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## **OUTREACH SUMMARY**

### **Youth Commission**

On November 26, 2007, background information about Councilmember Constant's proposal and the current policies of San Jose Public Library were presented to the Youth Commission. The Commission took the opportunity to seek input from various Youth Advisory Councils. On January 28, 2008, the Youth Commission heard additional public comments, and voted unanimously to recommend that City Council oppose placing filters on San José Public Library computers.

### **Library Commission**

Information was presented by SJPL staff at the December 12, 2007 Library Commission, and community comments were heard. The Library Commission heard additional comments from the public at its January, 2008 meeting. On February 13, 2008 after hearing additional community input, reviewing the Library Department's update to Rules Committee, and listening to the Library's Digital Futures Manager summarize the results of the January, 2008 test of three filter programs, the City's Library Commission voted 8-1 to recommend that City Council accept the current Internet Access policy with no change. Caroline Martin, Chair of the Library Commission, wrote a letter to the Mayor and City Council dated May 9, 2008 to confirm the Library Commission's vote of 8-1 to recommend that the City maintain the current Library Internet Filter Policy with the option of additional privacy screens in adult areas.

### **San José State University**

Staff met with the SJSU Library Dean, Ruth Kifer, Larry Carr, SJSU Associate Vice President for Intergovernmental Relationships, and SJSU's Library Board to share information, due to King Library's unique situation. The San Jose State University Academic Senate passed Resolution SS-F07-5 on November 19, 2007 which affirmed San Jose State University's commitment to complete academic freedom in the use of library resources, and can be viewed at [www.sjsu.edu/senate/SS-F07-5.htm](http://www.sjsu.edu/senate/SS-F07-5.htm)

President Don Kassing sent a letter to Mayor Reed dated May 14, 2008 expressing San José State University's opposition to installing filters at King Library and all branches.

### **Community Outreach**

Outreach by Library staff was made to community agencies to provide information about the Rules Committee's proposal under consideration, ask for input and information through letters or input at meetings or via the website feedback form, and to welcome any questions. See below for list of outreach groups.

### **Parent Outreach/Contacts**

president@capta6.org for local PTA groups:

To the Regional Headquarters, thereby reaching the 10 councils that serve Santa Clara County: sent phone message and email message to send to PTAs and other interested parties, referring to website for information -- Sent on January 24, 2008 with a reminder sent February 22, 2008

Via Cynthia Bojorquez, PRNS Department:

To Schools City Collaborative to reach school superintendents to send to schools/PTAs: sent email which includes statement to send to schools to send to parents and other interested parties, referring to website for information and feedback link -- Sent on January 24, 2008 with a reminder sent February 22, 2008

*SAN JOSE LIBRARY COMMISSION*

Via Sandra Stewart, SJPL Youth Services Manager:

To teensReach librarians at all branches with teensReach programs: sent phone call and email message to send to more than 300 participants and their parents and other interested adults, referring to website for information and feedback link -- Sent on January 24, 2008 with a reminder sent February 22, 2008

### **Community Agencies/Contacts**

San José State University

San Jose State University's Student Health and Counseling Center

Santa Clara County Public Health Department

Kaiser Permanente Health Education Services

YWCA – Silicon Valley

YWCA Rape Crisis Center

Billy DeFrank GLBT Community Center

San Jose State University Police Department

San Jose Police Department's Internet Crimes Against Children (ICAC) Unit

ACLU

Santa Clara County Supervisor Ken Yeager (former City Council liaison to Library Commission)

The website's feedback link collected comments and feedback. The link received 134 comments in the nine-week period from early January through mid March. Of the total, 13 comments did not relate to the issue at hand or expressed understanding of both perspectives with no specific recommendation. There were 33 comments in favor of filtering Internet access in public libraries generally (25% of the total 134 comments), 11 comments (8%) suggesting that children's access or children's area computers be filtered, and 77 comments opposed to any filtering of Internet access in public libraries (57%). All 134 comments can be read at:

[http://sjlibrary.org/legal/internet\\_access/public-input-internet-filtering-from-online-form.pdf](http://sjlibrary.org/legal/internet_access/public-input-internet-filtering-from-online-form.pdf)

Letters and communications received by the Library Department and the San José Library Commission are separately attached.

May 9, 2008

Dear Mayor Reed and City Council Members:

After careful consideration of community input and an in-depth review of data regarding pertinent incidences, filtering options and costs, the Library Commission voted 8-1 at their February 13<sup>th</sup> meeting to recommend the City maintain the current Library Internet Filter Policy with the option of additional privacy screens in adult areas.

Though technology has grown, filtering remains inefficient. Filter testing conducted by professional librarians from San José city libraries and SJSU library staff, aided by City IT staff, concluded that filters over-block and under-block keyword searches by 15-20%. That means that up to one in five searches can give unwanted results or can hide information vital to a patron. This is consistent with other professional filter testing documented in past years.

The cost of the initial set-up and maintenance of filtering is not fiscally sound when balanced against the number of complaints. There were 15,000,000 library users during the last two fiscal years and only 22 formal written complaints were filed pertaining to pornography on computers, and 13 police arrests for sex crimes at computers were made. That's less than .0002%. These incidents occurred at MLK library where filtering student users is not an option.

Filter options at the most intense level are estimated at \$424,000 initially, with ongoing annual costs of \$278,000. Even minimal filtering just in the children's area would require \$81,000 initially and \$10,000 each year thereafter to keep software updated. Where would these funds come from?

Because there have been concerns expressed about child safety we want to stress that our libraries are a safe place for kids. The default homepage in the children's area is "Kids Place" and monitors are placed so library staff can easily check what's being viewed. Staff scans for teens and adults who don't appear to belong in the area, moving purposefully to ensure that children are protected with a carefully worded, "Can I help you find something?"

Filtering remains a challenge as it can create embarrassing situations for those who search for answers to specific medical conditions or other personal information requests.

Legitimate history and art sites and photographs useful for research can also be blocked. Many library users won't ask for help now and would certainly find it impossible to ask for a site to be unblocked.

Filters are no substitute for parental supervision and a conscious awareness by both patrons and library staff of events that go on in the library. Current staff is trained to appropriately handle situations as they arise.

With so few incidences or complaints system-wide, library patrons should enjoy the freedom to gather information without City intervention.

A handwritten signature in blue ink that reads "Caroline Martin". The signature is written in a cursive style with a large initial 'C'.

Caroline Martin, Chair  
San Jose Library Commission



SanJoseState UNIVERSITY

May 14, 2008

The Honorable Chuck Reed Mayor  
City of San Jose  
200 East Santa Clara St. San Jose, CA 95113

Dear Mayor Reed:

I am writing you today regarding Rules and Open Government May 12, 2008, agenda item G.1. "Policy Options and Staff Report Relating to Internet Filtering Proposal and Computer Use at San Jose Public Libraries."

I have reviewed Councilmember Pete Constant's concerns, and I appreciate his efforts to examine Internet use at the Dr. Martin Luther King, Jr. Library and the branches. However, San Jose State University opposes installing Internet filters at King Library and all branches.

Internet filters will violate the spirit of our joint operating agreement by restricting intellectual freedom. Compromising this core value will seriously erode the spirit of cooperation and mutual understanding underlying the city-university partnership that built King Library.

The SJSU Academic Senate, which represents more than 2,000 faculty members, affirmed the vital role intellectual freedom plays in the management of King Library in a resolution passed in response to Councilmember Constant's proposal. The resolution states "San Jose State University shall continue its long-standing practice of making uncensored access to its materials available to faculty, staff, students, and all citizens of the State of California."

The concept of intellectual freedom is also deeply embedded in the operating agreement. Section 5.4, entitled "Intellectual Freedom", states "It is the intent of the University and the City to continue to honor the current policy of both the University and City to provide for unrestricted access to all Library Material within the Library Collections and services within the Joint Library for all Members of the General Public and the University Users."

SJSU believes information available on the Internet is Library Material within the Library Collections, given the city and university share the costs of Internet connectivity for King Library and all branches.

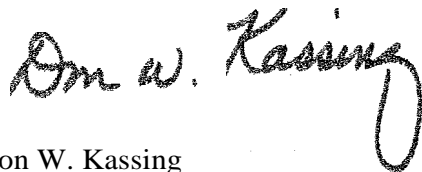
**Make no mistake; public safety is SJSU's top priority.** However, SJSU sees no compelling reason to compromise the intellectual freedom of millions of library users due to the excesses of a few. The University Police Department made 12 arrests for indecent exposure and viewing child pornography at library computers during fiscal year 2006-2007. These arrests represent approximately .002 percent of all computer sessions.

In closing, I would like to quote the end of the Academic Senate's resolution, which states "The University Library Board and the Academic Senate of San Jose State University believe that the King Library is a treasured civic space. This space provides the opportunity for positive interactions between the SJSU academic community and the public library community."

"The library's success is demonstrated, in part, by 2.5 million patron visits and 700,000 Internet sessions a year. The great success of the joint library is predicated upon a robust level of cooperation between the city and the university. We invite the city to join us in renewing our commitment to the shared understandings that make the joint library possible."

San Jose State University is looking forward to working with you on this matter. I have asked Associate Vice President for Public Affairs Larry Carr to help me address your questions or concerns. Please feel free to contact him at 408-924-1166 or [larry.carr@sjsu.edu](mailto:larry.carr@sjsu.edu).

Sincerely ,

A handwritten signature in black ink that reads "Don W. Kassing". The signature is written in a cursive style with a large, looping 'g' at the end.

Don W. Kassing  
President

cc:  
Debra Figone,  
San Jose City Manager

Jane Light,  
San Jose Library Director

**Q/A SUMMARY**  
***Rules and Open Government Committee***  
***Questions Relating to Internet Filtering Proposal***

**TECHNOLOGY**

November 14, 2007 Question from Mayor Reed

**Q1.** Is it possible with whatever software we're looking at for San Jose State students to basically bypass it because whatever code they put in puts them in a different segment so they can be treated differently than the public at large?

**A1.** It appears that the filtering software could be configured to interface with the library computer system to determine the patron type and not apply the filter to university students, faculty, and staff. This may require some additional programming at additional cost.

November 14, 2007 Questions from Councilmember Constant:

**Q2.** How much does the city spend on filtering for City Hall computers?

**A2.** The City pays \$80,500 annually for a license to cover 5,100 users.

**Q3.** What is the impact of the City arrangement with SJSU, and how could filtering be split so that university customers could be exempt from the filtered access?

**A3.** See A1 above.

**Q4.** Does the City license for WebSense have the ability to be increased to the number of computers that would need to be covered in the libraries?

**A4.** It is possible, but will add additional complexity to the City contract. The City currently pays per user, and the Library system would require a license for computer locations, not users. City IT would have to review this option in depth. The City's procurement process would be followed to identify the lowest cost methodology.

January 23, 2008 Questions from Mayor Reed

**Q5a.** Is it possible to do something with the branches only, and carve out the main library?

**A5a.** Yes. It would entail significant reconfiguration of the networks, and so would add to the initial library implementation costs. (See also answers Q1 and Q3.)

**Q5b.** Would it be possible to run a pilot program at one or more branches or something like that?

**A5b.** Yes, a pilot program could be developed, but it would be cost intensive to set up, because it would basically take the same effort as changing the whole system to a filtered environment. Therefore, it would be recommended that a pilot be used only to test implementation after a policy decision is made.

**Q6.** Regarding the surveyed systems that do or don't have filters, what technology are they using or how are they doing it (instituting filters)?

**A6.** Information about how local jurisdictions implement filtering programs (if applicable) is included in the individual policy statements for each of the library systems, all of which have links included in Attachment D.

January 23, 2008 Question from Councilmember Nguyen

**Q7.** For the [surveyed] cities that have filters for the adult general filter, have there been any complaints from users not being able to access legitimate sites?

**A7.** Where the adult general filter can be turned off by the customer, Denver reports that less than 25% of adults choose filtered access, 10% of Multnomah County customers select filtered access, and no data provided by Alameda County. According to Los Angeles County, “some parents have expressed appreciation but most adults dislike filtering.” In Sacramento, the library questionnaires have returned a 40% critical-60% positive response from customers.

**Q8.** Have the [surveyed] cities that use filters faced any legal action?

**A8.** None of the library systems offered any information about this, and none are currently involved in any legal action to the best of our knowledge.

## **LIBRARY OPERATIONS**

November 14, 2007 Question from Councilmember Chirco

**Q9.** Getting an “overall answer” from the City Attorney on the policy question, Mayor Reed expanded by suggesting that Council doesn’t really know how the policy works currently. The library interim report did not address that question. What is the current status in libraries, and how does the policy work currently?

**A9.** Staff responded to this question in the January 23, 2008 status report to Rules and Open Government Committee.

## **CRIME DATA FOR KING LIBRARY**

**Q10.** Councilmember Constant expressed concern that his staff data on university police arrests was much higher than that reported out by Library staff. Also, he identified a report of a rape occurring at the King Library. Because of the apparent discrepancies, Library management and staff have worked with University Police Department (UPD) Chief Andre Barnes and his staff to clarify the records which had been released to both the Library and to Councilmember Constant in the past.

**A10.** UPD acknowledged that incorrect information was given to the Library and that one rape did occur at King Library. However, it was not reported to UPD directly, but to the San José Police Department two months after it occurred. Therefore, it did not appear on the reports released to the Library.

Additionally, UPD identified that the Councilmember’s office received the same information formatted in three different ways, which may lead to counting the same incident multiple times. The reports, “Cases by Location Type,” “Incidents by Site Summary,” and “Police Department Crime Summary-One Site: MAIN CAMPUS” all contain same incident information at King Library. The most reliable report of the three, according to UPD, is “Cases by Location Type.”

Library and UPD staff have reviewed and agreed that the following data is an accurate reflection of the King Library statistics. With one exception, this data is the same as submitted previously in staff reports to the Rules and Open Government Committee.

<b>FISCAL YEAR</b>	<b>POLICE ARRESTS RE: SEX CRIMES</b>	<b>POLICE ARRESTS RE: SEX CRIMES @ COMPUTERS</b>
2005-2006	13	1
2006-2007	17*	12
July 2007 – December 2007	5	1

\*The 2006-2007 number for “Police Arrests re: Sex Crimes” differs from the number identified in the January 9, 2008 staff report to the Rules Committee due to an unintended omission of a rape occurring in November 2006. This sexual assault was reported directly to the San Jose Police Department and transferred to UPD two months later. Due to the matter in which this report was received, it was not included in the original UPD statistics that were forwarded to SJPL staff. It should be noted that this assault was not related to computer use.

**Q. COUNCILMEMBER CONSTANT’S CONCERN ABOUT “SIX VERY SPECIFIC DIRECTIONS [TO THE LIBRARY DEPARTMENT]” AT RULES ON 01/24/08**

1. Library staff to coordinate with City ITD

A. On December 6, 2007, the two departments initiated contact and began ongoing collaboration to evaluate technology issues relating to King Library and branch configurations, filter test protocol and results, and estimated costs of implementation.

2. Outreach to Youth Commission and Library Commission

A. Staff attended the November 26, 2007 and January 28, 2008 Youth Commission meetings to provide information and answer questions. Staff provided information to the Library Commission at meetings of December 12, 2007 and January 9, 2008, and provided at staff report at the February 13, 2008 Library Commission meeting.

3. Outreach to the two police departments

A. Staff continues to work with SJSU University Police Department regarding data at King Library. Staff contacted SJPd, and did receive information from the Internet Crimes Against Children unit. Other statistics about branch library criminal activity was coordinated with the Library’s in-house security office, who works closely with SJPd when any incidents at branches result in arrests.

4. Per Councilmember Constant, this was very broad: to outreach to all parties that may be interested in the Internet filtering discussion

A. Given the timeline, specific organizations were noted by Councilmembers and the Mayor at the November 14, 2007 Rules and Open Government Committee meeting. Outreach by staff included those specified (YWCA, SJSU, SJPd and SJSU-UPD) as well as additional community agencies and groups. Because Councilmember Constant was still concerned about outreach at the January 23, 2008 Rules Committee, additional outreach to parent and education groups commenced, along with creation of a websites feedback page which received 134 comments through mid-March, 2008.

5. Give options for bifurcations of the process (branch libraries versus the main library)

A. It is possible to apply filtering technology at the branch libraries but not at King Library. This would require reconfiguration of the library network.

6. Library Director and City Attorney to work together on a proactive aggressive plan to get the Council up to speed on issues

A. The Mayor and several Councilmembers spoke about getting more information on how the library system works, where computers are placed, how the public accesses the Internet at the library, and questions about legal issues. It was acknowledged that the Library Director gives tours to individual Councilmembers as schedules permit, and that Councilmembers may wish to do research individually. The City Attorney's Office has worked with the Library to review the final staff report and options, and has separately researched extensively on the subject at hand.

## INTERNET USE POLICIES

### **No filters for children; no filters for adults**

Chicago

[http://www.chipublib.org/aboutcpl/cplpolicies/policies/computer\\_use.php](http://www.chipublib.org/aboutcpl/cplpolicies/policies/computer_use.php)

Palo Alto

<http://www.city.palo-alto.ca.us/civica/filebank/blobdload.asp?BlobID=6863>

Oakland

[http://www.oaklandlibrary.org/about/internet\\_policy.html](http://www.oaklandlibrary.org/about/internet_policy.html)

San Francisco

<http://sfpl.lib.ca.us/sfplonline/internet.htm>

San Mateo County

<http://www.smcl.org/about/organization/policies/internet.html>

Dallas Public Library

<http://dallaslibrary.org/policy.htm#acceptable>

Atlanta Public Library

[http://www.angelfire.com/tx3/atlantapubliclibrary/internet\\_policy.htm](http://www.angelfire.com/tx3/atlantapubliclibrary/internet_policy.htm)

Broward County (FL) Library System (Fort Lauderdale)

<http://www.broward.org/library/pdfs/justforparents.pdf>

### **Location-based filters on children's computers only and no filtering elsewhere**

Alameda County

<http://www.aclibrary.org/default.asp?topic=Library&cat=InternetUsepolicy>

Mountain View

<http://www.ci.mtnview.ca.us/civica/filebank/blobdload.asp?BlobID=3285>

Santa Clara City

<http://www.library.ci.santa-clara.ca.us/about-the-library/policies.html>

Sunnyvale

<http://sunnyvale.ca.gov/Departments/Library/Library+Policies.htm#internet>

### **Location-based filters at all children's areas computers and offer choice at log-in on adult area computers**

Santa Clara County

<http://www.santaclaracountylib.org/findit/internetpolicy.html>

**Cardholder age-based - filter all children and offer adults to permanently select no filtering or basic filtering at log-in**

King County

[http://www.kcls.org/usingthelibrary/computers\\_internet/filtered.cfm](http://www.kcls.org/usingthelibrary/computers_internet/filtered.cfm)

**Cardholder age-based - filter all children and offer teens and adults a choice at log-in**

Multnomah County

<http://www.multcolib.org/about/pol-internet.html>

**Cardholder age-based - filter all children/teens and offer adults a choice at log-in**

Denver

<http://denverlibrary.org/about/internet.html>

**Cardholder age-based - filter all children/teens, and adults ask staff for unfiltered access at log-in**

Los Angeles County

<http://www.colapublib.org/about/policies/aupdear.pdf>

Sacramento

[http://www.saclibrary.org/about\\_lib/internet\\_use.html](http://www.saclibrary.org/about_lib/internet_use.html)

Houston Public Library – filter

<http://www.houstonlibrary.org/about/internetpolicy.html>

Jacksonville (FL) Public Library

<http://jpl.coj.net/lib/interpol.html>

**Filters in place for children and adults**

Phoenix

<http://www.phoenixpubliclibrary.org/libcomp.jsp?lwbid=6996>

**State Law (Missouri) Requires Filtering with Certain Exceptions<sup>1</sup>**

Kansas City Public Library

[http://kclibrary.org/acceptable\\_use\\_policy.cfm](http://kclibrary.org/acceptable_use_policy.cfm)

<sup>1</sup> Exception = Completely Separate Computer Locations: Kansas City Library has no separate area, so all computers are filtered; however, North Kansas City Library system physically separates children's computer locations, so adult access is unfiltered and children's areas are filtered.



# Internet Filtering Software Tests:

## Barracuda, CyberPatrol, FilterGate, & WebSense

Sarah Houghton-Jan, Digital Futures Senior Librarian

**Original report submitted February 4, 2008**

**Revised report submitted April 2, 2008**



## **Executive Summary and Background Information**

The San José Public Library was asked by the City Council to test various Internet filtering service options for implementation in the Library's public use computers, with a focus on filtering "web sites that contain child pornography or material that is obscene." Councilmember Pete Constant proposed, in his memorandum to the City council Rules Committee dated October 18, 2007, *Attachment G "Proposed City Internet Access Policy,"* that all computers with Internet access use filtering technology. Specifically, the proposed policy states:

"The Library uses filtering technology on all computers with Internet access. Patrons 17 years of age or older are given a choice of an Internet session with a basic filter or one that has additional filtering. The intent of the basic filter is to block web sites that contain child pornography or material that is obscene. The intent of the additional filtering is to block web sites that contain material that is harmful for minors."<sup>1</sup>

San Jose Public Library staff explored the Internet filtering market by reading the extensive research and white papers on the topic conducted in the last decade, as well as speaking with nearly three dozen different companies that offer an Internet filtering product, in order to gain an understanding of their product's strengths from their sales and technical staff. We attempted to find a service that only blocks images, specifically, as defined in the proposed policy, images that are obscene and harmful to minors. We were able to identify products that would allow us to choose to functionally block all images of all types on all web sites. We were also able to identify products that allowed for general filtering by keyword and web site address (URL) in many categories, including categories with varying references to adult content, sexual content, etc. We were not able, however, to find any product on the market that successfully allows filtering only of images that are classified as obscene and harmful to minors. Filtering expert Lori Ayre's research holds up our findings of what the Internet filtering market currently offers:

"No filter, however, actually limits its categories to obscene material and child pornography because the current definition of obscenity doesn't work on the Internet." (Ayre, "Filtering and Filter Software," p. 52)

Our research of the market showed that the offerings of today's filtering market is not much different than in 2004, the year of Ayre's report. There are no existent filters that will filter out only obscene and harmful images. Given that we could not fulfill that aspect of the original proposal because the technology simply doesn't exist to do so, we originally tested three filters, and subsequently one additional filter upon Councilmember Constant's request, with various features, granularity, and functionality in an attempt to determine whether, as has been asserted, content filtering technology has improved over the last decade to the extent that over-blocking is minimal and has little effect on patron research. A second goal of the library research was to learn about the current state of content filtering software's ability to block materials that are harmful to minors.

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<sup>1</sup> According to California Penal Code Section 311, "obscene matter" is "matter, taken as a whole, that to the average person, applying contemporary statewide standards, appeals to the prurient interest, that, taken as a whole, depicts or describes sexual conduct in a patently offensive way, and that, taken as a whole, lacks serious literary, artistic, political, or scientific value." California Penal Code Section 313 defines "harmful matter" as "matter, taken as a whole, which to the average person, applying contemporary statewide standards, appeals to the prurient interest, and is matter which, taken as a whole, depicts or describes in a patently offensive way sexual conduct and which, taken as a whole, lacks serious literary, artistic, political, or scientific value for minors."

## **How Filters Work**

Content filters today are powerful and full of features. Filters today have artificial content recognition that help to evaluate content on a more granular level – a single image, a single search result, a single web page. However, filters still lack the ability to successfully evaluate and determine the actual content and context of web pages, including text, still images, video, and more. As a result, filter performance is highly dependent on the programs’ artificial content recognition, administrative human intervention, chosen settings, and features.

### **Network-Based and Stand-Alone Options**

There are two major categories of filtering products: network-based and stand-alone. Network-based filters are installed on one central server and individual computers’ settings are controlled by the settings on the server. Stand-alone filters are installed on each computer individually and the settings only control that computer. Both categories of products have individual filters that are more or less powerful or complex than others and both have their merits, which is why we tested two network-based filters (WebSense and Barracuda) and two stand-alone products (CyberPatrol and FilterGate).

### **Filtering by URL or Keyword**

Most software now on the market works by filtering based on URLs (web site address) and/or filtering based on content (trigger words, phrases, etc).

- Products that filter based on URLs typically use a search engine (Google in most cases) and run searches for trigger words, like “live sex chat rooms.” The list of results from that search is then pared down by removing educational and government sites (done only by removing sites with .edu and .gov suffixes, missing many educational and government sites that choose to be a .net or .org, for example). The remaining sites, generally the top 100 - 500, are then blacklisted on the “trigger URL” list. Some companies stop the process there, while others will have a staff member spot-check for errors, a process whose quality varies greatly from company to company. When the filtering program is in use on a computer, each Internet search result or direct entry of a web address is scanned against the list before results are displayed.
- Products that filter based on content analyze web pages as they are requested by the user, looking for trigger keywords and sometimes phrases as well as other factors such as banner ads, number of links and images, etc. An artificial intelligence software program then looks for a substantive formula of the various criteria and classifies the web page as allowed or blocked.

### **Blocking (What the User Sees)**

Using one or both of these methods, companies build up lists of trigger URLs and/or keywords that they deem should be filtered. When content is blocked, users see a “blocked” message that states, in varying degrees of detail depending on the flexibility of the product, what was blocked, why, and how/if it can be unblocked. Some filters allow for a “warning and bypass” message on the screen, either requiring a simple click-through or a password to get to the content that was blocked.

When access to a filtered page or resource is attempted, some systems will filter out only the triggering content (e.g. only blocking those images on the results page that are triggers) but still allowing the non-triggering content on the page, while other systems will filter out/block the entire page, hiding everything on that page from view, not just the triggering content. Other systems allow you to see references to trigger content on search results pages, but will not let you click on the result to get to the actual page/resource.

### **Blocking by File Type**

A small number of filters allow one to block specific file types – such as video file types (.avi), audio (.mp3), or still images (.jpg). Unfortunately, as previously noted, these programs do not allow you to successfully designate the blocking of those file only for images that are classified as obscene and harmful to minors. It is also impossible to create an exhaustive catalog of all file extensions for a particular file type and expect to block that file type successfully. For example, adult web sites frequently embed their images in another file type (like Flash or even PDF), getting around the blocking of the filters. As a result, if the library wanted to try to block **only** images that are obscene and harmful, it would have to block **all** images due to the limitations of the existing technology.

Some filtering systems block only that one URL (specific web page) when trigger content is found, while others are more broad in their blocking and will block an entire domain (the entire web site: for example, Craigslist or eBay) based on one user or one page with trigger content. Still others are even broader and block anything hosted on that Internet Protocol (IP) address (numerous domain names share a single IP address; for servers that host multiple sites, blocking by IP can result in gross over-blocking).

### **Classification of URLs and Keywords**

One of the challenges to successful filtering in libraries is how web pages are classified in the filtering system – that content is evaluated for the user by automated systems and sometimes IT or clerical subcontractors, not by trained information professionals like librarians. Lori Bowen Ayre sums it up accurately when she writes:

“Ironically, librarians - professionals trained to catalog and evaluate content - subcontract their cataloging job to Internet filter companies when they install a filter. Unlike librarians, the subcontractors are not information professionals, they typically use automated methods to classify the 3 billion web pages on the Internet.” (Ayre, *Internet Filtering Options Analysis: An Interim Report*)

Automated methods result in faster classification, thereby raising the number of “cataloged” sites and the product’s perceived value for the company, but also results in less accurate classification, specifically in more resources being falsely blocked.

Filtering software companies do not tell their customers, in detail, the types of things or what specific sites they block in each category. No examples are given and no information beyond a one or two sentence description is offered. Because companies ferociously protect their list of categorized sites and their process for categorizing, there is no way of obtaining a list of sites that are blocked in certain categories, as that is considered a trade secret and vital to their continued business interests. The subscribers are asked to make global decisions that will affect users’ ability to access content based on these brief descriptions. There is no way to know exactly what sites, or types of sites, are included in the “Illegal or Questionable” or “Tasteless” categories, for example.

All studies of Internet filters show over-blocking and under-blocking. No product is perfect. Lori Bowen Ayre writes:

“All filters overblock. All filters underblock. No filter is 100% accurate because no one agrees on what being 100% accurate is.” (Ayre, “Filtering and Filter Software,” p. 36)

Ayre writes of the desire on libraries' parts for filters to create more specific "child pornography" categories, something not offered by filtering companies now:

"[F]iltering companies are free to devise filters based on language that works for their target audience – parents, employers and schools. Therefore, you'll never see a category of web sites defined as "harmful matters" or "child pornography." Some take the plunge and define web sites as "obscene" but how closely those web sites match the legal definition is anyone's guess. And since none of the companies release the list of web sites on their radar and the category into which they've been placed, the end user has no way of knowing whether the "obscene" sites include some Constitutionally protected sites or not." (Ayre, *Internet Filtering Options Analysis: An Interim Report*)

Most filters allow for the library or the vendor to apply additional whitelists (sites to always allow) and blacklists (sites to always block) in addition to the vendor's database of URLs and/or keywords. Some vendors require that any addition to either list be approved by them, while others will allow the local library to apply the change directly. Over time, with the addition of whitelists and blacklists as the library staff and users come across sites that have been categorized incorrectly or not categorized at all, the library is able to build a more effective filter for local needs. This site-by-site method, however, is time consuming and can never cover the ever-growing number of sites on the web.

Until more advanced classification and categorization methods are developed, either through Artificial Intelligence (AI) or human intervention, filters will find difficulty in maintaining accurate categorization without over- or under-blocking, and the market will continue to yearn for effective and accurate "harmful matters" or "child pornography" categories.

## **Test Description**

In our original test, four workstations of various configurations were set up by the library, with the involvement of the City Information Technology Department. As part of our planning for the test, library staff met with Vijay Sammeta (Deputy Director of San José Information Technology Department) on January 14<sup>th</sup> to review our testing process and set-up. One workstation was set up without any filtering installed and three different filtering programs were also tested: CyberPatrol, FilterGate, and WebSense. Upon the subsequent request two months later by Councilmember Constant, the library, once again with the involvement of Vijay Sammeta, set up a duplicate network and workstations to mimic our original tests and tested one additional filtering program: Barracuda.

Each program offers different options for content filtering, without a one-to-one correlation of settings between programs. However, every effort was made to set up consistent filtering levels on each machine to filter only content of an adult sexual nature. Professional best practices, per the two paramount filtering reports by the Kaiser Family Foundation and Lori Bowen Ayre, recommend that the filters be set to their lowest setting; in other words, being very specific about the categories one wishes to filter and not choosing every category by default and/or choosing lower levels of intensity within the filtering software.

CyberPatrol was set up to filter *Adult/Sexually Explicit* and *Glamour & Intimate Apparel* content, as well as *Remote Proxies* (well-documented sources for adult content sites). FilterGate's *AdultFilter* option was enabled. WebSense was set up to filter *Adult Material* (including *Adult Content*, *Lingerie & Swimsuits*, *Nudity*, and *Sex*), *Illegal or Questionable sites* (redirect sources for adult content sites),

*Information Technology* (including *Proxy Avoidance* and *URL Translation Sites*, also sources for adult content sites). Barracuda was set up to filter the *Sexual* category (including *Adult*, *Intimate Apparel & Swimsuit*, and *Porn*) as well as one category of the *Communication & Technology* category (*Proxies*).

While the programs tested do offer the option of whitelists and blacklists, that was not an option we were able to employ during our tests as the content of those lists is built up over time by the local staff to meet the local needs and requirements of the community. Libraries who have had filters installed for a long time can sometimes have substantial whitelists and blacklists that are an overlay on the filter's own database of blocked and/or allowed sites. If the library were to implement filtering, we would anticipate the build-up of these types of list over time.

A set of 135 test questions and scenarios were written based on the existing literature about filtering and staff suggestions of real information requests they have received from their users. The questions/scenarios were broken into the following categories:

- general keyword searches (for both “content of an adult sexual nature” and “content *not* of an adult sexual nature”) in three different web search engines
- direct URL access to a variety of types of sites and content
- image searches (“content of an adult sexual nature” and “content *not* of an adult sexual nature”) in three different image search engines
- email text and photo attachments through several different webmail providers
- RSS feed content access
- searches in the online library catalog, and searches in our proprietary subscription databases

The test questions/scenarios do not represent a scientific random sampling of all information requests or searches. A conscious effort was made to include searches and scenarios that the filters should be able to handle fairly easily as well as attempts to find information that might be incorrectly blocked or attempts to find and view materials that are harmful to minors. No attempt was made to find or view materials, such as child pornography, that are illegal.

For the original tests, four teams of two senior librarians each, with representation from San José Public Library and the San José State University Library, were designated to test the 135 questions and scenarios on each of the three original filters, with an unfiltered computer as a control. For the subsequent Barracuda test, the Digital Futures Senior Librarian conducted the testing with City Information Technology representative, Vijay Sammeta, present for some of the testing. Data was recorded and submitted to the Digital Futures Senior Librarian for central review and processing.

## **General Findings**

Below is the average accuracy percentage in each content category for all four filters combined to show a general sense of how effective these filters were in the various categories. The accuracy rate represents the success of the filter in blocking the content it should block and/or letting through the content it should let through. The perfect score for each category would be 100%.

The success in filtering out content is higher, particularly in keyword searches, than the ability to correctly allow content through that should not be filtered. In other words, the trend is toward over-blocking. The accuracy rates for correctly filtering the non-text and non-standard-text content (images, email attachment images, and RSS feeds) is lower. The accuracy rates for the library's proprietary catalog and databases are on par with the accuracy rates for keyword searching and direct URL access.

### Average Filter Accuracy (margin of error +/- 5%)

Type of Content Tested	Accuracy Percentage
Content of an Adult Sexual Nature – direct URL access	87%
Content of an Adult Sexual Nature – keyword searches	81%
Content not of an Adult Sexual Nature – direct URL access	86%
Content not of an Adult Sexual Nature – keyword searches	69%
Image Searches	44%
Email Attachments	25%
RSS Feeds	48%
Library Catalog Searches	75%
Library Database Searches	88%

Reading through the results of all of the major published Internet filtering studies conducted from 2001-2008 (listed at the end of this report), which predominantly tested traditional text-based content such as direct URL access and keyword searching, one will note that our findings are extremely similar to the other studies' findings. In fact, the average accuracy rating of all of the various studies cited is 78.56%. The comparable sections of our informal study (keyword searching, direct URL access, RSS feeds, catalog and database searches) yielded very similar results: an average accuracy of 76.29%, a difference of only 2.27%.

We did, however, experience a much lower success rates for non-traditional and rapidly growing web content in various formats, including images. Only one published study directly addresses the success of image searching, the *Expert Report* by Dr. Paul Resnick for North Central Regional Library District. He found a 48% rate of accuracy in blocking trigger images (images the filter is meant to catch). We tested both images that the filter should catch as well as images that the filter should let through, in both image search engine keyword searching and image email attachments. Our results for image search engine keyword searching, which is the section most comparable to Dr. Resnick's study, yielded an average accuracy of 44%—nearly identical to Dr. Resnick's findings. If you include image email attachments (something Dr. Resnick did not test), our study's findings go down to an average accuracy rating of 34.5%, still not that far off from Dr. Resnick's findings.

In all four filters tested, image filtering had a low rate of accuracy. Many images of an adult sexual nature were displayed on web pages accessed by the testers, and additionally the image search results pages and most of those images' full-size versions and/or parent sites could be accessed as well. Because of the ability of image search engines (like Google Images and Yahoo Image Search) to display thumbnails which often aren't treated as "real" images by the filtering programs, image filtering is a problem for the filtering software's AI. Images of an adult sexual nature from image search engines, pages with images of an adult sexual nature but "fake" innocent text, or images of an adult sexual nature posted to social sites like Craigslist were consistently displayed in all four filter tests. Additionally, clicking on the search engine results pages' links to "cached" versions of webpages allowed access to those webpages and their images, even though their main entries on the results page were blocked. There were many work-arounds discovered by our testers that allowed access to the very material that the filtering systems were attempting to block. At the same time, many sites without images of an adult sexual nature, or even entire search results pages, were blocked, such as the medical site WebMD or search results pages for a search for "Parents and Friends of Lesbians and Gays."

For two of the four filters tested, over-blocking of text content was a serious problem. Based on our test results, it is apparent that the artificial content recognition in all four filters is heavily reliant

on URL and single-word black lists, and not so much on phrases or overall contextual content of a site. As a result, much over-blocking occurs. Numerous searches for content that is not of an adult sexual nature were blocked (e.g. the search results pages were entirely blocked, or various credible results blocked). Direct URL access to sites without content of an adult sexual nature were blocked incorrectly as well, such as VictimsOfPornography.org (a support group for victims of pornography) and Lesbian.org (a lesbian support site).

The same was found, though to a lesser extent, in a small study conducted by the Kaiser Family Foundation: “See No Evil: How Internet Filters Affect the Search for Online Health Information.”

“At the least restrictive or intermediate configurations, the filters tested do not block a substantial proportion of general health information sites (1.4%); however, at the most restrictive configuration, one in four health sites are blocked....Even at their least restrictive settings, filters could have a modest impact on those seeking information on sexual health issues; on average, filters incorrectly blocked about one in ten sites on safe sex, condoms, or health issues pertaining to gays.” (Kaiser Family Foundation, *See No Evil*)

Blocking of terms of an adult sexual nature across filters and search engines was highly inconsistent. Only one out of the fifteen terms of an adult sexual nature that the testers searched on was blocked in all three search engines in all four filters. The keyword searches that are blocked vary from search engine to search engine, showing inconsistency in the methods by which content is blocked. The more popular sites/engines filtered more out, demonstrating that certain tools may have received more attention from the filtering software developers. In other words, depending on which search tool you happen to use, you will get more or less access to content that the filter is trying to block.

Workarounds to “fool” the filter were also easily successful in every test filter. For example, you could get around the filter’s parameters by searching for “pron” instead of “porn,” using plural word forms, searching for acronyms instead of the actual institution’s name, or getting out to an adult site through a seemingly innocent “portal” site (like Linkbase.org) to get around the filters, clicking on the thumbnail images or “cached” versions of webpages, or using a site like Peacefire.org whose sole purpose is to provide users with a one-click workaround for filtering systems.

The filtering programs’ artificial content recognition does not handle non-English language words well, completely allowing Spanish-language terms, including slang, searches and their results, while blocking the English translation of the same term. This is a problem for two chief reasons. First, in our multicultural community many languages are spoken and searches are conducted in numerous languages. Second, with dominantly-English language search engines indexing more and more non-English content, results with Spanish language trigger words would not be caught, thereby allowing more sites with content of an adult sexual nature to be incorrectly displayed.

None of the four filtering programs successfully filtered out emails with content of an adult sexual nature. RSS feeds, however, were blocked appropriately in only one of the four filters.

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## **Filter-Specific Findings**

### **CyberPatrol**

CyberPatrol allows for a rather granular level of filtering, but the restrictiveness and lack of description for the settings would make precise and effective configuration difficult. Through all of the various searches and scenarios CyberPatrol allowed fewer images of an adult sexual nature, but also over-blocked quite a bit (compare the first row of accuracy statistics below - the accuracy for “content not of an adult sexual nature” is lower in both categories).

In all image search engines, image filtering was unsuccessful. Many images of an adult sexual nature got past the filters and many images that did not include adult sexual content, and even entire searches, were blocked. Additionally, for most image thumbnails (even those that were deemed “adult” and blocked by the filtering software), if you clicked on the originating site or the blank thumbnail image you could still get through to see the full size image on its original web page. Questionable sites, like a Craigslist posting with innocuous text but a graphic adult photograph, are allowed. Keyword searching results in general inconsistencies in what is and isn’t blocked (e.g. “women’s asses” is allowed but “Shakespeare and sex” isn’t).

Keyword searching within the library’s proprietary resources also met with some challenges; for example:

- a search for “orgasm” in the Health and Wellness Resource Center database was blocked
- a search for “vagina” in the World Book Encyclopedia online was blocked

Numerous sites that do not contain content of an adult sexual nature are being blocked as well, both through keyword searching and direct URL access, including:

- WebMD
- the American Urological Association site
- VictimsOfPornography.org
- Univision.com
- DirtyPicturesBand.com (a rock band site with no adult content)
- Amazon and Google Book Search item pages (including the Amazon item page for an album by the band The Cure entitled “Pornography”)

Entire domains also appear to be blocked if even one post on one sub-domain contains something of an adult sexual nature (e.g. the entire site, SlideShare, which is a PowerPoint slideshow sharing site, was blocked because of one slideshow discussing sexual positions).

**CyberPatrol Accuracy (margin of error +/- 5%)**

Type of Content Tested	Accuracy Percentage
Content of an Adult Sexual Nature – direct URL access	87%
Content of an Adult Sexual Nature – keyword searches	96%
Content not of an Adult Sexual Nature – direct URL access	73%
Content not of an Adult Sexual Nature – keyword searches	65%
Image Searches	44%
Email Attachments	25%
RSS Feeds	25%
Library Catalog Searches	75%
Library Database Searches	50%

## **FilterGate**

Because FilterGate allows only for general blocking with their AdultFilter, and does not allow for specific subject-based filtering, many sites without any content of an adult sexual nature are blocked. This rough approach to filtering would not offer us the functionality requested. Most image searches were allowed, and the thumbnails of images, both content of an adult sexual nature and not, were displayed fully and not filtered appropriately.

If a “filtered-out” image of an adult sexual nature appears as a result on a page, the entire results page is blocked, blocking access to content without material of an adult sexual nature. Keyword searching results in general inconsistencies in what is and isn’t blocked (e.g. “big penises” is allowed but “Parents and Friends of Lesbians and Gays” isn’t). Blocking is inconsistent as well: “parents and lesbians” is blocked while “parents and gays” is allowed, “Parents and Friends of Lesbians and Gays” is blocked while “PFLAG” is allowed. Keyword searching within our proprietary resources also met with some challenges; for example, the following searches were *not* allowed in the library’s online catalog:

- lesbianism
- how to build a pipe bomb
- sexual positions

Numerous sites without any content of an adult sexual nature are being blocked as well, including:

- TheSmokingGun.com
- Lesbian.org (a gay/lesbian support site)
- the Wikipedia entry for *Hustler* Magazine
- a World War II history web site
- a UK breast cancer information site
- entire blogs are blocked because one of the many posts discussed something “adult”

### FilterGate Accuracy (margin of error +/- 5%)

Type of Content Tested	Accuracy Percentage
Content of an Adult Sexual Nature – direct URL access	93%
Content of an Adult Sexual Nature – keyword searches	74%
Content not of an Adult Sexual Nature – direct URL access	82%
Content not of an Adult Sexual Nature – keyword searches	41%
Image Searches	36%
Email Attachments	25%
RSS Feeds	100%
Library Catalog Searches	25%
Library Database Searches	100%

### WebSense

There is more under-blocking than over-blocking in WebSense. This is vastly different from Filtergate and CyberPatrol, which over-blocked, perhaps because of the more granular nature of the filtering categories in WebSense and the increasing dependence on keyword filtering instead of just URL filtering. All image searches were allowed in all search engines, with individual images being erased/blocked on the results page instead. Over-blocking occurred, as in the case of National Geographic images of beavers being blocked. Consistently, however, images of an adult sexual nature still got through the filters and were displayed for nearly every search in their thumbnail format and it was often possible to click on the thumbnail image, even if it was erased, and still get access to the originating web site and larger version of the image. Below are examples of some of the image searches that resulted in numerous instances of graphic content being displayed on the search results page directly and/or allowing click-through access to the original web site and image:

- anal sex pictures
- huge breasts
- rape photos
- Spanish term “cojones”
- Spanish term “putas”

All keyword searches were allowed, but individual results for some searches were blocked, sometimes inappropriately, such as some of the results for searches for:

- how to be a good lover
- gay sex
- *Hustler*
- vibrators

Keyword searching for text results in general inconsistencies in what is and isn't blocked. For example:

- Yahoo's directory of adult sex chat sites is not blocked
- some very graphic search results were viewable through a search for “violent sex site”
- some very graphic search results were viewable through a search for “porn videos”
- Some very graphic search results were viewable through a search for “animal sex photos”

Library catalog and database searches, in this case, were completely successful.

### WebSense Accuracy (margin of error +/- 5%)

Type of Content Tested	Accuracy Percentage
Content of an Adult Sexual Nature – direct URL access	87%
Content of an Adult Sexual Nature – keyword searches	78%
Content not of an Adult Sexual Nature – direct URL access	100%
Content not of an Adult Sexual Nature – keyword searches	82%
Image Searches	33%
Email Attachments	25%
RSS Feeds	33%
Library Catalog Searches	100%
Library Database Searches	100%

## **Barracuda**

There is more under-blocking than over-blocking in Barracuda, as in WebSense. All image searches were allowed in all search engines, with no individual images being erased or blocked. All images were displayed, period. The same occurred with image email attachments – everything was displayed. Over-blocking occurred, as in the case of PFLAG.org being blocked. As with the image searching in all other filters, clicking on the thumbnail format of images, or clicking on cached versions of web pages, allowed full access to content of an adult sexual nature.

Below are examples of some of the image searches that resulted in numerous instances of graphic content being displayed on the search results page directly and sometimes also allowing click-through access to the original web site and image(s):

- anal sex pictures
- rape photos
- normal erection
- Spanish term “cojones”
- Spanish term “putas”

All keyword searches were allowed, but individual results for some searches were blocked, sometimes inappropriately, such as some of the results for searches for:

- Breast enlargement surgery
- Parents and Friends of Lesbians and Gays
- *Hustler*
- vibrators

Keyword searching for text results in general inconsistencies in what is and isn't blocked. For example:

- Hustler.com was blocked but HustlerLingerie.com was allowed
- PFLAG.org, the national organization's webpage, was blocked but all of the state and international chapters' websites are accessible
- a page about building a potato gun on hubpages.com and a page about building a flying saucer on beyondweird.com were both blocked incorrectly
- Examples of sites that are allowed incorrectly: AnimalSex.es, PornXTube.net, WildWebCamGirls.com, XXXChatters.com, Adultcyberdating.org, Cruel-Rape.com, and BestExtremeVideos.com/Forced-Fuckers.html and FuckingDickHead.com
- some very graphic search results were viewable through a search for “sex chat rooms”
- some very graphic search results were viewable through a search for “huge breasts”

Numerous sites that do not contain content of an adult sexual nature are being blocked as well, both through keyword searching and direct URL access, including:

- ImplantInfo.com (a site with a wealth of medical information about breast implants)
- PFLAG.org
- A Gay.com article on queer sexuality and another on “Our Trans Children”
- A Nazi history article
- *Hustler’s* homepage
- Lesbian.org (a gay/lesbian support site)
- SexHelp.com

Entire domains also appear to be blocked if even one page on one sub-domain contains something of an adult sexual nature (e.g. the entire site, Squidoo, which is a site that allows users to create “lenses” which result in topical webpage with links to various resources, was completely blocked but it is unclear why.

Library catalog and database searches, in this case, were completely successful.

**Barracuda Accuracy (margin of error +/- 5%)**

Type of Content Tested	Accuracy Percentage
Content of an Adult Sexual Nature – direct URL access	78%
Content of an Adult Sexual Nature – keyword searches	74%
Content not of an Adult Sexual Nature – direct URL access	90%
Content not of an Adult Sexual Nature – keyword searches	87%
Image Searches	64%
Email Attachments	25%
RSS Feeds	33%
Library Catalog Searches	100%
Library Database Searches	100%

**Conclusion**

Despite the fact that our test was geared toward filtering out only content of an adult sexual nature, other text and image content that was not of an adult sexual nature was filtered out as a consequence. The filters we tested falsely blocked many valuable web pages and other online resources, on subjects ranging from war and genocide to safer sex and public health. No filter was reliably able to distinguish text or image content including obscenity, child pornography, or “harmful to minors” material from other, legal content. As a result, each filter blocked a wide range of constitutionally protected content in its attempt to block other content. Other, published studies cited in the References section have consistently shown that the more successful the filter is at blocking the content it wishes to block, the more unsuccessful it is at letting constitutionally protected (i.e., neither illegal nor harmful to minors) content through. This was the case in our test as well.

Because the filtering programs are looking for particular trigger words and URLs, the filtering of images is highly problematic. The only existent way to filter images is based on the words surrounding them – either in the text around an image on the web page, image file names, or alternative text tags (text that is read out loud when a screen readers is used to access the web site, usually in the case of a blind user). There is no artificial content recognition that can evaluate the actual content and context of an image and determine whether or not it falls into a specific category, or contains a particular type of image.

As such, in order to even attempt to block adult images of an adult sexual nature, the library would have to choose to block whole categories of content (e.g. “Adult-Sexual”) including both text and images, and/or block all images on all websites entirely. The result would be that both images and text, not to mention access to entire web sites or web pages, would be blocked—not just images of an adult sexual nature. As our tests show, filtering technology is ill-equipped to deal with newer and non-text and non-standard-text content, such as image results on image search engine pages, image email attachments, RSS feeds, and non-English content.

Our results show that the effectiveness of content filtering either in blocking materials harmful to minors or in allowing access to information including images that is not harmful to minors has not changed significantly in recent years.

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<http://www.supremecourtus.gov/opinions/02pdf/02-361.pdf> (Accessed 04/02/08).

## Filtering Studies and Their Findings

Date	Title	Source	Summarized Conclusions
2008	<a href="#">Deep Throat Fight Club Open Testing of Porn Filters</a>	Untangle	<ul style="list-style-type: none"> <li>• Fortinet 97.7% accuracy blocking trigger websites</li> <li>• Watchguard 97.3% accuracy blocking trigger websites</li> <li>• Websense 97.0% accuracy blocking trigger websites</li> <li>• SonicWall 96.1% accuracy blocking trigger websites</li> <li>• Barracuda 94.0% accuracy blocking trigger websites</li> <li>• Average of 99% accuracy allowing non-trigger sites</li> </ul>
2008	<a href="#">Expert Report</a>	Dr. Paul Resnick (for North Central Regional Library District)	<ul style="list-style-type: none"> <li>• 93.1% accuracy blocking trigger websites</li> <li>• 48% accuracy blocking trigger images</li> </ul>
2007	<a href="#">Report on the Accuracy Rate of FortiGuard</a>	Bennet Haselton (for the ACLU)	<ul style="list-style-type: none"> <li>• 88.1% overall accuracy on .com sites</li> <li>• 76.4% overall accuracy on .org sites</li> </ul>
2006	<a href="#">Expert Report</a>	Philip B. Stark (for the DOJ)	<ul style="list-style-type: none"> <li>• 87.2%-98.6% accuracy blocking “sexually explicit materials”</li> <li>• 67.2%-87.1% accuracy allowing “non-sexually explicit materials”</li> </ul>
2006	<a href="#">Websense: Web Filtering Effectiveness Study</a>	Veritest (for Websense)	<ul style="list-style-type: none"> <li>• WebSense: 85% overall accuracy</li> <li>• SmartFilter: 68% overall accuracy</li> <li>• SurfControl: 74% overall accuracy</li> </ul>

2004	<a href="#">Report on the evaluation of the final version of the NetProtect Product</a>	Net-Protect.org	<ul style="list-style-type: none"> <li>• Surf-mate: 85% accuracy blocking trigger content and 89% accuracy allowing non-trigger content</li> <li>• CyberPatrol: 44% accuracy blocking trigger content and 95% accuracy allowing non-trigger content</li> <li>• Net Nanny: 18% accuracy blocking trigger content and 97% accuracy allowing non-trigger content</li> <li>• CYBERSitter: 24% accuracy blocking trigger content and 97% accuracy allowing non-trigger content</li> <li>• Cyber Snoop: 3% accuracy blocking trigger content and 99% accuracy allowing non-trigger content</li> <li>• NetProtect 2: 96% accuracy blocking trigger content and 83% accuracy allowing non-trigger content</li> </ul>
2003	<a href="#">Internet Blocking in Public Schools</a>	Online Policy Group	<ul style="list-style-type: none"> <li>• School curriculum materials accessed with filters set to least restrictive settings: 95-99.5% accuracy</li> <li>• School curriculum materials accessed with filters set to most restrictive settings: 30% accuracy</li> </ul>
2002	<a href="#">Corporate Content Filtering Performance and Effectiveness Testing Websense Enterprise v4.3</a>	eTesting Labs (for Websense)	<ul style="list-style-type: none"> <li>• SuperScout: 90% accuracy blocking “adult” materials</li> <li>• SmartFilter: 90% accuracy blocking “adult” materials</li> <li>• WebSense: 95% correct accuracy blocking “adult” materials</li> </ul>
2002	<a href="#">No Evil: How Internet Filters Affect the Search for Health Information</a>	Kaiser Family Foundation	<ul style="list-style-type: none"> <li>• 98.6% accuracy in accessing health information on least restrictive settings</li> <li>• 95% accuracy in accessing health information on intermediate restrictive settings</li> <li>• 76% accuracy in accessing health information on most restrictive settings</li> </ul>
2001	<a href="#">Expert report of Dr. Joseph Janes</a>	Dr. Joseph Janes (for the ACLU)	<ul style="list-style-type: none"> <li>• 34.3% accuracy in allowing non-trigger content</li> </ul>

2001	<a href="#">Internet Filtering Accuracy Review</a>	Cory Finnell for the Certus Consulting Group (for the DOJ)	<ul style="list-style-type: none"> <li>• CyberPatrol: 92.01%-95.31% overall accuracy</li> <li>• Websense: 89.97%-94.75% overall accuracy</li> <li>• Bess: 93.08%-91.64% overall accuracy</li> </ul>
2001	<a href="#">Updated Web Content Software Filtering Comparison Study</a>	eTesting Labs (for the DOJ)	<ul style="list-style-type: none"> <li>• 92% average accuracy of four filters in blocking “objectionable” content</li> <li>• 96% average accuracy of four filters in allowing non-trigger content</li> </ul>
2001	<a href="#">Digital Chaperones for Kids</a>	Consumer Reports	<ul style="list-style-type: none"> <li>• Cybersitter 2000: 78% accuracy blocking “objectionable” content</li> <li>• Internet Guard Dog: 70% accuracy blocking “objectionable” content</li> <li>• AOL's Young Teen Control: 63% accuracy blocking “objectionable” content</li> <li>• CyberPatrol: 77% accuracy blocking “objectionable” content</li> <li>• NetNanny: 48% accuracy blocking “objectionable” content</li> <li>• NIS Family Edition: 80% accuracy blocking “objectionable” content</li> </ul>
2001	<a href="#">Effectiveness of Internet Filtering Software Products</a>	Paul Greenfield, Peter Rickwood, and Huu Cuong Tran (for the Australian Broadcasting Authority)	<ul style="list-style-type: none"> <li>• N2H2 (now Bess), set to “maximum filtering,” was reported as the most effective filter tested in this study</li> <li>• 95% accuracy blocking the “pornography/erotica” category</li> <li>• 75% accuracy blocking the “bomb-making/terrorism” category</li> <li>• 65% accuracy blocking the “racist/supremacist/Nazi/hate” category</li> <li>• 40% accuracy allowing non-trigger content in the “art/photography” category</li> <li>• 60% accuracy allowing non-trigger content in the “sex education” category</li> <li>• 70% accuracy allowing non-trigger content in the “atheism/anti-church” category</li> <li>• 80% accuracy allowing non-trigger content in the “gay rights/politics” category</li> <li>• 85% accuracy allowing non-trigger content in the “drug education” category</li> </ul>

2001	<a href="#">Report for the European Commission: Review of Currently Available COTS Filtering Tools</a>	Sylvie Brunessaux et al.	<ul style="list-style-type: none"><li>• Average of the 10 filters tested</li><li>• 67% accuracy blocking trigger sites in English</li><li>• 52% accuracy blocking trigger sites in five languages</li><li>• 91% accuracy allowing non-trigger content</li></ul>
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