CYBER SKIRMISHES

By
Zubair Khan

Introducing Cyber Warfare

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". . . attaining one hundred victories in one hundred battles is not the pinnacle of excellence.

Subjugating the enemy's army without fighting is the true pinnacle of excellence."

Is Cyber Warfare Best Strategy?

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- Highly Anonymous
- Deniability
- Low expenditure on R&D

Outsourcing and Globalization of Warfare

- No Command

- Difficult to identify private or state sponsored hacking.

- Citizens of other regions and countries can also volunteer.
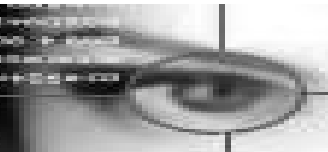
Cyber Targets

- Military Networks
- Government Systems and Websites
- Ecommerce and Financial Institutes
- Telecommunication Companies
- Others

Psychology of Modern Warfare and Hacking

- For Fun (31.4%)
- Want to be best defacer (17.2%)
- No reason Specified (14.7%)
- Political Reasons (11.8%)
- Patriotism (10.9%)
- As a challenge (10.8%)
- Revenge (3.3%)

Cyber Weapons

- Software Based Weapons
  - Availability
  - Capability

- Hardware Based Weapons
  - Availability
  - Cost of Manufacturing
  - Capability

Cyber Battleground of Palestine And Israel

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History

- 28th September 2000 – Israeli teenage hackers attacked Hezbollah and Hamas websites in Lebanon.

- Call for Cyber Jihad from Palestine

The Middle East Cyber War

- Elite Hackers around 100
- How Elite Hackers work?
- Volunteers around 1200
- How Volunteers work?

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Targets in Middle East Conflict

- Pro-Israeli Attacks
  - Extremist Websites
  - Government Websites

- Pro-Palestinian Attacks
  - Israeli official Websites
  - Media, technology, financial and telecommunication corporations

Middle East Cyber War- A Global Cyber War

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Israeli Hackers

- Mossad
- Wizel
- Israel Hackers Unite
- Israeli Internet Underground
- Small Mistake
- Analyzer
- ViRii

Targets of Israeli Hackers

- Government Systems
- Palestinian National Authority
- HAMAS
- Hizballah
- VISA

<u>Tactics and Strategy of Israeli Hackers</u>

- Registering websites with misspellings
- Hamas.com to hamas.org
- Propaganda
- Others
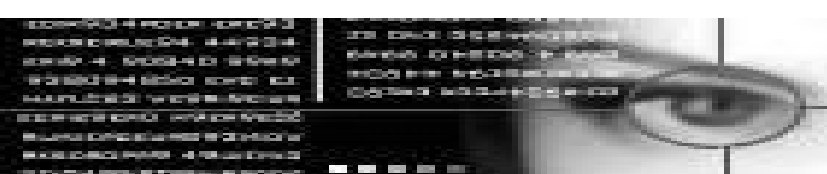
Counter Attack

- Pro-Palestinians hacked more than 50 websites.

- Paralyzed Israel's email system for days many times

- Israel's e-commerce websites

Israel: Cyber Target

- Extensive targets
- Israel losing the cyber war
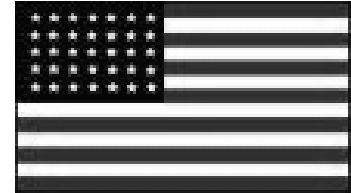- Hackers of all Arab countries combined

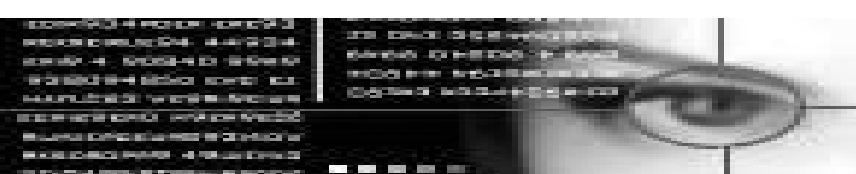# **Pro-Palestinian Hackers**

- G-Force Pakistan
- Dr. Nuker
- Pakistani Hackerz Club
- Arab Hackers
- Xegypt
- Arab Hax0rs
- Al-Muhajiroun

Palestinian Targets

- Israeli Army
- Israeli Central Bank
- Bank of Israel
- Israel's Educational Institutes
- Government System
- AT&T
- TA Stock Exchange

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<u>Cyber Battleground of Iran And USA</u>

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- Development Process
- Threat to USA
- Effects Caused
- Capabilities of Persian Hackers
- Strategies
- Globalize War
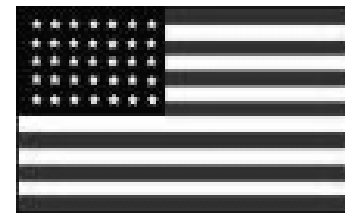
<u>Cyber Battleground of China, Cuba And USA</u>

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How Cuba is better than USA in Cyber Warfare?

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Bejucal Base

– 1100 engineers, computer scientists, technicians, staff

– Three groups of antennas/satellites.

- General USA telecommunications

- Pre Designated phones and computers

- Voice recognition capacity

- Ability to interfere USA computer networks

Paseo

– Transmission and reception of radio waves

– Ability to interfere radio telecommunications in USA, mainly in airports and strategic places.

Cojimar Electronic Complex

- Research Department
- Main focus High Radio Frequency

<u>Wajay Electronic Base</u>

- – Weather Change Research
- – Radio Interference
- – More than 100 very high antennas

Chinese in Cuba

- Mutual Understanding
- Trade Cooperation
- Financial Support
- Strategic Location

Cyber Battleground of India And Pakistan

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History

- First cyber attack: May 1998
- Reason: Pokhran 2 Nuclear Tests
- Target: Bhabha Atomic Research Centre, India
- Responsible Group: Milworm
- Disclosure of sensitive mails regarding nuclear tests
- Website Defaced

"Is BARC being brought under the defence ministry? If that happens, there'll be a lot of restrictions. I have doubts if the explosion was successful. That place is full of idiots, including Chidu. I know them inside out. I'm sure those morons aren't capable of anything. Must have exploded some RDX and are now claiming to have exploded the bomb for political gains. Biku is jumping about here and newspapers report some VECC scientists have contributed to the nuclear tests. He has asked for special security. The clown has got two bodyguards. Security has been tightened at the institute."

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Major Targets of Pakistani Hackers

- Gujrat Government
- Ministry of External Affairs
- India Gandhi Centre for Atomic Research
- India Online Bazaar
- Indian National IT Promotion
- India Today
- Nuclear Science Centre
- Telecommunication companies

Stats of Indian Defacements

- **Total number of defacements recorded – 780**
- **co.in - 115 defacements - 14.74%**
- **gov.in - 29 defacements - 3.72%**
- **net.in - 23 defacements - 2.95%**
- **org.in - 15 defacements - 1.92%**
- **nic.in - 45 defacements - 5.77%**
- **ac.in - 33 defacements - 4.23%**
- **ernet.in - 56 defacements - 7.18%**
- **res.in - 20 defacements - 2.56%**
- **.com - 398 defacements - 51.03%**
- **.net - 18 defacements - 2.31%**
- **.org - 25 defacements - 3.21%**
- **.edu - 2 defacements - 0.26%**

Gujrat Government Website

File   Edit   View   Go   Bookmarks   Tools   Help

http://www.attrition.org/mirror/attrition/2001/01/02/igcar.ernet.in/   Go

Stumble!   All▾   I like it!   Not-for-me   ...   Menu▾

GForce Pakistan

sniper + heataz + RSnake + instinct + rave + amnesiac

heh finally
India's Atomic Power's secrets are not secrets anymore...
thanks for sharing such valuable information with us you indians..
oops did we say sharing ? *heh*
rest assured but you have been *owned* long time back

die bitch , we'll blow you up!

Our Previous Work is archived here

KASHMIR
and
PALESTINE

greetz
Hackweiser , rsh , crimeboys , kn0wledge , prime suspectz , m0r0n&nightman , WFD
EdgE , kngstr0ke , axess , mR_ice , cen , cnz , RR , krimie , justagurl , miran
DoctorNuker , kidjess , sysop , attic , jades , zolo , phc , root66 , qu1ver , t0rpedo , dayzee , aekpani
forpaxe , mosthated , cruciphux , KILLER1 , Earizer , sugaking , lypox , xessor

Done

India Gandhi Centre for Atomic Research

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Top 5 Pakistani Attackers

- **AIC** - 166 defacements - 21.28%
- **GForce Pakistan** - 116 defacements - 14.87%
- **Silver Lords** - 101 defacements - 12.95%
- **WFD** - 59 defacements - 7.56%
- **ISOTK** - 17 defacements - 2.18%

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Formation of Pakistani Hacker Groups and their Strategies

- GForce Pakistan
- Silver Lords
- Pakistan Hacker Club

Objectives of Pakistani Hackers

- Target websites with a huge domestic audience

- To bring attention to violence in Kashmir

- Middle East conflict

Indians in Action

- Paralyzed Pakistani government sites for more than two months in 2003.

- Yaha-series viruses

- Damaged about 150 Pakistani websites in two days and erasing files from the hard disks of more than 3,000 corporate computers.

- Severe damage to Pakistan Internet Exchange and ecommerce

Cricket and Indian Hacking

Indian Hackers

- Indian Snakes
  - Roxx of Calcutta
  - Cobra
- Hindustan Hackers Association (H2O)
- Indian Hackers Club
- Indian Spy

Strategy of Indian Hackers

- Using Denial of Service Attacks as their primary weapon

India Pakistan State-Sponsored Hacking and Warfare

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What FBI hates more than Osama Bin Laden?

Art by Mike Werner
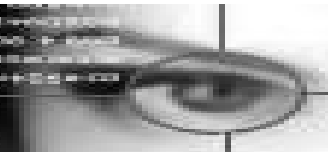
Capabilities and interests of Al Qaeda

- Training Process
  - Khalid Sheikh Mohammed
  - PhD Cyber Security
- Reconnaissance of critical infrastructures
- Communications and Cryptography techniques
- Cyber Propaganda
- Call for Jihad
- How Bin Laden is better than NSA in Tech

Capabilities and interests of Al Qaeda

- Big Damage……less investment
- High Anonymity

Al Qaeda's Cryptography

- Cryptography Techniques and methods used
- Example

Cyber Attacks on Al-Qaeda by US

- Bin Laden's Financial Network
- Damage to Financial Network of Bin Laden by U.S Hackers
- Calls Interception
- Decrypting Messages
- Avenues for US hackers by Al Qaeda

What makes Cyber War as important as Nuclear War for USA?

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Future of Al Qaeda's Cyber Warfare

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Cyber Defence Strategies

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Hacking affecting Military Operations

- Before Fighting
  - Example of Department of Defence
- During Fighting
  - Example of Gulf War

Influencing Foreign Policy

Can hacking cause real war?

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ECHELON/Project 415

Global network of computers that automatically search through millions of intercepted messages for pre-programmed keywords or fax, telex and e-mail addresses.

ECHELON

- ECHELON Dictionaries
- ECHELON Working
- UKUSA System

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Agencies in UKUSA System

- National Security Agency (NSA)
- Government Communications Headquarters, UK (GCHQ)
- Defence Signals Directorate, Australia (DSD)

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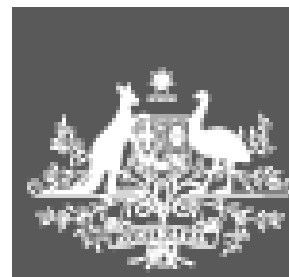
Agencies in UKUSA System

- Government Communications
  Security Bureau, New Zealand (GCSB)
- Communication Security Establishment,
  Canada (CSE)

Revolution in Military Affairs And C4i

- Psychological Operations
- Military Deception
- Operations Security
- Computer Network Operations
- Electronic Warfare

<u>Cyber Terrorism and Propaganda</u>

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The Abu Ghraib Prison Photos

Example of Powerful Cyber Propaganda

The propagation of Abu Ghraib photos on internet did a severe damage to political interests of American Government.

The Future of Warfare

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QUESTIONS?