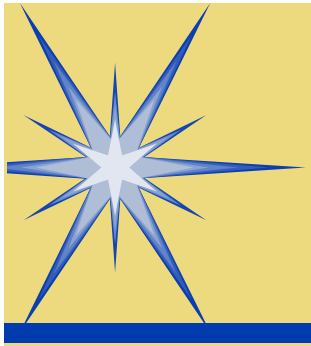
Regulating the Internet:
Wild Wild West or World Wide Web?

CSci 110 - Prof. C.D. Martin

Summer 2002



Issues to Consider

- How the Internet Evolved
- The Four Regulatory Horsemen
- Role of W3C
- Free Speech versus Regulation
- Wild Wild West versus Trusted Place
- Example 1: PICS and content control
- Example 2: ICANN and domain names

How the Internet Evolved:

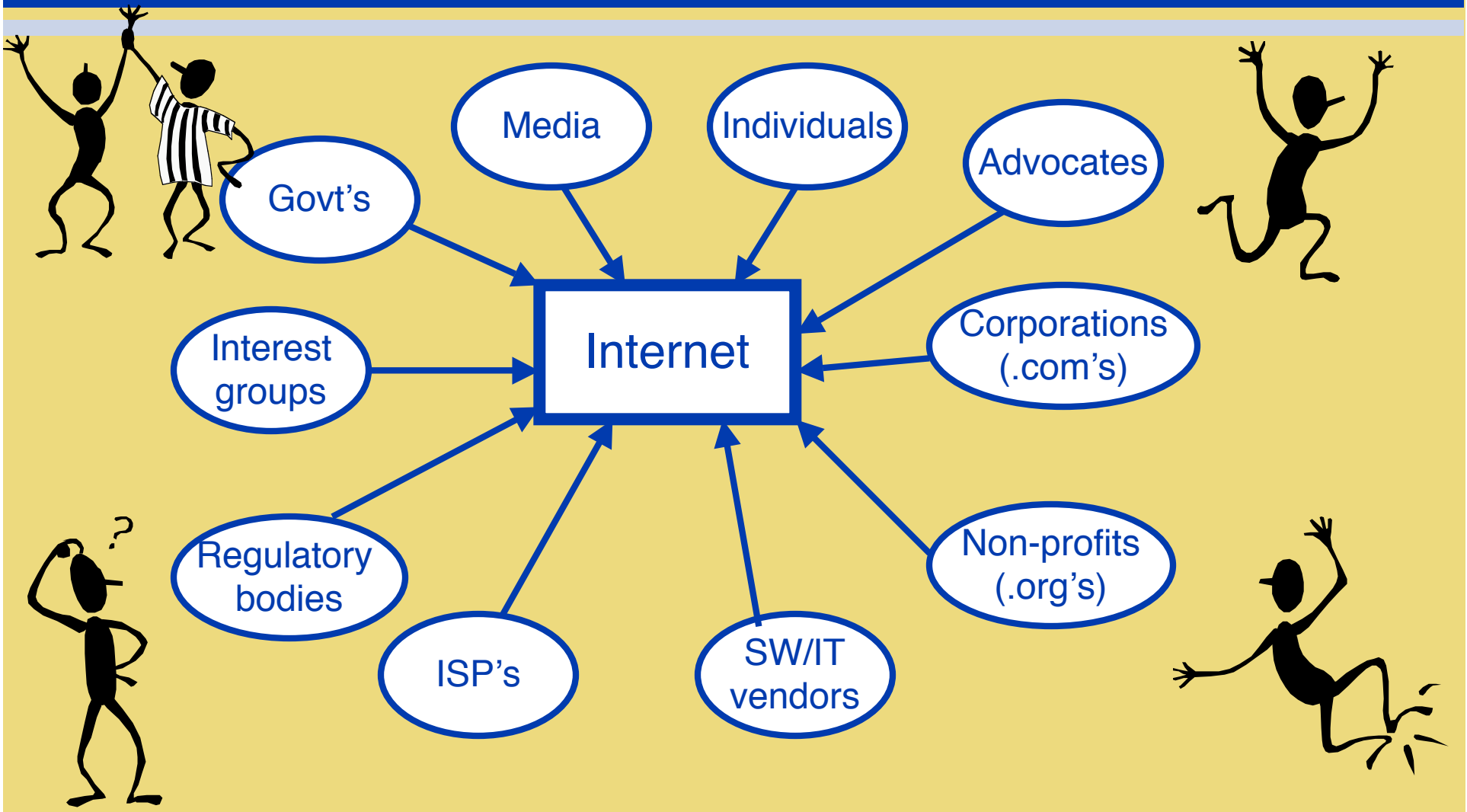
- What is it: a distributed, interoperable network of multiple format data interconnections, including WWW
  - 1969 ARPANET project - DoD
  - Reliable digital communications network that could withstand nuclear attack due to redundant paths
  - Originally only “hard core” computer scientists and government research labs
  - 1975-85 BitNet - universities established a network supported by cooperating members who provided nodes to support email.

How the Internet Evolved (continued)

- 1970's UseNet - free nets, non-profits
- 1980's ARPANET divided into ARPANET and Milnet
  - NSF provided NSFNET to link them - Internet
  - 1983 500 computers were connected to Internet
- 1990's - NSF-funded backbone, non-commercial
- 1990's commercial ISP's-CompuServe, MCI
- 1995 Tim Berners-Lee: WWW
- Since 1995 - astronomical growth, commercialization
- Tangle of information - browsers, search engines, etc.

Internet Stakeholders

(Richard Spinello, CyberEthics, 2000)



Internet "Governance"

- Direct State Intervention - existing or new laws of nations can govern the Internet
- Coordinated International Intervention - a new intergovernmental organization
- Self-governance - the Internet will develop its own semi-official political structure - charters developed by non-profits to represent the stakeholders

Can It Really Be "Governed?"

- Jurisdictional problems - global, borderless
- "Virtually" untamable
- Immune from centralized control
- Immortally flexible - will work around a damaged node
- Interprets censorship as damage and routes around it
- Power struggle between frustrated states and newly empowered virtual community.

Four Regulatory Horsemen (Larry Lessig, Harvard)

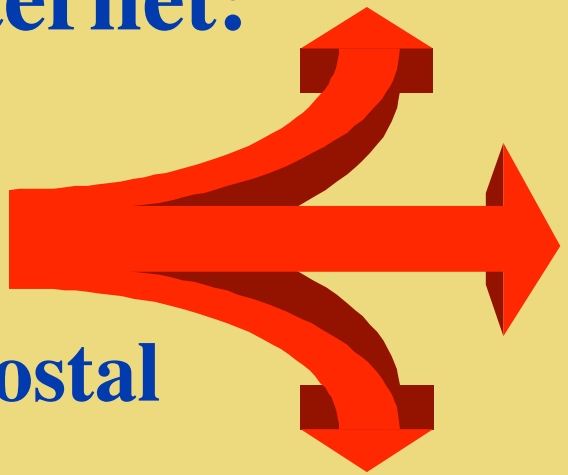
- Norms
- Laws
- Market
- "Code"

W3C Founding Principles

- Technology can be used to provide safe access to the internet
- Technology can be used to protect users from unreliable, unwanted, offensive or illegal information as well as from hackers, viruses, unwanted intrusion, invasion of privacy, and electronic fraud.
- W3C sets up working groups to establish technical standards and data exchange protocols to be used by others to develop systems to accomplish the above.

Free Speech versus Regulation

- 1st Amendment protection of speech - written to protect offensive, controversial speech and ideas. Is the Internet:
  - Print media?
  - Broadcast media?
  - Common carrier - telecom, postal
  - CDA ruling - like print media
  - Many to Many



Offensive Speech in Cyberspace

- Libel - a number of lawsuits against Matt Drudge
  - Who is libel? ISP? BBS?
- Hate speech - racist, sexist, harassing
- Pornography - provider or receiver?
  - What is obscene - community standards
  - CDA of 1996 -held ISP's liable
- Bomb-making, terrorist manuals

Discussion Question

- Should there be campus speech codes for e-mail supported by university computer systems?
- Should there be restrictions on what students can have on their websites?

The Internet as a "Place"

- Place for research
- Place for personal communication
- Place for commerce
- Place for education
- Place for entertainment

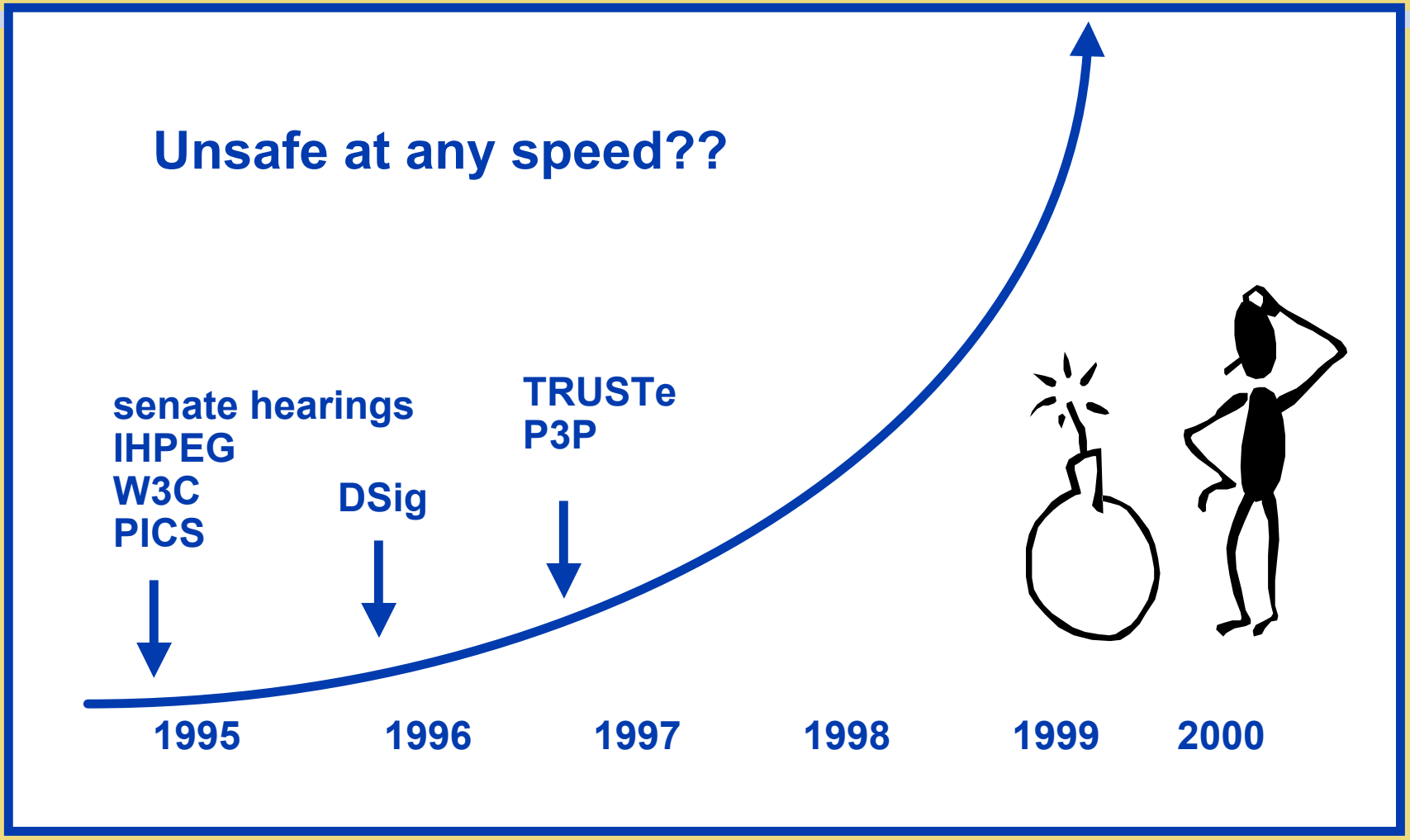
- Place to form communities of interest
- Even a place for "dangerous liaisons!"

What is Trust?

Trust – reliance on the integrity and ability of another entity; to commit with confidence.

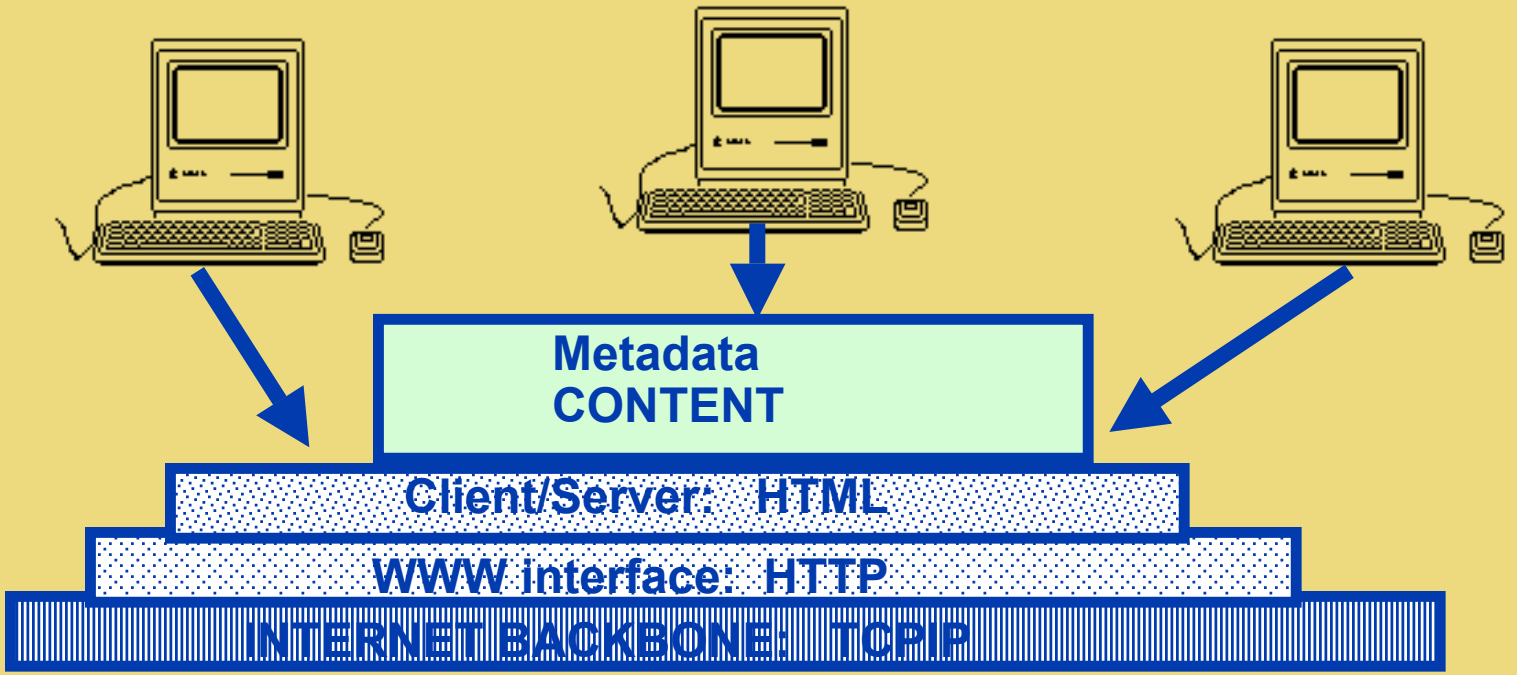
- **Integrity – uncompromising adherence to ethical principles**
- **Ability – capacity to perform**

Explosion of the WWW



PICS
Platform for Internet Content Selection

Web Architecture



Safety Rules for Children

My Rules for Online Safety

1. I will not give out personal information such as my address, telephone number, parents' work address/telephone number, or the name and location of my school without my parents' permission.
2. I will tell my parents right away if I come across any information that makes me feel uncomfortable.
3. I will never agree to get together with someone I "meet" online without first checking with my parents. If my parents agree to the meeting, I will be sure that it is in a public place and bring my mother or father along.
4. I will never send a person my picture or anything else without first checking with my parents.
5. I will not respond to any messages that are mean or in any way make me feel uncomfortable. It is not my fault if I get a message like that. If I do, I will tell my parents right away so that they can contact the online service.
6. I will talk with my parents so that we can set up rules for going online. We will decide the time of day that I can be online, the length of time I can be online, and appropriate areas for me to visit. I will not access other areas or break these rules without their permission.

NATIONAL CENTER FOR MISSING & EXPLOITED CHILDREN

Sun microsystems The Network is the Computer

UR • LABS

What was RSAC?

RSAC: An independent, non-profit organization set up in 1994. Its mission is to empower the public, especially parents, to make informed decisions about electronic media by means of an open, objective content advisory system.

RSAC

General Content Labeling Issues

- Descriptive vs Evaluative
- Deterministic vs Non-Deterministic
- Voluntary vs Mandatory
- Self-Rated vs Third Party
- Individual User vs Proxy

Descriptive Labeling System

Keebler®

ANIMAL CRACKERS

Nutrition Facts

Serving Size 11 pieces (31g)
Servings Per Container about 29

Amount Per Serving	
Calories 140	Calories from Fat 40
	% Daily Value*
Total Fat 4.5g	7%
Saturated Fat 1g	5%
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 23g	8%
Dietary Fiber less than 1g	3%
Sugars 8g	
Protein 2g	

Vitamin A 0% • Vitamin C 0%
Calcium 0% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

INGREDIENTS: ENRICHED WHEAT FLOUR CONTAINING NIACIN, REDUCED IRON, THIAMINE MONONITRATE (VITAMIN B1) AND RIBOFLAVIN (VITAMIN B2), SUGAR, VEGETABLE SHORTENING (PARTIALLY HYDROGENATED SOYBEAN AND COTTONSEED OILS), CORN SYRUP, SALT, LEAVENING (SODIUM BICARBONATE, SODIUM ACID PYROPHOSPHATE, MONOCALCIUM PHOSPHATE), SOY LECITHIN AND ARTIFICIAL FLAVOR.

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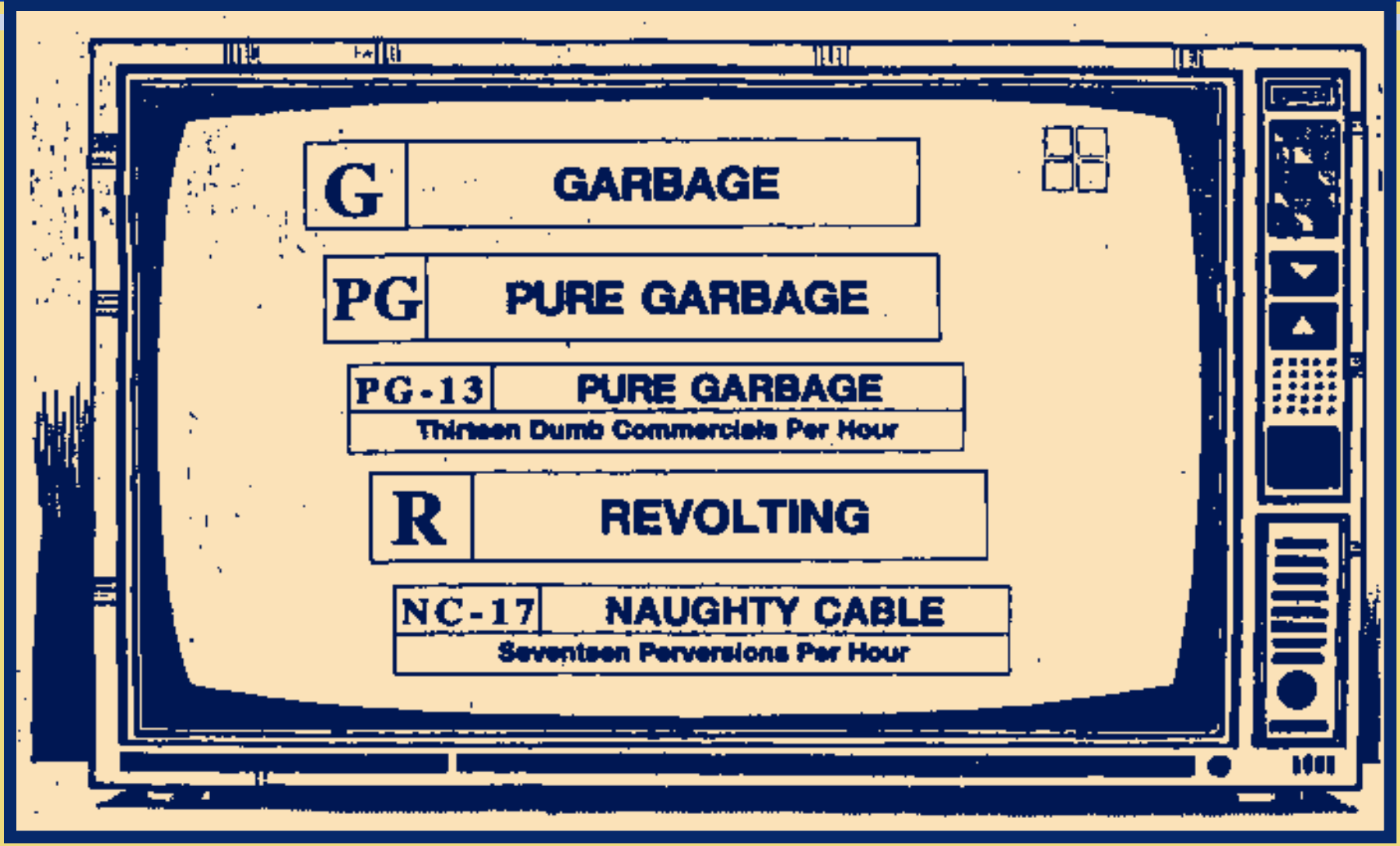
Evaluative Labeling System



Computer Game Rating Systems

Comparison of Electronic Game Rating Systems

	RSAC	ESRB
platform	computer based	video, computer based
mandate	voluntary	required to license
rating method	self-rating	anonymous rating board
rating basis	content based	age based
system	open to public	closed
numbers	400 games, >3,000 sites	several thousand games
organization	independent, non profit backed by SPA	independent, non profit backed by IDSA
on Internet?	YES	NO

Content - Based System

		Level 1	Level 2	Level 3	Level 4
	**VIOLENCE** Harmless conflict, some damage to objects	Creatures injured or killed; damage to objects, fighting	Humans injured or killed; with small amount of blood	Humans injured or killed, blood and gore	Wanton and gratuitous violence; torture; rape
	**NUDITY/SEX** No nudity or revealing attire / Romance, no sex	Revealing attire / Passionate kissing	Partial nudity / Clothed sexual touching	Non-sexual frontal nudity / Non-explicit sexual activity	Provocative frontal nudity / Explicit sexual activity; sex crimes
	**LANGUAGE** Inoffensive slang; no profanity	Mild expletives	Expletives, non-sexual anatomical references	Strong, vulgar language; obscene gestures	Crude or explicit sexual references

Please click the back button when you are finished.

RSAC

- RASCi Launched on the Internet (April, 1996)
- Evolved as alternative to CDA (1995)
- Protecting children
- Protecting free speech
- A technical solution to social problem
- Sponsors: Microsoft, Compuserve, Dell

RSACi Content Advisory Levels

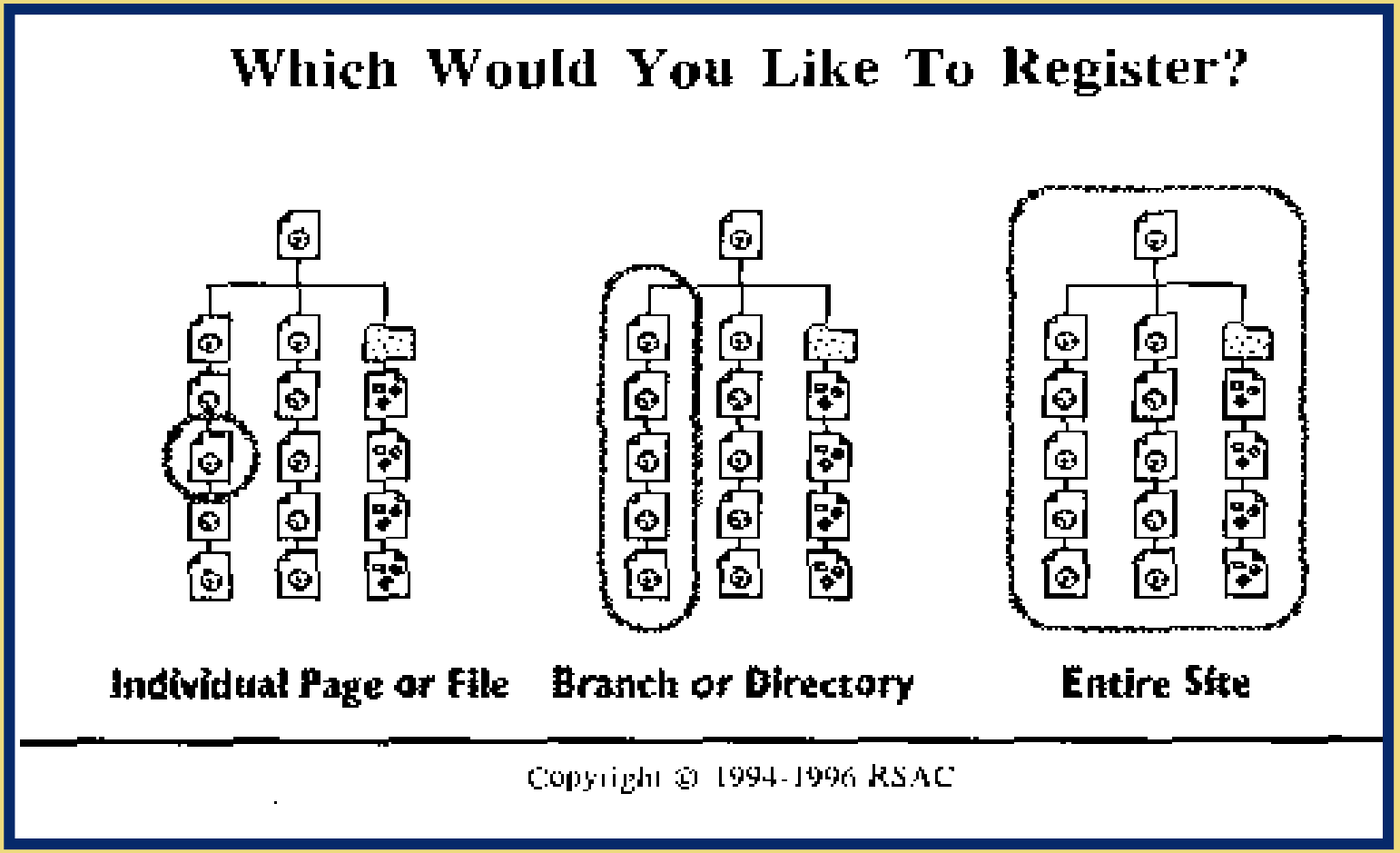
LEVEL 0	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
VIOLENCE: content may include				
Harmless conflict: some damage to objects	Creatures injured or killed; damage to objects;fighting	Humans injured or killed with small amt of blood	Humans injured or killed; blood and gore	Wanton and gratuitous violence torture; rape
NUDITY: content may include				
No nudity or revealing attire	Revealing attire	Partial nudity	Non-sexual frontal nudity	Provocative frontal nudity
SEX: content may include				
Romance; no sex	Passionate kissing	Clothed sexual touching	Non-explicit sexual activity	Explicit sexual activity; sex crimes
LANGUAGE: content may include				
Inoffensive slang; no profanity	Mild expletives	Expletives; non-sexual anatomical references	Strong, vulgar, or hate language; obscene gestures	Crude, explicit sexual references; extreme hate language

Example of an RSAC Meta-tag

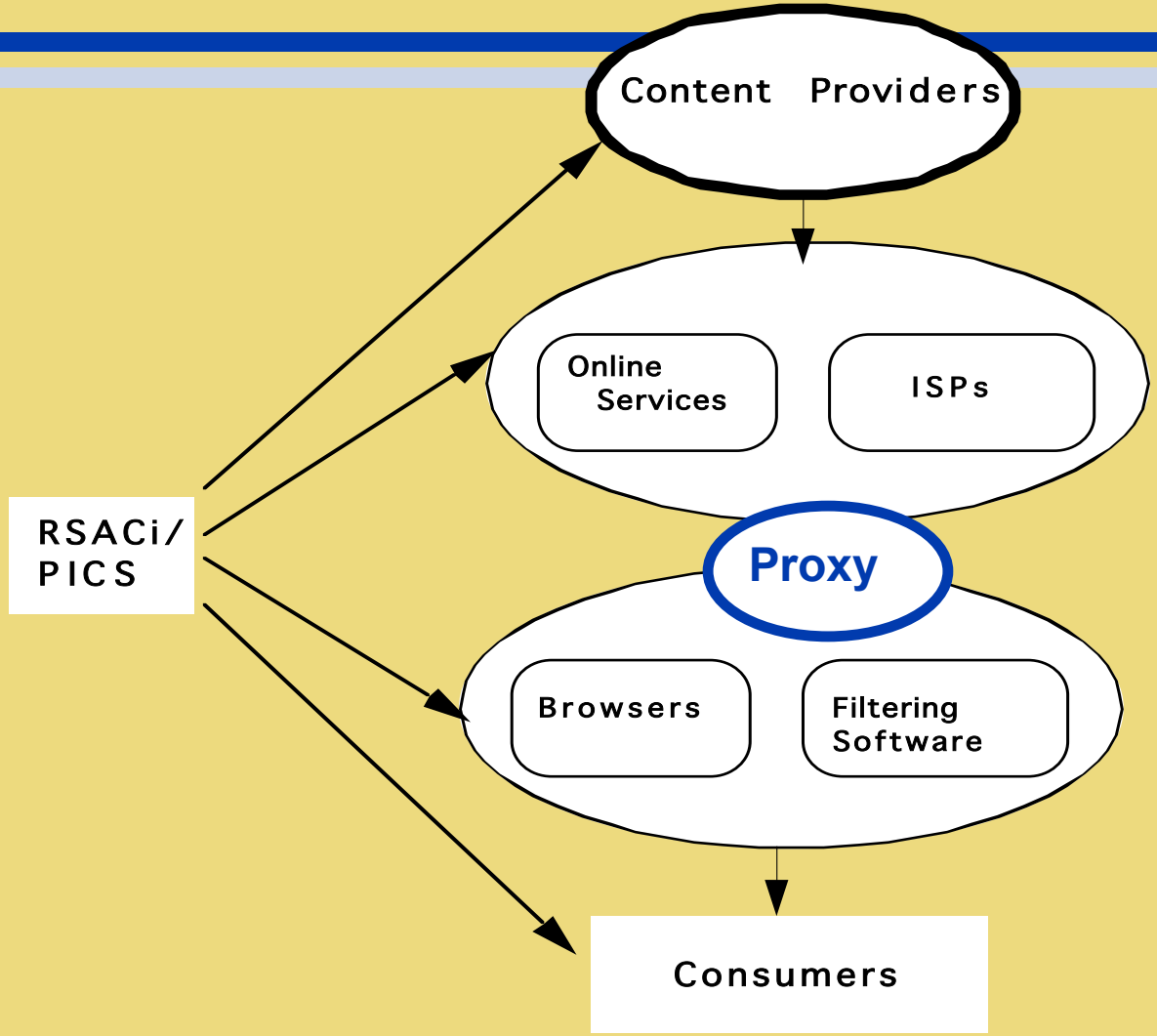
RSAC label that describes language (l=3), sex (s=2), nudity (n=2) and violence (v=0):

(PICS-l.0 “http://www.rsac.org/vl.0/" labels
on "1997.11.05T08:15-0500" until "1999.12.31T23:59-0000"
for "http://www.gwu.edu/stuff.html”
by "Dianne Martin" ratings (l 3 s 2 n 2 v 0))

Granularity of an Advisory



Content Flow on Internet



Evolution of Labeling Systems for Interactive Media

- Content Labeling Issues
- RSAC -> RSACi -> ICRA
- Bertelsmann “layer cake model” for content labeling, filtering

The ICRA Model

- Distributes work of rating between 1st and 3rd parties
- Technically more complex than RSACi
- Socially more complex - allows context, different cultural value systems
- Usability

Location : http://www.icra.org/ What's Related

WebMail Radio People Yellow Pages Download Calendar

INTERNET CONTENT RATING ASSOCIATION

Hosted by CABLE & WIRELESS

ICRA MEMBERS thus

ABOUT ICRA
CONTACT
PRESS
SUPPORT
HOME

Deutsch
FranÁais
EspaÒol

Language (No additional definition is felt necessary)

- ☐ Explicit sexual language
- ☐ Crude words or profanity
- ☐ Mild expletives
- ☐ None of the above

Other topics [*Definitions*]

- ☐ Promotion of tobacco use
- ☐ Promotion of alcohol use
- ☐ Promotion of drug use
- ☐ Gambling
- ☐ Promotion of weapon use
- ☐ Promotion of harm against people
- ☐ Material that might be perceived as setting a bad example for young children
- ☐ Material that might disturb young children
- ☐ None of the above

Chat [*Definitions*]

- ☐ Chat
- ☐ Moderated chat suitable for children and teens
- ☐ Neither of the above

The Layer Cake Model

- Green, Red Lists
- Templates

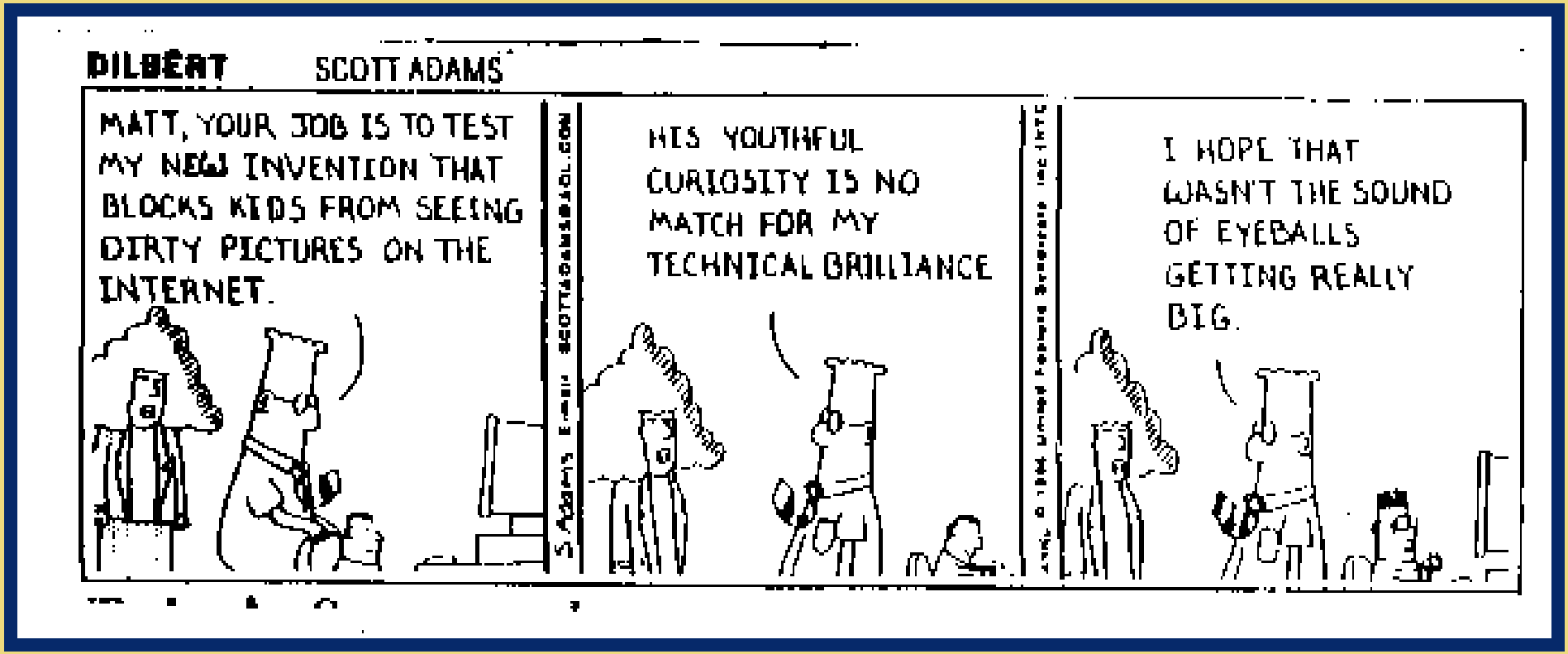
- Common
  Vocabulary

- Software Specs (PICS)
- CONTENT

Progress so far...

- ICRA created in 1999 - industry initiative
- ICRA Advisory Council to vet the new system
- Received an EU development grant
- PICS and PICS Rules-based
- Common vocabulary - 40 terms
- Open source template system
- Let 1,000 flowers bloom! Launched 2001

Can Browser Filters Work?



Do Browser Filters Work?

Esther Dyson in Jan, 1997, Release 1.0:

"The truth is, filters can be bypassed by extremely clever kids, but overall they create a more secure environment to deal with the problems of parental content control better and in a freer way than any government could."

ICANN / DNS

Internet Corporation for Assigned Names and Numbers

- Technical coordination body for the Internet
- Established in 1998; assumed responsibilities performed by US govt. (NSF)
- Coordinates assignment of globally unique identifiers:
  - Internet domain names - org, edu, com, net
  - IP address numbers
  - Protocol parameters, port numbers
- Preserves operational stability of the Internet

ICANN Controversy

- Who made them the boss?
  - US govt and broad industry coalition
  - Develop policy through private sector, bottom-up, consensus-based means
- De Facto government of the Internet
- Uniform dispute resolution (court)
- No coercive or legislative power

Acknowledged Problems

- Still not fully organized, incapable of taking on entire responsibility of DNS management
- Ineffective, too slow to react to problems
- Bogged down with processes
- Under-staffed, under-funded
- Low confidence level
- Purely private sector body impractical

ICANN Core Values

- Openness and broad participation
- Transparency of operation
- Consensus based
- Main weakness - isolated from real world institutions - governments- whose backing and support are necessary for legitimacy and funding.

What ICANN Can't Do

- Innovate new institutions of global democracy
- Achieve mathematically equal representation of all affected individuals
- Regulate content
- Solve the Digital Divide
- Embody some idealized process
- Diverted ICANN from core mission

What ICANN Can do

- Provide effective and efficient management of the DNS
- Abstain from actions that interfere with innovation and creativity or stifle development of new technology
- ICANN mission is stewardship and operational stability, not preservation of status quo!

An Open Question- How much should (can) the Internet be regulated?

- Operational stability
- Access
- Taxation
- Legal protection of trade, property, personal safety, transactions
- Dispute resolution
- Content

Final Idea: The Power of Code

- The most powerful regulator
- Technical standards exert subtle control
- Subtle and obscure in the hands of a sophisticated government
- Laws can actually be more transparent and democratic
- Highlights importance of ethics!