Iftach Ian Amit | November 2010

Cyber[Crime|War]

Connecting the Dots

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disclaimer

This is "hacker" me, and my own personal opinion only. This has got nothing to do with work stuff. The "work" me is often suited and talks in acronyms and industry best practices stuff.

Agenda

- Who am I?
- CyberWar [Attack | Defense]
- CyberCrime [Attack | Defense]
- History revisited
    - Connecting the dots...
- Future

Who Am I

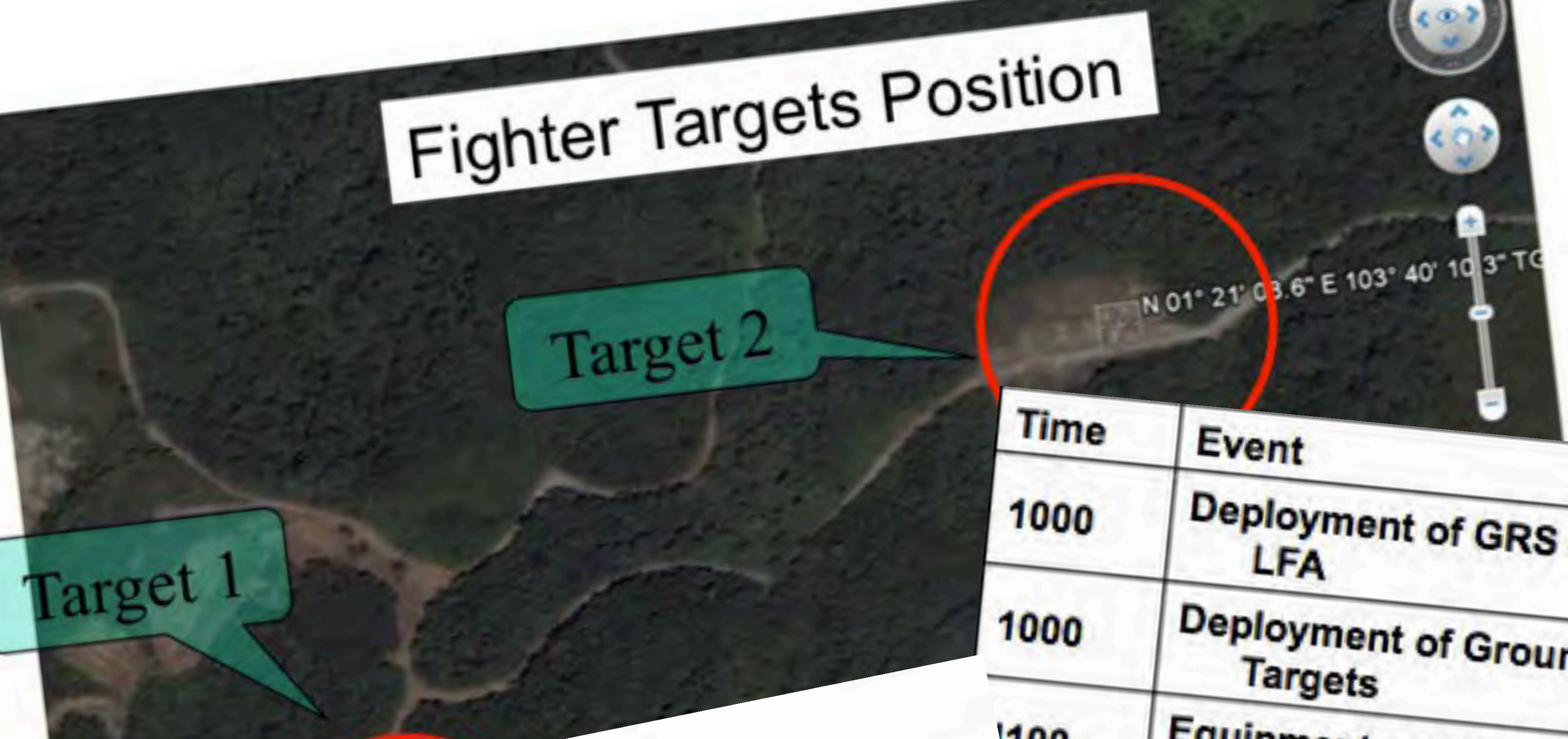
class Prog
class Problem
class Token{
char
char *Na
Probl
pub

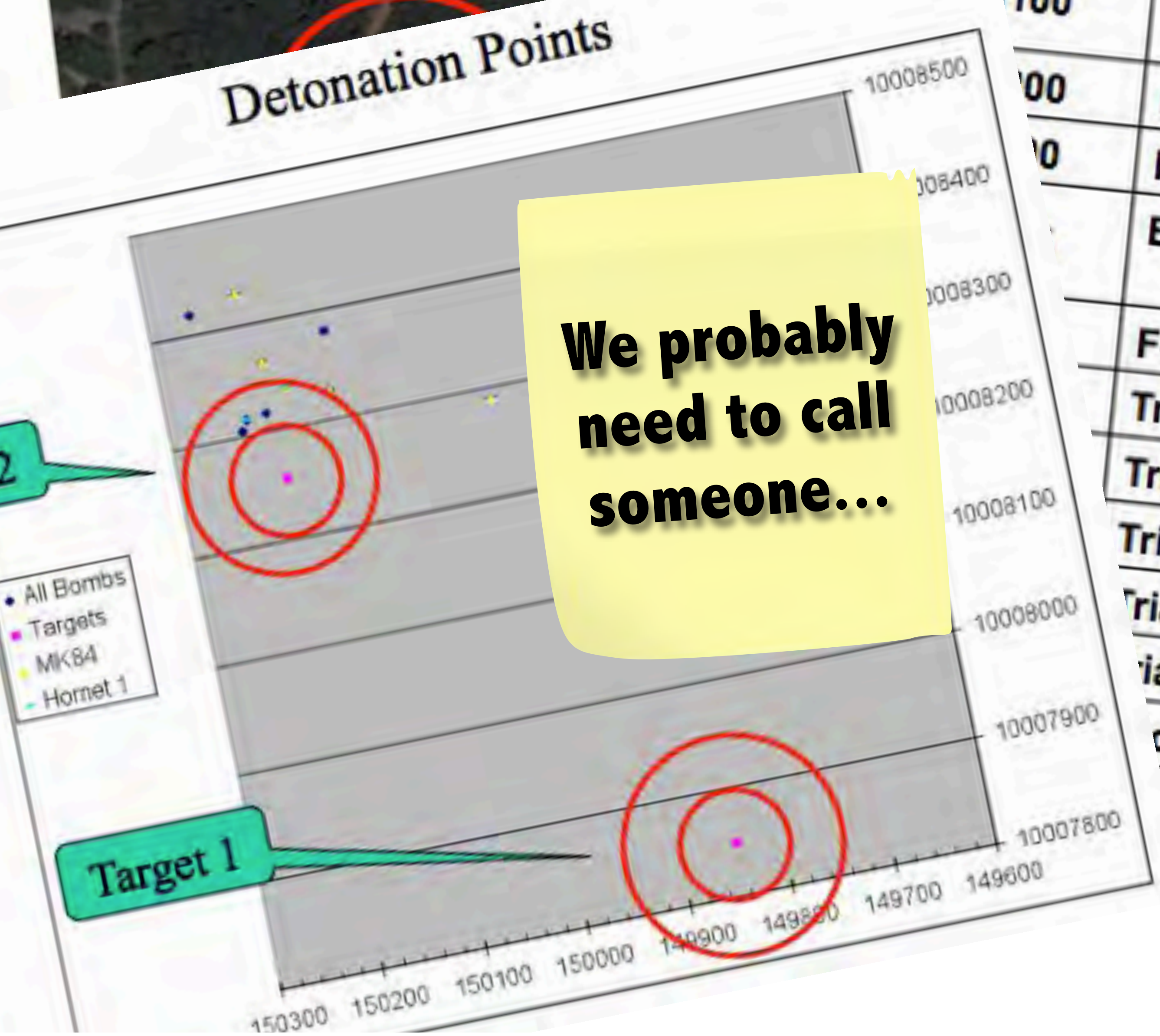
ISRAEL AIR FORCE
חיל האויר

This is NOT going to be

Picking up where we left off

At least as far as last year's research is concerned...





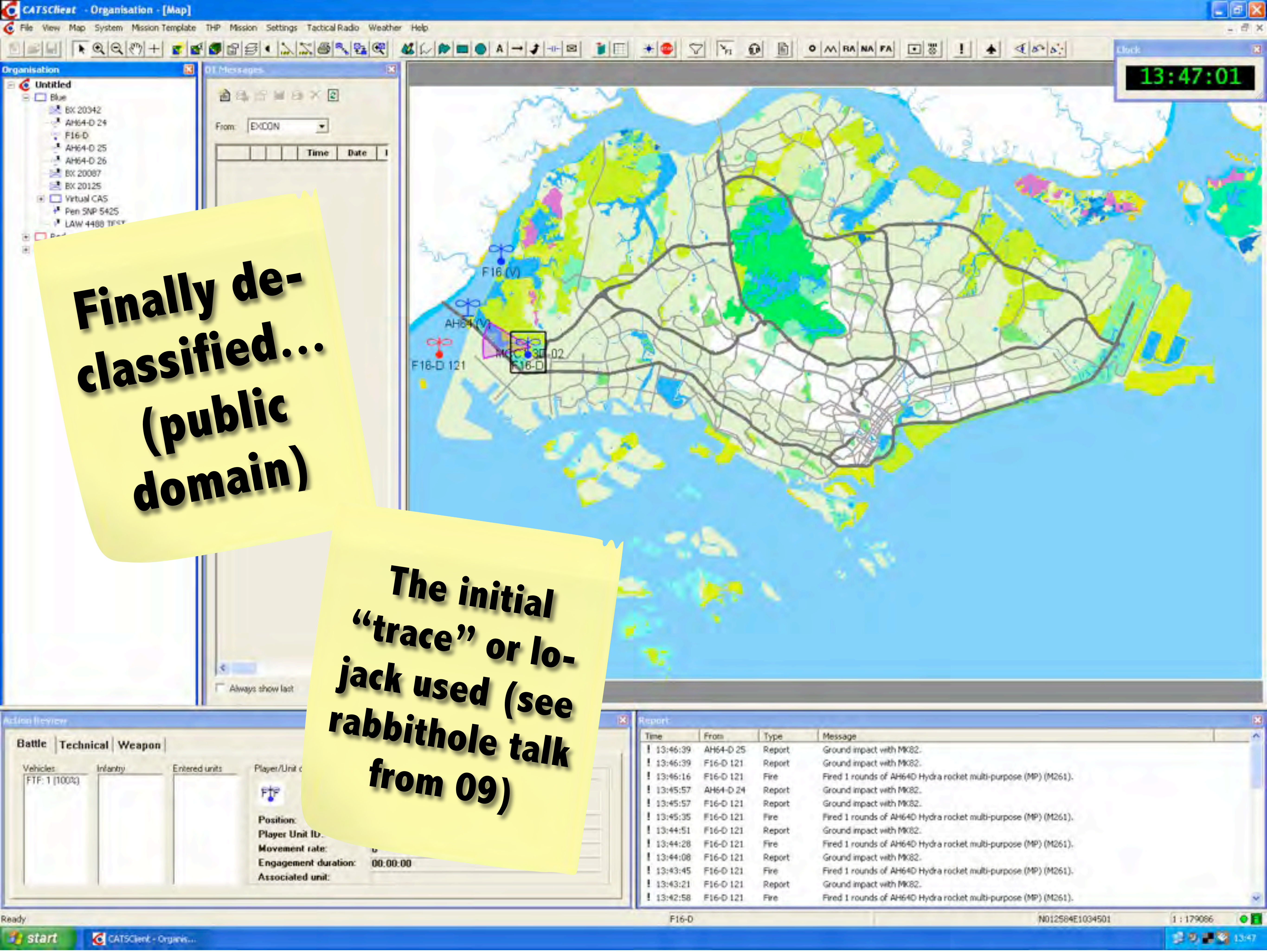
We probably need to call someone...

Time	Event
1000	Deployment of GRS #9 to LFA
1000	Deployment of Ground Targets
100	Equipment serviceability checks
00	Lunch
0	No Move
	Establish comms between MCC and BCDS
	F-16 launch
	Trial #1
	Trial #2
	Trial #3a
	rial #3b
	ial #3c
	cover
	rief

Package	Events
1	F-16 bomb drops on ground targets (Mk82 Mk84)
2	F-16 bomb drops on ground targets (Mk82, Mk84)
	Virtual Close Air Support
3a	F-16 bomb drops on ground targets (Mk82, Mk84)
	Ground-to-ground engagements at ALIGN GR
3b	F-16 bomb drops on ground targets (Mk82, Mk84)
	Ground-to-ground engagements at normal GRS
	F-16 bomb drops on ground targets (Mk82, 4)
	round-to-ground engagements at ALIGN GRS
	Ground-to-ground engagements at normal GRS

I think this is from my powerpoint!

ove and beyond traditional security



Finally de-classified... (public domain)

The initial "trace" or lo-jack used (see rabbithole talk from 09)

Time	From	Type	Message
! 13:46:39	AH64-D 25	Report	Ground impact with MK82.
! 13:46:39	F16-D 121	Report	Ground impact with MK82.
! 13:46:16	F16-D 121	Fire	Fired 1 rounds of AH64D Hydra rocket multi-purpose (MP) (M261).
! 13:45:57	AH64-D 24	Report	Ground impact with MK82.
! 13:45:57	F16-D 121	Report	Ground impact with MK82.
! 13:45:35	F16-D 121	Fire	Fired 1 rounds of AH64D Hydra rocket multi-purpose (MP) (M261).
! 13:44:51	F16-D 121	Report	Ground impact with MK82.
! 13:44:28	F16-D 121	Fire	Fired 1 rounds of AH64D Hydra rocket multi-purpose (MP) (M261).
! 13:44:08	F16-D 121	Report	Ground impact with MK82.
! 13:43:45	F16-D 121	Fire	Fired 1 rounds of AH64D Hydra rocket multi-purpose (MP) (M261).
! 13:43:21	F16-D 121	Report	Ground impact with MK82.
! 13:42:58	F16-D 121	Fire	Fired 1 rounds of AH64D Hydra rocket multi-purpose (MP) (M261).

Hungry yet?

That was just the appetizer...

Question 1:What is **this**?

Perceptions may be deceiving...

War

Crime

War

- Government / state
- Official backing
- Official resources
- Financing
- Expertise?
- Exploits/Vulns?

Crime

- Private
- Semi-official backing (org. crime)
- Official resources
- Self financing?
- Established expertise (in-house + outsourced)
- Market for exploits

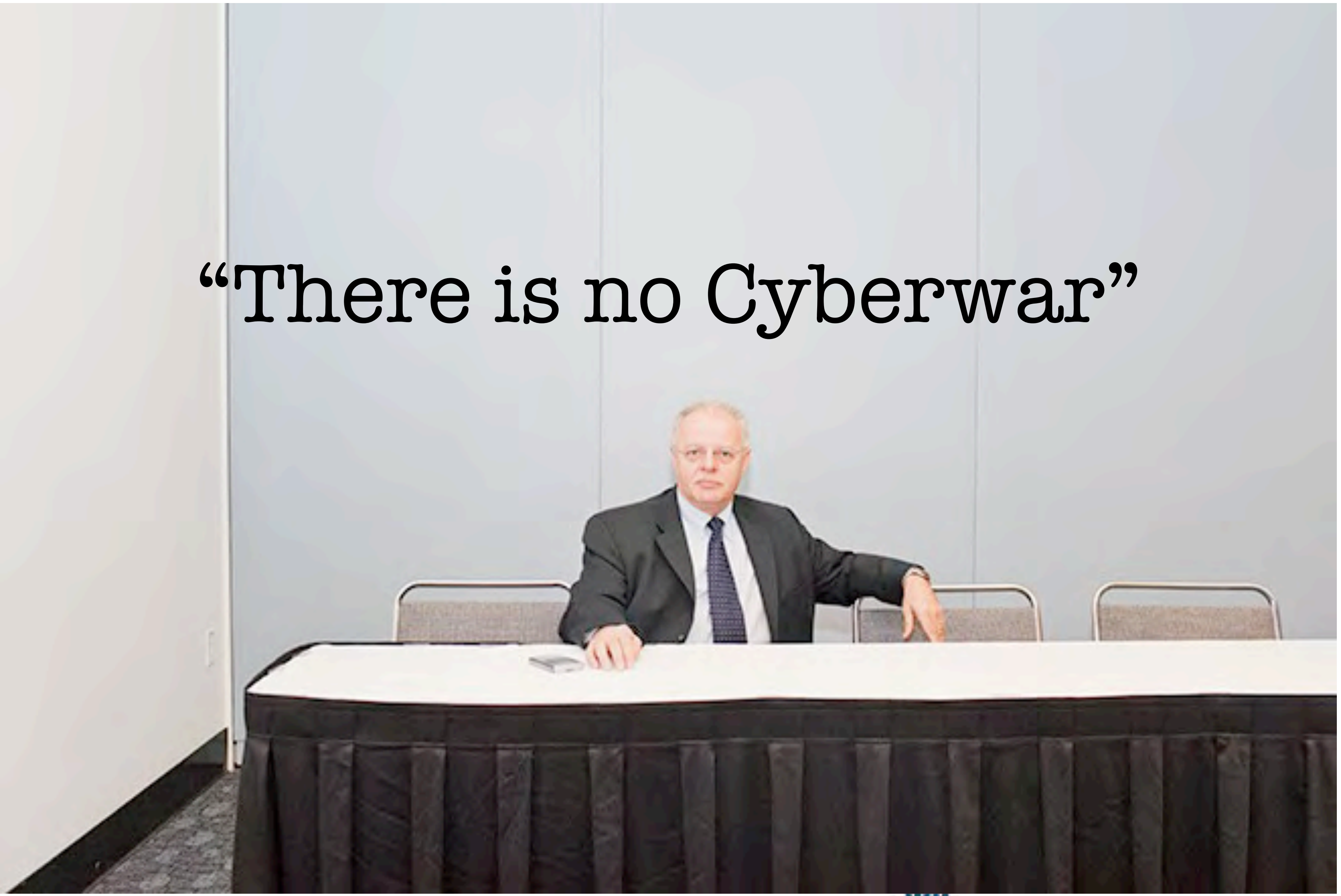
CyberWar

"Cyberwarfare, (also known as cyberwar and Cyber Warfare), is the use of computers and the Internet in conducting warfare in cyberspace."

Wikipedia

It **did not** happen yet

Estonia being an exception?



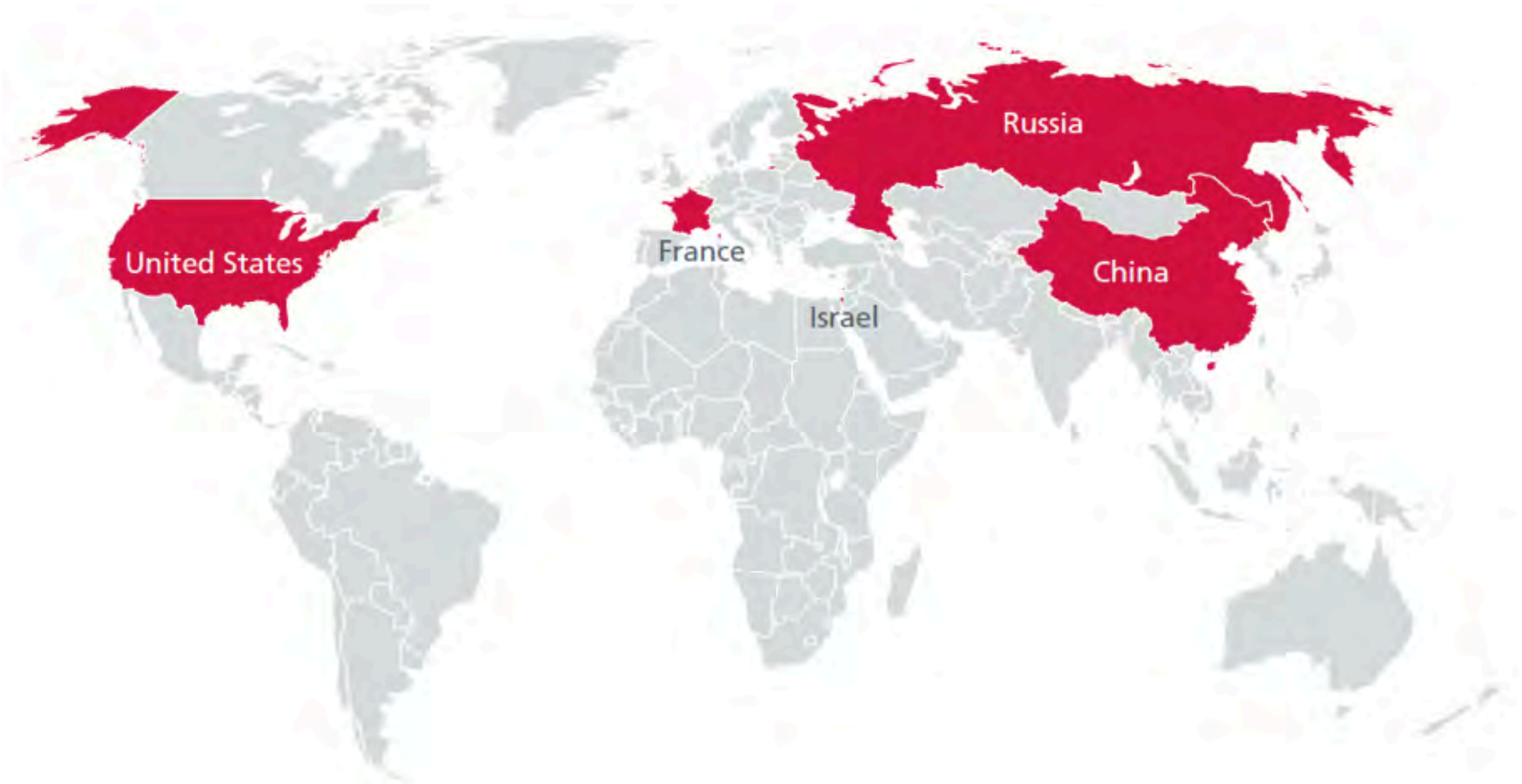
"There is no Cyberwar"

This is not the **only** way!

Neither is this...

But civilian are **always** at stake!

Many faces of how CyberWar is perceived...

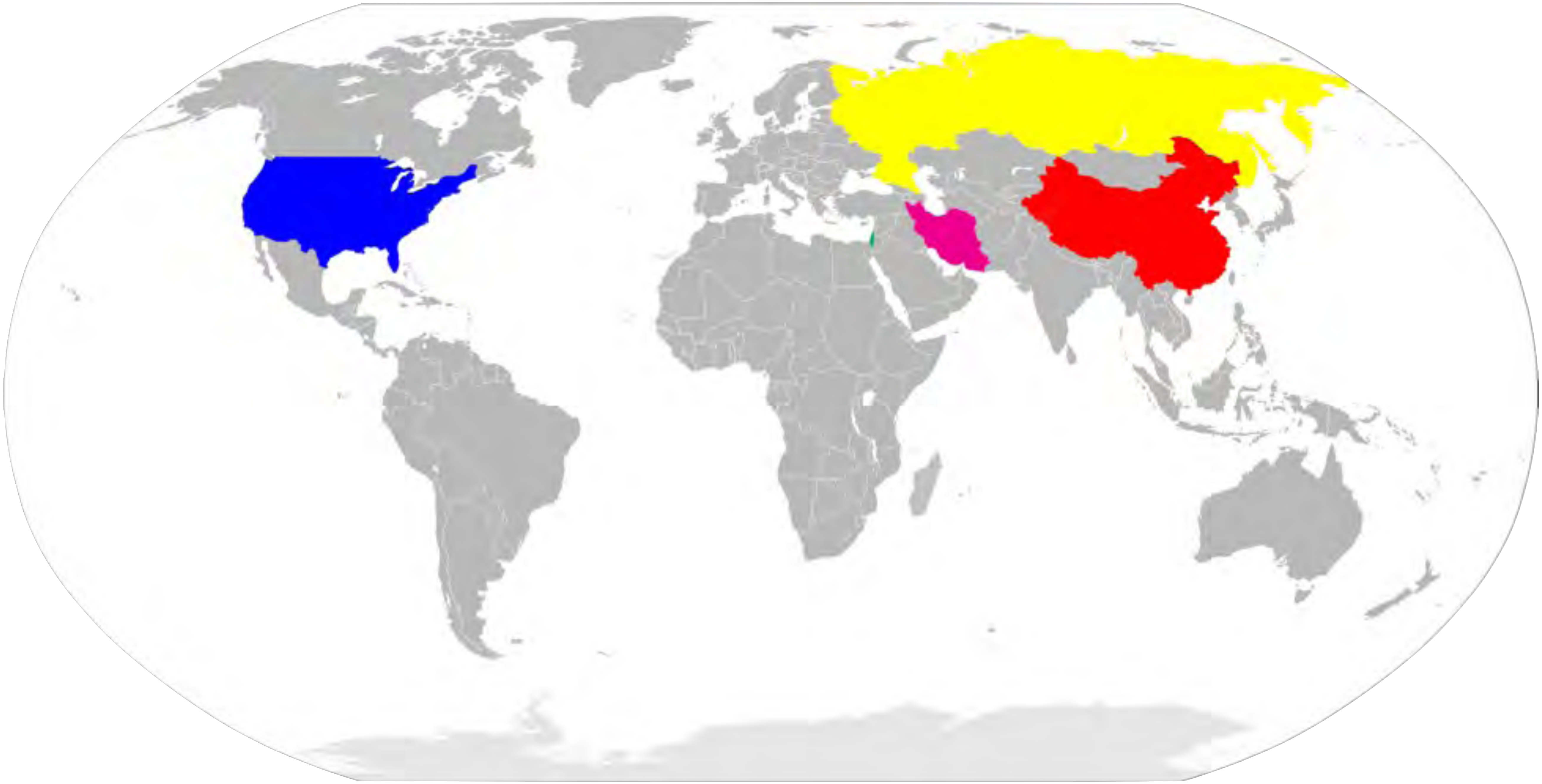


From McAfee's "Virtual Criminology Report 2009"

Image caption:

"*countries developing advanced offensive cyber capabilities*"

We’ll focus on current players:



And no, here size does **NOT** matter...

USA

- Thoroughly documented activity around cyberwar preparedness as well as military/government agencies with readily available offensive capabilities
- Massive recruiting of professional in attack/defense for different departments:
    - USCC (United States Cyber Command - includes AirForce, Marines, Navy and Army service components)
    - NSA
    - Other TLA's...

Russia

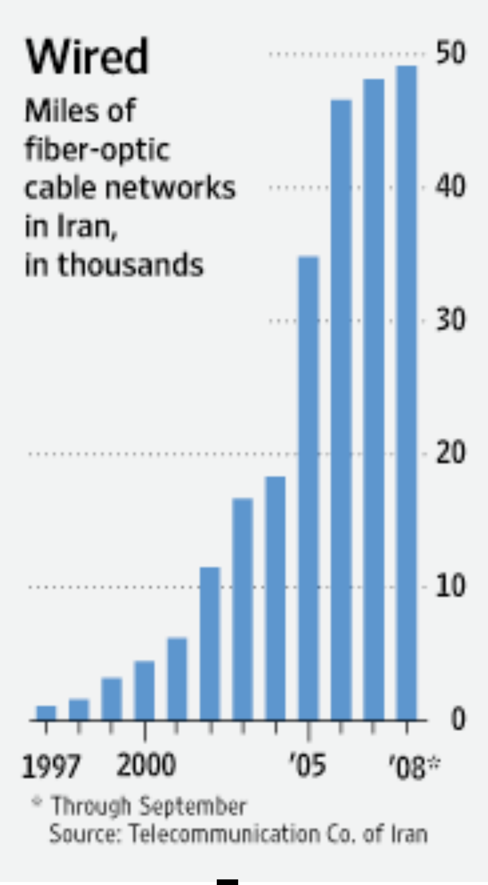
- GRU (Main Intelligence Directorate of the Russian Armed Forces)
- SVR (Foreign Intelligence Service)
- **FSB** (Federal Security Services)
- Center for Research of Military Strength of Foreign Countries
- Several “National Youth Associations” (**Nashi**)

China

- PLA (People’s Liberation Army)
  - Homework: read the Northrop Grumman report...
  - General Staff Department 4th Department - Electronic Countermeasures == Offense
  - GSD 3rd Department - Signals Intelligence == Defense
- Yes... Titan Rain...

Iran

- Telecommunications Infrastructure co.
  - Government telecom monopoly
- Iranian Armed Forces



Wired

Miles of fiber-optic cable networks in Iran, in thousands

* Through September

Source: Telecommunication Co. of Iran

Israel

- This is going to be very boring... Google data only :-(
- IDF (Israel Defense Forces) add cyber-attack capabilities.

Israel Adds Cyber-Attack to IDF

Aviation Week's DTI | David Eshel | February 10, 2010

- C4I (Command, Control, Communications, Computers and Intelligence) branches in Intelligence and Air-Force commands
- Staffing is mostly homegrown - trained in the army and other government agencies.
- Mossad? (check out the jobs section on mossad.gov.il...)

מדינת ישראל ○ המוסד למודיעין ולתפקידים מיוחדים

STATE OF ISRAEL ○ ISRAEL SECRET INTELLIGENCE SERVICE

CyberWar - Attack

Highly selective targeting of **military** (and **critical**) resources

In conjunction with a **kinetic** attack

OR

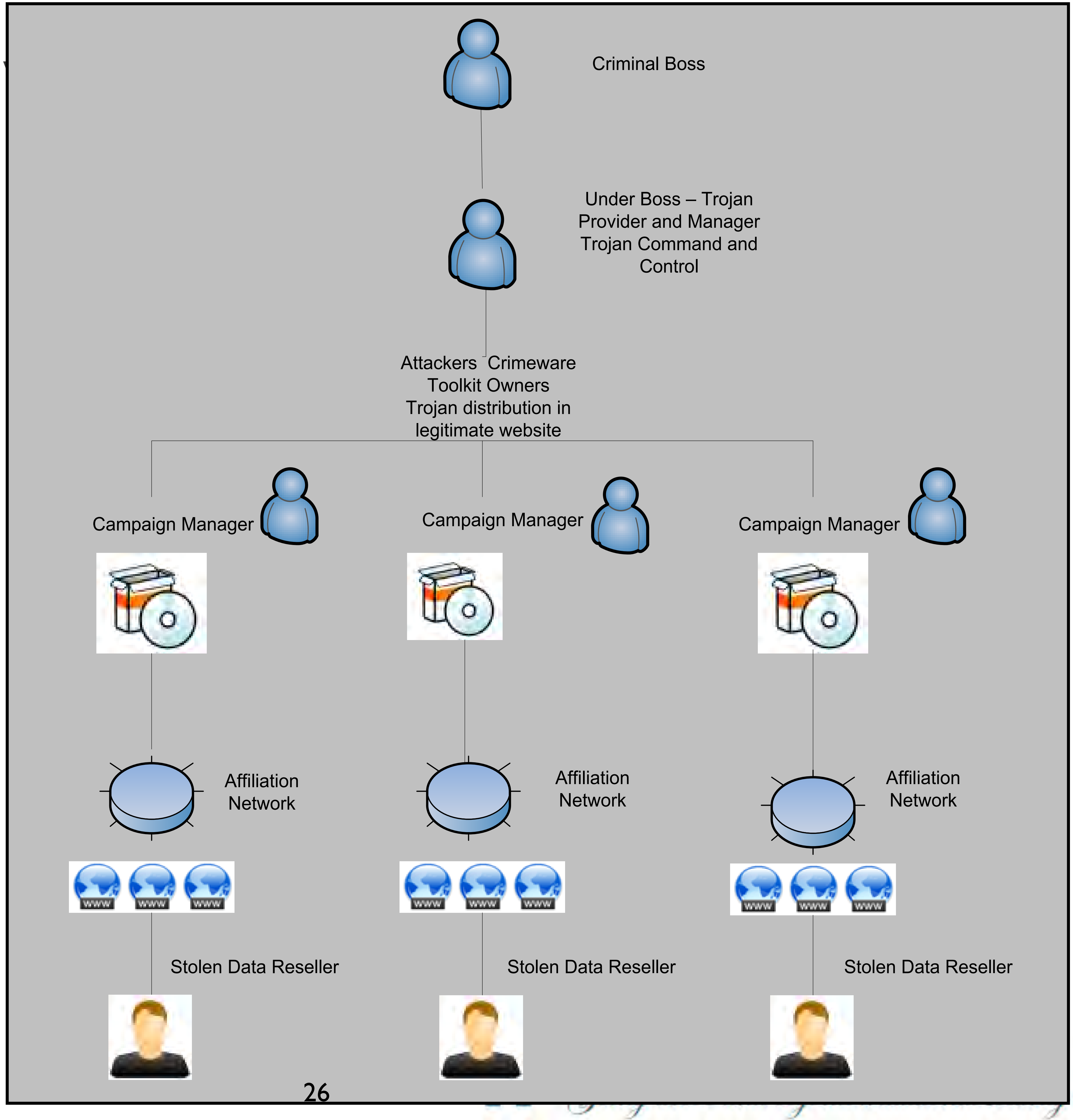
Massive **DDOS** in order to "black-out" a region, **disrupt** services, and/or push political agenda (**propaganda**)

CyberWar - Defense

- Never just **military**
  - Targets will be **civilian**
- Physical and logical protections = last survival act
- **Availability** and **Integrity** of services
  - Can manifest in the cost of making services **unavailable** for most civilians

CyberCrime

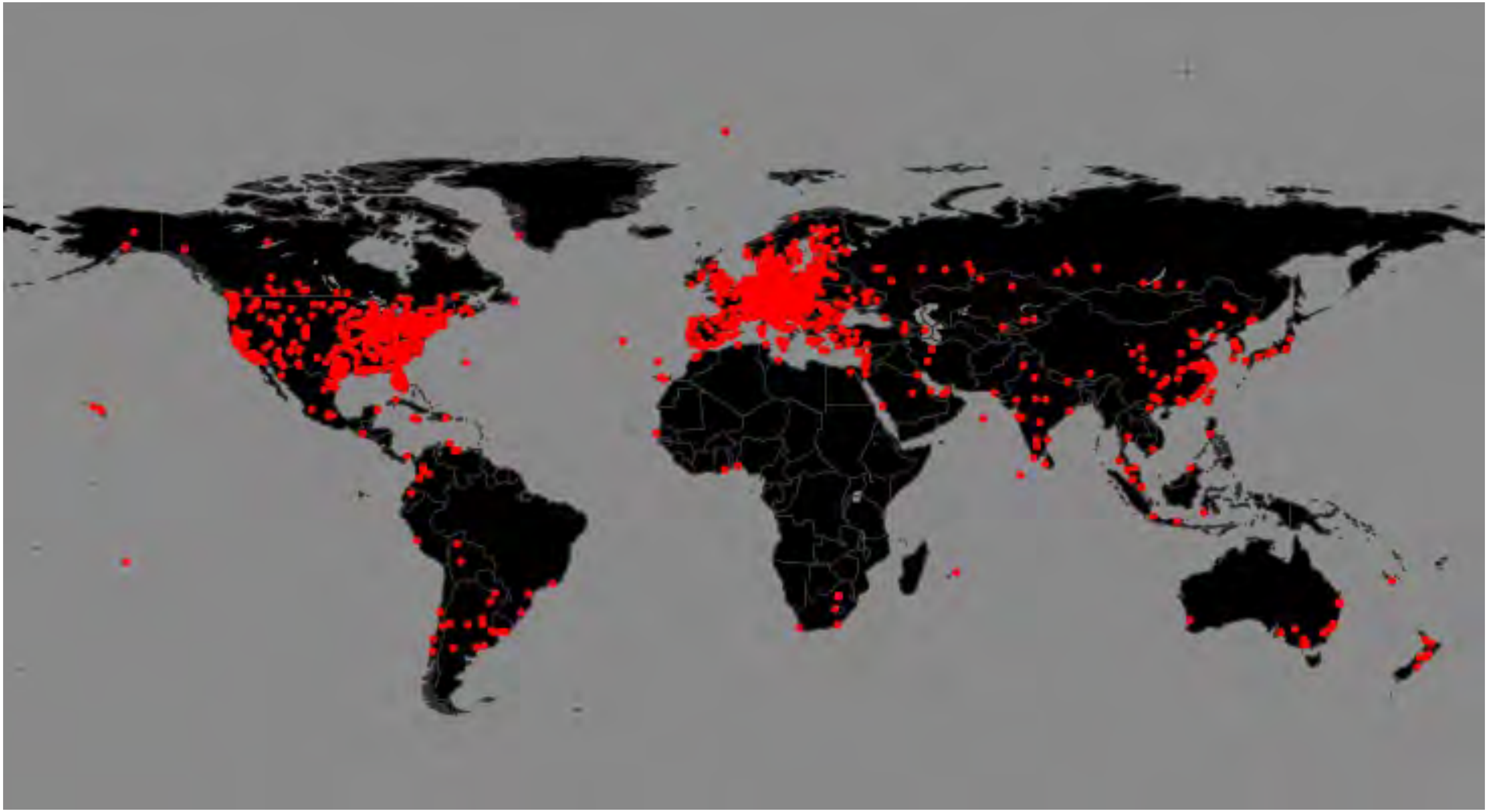
You want money, you gotta play like the big boys do...



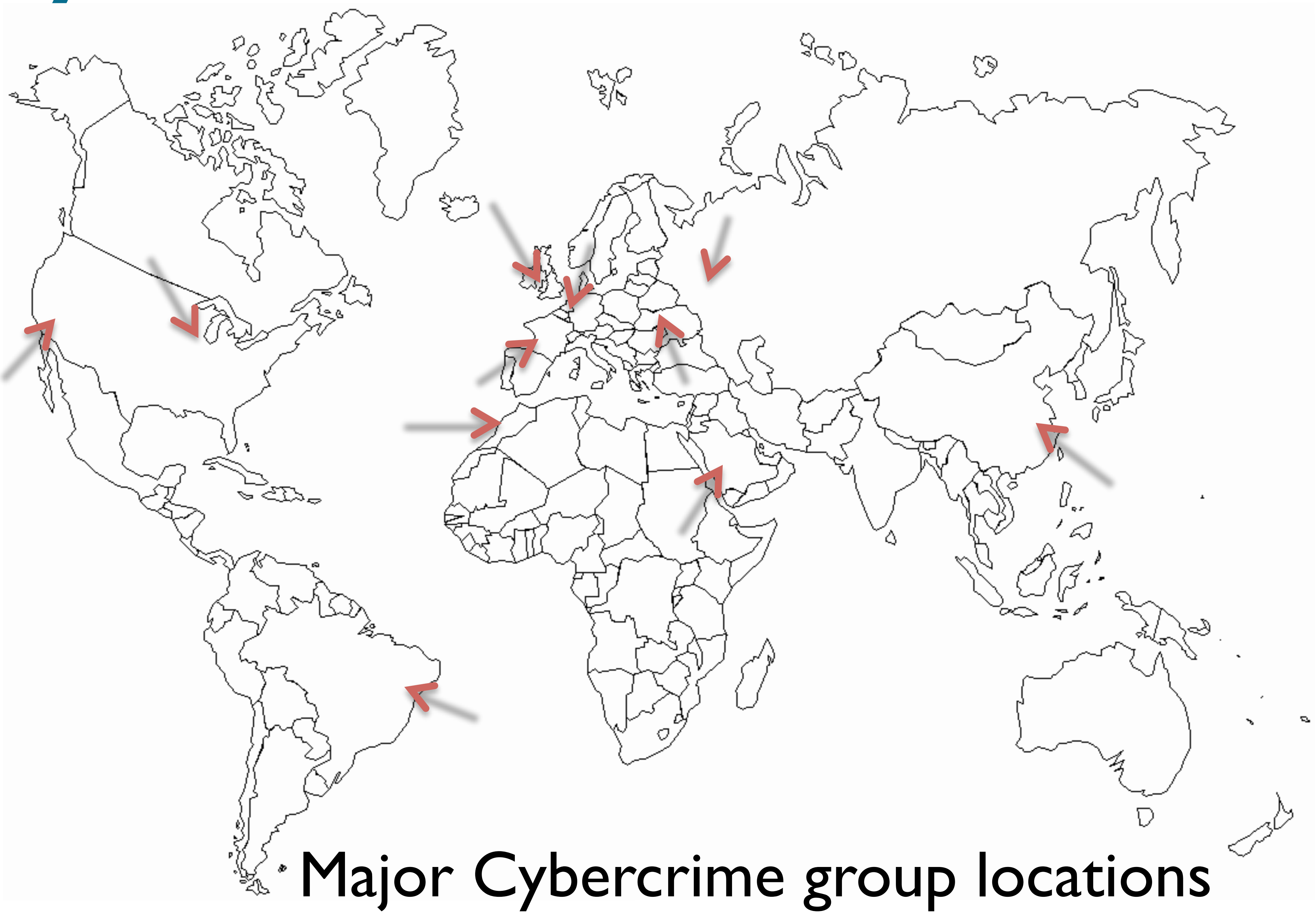
CyberCrime - Attack

- Channels: web, mail, open services
- Targeted attacks on premium resources
  - Commissioned, or for extortion purposes
- Carpet bombing for most attacks
  - Segmenting geographical regions and market segments
- Secondary infections through controlled outposts
  - Bots, infected sites

CyberCrime - target locations

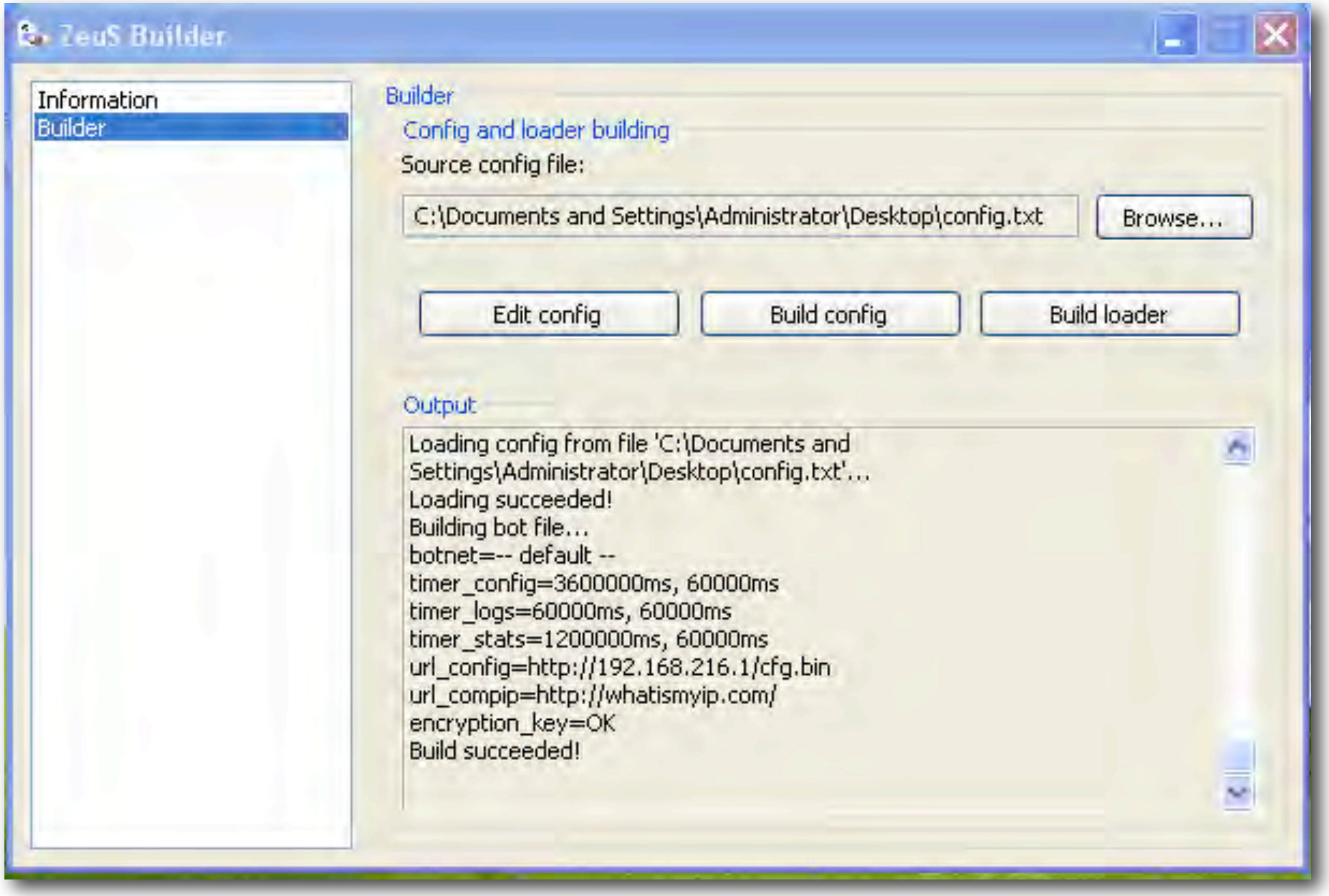


CyberCrime - Locations



Major Cybercrime group locations

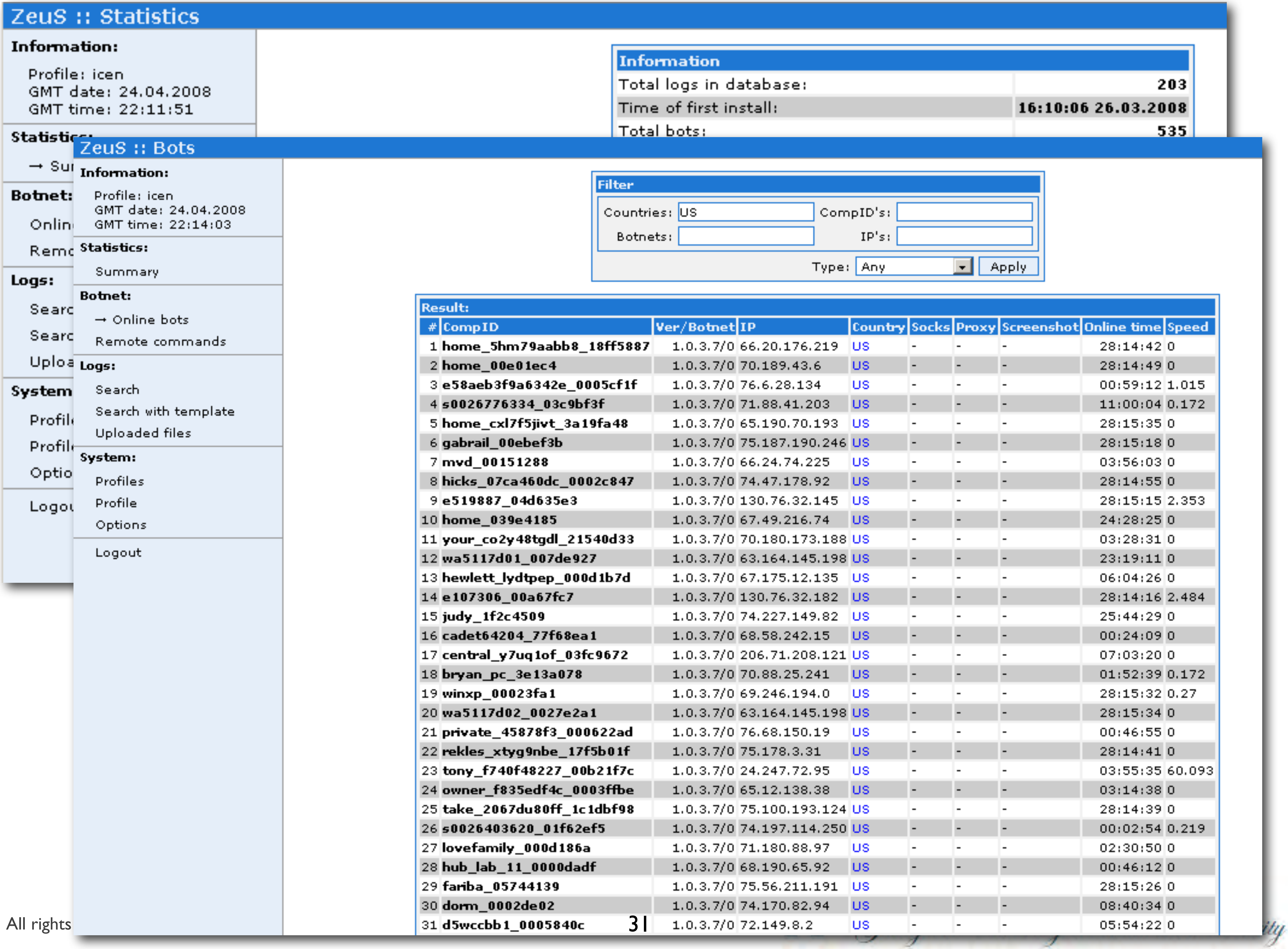
CyberCrime - Ammunition



Source config file: C:\Documents and Settings\Administrator\Desktop\config.txt

```
Loading config from file 'C:\Documents and
Settings\Administrator\Desktop\config.txt'...
Loading succeeded!
Building bot file...
botnet=-- default --
timer_config=3600000ms, 60000ms
timer_logs=60000ms, 60000ms
timer_stats=1200000ms, 60000ms
url_config=http://192.168.216.1/cfg.bin
url_compip=http://whatismyip.com/
encryption_key=OK
Build succeeded!
```

=≈ APT



ZeuS :: Statistics

Information:

Profile: icen
GMT date: 24.04.2008
GMT time: 22:11:51

Statistic

→ Su

Botnet:

Onlin
Remo

Logs:

Searc
Searc
Uploa

System

Profil
Profil
Optio

Logou

Information	
Total logs in database:	**203**
Time of first install:	**16:10:06 26.03.2008**
Total bots:	**535**

ZeuS :: Bots

Information:

Profile: icen
GMT date: 24.04.2008
GMT time: 22:14:03

Statistics:

Summary

Botnet:

→ Online bots
Remote commands

Logs:

Search
Search with template
Uploaded files

System:

Profiles
Profile
Options

Logout

Filter

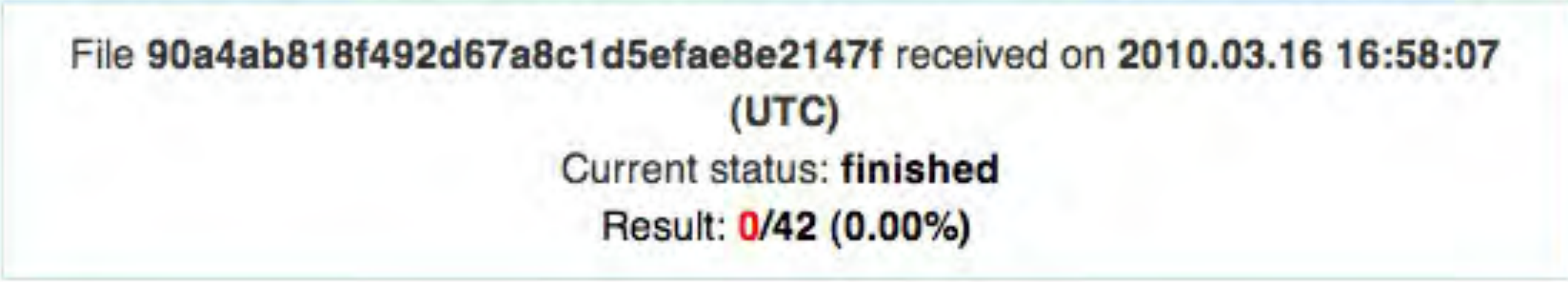
Countries: US
CompID's:
Botnets:
IP's:
Type: Any

Result:

#	CompID	Ver/Botnet	IP	Country	Socks	Proxy	Screenshot	Online time	Speed
1	home_5hm79aabb8_18ff5887	1.0.3.7/0	66.20.176.219	US	-	-	-	28:14:42	0
2	home_00e01ec4	1.0.3.7/0	70.189.43.6	US	-	-	-	28:14:49	0
3	e58aeb3f9a6342e_0005cf1f	1.0.3.7/0	76.6.28.134	US	-	-	-	00:59:12	1.015
4	s0026776334_03c9bf3f	1.0.3.7/0	71.88.41.203	US	-	-	-	11:00:04	0.172
5	home_cxl7f5jivt_3a19fa48	1.0.3.7/0	65.190.70.193	US	-	-	-	28:15:35	0
6	gabrail_00ebef3b	1.0.3.7/0	75.187.190.246	US	-	-	-	28:15:18	0
7	mvd_00151288	1.0.3.7/0	66.24.74.225	US	-	-	-	03:56:03	0
8	hicks_07ca460dc_0002c847	1.0.3.7/0	74.47.178.92	US	-	-	-	28:14:55	0
9	e519887_04d635e3	1.0.3.7/0	130.76.32.145	US	-	-	-	28:15:15	2.353
10	home_039e4185	1.0.3.7/0	67.49.216.74	US	-	-	-	24:28:25	0
11	your_co2y48tgdl_21540d33	1.0.3.7/0	70.180.173.188	US	-	-	-	03:28:31	0
12	wa5117d01_007de927	1.0.3.7/0	63.164.145.198	US	-	-	-	23:19:11	0
13	hewlett_lydtpep_000d1b7d	1.0.3.7/0	67.175.12.135	US	-	-	-	06:04:26	0
14	e107306_00a67fc7	1.0.3.7/0	130.76.32.182	US	-	-	-	28:14:16	2.484
15	judy_1f2c4509	1.0.3.7/0	74.227.149.82	US	-	-	-	25:44:29	0
16	cadet64204_77f68ea1	1.0.3.7/0	68.58.242.15	US	-	-	-	00:24:09	0
17	central_y7uq1of_03fc9672	1.0.3.7/0	206.71.208.121	US	-	-	-	07:03:20	0
18	bryan_pc_3e13a078	1.0.3.7/0	70.88.25.241	US	-	-	-	01:52:39	0.172
19	winxp_00023fa1	1.0.3.7/0	69.246.194.0	US	-	-	-	28:15:32	0.27
20	wa5117d02_0027e2a1	1.0.3.7/0	63.164.145.198	US	-	-	-	28:15:34	0
21	private_45878f3_000622ad	1.0.3.7/0	76.68.150.19	US	-	-	-	00:46:55	0
22	rekles_xtyg9nbe_17f5b01f	1.0.3.7/0	75.178.3.31	US	-	-	-	28:14:41	0
23	tony_f740f48227_00b21f7c	1.0.3.7/0	24.247.72.95	US	-	-	-	03:55:35	60.093
24	owner_f835edf4c_0003ffbe	1.0.3.7/0	65.12.138.38	US	-	-	-	03:14:38	0
25	take_2067du80ff_1c1dbf98	1.0.3.7/0	75.100.193.124	US	-	-	-	28:14:39	0
26	s0026403620_01f62ef5	1.0.3.7/0	74.197.114.250	US	-	-	-	00:02:54	0.219
27	lovefamily_000d186a	1.0.3.7/0	71.180.88.97	US	-	-	-	02:30:50	0
28	hub_lab_11_0000dadf	1.0.3.7/0	68.190.65.92	US	-	-	-	00:46:12	0
29	fariba_05744139	1.0.3.7/0	75.56.211.191	US	-	-	-	28:15:26	0
30	dorm_0002de02	1.0.3.7/0	74.170.82.94	US	-	-	-	08:40:34	0
31	d5wccbb1_0005840c	1.0.3.7/0	72.149.8.2	US	-	-	-	05:54:22	0

CyberCrime - Defense

- Anti [Virus | Malware | Spyware | Rootkit | Trojan]
  - Seriously?



File **90a4ab818f492d67a8c1d5efae8e2147f** received on **2010.03.16 16:58:07 (UTC)**

Current status: **finished**

Result: **0/42 (0.00%)**

- Firewalls / IDS / IPS
  - Seriously?
    - Brought to you by the numbers 80, 443, 53...
    - SSL...

How do these connect?

Claim: **CyberCrime** is being *used* to conduct **CyberWar**

Proof: Let's start with some *history*...

History - Revisited...

Estonia

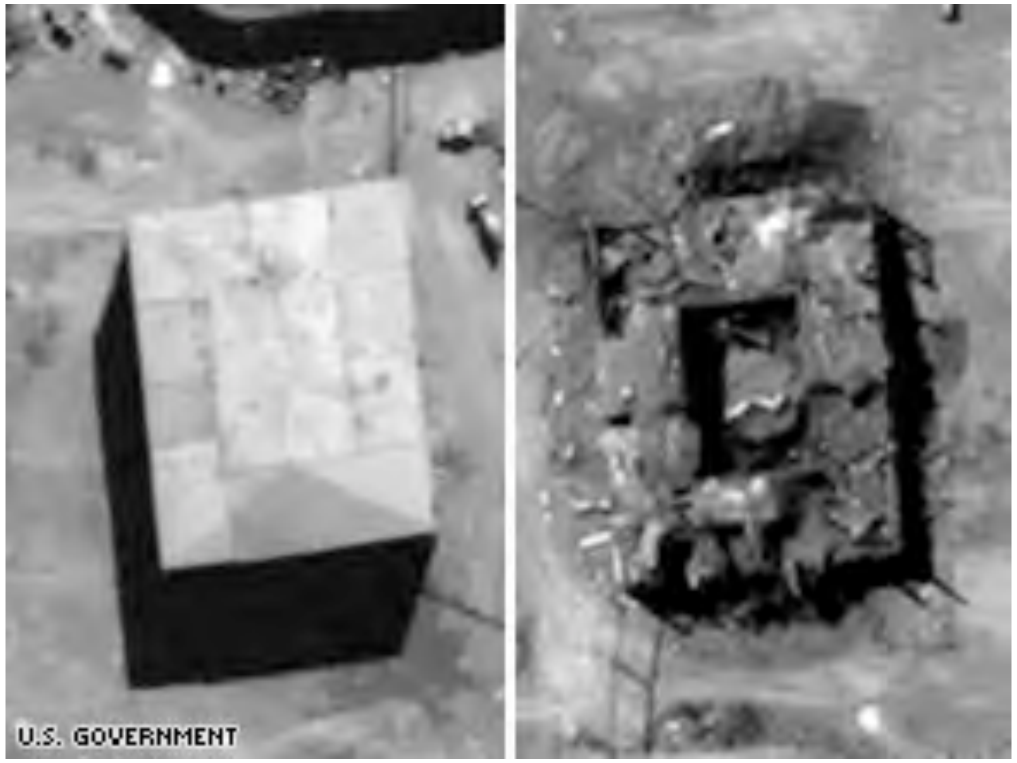
You read all about it.

Bottom line: **civilian** infrastructure was targeted
Attacks originated mostly from **civilian** networks

History - Revisited...

Israel

Operation Orchard



September 6th, 2007
Source: http://en.wikipedia.org/wiki/Operation_Orchard

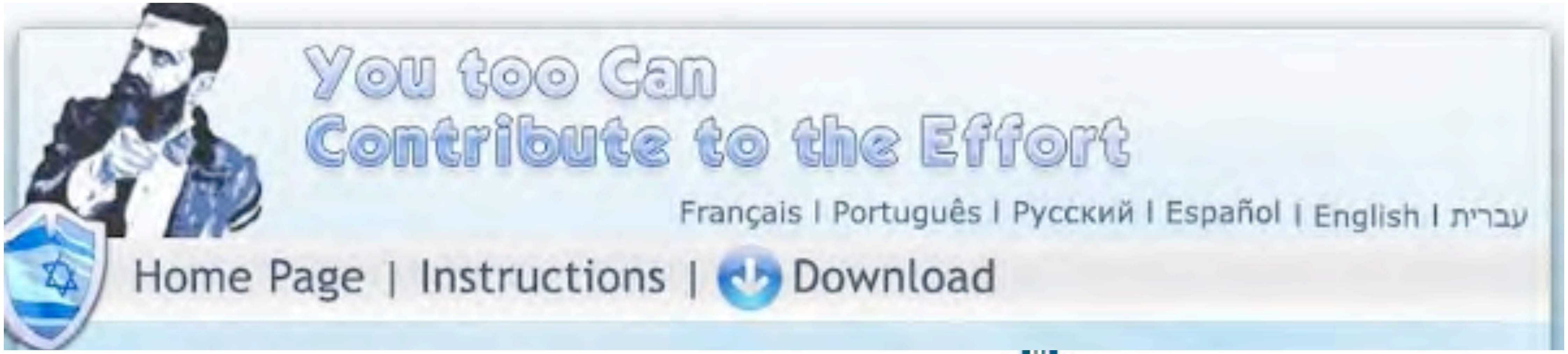
Source: Der Spiegel

Cast-Led, 2nd Lebanon war
(Israel and mid-east)

All **attacks** on $\frac{\text{Israeli}}{\text{Arabic}}$ targets

are **Attributed** to

Hacktivists



You too Can
Contribute to the Effort

Français | Português | Русский | Español | English | עברית

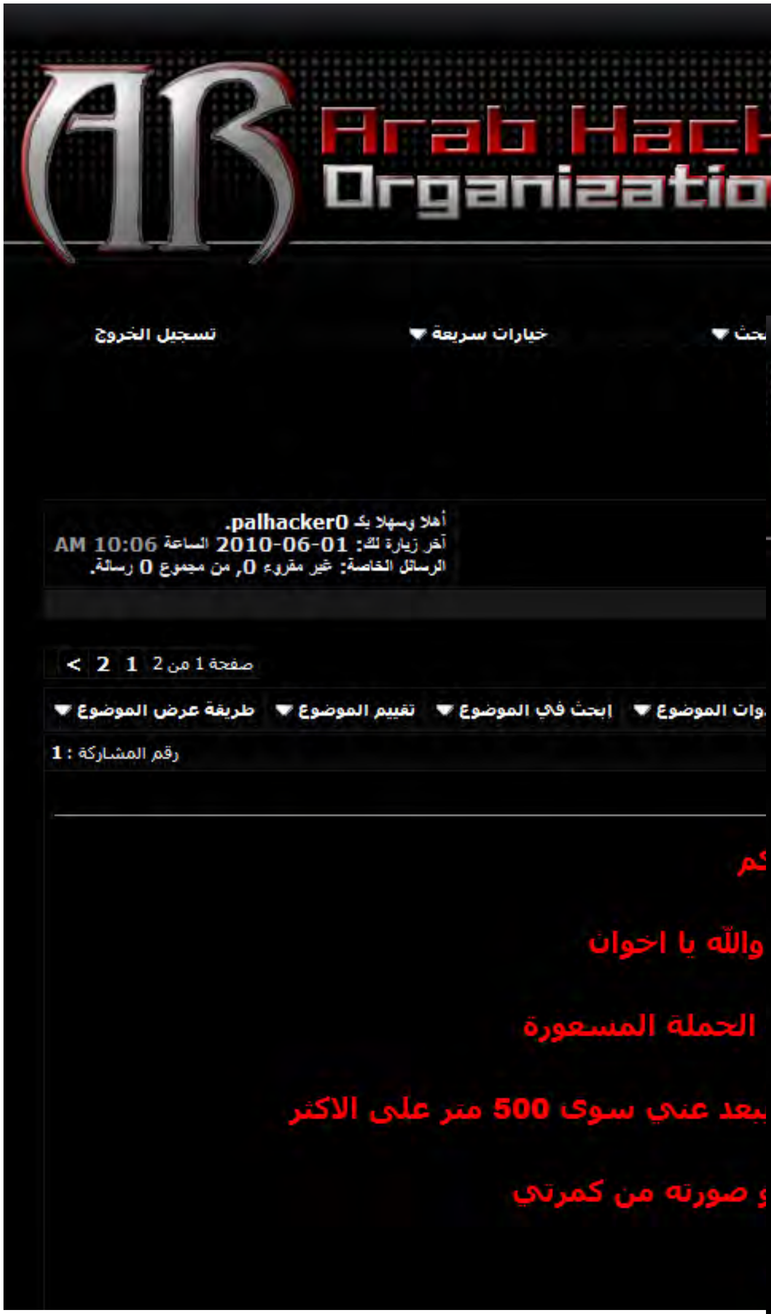
Home Page | Instructions | Download

Mid-east crime-war links

ARHack

Hacker forum by day

Cybercrime operations by night



أهلا وسهلا بك palhacker0.
آخر زيارة لك: 2010-06-01 الساعة 10:06 AM
الرسائل الخاصة: غير مقروء 0, من مجموع 0 رسالة.

رقم المشاركة : 1

كم

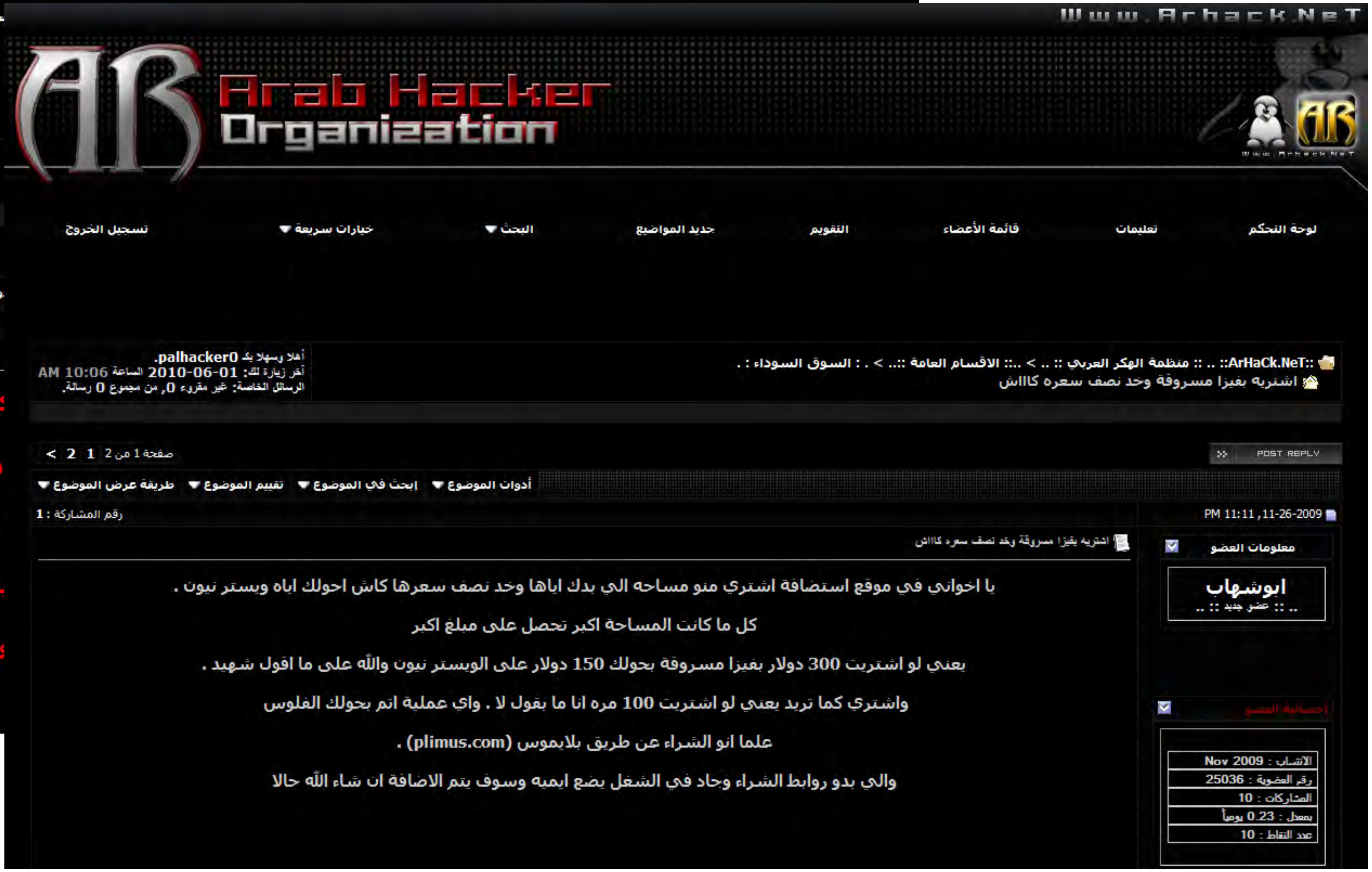
والله يا اخوان

الحملة المسعورة

يبعد عني سوى 500 متر على الاكثر

و صورته من كمرتي

Political post



::ArHaCk.NeT:: .. :: منظمة الهكر العربي :: .. > ..:: الاقسام العامة ::.. > . : السوق السوداء : .
اشتريه بفيزا مسروقة وخد نصف سعره كاااش

أهلا وسهلا بك palhacker0.
آخر زيارة لك: 2010-06-01 الساعة 10:06 AM
الرسائل الخاصة: غير مقروء 0, من مجموع 0 رسالة.

11-26-2009, 11:11 PM

رقم المشاركة : 1

ابوشهاب
.. :: عضو جديد :: ..

اشتريه بفيزا مسروقة وخد نصف سعره كاااش

يا اخواني في موقع استضافة اشتري منو مساحه الي بدك اياها وخد نصف سعرها كاش احولك اياه ويستر نيون .

كل ما كانت المساحة اكبر تحصل على مبلغ اكبر

يعني لو اشتريت 300 دولار بفيزا مسروقة بحولك 150 دولار على الويستر نيون والله على ما اقول شهيد .

واشتري كما تريد يعني لو اشتريت 100 مره انا ما بقول لا . واي عملية اتم بحولك الفلوس

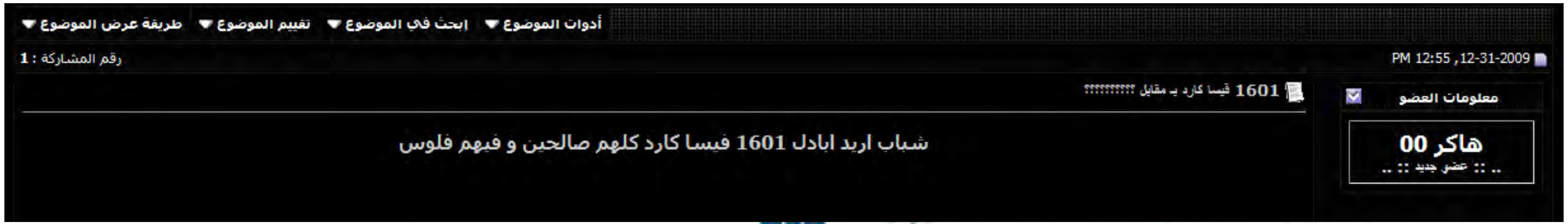
علما انو الشراء عن طريق بلايموس (plimus.com) .

والي بدو روابط الشراء وجاد في الشغل يضع ايميه وسوف يتم الاضافة ان شاء الله حالا

الانتساب : Nov 2009
رقم العضوية : 25036
المشاركات : 10
بمعدل : 0.23 يومياً
عدد النقاط : 10

Buying/Selling cards for 1/2 their balance

Selling 1600 visa cards



12-31-2009, 12:55 PM

رقم المشاركة : 1

هاكر 00
.. :: عضو جديد :: ..

1601 فيسا كارد بـ مقابل ??????????

شباب اريد ابادل 1601 فيسا كارد كلهم صالحين و فيهم فلوس

History - Revisited...

Georgia

More interesting...

Highly synchronized **Kinetic** and **Cyber** attacks
Targets still mostly **civilian**
Launched from **civilian** networks

Russian Crime/State Dillema

Micronnet

McColo

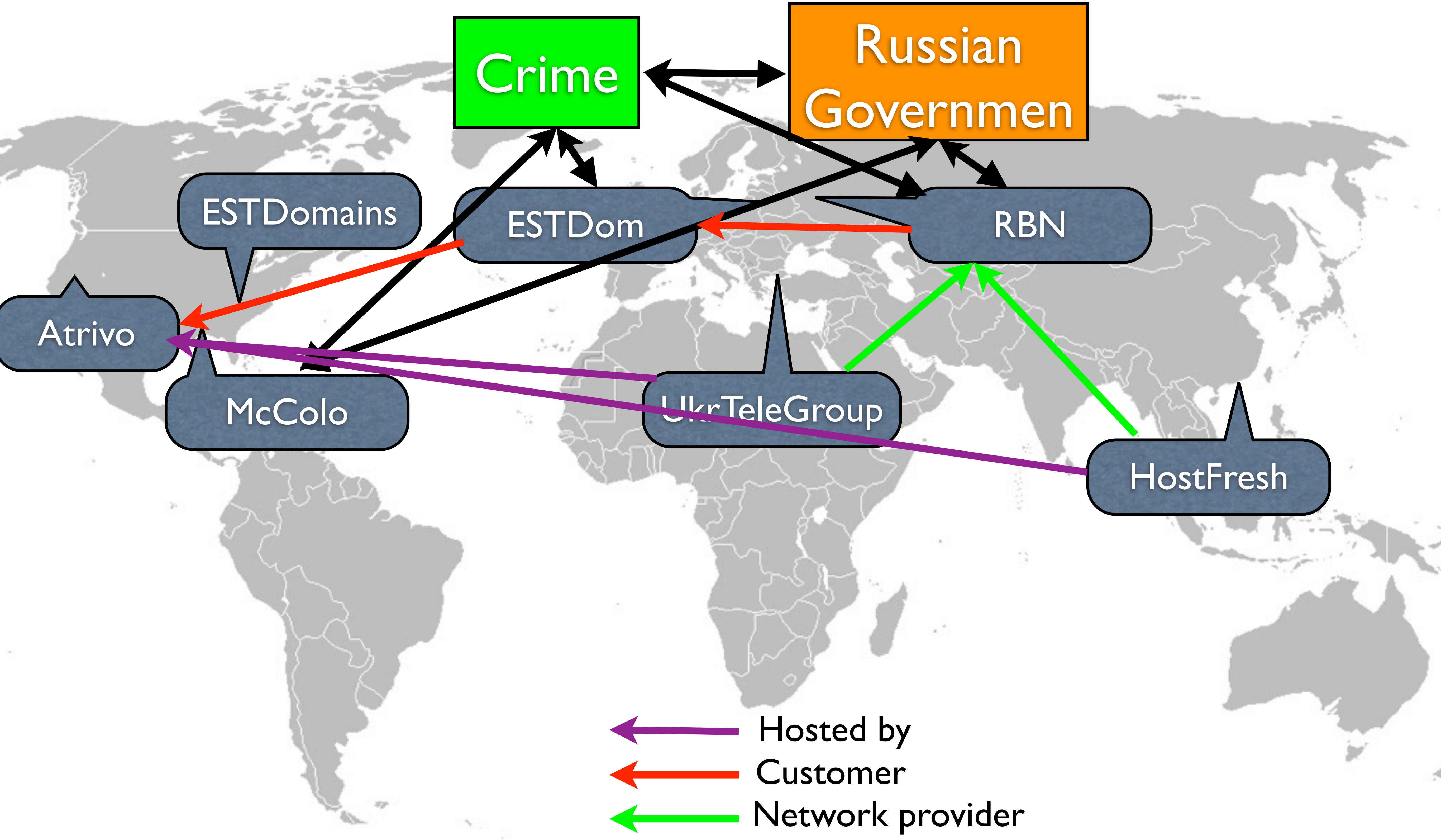
Atrivo

ESTDomains

Eexhost

RBN

RealHost



Crime

Russian Governmen

ESTDomains

ESTDom

RBN

Atrivo

McColo

UkrTeleGroup

HostFresh

← Hosted by

← Customer

← Network provider

Remember Georgia?

- Started by picking on the president...

```
flood http www.president.gov.ge
flood tcp www.president.gov.ge
flood icmp www.president.gov.ge
```

- Then the **C&C** used to control the botnet was shut down as:
  - **Troops** cross the border towards Georgia
  - A few days of silence...

Georgia

- Six (6) new C&C servers c
  at additional **Georgian** sit

www.president.gov.ge
www.parliament.ge
apsny.ge
news.ge
tbilisiweb.info
newsgeorgia.ru

Homework: Look up the city of Gori in Georgia.

DDoS on media and local sites ran RIGHT BEFORE the russian attack on the city.

- BUT - the same C&C's were also used for attacks on **commercial** sites in order to extort them (botnet-for-hire)

Additional sites attacked:
•Porn sites
•Adult escort services
•Nazi/Racist sites
•Carder forums
•Gambling sites
•Webmoney/Webgold/etc…

History - Revisited...

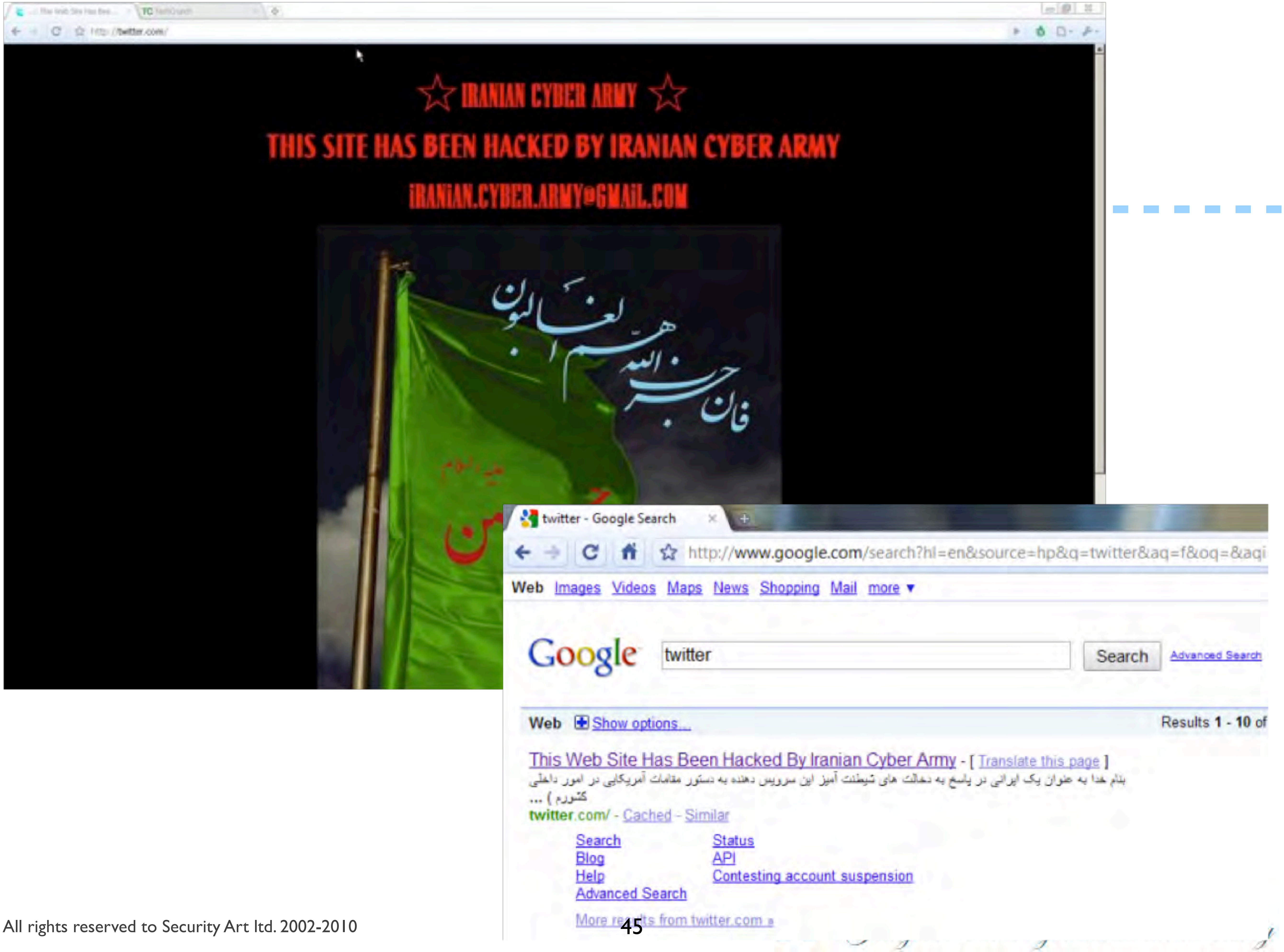
Iran

2009 **Twitter** DNS hack attributed to Iranian activity.

Political connections are too obvious to ignore (elections)

Timing was right on:

UN Council **Decisions**	**Protests** by leadership opposition in Tehran



★ IRANIAN CYBER ARMY ★

THIS SITE HAS BEEN HACKED BY IRANIAN CYBER ARMY

iRANiAN.CYBER.ARMY@GMAiL.COM

twitter - Google Search
http://www.google.com/search?hl=en&source=hp&q=twitter&aq=f&oq=&aqi
Web Images Videos Maps News Shopping Mail more ▼
Google
twitter
Search
Advanced Search
Web
Show options...
Results 1 - 10 of

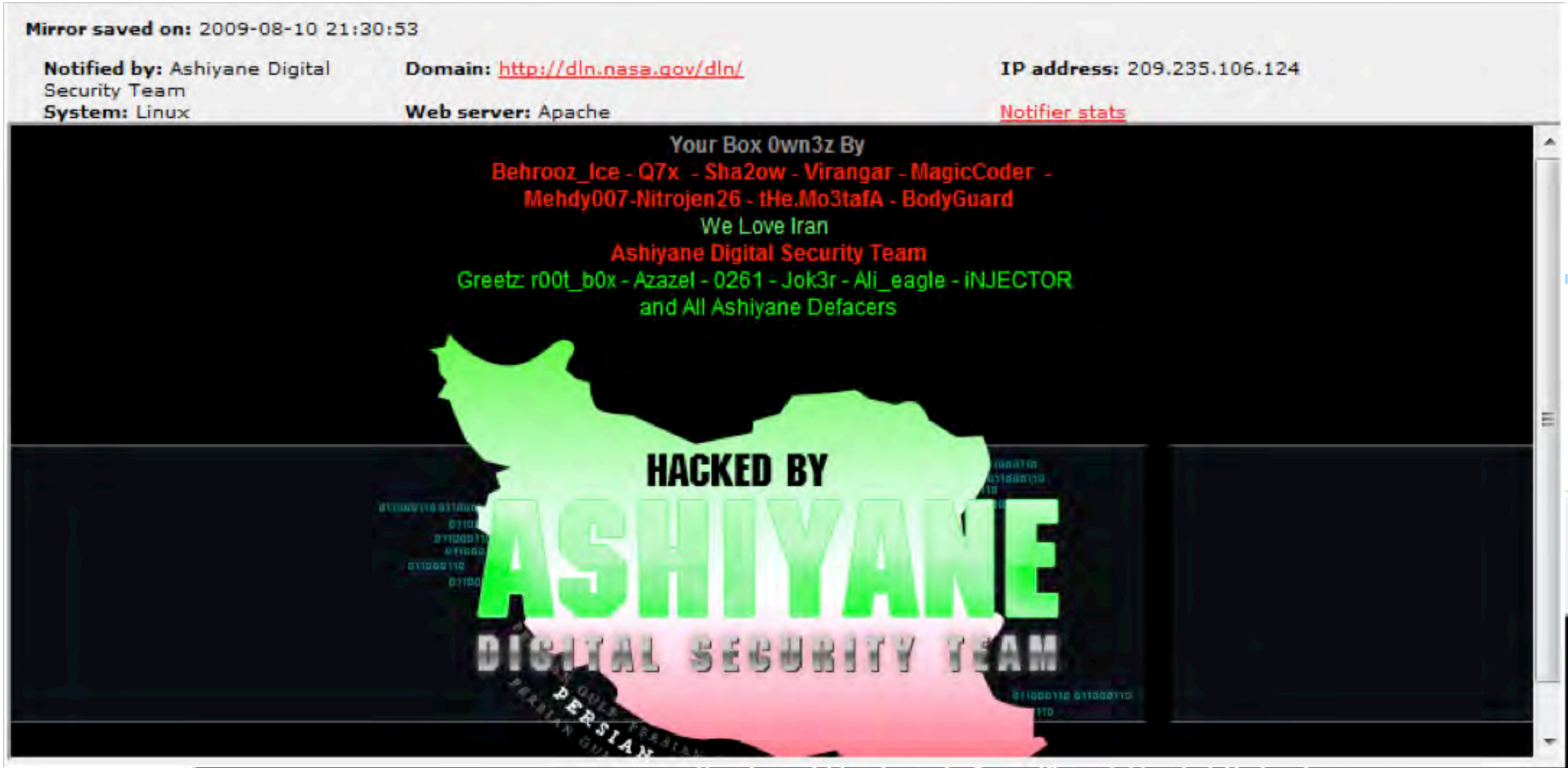
This Web Site Has Been Hacked By Iranian Cyber Army - [Translate this page]
بنام خدا به عنوان یک ایرانی در پاسخ به دخالت های شیطنت آمیز این سرویس دهنده به دستور مقامات آمریکایی در امور داخلی کشورم) ...
twitter.com/ - Cached - Similar

Search	Status
Blog	API
Help	Contesting account suspension
Advanced Search	

More results from twitter.com »

Iran-Twitter connecting dots

- Twitter taken down December 18th 2009
- Attack attributed eventually to cyber-crime/ vigilante group named "Iranian Cyber Army"
- Until December 2009 there was no group known as "Iranian Cyber Army"...
- BUT - "Ashiyane" (Shiite group) is from the same place as the "Iranian Cyber Army"



Mirror saved on: 2009-08-10 21:30:53

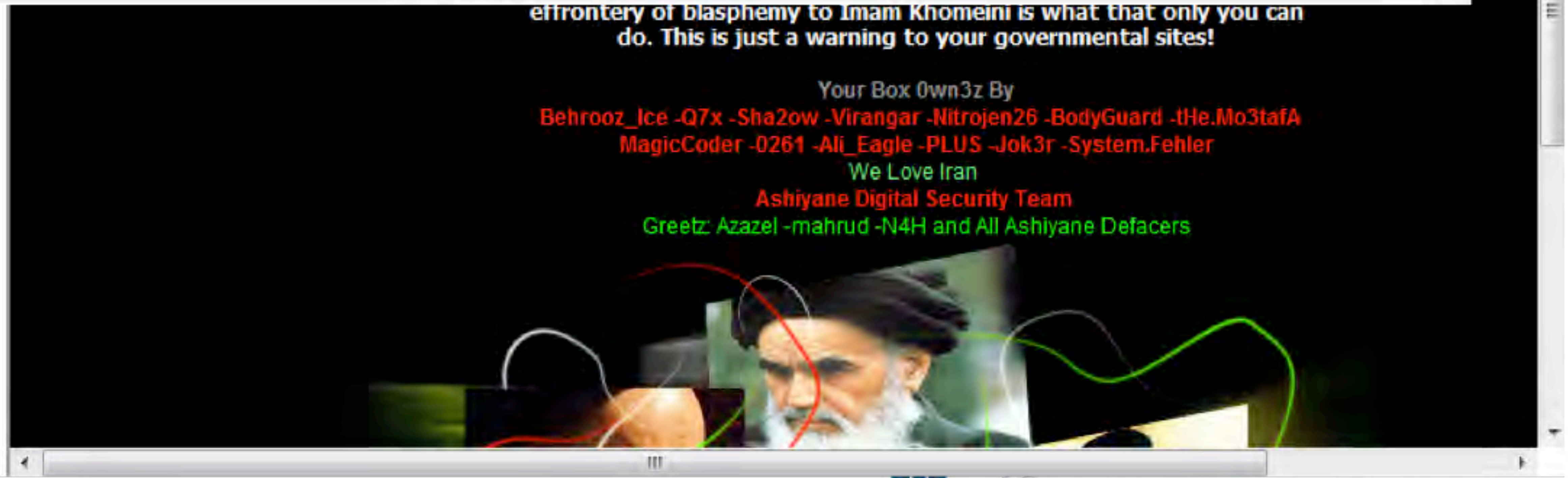
Notified by: Ashiyane Digital Security Team
System: Linux

Domain: http://dln.nasa.gov/dln/
Web server: Apache

IP address: 209.235.106.124

Notifier stats

Your Box 0wn3z By
Behrooz_Ice - Q7x - Sha2ow - Virangar - MagicCoder - Mehdy007-Nitrojen26 - tHe.Mo3tafA - BodyGuard
We Love Iran
Ashiyane Digital Security Team
Greetz: r00t_b0x - Azazel - 0261 - Jok3r - Ali_eagle - iNJECTOR and All Ashiyane Defacers



effrontery of blasphemy to Imam Khomeini is what that only you can do. This is just a warning to your governmental sites!

Your Box 0wn3z By
Behrooz_Ice -Q7x -Sha2ow -Virangar -Nitrojen26 -BodyGuard -tHe.Mo3tafA
MagicCoder -0261 -Ali_Eagle -PLUS -Jok3r -System.Fehler
We Love Iran
Ashiyane Digital Security Team
Greetz: Azazel -mahrud -N4H and All Ashiyane Defacers

Iran-Twitter - Ashiyane

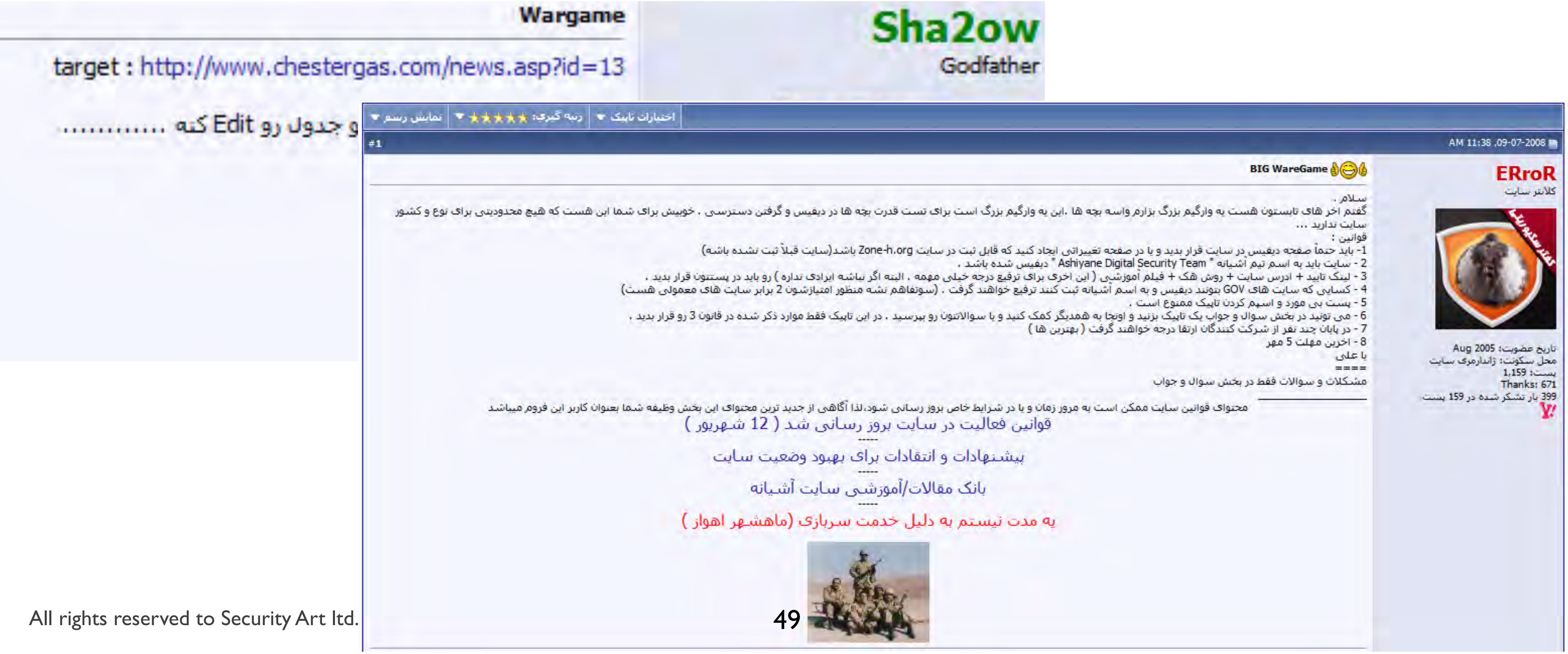
- Ashiyane was using the same pro-Hezbolla messages that were used on the Twitter attack with their own attacks for some time...
- AND the "Iranian Cyber Army" seems to be a pretty active group on the Ashiyane forums www.ashiyane.com/forum

Let's take a look at how Ashiyane operates...

On [Crime|War] training

Ashiyane forums

WarGames


Wargame

target : http://www.chestergas.com/news.asp?id=13

و جدول رو Edit کنه ....

Sha2ow
Godfather

AM 11:38 ,09-07-2008

#1

ERroR
کلانتر سایت

تاریخ عضویت: Aug 2005
محل سکونت: ژاندارمری سایت
پست: 1,159
Thanks: 671
399 بار تشکر شده در 159 پست

BIG WareGame

سلام .
گفتم اخر های تابستون هست یه وارگیم بزرگ بزارم واسه بچه ها .این یه وارگیم بزرگ است برای تست قدرت بچه ها در دیفیس و گرفتن دسترسی . خوبیش برای شما این هست که هیچ محدودیتی برای نوع و کشور سایت ندارید ...
قوانین :
1- باید حتماً صفحه دیفیس در سایت قرار بدید و یا در صفحه تغییراتی ایجاد کنید که قابل ثبت در سایت Zone-h.org باشد(سایت قبلاً ثبت نشده باشه)
2 - سایت باید به اسم تیم آشیانه " Ashiyane Digital Security Team " دیفیس شده باشد .
3 - لینک تایید + ادرس سایت + روش هک + فیلم آموزشی (این اخری برای ترفیع درجه خیلی مهمه . البته اگر نباشه ایرادی نداره) رو باید در پستتون قرار بدید .
4 - کسایی که سایت های GOV بتونند دیفیس و به اسم آشیانه ثبت کنند ترفیع خواهند گرفت . (سوتفاهم نشه منظور امتیازشون 2 برابر سایت های معمولی هست)
5 - پست بی مورد و اسپم کردن تاپیک ممنوع است .
6 - می تونید در بخش سوال و جواب یک تاپیک بزنید و اونجا به همدیگر کمک کنید و یا سوالاتتون رو بپرسید . در این تاپیک فقط موارد ذکر شده در قانون 3 رو قرار بدید .
7 - در پایان چند نفر از شرکت کنندگان ارتقا درجه خواهند گرفت (بهترین ها)
8 - اخرین مهلت 5 مهر
یا علی
====
مشکلات و سوالات فقط در بخش سوال و جواب

محتوای قوانین سایت ممکن است به مرور زمان و یا در شرایط خاص بروز رسانی شود،لذا آگاهی از جدید ترین محتوای این بخش وظیفه شما بعنوان کاربر این فروم میباشد

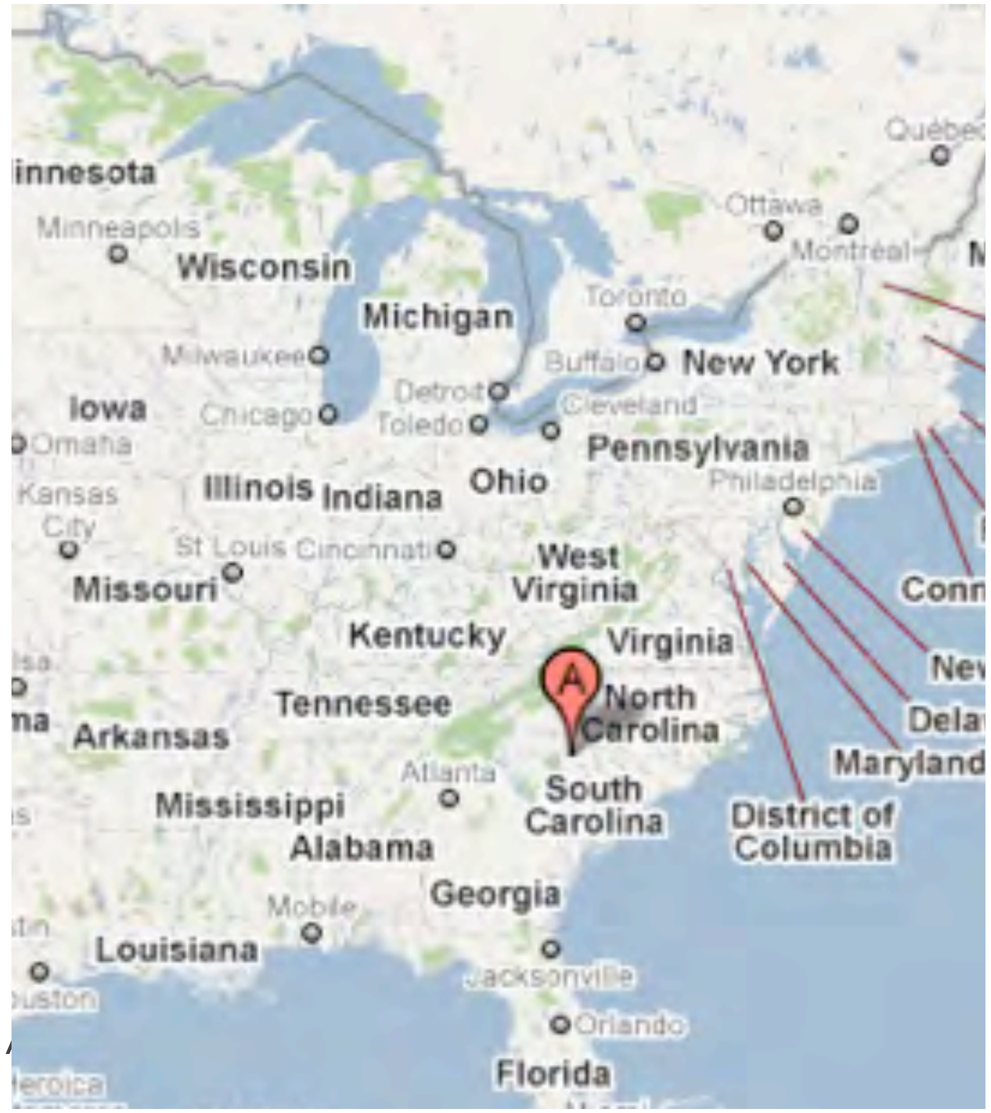
قوانین فعالیت در سایت بروز رسانی شد (12 شهریور)

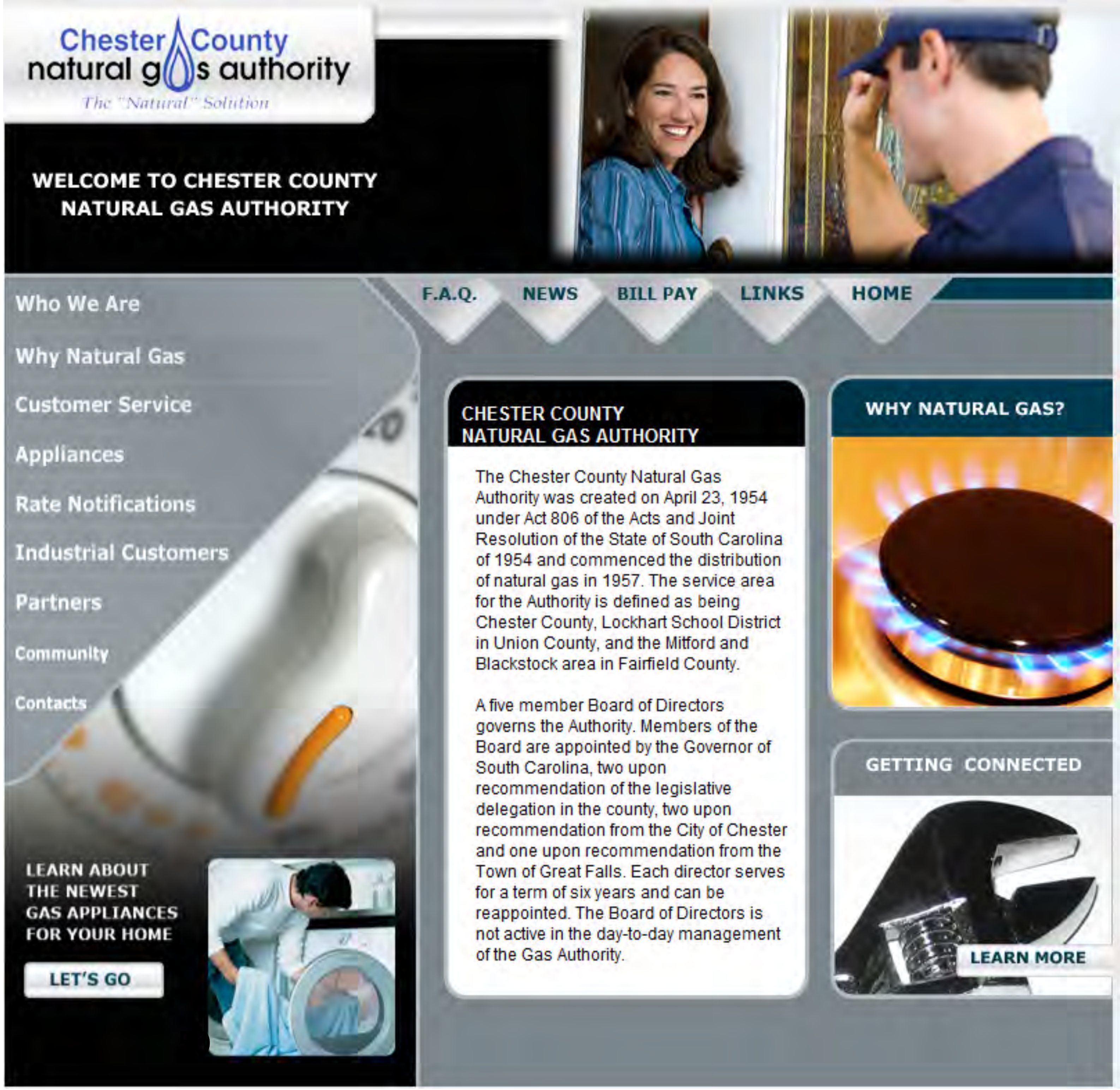
پیشنهادات و انتقادات برای بهبود وضعیت سایت

بانک مقالات آموزشی سایت آشیانه

یه مدت نیستم به دلیل خدمت سربازی (ماهشهر اهواز)

Wargames targets includes:





Chester County natural gas authority

The "Natural" Solution

WELCOME TO CHESTER COUNTY NATURAL GAS AUTHORITY

F.A.Q. NEWS BILL PAY LINKS HOME

Who We Are
Why Natural Gas
Customer Service
Appliances
Rate Notifications
Industrial Customers
Partners
Community
Contacts

CHESTER COUNTY NATURAL GAS AUTHORITY

The Chester County Natural Gas Authority was created on April 23, 1954 under Act 806 of the Acts and Joint Resolution of the State of South Carolina of 1954 and commenced the distribution of natural gas in 1957. The service area for the Authority is defined as being Chester County, Lockhart School District in Union County, and the Mitford and Blackstock area in Fairfield County.

A five member Board of Directors governs the Authority. Members of the Board are appointed by the Governor of South Carolina, two upon recommendation of the legislative delegation in the county, two upon recommendation from the City of Chester and one upon recommendation from the Town of Great Falls. Each director serves for a term of six years and can be reappointed. The Board of Directors is not active in the day-to-day management of the Gas Authority.

WHY NATURAL GAS?

GETTING CONNECTED

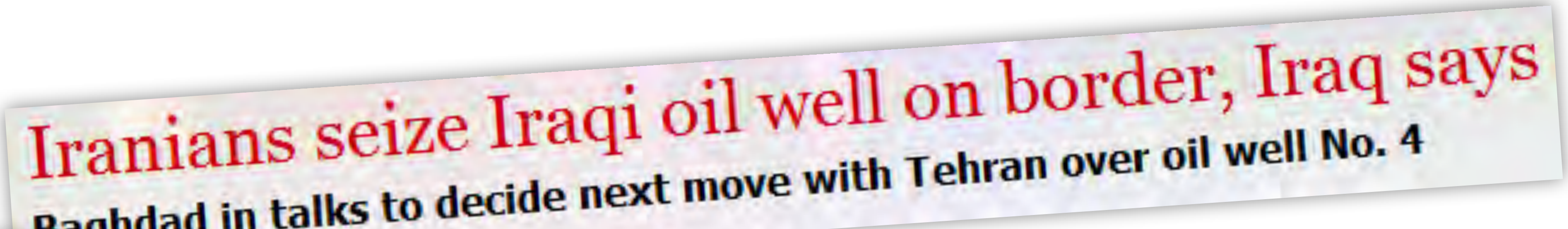
LEARN MORE

LEARN ABOUT THE NEWEST GAS APPLIANCES FOR YOUR HOME

LET'S GO

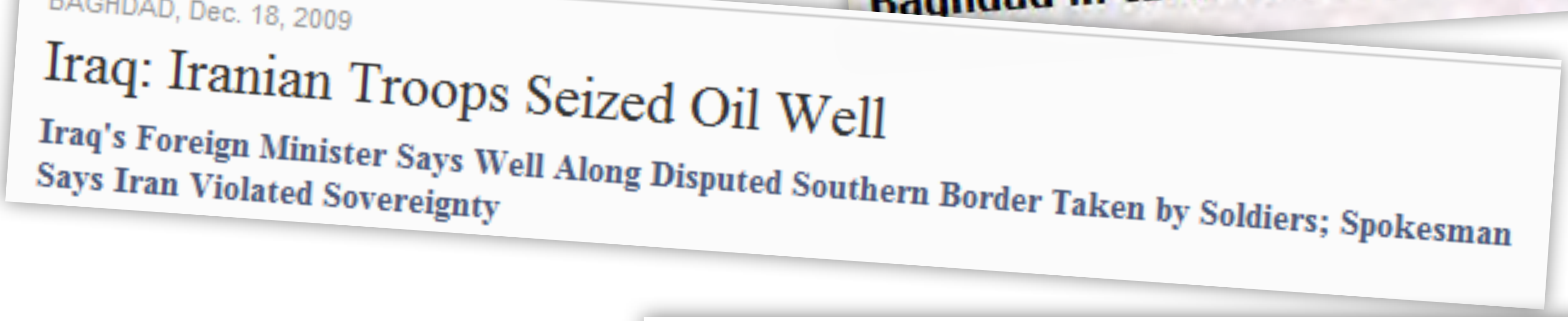
Back to [Crime|War] Links:

What **else** happened on the 18th?



Iranians seize Iraqi oil well on border, Iraq says

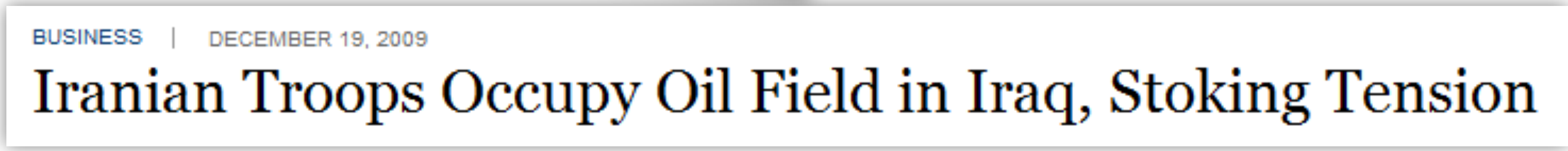
Baghdad in talks to decide next move with Tehran over oil well No. 4



BAGHDAD, Dec. 18, 2009

Iraq: Iranian Troops Seized Oil Well

Iraq's Foreign Minister Says Well Along Disputed Southern Border Taken by Soldiers; Spokesman Says Iran Violated Sovereignty

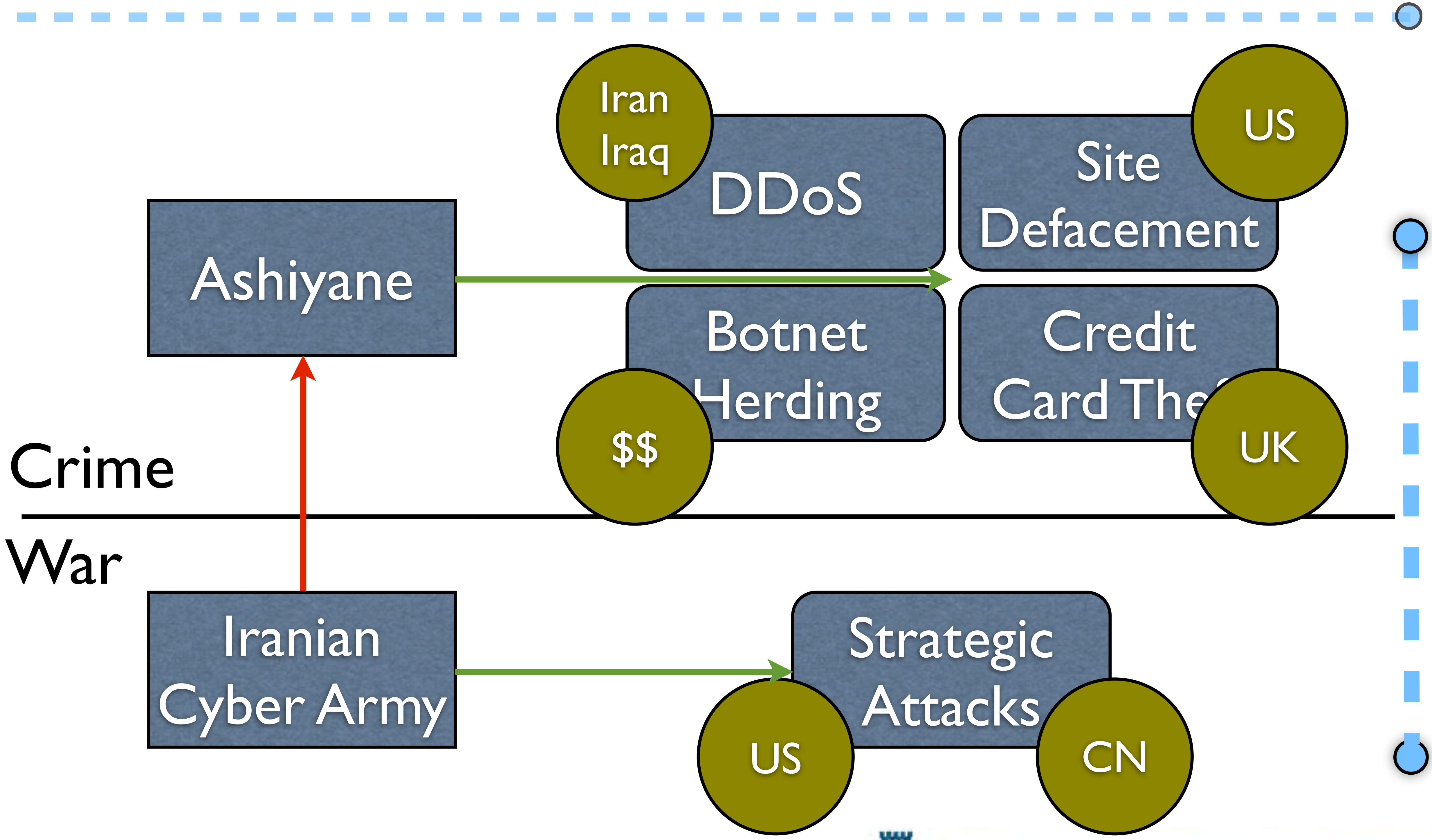


BUSINESS | DECEMBER 19, 2009

Iranian Troops Occupy Oil Field in Iraq, Stoking Tension

More recently - Baidu taken down with the same MO (credentials)

Mapping Iran's [Crime|War]



Crime

War

Ashiyane

Iranian Cyber Army

Iran Iraq

DDoS

Site Defacement

US

Botnet Herding

$$

Credit Card The

UK

Strategic Attacks

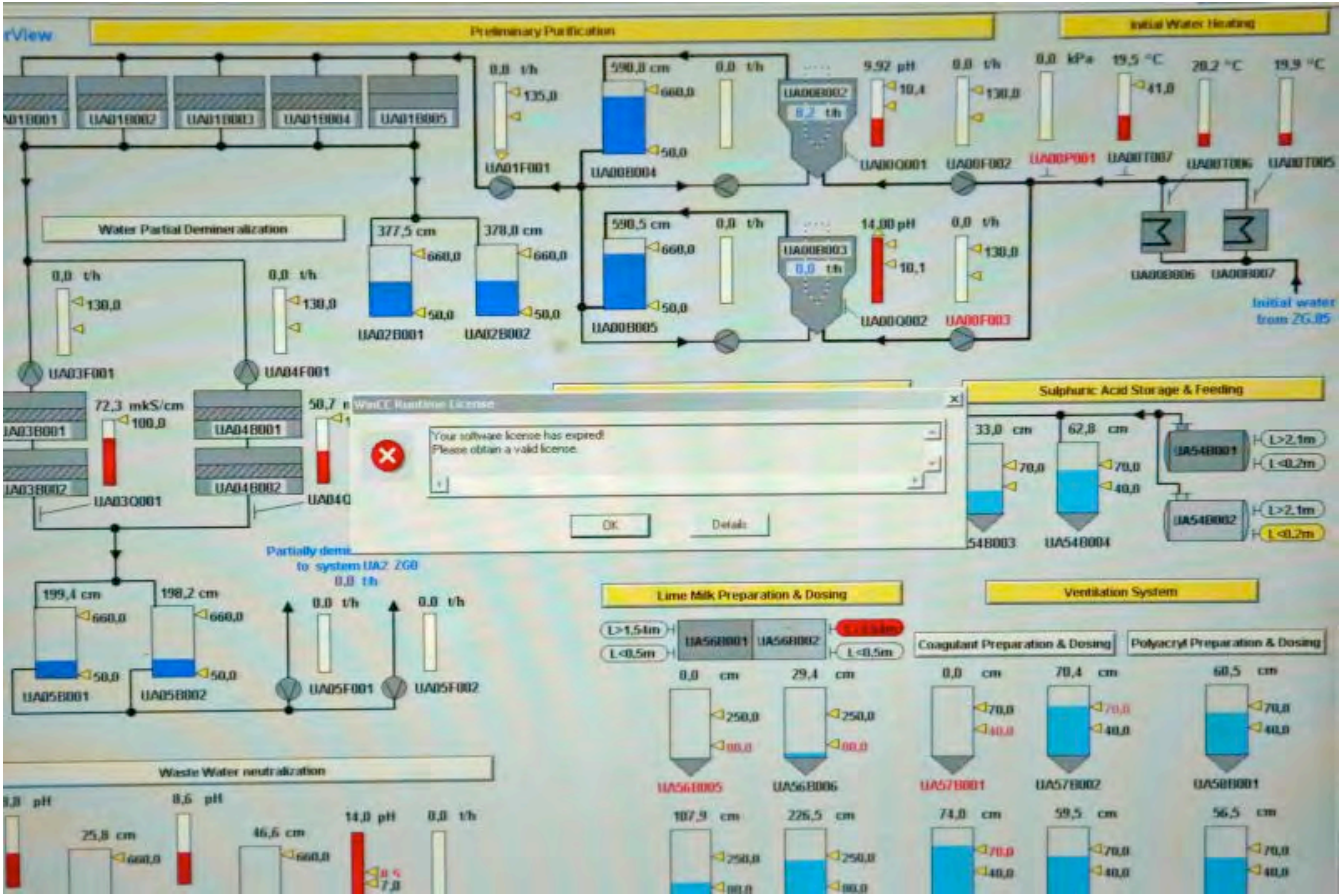
US

CN

Going above and beyond traditional security

Iran - the unspoken

- Stuxnet
- There, I’ve said it


Preliminary Purification
Initial Water Heating
Water Partial Demineralization
Sulphuric Acid Storage & Feeding
Lime Milk Preparation & Dosing
Ventilation System
Coagulant Preparation & Dosing
Polyacryl Preparation & Dosing
Waste Water neutralization
Initial water from ZG.05
Partially demi... to system UA2 ZG0
WinCC Runtime License
OK
Details

Your software license has expired!
Please obtain a valid license.

History - Revisited...

China

- Great Chinese Firewall doing an OK job in keeping information out.
- Proving grounds for many cyber-attackers
- Bulletpfoof hosting (after RBN temporary closure in 2008 China provided an alternative that stayed...)

China ...connecting the dots

January 12th - Google announces it was hacked by China

Not as in the “we lost a few minutes of DNS” hacked...

“*In mid-December we detected a **highly sophisticated and targeted attack** on our corporate infrastructure originating from China that resulted in the theft of intellectual property from Google*” (David Drummond, SVP @Google)

China ...connecting the dots.

January 12th - Adobe gets hacked. By China.

> “*Adobe became aware on January 2, 2010 of a computer security incident involving a* ***sophisticated coordinated attack*** *against corporate network systems managed by Adobe and other companies*” (Adobe official blog)

Same **MO**: 0-day in Internet Explorer to get into Google, Adobe and more than 40 additional companies

China ...connecting the dots..

The only problem so far - the attacks all have the sign of a CyberCrime attack. All the evidence points to known crime groups so far.

“*It was an attack on the technology infrastructure of major corporations in sectors as diverse as **finance, technology, media, and chemical***” (Google enterprise blog)

China ...connecting the dots...

Criminal groups attack companies in order to get to their data so they can sell it (whether it was commercial or government data!)

US Response: *"We look to the Chinese government for an explanation. The ability to operate with confidence in cyberspace is critical in a modern society and economy."* (Hillary Clinton, Secretary of State)

China ..

Anecdote - a professor in one of the universities linked to the attack admitted that the school network is often used to anonymously relay attacks

The China move:

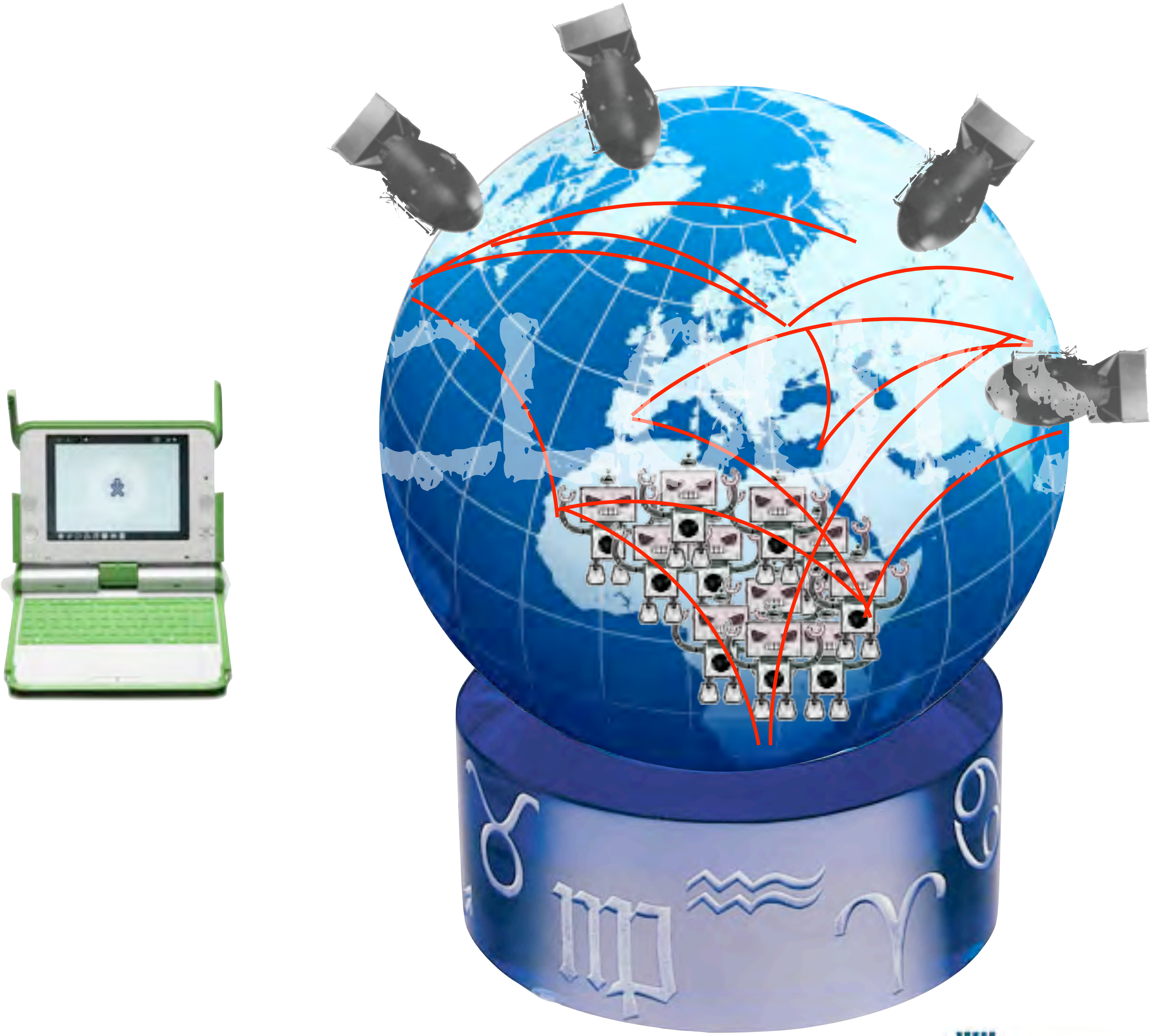
- Use of criminal groups to carry out the attacks provides the perfect deniability on espionage connections (just like in the past, and a perfect response to clinton).
- Targets are major US companies with strategic poise to enable state interest espionage

Information sharing at its best:

STATE Crime

Win - Win

THE FUTURE (Ilustrated)



Deterrence

An **attack** agains **one** or more states, shall be considered an attack against **all member states**, who agree, to exercise their right to **assist** the attacked party, including the right to use **armed forces**.

NATO Article 5 - abridged

Think: **Article 5** for the Cyber Commons!

Attribution?

- Technical - not feasible
- Political - should be obvious
- Defending state?
    - Should have the responsibility to “clean up” its portion of the Cyber Commons in order to enable a sustainable economic and civil environment.

Summary

Good

Formal training on cybersecurity by nations

Bad

Commercial development of malware still reigns

Ugly

Good meet Bad: money changes hands, less tracks to cover, criminal ops already creating the weapons...

Summary

THE FUTURE

LACK OF LEGISLATION AND COOPERATION ON MULTI-NATIONAL LEVEL IS CREATING DE-FACTO "SAFE HAVEN" FOR CYBERCRIME. <- FIX THIS!

TREATIES AND ANTI-CRIME ACTIVITIES MAY PROVE TO BE BENEFICIAL. <- NUKES WILL HELP US?

Thanks!

Q & A

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