGEST EUROPEAN BANKS – 2009-2010

- Risk issues consultancy, related with a large project management.
- Temporary replacement of a resident security expert.
- Assist with purchase of IT solutions.
- PCI and other compliance consultancy.

iPB (Banques Populaires Group) - 2009

- PCI-DSS expertise.

A PAYMENT SERVICE PROVIDER - 2009

- French Central Bank agreement to launch a card business for a new player on the French market.

CLUB MED - 2009

- Consulting about global risk policy and PCI-DSS issues.

Oct 1997 – Aug 2005

Card payment expert and organiser

CEDICAM (now CREDIT AGRICOLE CARDS & PAYMENTS) in charge of the payment systems for this very large French bank, and leading French issuer of debit/credit cards.

EMV Migration Project (2002-2005)

Supported groups in charge of payment systems specifications and development, worked as an organiser and as an **expert in EMV implementation** (EMV is the new international smart card payment standard).

Main responsibilities were:

- **To select the values of all the data and parameters** influencing risk issues, for all the Credit Agricole Group in the **EMV context**. These EMV data range from card components to point of sale or ATM devices, and include acquiring and authorisation systems. **Managed a 2 to 4-person team** during the busiest part of this project (2002-2003).
- **To create a Credit Agricole internal course** about risk management in EMV context, and to teach it.

Basel 2 Project (2003-2004)

Proposed a risk coverage policy (insurance, provisions...) for the most important card fraud patterns, co-ordinated with teams in charge of the compliance with "Basel 2" prudential requirements.

Project organisation and assistance for deployment (1997-2005)

Initiated and organised card systems projects and tools evolution in order to minimize fraud risk: functional needs' surveys and formalisation, specifications, project scheduling and division into functional parts, assistance with systems deployment...

Resident expert for the Credit Agricole Group in the fight against card fraud in general, support for teams in charge of developing card payment systems, for users of these systems, for the Group's subsidiaries and regional branches "Caisses Régionales"... (1997-2002)

Participated with tool and system development.

Wrote risk documentation,

Represented Credit Agricole in inter-banks working teams and in negotiations,

Acquired excellent knowledge of risks of fraud by merchants, dishonest companies, "electronic purses" and "card not present" (Internet fraud...)

Oct 1996 – Oct 1997	Project manager	CREDIT AGRICOLE LEASING (formerly UCABAIL), holding company including all the leasing subsidiaries of the CREDIT AGRICOLE GROUP
		Data correction (mission-critical work made necessary by mistakes during replacement of the company's previous information system) Coordinated a task force in the Computer Department: corrected financial and accounting data, and the logical accounting process of the bank's operations.
Dec 1991 – Oct 1996	Budget Controller	CREDIT AGRICOLE LEASING (formerly UCABAIL), holding company including all the leasing subsidiaries of the CREDIT AGRICOLE GROUP
		General control responsibilities Monitored and forecasted financial incomes and credit risks. Financial reporting and communication support used by the CEO of CRDIT AGRICOLE LEASING. Trained and supervised one person on the budget control.
		Overhead expenses cut Budget tracking: created an analytic accountancy system, wrote accounting procedures, established and audited the overhead expense budget (cutting costs from 217 to 182 million French Francs between 1991 and 1994).

Business Skills

Skill	Experience
Symmetric and asymmetric cryptography	20 years
EMV	17 years
Protection against card fraud	20 years
Operational risk management, Basel	20 years
Team Leading	12 years
Analysis & Design	22 years

IT Skills

Skill	Experience
HMS devices	1é years
Standard personal computer software (Microsoft Office...)	30 years
MCPC V7 proprietary Crédit Agricole project management method, similar to Merise	5 years
UML	Some months
Visual Basic	Some months

Languages

French	Mother tongue
English	Fluent (TOEIC 930 pts, Aug 2005)
Spanish	Proficient
Russian	Basic conversation (about 1000 words read and spoken in each language).
Turkish	
Hindi	
Vietnamese	Very basic
Arabic	

Qualifications / Affiliations

- 1991: DESCAF (diploma of the ECOLE SUPERIEURE DE COMMERCE (ESC) de Montpellier - a French "grande école" in business administration).
Majors: "stock exchange and financial markets" in second year and "budget control" in third year (ranked first of the major, second of the whole ESC, among the 90 students who obtained the diploma).
- 1987: DUT "Techniques de Commercialisation" (University Institute of Technology diploma in selling, advertising and marketing).

Publications & conferencing

- Le Courrier de la Monétique n° 498 (mai 15th 2009) interview « Sur l'authentification forte, les banquiers sont partagés » (ie "The banks do not share the same point of view about strong authentication")
- 01 Informatique n° 1990 (April 16th 2009) article « Peu de cohésion dans la protection des données de cartes bancaires » (ie "Not a lot of consistency with card data protection rules")
- Club CSA (March 27th 2009) conference « Standards et obligations de protection des données cartes : PCI-DSS et autres » (ie "Card data protection standards and rules: PCI-DSS and others")

Normalization work

- Co-author of two major card industry security standard:
 - IFSF RECOMMENDED SECURITY STANDARDS FOR POS TO FEP AND HOST TO HOST EFT INTERFACES
 - IFSF RECOMMENDED KEY MANAGEMENT METHODS FOR POS TO FEP AND HOST TO HOST EFT INTERFACESSee www.ifsf.org
- Participated to a French card industry major players working group to set up a set of rules for physical protection of acquirer PKI - see www.concert.asso.fr