Seeker

From Obscurity to Pop Culture

Evolution of Application Security

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VP Product Management

OWASP Israel 2013

Quotium

WWW.QUOTIUM.COM

About Quotium

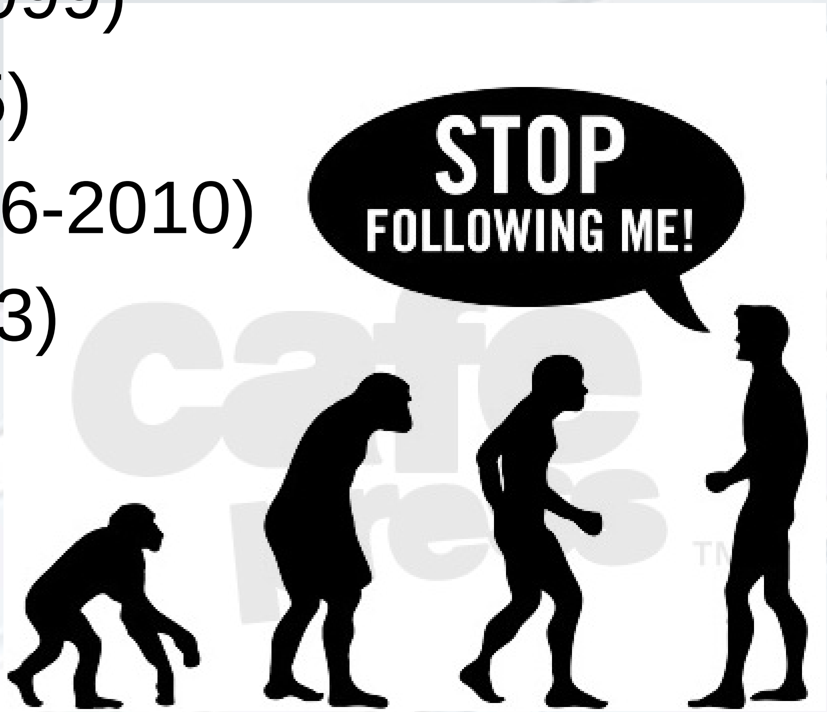
- EU Based Enterprise Software Company
- New Generation Application Security
- Fortune 500 Customers – Banking, Insurance, Industry, Services, Healthcare & More…
- Headquartered in Paris
- Branches in London, New York, Israel

About Myself

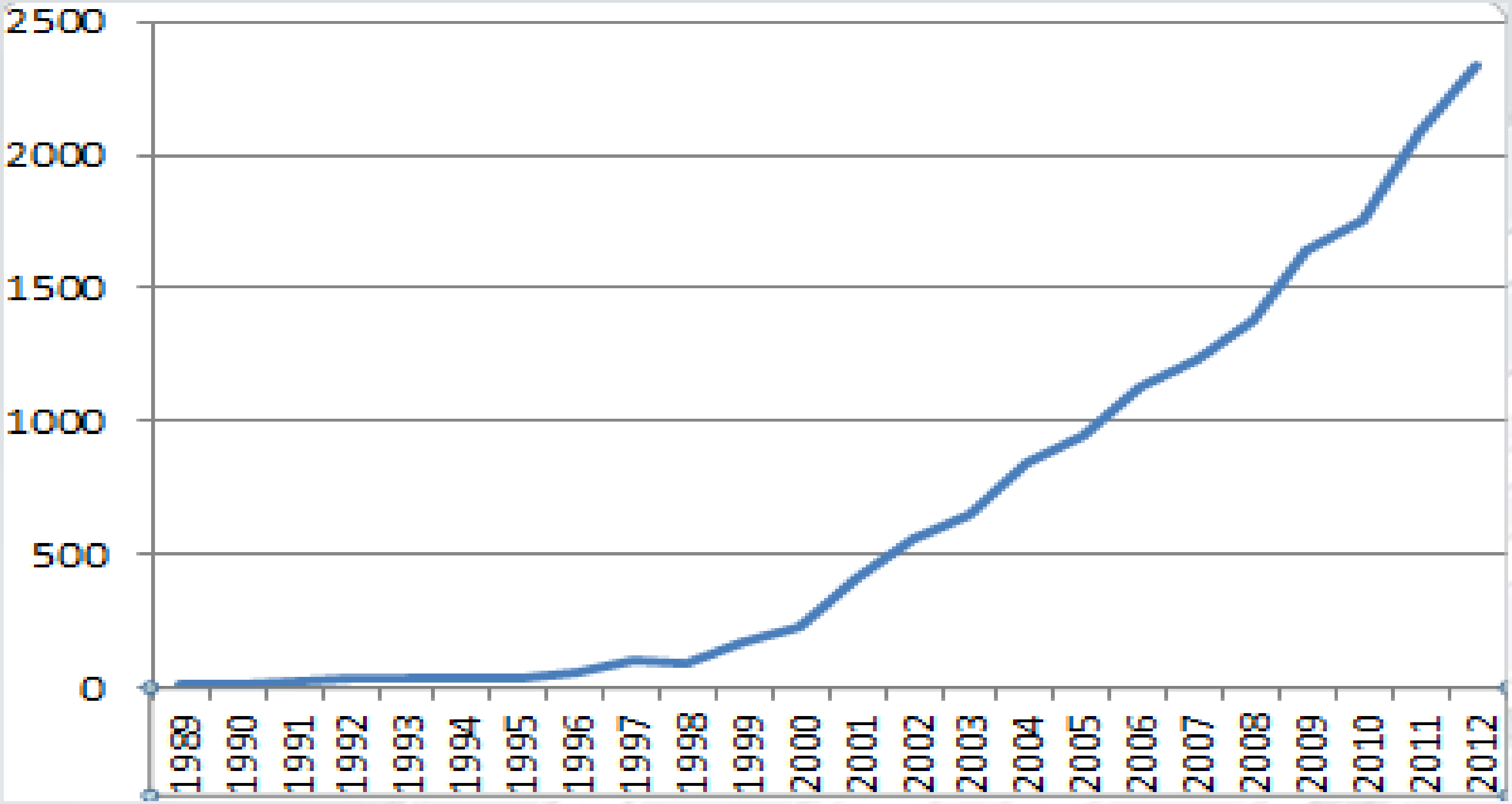
- 10+ Years in Application Security
- Breaking and Building Web and Software
- Penetration Tester, Security Researcher, OWASP Contributor
- VP Product of Seeker

Agenda

- Evolution of Application Security
  - – Ancient History (1990-1999)
  - – Middle Ages (2000-2005)
  - – Early Modern Ages (2006-2010)
  - – Modern Ages (2011-2013)



Google Scholar - “Application Security”



Ancient Times (1990-1999)

Intel Launches the Pentium Processor

Java is First Released by Sun

Larry Page and Sergey Brin Build a Search Engine

Internet Reaches a Million Users

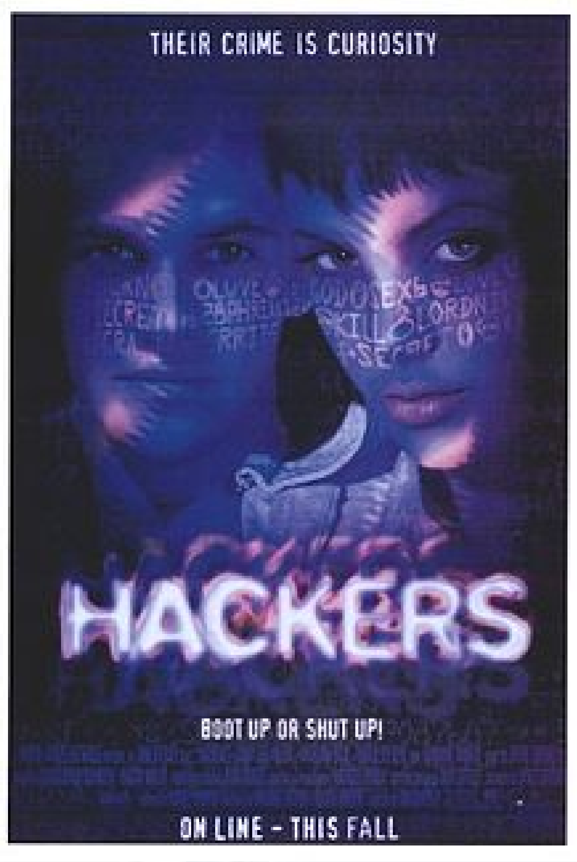
Application Security Experts Start to Emerge

Hackers Party, Deface and Start to get Jailed

Government Warns: Online Industry Lacks Protection

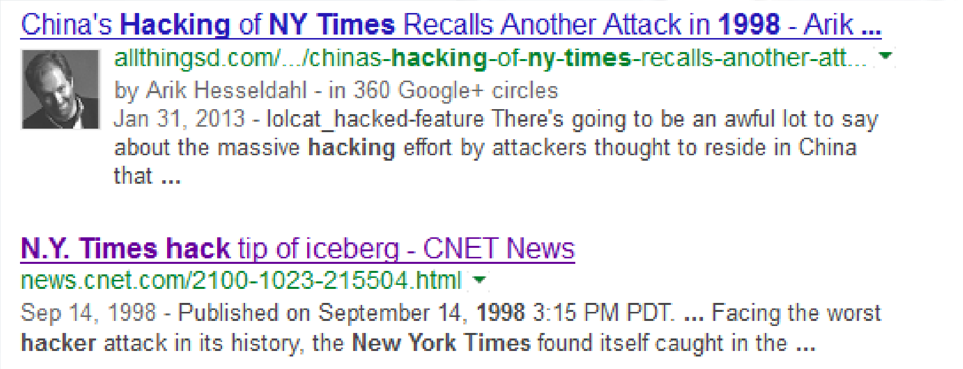
Ancient Times (1990-1999)

- Early Nineties – most of the talk still revolves around non-application Hacking
- Mid-Late Nineties – Starting to be Evident that Application Security is an Issue
- Application Hacks Begin to be Published
- First Application Security Oriented Companies Emerge



Ancient Times (1990-1999)

- New York Times Hack (1998)
  - HFG (Hacking for Girlies)
  - Defacement
  - FOR MITNICK!
  - Targeting Reporter John Markoff and Others



China's **Hacking** of **NY Times** Recalls Another Attack in **1998** - Arik **...**
allthingsd.com/.../chinas-**hacking**-of-**ny**-**times**-recalls-another-att...
by Arik Hesseldahl - in 360 Google+ circles
Jan 31, 2013 - lolcat_hacked-feature There's going to be an awful lot to say about the massive **hacking** effort by attackers thought to reside in China that **...**

N.Y. Times hack tip of iceberg - CNET News
news.cnet.com/2100-1023-215504.html
Sep 14, 1998 - Published on September 14, **1998** 3:15 PM PDT. **...** Facing the worst **hacker** attack in its history, the **New York Times** found itself caught in the **...**

Ancient Times (1990-1999)

<!-- Don't hate us because we nailed your girlfriend. -->

F1RST 0FF, WE HAVE T0 SAY.. WE 0WN YER DUMB ASS. 4ND R3MEMB3R, DUMB ASS 1S OFT3N CUTE 4SS. AND WE L1KE CUTE ASS.

S3C0ND, TH3R3 AR3 S0 MANY L0S3RS H3R3, 1TZ HARD T0 P1CK WH1CH T0 1NSULT THE M0ST.

S1NC3 WE AR3 N0W INTERN3T TERR0RISTZ, W3 F1GURE WE SH0ULD DEMAND S0ME RANSOM OR SOMETHING. SO, PAY US 104 GIRLIEZ, 6 BILLION IN N3WSPAP3R SUBSCRI1PTIONZ, AND MAYBE A PR1NT1NG PR3SS 0R S0M3TH1NG. N0T L1K3 Y0U GUYS KN0W WHAT FA1R J0URNALIZM IS ANYWAY. DUMB WH0R3Z.

Ancient Times (1990-1999)

- New York Times Hack – Responses
  - Defacement was discovered by the editor
  - It must be an anomalous hole in the website
  - They performed a penetration test two years ago, maybe it was not enough

Ancient Times (1990-1999)

- More Action in the 90ies
  - Early Roots of Hacktivism (300 sites hacked in 1998)
  - FTC warns about lack of website security and privacy concerns (1997)
  - Sierra-Online Hack – “Sierra is bringing in a security expert to determine how the hack occurred and how to prevent it in the future.”

Ancient Times (1990-1999)

90ies Hacker

- Young
- Idealist
- Mostly Unorganized
- Looks up to Mitnick
- Varying Level of Skill
- Few set Goals

90ies Application Defender

- Mostly Inexistent
- Low Budget
- Beginning to get Recognition
- Mostly Low Level of Skill
- Mostly Unorganized
- Little Government Support

Middle Ages (2000-2004)

Dot-com bubble bursts

Apple Introduces the iPod

MySpace, LinkedIn, WordPress are Launched

Internet Population Surpasses 500 Million

Security Experts Start OWASP, WASC

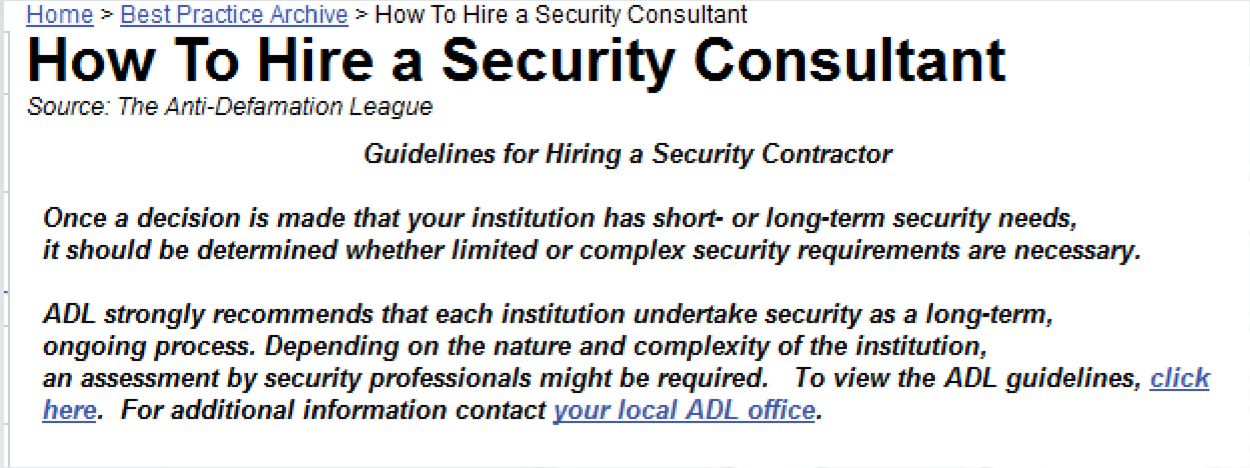
Hackers form Anonymous and get Organized

Governments pass Acts and Regulations

Middle Ages (2000-2004)

- Application Security Begins to Gain Momentum, More Companies are Founded
- OWASP AppSec USA Takes Place in NYC
- First Edition of the Top Ten Project is Released

Middle Ages (2000-2004)



Home > Best Practice Archive > How To Hire a Security Consultant

How To Hire a Security Consultant

Source: The Anti-Defamation League

Guidelines for Hiring a Security Contractor

Once a decision is made that your institution has short- or long-term security needs, it should be determined whether limited or complex security requirements are necessary.

ADL strongly recommends that each institution undertake security as a long-term, ongoing process. Depending on the nature and complexity of the institution, an assessment by security professionals might be required. To view the ADL guidelines, click here. For additional information contact your local ADL office.

Middle Ages (2000-2004)

- US Government Passes Sarbanes-Oxley
- International Standards Organization takes BS7799 and makes ISO17799
- Applications hosting Medical Data are required to HIPAA Compliance
- Payment Card Industry Issues PCI-DSS

Middle Ages (2000-2004)

Inter

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Sans.org Web site hacked - Technology & science - Tech and

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Oct 17, 2002 - MICROSOFT'S BETA **WEBSITE** , BetaPlace, was downed by a bunch of hackers who **hacked** into the security servers and stole the entire database of Microsoft ...

Middle Ages (2000-2004)

Early 2000's Hacker

- – Still quite young
- – Begins to understand a lot of money can be gained
- – Starts to be more organized and targeted
- – Idealistic & Hacktivistic
- – Some good technologists, mostly script kiddies

Early 2000's Application Defender

- – Talks security in the SDLC
- – Starts professional communities and helps governments design regulations
- – Gets very technological and forms application security consulting and software companies
- – Enjoys strong government support

Early Modern Ages (2005-2010)

Nintendo Releases Wii

Amazon introduces the Kindle, Apple the iPhone

YouTube, Wikipedia, and LOLcats are Launched

Internet Reaches a Billion Users

Application Security is Trendy

Hackers Become Pop-Culture, not Sub-Culture

Governments & Businesses Dedicate more Resources

Watch out cyberworld!
Hairballs aren't the only things I hack!
ICANHASCHEEZBURGER.COM
I'M II
icles
ICANHASCHEEZBURGER.COM
ICANHASCHEEZBURGER.COM

Early Modern Ages (2005-2010)

- In 2007 the Die Hard 4 Movie Features a Cyber Attack on National Infrastructure
- Samy hits MySpace with a PXSS worm reaching over a million users within 20 hours
- Tsunami Hacker gets Convicted

Early Modern Ages (2005-2010)

- Also in 2007, a TJ Maxx hacker takes off with over 45 million credit card numbers (and is undetected for nearly half a year)
- 3 Years Later TJ Maxx Hacker also Admits to Hacking Barns & Noble, and more..
- TJ Maxx is a Big Milestone

Early Modern Ages (2005-2010)

- Enterprises have either already Established or are Establishing Application Security Testing Teams
- Enterprises Start to Understand Need for Routine Application Security Testing
- Experts talk about Change Management, Agile Development Security, and Ongoing Testing

Early Modern Ages (2005-2010)

Late 2000's Hacker

- – Government, crime organizations and individuals
- – Motivated by ideals, money or fame (or all)
- – Script kiddies trained by veterans
- – Governments and crime organizations have extensive training programs

Late 2000's Application Defender

- – Thoroughly understands attackers and threats
- – Helps achieve regulation and/or works for governments, consulting firms, businesses or security vendors
- – In high demand, enjoys a very dynamic field

Modern Ages (2011-2013)

Apple makes Champagne iPhone

Elon Musk makes Cool Stuff

1.2 Billion mobile apps Downloaded at Christmas 2011

Number of Smart Phones Reaches 1 Billion

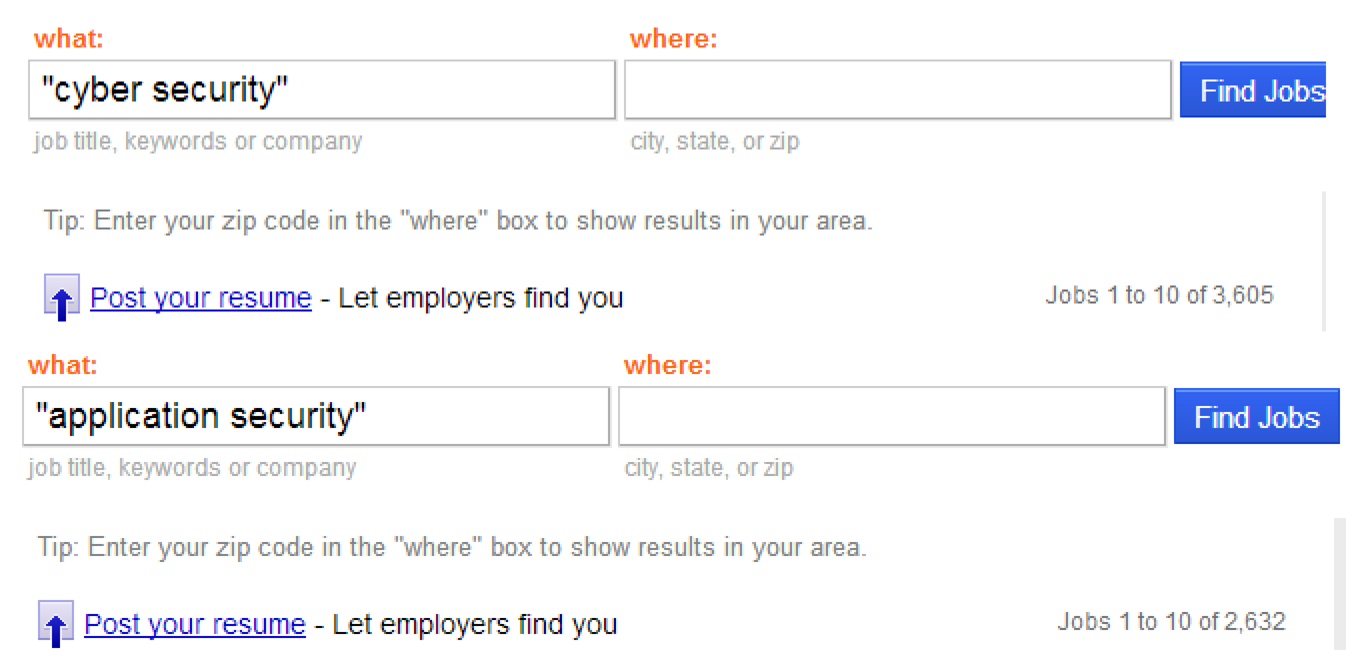
Application Security Turns to Mobile and Cyber

Hackers turn to Mobile and Cyber

Resources are allocated for Mobile and Cyber

Modern Ages (2011-2013)

- Application Security Shifting to Mobile and Cyber



what: "cyber security"

job title, keywords or company

where:

city, state, or zip

Find Jobs

Tip: Enter your zip code in the "where" box to show results in your area.

Post your resume - Let employers find you

Jobs 1 to 10 of 3,605

what: "application security"

job title, keywords or company

where:

city, state, or zip

Find Jobs

Tip: Enter your zip code in the "where" box to show results in your area.

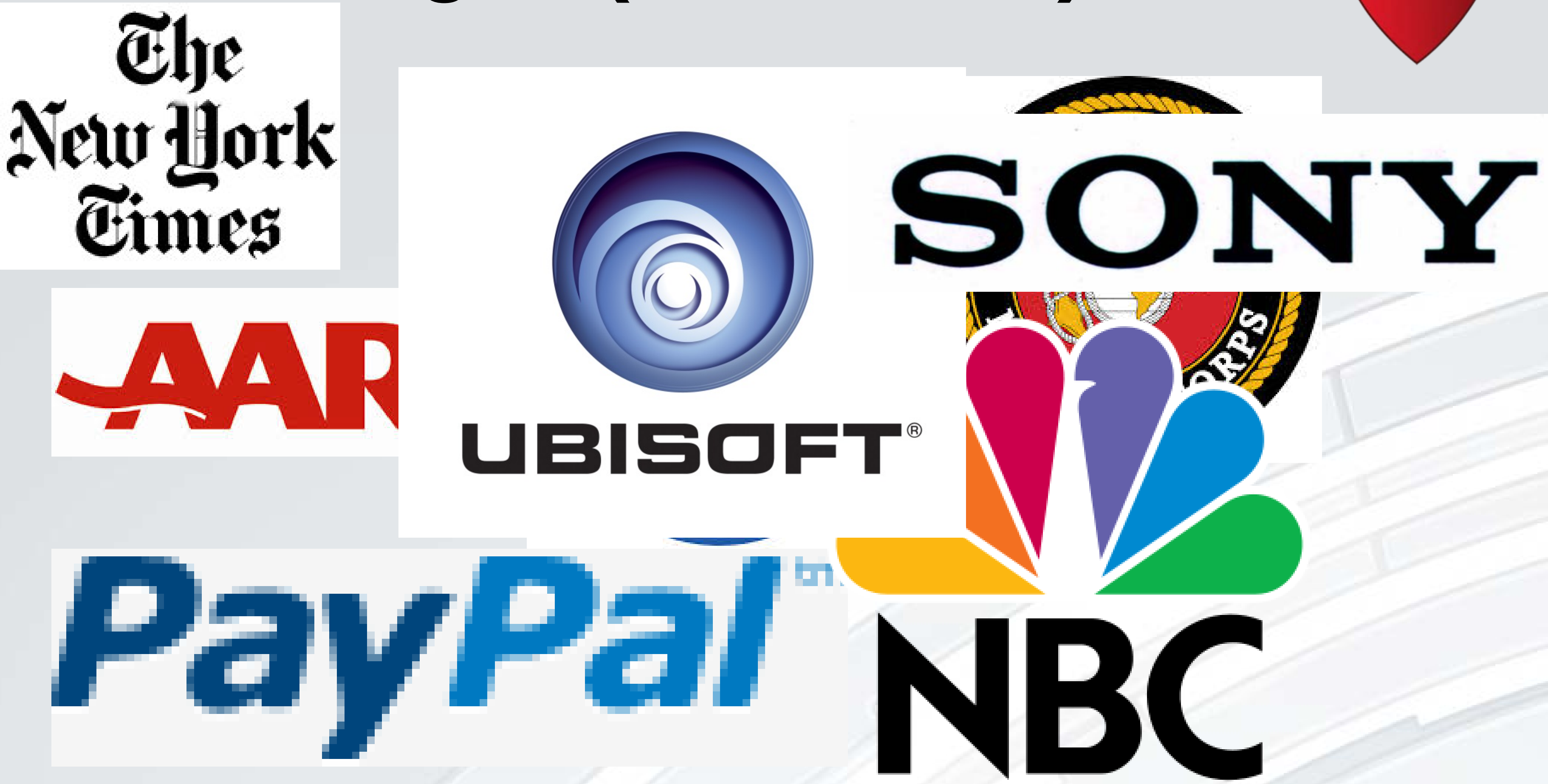
Post your resume - Let employers find you

Jobs 1 to 10 of 2,632

Modern Ages (2011-2013)

- Some Enterprises talk about Advanced Persistent Threats
- Others still Fail to Create an Effective Application Security Testing Process
- 2011 is the Starting Year of the Big Hacks

Modern Ages (2011-2013)



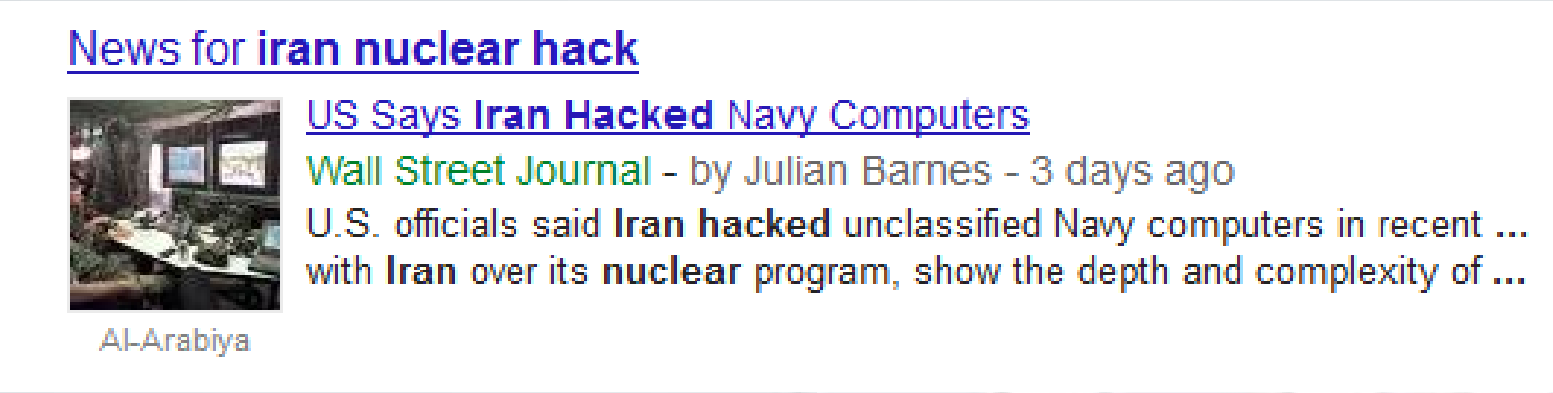
Modern Ages (2011-2013)

- Attackers get Advanced and Persistent, more Sophisticated
- Hacktivism Strongly Affected by Arab Spring
- US Government Arrests 5 Ukrainians and Russians for Largest Hack in History

The group allegedly hacked NASDAQ, Visa, J.C. Penney, 7-Eleven and JetBlue, among other companies, from 2005 until early last year. The men are accused of illegally obtaining roughly 160 million credit and debit card numbers, and allegedly stealing more than $300 million from at least three of the companies they attacked.

Modern Ages (2011-2013)

- Countries turn on Each Other



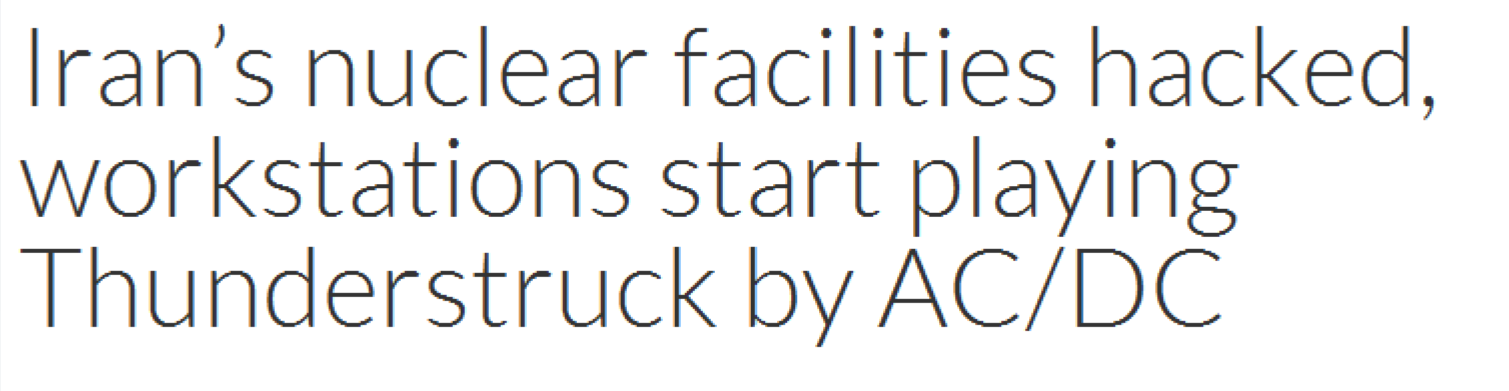
News for **iran nuclear hack**

US Says **Iran Hacked** Navy Computers

Wall Street Journal - by Julian Barnes - 3 days ago

U.S. officials said **Iran hacked** unclassified Navy computers in recent **...** with **Iran** over its **nuclear** program, show the depth and complexity of **...**

Al-Arabiya



Iran's nuclear facilities hacked, workstations start playing Thunderstruck by AC/DC

Modern Ages (2011-2013)

2010’s Hacker

- Part of Global Cyber War
- Vast Amounts of Script-Kiddies with some Trained Individuals
- Organized (Anonymous, Lulzsec, Governments, Crime Organizations), Advanced and Persistent

2010’s Defender

- Talks Cyber and APTs, Understands the Landscape has changed
- Helps Organizations Achieve Security as part of SDLC
- A lot of Highly Trained Experts. Also Experts with 15 Years of Experience

Summary

- Application Security Evolved Following the World Technological Advancements
- Application Security Experts Emerged, got Organized (over 600 Registered to OWASP Israel 2013!)
- Governments Joined in on the Fun
- Hackers get Organized, but Keep sense of Humor

Summary

Seeker

Thank You!

Questions?

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Quotium

WWW.QUOTIUM.COM