



# **E-Business Security ~ Technical and Legal Issues**

## **Information Security and Forensics Society**

### **The Future Legal Framework of e-commerce**

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**Nov 11, 2000**

# Agenda

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- A. Top Cyber-crime in US
- B. Proposed legislation in US Congress
- C. Proposal by Council of Europe
- D. New Challenge
- E. Difficulties in Law and Enforcement



# A. Top cyber-crime in US

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 **Federal Bureau Investigation(FBI)**

 **Insiders**

 **Hackers**

 **Virus Writers**

 **Criminal Groups**

 **Terrorists**

 **Foreign Intelligence Services**

 **Information Warfare**

 **Internet Fraud**

 **Intellectual Property Rights**

Source: Statement for the Record of Louis J. Freeh, Director Federal Bureau of Investigation on Cybercrime

# A. Top cyber-crime in US

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-  *2000 Computer Crime and Security Survey*
-  Computer Security Institute (CSI) & San Francisco FBI
-  273 organizations

# A. Top cyber-crime in US

-  **90% detected computer security breaches within the last 12 months**
-  **70% found a variety of serious computer security breaches liked**
  -  theft of proprietary information
  -  financial fraud
  -  system penetration from outsiders
  -  denial of service attacks
  -  sabotage of data or networks.
-  **74% acknowledged financial losses due to computer breaches**

## B. 2000 Information Security Industry Survey

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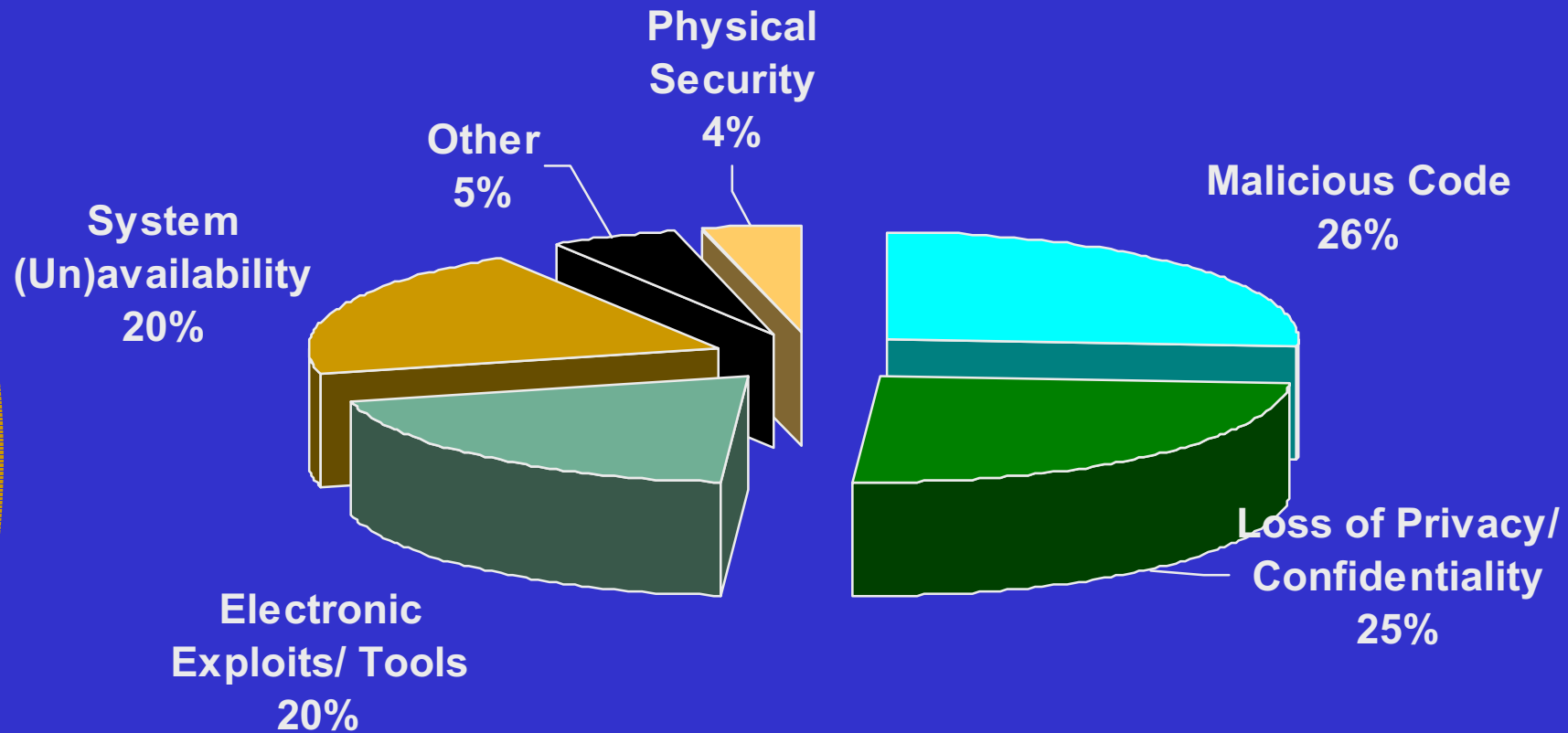
 Late June and Early July 2000

 1,897 infosecurity professionals

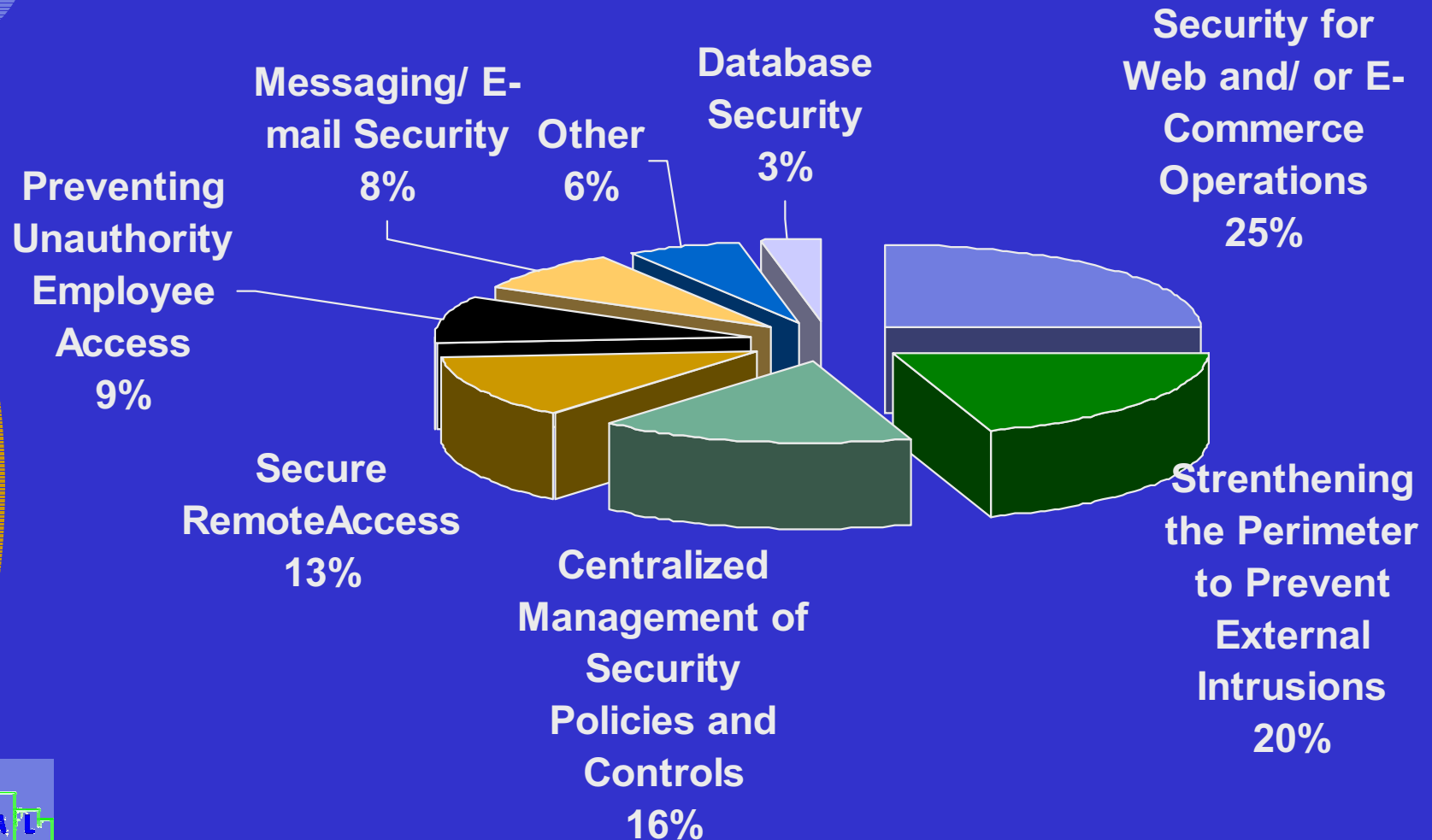
 1. “What is your single most important info-security concern?”

 2. “What is your most important program or project?”

# 1. Concern



## 2. Project/Program





## B. Proposed legislation in US Congress

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1. Privacy
2. Spamming
3. Intellectual Property
4. Internet Taxation
5. Internet Gambling
- 6 Electronic Signatures

# 1. Privacy

## 14 Bills in Year 2000








### a. Control of spyware

 H.R. 5571 Electronic Privacy protection Act

 S. 3180 Spyware Control and Privacy Protection Act of 2000

# 1. Privacy

## b. Privacy Policy

-  H.R. 5430 Consumer Online Privacy and Disclosure Act
-  H.R. 4908 Notice of Electronic Monitoring Act
-  H.R. 4059 Online Privacy Disclosure Act of 2000
-  H.R. 3560 Online Privacy Protection Act of 2000
-  S. 2928 Consumer Internet Privacy Enhancement Act
-  S. 2606 Telecommunications and Electronic Commerce Privacy Act
-  S. 2063/ HR 3770 Secure Online Communication Enforcement Act of 2000

# 1. Privacy

## c. Eliminate threshold for federal prosecution

 S. 2448 Internet Integrity and Critical Infrastructure Protection Act of 2000

## d. Financial Record Privacy

 H.R. 4332 Financial Consumers' Bill of Rights Act

 S. 2513 Financial Information Privacy Protection Act

 S. 2360 Freedom From Behavioral Profiling Act of 2000

## e. Others

 H.R. 4049 Privacy Commission Act



# 1. Privacy



## a. Control of spyware



**A software that collects information about the software users and transmits it back to the software company**



**manufacturers would be required to**

- ✎ **inform the use of spyware**
- ✎ **obtain user consent**
- ✎ **notify the users the kinds of information collected**
- ✎ **method to disable the function of spyware**
- ✎ **make it illegal to transmit users' information back to the software manufacturers if no permission**

# 1. Privacy



## b. Privacy policy



**Provision of public policy**



**Require the Federal Communications Commission to create a uniform “seal program” based on the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data.**



**Provide opt-out option**



**Allow users to reach their own information**

# 1. Privacy

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c. Eliminate threshold for federal prosecution



d. Strengthen the privacy provisions in the Gramm-Leach-Bliley Act



e. Others

## 2. Spamming

### 3 Bills in Year 2000

 **H.R. 5300 Wireless Telephone Spam Protection Act**

 **S. 2542 Controlling the Assault of Non-Solicited Pornography and Marketing (CAN SPAM) Act of 2000**

 **S. 2448 Internet Integrity and Critical Infrastructures Protection Act of 2000**



## 2. Spamming

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-  Provide valid identification information, routing information and opt-out address to receivers
-  Wireless spamming--messaging system of mobile phones

# 3. Intellectual Property

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## 3 Bills in Year 2000

 **H.R. 5275 Music Owners' Listening Rights Act of 2000**

 enacted legislation Public Law 106-379

 **H.R. 5106 Copyright Technical Corrections Act of 2000**

 **H.R. 5107 Work made For Hire and Copyright Corrections Act of 2000**

# 4. Internet Taxation

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 Prohibit multiple or discriminatory taxes on e-commerce

 Prohibit taxes on Internet access

 **H.R. 3709 Internet Nondiscrimination Act of 2000**

 **S. 2028 Internet Non-discrimination Act**

# 5. Internet Gambling



**Prohibit involvement in Internet gambling business**



**H.R. 4419 Unlawful Internet Gambling Funding Prohibition Act**



**H.R. 3125 Internet Gambling Prohibition Act of 2000**






**S. 692 Internet Gambling Prohibition Act of 1999**



# 6. Electronic Signatures

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-  Legalize the application of Electronic Signatures
-  Signed by President Clinton and became public law on June 30, 2000
-  Electronic Signatures in Global and National Commerce Act

# C. Proposal by Council of Europe



## Convention of Cyber crime



European Committee on Crime Problems



[conventions.coe.int/treaty/EN/cadreprojets.htm](http://conventions.coe.int/treaty/EN/cadreprojets.htm)



Latest draft released on October 5, 2000  
(Version No 22)



## Objections from Global Liberty Campaign Committee



## Over 30 organizations jointly wrote to Council of Europe



[www.gilc.org/privacy/coe-letter-1000.html](http://www.gilc.org/privacy/coe-letter-1000.html)

# 1. Controversial proposals

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## a. Records Retention

 **Article 17, 18, 24, 25**

 **require ISP to retain records regarding the activities of their customers**

## b. Illegal devices

 **Article 6**

## c. Crimination of copyright infringement

 **Article 10**

## d. Protection of Children pornography

 **Article 9**

# 1. Controversial proposals

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## e. Investigation Authority

### Article 14 and 15

- i. Access and seizure of data by authority due to criminal investigation or proceeding.
- ii. Order person who has knowledge about the functioning of computer system.
- iii. Order people to submit information controlled.
- iv. Order ISP to submit subscriber's information.

# D. New Challenge

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 Peer-to-peer Technology

 **Napster.com**

 **Gnutella**

 **DeCSS**

 Litigation in US

 Exchange of MP3 files and other file formats

 Bypassing through central servers

 Copyright infringement

cybercrime



Law/ Enforcement



## E. Difficulties in Combating Cyber-crime

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1. Legislation
2. Jurisdiction
3. Evidence Collection

# 1. Legislation

 Existing laws applies


 Hacking: Telecommunication Ordinance

 Privacy: Personal Data (Privacy) Ordinance

 Spamming: *no legislation in Hong Kong*

 Intellectual Property: Copyright Ordinance

 Pornography: Control Obscene and Indecent  
Article Ordinance

 Digital Signature: Electronic Transactions  
Ordinance

 Criminal Ordinance

# New Legislation

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working group lead by Deputy Secretary for Security



Draft in 2001

## 2. Jurisdiction



**Trans-border crimes**



**Internet has no border**



**Jurisdiction has !**



**Nazism is an offence in Germany but not in most other countries.**

# 3. Evidence Collection

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