





Agenda



- Update Projets OWASP
- Evolution du Cadre Légal
 - Developers, Sofware makers held liable for code?
- Données personnelles & WebApp Sec
 - Projet de Réglement Européen
- OWASP France Day
- Traduction OWASP Top Ten 2013
- Adhésions OWASP





Chapter Meeting OWASP France Paris, 7th Feb, 2013



Ludovic Petit

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Chapter Leader OWASP France
Global Connections Committee

About Me



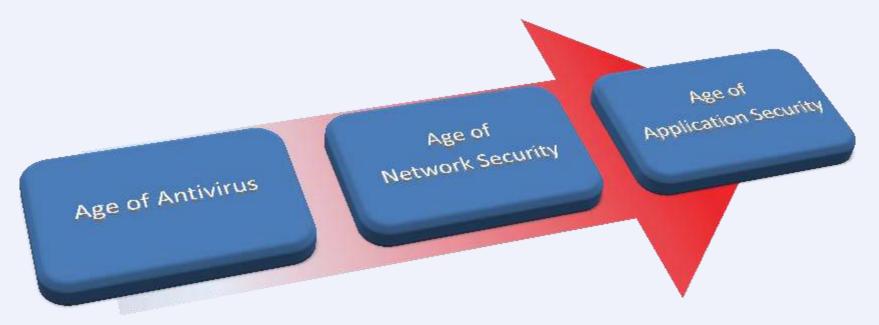
- Group Fraud & Information Security Advisor at subsidiaries in Brazil and Morocco
 - Working on Anti Fraud, Cybercrime, Technical Threat Intelligence, Law Enforcement and Security Futurology
 - 20 years' experience in Security Management within the Telecommunications industry, following 10 years in Information Technology
- Chapter Leader & Founder OWASP France
- Global Connections Committee Member
- 10 years in Application Security, OWASPer since 2003
- Contributor to various OWASP Projects
 - Translator of the OWASP Top Ten in French (All versions)
 - Application Security Guide For CISOs (Marco Morana)
 - OWASP Mobile Security Project (Jack Mannino)
 - OWASP Cloud Top10 Project (Vinay Bensal)
 - OWASP Secure Coding Practices Quick Reference Guide (Keith Turpin)



Why this presentation



We are living in a Digital environment, in a Connected World



- Most websites vulnerable to attacks
- ❖ 75% of Attacks at the Application Layer (Source: Gartner)
- Important % of web-based Business (Services, Online Store, Self-care)

But also because...



The legal framework rules the technical means required to be compliant!



Agenda



- What is OWASP, what we could bring
- OWASP Projects



- Talking Legal
 - Evolutions of the legal framework
 - O Developers, Software makers held liable for code?

The True Story



The Open Web Application Security Project

OWASP:



Swarms of WASPS: Local Chapters



What is OWASP



Mission Driven

Nonprofit | World Wide | Unbiased

OWASP does not endorse or recommend commercial products or services

What is OWASP



Community Driven

30,000 Mail List Participants
200 Active Chapters in 70 countries
1600+ Members, 56 Corporate Supporters
69 Academic Supporters

Around the World



200 Chapters, 1 600+ Members, 20 000+ Builders, Breakers and Defenders



What is OWASP



Quality Resources

200+ Projects

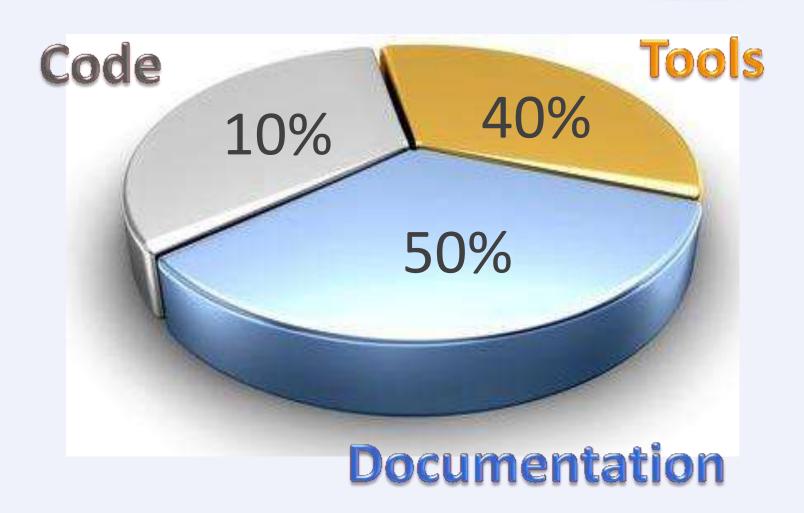
15,000+ downloads of tools, documentation

250,000+ unique visitors

800,000+ page views (monthly)

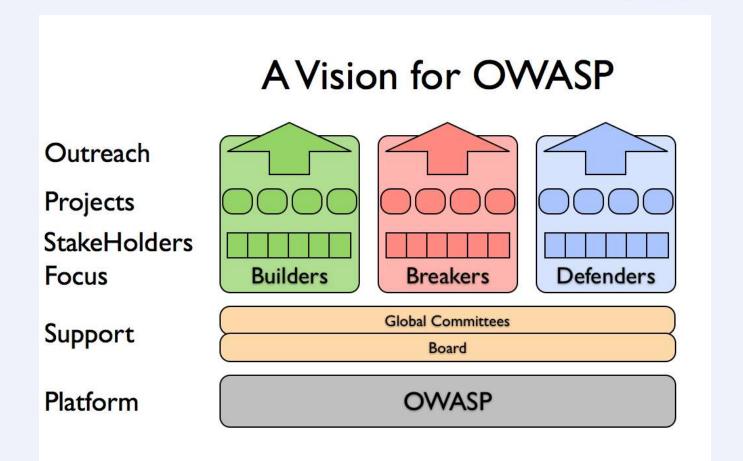
Quality Resources





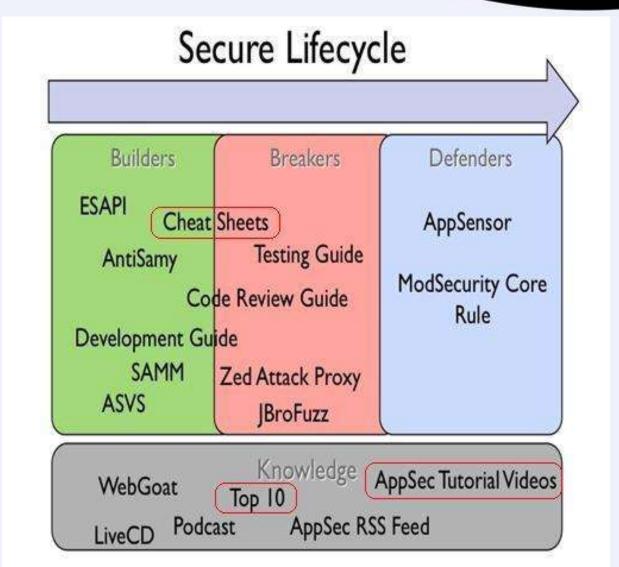
Security Lifecycle





Security Resources







The OWASP Top Ten

TIOP BOWEEBATERLOCATIONS SECURITY RISKS

A1: Injection

A2: Cross Site Scripting (XSS)

A3: Broken Authentication and Session Management

A4: Insecure **Direct Object** References

A5: Cross Site Request Forgery (CSRF)

A6: Security Misconfiguration A7: Failure to Restrict URL Access

A8: Unvalidated Redirects and **Forwards**

A9: Insecure Cryptographic Storage

A10: Insufficient Transport Layer Protection





The OWASP Appsec Tutorial Series (Videos)



NEWS

A BLOG

A PODCAST

MEMBERSHIPS

MAILING LISTS

A NEWSLETTER

APPLE APP STORE

VIDEO TUTORIALS

TRAINING SESSIONS

SOCIAL NETWORKING

























7 Global Committees



OWASP GLOBAL COMMITTEES							
OWASP GLOBAL COMMITTEE	Projects	Membership	Education	Conferences	Industry	Chapters	Connections
Committee Chair	Jason Li	Helen Gao	Martin Knobloch	Mark Bristow	Rex Booth	Josh Sokel	Jim Manico
Members	Brad Causey Chris Schmidt Justin Searle Larry Casey Keith Turpin	 Dan Cornell Ofer Maor Aryavalli Gandhi 	 Eduardo Neves Cecil Su Fabio Cerullo Kuai Hinjosa Sebastien Gioria Tony Gottlieb Carlos Serrão Luiz Otavio Duarte 	 Lucas Ferreira John Wilander Richard Greenberg Ralph Durkee Mohd Fazli Azran Lorna Alamri Benny Ketelslegers 	Mauro Flores Alexander Fry Eoin Keary Mateo Martinez Colin Watson Marco Morana	Seba Deleersnyder Tin Zaw L. Gustavo C. Barbato Ivy Zhang	Ludovic Petit Luiz Eduardo Dos Santos Justin Clarke Jerry Hoff Ludovic Petit Luiz Hourd Luiz Eduardo Luiz Edu
Applicants				• Zhendong Yu	Michael Scovetta		
Committee Looking For	New Members with OWASP Project Leadership Experience	More Members	New Members with Education Background	More Members Outside U.S.	More Members Outside U.S. and Europe	More Members Outside U.S.	More Members

All over the world





OWASP Projects





Cheat Sheets



Developer Cheat Sheets (Builder)

- Authentication Cheat Sheet
- Choosing and Using Security Questions Cheat Sheet
- Clickjacking Defense Cheat Sheet
- Cross-Site Request Forgery (CSRF) Prevention Cheat Sheet
- Cryptographic Storage Cheat Sheet
- DOM based XSS Prevention Cheat Sheet
- Forgot Password Cheat Sheet
- HTML5 Security Cheat Sheet
- Input Validation Cheat Sheet
- JAAS Cheat Sheet
- Logging Cheat Sheet
- OWASP Top Ten Cheat Sheet
- Query Parameterization Cheat Sheet
- REST Security Cheat Sheet
- Session Management Cheat Sheet
- SQL Injection Prevention Cheat Sheet
- Transport Layer Protection Cheat Sheet
- Web Service Security Cheat Sheet
- XSS (Cross Site Scripting) Prevention Cheat Sheet
- User Privacy Protection Cheat Sheet

Assessment Cheat Sheets (Breaker)

- Attack Surface Analysis Cheat Sheet
- XSS Filter Evasion Cheat Sheet

Mobile Cheat Sheets

- IOS Developer Cheat Sheet
- Mobile Jailbreaking Cheat Sheet

Draft Cheat Sheets

- Access Control Cheat Sheet
- Application Security Architecture Cheat Sheet
- Password Storage Cheat Sheet
- PHP Security Cheat Sheet
- .NET Security Cheat Sheet
- Secure Coding Cheat Sheet
- Secure SDLC Cheat Sheet
- Threat Modeling Cheat Sheet
- Virtual Patching Cheat Sheet
- Web Application Security Testing Cheat Sheet
- Grails Secure Code Review Cheat Sheet
- IOS Application Security Testing Cheat Sheet

Enterprise Security API



Project Leader: Chris Schmidt, Chris.Schmidt@owasp.org

Purpose: A free, open source, web application security control library that makes it easier for programmers to write lower-risk applications

Security controls that are included:

There are reference implementations for each of the following security controls:

- Authentication
- Access control
- Input validation
- Output encoding/escaping
- Cryptography
- Error handling and logging
- Communication security
- HTTP security
- Security configuration

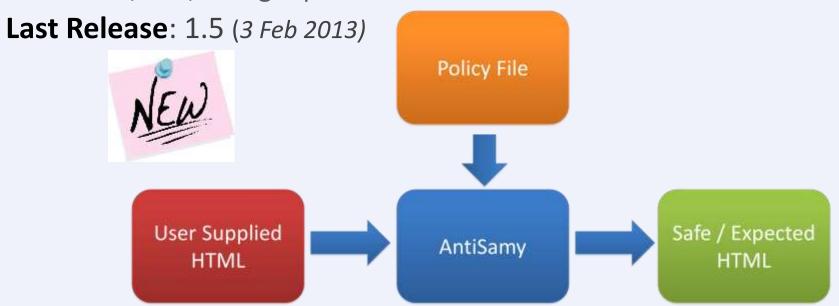


AntiSamy



Project Leader: Jason Li, jason.li@owasp.org

Purpose: An API for ensuring user-supplied HTML/CSS is in compliance within an application's rules, that helps you make sure that clients don't supply malicious code in the HTML they supply for their profile, comments, etc., that get persisted on the server.



https://www.owasp.org/index.php/Category:OWASP AntiSamy Project

Guides



Development Guide: comprehensive manual for designing, developing and deploying secure Web Applications and Web Services

Code Review Guide: mechanics of reviewing code for certain vulnerabilities & validation of proper security controls

Testing Guide: understand the what, why, when, where, and how of testing web applications

https://www.owasp.org/index.php/Category:OWASP_Guide_Project

https://www.owasp.org/index.php/Category:OWASP Code Review Project

https://www.owasp.org/index.php/Category:OWASP Testing Project

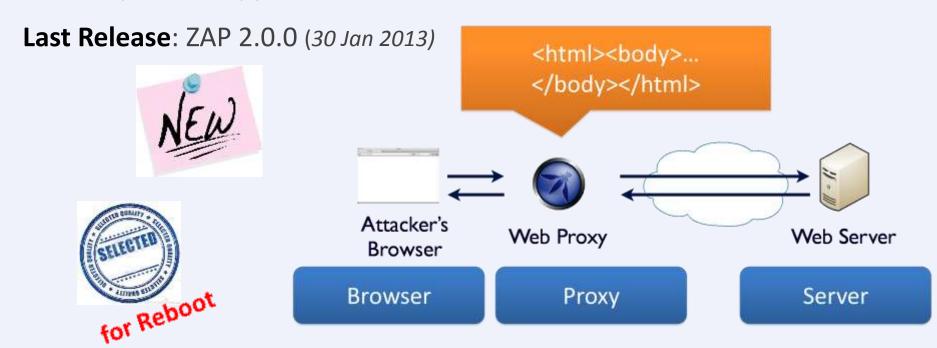
for Reboot

Zed Attack Proxy



Project Leader: Simon Bennetts (aka Psiinon), psiinon@gmail.com

Purpose: The Zed Attack Proxy (ZAP) provides automated scanners as well as a set of tools that allow you to find security vulnerabilities manually in web applications.



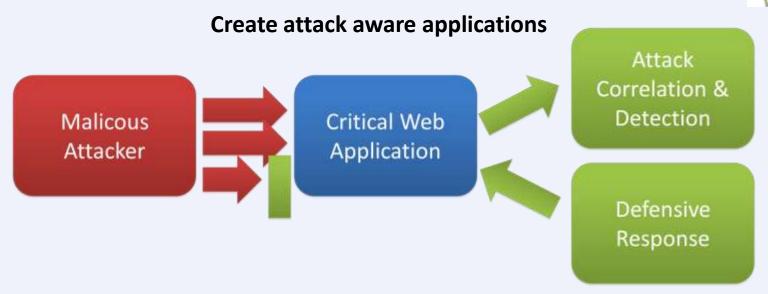
AppSensor



Project Leader(s): Michael Coates, John Melton, Colin Watson

Purpose: Defines a conceptual framework and methodology that offers prescriptive guidance to implement intrusion detection and automated response into an existing application.

Release: AppSensor 0.1.3 - Nov 2010 (Tool) & September 2008 (doc)



Cloud Top10 Project



Project Leader: Vinay Bansal, Vinaykbansal@gmail.com

Purpose: Develop and maintain a list of Top 10 Security Risks faced with the Cloud Computing and SaaS Models. Serve as a Quick List of Top Risks with Cloud adoption, and Provide Guidelines on Mitigating the Risks.

Deliverables

- Cloud Top 10 Security Risks (Draft expected for early 2013)

Cloud Top10 Security Risks



- R1. Accountability & Data Risk
- R2. User Identity Federation
- R3. Legal & Regulatory Compliance
- R4. Business Continuity & Resiliency
- R5. User Privacy & Secondary Usage of Data
- R6. Service & Data Integration
- R7. Multi-tenancy & Physical Security
- R8. Incidence Analysis & Forensics
- R9. Infrastructure Security
- R10. Non-production Environment Exposure

Mobile Security Project



Project Leader: Jack Mannino, <u>Jack@nvisiumsecurity.com</u>

Purpose: Establish an OWASP Top 10 Mobile Risks. Intended to be platformagnostic. Focused on areas of risk rather than individual vulnerabilities.

Deliverables

- Top 10 Mobile Risks (currently Release Candidate v1.0)
- Top 10 Mobile Controls (OWASP/ENISA Collaboration)
 - OWASP Wiki, 'Smartphone Secure Development Guidelines' (ENISA)
- Mobile Cheat Sheet Series
- OWASP GoatDroid Project
- OWASP Mobile Threat Model Project



https://www.owasp.org/index.php/OWASP Mobile Security Project

Top 10 Mobile Risks



- M1. Insecure Data Storage
- M2. Weak Server Side Controls
- M3. Insufficient Transport Layer Protection
- M4. Client Side Injection
- M5. Poor Authorization and Authentication
- M6. Improper Session Handling
- M7. Security Decisions via Untrusted Inputs
- M8. Side Channel Data Leakage
- M9. Broken Cryptography
- M10. Sensitive Information Disclosure

Threat Modeling Project



Project Leader: Anurag "Archie" Agarwal, anurag.agarwal@owasp.org

Purpose: Establish a single and inclusive software-centric OWASP Threat modeling Methodology, addressing vulnerability in client and web application-level services over the Internet.

Deliverables (1st Draft expected for end of 2012 / early 2013)

- An OWASP Threat Modeling methodology
- A glossary of threat modeling terms

Projects Reboot 2012



Refresh, revitalize & update Projects, rewrite & complete Guides or Tools.

Initial Submissions

- OWASP Application Security Guide For CISOs -Selected for Reboot
- OWASP Development Guide Selected for Reboot
- Zed Attack Proxy Selected for Reboot
- OWASP WebGoat
- OWASP AppSensor
- OWASP Mobile Project Selected for Reboot
- OWASP Portuguese Language Project
- OWASP_Application_Testing_guide_v4
- OWASP ESAPI
- OWASP Eliminate Vulnerable Code Project
- OWASP Code Review Guide Reboot

Projects selected via first round of review

- **1. OWASP Development Guide**: Funding Amount: \$5000 initial funding
- **2. OWASP CISO Guide**: Funding Amount: \$5000 initial funding
- **3. OWASP Zed Attack Proxy**: Funding Amount: \$5000 initial funding
- **4. OWASP Mobile Project**: Funding Amount: \$5000 initial funding

Ongoing discussions about the **Code Review** and the **Testing Guides**

Agenda

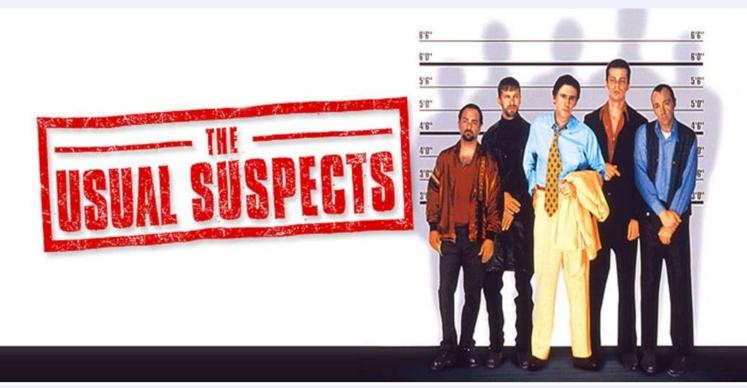


- What is OWASP, what we could bring
- Update OWASP Projects
- Talking Legal
 - Evolution of Legal framework
 - O Developers, Software makers held liable for code?



Remember this?





Do you...Legal? 1/2



In case of security breach, what's going on from a Legal perspective?

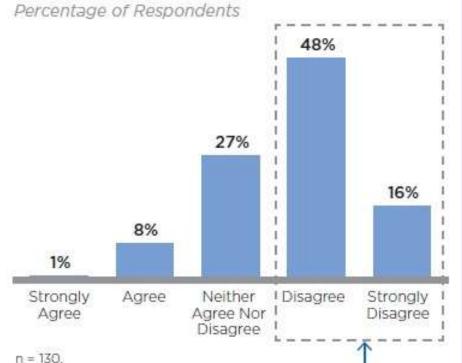
- Who could be accountable for what?
- Who should be accountable for what?
- Who would be accountable for what?

In fact, who is accountable for what?...

Do you...Legal? 2/2



Agreement That "Business Clients Consider Legal, Regulatory, and Records-Related Risks When Starting a New Information-Related Project"



More than 60% of respondents believe the business does not consider legal risks when starting an information- or technology-related project. Although Legal and Information Security need to work better together, they aren't, and this is damaging companies' ability to manage risk.



Over 60% of General Counsel are dissatisfied with the way information risks are being addressed and with their involvement in information risk management.

Source: The Information Risk Executive Council (IREC)

Law Enforcement



Three criteria of sensitivity of the information commonly accepted

- Confidentiality: Confidentiality refers to limiting information access and disclosure to authorized users and preventing access by or disclosure to unauthorized ones.
- Integrity: Integrity refers to the trustworthiness of information resources.
- Availability: Availability refers, unsurprisingly, to the availability of information resources.

A fourth is also often used (under different names)

Traceability, Imputability, or Proof, i.e. Non-repudiation

Stakes of Security: Status



- The legal risk is a consequence of operational risk
- The business risk is in fact induced by the informational risk
- Information Systems Security aims four main objectives:
 - Availability
 - Data Integrity
 - Confidentiality
 - Non-repudiation

The risk assessment of information systems can make it possible to reduce both business and legal risks

A Difficult Equation





OBLIGATIONS OF THE ENTERPRISE

CUSTOMER REQUIREMENTS

Where is the 'Border' between
Customer Satisfaction and
Interaction with the
Authorities?

Point

of Balance

LEGAL AND REGULATION REQUIREMENTS

What's at Stake?

... also for Software Makers



Technologies

FIND THE POINT OF
BALANCE

FRAUD SECURITY

Anticipate Security stakes and assist businesses in their efforts to maintain a balance.

Usages

Implémentation



The OWASP Secure Software Contract Annex



Intended to help software developers and their clients negotiate important contractual terms and conditions related to the security of the software to be developed or delivered.

CONTEXT: Most contracts are silent on these issues, and the parties frequently have dramatically different views on what has actually been agreed to.

OBJECTIVE: Clearly define these terms is the best way to ensure that both parties can make informed decisions about how to proceed.

https://www.owasp.org/index.php/OWASP Secure Software Contract Annex



Legal Update



States of California, USA Data Breach



California was the first state in USA to enact such a law.

California Senate Bill No. 1386 became effective on 1st July 2003, amending Civil Codes 1798.29, 1798.82 and 1798.84. It is a serious bill, with far reaching implications.

Essentially, it requires an agency, person or business that conducts business in California and owns or licenses computerized 'personal information' to disclose any breach of security (to any resident whose unencrypted data is believed to have been disclosed)



The statute imposes specific notification requirements on companies in such circumstances.



The statute applies regardless of whether the computerized consumer records are maintained *in or outside* California.

European Directive 2009/136/EC



DIRECTIVE 2009/136/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 25 November 2009

amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws.

Article 2 (2) (4) (c) adds a requirement to notify Security breaches to "National Authority" and to those affected by this vulnerability, at least if the flaw is "likely to affect negatively" their personal data

European Convention on Cyber Crime





The Council of Europe adopted a Convention on Cyber Crime that identified and defined internet crimes:

- Offenses against the Confidentiality, Integrity and Availability of computers, data and systems (illegal access, illegal interception, data interference, system interference, misuse of devices)
- Computer-related Offenses (computer-related forgery, computer-related Fraud)
- Content-related Offenses (offenses related to child pornography)
- Offenses related to infringements of copyright and related rights

Executive Management Responsibility



All organisations need to be aware of the Convention's provisions in Article 12, Paragraph 2:

'Ensure that a legal person can be held liable where the lack of supervision or control by a natural person... has made possible the commission of a criminal offenses, established in accordance with this Convention'.

In other words, Directors can be responsible for offenses committed by their organisation simply because they failed to adequately exercise their *duty of care*.

European Convention on Cyber Crime



The Organization of American States (OAS) and the Asia-Pacific Economic Cooperation (APEC) have both committed themselves to applying the European Convention on Cyber Crime.

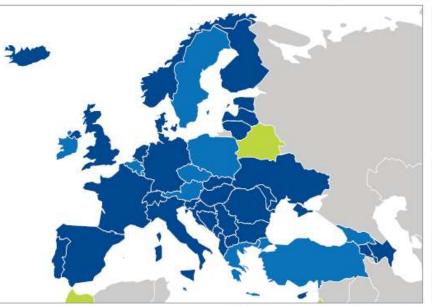
70+ countries have enacted.

http://www.coe.int/t/DGHL/cooperation/economiccrime/cybercrime/default_en.asp

http://www.oas.org/en/default.asp

http://www.apec.org/

Global reach of the Budapest Convention on Cybercrime













State Parties to the Convention

Council of Europe member states

Albania Armenia Azerbaijan Bosnia and Herzegovina Bulgaria Croatia Cyprus Denmark Estonia Finland France Germany

Lithuania Moldova Montenegro Netherlands Norway Portugal Romania Serbia Slovak Republic Slovenia Spain «the former Yugoslav Republic of Macedonia » Switzerland Ukraine

United Kingdom

Non Council of Europe member states

United States*

Hungary

Iceland

Italy

Latvia

Signatories and States invited to accede

Signatories

Austria Belgium Canada* Czech Republic Georgia Greece Ireland Liechtenstein

Luxembourg Japan* Malta Poland South Africa Sweden Turkey

States invited to accede



Dominican Republic Mexico* Philippines Senegal

Cooperation also with

Antigua and Barbuda Bahrain Bangladesh Belarus Benin Bolivia Botswana Brazil Brunei Darussalam Cambodia Cameroon Colombia Congo, Republic of Cook Islands Cote d'Ivoire Dominica Ecuador Egypt El Salvador Fiji Gabon Ghana

Grenada Guatemala Haiti Honduras India Indonesia Jamaica Korea, Republic of Laos Lebanon Malaysia Maldives Marshall Islands Mauritius Micronesia Morocco Nauru Nicaragua Niger Nigeria Pakistan Palau

Panama Papua New Guinea Paraguay Peru Samoa Singapore Solomon Islands Sri Lanka St Kitts and Nevis St. Vincent and the Grenadines Tanzania Thailand Tonga Togo Trinidad and Tobago Tuvalu

Uruguay

Vanuatu

Vietnam



10th November 2011 www.coe.int/cybercrime

^{*} observer countries

What about France? 1/2



- Reporting of violations of personal data to the CNIL
- New obligation to notify security breaches or the integrity of Networks and Services
- Consequences in case of non-compliance with legal obligations

The Commission Nationale de l'Informatique et des Libertés (CNIL) is responsible for ensuring that information technology remains at the service of citizens, and does not jeopardize human identity or breach human rights, privacy or individual or public liberties.

http://www.cnil.fr/english/the-cnil/

What about France? 2/2



Article 38 de l'ordonnance du 24 août 2011 (aka '<u>Telecom Packet</u>'): l'obligation d'une notification des failles de sécurité

«<u>En cas de violation de données à caractère personnel</u>, le fournisseur de services de communications électroniques accessibles au public avertit, sans délai, la Commission nationale de l'informatique et des libertés. Lorsque cette violation peut porter atteinte aux données à caractère personnel ou à la vie privée d'un abonné ou d'une autre personne physique, le fournisseur avertit également, sans délai, l'intéressé. »

Penalties in case of breach of the duty to report under the jurisdiction of the CNIL

• 150 K€, 300 K€ for repeat offenses

Brand Impact!



Possibility of publication of the CNIL's decision

Computer-related Offenses



According the French Penal Code

- Fraudulent access and maintaining in an Information System (Art. 323-1 C. Pénal)
- Obstacle to the functioning of an information system (Art. 323-2 C. Pénal)
- Fraudulent introduction of data into an information system (Art. 323-3 C. Pénal)

Computer Crimes



Legal risks in connection with the fraudulent use of Information Systems:

Reminder: Any Commercial Web Application Service is part of an Information System

Why: Because we are talking about Information Security, which means... Legal Compliance!

Privacy & Information Security



The Responsible of the Data Processing is required to take any useful precautions, au regard de la nature des données et des risques présentés par le traitement, pour préserver la sécurité des données et, notamment empêcher qu'elles soient déformées, endommagées ou que des tiers non autorisés y aient accès. (Article 34 de la Loi 78-17 du 6 janvier 1978 modifiée - CNIL)

Article 226-17 du Code Pénal : Le fait de procéder ou de faire procéder à un traitement de données à caractère personnel sans mettre en œuvre les mesures prescrites à l'article 34 de la loi n° 78-17 du 6 janvier 1978 précitée est puni de cinq ans d'emprisonnement et de 300 000 Euros d'amende.

What is this obligations?



Take any useful precautions

- In regard of the nature of Data
- And the risks presented by the Processing
- To preserve data security and, in particular, prevent that they are
 - Modified
 - Tampered
 - or that unauthorized third parties have access

Privacy Security within the Enterprise



- The CEO is criminally responsible of the Data Processing
 - France: Obligations under the law of 6 Jan 1978 (modified in 2004)
- Criminal Risk in case of Delegation of Authority
 - ... for each person part of the Chain!

What about the subcontracting?

- ✓ Enterprise: Data owner = Accountable
- ✓ Subcontractor: Data processor = Accountable

Proposed European Regulation on the protection of personal data



Will to harmonization of the regulations at EU level by the use of a Regulation, for greater harmonization of rules between actors and countries:

- Same framework for all players regardless of their location:
 - The proposed regulation provides that EU rules apply to any provider that handles data from a EU user
- Same framework throughout Europe:
 - The choice of a Regulation, not a Directive, reduces the risk of differences in interpretation between Member States (national transposition not required).
- Same framework, whatever the activity of the controller

New obligations for the persons in charge of the treatment



- Privacy by design, impact analysis and documentation:
 - Principles of "privacy by design" and "accountability": new internal governance rules for companies to integrate the protection of personal data in the design of the product / service.
- Reporting of violations of personal data

Real Sanctions!



Art. 79 - Penalties:

- A 2% annual turnover fine
 - ✓ Administrative penalties may be up to 2% of total revenues
- 1 000 000 Euros

A 2% annual turnover fine would have meant

1.2 Billion dollars in 2008 for a company like Microsoft!

Issues for the Enterprise & Consequences



All these acts can have serious consequences for the Company

- Financial Consequences
- Consequences on the Reputation
- Brand impact
- Criminal Consequences for the Executives
- Proceedings to the civil courts: Claims for damages by customers

Criminal Consequences (France)



- Article 226-17 of the Penal Code *also* charges the disclosure of information... to the spied!
- The Enterprise (i.e. the Spied) is responsible of consequences caused to third parties
- The people 'accountable' (IT, Security, or the CTO, even the CEO) can be personally involved
 - ✓ Law 'Godfrain' Penalty: 2 months to 5 years / 300 € to 300 K€
 - ✓ Protection of information / Negligence: 5 years / 300 K€



What about Software Makers, Developers?

Don't forget!



A Software Maker, a Developer, is recognized as a subject-matter expert in its field.

As such, Software Makers and Developers have a Duty to Advise ... including about Web Application Security.

Back to the Future 1/2



EC wants software makers held liable for code

After identifying gaps in EU consumer protection rules, the European Commission is proposing that software makers give guarantees about the security and efficiency of their code.

http://news.cnet.com/8301-1001 3-10237212-92.html

Back to the Future 2/2



Should developers be sued for security holes?

Dr Richard Clayton, security researcher at the University of Cambridge, is arguing for regulations that remove the developer's right to waive any responsibility for security flaws in their software.

It's an argument that has already won support from officials across Europe, with a House of Lords committee (UK) recommending such a measure be implemented in 2007 and European Commissioners arguing for the requirement in 2009 - however agreements to this effect have not been passed.

http://www.publications.parliament.uk/pa/ld200607/ldselect/ldsctech/165/165i.pdf (see page 38, Vendor liability) http://www.techrepublic.com/blog/european-technology/should-developers-be-sued-for-security-holes/1109

Here is the Question



Developers, Software makers held liable for code?

- From a global point of view and in essence, YES.
- From a Legal point of view: YES, you could.
 - Depends on the circumstances
 - Depends on the Contract
 - Depends on the eventual License
 - Depends on the Product
 - Depends on the Customer (reputation, business, large account, etc.)

So, is your Software company concerned? (Answers below from lawyers specialized in IT)



YES, you could <u>also</u> be held liable in case of Security Breach in a Customer's Information System, as well as the company

concerned.



The Knowledge is wealth, Knowledge must flow



"If you think education is expensive, you should try ignorance!"

Abraham Lincoln



Teamwork



TEAM stands for... Together Each Achieves More

You guys are welcome to attend our meetings and have talks at OWASP.

The OWASP French Chapter welcomes you!











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