PUBLIC MINISTRY
Prosecutor's Office attached to the High Court of Justice

Directorate for the Investigation of Organized Crime and Terrorism (D.I.O.C.T)

Service for Countering Cyber Criminality (CC.U)

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www.diicot.ro

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Typology of crime

- Collecting of confidential data – phishing/vishing (credit card information, online banking, usernames, passwords etc.)
- Fraudulent computer auctions-selling (computer forgery, escrow fraud, use of fake documents/identity, blind mules or affiliated to the network etc.)
- Unauthorized access to computer systems/ illegal interception of computer communications
- VoIP fraud (PBX attacks)
- ATM manipulation (skimming)
- Forgery of electronic payment instruments/fraudulent withdrawals

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Objective & subjective factors that have favoured proliferation of Cybercrime

- Increasingly and wide access to fast/modern equipment/connections
- Anonymous connections
- Difficulties in cooperation with service providers, cyber cafés, university campus networks or small networks;
- The relative easiness with which one is able to carry out some of the acts specific of Cybercrime;
- The delay in the response by the authorities,
- Lack of predictability in prosecution and also within courts procedures
- Migration of some organized criminal groups to cyber crime
- Freedom of movement
- Maximum profits at lower costs

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Common evidence vs electronic evidence

General definition on evidence any factual element that serves :

- to establish the existence or non existence of a crime;
- to identify the perpetrator and to know the necessary circumstances for a just solution

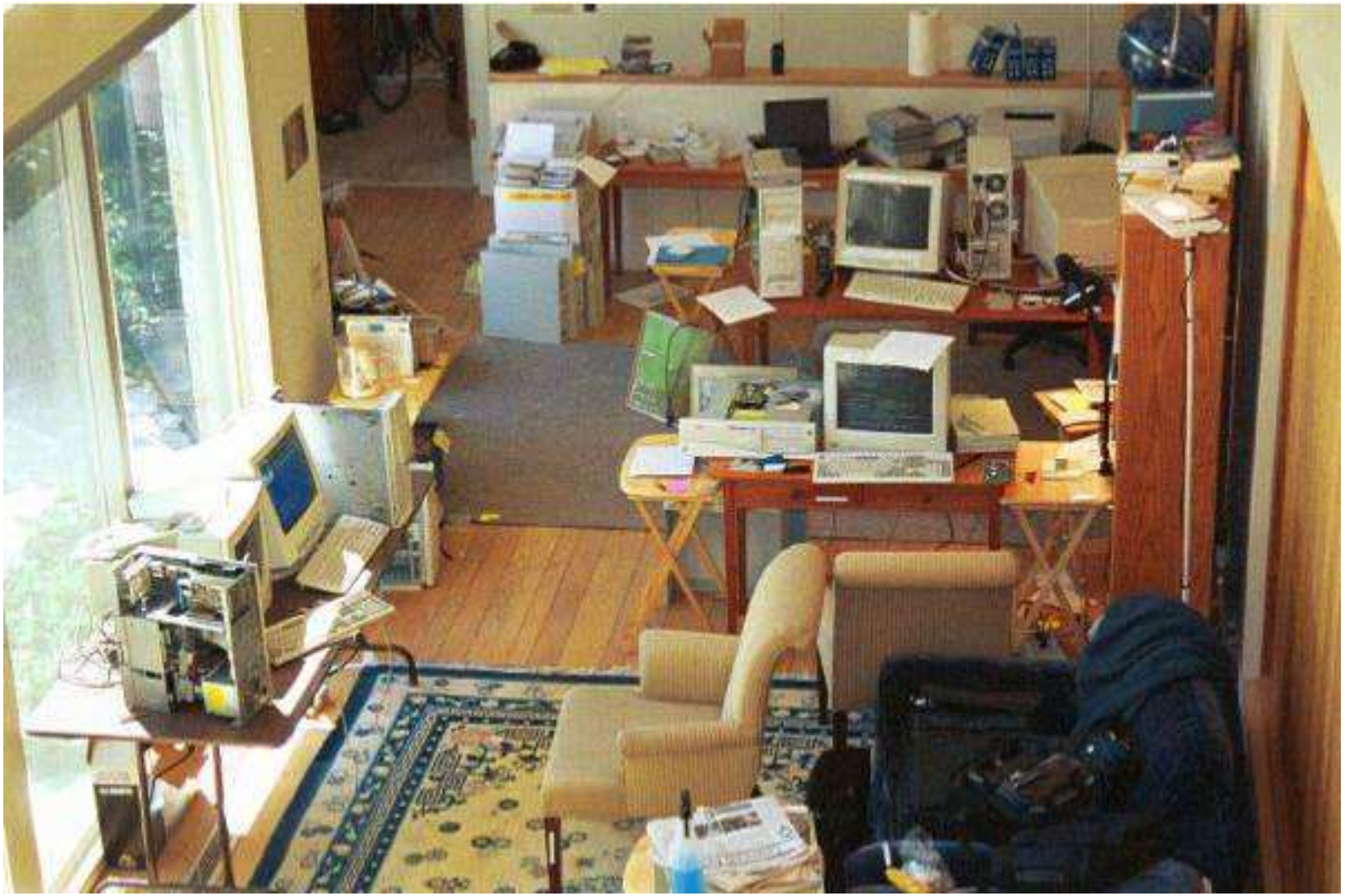
Electronic evidence = any factual element **created or revealed in a digital environment** that serves :

- to establish the existence or non existence of a crime;
- to identify the perpetrator and to know the necessary circumstances for a just solution

Computers create evidence as well as they can record or produce evidence: files content; meta data; system files; logging data; backup files; deleted files; recovered files

Conditions for admissibility :

- » To be pertinent
- » Conclusive
- » Utility for the case
- » Not forbidden by the law



Case I

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Notification/complaint – FBI Legal attaché

Victim – Discover, 20 pharmacies, Brandi Inc.

Offence 1 – illegal access to computer systems, illegal interception of computer communication, illegal operation with credit card data

Offence 2 – money laundering, organized crime

Description of facts

- A fraudulent scheme involving compromised computers at retail pharmacies with the purpose of stealing credit card information
- Maintenance common software products used at each pharmacy, service LogMeIn, to allow remote access to POS machines located in the pharmacies
- The computer systems at the pharmacies were compromised by malware
- Fortunately - log created, thus the analysis revealed IP address, user account created

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Information provided by US authorities

- affidavit /case agent FBI Chicago
- evidence collected in US under subpoena, legal documents, logs for email addresses, forensic analysis, financial analysis/WU transfers

Track back the facts

Malicious software update scheme/phishing /successful

Account created on a compromised computer: gestapo09@gmail.com

Traceable IP 89.42.137.9 – Skynet Telecom network , Bucharest

Hi5 profile *pictures, car plate led to the offender/nicknames

FTP server identified / information collected – HTML files provided by a Keylogger software/credit card information, logs

Other email accounts and logs : **grimvm@yahoo.com; bastardvm@yahoo.com**

ICQ account by the name of the offender

AOL account by the name of Grim

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IP address verification led to several ISPs:

- RDS&RCS, Constanta
- UPC Romania, Bucharest , Blvd. Banu Manta
- Bucharest, G-ral Vladoianu (rented apartment girlfriend)
- Wireless network (neigh borough)
- Zapp modems (anonymous)

Forensic analysis on compromised computers

- Forensic company/Cybertrust
- Carnegie Mellon CERT / alg.exe and update9823.exe

KEYLOGGER ANALYSIS

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- **Name given by the offender: “Grim Keylogger added PWS”**
- **What it can do:**
  - **Firewall Bypass**
  - Persistence Option (Impossible to Remove)
  - **Colored HTML Log**
  - Works on Non admin Accounts
  - 2 FTP Servers Support
  - Passive mode for FTP Upload (works behind routers and LANs)
  - Organized FTP Upload (Dir for Each User , Logs Sorted with Date and time)
  - When the Keylogger starts , it Checks for Internet Connection and try to send the current Log directly , then after that it sleeps the number of hour chosen in the editor and send when the time passes
  - Should be Undetected by 90 % of avs
- **Customization:**

KEYLOGGER ACTIVITY

- **Server.exe** :
  - Changes Windows Registry
  - Creates the following files on the computer:
    - C:\Documents and Settings\user\Application **Data\windows\alg.exe (adds an Win Reg Key "alg.exe")**
    - C:\Documents and Settings\user\Application Data\windows\gp2007.dll
    - C:\Documents and Settings\user\Application Data\windows\sql2005.dll
    - C:\Documents and Settings\user\Application Data\ tmp6sfsa.sql **(contains HTML logs)**
    - C:\Documents and Settings\user\Application Data\ **ppx123.txt (contains passwords)**
    - C:\WINDOWS\uninstall\rundl132.exe (imitates OS "rundll32.exe")
  - Accesses Windows Functions: WriteFile , CreateFileA , GetTempPathA;
  - Once executed it initiates a connection **to www.google.com using port 80 and also to IP : 200.115.173.65 using FTP port 21 ;**

Panama FTP Server

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host-200-115-173-65.ccipanama.com (200.115.173.65

200.115.173.0 - 200.115.173.255
Cyber Cast International, S.A.
Addison House Plaza Suite 20, 507, 264-0852
6-3783 - Panama - PA
Panama
Brazil
+507 264-0852 []
Created on 19-11-2008
Last updated on 19-11-2008

Cyber Cast International, S.A.
info@CCIPANAMA.COM
Addison House Plaza Suite 20, 507, 264-0852
6-3783 - panama - pa
Panama
Brazil
+507 264-0852 []
Created on 05-04-2005
Last updated on 23-09-2008

Please wait while you are redirected to the gateway you chose to make payment...

Loading

Western Union Transfer Instructions:

Send the Western Union to:
Receiver First Name: Jorge
Receiver Last Name: Moreno
Receiver Country: Panama
Receiver City: Panama
Receiver Province: Panama

When the transfer is completed send us an email to billing@offshore-web-hosts.com with the following information:
- Sender's Name
- Sender's Country
- Total Amount Sent
- Your 10 digit Western Union order number

Intercepted email

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tuesday, march 17, 2009 6:08 am
from:
"billing@offshore-web-hosts.com" <billing@offshore-web-hosts.com>
add sender to contacts
to:
grimvm@yahoo.com
dear client,

regarding western union

please make the payment to:

receiver first name: jorge
receiver last name: moreno
receiver country: panama
receiver city: panama
receiver province: panama

when the payment has been done please send us an email to billing@offshore-web-hosts.com with the following information:

- full name
- address
- amount of your transaction. $
- your 10 digit western union order number.

if you need any further information, feel free to contact us. is always a pleasure to assist you.
thank you to trust cyber cast international.
best regards,

elisa vado
billing department
cyber cast intl
panama, panama

---
email: billing@offshore-web-hosts.com
phone: +507 264-0852
fax: +507 264-2978

ticket details

ticket id: pmp-704832
department: billing
priority: low
status: closed

COLORED HTML LOG

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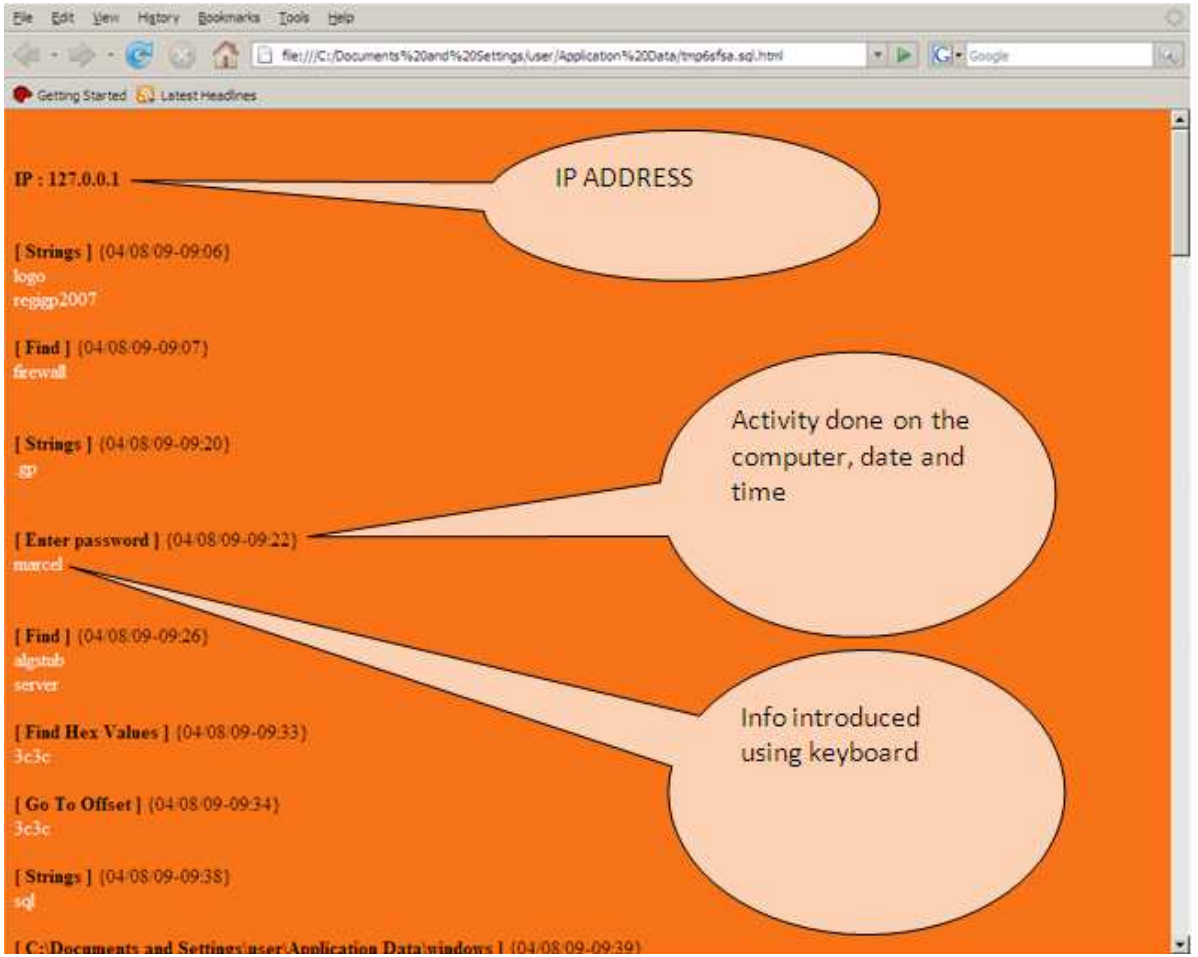

GRIM KEYLOGGER EDITOR

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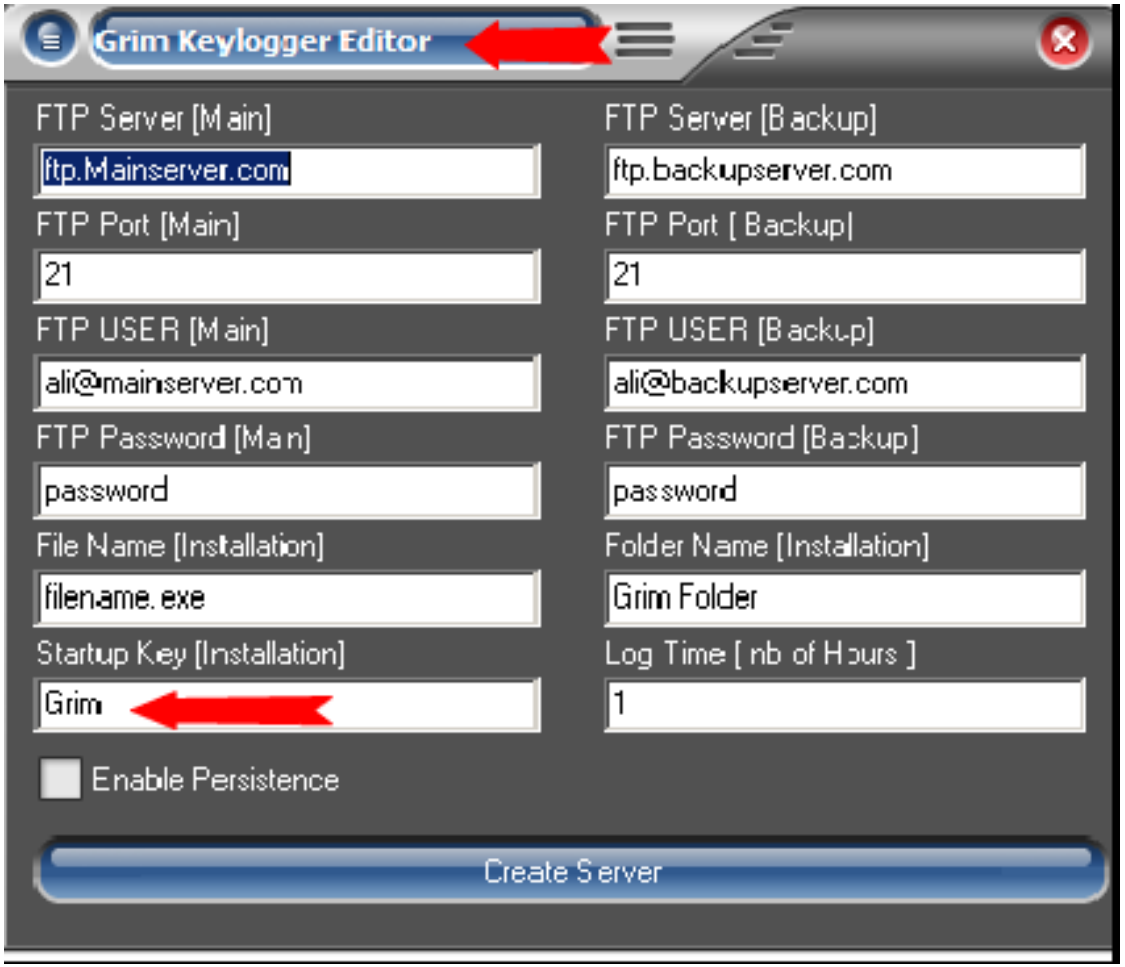

Internet/Phone Intercepts

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- Phones used to comunicate with individuals from USA and Bulgaria
- Emails addresses used by RE to comunicate with individuals from USA, Bulgaria and Romania :
  - **gestapo09@gmail.com**
  - **bastardvm@yahoo.com**
  - **grimvm@yahoo.com**
- WebMoney nr. on **www.trainexservice.com** : WMZ: Z188516
- WebMoney nr. on **www.wmtransfer.com** : WMId 998970028670

Search warrants
Forensics on RE computers

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- **Identified:**
  - Keylogger HTML logs containing CC data from pharmacies;
  - Keylogger installation kit
  - References to maintenance software
  - References to IP's used in the illegal access;
  - 43786 unique credit card numbers (VISA, MASTERCARD, DISCOVER , AMERICAN EXPRESS);
    - 3957 reported to have been compromised.
    - WU transfers from

Financial investigation

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- WU documents for receiving money corroborated with the information obtained from intercepts and computer forensic (around 200.000 USD within one year)
- Web money transactions couldn't be verified
- Parallel investigation in the US on the persons identified in fraudulent transaction with forged credit cards
- 120.000 USD seized on the house search
- Investigation on legal subsistence (the offenders/no job and their family, estate, other goods/cars)
- No match between the personal legal earnings and the expenditure

Indictment I/conviction
September 2010

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RE and one of his accomplices (CE) have been indicted and then convicted for committing :

- Illegal access to a computer system (aggravated)
- Illegal interception of computer data (aggravated)
- Misuse of device
- Fraudulent operation with credit cards data
- Money laundering

Total - RE imprisonment 4 years and 6 months

- CE (accomplice) suspended sentence

- **No sufficient evidence to indict other accomplices** (preventive measures on MC – not to leave the country by the end of the investigation)
- **Spontaneous release of information regarding the US participants**

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THANK YOU FOR YOUR ATTENTION

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