Social Engineering in the 21st Century

Attack Techniques and Practical Defense

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Who am I?

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- Certified Information Systems Security Professional (CISSP)
- Web developer since 1996

What is Social Engineering?

Definition:

Social engineering is the art and science of getting people to comply with your wishes for the purpose of gaining unauthorized access, control or disruption of resources.

Typical Targets for Social Engineering

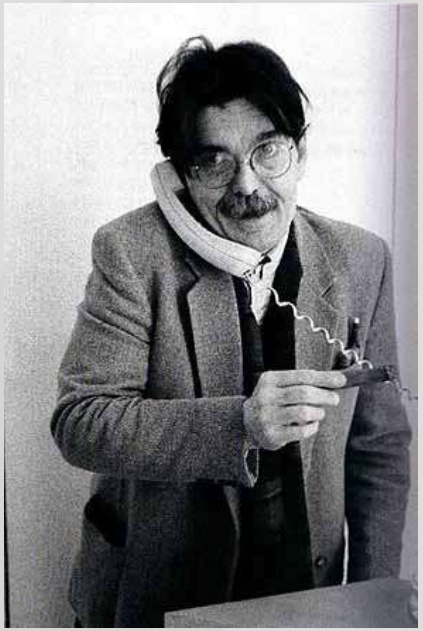
- Large Corporations
- Telephone Companies
- Financial Institutions
- Hospitals
- Government Agencies
- Military

Why Should I Care?

- Loss of valuable trade secrets
- Entire organization can face embarrassment
- Loss of competitive advantage – impacts bottom line
- Handing over keys to your resources to unauthorized user

Attack Techniques

- Telephone Conversation
- Help Desk / Customer Service
- Dumpster Diving
- From the Internet
- Persuasion
- Reverse Social Engineering



Telephone Conversation

- **Easy – only equipment required is a telephone**
- **Low risk – no physical presence required**
- **Utilizes natural inclination to trust other people**
- **Can create sense of urgency**

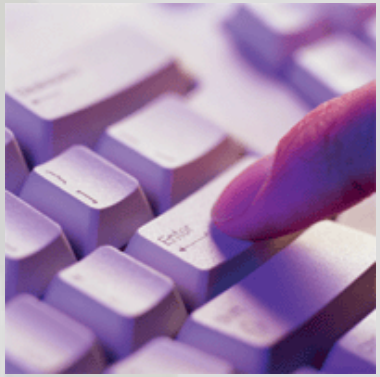
Help Desk / Customer Service

- They're there to HELP users get information
- Often low-paid, little motivation to "Watch out for the Company"
- Low emphasis on security
- Hard for target to actually verify identity of caller

Dumpster Diving

- Can be excellent source of intelligence about organization
- Post-it® notes – glowing little nuggets of useful information
- Phone books, calendars, memos
- Old equipment – hard drives can be recovered

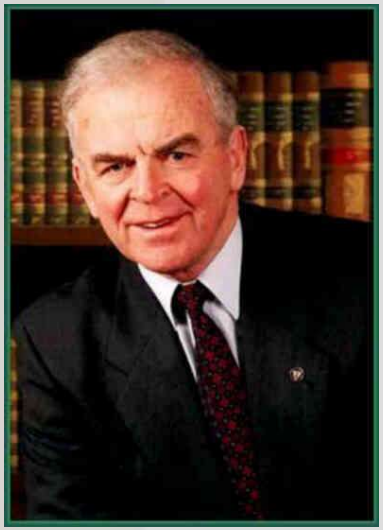
Internet Delivered Attack



- Fastest-growing area of social engineering
- Can be even easier than telephone and more anonymous
- Users react in predictable ways
- Backdoor programs often emailed as attachments

Persuasion

- Psychological element of Social Engineering
- Appeals to emotion – empathy, helpfulness, kindness
- Impersonation
- Authority figure, trusted
- Third-party & "newbie" approach used



Reverse Social Engineering

- Advertise being the person to call for certain type of problem
- Cause problem to happen
- Help fix problem, verifying position of trust
- Ask for innocuous bit of information – no harm

Practical Defense Strategies

- Difficult to eliminate the human inclination to trust others
- Organization-wide training and awareness program are the best defense
- Enforce Security Policy
- Have single point of contact

Practical Defense Strategies (cont.)

- Shred all documents prior to disposal, important or not
- Use bulk-erase equipment on discarded hard drives
- Perform informational audit on publicly available data for sensitive or useful tidbits

Testing Your Defenses

- **Should test for Social Engineering weaknesses on a regular basis – use the same tactics that attackers might use**
- **Educate workforce, then verify the information is understood**
- **Share results of tests so that all can see the value of compliance**

Summary

- **Defense against Social Engineering is a never-ending battle – training & education most effective tools to defend**
- **Problem won't go away if you simply ignore it**
- **Think like an attacker to defend effectively**

Questions / Answers

Additional Information

- SecurityFocus.com
- Google
- *The Art of Deception* by Kevin Mitnick
- SANS Reading Room
- CERT.org

U.S. Department of Justice
United States Marshals Service

WANTED
BY U.S. MARSHALS

NOTICE TO ARRESTING AGENCY: Before arrest, validate warrant through National Crime Information Center (NCIC).
United States Marshals Service NCIC entry number: (NIC/ W721460021).

NAME: .....MITNICK, KEVIN DAVID
AKS(S): .....MITNIK, KEVIN DAVID
MERRILL, BRIAN ALLEN

DESCRIPTION:
Sex:.....MALE
Race:.....WHITE
Place of Birth:.....VAN NUYS, CALIFORNIA
Date(s) of Birth:.....08/06/63; 10/18/70
Height:.....5'11"
Weight:.....190
Eyes:.....BLUE
Hair:.....BROWN
Skintone:.....LIGHT
Scars, Marks, Tattoos:.....NONE KNOWN
Social Security Number (s):.....550-39-5695
NCIC Fingerprint Classification: ...DOPM2GPM15DIPM19PM09

ADDRESS AND LOCALE: KNOWN TO RESIDE IN THE SAN FERNANDO VALLEY AREA OF CALIFORNIA AND LAS VEGAS, NEVADA

WANTED FOR: VIOLATION OF SUPERVISED RELEASE
ORIGINAL CHARGES: POSSESSION UNAUTHORIZED ACCESS DEVICE; COMPUTER FRAUD
Warrant Issued: CENTRAL DISTRICT OF CALIFORNIA
Warrant Number: 9312-1112-0154-C

DATE WARRANT ISSUED: NOVEMBER 10, 1992

MISCELLANEOUS INFORMATION: SUBJECT SUFFERS FROM A WEIGHT PROBLEM AND MAY HAVE EXPERIENCED WEIGHT GAIN OR WEIGHT LOSS
VEHICLE/TAG INFORMATION: NONE KNOWN OFTEN USES PUBLIC TRANSPORTATION

If arrested or whereabouts known, notify the local United States Marshals Office, (Telephone: 213-894-2485).
If no answer, call United States Marshals Service Communications Center in McLean Virginia.
Telephone (800)336-0102; (24 hour telephone contact) NLETS access code is VAUSMOOOG.

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