A common misperception about the Internet is that it’s a homogeneous environment. Everything in it is accessible to everyone; there are no boundaries. It’s all a cesspool of anarchists, terrorists, dope fiends, dirty pictures that can reach out and snatch unwary children... It’s also a hotbed of fraud and insecurity. It has no central control, and people can vanish into it, safe from law-enforcement. That’s why we need strong government oversight and some universal laws to make it a safe place.

In fact, all the above is misguided. The Internet is not a homogeneous place -- and as a medium that will support millions and even billions of individuals and organizations, it shouldn’t be. Diverse already, it will only become even more variegated and local as it gets built up and civilized. In this and the forthcoming February issue of Release 1.0, we outline how it’s likely to happen -- and offer encouragement for the mechanisms that will foster this progress.

The Net is already full of boundaries -- everything from domain names and passwords to language barriers and payment requirements (see Release 1.0, June 1996). Moreover, even things that are accessible must usually be downloaded or visited. Yes, you can be part of discussion groups, whether through mailing lists, Websites or chats -- some restricted, some open to anyone. But you have to get to all these places; they don’t grab you. You can also sign up for the new proliferating "push" services which send you stuff automatically -- but only once you’ve asked to be so bothered.

But whatever is out there is not usually clearly marked. You may follow a link to something unexpected, and offensive. You may get e-mail from someone you don’t know...and would not care to meet. You may inadvertently leave some data behind that you’d rather not disclose. How can you tell beforehand?

The question of "how to govern the Internet" is popping up all over, from people concerned with everything from objectionable content to financial fraud and loss of privacy. Like it or not, governments all around the world, from the United

HAPPY NEW YEAR!
States to Russia (where the Duma held hearings on "the future of the Internet" on December 17), are trying to regulate the Net and people's behavior on it. The World Intellectual Property Organization just concluded a meeting in Geneva trying to promulgate new, restrictive laws to handle copyright protection on the Internet. The European Commission is asking local governments to foster self-regulation -- or else. Countries such as France and Russia restrict and monitor the use of encryption, and others restrict international traffic into and out of their territories.

Many people would prefer to see traditional government stay out: "We can handle our own problems, thank you!"

Well, we do need governance on the Net; we just don't need the kind of governance we're likely to get if we don't take action for ourselves. Many libertarians would like absolute freedom, but that doesn't work in real life and it won't work on the Net. Not all people are inherently good or even well-behaved, and they can make it pretty miserable for the rest of us. Precisely because the Internet empowers individuals to exercise their own rights, it increases their power to infringe on the rights of others.

So we must consider how governance is to be applied. Certainly the territory shouldn't be handed over to a single government. But if you give it to several governments you will create conflicts, since the Net's borders don't coincide with those of any terrestrial regime.

Just do it!

Meanwhile, self-regulation can solve many problems...and has the advantage that you don't need to wait for any government action or large-scale agreements (although frequently the threat of government action hastens such efforts). All you have to do is get a bunch of people together and do it!

This issue of Release 1.0 and the issue planned for February describe several groups that are just doing it! Overall, we attempt to define how the Net can be governed in three specific areas -- content selection/ control in this issue, privacy and security in the February issue -- in a way that allows maximum choice to individuals while protecting the rights of other individuals. Such a happy outcome is not possible in all areas, to be sure. But in these three areas you can use market mechanisms rather than one-size-fits-all regulation to achieve not just the best set of rules for the majority, but different sets of rules that people can pick for themselves, whether going to a community or simply visiting a site.

In a sense, we're talking about creating virtual governments (or self-regulating communities) that people can select for themselves, according to which rules they want to live by in a particular context. That is, you can use one group's rule-set for privacy, and another for content selection. Underlying those different rule-sets, we do still need a more general set of rules -- and dispute-resolution mechanisms -- that govern the disclosure, acceptance and observance of all rule-sets.

Communities can set their own rules as long as they are clear about what the rules are.

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These rule-sets -- whether they govern use of language, privacy principles or security standards -- have great moral authority precisely because the people they affect are there by free choice. They are not chafing under

**DISCLOSURE IN THE FINANCIAL WORLD**

Let's look at a specific US example: The Securities and Exchange Commission focuses more on disclosure than on specific regulations -- despite the amount of paperwork it requires and certain specific restrictions. Almost any company can raise money from the public as long as it properly discloses the risks involved, the interests of the principals and other items. (We remember a company that went public in the Eighties not just with negative profits but with negative revenues: It had more product returned in the previous quarter than it had managed to sell.) The formal term is "material information," including earnings, transactions with related parties, potential and actual liabilities, and information about employees, customers, products and the like. But as long as the information is disclosed, the SEC has no problem.

Of course, the SEC is not a perfect model. It can get unduly paternalistic. And as FTC commissioner Christine Varney notes, "Sometimes the disclosure is incomprehensible; the government should require meaningful discussion of risk" -- instead of rote adherence to specific formats. (Does "The CEO was convicted as an ax murderer" come under "certain transactions," or under "management background"?)

When it comes to less sophisticated non-investors, or consumers, the Federal Reserve has a more specific disclosure formula -- the Annual Percentage Rate on certain kinds of consumer deposits and interest charges. Consumers were getting confused because there were so many ways to present the information. Some states regulate credit-card rates, which means it's hard for people with poor credit ratings to get credit at all. The wiser states figure almost any rate is fair as long as it's disclosed -- and so it is, at least in a market where consumers understand their options and have free choice.

The relevant point here is that the regulations do specify a format for revealing the information, but they do not specify what the information should be.

Says Varney, an unusually enlightened regulator: "If there is an appropriate role for government it could be in prosecuting fraud and deception. Voluntary systems of standards or ratings, whether for privacy or content, are more likely to be effective when backed up with strong government enforcement against misstatement as either deception or fraud. Indeed, the administering body of a rating system [or any particular rating bureau] could refer abuses of their system to us, as the Better Business Bureau does now. This could lead to more consumer confidence in private market-based systems, and it would allow government rather than business to shoulder the burdens of reining in the most egregious abuses of private and presumably proprietary systems."
rules imposed by some government they may have voted against (or voted for reluctantly because the rules came as a package deal and they had to take the bad with the good).

Don't regulate; annotate!

Many people believe that the best way to control behavior is through laws and enforcement mechanisms. The laws can be implemented as specific regulations, which in turn can be interpreted by a court if necessary. That's pretty much how we do it in the US, in all too many cases. Certain things are best handled by law -- murder, for example. But for many purposes, laws are inflexible, and regulations are often even worse. For most things other than murder, it's hard to get worldwide agreement -- and even about murder there are different concepts of extenuating circumstances.

In a large number of areas of human activity, individual tastes legitimately vary. Some people find certain language offensive; others find it refreshing. Some like to maintain their privacy; others are happy to share their secrets with the world. Some like religious imagery; others find it offensive. Some expect to have others look out for their welfare; others reject paternalism. Some like risky investments such as Netscape and Yahoo!; others prefer the safety(?) of AT&T and IBM. In the world at large, we often have to live with others' preferences: no Christmas trees in the town square during the holidays, but secular advertisements all over the place. Loud and boring talkers next to us on an airplane. Pretentious statues on neighbors' lawns.

In the online world, it's easier to find congenial neighbors, to join conversations that suit your tastes, and so on. You can do so without inflicting your preferences on your neighbors. Now you no longer have to take your privacy regulations along with your content controls; you can select different regimes for each. The trick is labels and disclosure.

Ideally, a person can use these labels to pick things, or instruct a browser where to take him or what to avoid automatically. And ideally, they would work perfectly. Adults could always get what they want and could control what their kids see. The truth is, the filters can be bypassed by extremely clever kids, but overall they create a more secure environment and deal with the problems of parental content control better and in a freer way than any government ever could.
LABELING CONTENT

So how does this actually work for content?

Well-meaning people's first reaction to problems with offensive content is often that the government should control it, so that children aren't exposed to filth, people can't print lies, terrorists can't find bomb-making instructions, invalids can't be led astray by quacks. Someone must set standards! In some countries, governments want to limit the proportion of foreign (or foreign-language) material, liquor advertising, or what China memorably calls "harmful material" -- as in "harmful to the Chinese government." You may or may not think any of these goals are legitimate, but how are they to be achieved?

The answer is to label the content, and then allow people to make their own choices. The technical issue is how these labels should work. For example, do we want something like the Annual Percentage Rate that specifies a particular way to present a limited range of information?

That doesn't make sense in terms of rating content -- even though Hollywood handles movies this way, and the US broadcasting industry is trying to enforce a similar system for television...and who knows what else? The one-rating-fits-all-varieties system may not technically be government control, but it comes too close to central control to operate much differently in practice.

In fact, there are many different ways to rate, say, sexual material, and many different preferences/aversions among consumers and parents. It makes more sense for various groups to have their own standards for content, from age-based ranges to religious issues, violence meters, and the like.

What is needed is a broad technical standard for presenting each group's assessments, in a way that lets software as well as people know where to find the label and how to read it. It's the equivalent of a packaging standard specifying the location, type size and structure of a label, without requiring it to be in ounces or grams -- or even requiring it to include weight at all. The consumer can decide what he wants to know.

Ideally, there should be a standard form of attribution as well, so that you can search for labels from a rater you trust, and some means of authentication of rater, product rated and the rating. Optionally, of course. Anyone could rate something anonymously -- and anyone else could decide whether to pay attention to such unsourced ratings.

In fact, such a standard has just emerged -- the Platform for Internet Content Selection. Earlier this month the World Wide Web Consortium (W3C),

1 Or governments may mandate the choices, not an approach we like, but one that is eminently possible and even likely in some places. Government control of content is inherently coercive -- and not usually totally effective, thank goodness! Yet people in the US tend to forget that governments can shoot people or lock them up, so that what is technically possible may still be practically dangerous. Seeing your neighbor dragged away at midnight has a deterrent effect. More on this in the future.
the people who define most standards for the Web, announced PICS as a formal standard.

**Platform for Internet Content Selection (PICS)**

The PICS effort began in the summer of 1995; the Communications Decency Act was in the air, but not yet passed. A variety of groups including the Electronic Frontier Foundation and the Center for Democracy and Technology, and many companies and people felt there just had to be a better way than government regulation of content. In August 1995 they convened a meeting under the auspices of the W3C. Their goal was to define a technology platform (like the Web itself) on top of which people could define their own content. PICS is a set of Web-oriented protocols for how ratings can be expressed, distributed and parsed, not a rating system in itself.

"We already had a technical agenda at W3C," says Paul Resnick, a researcher at AT&T Labs who is also chairman of the PICS Steering Committee. "We were already thinking about metadata and annotations, and we leveraged the political agenda to get it through." Although the original impetus came for rating content for suitability for children, many of the participants see it as far more extensible than that.

Now, many meetings and much work later, PICS implementations should start proliferating. The W3C seal of approval -- ratified by the Consortium's 160-plus corporate members -- gives the standard broad credibility. (Not all members voted, but all who voted approved the standard. The W3C won't give further details, notes Resnick, "but you can say that we did better than the US elections.")

PICS, then, is a technical standard for labels. It allows any PICS-enabled browser or other tool to find and interpret the label on any piece of content or Website. Furthermore, anyone can publish his own label for any URL for interpretation by other PICS tools. And vice versa: A user can specify not just which ratings but which rating service he wants to trust. Of course, not every page is going to carry the ratings for all the different services; widely-rated sites would soon get overloaded. Just as in other markets, some rating services will be more widely consulted than others.

Service bureaus will maintain electronically readable lists of labels not posted on the sites themselves. Thus you can go to, say, the Sunny Valley site and find everything selected by the PTA for kids 8 to 10 (assuming there is proper support for such searches, and not just filtering). You can also, with slightly more sophisticated software, have your browser consult several services: "I want only sites rated 'A' by the Catholic Church; 'D2' by Healthy Living; and 'suitable for 9 and up' by the Sunny Valley PTA."

The system has its imperfections, but it is becoming relatively simple for both self-raters and parents to use as appropriate tools are developed. Parents can set their own desired level of the various factors, rather than

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2 Speaking of disclosure: Esther Dyson is chairman of the Electronic Frontier Foundation.

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relying on a simple age scale like that of the Motion Picture Association of America's. (Juan's eight-year-old may be more mature than Alice's ten-year-old; only Juan and Alice know for sure. And Juan may care most about sexual content, while Alice deplores violence.)

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Diversity in ratings: "One man's meat is another man's sex organ."

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The wonderful thing is that this approach can do more than just protect children. For example, it can allow an adult to find articles rated "insightful" by their favorite critic; all recipes rated spicy by Julia Child, or all sites rated "pure French" by the French government. It could also be part of a requirement by the French government that all browsers used in France measure the user's time spent viewing French and non-French content, sending the user a warning when the proportion of non-French content is too high. Sound ridiculous? Maybe. But the technology is capable of doing both clever and outrageous things.

How it works

We won't go into great technical detail here, but... The PICS labels follow a defined syntax. They can be embedded in a site's HTML, or expressed as part of the http stream between the client and the site. Or they can be expressed standalone and matched to a URL, as happens in the third-party label bureaus. A site can create its own PICS label, and it can also incorporate PICS labels generated by others into its site. Thus some tools that can filter PICS labels posted on a self-rated site cannot necessarily read all PICS labels, especially those posted in a formatted list on a particular PICS label bureau. Buyer beware: The expression "supporting PICS" has a lot of gradations!

Right now, the protocols and the infrastructure around them are designed for matching and filtering: Select a URL, go to the site and see how it's labeled, or look at the http stream it generates back. In the future, it will also be able to work more like the search engines, so that multiple PICS specs can be used to search and match within a database of ratings.

Beyond filters

Long-run, the most powerful use of PICS will include more than just a parser/filter, but agents that can execute complex queries with ranges, limits and Boolean logic, allowing a user to specify various combinations of labels to look for or avoid. In principle, PICS labels could be used by any application, for better or worse. Imagine a tool that automatically selected names from any site labeled above a certain rating for violence and sent out solicitations for guns or dangerous work of dubious character. Or a resume filtering tool could check out the URLs of prospective employees' employers to screen (in or out) for various kinds of affiliations. (Or you could use it to do research before the screening, to find out what sort of background correlated best with successful employees.)

Indeed, PICS is a fine technology for agents -- the hot new software category that everyone wants but few people define. (Our version: Agents are autonomous programs that can be directed by users to perform a variety of
The big problem with agents is usually specifying the precise conditions and objects that they might encounter; PICS is a wonderfully extensible protocol for doing just that. Now we just need to develop the agents to use it!

Like any standard, PICS will gain value the more broadly it is used. Right now, it is starting to show up in various guises: in labeling tools and services, in the proliferation of ratings both from sites themselves and from third-party sources, and in filtering tools and browsers to use them.

**Labeling tools and services**

The biggest problem is that although many companies are now supporting PICS in their browsers, the folks who create Website development tools don’t seem to have even heard of the concept.

Soon, a variety of Web development tools should allow one to build PICS labels semi-automatically, although mostly we are back in the early stages where people have to write their labels by hand following a defined syntax. Remember when people had to write HTML code straight, before the days of FrontPage, PageMill and the like? With luck, those tools and others will soon offer a PICS-labeling feature as well.

IBM’s next release of its Webserver (4.2) will have good support for management of PICS labels, keeping them separate from the page content. This means that it’s a good system for a label bureau, since it can match URLs and labels without inspecting the pages themselves. Even later next year, says staff programmer Martin Presler-Marshall, IBM will come out with a new proxy server that can filter for PICS labels, either for the client machines it serves as a group, or for specific user IDs and IP addresses.

**Labels**

Then there’s the content: the result and the purpose of the whole infrastructure. So far approximately 200,000 sites are PICS-rated. That’s a very rough number, because it’s impossible to account properly for double-counting and inaccurate estimates by raters -- but it does indicate that the system is gaining momentum. Nor are all the self-ratings "good" and the third-party ratings "bad." For example, of the 12,000 sites self-rated through the RSAC1 ratings service (page 21), about 3,000 rate themselves as having some sex, violence, nudity or vulgar language. Many adult sites are eager to keep children -- and government scrutiny -- away. Rating services provide both good lists and bad lists, or what Cyber Patrol calls CyberNOT and CyberYES lists. Parents can either limit their kids to "good" sites, if they want full control, or simply block out bad sites, if they have less concern about what their kids are up to.

SafeSurf, a volunteer effort managed by a for-profit company, has already rated about 60,000 sites with PICS. Use of them is available to anyone who visits the sites in questions with a PICS filter. All these efforts are described in detail beginning on page 14.
Filters

On the filter side, Microsoft has a PICS reader in Internet Explorer 3.0, while Netscape has promised to offer one soon. The IE "Content Advisor" defaults to no controls, but if you do want ratings, the RSACi ratings are the default choice. (Microsoft also bundles SurfWatch, to supplement what for now is a still limited range of PICS ratings.)

Netscape has announced support for PICS and is solidly behind it in principle, but it is unlikely to have a product for either client or server much before the end of 1997. Company employees such as Martin Haeberli vigorously support the concept, but there are other priorities, such as the focus on intranets...

CompuServe provides a full version of the PICS-oriented Cyber Patrol filtering tool, downloadable free to its members; AOL offers its own parental controls based on Cyber Patrol technology and its ratings database.

MODELS FOR RATINGS

Rating content is not an easy task. There is one broad distinction -- between ratings done by a site/service itself, and those done by third parties. Let's consider self-rating first.

In principle, self-ratings are likely to be most accurate since people know what they are producing. There are two major problems: They may have an incentive to fudge the truth -- in order to gain a wider audience, for example. Second, Juan's criteria for rating his site may differ from Alice's criteria for rating hers, even though they use the same terms and the same rating scale. The best way to overcome this is to have certain objective criteria, such as RSACi's. (As will be noted on page 21, RSACi has provisions for spot checks -- matching self-ratings against those derived by a panel of experts -- and responses to complaints.)

Generally, self-ratings are maintained on the Websites themselves. That means they are conveniently available for filtering, but not so handy for matching search criteria. Most non-PICS labels are maintained in some kind of database by the originator; the goal of PICS is to make the rating environment more decentralized, but it will need to allow for centralized searching as well. This tension between centralization for management and decentralization for all kinds of good things such as third-party ratings is a continuing feature of the Internet.

Third parties: Distributed ratings

Of course, the Internet covers territory much broader than a relatively defined universe of a few thousand games or movies a year. Moreover, we're considering not just software and static content, but also mailing lists, chat rooms, discussion sites, newsgroups and of course constantly changing streams of content at sites that are updated continually.

This is ideal ground for a proliferation of third-party raters, or trust and reputation services. We expect to see a lively marketplace of competing rating services -- just as in the real world there are restaurant

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ratings, seals of approval, best picks in magazines, reading lists from high schools, rankings of legislators by political groups, top-10 lists, special college issues and the like. In the online world, where communities are more far-flung, such systems make even more sense.

One can imagine rating systems for almost any characteristic that is easily specifiable -- or for any group's or individual's judgment. And they can rate locations or places or communities as well as static content. Some rating systems simply look at the words used, but the more sophisticated ones make judgments on a different basis -- more like editorial judgment. This site is filled with mature people with an interest in social action; that one is best-suited for teenage girls who want to talk about boys, models and make-up; that one is for my teenage girl, with discussions about female pilots, doctors and executives, such as Margaret Thatcher, Kay Graham and Carol Bartz, CEO of Autodesk.

Rating services will arise to rate other rating services. And of course there will be more rating services in general, because they will be easier for providers to set up and for customers to find and use. Want to know what people think of the airline you're considering flying, or the hairdressers in your new neighborhood, or the acupuncturists?

Moreover, companies such as Firefly Network (see Release 1.0, 11-96) will allow people to find their statistical matches -- people whose tastes most closely correspond to their own. In return for using other individuals' ratings, you simply have to post your own. Could you define your interests through a PIGS label? In principle, it's possible... although there are privacy issues to consider. You might not want to expose your interests to everyone -- just to people who share them. That's why such services will end up going through intermediaries; more in February.

The value of such systems is that they celebrate diversity rather than obliterate it. Like-minded people and content can find one another and cluster, instead of losing out to majority preferences.

Business models

One question any company interested in PIGS has to ask is: What's the business model? For software vendors, PIGS support is a handy feature -- one that should be de rigueur within a year. And content providers will soon recognize the value of rating their own content. But whose rating scheme to use? Who will go to the trouble of developing ratings as third parties, and how will those third parties get paid? Meanwhile, consumers have to decide which ratings services to trust.

Currently, most of the ratings/filter vendors are trying to gain market share through OEM deals with companies such as AOL (the lucky ones), various ISPs and modem manufacturers. The OEMs may not be making money themselves, but they're willing to pay a few cents extra a head to make their products more attractive. The initial lure of "use my browser/filter to use my rating service" won't apply once PIGS becomes prevalent. Later, says Brian Milburn of CYBERSitter vendor Solid Oak, his hope is to make money on Internet sales; retail-store sales aren't terribly lucrative because packaging and distribution costs eat up most of the revenues. Other companies, such as SurfWatch and Cyber Patrol, are going after the corpo-
rate market. Currently, companies such as SurfWatch and Cyber Patrol offer the paid-product/ free-service approach: You pay for the filtering tool, and get the service -- access to updated ratings -- for a specified period.

Open PICS platform makes profits a challenge

But this business model is tough: A major goal of PICS is to separate any particular browser/filter from any particular ratings set; the standard means that any filter should work with anyone's ratings. And since there's no monopoly or even clear market leader on either side, exclusivity doesn't bring much benefit. About the only company that really seems to get this point is Net Shepherd, which sells not just filtering tools and access to a ratings database, but also sells the tools for communities and other groups or companies to build their own ratings bureaus, with whatever business model they choose.

These rating services themselves may charge for access to their labels or service, or they may try to sell advertising. However, a second major goal of PICS is to make labels machine-readable so that a search or link can be automatically completed or restricted. The way to use a ratings service is not to look at it, but to use it behind the scenes to guide access or searches. Therefore, it doesn't really offer much opportunity to display advertising. (And any rating service that sold its ratings would soon go out of business, we hope!) However, some specialized ratings services may present themselves as search tools or as push tools, so that they could sell their own ads.

Continued evolution

The best business models will continue to evolve. In the long run, the value-added and the recurring revenues are likely to reside in ratings databases delivered as software-enhanced services, continually updated.

Many of the initial ratings services will be voluntary and membership organizations -- schools, teachers' associations, religious groups, interest groups of various kinds such as the visually impaired who might rate sites for accessibility, political/moral/social-action groups such as Girls Inc., People for the Ethical Treatment of Animals and Mothers Against Drunk Driving. Then there will be self-regulatory organizations such as RSACI and InternetWatch Foundation in the United Kingdom. The European Commission is suggesting that the ISPs in each country form such groups -- or it will do so for them! So yes, some misguided governments may try to require their citizens to use certain filters...

Ratings-enhanced search

Eventually, as more users start using PICS capabilities with their browsers and other tools, some entrepreneurs (and their investors) will see markets for a variety of rating-related businesses. Many ratings databases will end up being bundled in with the various search services, supported by advertisers rather than customers directly. (The search services will license the use of the ratings databases to make their search systems more attractive to consumers and thus their audiences more attractive to advertisers, but the advertisers needn't be directly involved.)
The Magellan service of Excite, for example, already has its own proprietary list of "green" sites, rated appropriate for children by its own team of reviewers. There's no reason it couldn't offer the SurfWatch, RSACi or Net Shepherd (and affiliates) ratings as well. Cyber Patrol says it is working on ratings deals with some search companies, but won't give further details. In the other direction, SurfWatch has just concluded a deal with Yahoo, to use ratings from the Yahooligans directory of kid-oriented sites. That database (not PICS-compatible) is in SurfWatch's WebTV version and will be in new releases of the SurfWatch product.

Just as you can now select your search service from the Netscape home page, so will you be able to refine your query with a rating spec. A friend of ours complains that he gets too many sex sites even for the most innocent queries. That doesn't happen to us, but maybe he's mostly looking at cars and other "boy" things. He would pay a wee amount extra to avoid those on a regular basis, but he would not want an ISP that totally restricted his access. "I might have to do some research or something," he claimed with a straight face.

As with all such deals, the ratings providers and the search companies will have to negotiate delicate trade-offs between exclusivity and market share.

Bundled into a community

Many ratings services are likely to pay their way as part of members-only services, where revenues are generated through membership or transaction fees. The ratings content won't be charged for directly, but will be included as part of a broader offering. Services offering collaborative filtering, as described last month in Release 1.0, may also find the use of expressive PICS labels helpful (as long as they remember to protect users' privacy!). The Zagats of the Net (ZagaNets?) will soon emerge.

Ratings as assets

Of course, the ratings providers will attempt to control their ratings as intellectual property, and users will likely share them with friends as a dubious exercise of fair use. This shouldn't be much of a problem as long as ratings providers don't get overly paranoid -- and remember that they are providing a constantly changing stream of service rather than selling chunks of content. The fact that sites are constantly changing works strongly in the rating services' favor.

The point is simply that this is not an area to invest in carelessly. PICS itself is rigorously designed to be a standard rather than a profit center. Ratings will generally make money only in the context of some broader service, rather than as a standalone database. But taking a job doing ratings is likely to be a good entry-level career move: the mailroom clerk of the Internet.

Forget the entry-level job at McDonald's! Join the knowledge economy by starting as a Website rater. No experience required! All the Internet access you can stand, at 64K and above!!

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Issues

But the rating approach isn't trouble-free. It begs the question some people ask: Is there some content that simply shouldn't exist -- that should be filtered from everyone? But that's for another time...

Two more immediate issues: Who owns the ratings? And who controls them?

In principle, a service that develops ratings -- whether they are developed internally or gathered from users and Website managers themselves -- owns those ratings. It may offer the use of them as a service to the world at large (as most churches might do) or to members only (especially fee-paying members), or it may sell the (use of the) data and updates to users or third parties. But it needs to negotiate carefully the shoals between obsessive control and losing a proprietary edge. We discussed this dilemma in general in Release 1.0, 1-96.

Meanwhile, if the service owns the ratings, what rights do the subjects of the ratings have -- especially those who have self-rated? Who rates the raters? Do the subjects of ratings get to argue back? To erase them? Dispute them? Even see them? Can they see the data on which they are based? What about a rating service that is sloppy, or one that is corrupt and takes bribes? Suppose Juan has a really bad experience at Alice's Restaurant and badmouths it to all the rating services, which base some of their ratings on consumer feedback?

In the short run, that can be a problem, but in the long run -- fairly quickly the way the Web works -- the market should work. The unreliable rating services will lose customers, and Juan will be exposed as a petulant, obnoxious customer. His restaurant ratings will almost all be negative, and people won't trust his ratings anymore: He'll be rated out of the ratings-service feedback loop. That's because most ratings services will use a large number of raters, and calibrate them against one another. Some reviewers will get reputations for unreliability, and their views will be disregarded. Some sites will use anonymous reviewers, and their judgments will reflect that. People who find a ratings service biased can complain -- and those who share its biases will use it happily.

Of course, we need to start with a market that fosters good practices -- which is what PICS is trying to do. The basic assumption is that people can dispute the ratings, and various services may set themselves up as dispute-adjudication boards. Ratings services with bad ratings will lose market share.

In extreme cases, people may sue under terrestrial laws, but that will be expensive and complicated -- as it is now.
THE PLAYERS

The table below outlines some of the key players; individual companies/organizations are described in alphabetical order starting on page 14.

<table>
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<th>Company</th>
<th>no of users</th>
<th>no of sites rated*</th>
<th>source of ratings</th>
<th>comments</th>
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<td>50,000</td>
<td>2,500</td>
<td>employees</td>
<td>local monitor</td>
</tr>
<tr>
<td>Net Shepherd</td>
<td>NA</td>
<td>*14,000</td>
<td>volunteers, bureaus</td>
<td>support for 3-party bureaus</td>
</tr>
<tr>
<td>PlanetWeb</td>
<td>NA</td>
<td>*44,000</td>
<td>employees, students</td>
<td>focused on games &amp; net devices</td>
</tr>
<tr>
<td>RSACi</td>
<td>NA</td>
<td>*12,000</td>
<td>self-rating</td>
<td>free service, nonprofit org</td>
</tr>
<tr>
<td>SafeSurf</td>
<td>10,000</td>
<td>*60,000</td>
<td>self-rating, volunteers</td>
<td>focus on ISPs, intermediaries</td>
</tr>
<tr>
<td>Solid Oak</td>
<td>NA</td>
<td>2,700</td>
<td>self-rating</td>
<td>free service</td>
</tr>
<tr>
<td>(CYBERsitter)</td>
<td></td>
<td>(reads PICS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SurfWatch</td>
<td>300,000</td>
<td>11,000</td>
<td>employees, contractors</td>
<td>PICS soon</td>
</tr>
</tbody>
</table>

*indicates ratings that are PICS-compatible and available to the general public. Several of the services also control access to other Net resources such as newsgroups or FTP sites.

Note: The numbers are unreliable, and should increase anyway over the holidays. "Local monitor" means that the software monitors the user's activities.

Describing the companies involved in content-rating is a challenge, since they are typical Net companies: They change form and business models with no notice. But that very diversity shows the potential success of PICS: It is fostering precisely the kind of decentralized, pluralistic profusion of products, services and business models that its creators hope to see. Moreover, they are not typical Silicon Valley companies; there is not a Kleiner Perkins dollar among them. Two (Net Nanny and Net Shepherd) have funding from those oil-oriented investment pools that populate the Canadian stock exchanges; one (PlanetWeb) is partly a Silicon Valley re-start. Solid Oak and SafeSurf are very private, and RSACi and InternetWatch Foundation are nonprofit industry coalitions. Only SurfWatch did the traditional Silicon Valley start-up and then got acquired; Microsystems is a standard-issue private company based on Massachusetts' Route 128.

Release 1.0 24 December 1996
Almost all the tools do more than just filter the Internet based on labels. They can filter based on specific words in the URLs, or on a text search of a particular page or site. And they use those tools as well as human inspection to develop or validate the labels.

Two further trends are notable. The first is that many of the vendors are quickly coming out with corporate versions, designed for employers rather than parents, for blocking employees access not just to smut and violence but also to productivity-destroying games, potentially virus-ridden downloaded software and time-wasting chat rooms. They include audit trails, scheduling tools that make a distinction between work time and leisure time such as lunch hours with the rules relaxed to allow game-playing, and user profiles to assign workers to categories with different levels of restrictions. (Some of these are similar to the technical requirements for ISP versions, but implemented with a different flavor. Proxy server versions, meanwhile, don't always allow per-user or group configuration.) This trend makes "real engineers" happy, because the consumer market likes simplicity, while the corporate market is willing to accept a higher level of complexity in exchange for granular control and configurability.

The second trend is to filter what a child or employee sends out -- everything from a revealing home address, a credit-card number or confidential corporate information. "If you can define it, we can block it," says Net Nanny. Of course, "I know it when I see it" isn't good enough for such systems, but character strings such as a credit card number are easily detected and filters. Says Net Nanny: "At least they won't be using your [credit] cards!" However, the technology isn't foolproof, even though Net Nanny's for one is based on powerful underlying pattern-recognition tools. It may block innocent but misspelled words, or let out slight variations that may be revealing. Thus, it may offer a false sense of security.

Not listed here, Novell is promoting similar capabilities in its newest version of NetWare, in an approach called border services that supports monitoring of what comes in and what goes out of any corporate Intranet. You can expect to see similar positioning from many infrastructure and middleware vendors over the coming year.

Diversity in content; diversity in companies

The companies/offerings that are listed here range from dedicated everyone-to-his-own-shared-value ratings (Net Shepherd) to targeted-at-conservative-families-and-proud-of-it (CYBERsitter). Cyber Patrol (Microsystems) is probably the most traditional corporate-style company, with an existing business in corporate scheduling tools, while SafeSurf is essentially a volunteer effort turned for-profit in order to sustain its existence. Net Nanny has a strong technical background in telecom and computer security. SurfWatch was a typical Silicon Valley start-up focused on the single problem of parental control; it is now part of Spyglass, increasingly focused on the brand-oriented corporate market and the Internet device (WebTV) market. OEM-oriented PlanetWeb sells filter-enhanced browsers for game machines and Internet appliances. SurfWatch is generally considered liberal, CYBERsitter conservative -- just the diversity you'd want to find in ratings services that seek like-minded customers. Others focus on providing "objective" information and have less visible biases.
Cyber Patrol (Microsystems Inc.)

Cyber Patrol is a product of Microsystems Software Inc., a private company in Framingham, Massachusetts. Unlike most of the rating services listed here, Microsystems serves the corporate world with products such as CaLANder, a LAN-based scheduling tool, which augurs well for its new corporate version of Cyber Patrol. The company also offers a family of products for people with disabilities (low-vision and motion disabilities); it’s no stranger to social issues.

A key player in the PICS consortium (abetted by geographical proximity to Cambridge), Microsystems is committed to the PICS movement; marketing director Susan Getgood is a member of the Cyber Patrol team and Microsystems' representative to PICS. Cyber Patrol is reworking its filtering service to make it PICS-compatible. Thus, the Cyber Patrol filter can now read RSACi labels with no reconfiguring by the user; on the other hand, users still can’t read all other PICS labels or PICS ratings file -- although there aren’t that many yet.

The company has thought carefully about many of the issues involved, says Getgood, director of marketing. For example, the "CyberYES" list includes about 40,000 sites rated as good for children, with no links to any "bad" sites. Microsystems posts that list as a Website called Route 6-16 with links to the sites on the list, but it doesn’t use PICS labels yet. But it keeps the CyberNOT list confidential, partly because publishing that list would most likely encourage kids in search of adventure to go hunting down the list. Any Webmaster, of course, can find out the rating of his own site -- and ask how it got that rating. "We respond to everyone," says Getgood with conviction. When there are disputes, Cyber Patrol convenes all of its raters, about ten people currently, to rate a particular site, and then averages the results. Those raters are all parents and teachers who are paid to do the ratings; the company eschews volunteers because they don’t provide consistent ratings. The company also periodically convenes an oversight council of representatives from organizations such as the National Organization for Women, the Gay and Lesbian Alliance Against Defamation, church groups and other interested parties.

So far the Cyber Patrol team has signed up both CompuServe and AOL, who supply it (or a version of it) to their customers free as the default Internet filtering system. The company has also sold it to numerous schools, and estimates it has about 200,000 users -- a very rough estimate! The software sits on the user’s PC (or the school’s server) and can be configured by a parent or other password-possessor. It stores the two lists and whatever other restrictions a parent has set locally; it automatically downloads changes to Cyber Patrol’s list when the user logs on to the Net.

Cyber Patrol is getting good early returns for its LAN-based corporate product as well, says Getgood. Now in beta, it addresses three issues, she notes: productivity, avoidance of liability, and vulnerability to outside security risks. The cost ranges from a high $50 per user in small quantities to $10 per user in batches of a thousand or more.

Microsystems is private and won’t discuss financials, but Getgood says the 65-person business is profitable.
CYBERSitter (Solid Oak)

Solid Oak is a venerable Santa Barbara-based development company founded in 1986 that long did software for other companies; it started selling under its own name a couple of years ago. Its CYBERSitter, first released in mid-1995, is a filter that works with any browser using standard Winsock connections. Its filter originally worked only with its own VCR (Voluntary Content Rating) ratings, which were designed to be much simpler to generate than PICS labels -- sort of the cyberspace equivalent of Jack Valenti's television ratings, except that they're not imposed on an entire industry. "Those [other] ratings services are free now, but sooner or later they'll start charging," says founder Brian Milburn darkly.

Nonetheless, in response to demand, CYBERSitter can parse PICS ratings, in addition to the VCR ratings of an estimated 2,700 sites. It also blocks another 10,000 sites selected by a review committee at Solid Oak or reported by customers or found by search tools looking for offensive words and phrases. Milburn sees his system as the voice of the people -- people too poor or simple to go to a complicated service but eager to rate themselves. "There are about nine companies that do 50 percent of all the [really smutty] content on the Net, and they are glad to keep children out," he adds. "One of them rated 20 different domains that it operates." It and its competitors have all rated themselves with VCR, he says -- and by now probably with PICS as well.

The company won't disclose how many users it has, but it has distributed hundreds of thousands of copies through other vendors. CYBERSitter comes in the box along with a variety of net-oriented products, including those from Hayes, Quarterdeck and McAfee. It also has a deal with VirginNet, the new ISP started by Richard Branson of Virgin Airlines. Or you can download it off the Net for $39.95.

"We target the conservative family; our customers are happy with the sites that we block. That's who we're trying to please -- our customers," says Marc Kanter, director of marketing. The company has gotten into tangles with zealous free speech advocates who forget that freedom of speech includes the right to be very selective about content -- as long as that choice is not imposed on others.

InternetWatch Foundation (UK)

While the United States had (and unfortunately still has) the Communications Decency Act and an overwrought and inaccurate article in Time magazine, the United Kingdom had its own attention drawn to objectionable content on the Net by a series of overwrought and inaccurate articles about child porn on the Net that appeared in the Observer last summer. The industry, more tightly knit and also smaller than its US counterparts, quickly banded together, and the two major associations, the Internet Service Providers Association and the London INternet EXchange (LINX), met with officials from the UK Home Office (which oversees the police) and the Department of Trade and Industry.

With urging and funding from Peter Dawe, the now-retired-from-business founder of Pipex who recently sold his company to UUnet, they set up
SafetyNet, which quickly turned into the InternetWatch Foundation for copyright reasons. Says chief executive David Kerr: "Our first objective was to establish a report line for users to report on illegal material." ISPs undertake to remove potentially illegal material, with or without the cooperation of the poster, and to inform InternetWatch of any problems. If there are continuing problems or in all cases of child pornography, InternetWatch informs the police. "Generally, the understanding is that the police will not pursue cooperative ISPs," says Kerr.

The Foundation's second objective was to decide how to create some kind of rating system for legal material that still might not be suitable or offensive for everyone. Kerr is now in the process of pulling together an advisory board, to be composed of representatives of the ISP business, voluntary organizations and representatives of other media such as the BBC. He will present them with the options and some questions. "One thing is quite clear," he says, "and that is that we'll use PICS. As far as I'm aware there's no UK ratings system, and we need to figure out what it means to have a UK system, how we differ from what you have in the US. How do we deal with local issues and still map to some international rating system?" Certainly in the UK (and Canada and Australia) more than most other countries, US content is extremely "present" by virtue of the English language.

But the UK differs from the US in one important respect: "Whatever we do here," notes Kerr, "has the potential of being adopted all over Europe. The European Commission is watching us closely." He wants to extend the general RSACI approach, but with refinements suggested by members, including a rating of "not suitable for children" even though it may not contain any of the items in the RSACI ratings -- discussions of euthanasia, for example, or perhaps drugs or racial intolerance. The group also plans to launch a program to rate all the newsgroups -- which by their very nature don't have a single person who could do a self-rating. We also think that the inclusion of binary files might deserve a flag -- not a rating, per se, but an indication that a site probably should be rated to make its character clear. Overall, the InternetWatch approach makes a lot of sense; we just hope it doesn't crowd out all alternative systems in the UK -- or in Europe.

Net Nanny

Net Nanny's previous identity was Trove Investment Corporation, a former mining company turned into an investment pool. In 1989, it called in Gordon Ross, a consultant with years of experience in telecommunications and security, to assess some security technology involving keystroke and retina patterns. "I liked the technology so much we bought it and hired the people, and now I'm running the company!" he says.

In 1994, seeing a market in consumer security, Ross launched development of Net Nanny, a tool that applies pattern recognition to watching a user's actions and preventing whatever the system administrator has forbidden. To quote Net Nanny's own Website: "To protect family members from uninvited electronic visitors, parents can load personal information like children's names, home address and telephone numbers. To keep kids from using credit cards online for various unauthorized transactions the appropriate numbers can be loaded into Net Nanny's dictionary. At least they won't be using
your cards! .... Net Nanny isn’t limited in terms of type of content. So you can screen and block anything you don’t want running on your PC like bomb-making formulas, designer drugs, hate literature, Neo-Nazi teachings, car theft tips -- whatever you’re concerned about. If you can define it Net Nanny can block it!" That job of defining it is still a challenge...

With the advent of the Internet, the company developed a list of 10,000 blockable sites, focusing on pornography, violence and hate literature, bombs and drugs. The ratings are done by three employees, contractors and volunteers. This list is in Net Nanny’s own format; user/administrators can see a text version and add or delete sites of their own choosing. Starting in January, they can also configure Net Nanny to use outside PICS ratings with their own criteria and choice of ratings service.

Registered users of the Net Nanny package, who currently number about 50,000, can download the list at any time; it doesn’t update itself automatically. The company sees that as a benefit; the user is in control. "We don’t want to impose our values," says Graham Heal, marketing manager.

Ross stresses that the service is much broader than a Net filter. It focuses on user customization, including filtering by the presence of words and controlling materials sent out as well as what is viewed or downloaded. For example, it sees AOL as a bulletin board, although a large one (!), and can selectively block use of chat rooms, or it can work with virtually any Windows application, blocking use of an application, or e-mail from or to a particular address. All this, of course, is a specialization of the company’s broad pattern-recognition security technology.

The software is sold mostly direct (retail or over the Net, for about $30 to $40, which includes indefinite access to the Net Nanny blocking list). The software is sold through distributors such as Ingram Micro, and there is a Kanji version in the works with a Japanese partner. The company’s corporate version offers pretty much the same capabilities, with some additional auditing features. And oh yes! -- the company changed its name this month from Trove Investment Corporation to Net Nanny International Software Inc.

Net Shepherd

Net Shepherd is a company based in Calgary, Alberta, that recently went public on the Alberta Stock Exchange through a merger with a capital-pool company called Enerstar. The company was founded in 1995 by Ron Warris, a corporate IS manager, who was helping a friend to connect a home PC to the Net. The friend commented how great this would be for his kid, but...

Warris saw a need and an opportunity.

The company is using the $750,000 (Canadian) it gained in the recent financing plus some other funds in a grandiose plan to rate much of the Net. It is attempting to mobilize all the teachers of Canada (and ideally all North America) and other volunteers to rate a substantial portion of the Net using Net Shepherd’s labeling system, based on PICS. In addition, it is working with a Vancouver firm called Mark Trend, which has hired and trained 500 people to do the same, with another 500 to be added. The plan is to jumpstart Net ratings well beyond the puny 200,000 or so sites rated
so far, and rate 60 million pages (or some 10s of millions of sites). The Net Shepherd service is designed to encourage collaborative rating, where individuals and groups can simply add their ratings to the tally for each site. This encourages quality control all by itself. The organizations pay a license fee and can develop not just their own ratings, but their own rating criteria.

The Net Shepherd business model is to sell the tools and services for all this to businesses, schools, companies and what it calls shared-value organizations. Those organizations can build subdatabases of ratings, like the collaborative filtering systems we described in the November Release 1.0. Net Shepherd also stays involved as the manager of the giant ratings database of all the ratings combined, and as the vendor of software or hosting services to the communities that develop their own. Thus a user can see how everyone rated a site, or how just the members of his own group assessed it.

Eventually, the company hopes to team up with a brand-name search service, so that people can search on the ratings instead of simply using them in a binary way for filtering.

Will Net Shepherd’s schemes pan out? We’re not sure, but it certainly has the vision. It has the most interesting Website of the companies listed here, with pointers not just to product information and PICS pages, but to thoughtful political pieces about censorship, self-rating and annotation systems. It also makes a point of its support for French-language services -- a handy thing in Canada...and eventually in France!

PlanetWeb

PlanetWeb is the new home for the assets of a moribund Redwood City company called NewView, which was developing a PICS-based rating system. PlanetWeb, itself owned mostly by management and with an investment from Sega, acquired the assets last fall for use in its own browser, targeted at the OEM market for (of course) game machines and Internet appliances. So far the company has sold tens of thousands of copies of its browser for Sega NetLink systems in the US and Brazil.

The browser includes the PlanetWeb Parental Control System, the former NewView technology. Since Internet appliances do not have local storage, the company has come up with some interesting technical approaches. The client machine is too small to hold its own list of restricted or allowed sites, but at the same time forcing every query to go through a single proxy server would likely result in horrible performance problems. The solution is to send out two messages from the client machine every time the user requests a URL: one to the desired site, and the other to the PlanetWeb server. The PlanetWeb server resolves the query against its list and the user’s settings (which are all stored on PlanetWeb’s server), and then sends a message back to the client machine to let it know whether it can display the requested site. This all relies on the fact that any interesting Website takes longer to download than it takes PlanetWeb to clear the transaction. To avoid a single point of failure, PlanetWeb is planning to set up multiple servers at different physical and virtual locations. We
just hope it doesn’t get too successful too quickly -- such as the day after Christmas!

Actual use of the ratings server has been below 10 percent of users, says CEO Kamran Elahian (chairman of CEO of NeoMagic currently and also founder of Momenta and Cirrus Logic, among other companies). He’s hoping that proportion will jump as a result of Christmas sales, as the Sega Netlink parents have bought for children move from the shelves and under the trees into actual use.

PlanetWeb has rated about 44,000 sites, using mostly part-time graduate students working with a supervisor who is a full-time employee. The company avoids volunteers in order to establish some consistency across the ratings, Elahian says, although it certainly takes input from parents to guide the sites it rates.

Of the 44,000 sites (750,000 pages) rated, most are suitable for children on the basis of about 10 criteria; the focus is on providing approved sites and a greater degree of safety than you can get just by blocking known "bad" sites. Generally, the company does not support PICS, but it still maintains its PICS server from the NewView days. In principle anyone with a PICS browser can query it, and it works off the same database as the new PlanetWeb server, so it is up to date. Since the service is free, PlanetWeb doesn’t promote it, but it keeps it up as a low-cost gesture of good will.

RSACi

The Recreational Software Advisory Council, an independent nonprofit creation of the Software Publishers Association which rates computer games (and keeps government heat off that industry), has formed a new unit, RSACi (for Internet). It has the leading database of PICS labels available to the general public, covering about 12,000 Websites.

RSACi is a self-rating service that lets sites rate themselves by answering questions and that generates PICS labels for them automatically. RSAC charges for its game ratings, but it wanted to make this system cost-free -- both to encourage use and because it's complicated to pay over the Net anyway! So, says executive director Stephen Balkam, he went after sponsors, and eventually got $100,000 each from Microsoft and the Software Publishers Association, $50,000 from CompuServe, all the hardware he needs from Dell, and implementation assistance from USWeb -- along with a commitment to encourage all USWeb clients to rate their sites with RSACi.

To self-rate, a Webmaster goes to the RSACi site and answers a set of branching questions with a yes or no ("Does it have blood and gore?") and the tool calculates a set of ratings from 0 to 4 in four categories: sex, nudity, language and violence. RSACi e-mails him the code for the label to place it on his Website, along with a symbol for visual display. Although the service is free, the Webmaster does have to fill out a contract before he goes through the rating process, certifying that he will not willfully misrepresent anything. That gives RSACi enforcement rights if there are any problems later. RSACi also will have a Webcrawler to search for spurious RSACi ratings. So far, only three sites have had their ratings
questioned; two had made genuine mistakes, says Balkam, and the third decided to withdraw its rating.

Among notable users of RSACi for self-rating is CompuServe, which has rated all its Websites -- still a tiny part of its overall content. As it increases its presence on the Web, the company promises, it will rate each new entry in turn. "Our intent is to go with whatever standard ratings are available," says spokesman William Giles.

In the European Union, the Directorate dealing with telecom issues, DGXIII, has backed the notion of self-regulation and even commended RSACi (with some reservations) in its official report, says Balkam. The chairman of the Australian Broadcasting Authority, Peter Webb, recently backed both PICS and RSACi in a public address in Sydney. And, he adds, "interest" has emerged from Norway, Canada, Spain, Singapore and China (for example, the Shanghai Tourist office has already rated its site).

SafeSurf

Two years ago, Ray Soular and Wendy Simpson co-founded SafeSurf "as a mission," they say. They organized a volunteer effort to develop ratings, collecting the combined efforts of teachers and parents from all over, as well as self-ratings. Simultaneously, the company started development on a filtering system, incorporating both a rating system and ISP filtering software. It folded that effort into PICS, where it was a founding member of the PICS technical committee, and now uses PICS protocols throughout.

The company's focus is a broad-ranging rating system, using more than 100 volunteers, mostly parents and educators. Although they are volunteers, SafeSurf tries to coordinate and quality-control their efforts. When a Webmaster requests a rating by filling in a form at the SafeSurf site, a volunteer is assigned to inspect it. The company has rated about 60,000 sites, focusing on "safe" ones, with ratings giving suggested age levels and content ratings in nine different categories. When Webmasters who requested a rating don't pass, which would allow them to display the SafeSurf logo, the company will explain why not. "Mostly, it's a negotiation, a discussion," says Simpson. "We've never had to tell anyone don't use the system. Anything beats censorship!" Webmasters who pass get the right to display the SafeSurf logo, along with their PICS label that can be read by SafeSurf's or another PICS-compatible filter.

The SafeSurf approach is to pay attention to the uniqueness and context of Internet content; its volunteers notice, for example, whether a breast belongs to the Virgin Mary, the latter-day Madonna or a medical specimen. "A rating system has to look at how an item is used," says Simpson. "A parent can decide which is acceptable and which is not."

The business model is still evolving: It includes sponsoring a parents' organization, taking advertising for its Website and a forthcoming family-focused Website, and selling software to schools, libraries, businesses and ISPs. The filtering side generally operates on a server, allowing the establishment of family-safe clients without any local software. If the customer is an ISP, its customers, usually parents, parent get passwords, and their children get different passwords, and are assigned different
levels of filtering (not individually configurable). The ISP or server admin-
istrator can change the URL list, Soular notes, but most don't want the
hassle: "Most parents just want their children protected; that's their
main goal. In fact, they usually tell us to protect them more!" But at
the same time they can have their own adult account.

The company uses a variety of its own infrastructure software, including a
Webcrawler that detects sites that have been changed, text tools that
detect the presence of specified words (for assistance in ratings), and
other tools for mapping sites. The focus is on checking the validity of
"safe" ratings, says Soular: "Once a site is rated beyond a certain level,
we don't consider it a priority. If someone feels their site should not be
accessed by children, fine. We focus on sites that do accept family traf-
ic. They get inspected by humans."

"We created our rating system as a gift for the Internet," says Soular.
"There is no charge to use it, but we're looking for organizations to
sponsor it." He also wishes search engines would adopt PICS, to make the
whole approach spread faster and wider.

The company sells its software and service primarily to intermediaries --
ISPs, schools, libraries and corporations. Technically, its focus is on
servers rather than individual PCs. The server administrator can configure
it with ratings, and also with specific URLs. The server maintains the
list and downloads updates every 24 hours. So far it has sold the system
to ten ISPs, seven schools, and a growing number of libraries and com-
panies. The pricing amounts to about $1 per client per month in volumes of
hundreds of users.

Simpson, single, and Soular, with an eight-year-old daughter, started the
company two years ago. She was a retail manager with the Hahn Company and
is now studying child psychology; he was an industry veteran with experi-
ence ranging back to Commodore's VIC-20 and a co-designer of the MIDI spec.
Soular is proud to have done much of SafeSurf's technical work himself.
But, he says, "As soon as we saw PICS, we realized that this was the op-
portunity to create a universal protocol. We gave up proprietary value,
but we gained a universal system with immense expandability."

He continues, "We're trying to achieve a rated Internet. The purpose of
our profit side is to fund the nonprofit side. We believe it's the right
of a person to know what sort of content is going to enter their home." The
company is funded by individual investors who believe in a safe Inter-
net, he adds.

SurfWatch

SurfWatch is the grand-daddy of the filtering services/tools and got its
start in 1995, well before PICS appeared. Thus, although the company sup-
ports PICS politically and in principle, it hasn't yet come out with a ver-
sion that can parse PICS labels. It uses its own filtering list of 11,000
bad sites, and also relies on simple text-matching to block about 25,000
sites altogether. The company was acquired last spring by Spyglass, which
is enthusiastic about its direction, but the acquisition slowed development
plans somewhat. SurfWatch's most pressing concern has been the release of
a corporate version.
The company is an active member of PICS, and plans to release products that use the protocol soon. So far, it has shipped or downloaded about 3 million copies since its founding -- accounting for about 300,000 users currently, founder Jay Friedland estimates. (That larger figure includes, among others, 300,000 copies shipped with CompuServe's version of Internet in a Box in a service for kids that has been mostly abandoned.)

Although it made its name with a retail product, the company is now increasingly turning its attention to the OEM and ISP market. Customers include Microsoft, AT&T, Netcom, Earthlink, Pacific Bell, Southwestern Bell, HK (Hong Kong) Net and WebTV. "We changed our business model to focus on trying to get ISPs to bundle, and they pay us on the overall number of users they have, not on how many actually use it," says Friedland. 3 "The fact is, offering a parental control feature was more important as a marketing feature than whether people actually used it." On the other hand, he notes, the market closest to his heart is education: SurfWatch is in more than 8000 schools and school districts, where the company's support for the Macintosh has really paid off. School prices range down to about $1 per pupil for more than a few thousand users.

The two newest money-making initiatives are the OEM deal with WebTV (figures undisclosed) and a corporate server. Technically, the product has its own little edges, Friedland points out. For starters, it has its own list of about 11,000 sites to block, generated by a team of four full-time people and more than 20 contractors (parents, teachers, and grad students) worldwide. The system is clever enough to block not just the sites' URLs, but their IP addresses. Playboy, For example, has seven IP addresses, Friedland notes. If someone happens to know them he can often get around other blocking tools. SurfWatch also filters out another 14,000 sites by blocking outgoing queries instead of waiting for the URLs -- all queries with the word sex, for example.

The system rates each site yes or no in four categories -- violence, sex, drugs/alcohol/tobacco and gambling, and the parent can select any or all of those four to block. Other vendors consider the all-or-nothing approach of SurfWatch to be a disadvantage, but Friedland stresses that in the real world people like simplicity. "Early on I was a big proponent of feature creep," he admits, but feedback suggested that people found the configuration process difficult. "I got one call from a teacher who had just spent 45 minutes configuring some other system, and then it crashed...." The all-or-nothing approach also encourages children and teachers or parents to work together, he adds, since an adult can't simply allow a single site or two that the child has valid reasons to use. Instead, the adult has to turn the whole thing off, and then presumably stay with the child to make sure the new freedom isn't abused.

"We're really big supporters of PICS as plumbing, but we still need to build a critical mass of qualified rating systems and ratings," says Friedland.

3 Note that this is the policy that Microsoft used to use for Windows, but SurfWatch is hardly a monopolist.
LOSING CONTROL: A NEW ATTITUDE

In the end, people and companies will have to start feeling comfortable with the proliferation of ratings that they don't control -- and trust the market to sort things out. The fact is, right now people all around your social and business circle are saying things about you that you might not like. But you don't post company representatives at cocktail parties to protect your good name. Nor do you probably know everything that is being said about you on the Net even now. The difficulty, of course, is that cocktail party conversations usually vanish, or at least are treated with appropriate skepticism. Stuff on the Net lives on. On the other hand, it is easier to find and correct, and comments can be appended to explain other comments. In short, there will be a decentralized, Web-like system, rather than a hierarchy of control to keep things in check.

Will all this work perfectly? Of course not. But whom would you like to put in charge? And what proportion of the rest of the world would agree with you?

A final thought: This newsletter is in itself a form of very fuzzy third-party rating system. First we establish the rating criteria, which are not necessarily along a spectrum from good to bad, and then we attempt to position the various entities within the rating space. We hope you enjoyed it!

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COMING SOON

- Conversation tools on the Net.
- Labels and disclosure for privacy and security.
- Navigation.
- The analog world.
- And much more... (If you know of any good examples of the categories listed above, please let us know.)
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**Software, Services and Networking Conference** - Scottsdale, AZ. Sponsored by Morgan Stanley. With Intuit's Scott Cook, Netscape's Jim Barksdale and so many more. Call Chena Dederian, (212) 761-7334; (212) 761-8900.

**January 15**  

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**1997 Trends & Forecasts** - Scottsdale, AZ. Sponsored by Interactive Services Association. Call (301) 495-4955; fax (301) 495-4959; ISA@isa.net; www.isa.net.

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**January 26-30**  

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**Digital Frontier Conference** - Evanston, IL. Sponsored by Kellogg Graduate School of Management. Call (888) 332-1997; DF1997@nwu.edu; www.kellogg.nwu.edu.

**January 28-31**  
**RSA Data Security Conference** - San Francisco. Sponsored by LKE Productions. Call (800) 340-3010 or (415) 544-9300; fax (415) 544-9306; info@lke.com; www.rsa.com.

**February 3-6**  

**January 3-6**  

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**MILIA '97** - Cannes, France. Sponsored by Reed Midem Organization. Contact Diana Butler or Pamela Dolan, (212) 689-4220; fax (212) 689-4348; 75017.2143@compuserve.com; www.reedmidem.milia.com.

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**February 12-15**  
**Interactive Newspapers** - Houston. Organized by Editor and Publisher. Discuss how newspapers will keep those ads and classifieds coming. Call Marsha Stoltman, (212) 675-4380 ext. 502; fax (212) 929-1894.
February 19-21  *Internet & Politics* - Munich, Germany. How do they interact? Sponsored by the Academy for the Third Millennium and Burda Holdings. Contact: Christa Maar, 49 (80) 9250-3559, fax 9250-3464, 100431.3372@compserv.com.


February 22-26  Web Design and Development West '97 - San Francisco. Supported by Sun, Intel, Spyglass and others. Call (800) 441-8826; fax (415) 905-2222; web97@mfi.com; www.web97.com.

February 26-28  Internet Expo - Zurich. Sponsored by Compress Information Group. Call 41 (6) 1 722 77 00; fax 41 (6) 1 77 22 01; info@compress.ch; www.iex.ch.

March 1-5  VRAIS '97 (Virtual Reality Annual International Symposium) - Albuquerque, NM. Sponsored by IEEE. Calling for papers now. Call Larry Hodges, (404) 894-8787; fax (404) 894-0673; hodges@cc.gatech.edu; www.eece.umn.edu/eece/conf/vrais.

March 9-12  Support Services East - Nashville. Sponsored by Softbank Expos. Network, network, network! Call (800) 801-1354; fax (719) 528-4252; csc@sbexpos.com; www.SBExpos.com/ssce.

March 11-14  *CFP '97: Commerce & Communities* - Burlingame, CA. Hosted by ACM, Stanford, and UC Berkeley. Seventh conference on computers, freedom and privacy. Send inquiries and suggestions for conference content to cfp97@cfp.org.


March 23-26  **@PC (Platforms for Communication) Forum** - Tucson, AZ. The twentieth annual; sponsored by us. "The living web: models and metaphors." You read the newsletter; now meet the players. Call Forum Director Daphne Kis, (212) 924-8800; fax (212) 924-0240; daphne@edventure.com; www.edventure.com.


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May 27-30 Tenth Annual International Software Quality Week - San Francisco. Sponsored by the Software Research Institute. Call Margaret Kenney, (800) 942-7638 or (415) 957-1441; fax (415) 957-0730; kenney@soft.com; www.soft.com/QualWeek.

June 9-14 Asia TELECOM '97 - Singapore. Sponsored by ITU. Contact Tom Dahl-Hansen, 41 (22) 730 5298; fax 41 (22) 730 6444; dahl-hansen@itu.ch; www3.itu.ch/TELECOM/ast97/.

June 15-18 Global Networking '97 - Calgary, Alberta, Canada. Sponsored by Telus. Call Pete Desrochers, (403) 493-5380; fax (403) 493-5380; pdesrocl@ent.agt.ab.ca; www.wnet.ca/gn97/; www.wnet.ca/qn97/.

Sept 8-14 Telecom Interactive - Geneva. Sponsored by ITU. Contact Fernando A. Lagrana, 41 (22) 730 5542/5179; fax 41 (22) 730 6444; fernando.lagrana@itu.int; www.itu.ch/TELECOM.

* Events Esther plans to attend.
@ Events Jerry plans to attend.

Lack of a symbol is no indication of lack of merit.

The full, current calendar is available on our Website (www.edventure.com).

Please let us know about other events we should include. -- Susanna Stromberg

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