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### **Ethics in Technical Support**

- Intellectual Property Rights
- Privacy and Confidentiality
- Free Speech in Cyberspace
- Children in Cyberspace
- Professionalism in Cyberspace
- Criminal Hackers
- Employee Rights in the Workplace
- 10 Commandments of Computer Ethics

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### **Intellectual Property Rights**

- Copyright law
  - Author's property by default
  - Employment implies ownership of work
  - Illegal copying is felony
- Stealing copies of books and programs
  - deprives author/owner of return on effort
  - discourages intellectual effort
  - loss of control over property

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# VIDEO: It's Just Not Worth the Risk

Software Publishers' Association Washington, DC

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### Why Not Steal Software?

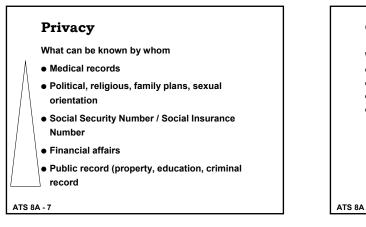
**Classic excuses** 

- Everyone's doing it.
- We won't get caught.
- It's the software company's fault: if they don't want theft, they should charge less.
- If they don't want their software stolen, they should make it harder to copy.
- But I need it and I don't want to pay for it.
- It doesn't hurt anyone.
- It only hurts a company—I wouldn't steal it from an individual.
- No software should ever be copyrighted—it should always be free.

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### **Privacy and Confidentiality**

- Privacy
  - What can be known by whom
- Confidentiality
  - What can properly be done with information about individuals and organizations
- Control over personal information
  - How one can inspect and correct records about oneself



### Confidentiality

What can be done with information

- Transfer to authorized users
- Use for statistical analysis
- Guard against unauthorized disclosure
- Tech support must safeguard client confidentiality

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### Confidentiality (cont'd)

Case studies of violation of confidentiality

- Victoria, BC: police officer (1995)
  - used police computers to locate home addresses of abortion clinic workers penalized
- Miami, FL: public health worker (Nov 1996) - stole copies of disks with records of 4,000 HIV+ patients
  - used them in bars to give advice on
  - whether to go out with affected people

- fired

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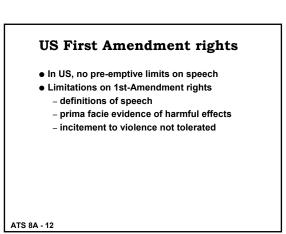
### **Control Over Personal** Information

- Credit and bank card leave trail in cyberspace
- Credit bureaus keep records of questionable accuracy
- Insurance bureaus share information
- Right to see and comment on all records about yourself

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### **Free Speech Issues in** Cyberspace

- US First Amendment Rights
- Problems of Community
- International Differences
- Pornography
- Bombs and Viruses



### **Problems of Community**

- In US., generally unrestricted access by adults to legal materials (not child porno, obscenity)
- Community standards can limit display or sale
- KEY: WHICH COMMUNITY DEFINES STANDARDS?
- 1994: Nashville postal inspector & CA BBS
  - Knowingly downloaded well-marked porn
  - Filed federal complaint on wire-transfer of pornography
  - BBS operators convicted under Tennessee law -- while living in California
  - Operators lost their appeal

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### **International Differences** How to reconcile conflicts among national moral standards and legal systems in cvberspace? • Canada: limits on hate speech • UK: bans on public commentary about trials China: national intranet bars access to Western news media · Indonesia: limitations on access to Internet

- sites discussing East Timor
- Saudi Arabia: concern over sites dealing with women's liberation

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### Pornography

- Newsgroups: alt.sex.\_\_[anything at all]\_\_
- WWW sites & BBSs
- Lawrence Livermore National Laboratory
  - US. DOE computers
  - 10 Mb pornographic files
  - public access
  - employee fired
- · Gross exaggerations in popular press
  - Carnegie-Mellon scandal
  - relatively small % total information transfer

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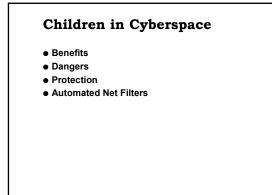
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### **Bombs and Viruses**

- Libraries, Internet sites, publications & BBSs have dangerous info
  - instructions on how to make bombs, weapons - detailed instructions on making computer
  - viruses, Trojans, logic bombs
- Why would anyone post such information?
  - perceived as interesting, educational - fun, part of belonging to club
  - political ideology

  - belief that what is not illegal must be right
  - mindless opposition to authority
- Why would anyone stop such postings?

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### Children in Cyberspace: **Benefits**

- Commercial on-line services
  - moderated children's chat lines
  - children's forums
  - educational services
- Reference areas
  - encyclopaedias
  - on-line articles
- Interaction with decent adults
  - moderated discussion groups
  - children get refs for homework
  - 13 yr-old sysop in anti-virus forum

### Children in Cyberspace: Dangers

- Access to newsgroups
  - neo-Nazi and other racists
  - outright lunatics
  - perverts of various descriptions
- "Naked ladies on-line"
  - photographs freely accessible on Net
  - but also available at corner stores
- E-mail seduction by paedophiles
  - 50 yr-old man tricked 14 yr-old girl into
  - meeting

    airplane tickets sent secretly to kids

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# Protecting Kids in Cyberspace

- Parental involvement!
- Awareness of the issues
- Education of their children
- Integration of ethical issues in computer classes at school
- Discussion among parents and children of activities on the Net

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### **Automated Net Filters**

Prevent access to parentally-restricted areas

- Techno-fix (sometimes viewed as challenge by kids)
- SafeSurf(TM) (http://www.SafeSurf.com/)
- Microsystems Software--CyberPatrol (http://www.cyberpatrol.com)
- Trove Investments--Net Nanny (http://www.netnanny.com/netnanny/)
- Solid Oak Software--CYBERsitter (http://www.solid.oak.com/solid.oak)
- SurfWatch (http://www.surfwatch.com)

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### Professionalism in Cyberspace

- Selling on the Net
- Netiquette
- Public Relations Nightmares
- Data Leakage
- Encryption and the ITAR
- Pornography
- Firewalls
- Denial of Service
- Concluding Remarks

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# Selling Products and Services

Nothing inherently unethical

Problems include:

- Immortal messages (need expiration date)
- Inaccurate messages (need digital signature)
- Inauthentic messages (need non-repudiation)
- Unwanted messages (need good judgement)

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### **Netiquette for Beginners**

- World-wide web--Marketing the right way
- Legitimate mailing lists
  - by request
  - or by permission ("May I send you...")
- Junk e-mail
  - unsolicited
  - who pays?
  - denial of service
  - outrage from many recipients
  - serious business consequences

### Spamming the Net

- Dropping Spam on moving fan blades
- Sending large numbers of identical messages to many news groups or e-mail addresses
- Many readers get several related news groups
- Annoys members, uses bandwidth
- Severe consequences
  - hate e-mail
  - mail bombing
  - removal of Internet access
  - deletion of all future messages
  - expulsion from new groups

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### **Spamming the Net: Case Studies** • Canter and Siegel (1993) - "Green Card Lottery" legal advice

- 2,000 news groups and 200,000--2,000,000
- recipients
- many received multiple copies
- violated rules of the news groups
- Responses
  - complaints to C&S's service provider
  - mail bombing of C&S mailbox
  - crashed their service provider
- cancelbots

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### Spamming the Net: **Case Studies**

Anonymous executive writing in Network World (1994)

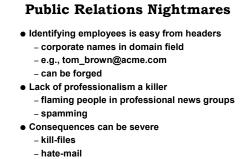
- Posted advertising to 20 news groups
- Thought people would be interested
- E-mail bombs
- 800 number posted in alt.sex groups
- Thousands of obscene phone calls
- Receptionist quit
- All 800 calls sent directly to his phone
- Nearly destroyed his career

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### **Market Data Collection: Ethical Issues**

- Point of sale data capture
- Credit records
- Medical records
- Compilations of e-mail addresses
- Net usage statistics
- Snitchbots

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- boycotts

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### Did I say that??

- Covert Ads
- Flamewars
- Shills
- Spoofs

### **Covert Ads**

- Forums, newsgroups may have strict standards
- Responses should be technical and helpful
- Do not introduce company name and product without clear benefit to recipient
- Repeated marketing hyperbole in technical forum repels potential customers
- Beware of posting superficially-objective responses that are slanted: will be nailed

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### Flamewars

- Technology insulates some people from empathy
- Not everyone capable of writing with subtlety and sensitivity
- Flamewars are written shouting matches
- Avoid ad hominem remarks
- comments on intelligence or competence
- imputation of motives
  - statements claiming to know other people's thoughts
  - outright verbal abuse

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### Shills

- Employees who write as if they were customers
- All employees should identify themselves as such if information bears on their credibility
- Such tactics backfire
  - strong objections to dishonesty
  - perpetrators locked out of forums
  - great abuse heaped on individuals and employers
  - long term distrust

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### Spoofs

- Impersonation of others
- Writing bad things about competitors
- Can be used as industrial sabotage
- Possibly actionable

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# Spoofs: Case Study

ReplyNet vs Promo: October 1995

- Promo Enterprises is mass e-mail
   sent junk e-mail to 171,000 recipients
  - listed "REPLY.NET" as return address

  - Promo has recently announced competition with ReplyNet auto-reply service
- ReplyNet Inc. provides non-objectionable advertising on Net
  - ReplyNet received 100s of complaints
  - sent apologies but largely rejected
  - damage to reputation as responsible service

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### Spoofs: Case Study (cont'd) ReplyNet initiated lawsuit: • Violations of US. federal law – Forgery – Trademark violation • Damages payable to ReplyNet – \$5-\$10 for each of 171,000 people • Refunds for on-line time to all unwilling recipients • May be a case of industrial sabotage ("spamotage" in John Schwartz's phrase--Washington Post)

• Settled out of court on "generous terms"

### **USENET Etiquette**

- Lurk before you leap: learn specific style
- Stick to the forum/section subject area
- Make messages concise
- Quote only relevant text from previous message
- Respect copyright laws
- Don't flame people
- Avoid profanity, ethnic/religious slurs, etc.
- On USENET, everything you write may be archived and available forever

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### Cyberpaths

- Virus Writers
- Criminal Hackers
- Theft of Services

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### **Virus Writers**

- 13,000 virus variants (1997)
- Most are trivial modifications of existing viruses
  - children
  - "wannabees"
  - fools
- Some virus writers are sociopaths

   Dark Avenger (Bulgaria)
- Others are unaware of consequences

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### **Criminal Hackers**

## VIDEO:

# Unauthorized Access by Annaliza Savage

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### Criminal Hackers (cont'd)

Hacker philosophy / cant

- "Information Wants to be Free"
- No limitations on posting information
- No intellectual property rights
  - No limits on retrieving information
     Software should be free

### Criminal Hackers (cont'd)

Moral relativists

- Morality = preference
- Everyone's preference morally equivalent
- Offended by criticism
- Outraged by legal pursuit

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### Criminal Hackers (cont'd)

Theft of Services

- Many ways to steal services
  - Phone fraud
  - Voice-mail invasion
  - System misappropriation
- Genuine losses
  - Payments to foreign governments
  - Obligation to pay for stolen phone calls
  - Decreased access to resources
  - Expensive work to re-establish trusted computing base

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### Criminal Hackers (cont'd)

Identity and Responsibility

- Currently no non-repudiable I&A
- No human society can function well without stable identity
- Impossible to bring consequences to bear on malefactors
- Disaster to depend on electronic messages as guide to popular will
- Anonymous remailers circumvent I&A
- Arguments about benefits / necessity of
  - anonymity
  - totalitarian regimes
  - cases of abuse and probable pursuit

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# Employee Rights in the Workplace

- Privacy Issues
- Harassment
- Fighting a Crooked Boss
- Blowing the Whistle

### **Privacy Issues**

- Must answer employment application forms
   absolutely truthfully and completely
- But interviewer has no right to ask personal questions unrelated to job
  - Political beliefs
  - Religious affiliation
  - Family plans (pregnancy, children)
  - Sexual orientation
- Corporate phone calls usually viewed as
- private (check policy)
- Corporate e-mail usually viewed as corporate property (check policy)

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### Harassment

Unacceptable behaviour

Abusive language

- Racial, sexual innuendos and behaviour
- Demeaning behaviour (e.g., demanding services not part of job)
- Hostile environment (e.g., pinups on wall, swastikas, KKK paraphernalia)

### Harassment (cont'd)

Taking charge of the problem yourself

- Document problems in detail using diaries, notes, photographs
- Contact lawyer specializing in civil rights cases
- Use official organizational procedures for complaint
- If no satisfaction, file grievance through union
- File complaint with human rights commissions
- File civil litigation

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### **Fighting a Crooked Boss**

- Never a legal obligation to perform illegal act
- Document situation in detail (as above)
- Contact a lawyer
- Verify that personal safety not in jeopardy
- Ensure witnesses if possible
- Inform superiors if reasonable expectation they are honest
- Contact police or regulators if necessary

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### **Blowing the Whistle**

- Identify appropriate authority
- Document case
- Obtain legal advice
- Lay case before authorities
- Lose job
- Fight wrongful dismissal

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# 10 Commandments of Computer Ethics

- [1] Harm: Thou shalt not use a computer to harm other people.
- [2] Interference: Thou shalt not interfere with other people's computer work.
- [3] Snooping: Thou shalt not snoop around in other people's computer files.
- [4] Theft: Thou shalt not use a computer to steal.
  [5] Lying: Thou shalt not use a computer to bear false witness.
- [6] Copyright violations: Thou shalt not copy or use proprietary software for which you have not paid.

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### 10 Commandments of Computer Ethics

- [7] Unauthorized use: Thou shalt not use other people's computer resources without authorization.
- [8] Theft of intellectual property: Thou shalt not appropriate other people's intellectual output.
- [9] Social consequences: Thou shalt think about the social consequences of the program you are writing or the system you are designing.
- [10] Consideration and respect: Thou shalt always use a computer in ways that ensure consideration and respect for your fellow creatures.

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### InfoSec & Ethics Information

- National Computer Security Association – http://www.ncsa.com
  - any e-mail to info@ncsa.com
- NCSA Web Page links to
  - Computer Ethics Institute
  - Electronic Messaging Association
  - Books on computer ethics

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# Homework: Read "Ten Questions for Parents and Children" Discuss with your family or with friends Write down your thoughtful comments on each question. Read and summarize "Totem and Taboo in Cyberspace" and submit your notes for credit Answer all the review questions from the instructor Submit your review questions and comments no later than the date & time indicated by your instructor: 09:00 Tuesday 22 April at front desk.