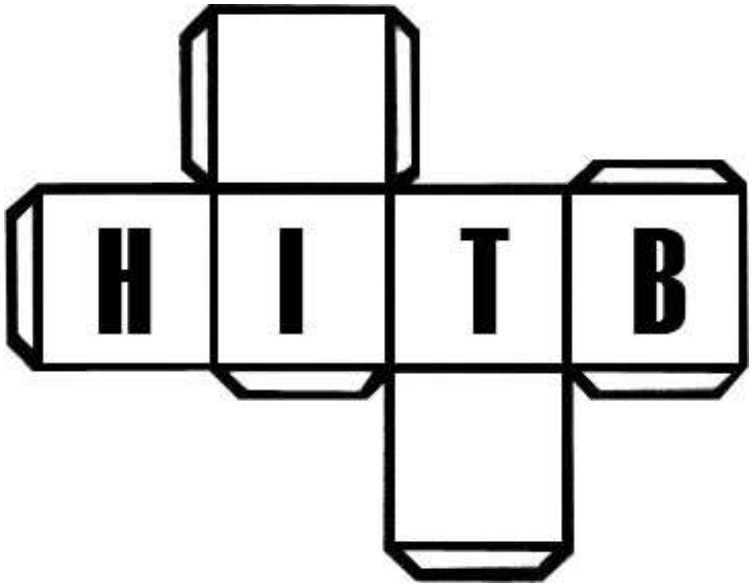
Advanced Information Gathering



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Outline

- Information Gathering
- What you can Harvest
- The power of modern search engines
- Using Google fully
- The Google API & Google based apps
- Some juicy Google hacks
- Recommendations

Info Gathering (I)

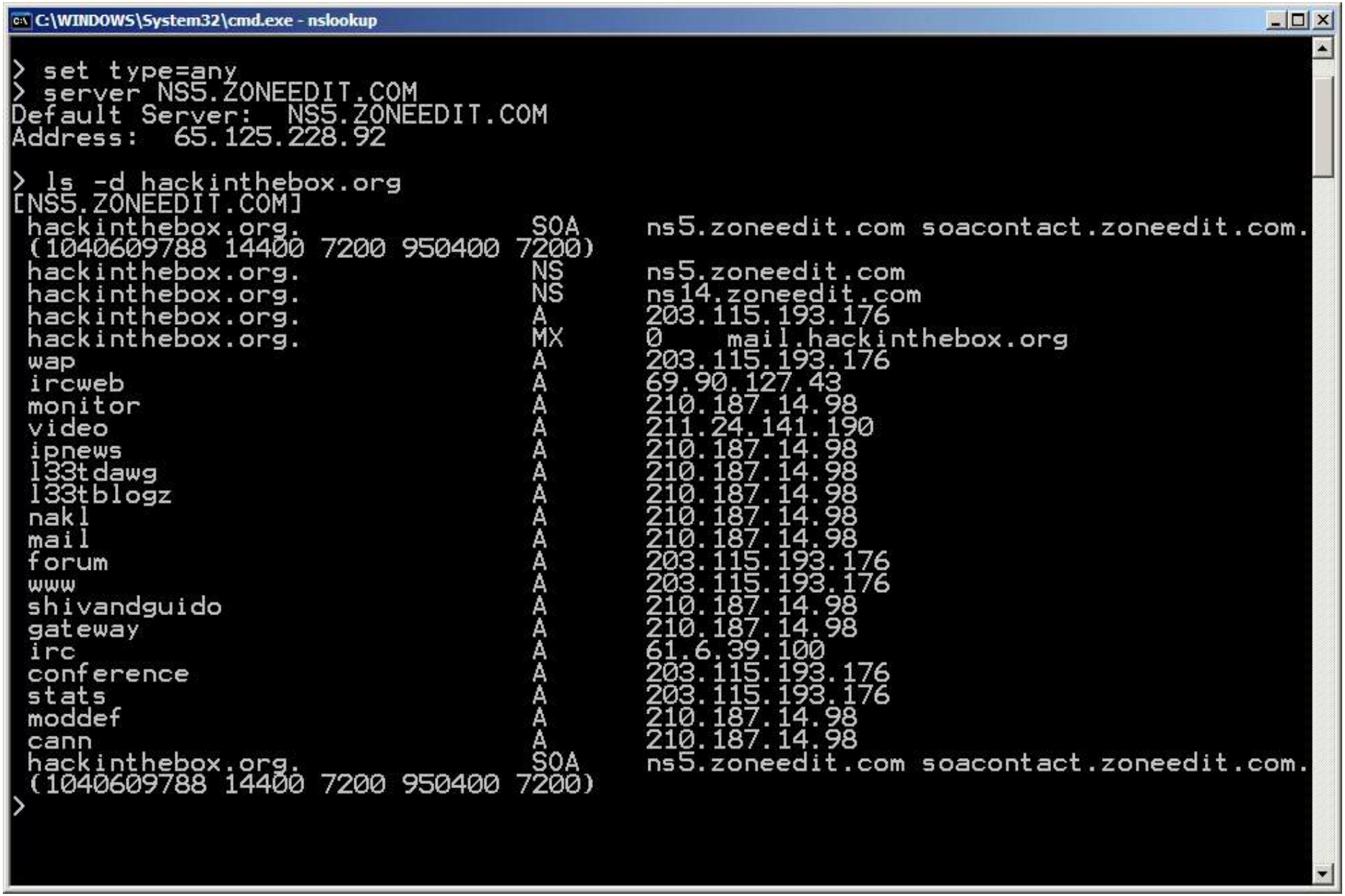
- Generally the first step of a pen test
- Very important for profiling a company
- Leveraging public resources to find private information
- Fully utilized by 'Blackhat' hackers
- By linking information from different sources a complete picture can be built

Info Gathering (II)

- The main thing to note here is **STEALTH**

- These activities are passive and non-intrusive
- Utilizing the memory of the net:
  - Google Cache
  - archive.org
  - Newsgroups (used to be Dejanews)

Example of DNS leakage



Info Gathering (IV)

- Such information gathering is now even easier with tools such as
  - dnsreports.com
  - whois.sc
  - nqt.php
  - network-tools.com
  - netcraft.com
  - ip-plus.net/tools/dns_check_set.en.html

Info Gathering (V)

whois.sc reverse IP lookup

What you can harvest (I)

- Like any kind of hacking, passive information gathering is about thinking outside the box
- Utilizing the many links between information sources is a key
- Picking out useful info is the skill, this activity is akin to modern age dumpster diving

What you can harvest (II)

- Think outside the lines:
  - Check job databases for vacancies
    - Discloses types of technology used
  - Trawl newsgroups for technical postings
    - Sometimes can reveal whole topology
  - Locate company registration details
    - Can give away physical locations
  - Find out personal details about employees
    - May be used in social engineering attacks

What you can harvest (III)

Example usenet posting

All messages from thread

From: netadmin REMOVE @[redacted] (netadmin REMOVE @[redacted])
Subject: Universal Password Enabling
Newsgroups: novell.support.native-file-access
Date: 2004-07-20 08:10:39 PST

I have a question regarding Universal Password which I am told needs to be enabled so that Macs can login to our Netware Servers. My network contains 3 Netware Servers 2 are Netware 5.1 SP6 and 1 Netware 6.5 SP1B. Here is how my Tree is setup

Tree - OU#1 contains NW 5.1 Server is Replica Master w/RW of OU#2 & OU#3
- OU#2 contains NW 6.5 Server is Replica Master w/RW of OU#1 & OU#3
- OU#3 contains NW 5.1 Server is Replica Master w/RW of OU#2 & OU#1

My Mac needs to login to OU#2, so can I enable Universal Password for only OU#2 and not affect OU#1 and OU#3 in anyway. My concern is that I am not completely running Netware 6.5 on every server so I just want to make sure I don't create problems for my other OUs since those servers are in different locations accross USA. Also, if I enable Universal Password, can I disable it and be back to square 1 without any after affects?

Thanks

What you can harvest (IV)

Example job posting

System Administrators - Windows NT/2000

(Singapore - City [Map])

Requirements:
Minimum 3-5 years of experience required.

SKILLS REQUIRED:
- Windows 2000 and Active Directory
- Exposure to BMC Patrol or Veritas backup (At least 1 year)
- Preferably a MCSE with at least 5 years of Systems Integration Experience in the areas of NT/Windows 2000, Exchange 2000
- Experience in the deployment of Windows2000 servers and desktops and implementation of email platform (preferably Exchange)
- Should be familiar with the Compaq Server range
- Success attributes include initiative, the ability to perform under pressure, willing to learn, interpersonal and communication skills as well as analytical problem-solving abilities

DESIRED SKILLS:
- Microsoft Clustering Technology
- Microsoft Monitoring Management
- Work experience in the areas of SAN/NAS and wireless platforms

The Power of Search Engines

- Search engines have evolved hugely since the beginning
- They now have MEMORY
  - Google cache
- Advanced search operands now exist
  - filetype:
  - inurl:
  - intitle:

The Power of SEs (II)

- Google is the MIGHT
  - Masses of info, often unrelated
- Teoma is the REFINE
  - Find exactly what you want
- Fast is the DEPTH
  - Locate some obscure parts of the web
- Don't be reliant on one engine

Reference: searchlore.org

The Power of SEs (III)

- Only 3% of people use the advanced features of Google..
- People tend to get locked in to 1 search engine when there are so many
- Each engine has different strengths, learn to utilize them all
- searchlore.org is a great place to learn about the different engines

Using Google Fully (I)

- People often overlook the breadth of Google:
- Google Groups (usenet archive)
- Google images (searchable images)
- Google News (aggregated news)

All of these resources are useful when information gathering

Using Google Fully (II)

- The most useful advanced operators:
  - site: (restrict search to a single site)
  - [all]intitle: (looks for words in the title)
  - [all]inurl: (look for words within the url)
  - cache: (view the Google cache)
  - filetype: (locate a certain file type)
  - link: (lists links to a given site)
  - related: (view related sites)

Using Google Fully (III)

- Other operators:
  - [+] Essential words (e.g. +word)
  - [-] Words to exclude (e.g. -exclude)
  - [~] Similar to, will include synonyms
  - [.] Single letter wildcard
  - [“] Put around multiple words to search for an exact phrase (e.g +”my phrase”)

The Google API and Apps

- Information about the Google web API can be found here:

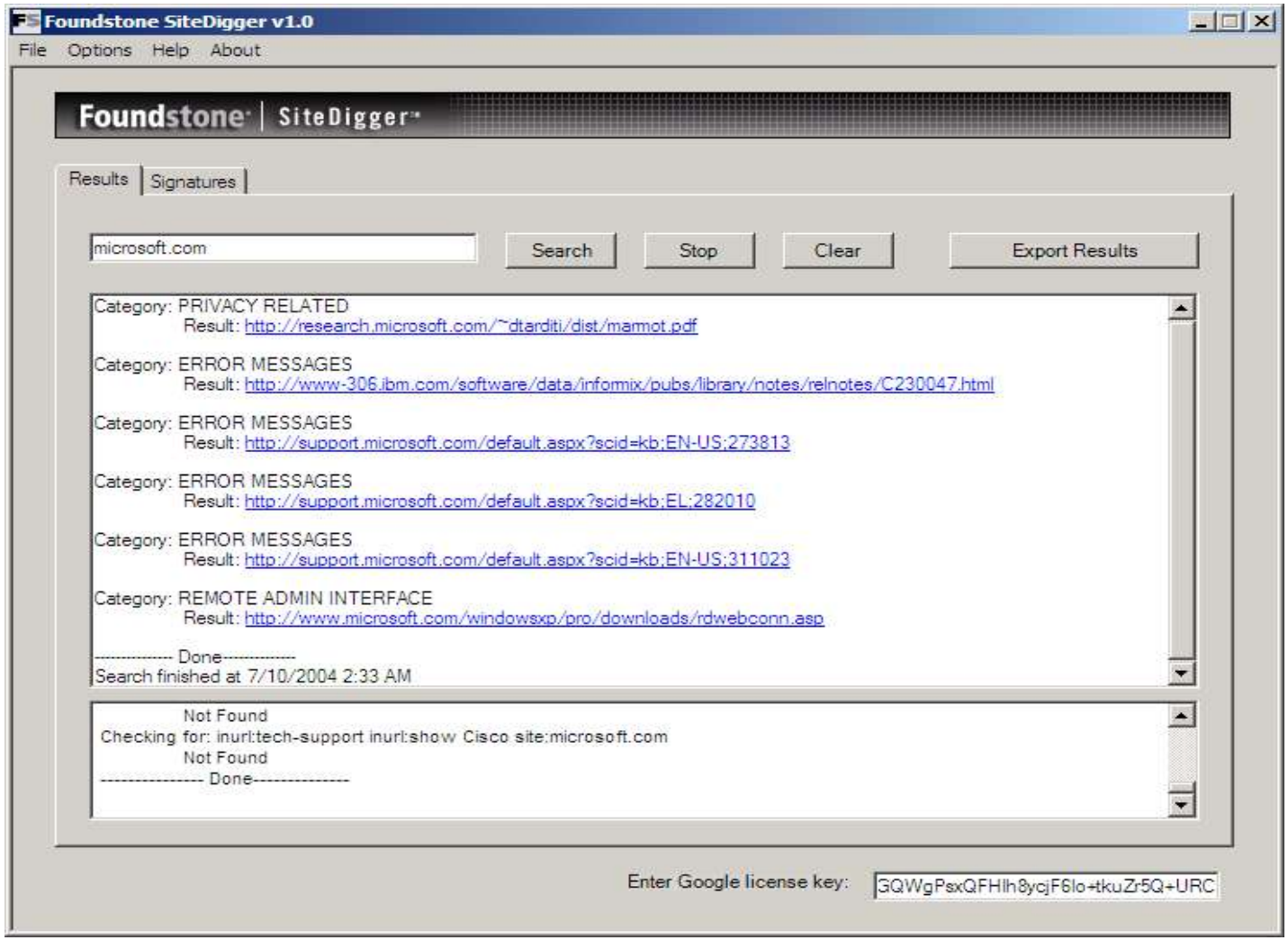
  http://www.google.com/apis/

- Google is offering a BETA service utilising WSDL and SOAP which allows developers to create applications that can call Google information directly
- Queries are limited to 1000 per day

API and Apps (II)

- Foundstone SiteDigger™:
  - Uses the Google API
  - Requires Google API licence key (free)
  - Suited to targeting a specific domain or organisation
  - Over 100 pre-defined queries
  - Uses XML so you can add more queries
  - Has auto-update for definitions

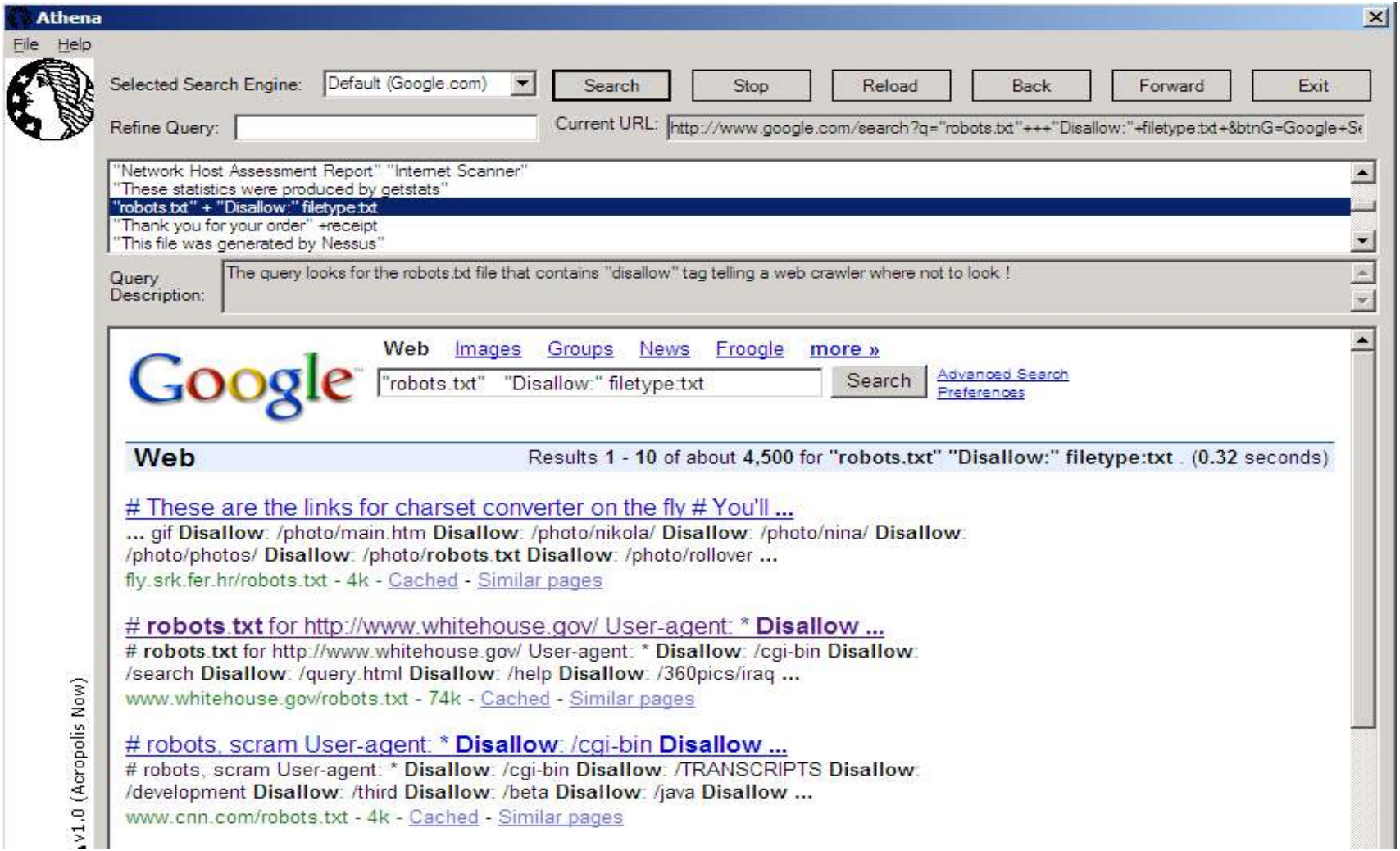
API and Apps (III)



API and Apps (IV)

- Buyukada Athena::
  - Doesn't rely on the Google API
  - Suited to finding general misconfigurations
  - Uses extensible XML format which allows support for engines other than Google
  - Developed after SiteDigger was found too limited

API and Apps (V)



Juicy Google Hacks

- The number one source for Google Hacks is Johnny Longs site:

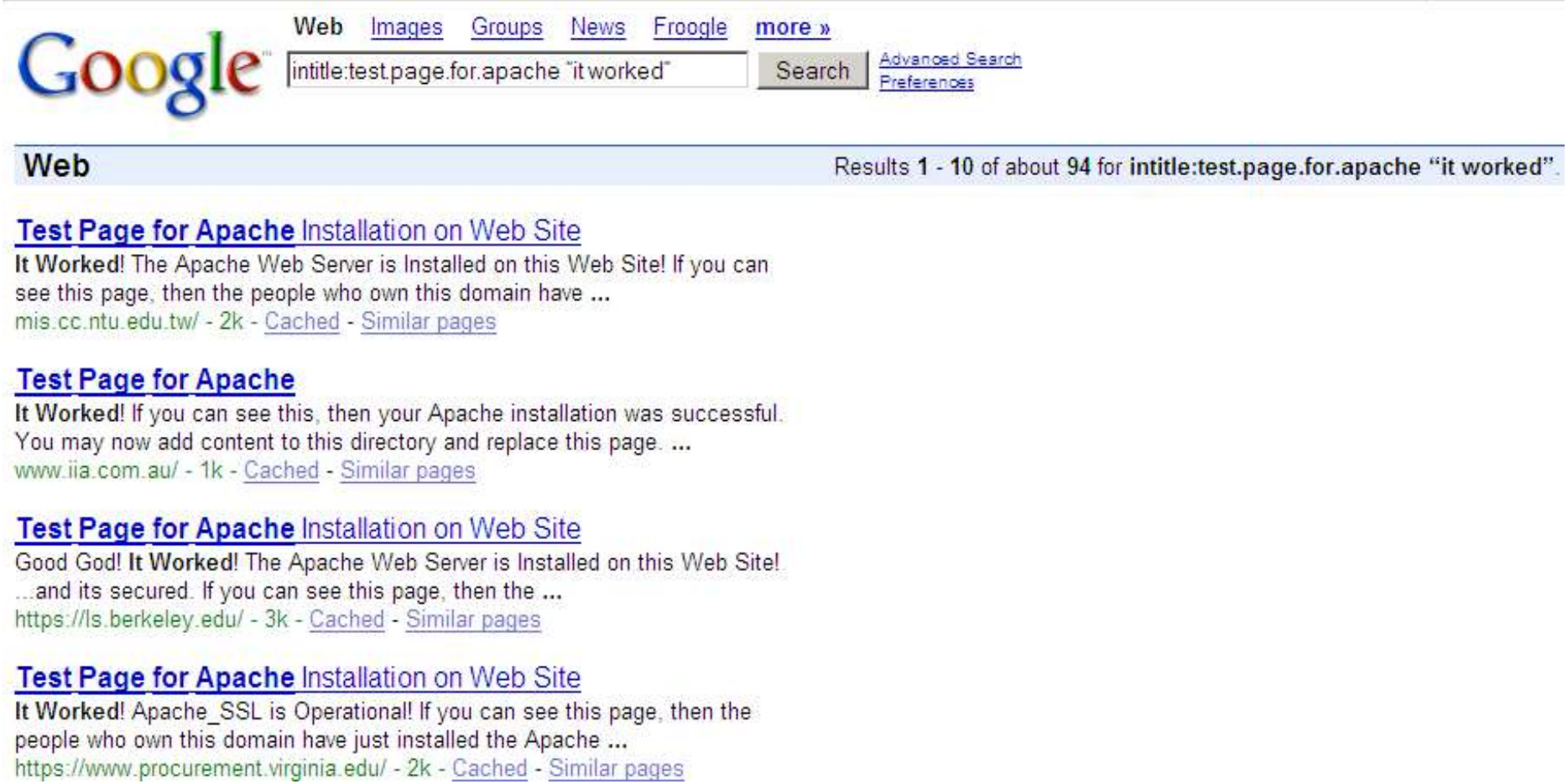
  http://johnny.ihackstuff.com

- Most of the following info comes from his Google Hacks database

Juicy Google Hacks (II)

- Default Server pages
  - Shows sloppy administration
  - intitle:test.page.for.apache “it worked”
  - allintitle:Netscape FastTrack Server Home Page
  - intitle: “Welcome to Windows 2000 Internet Services”

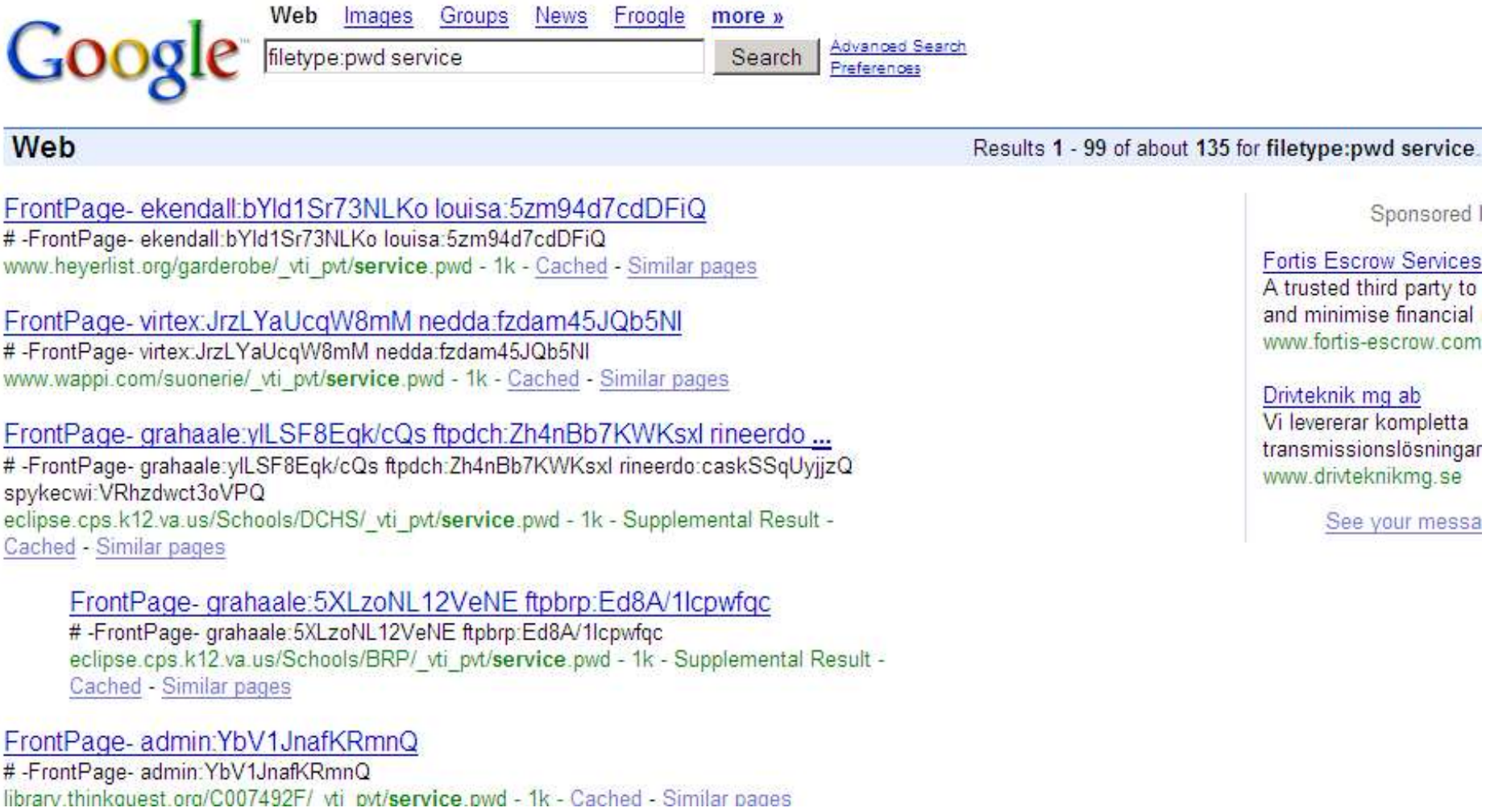
Juicy Google Hacks (III)



Juicy Google Hacks (IV)

- Passwords
  - "Index of" htpasswd / passwd
  - allinurl: admin mdb
  - "config.php"
  - auth_user_file.txt
  - filetype:dat "password.dat"
  - filetype:ini ws_ftp pwd

Juicy Google Hacks (V)



Juicy Google Hacks (VI)

- There are currently 540 Google Hacks in the database
- Shown were just a few common examples to outline the amount of information available
- Play around, be inventive

This is just the beginning

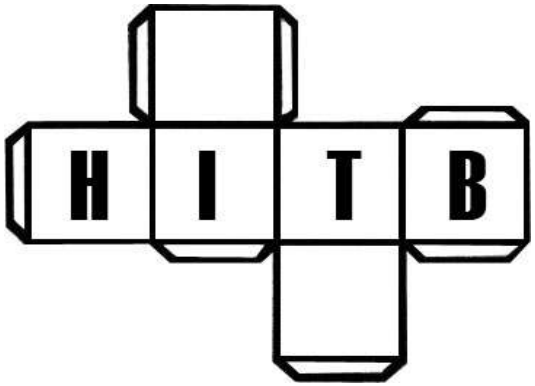
Recommendations

- Disable Directory Browsing
- Do not put sensitive information in web browseable directories
- Don't rely on security through obscurity
- Conduct these tests on your own domains and fix any rogue findings

Conclusion

- Information gathering is important and is being used
- There is no way to know people are doing this
- Be aware of what you have available on the web
- Learn and understand the discussed techniques and tools

Questions?



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