Web Monitoring & Content Filtering

IA340 – Introduction to IA

Supplementary Notes for CSH6 Chapter 31

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Objectives

➢ **This set of notes *supplements* *CSH6* Chapter 31**

➢ ***However, the materials do not correspond to the structure of the chapter***

➢ **Much of this slide deck is devoted to exploring the functional requirements and difficulties of schools and public libraries**

➢ **There are detailed notes for some of the slides – you can use the NOTES format to view them with the slides**

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Topics

➢ **Case Study: Schools and Public Libraries**

➢ **Corporations**

➢ **Filtering Technology**

➢ **Management Alternatives**

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Case Study: Schools and Public Libraries

➢ **Problems on the Internet**

➢ **Responsibilities to Stakeholders**

➢ **Legal Context**

➢ **Political context: conflicting pressures**

Problems on the Internet

- ➢ **Pedophiles**
- ➢ **Hate groups**
- ➢ **Pornography**
- ➢ **Plagiarism**
- ➢ **Stolen music & video**
- ➢ **Warez**
- ➢ **Viruses**
- ➢ **Criminal hackers**
- ➢ **Games**

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Pedophiles

- ➢ **Misrepresentation as youngsters**
- ➢ **Chat rooms**
- ➢ **E-mail**
- ➢ **Video films**
- ➢ **Bus/Airline tickets -- meetings**

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Hate Groups

➢ **Growing movements across world**

➢ **Anti-everything**

 ❑**racist**

 ❑**anti-Catholic, anti-Jewish, anti-. . . .**

 ❑**homophobic**

➢ **Recruiting young people through Web**

 ❑**hate-rock**

 ❑**propaganda**

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Pornography

➢ **Widespread – massive amount of content**

➢ **Misleading URLs**

❑ **trademark violations, variant domains**

✓ **http://www.whitehouse.com (still active)**

❑ **misspellings**

✓ **http://www.micosoft.com (no longer active)**

➢ **Junk e-mail invitations**

❑ **e.g., new CompuServe accounts receive invitation for Russian porn from St Petersburg**

Plagiarism

- Buy / trade copies of essays, term papers
    - wide range of subjects, styles
    - choose your preferred grade (A+, B-. . .)
- Write-to-order
    - graduate students
- Anti-plagiarism sites available for teachers
    - check student paper against database of stolen papers

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Stolen Music & Video

➤ **Napster, MP3, Gnutella, Wrapster. . . .**

❑ **trading copies of music**

❑ **most without permission – copyright violations**

❑ **lawsuits against companies & individuals**

❑ **Gnutella, Wrapster extending trades to other files**

➤ **Problems**

❑ **bandwidth saturation – many colleges**

❑ **legal liability**

Warez

➢ **Stolen software**

  ❑ **violation of copyright law**

  ❑ **often virus-infected**

  ❑ **many Trojan Horse programs**

➢ **Sites**

  ❑ **warez exchanges**

  ❑ **individual exchanges**

  ❑ **electronic auction services**

➢ **Severe penalties for school systems**

  ❑ **Los Angeles: $5M fines**

Malware

- **Self-replicating code**
  - **program infectors**
  - **boot-sector viruses**
  - **Internet-enabled worms**
- **Non-replicating code: Trojan Horse programs**
- **Sources**
  - **accident**
  - **deliberate infection**
  - **virus-exchange sites**
- **Damaging**
  - **availability, integrity, confidentiality**

Criminal Hackers

- ➢ **Propaganda**
  - ❑ **USENET groups**
  - ❑ **Web sites**
  - ❑ **printed magazines**
  - ❑ **regular meetings (2600)**
- ➢ **Appeals to kids**
  - ❑ **group affiliation**
  - ❑ **rebellion**
  - ❑ **power**
  - ❑ **video-game syndrome**

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2600
THE HACKER QUARTERLY
2600
1989
1991
1995
1994
1996
90
1994
1998

Current issue:
Fall 2000

NOW ON STANDS!
View Cover
View Details

ORDER 2600 ONLINE

Post-H2K photos and stories

H2K

General
News Archive
Off The Hook
  The Magazine
General Information
Online Store
Covers
Pay Phones
Meetings
  Hacked Sites
Archive
... of the Future?
  People
Kevin Mitnick
Bernie S
  Cons
HOPE
Beyond HOPE
H2K
  Features

ST⊕P THE MPAA Help us fight the MPAA with _shirts, stickers, flyers_ and _mirrors_.

TUESDAY: LIVE NET BROADCAST Check out the latest Off The Hook _October 24_!

FREEDOM DOWNTIME

NEWS

10.18.2000 HOW MANY LEGAL THREATS CAN WE GET THIS YEAR?
: Since we've been publishing controversial material since 1984, we think we're in a good position to put things in perspective. And right now, there is an epidemic of legal activity on the part of large corporations like we've never seen before. We got yet another threat today.
[Read More]

10.04.2000 H2K LEFTOVERS
: We're clearing out everything left over from the H2K conference including shirts, hats, and stickers. Full details at our online store.

10.03.2000 YET ANOTHER LEGAL THREAT
: Read about the story behind www.guinessrecords.com.
[Read More]

10.02.2000 WHY VERIZON REALLY SUCKS
: If ever there was a reason to dismantle

CULT OF THE DEAD COW®

PARAMEDIA • est.1984 v. 5.0

Warning:

This site may contain explicit descriptions of or advocate one or more of the following:

adultery, murder, morbid violence, bad grammar, deviant sexual conduct in violent contexts, or the consumption of alcohol and illegal drugs.

Then again, it may not.

Who knows?

enter graphical site

enter text-only site

Games

- Cooperative multiplayer games
  - Quake
  - Doom
  - Gambling
- More a nuisance than a danger
  - high bandwidth utilization

Responsibilities to Stakeholders

➢ **Schools**

  ❑ **Provide access to information**

  ❑ **Protect children against abuse**

  ❑ **Respect wishes of parents**

  ❑ **Comply with educational standards**

➢ **Libraries**

  ❑ **Provide access to information**

  ❑ **Comply with legal requirements against illegal materials**

  ❑ **Avoid violating 1st Amendment**

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Corporations

➢ **Private industry can regulate use of corporate assets**

➢ **Key issue is policy awareness**

   ❑**Policy must be clear and unambiguous**

   ❑**All employees must know and understand the policies on appropriate use**

   ❑**Policies compliance must be monitored and enforced consistently**

➢ **Failure to protect employees against exposure to offensive materials may be grounds for tort: hostile work environment**

Costs of Inappropriate Use of Internet Access

- ➢ **Massive costs**
- ➢ **Some cases where 20-40% of user time spent misusing Internet access**
- ➢ **Gross waste of resources and wages**
- ➢ **Demoralizes hard-working staff**
- ➢ **Decreases respect for lax management**
- ➢ **Increases petty violations of other policies and rules (e.g., theft of supplies)**

Technology

➢ **Monitoring**

❑ **tools for reviewing what users are doing on the Net**

➢ **Filtering**

❑ **tools for limiting what users are doing on the Net**

SpyBuddy Spy Software
Our most popular spy package!

SpyBuddy captures all user activities both online and off. Including new AOL, chats, instant messages, emails, and all keystrokes and websites visited!
$49.99

Learn More

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NetObserve Remote Spy

Our most powerful monitoring program!
(Remote Internet Spy Software)
Records keystrokes and Internet usage
activities Remotely! All records are
viewable through your web browser!
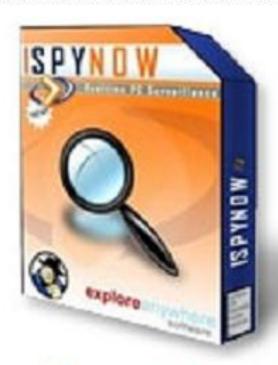$54.95

Learn More

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WebMail Email Spy

WebMail Spy records Web-based E-Mail!

WebMail Spy is a powerful, discrete monitoring software application which will record and store web-based e-mail messages from **Hotmail, Yahoo Mail, Go Mail, AOLMail and many others.**

$39.99

Learn More

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iSpyNow Remote Install Spy

iSpynow is the first remote install computer monitoring product offered anywhere! iSpyNow spy software **installs through an email attachment**. You will simply not find this software anywhere else!

$79.95

Monitoring

- ➤ **Audit trails**
  - ❑ **disk files**
  - ❑ **browser URL trail**
  - ❑ **browser disk cache**
  - ❑ **anti-virus products**
  - ❑ **anti-game software**
  - ❑ **anti-MP3-music software**
- ➤ **Real-time alerts**
  - ❑ **Web page**
  - ❑ **suspect e-mail content**
- ➤ **Human inspection**
  - ❑ **remote-access software**
  - ❑ **supervising by walking around**

Filtering

- Anti-virus products
- Firewalls
- Self-rating & filtering proposals
- Censorware

Firewalls

- ➢ **Corporate**
  - ❑ **Can block access to specific types of traffic**
  - ❑ **E.g., P2P file/music/video sharing**
  - ❑ **Often integrates antivirus capabilities**
- ➢ **Workstation firewalls**
  - ❑ **Zone-Alarm**
  - ❑ **BlackIce**
  - ❑ **Norton**
  - ❑ **McAfee**

Self-rating & Filtering Proposals

➢ **ICRA – Internet Content Rating Association**

  ❑ **RSACi system**

  ❑ **already works with common browsers**

➢ **PICS – Platform for Internet Content Selection**

➢ **Fundamental question:**

  ❑ **Why would objectionable sites rate themselves at all?**

RSACi Standards

	Violence Rating Descriptor	Nudity Rating Descriptor	Sex Rating Descriptor	Language Rating Descriptor
Level 4	Rape or wanton, gratuitous violence	Frontal nudity (qualifying as provocative display)	Explicit sexual acts or sex crimes	Crude, vulgar language or extreme hate speech
Level 3	Aggressive violence or death to humans	Frontal nudity	Non-explicit sexual acts	Strong language or hate speech
Level 2	Destruction of realistic objects	Partial nudity	Clothed sexual touching	Moderate expletives or profanity
Level 1	Injury to human being	Revealing attire	Passionate kissing	Mild expletives
Level 0	None of the above or sports related	None of the above	None of the above or innocent kissing; romance	None of the above

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Censorware

- ➢ **Types**
  - ❑ **Site-specific exclusion**
    - ✓ **lists of forbidden sites – updated often**
  - ❑ **Content recognition**
    - ✓ **lists of forbidden terms**
    - ✓ **nudity-recognition algorithms**
- ➢ **Problems**
  - ❑ **very high false-positive rates (rejecting sites unrelated to targets)**
  - ❑ **political bias (rejecting educational sites whose philosophy the makers reject)**

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Consistently Rated the BEST Internet Filtering Product

August 3, 2004
Cybersitter 9.0
Solid Oak Software, Inc.

CYBERsitter wins the highly coveted **PC-Magazine "Editors' Choice" award** for 2004, the **fourth consecutive year**, and an unprecedented **five** times since 1997.

Read the full review here!

New - July 7, 2004 - CYBERsitter 9.0 Wins PC-Magazine Editors' Choice (Again!)

CYBERsitter 9.0 has once again been rated the best Internet Filter by PC-Magazine in the August 4, 2004 issue (on newsstands now). CYBERsitter has now been awarded the Editors' Choice Award for four years in a row and five times since 1997. Read the CYBERsitter review here or read reviews for all filtering products.

New - July 6, 2004 - Time Magazine Rates CYBERsitter Best

CYBERsitter 9.0 Product Overview

New Version! CYBERsitter 9.0 is designed primarily for home, educational and small business use. Even though CYBERsitter has been designed to be easily installed and used by the most inexperienced users, there are plenty of advanced features for power users too.

New Features! Now records all Instant Messenger chat conversations for AOL (AIM), and Yahoo Messengers. Now you can know who your kids are chatting with to ensure that they are not communicating with strangers. Several new security enhancements have also been added for Windows 2000/ XP users.

CYBERsitter provides over 30 categories of filtering making it the most complete Internet filter available. Filters are updated automatically, and there are no subscription charges. A sophisticated "content recognition" system recognizes and blocks new objectionable web sites even before we know about them.

CYBERsitter allows parents to override blocked sites, add their own sites to block, specify allowable times to access the Internet, and maintains a detailed log of all Internet activity and violations. It will even send a daily report to parents by e-mail. Order On-line

Security

Many kids are much more computer literate than their parents. We recognize this, and the program is designed with this in mind. CYBERsitter has the most advanced anti-tampering functions available. Password protected, the settings you choose cannot be modified by even the most determined users. Advanced security features are available within the program to make it even more difficult to attempt to defeat or override the intentions of the parent or supervisor. Would you like to scan your PC for free to see if porn has been accessed? Click here!

CYBERsitter runs secretly in the background, always analyzing Internet activity, and can be configured to be completely invisible to the user and still accessible by the parent or supervisor.

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Legal Context: Disclaimer

➢ **I am not a lawyer and this is not legal advice.**

➢ **For legal advice, consult an attorney with expertise in the area of law of concern to you who is licensed to practice law in your jurisdiction.**

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Legal Context: First Amendment Law (USA ONLY)

- ➢ **Complex area – much subtle reasoning**
- ➢ **Ultra-simple summary:**
  - ❑ **Who cannot censor speech?**
    - ✓ **governments acting against others as sovereign to control unprotected speech**
    - ✓ **governments acting against protected speech**
  - ❑ **Who can censor speech?**
    - ✓ **governments controlling their own speech or that of their agents**
    - ✓ **within limits, anyone else dealing with private speech on their own property**

How do we decide if restrictions are constitutional or unconstitutional?

➢ **Determine capacity in which government is acting**

➢ **Determine degree of protection of specific speech**

Determine Capacity

➢ **Sovereign – least power to regulate speech**

➢ **Employer – can regulate speech**

➢ **Proprietor – can regulate**

➢ **K-12 educator – broad but not unlimited power**

➢ **University educator – less discretion to control**

➢ **Speaker – complete power to control speech**

➢ **Subsidizer – complete power**

Determine Protection

➢ **Constitutionally valueless speech**
- ❑ **deliberate or reckless falsehoods**
- ❑ **obscenity (difficult issue)**
- ❑ **child pornography**
- ❑ **incitement to lawless conduct**
- ❑ **threats**
- ❑ **criminal solicitation or conspiracy**

➢ **Intermediate protection**
- ❑ **commercial advertising that is not false or misleading**
- ❑ **sexually explicit but not obscene speech**

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Obscenity & Indecency

- **Obscenity**
  - ❑ **Average person**
  - ❑ **Community standards**
  - ❑ **Patently offensive**
  - ❑ **Prurient interests**
  - ❑ **Lacking in serious value**
  - ❑ ***Not* protected by 1st Amendment**
- **Indecency**
  - ❑ **Primarily regulated for children**
  - ❑ **Protected by 1st Amendment**

Literary

Artistic

Political

Scientific

Child porn – felony

- ❖ **Making**
- ❖ **Transmitting**
- ❖ **Storing**

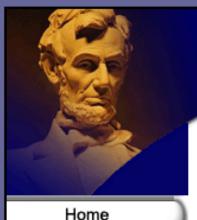# Determine Protection (cont'd)

➤ **Fully-protected: all other speech**
- ❑ **political, social, religious, philosophical, scientific**
- ❑ **art, literature, music, poetry**
- ❑ **jokes, gossip, entertainment, casual chat**

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Political Context: Conflicting Pressures

- **For filtering**
  - concerned parents
  - right-wing
  - religious fundamentalists
- **Against filtering**
  - concerned parents
  - libertarians
  - civil liberties advocates
  - privacy activists

Get Informed

IFI News Release: Decency Advocates Respond to FCC Consent Decree

9/14/2004 12:14:00 PM
By David E. Smith, IFI Senior Policy Analyst

GLEN ELLYN, Ill.--The Illinois Family Institute, issued the following release in response to the August 12th consent degree between **Emmis Broadcast Corporation** and the **Federal Communications Commission**:

Last month in a Consent Decree, broadcast giant Emmis Communications Corporation "voluntarily" agreed to pay the US Treasury $300,000 in order to settle dozens of broadcast indecency complaints filed against at least two radio stations it owns. At issue were numerous broadcasts by Chicago's WKQX and St. Louis' KPNT. In response to this action, a "Petition for Reconsideration" was filed late yesterday by Attorney **Dennis J. Kelly** objecting to this agreement. The petition asks that the August 12th Consent Decree be vacated, in part because the "Commission has no authority to sell a renewal of license to a party such as Emmis, nor does it have any authority to sell a party a finding of basic character qualifications."

David Smith, Julie A. Cordry, the Illinois Family Institute, and Concerned Women for America of Illinois have decided to file an official objection to the Consent Decree between the Federal Communications Commission and Emmis because it is believed that the FCC has overstepped its authority.

The primary allegations of wrong doing come from two separate people in two different

ACLU

AMERICAN CIVIL LIBERTIES UNION

Become a card-carrying member of the ACLU: **JOIN**

ISSUES ⌄

Criminal Justice
Death Penalty
Disability Rights
Drug Policy
Free Speech
FreedomWire/Youth
HIV/AIDS
Immigrant Rights
Int'l Human Rights
Lesbian & Gay Rights
National Security
Police Practices
Prisons
Privacy & Technology
Racial Justice
Religious Liberty
Reproductive Freedom
Rights of the Poor
Safe and Free
Voting Rights
Women's Rights

Hot Topics

Intelligence Reform >>
Fighting for Marriage >>
USA PATRIOT Act >>

DEFEND YOUR RIGHTS
Take Action ▶

SIGN UP FOR
Email Updates ▶

Changing Your Info?
Sign In >>

Keep America Safe *and* Free ▶

THE NEW FACE OF AMERICA?

ACLU Sues Rumsfeld >>

ACLU Files Motion to Open Hearing In Case of FBI Whistleblower

The ACLU filed an emergency motion to open the D.C. Circuit Court of Appeals to the public during oral arguments Thursday in a hearing over the termination of Sibel Edmonds.

READ MORE ABOUT THE CASE >>

Homeland Security Violates Civil Rights

The NYCLU, the ACLU and Council on American-Islamic Relations have charged in a lawsuit that the Department of Homeland Security violated the rights of Muslim Americans returning from Toronto.

ACLU RENEWS CALL FOR PATRIOT ACT CHANGES >>

Records Show Command Approved Abuse

New evidence disclosed in documents released by the Department of Defense confirms that soldiers who abused prisoners were acting with the "seeming approval" of senior command.

READ THE RELEASED DOCUMENTS >>

Students Making a Difference

This year's Youth Activist Scholarships were awarded to

Recommendations: Schools & Libraries

➢ **Define standards of acceptable use for children, students, teachers and staff**

❑ **important issue is the discussion**

❑ **safeguard children against harm**

❑ **respect other people**

Recommendations (cont'd)

➢ **School/Library Internet oversight group**
  ❑ **include all concerned**
    ✓ **students**
    ✓ **parents**
    ✓ **teachers**
    ✓ **staff**
  ❑ **explicitly discuss each issue**
    ✓ **protecting children against bad people**
    ✓ **protecting others against children**
    ✓ **intellectual property rights**
    ✓ **training in critical thinking**

Recommendations (cont'd)

➢ **Provide educational resources for all concerned**

- ❑ **acceptable-use guidelines**
- ❑ **limited expectation of privacy**
- ❑ **pamphlets**
- ❑ **URLs**

Recommendations (cont'd)

- ➢ **At home, in libraries and schools**
  - ❑ **Use supervision-by-walking-around**
- ➢ **Install *monitoring* software, not *blocking* software**
- ➢ **Discuss infractions with all concerned – parents, students, staff, teachers**

DISCUSSION