

Platform for Internet Content Selection

The history of the Platform for Internet Content Selection (PICS) begins with proposed legislation to regulate indecent speech on the Internet by Senator Exon in the summer of 1994 (Cannon, 1996). By December 1994, the idea for a standard for labeling content on the Internet, was discussed in an advisory committee meeting of the newly formed World Wide Web Consortium (W3C) (Veza, 1996). IBM, a member of the W3C, was concerned about minors viewing indecent material on the web. This problem was a concern to IBM because it was trying to install computers in classrooms. IBM understood that “something has to be done or children won’t be given access to the Web” (Berners-Lee, 1997). AT&T joined IBM in proposing this project for the W3C (James Miller, personal communication, August 13, 1999). However, no action was taken in response to their concerns.

Senator Exon reintroduced his legislation in February 1995 as Senate Bill 314. This would eventually become the Communications Decency Act (CDA) (“Communications Decency Act,” 1996). On June 14, 1995, the Senate approved an amendment (the CDA) to the United States Telecommunications Competition and Deregulation Act of 1995 that would make it unlawful to transmit indecent material over the Internet to minors. This proposed legislation was followed by the now infamous Time cover story on cyberporn (Elmer-Dewitt, 1995). This combination of media and political pressure threw the upstart Internet companies into action.

In June of 1995, the W3C set up a meeting to discuss technical solutions to limit content regulation of the Internet. According to Berners-Lee, “a group of companies quickly came to the consortium asking to do something now, because they knew

Congress had plans to draw legislation very soon that would be harmful to the Internet” (1999, p. 113). The members of the W3C realized that without an industry solution, the government would regulate the industry. Similarly, James Miller, co-chairman of the PICS Technical Committee, PICS was motivated by desires to avoid regulation. Miller remarked that, “if we hadn’t had the bill going through Congress [the CDA] there is no way this group would have come together, in fact it’s evidenced by the fact we had been asked at our previous members meeting by both IBM and AT&T to look into this, nothing had happened” (James Miller, personal communication, August 13, 1999).

Microsoft, Netscape, and Progressive Networks created the Information Highway Parental Empowerment Group (IHPEG) in late June of 1995 to develop standards for labeling content (Cotton, 1995). IHPEG was chosen over the W3C because the members of IHPEG didn’t believe the W3C could act quickly enough (James Miller, personal communication, August 13, 1999). Their press release stated that the companies were cooperating to develop a solution that would allow parents to easily “lock-out” access to inappropriate material.

In August 1995, the W3C held a members meeting with two goals in mind. The first was to create a viewpoint independent content labeling system. This would allow content to be labeled in many different ways. This went beyond movie ratings of content to encompass other classification schemes such as the Library of Congress cataloging scheme. The second goal was to allow individuals to selectively access or block certain content.

The August meeting was planned for two days. The first day would address political concerns and the second day would discuss possible technical solutions. The

resultant project would be the Platform for Internet Content Selection (PICS). According to Berners-Lee, “the PICS technology was created specifically in order reduce the risk of government censorship in civilized countries. It was the result of members of the industrial community being concerned about the behaviour of government” (1997).

Soon after, the W3C was able to persuade IHPEG to join the PICS efforts. Previously, Microsoft had argued that the W3C could not act quickly enough, and therefore, the IHPEG was necessary. Microsoft even attempted to persuade others such as IBM to join in their coalition, however IBM supported the W3C. IBM’s position was that “IBM does not join organizations founded by Microsoft, it forms them with Microsoft” (James Miller, personal communication, August 13, 1999). Microsoft capitulated and in September 1995, it was announced that PICS would be the result of a merger of the current efforts by the W3C and IHPEG (World Wide Web Consortium, 1996c).

A small group of researchers led by Paul Resnick of AT&T and James Miller of the W3C began work on PICS. They knew their work would be taken seriously because of the intense political pressure and the threat of regulation. These pressures allowed the PICS team to rapidly push their standard through the W3C. The PICS team also knew that working within the W3C, a consortium of important Internet companies, gave them another advantage. A solution by the W3C would place pressure on companies to adopt such a solution. As a result, it was likely that their efforts would become widely implemented.

The PICS group separated into two teams consisting of four to five people with approximately ten other people reviewing the work and offering suggestions. The teams used a combination of email and telephone conferences in developing the PICS

specifications. Communications between these teams was private and has never been made public. Because of the political pressure and the upcoming court challenge to the CDA, the PICS technical committee set a deadline of Thanksgiving for a draft technical specification of PICS. This date was purely “a political decision” that was based on upcoming trial dates in December for the court challenge of the CDA (James Miller, personal communication, August 13, 1999).

The final PICS specification limited access to indecent material through two methods (Resnick & Miller, 1996). First, web sites could self rate their content. They could attach labels indicating if content contained nudity or violence. An example of a label incorporated in a web page is:

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<META http-equiv="PICS-Label" content='(PICS 1.0  
"http://www.classify.org/safesurf/" 1 r (SS~000 4 SS~001 5 SS~004 2 SS~007 2  
SS~008 3))'>
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This label uses the SafeSurf rating system. As a result, it would be translated that this web page contains a Rating of Suitable for Older Teens, Profanity with a Caution level of 5, Nudity with a caution level of 2, Intolerance with a level of 2, and Drug Use with caution level of 3. The label becomes clearer when you realize that the Safesurf rating system of SS~000 4 means that a web site has a rating of suitable for older teens and that SS~001 refers to profanity with a caution. Second, PICS supported the establishment of third party labeling bureaus to filter content. This separates the labeling of a web page from publishing a web page. For example, the Simon Wiesenthal Center could operate a labeling bureau that labeled neo-Nazi hate sites. This could allow an end

user to filter out neo-Nazi web sites, by relying on a third party and not the neo-Nazi web site to label themselves.

While the PICS team was focusing on protecting children from Internet pornography, they knew that the PICS specification was capable of much more. PICS was developed as a generic method for providing information about web pages for two reasons. The first is the need for various types of labels to describe pages that are inappropriate for children by such varied criteria as violence, nudity, sex, and racism. The second was the impetus of the designers to “over-engineer” PICS as long as its performance did not suffer. This led to the PICS specification as a general “metadata” system. Metadata is the term for information that provides information about data. For example, the rating of web pages would produce metadata. The metadata would be the rating, such as PG, of the web page. However, metadata, and thus PICS, could also be extended to provide information about copyright, payment information, data authenticity, reviews, and meta-information. The PICS team knew and publicly proposed these possible applications when promoting PICS.

By November 1995, the PICS technical subcommittee released the PICS specifications for public review. This was followed by several presentations at leading conferences on the Internet and the World Wide Web. By February 1996, Microsystems put the first PICS ratings server on the Internet (World Wide Web Consortium, 1996c). By March, a number of companies including Netscape and Microsoft had publicly committed to using PICS in their browsers (World Wide Web Consortium, 1996a). And by December 1996, the W3C made PICS an official “recommendation”, the highest recognition a standard can receive by the W3C (World Wide Web Consortium, 1996b).

This recommendation, as is the norm in the W3C, was not patented and could be used royalty-free.

The final version of the CDA was signed into law on February 8, 1996 ("Communications Decency Act," 1996). Immediately, a lawsuit was filed seeking to overturn the CDA. Albert Veza, Chairman of the W3C, testified at the trial. His testimony concerned the use of PICS as a method for content selection (Veza, 1996). The judges were very interested in Veza's testimony, especially his conclusions that the web has developed almost entirely because the government stayed out of the way (Center for Democracy and Technology, 1996). Judge Stewart Dalzell speculated that he could imagine a marketing advantage for implementing PICS standards. Providers would sell their services by saying, "come online with us and your kids won't see what is in Mr. Coppalino's book", referring to the book of evidence containing sexually explicit images found online (Center for Democracy and Technology, 1996). The testimony held up PICS as an example of how the industry was developing solutions for the problem of access to indecent content by minors. The plaintiffs presented PICS technology as a less restrictive alternative to the outright banning of indecent speech on the Internet. Even the free speech advocacy groups, such as the Electronic Frontier Foundation (EFF), Center for Democracy & Technology (CDT), and the American Civil Liberties Union (ACLU), were either positive or neutral regarding PICS (Paul Resnick, personal communication, August 10, 1999). The testimony on PICS was influential and on June 26, 1997, the Supreme Court found the CDA unconstitutional. Specifically, the Court's decision noted that the CDA's burden on adult speech "is unacceptable if less restrictive alternatives

would be at least as effective in achieving the Act's legitimate purposes" ("Reno v. American Civil Liberties Union," 1997).

After the CDA was struck down, the tide turned against PICS. PICS went from a solution to the problem. People realized it could be more insidious than the CDA. On February 1997, the influential Wired ran a story titled, *Good Clean PICS: The Most Effective Censorship Technology the Net Has Ever Seen May Already Be Installed On Your Desktop* (Garfinkel, 1997). During the summer, Lessig would pen a story titled, *The Tyranny in the Infrastructure: The CDA Was Bad - but PICS May Be Worse* ("Communications Decency Act,"). Even the ACLU joined in and released a report on the dangers of content rating technologies such as PICS (American Civil Liberties Union, 1997).

These stories emerged because people acknowledged the flaws in PICS. For self-labeling to work, there needed to be a critical mass. Self-labeling would be ineffective if it only covered a small portion of the web. However, to gain this critical mass would require urging many web sites to label themselves, which many people felt was akin to censorship. For example, news agencies refused to label their content with PICS (Lasica, 1997).

Similarly, search engines never limited their results to only PICS-labeled sites. There was no technical reason preventing Internet search engines from implemented PICS filtering. In fact, according to Miller, "Alta Vista had implemented part of it [PICS filtering] and given us some of the results." However, none of the search engines ever publicly implemented filtering to limit their results to PICS based pages. Miller surmises that this was because search engines did not know how to make money off such filtering

nor would they make any friends with such filtering. For search engines to provide filtered results, several steps would need to be taken to ensure content was widely labeled. This could include persuading search engines to ignore non-labeled web pages. Robert Davis, the president of Lycos stated that he “threw a gauntlet to other search engines . . . saying that collectively we should require a rating before we index pages” (McCullagh, 1997) In effect, this would leave unrated sites as “invisible” to search engines. Both Yahoo! and Excite supported this strategy. Nevertheless, no search engine ever implemented any filtering based on PICS. However, more recent search engines, such as Google, provide their users with the ability to filter the results using proprietary techniques besides PICS. For example, Google’s SafeSearch provides for “family filtering” of results.

Second, were proposals for changing the default settings in web browsers to only display filtered web pages. In another scare to unrated sites, Ken Wasch, the president of the Software Publishers Association announced that the next version of Microsoft’s Internet Explorer would have a default set to view only rated or labeled web pages. However, Microsoft quickly denied that, and stated that the default would not change (McCullagh, 1997). Microsoft has continued to keep the default to off for their filtering features.

In the end, most sites refused to rate their sites with PICS compliant labels. There are two services that allow people to generate PICS compliant labels for web sites, RSACi and SafeSurf. *See* <http://www.classify.org/pics.htm>. Today, PICS largely relies upon web users and web sites labeling their own pages for two reasons. First, there is no server software to operate third party labeling bureaus for PICS. Consequently, people

must trust the label a web site provides. Second, server companies have not consistently provided support for PICS labels. PICS labels can either be placed in the HTML of a web page or they can be attached as an HTTP header. Today, most PICS labels are in the HTML of a web page because of the historical lack of server support for PICS. The advantage to server support, is that it is possible to quickly label multiple web pages and web sites. However, only a few companies ever sold server software that supported PICS labels. According to James Miller, “we tried very hard to get servers to do it, but nobody wanted to do it.” Miller believes that firms didn’t see a “commercial advantage” either in terms of potential sales or “good-will” marketing. Currently, Microsoft’s Internet Information Server provides good support for PICS. However, Apache requires the installation of a module that is not a default module. This requires compiling/loading the module, which is not a trivial operation.

While there are a number of web sites that are rated with PICS compliant labels, at best this covers merely 0.4% of the web. At last count, there are about 120,000 web sites that have adopted PICS. However, the adoption of PICS is lagging behind the growth of the Internet. In the same time period, May 2001, there were over 30,775,624 web sites.

The use of PICS for third party ratings never became viable. A system of third party labeling bureaus never emerged because of the lack of economic incentives and the necessary software tools. The filtering software companies realized that PICS separated the filtering software from the labeling of content. With the free PICS enabled web browsers, the filtering software companies would not be able to sell their filtering software. Instead, they would have to shift their business model to providing only the

labeling of content. The filtering companies weren't persuaded that people would pay for just the service of labeling. As a result, the filtering companies chose to continue selling software and never embraced the idea of operating third party labeling bureaus (Stutz, 1997).

A system of third party bureaus was seen by Resnick as the most realistic scenario through which PICS would become useful. However, the existing filtering software companies did not see any commercial scenario for operating public label bureaus. The existing filtering companies incorporated the PICS specifications into their own products, but never committed to running public labeling bureaus. There was an effort to persuade one or two large companies to run a public labeling bureau as basically a public service, like a utility. In fact any such organization could have received partial funding from the European Union for running such a service. However, the idea never caught on. (James Miller, personal communication, August 13, 1999). A few years later, the European Union awarded the Internet Content Rating Association (ICRA) a \$650,000 grant. The ICRA now owns and operates the PICS compliant RSACi rating system.

In tandem with the lack of a business model for public labeling bureaus was the lack of support from software vendors. The server software for creating label bureaus was only developed for a few servers. Most notably, Netscape and Microsoft did not have this feature. The W3C's web page indicates the only commercial server software was IBM's Internet Connection Server. IBM has since dropped support for PICS in later versions of its web server, which are based on Apache. In sum, once the Supreme Court found the CDA unconstitutional, the development of software for PICS was essentially stopped.

The consequent lack of support from commercial filtering firms, the W3C's members, and other children's groups led to the abandonment of PICS.

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