

### Children's Access to Pornography Through Internet File-Sharing Programs

Prepared for Rep. Henry A. Waxman and Rep. Steve Largent

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#### **EXECUTIVE SUMMARY**

At the request of Reps. Henry A. Waxman (D-CA) and Steve Largent (R-OK), this report examines a new and growing problem for parents throughout the United States: Internet file-sharing programs that provide children easy and free access to thousands of explicit pornographic videos and other pornographic materials. These file-sharing programs include such popular software as Music City Morpheus, BearShare, and Aimster.

The use of personal computers to access new peer-to-peer file-sharing networks is expanding rapidly. Napster popularized the notion of file sharing through a peer-to-peer network, claiming as many as 70 million users at its peak. But as Napster continues to face litigation from the music industry for copyright infringement, computer users are searching for alternatives and increasingly turning to a new wave of file-sharing programs. Most of these new programs have more features than Napster because they can share any type of files, including video files. Moreover, they are harder to regulate than Napster because they operate without a central directory that manages the file-sharing operations.

The explosive growth of Internet file-sharing programs poses a unique problem for both parents and their children. On the web, the most graphic content, such as x-rated adult video, is available primarily through commercial sites that impose credit card fees on users. By contrast, file-sharing networks have the same content available for free, eliminating the need for a child to have access to a credit card. Moreover, most popular parental filters do not block access to pornographic materials obtained through file-sharing programs. It is possible for a parent to install a filtering program to block access to pornographic pictures available through adult web sites -- only to discover that his or her child has unrestricted access to pornographic videos through file-sharing programs.

These risks are compounded by the pervasiveness of pornography on file-sharing networks. Teenagers who use these programs to search for music or videos of popular artists can be unexpectedly inundated by files containing explicit pornographic content.

This report on Internet file-sharing programs was prepared by the Special Investigations Division of the minority staff of the Committee on Government Reform at the request of Reps. Waxman and Largent. It is the first report to examine the use of these file-sharing programs for the transfer of pornographic materials.

#### **Major Findings**

Internet file-sharing programs are rapidly gaining users. File-sharing alternatives to Napster, such as Music City Morpheus, BearShare, and Aimster, are surging in popularity. According to recent figures, these file-sharing programs have at least as many users today as Napster did a year ago. One leading Internet clearinghouse for software recently reported that more than 3.1 million copies of these file-sharing programs were downloaded from its site in just one week.

Internet file-sharing programs provide free access to thousands of pornographic videos and images. Although the new file-sharing programs are often viewed as a means of obtaining free music online, one of the major uses of the programs is to exchange pornographic materials, such as adult videos. Several of the most popular file-sharing programs are Gnutella-based programs. On these programs, six of the top ten searches on a recent day were for "porn," "sex," "xxx," and other terms intended to elicit pornography. A single search for the term "porn" using BearShare yielded over 25,000 entries, more than 10,000 of which were video files. All of these entries required no charge or age restriction to download.

The pornographic content available through the file-sharing programs includes, but is not limited to, graphic adult videos. The content also includes child pornography, violent pornography, and bestiality. On a recent day, the eighth leading search on the Gnutella network was "preteen"; the sixteenth most popular was "rape."

<u>Children in search of music on file-sharing programs are directed to pornographic</u> <u>files.</u> Even if children innocently use these programs with the goal of obtaining music or video from their favorite artists, they can encounter pornography. When the Special Investigations Division used the popular file-sharing program Aimster to search for videos of "Britney Spears," over 70% of the results were pornographic files. Searches for "Christina Aguilera" and "Madonna" also produced extensive pornographic content.

Popular parental filters do not block access to pornographic files through filesharing programs. Many parents install parental filters to protect their children from encountering pornographic content online. These programs, however, are generally designed to block access to pornography from web sites, not through the new file-sharing programs. When installed in their default configuration, which is the setting most frequently used by parents, five of seven popular parental control programs examined by the Special Investigations Division fail to block access to pornography through Internet file-sharing programs. Moreover, four of the seven programs do not have the capability to be configured to effectively block such access. The programs that fail to block access include two of the most popular: Net Nanny and Cyber Patrol.

The number of children using file-sharing programs is unknown, but is believed to be high. Precise data on the number of persons under 18 using file-sharing programs is not available because none of the surveys of usage of these programs identify users by age. Experts contacted by the Special Investigations Division, however, consistently expressed the view that many of the users of file-sharing programs are under 18. According to one survey, one-third of teens ages 12 to 17 have downloaded songs from Napster. Experts believe that as Napster's appeal declines, many of these teens are turning to the new file-sharing programs.

#### I. INTRODUCTION

In recent years, there has been growing public concern over the prevalence of sex and violence on televison, in the movies, and in other forms of popular culture. For many parents, the largest worry has been the exposure of their children to pornography on the world wide web. According to a recent Markle Foundation study, pornography and violence rank as the public's greatest Internet concern.<sup>1</sup>

Although there is widespread concern about pornography on the web, few parents are aware of the risks posed by the explosive growth of file-sharing programs on the Internet. Countless articles have been written about the dangers of pornography on the web, but there has been virtually no coverage of the even greater risks that children may face through the use of file-sharing programs. Press coverage of these technologies has generally focused on their rapid growth and unregulated nature without examining the issues that they raise for parents concerned about children's exposure to graphic adult content.

The first popular file-sharing program was Napster, which pioneered a new way to exploit Internet technology by creating a system in which computer users could download files from other users. Napster, however, permitted users to download only music files. The new generation of file-sharing programs allows users to download a wide array of files, including adult videos and other pornographic content. Moreover, unlike Napster, most of the new file-sharing programs do not operate through central directories, making regulation more difficult.

Because of the lack of public awareness about the access that children have to pornographic materials on file-sharing programs, Rep. Henry A. Waxman, a Democrat from California, and Rep. Steve Largent, a Republican from Oklahoma, requested that the Special Investigations Division of the minority staff of the House Committee on Government Reform investigate the new file-sharing programs. This report presents the results of this investigation. It is the first report to examine the use of file-sharing programs for the transfer of pornographic materials.

#### II. INTERNET FILE-SHARING PROGRAMS

File-sharing programs are a means of accessing peer-to-peer networks. These networks are online networks that allow users to share and download files without charge. Most peer-to-peer networks work separately from web sites or web browsers. Once the file-sharing software is downloaded and installed on a personal computer, users need to be online to access files from other computers, but they do not need to open their web browser. By simply clicking on the program's icon, users are connected to a network where they can search for, download, and trade files.

<sup>&</sup>lt;sup>1</sup>The Markle Foundation, *Toward a Framework for Internet Accountability*, 20 (July 2001).

Napster once dominated the field of Internet file-sharing programs. At the height of its popularity, Napster claimed as many as 70 million users.<sup>2</sup> But Napster's popularity has faded as record companies have prevailed in legal challenges. This has created a surge of interest in alternative file-sharing programs. As the New York Times reported in a front-page article on July 20, 2001:

The record industry's largely successful effort to cripple Napster . . . has left it facing something potentially worse: a new generation of music-swapping sites, more numerous and much harder to police.

Figures to be released today show that a precipitous drop in Napster's traffic over the last several weeks has been paralleled by marked growth in more than half a dozen less centralized services.<sup>3</sup>

The new file-sharing programs like Music City Morpheus, BearShare, Aimster, and LimeWire, differ from Napster in two significant ways. First, Napster supports only the sharing of MP3 audio files. The new file-sharing programs can be used to download any type of file, including photographs, video files, and software. Second, Napster operates through a central server. Although users of Napster download MP3 files from other users, the users identify the files that they want to download by accessing Napster's central computers. Many of the new file-sharing programs turn users' computers into temporary servers, avoiding the need for any organized central server.

#### A. Access to and Use of File-Sharing Programs

Each peer-to-peer network can be accessed by downloading file-sharing software from the Internet. More than a dozen of the new file-sharing programs use the "Gnutella protocol," which is a format that allows the software to communicate with other users. Popular file-sharing programs that use the Gnutella protocol include BearShare, LimeWire, Gnotella, Gnucleus, Bodtella, Mactella, and Newtella. Other file-sharing programs operate under the same principles, but use different protocols. These include Music City Morpheus, Aimster, KaZaA, iMesh, FreeNet, WinMX, FileNavigator, Hotline, MyNapster, Direct Connect, eDonkey2000, Jungle Monkey, Mojo Nation, Flycode, Konspire, and Filetopia.

Once file-sharing software is downloaded, users can access the network as long as they are online without having to open a web browser like Netscape Navigator or Internet Explorer. Users type in search terms and the software searches other computers connected to the network

<sup>&</sup>lt;sup>2</sup>Matt Richtel, *With Napster Down, Its Audience Fans Out*, New York Times (July 20, 2001).

<sup>&</sup>lt;sup>3</sup>Matt Richtel, With Napster Down, Its Audience Fans Out, New York Times (July 20, 2001).

for matches. As matches are returned, the user can make selections and download them to the computer's hard drive. Download times vary significantly based on a variety of factors. Matches can be organized by several categories including the length of the file, the type of file (music, video, photograph), the size of the file, the provider's connection (modem, cable, DSL), and the title of the file.

#### B. **Popularity**

As Napster's popularity dwindles, use of alternative peer-to-peer networks has exploded. Just one file-sharing program, Music City Morpheus, claimed 518,000 simultaneous users on July 18, 2001.<sup>4</sup> This makes this program as popular as Napster was in July 2000.<sup>5</sup>

CNET's Download.com is a leading Internet clearinghouse for software. According to its data, file-sharing programs are now the most popular downloaded software on the Internet. In the week ending July 15, the single most popular download from CNET was Music City Morpheus, which was downloaded more than a million times. Among the ten most popular downloads, six were multimedia file-sharing programs. KaZaA was downloaded more than 580,000 times, iMesh more than 550,000 times, BearShare more than 540,000 times, and LimeWire more than 160,000 times. Altogether, CNET reports that more than 3.1 million copies of file-sharing programs were downloaded from its site in just one week.<sup>6</sup>

According to the vice president of CNET's Download.com, "with Napster not working, all 50 million users are most likely looking for an alternative."

One of the factors driving increased use of the new file-sharing programs is the growth in fast, broadband connections, such as cable and DSL connections. The website eMarketer.com estimates that by the end of 2001, there will be 9.9 million broadband households in the United

<sup>&</sup>lt;sup>4</sup>Matt Richtel, With Napster Down, Its Audience Fans Out, New York Times (July 20, 2001).

<sup>&</sup>lt;sup>5</sup>Napster Press Release, Community of Napster Users Now Exceeds 20 Million; Music Lovers of All Ages and Diverse Interests Drive Record Adoption Rate, (July 19, 2000).

<sup>&</sup>lt;sup>6</sup>Online at http://download.cnet.com/downloads/0-10005-102-0-1.html?tag=st.dl.10005.pop.10005-102-0-1; http://download.cnet.com/downloads/0-10001-102-0-1.html?tag=st.dl.10001.dir.10001-102-1; http://download.cnet.com/downloads/0-10004-102-0-1.html?tag=st.dl.10004.pop.10004-102-0-1

<sup>&</sup>lt;sup>7</sup>Matt Richtel, *With Napster Down, Its Audience Fans Out*, New York Times (July 20, 2001).

States, up from 4.9 million at the end of 2000.<sup>8</sup> Downloading large files, such as video files, can be time-consuming on dial-up connections. But with the advent of broadband connections, download times will decrease significantly, making it easier to access large files in a short time.

#### III. PREVALENCE OF PORNOGRAPHY ON PEER-TO-PEER NETWORKS

There is an astonishing number and range of pornographic files available on peer-to-peer networks. Virtually every form of pornography that is available on the world wide web is accessible through file-sharing programs, with two differences. The content on file-sharing programs is free of charge. And it is not blocked by most parental filters.

#### A. Popularity and Availability of Pornography

The new file-sharing programs are used extensively to access pornography. A listing of the most popular searches on file-sharing programs that use the Gnutella protocol is maintained by Gnutellameter.com. On June 26, six of the top ten queries were searches for pornography. These queries included "porn" (the second most popular search), "sex" (the fourth most popular search), and "xxx" (the fifth most popular search). Appendix 1 lists these searches in order of their popularity.

To assess the availability of pornography on file-sharing programs, the Special Investigations Division ran a search for "porn" on BearShare on July 20. This search produced more than 25,000 results. The results included more than 10,000 video files. These video files contained graphic displays of sexual activities, including intercourse, masturbation, and oral and anal sex. Appendix 2 shows some of these results.

Some file-sharing programs limit the number of results that they will display. Music City Morpheus, for example, will return only about 100 results per search. However, pornography is widely available through these programs as well. A search of videos containing "porn" on Music City Morpheus returned the maximum results almost immediately. Appendix 3 shows some of these results.

#### B. Types of Pornography

The pornographic content available through file-sharing programs includes, but is not limited to, hardcore "triple x" adult pornography. Child pornography, violent pornography and bestiality are also prevalent. Like the adult pornography, these types of pornography are also available without charge.

In fact, child pornography and violent pornography appear to be popular items on some

<sup>&</sup>lt;sup>8</sup> Ben Macklin, *Sizing Up the US Broadband Audience*, (July 10, 2001). Online at http://www.emarketer.com/analysis/broadband/20010710 bband.html

peer-to-peer networks. On June 26, the sixth most popular search on file-sharing programs using the Gnutella protocol was "teen" and the eighth most popular was "preteen." The sixteenth most popular search was "rape." The thirtieth most popular search was "incest." See Appendix 1.

#### IV. UNINTENDED EXPOSURE TO PORNOGRAPHY

Even users of file-sharing programs who do not seek pornography can be flooded with pornographic files when searching for other content. For example, the Special Investigations Division used the file-sharing program Aimster to conduct a search for "Britney Spears" videos on July 24. This is the type of search that a teenage girl might conduct to access music videos of one of her favorite artists. Aimster, which limits results, returned 100 files. Over 70% of these results were videos with pornographic titles. Appendix 4 shows some of these results.

This problem is not unique to Aimster. The Special Investigations Division conducted searches for "Britney Spears" on other popular file-sharing programs and obtained similar results. Moreover, searches for other popular musicians, such as Christina Aguilera and Madonna, also produced significant numbers of pornographic files.

#### V. FAILURE OF PARENTAL CONTROLS

Many parents who are concerned about their child's exposure to pornography online install filtering software. However, many of the leading parental control programs are aimed at preventing exposure to pornography on the world wide web, as opposed to file-sharing programs. To assess the effectiveness of parental control software in blocking access to pornographic content on file-sharing programs, the Special Investigations Division examined seven popular versions of parental control software: Net Nanny, Cyber Patrol, Internet Guard Dog, Cyber Snoop, America Online Parental Controls, Cyber Sitter, and Norton Internet Security 2001 Family Edition.<sup>10</sup>

For each of the seven programs, the Special Investigations Division downloaded the software and attempted to block the use of file-sharing programs to obtain pornographic files.

#### A. <u>Default Settings</u>

The parental control programs were first tested in their default setting. This is the

<sup>&</sup>lt;sup>9</sup>Search terms like "teen" or "preteen" are used specifically to find pornographic materials that contain youth. The vast majority of files returned when these terms are searched are pornographic.

<sup>&</sup>lt;sup>10</sup>These seven programs were chosen on the basis of having been reviewed in *Consumer Reports* in March 2001.

configuration that is most likely to be installed by parents. When used in their default setting, five of the seven parental control programs fail to block access to pornographic content through file-sharing programs. The five programs that do not block access are Net Nanny, Cyber Patrol, Norton Internet Security 2001, Cyber Sitter, and Cyber Snoop. In telephone interviews, representatives from the companies that distribute these programs confirmed their products do not block access to file-sharing programs in their default settings.<sup>11</sup>

In the case of America Online Parental Controls, the software failed to block access in the default setting when the connection to the Internet was made through a network and through a residential DSL line.<sup>12</sup> When accessed through a dial-up connection through America Online, however, America Online Parental Controls did effectively block access to file-sharing programs.

Only one parental control program, Internet Guard Dog, completely blocked access to file-sharing programs under its default setting. <sup>13</sup>

#### B. <u>Customized Settings</u>

The Special Investigations Division next examined whether the parental control software could be configured by parents to block access to pornography through file-sharing programs. Four of the parental control programs could not be configured by parents to effectively block such access. These four programs were Net Nanny, Cyber Patrol, America Online Parental Controls (when connected through a network or a residential DSL line), and Cyber Snoop. 14

<sup>&</sup>lt;sup>11</sup>In the case of Net Nanny, technical difficulties prevented the Special Investigations Division from testing the software. Nika Herfer, the Vice-President of Public Affairs for Net Nanny, confirmed, however, that the program would not block access to pornographic content through file-sharing programs. Telephone conversations (July 23 and July 24, 2001).

<sup>&</sup>lt;sup>12</sup>The default setting tested by the Special Investigations Division is the setting for children age 13 or older. If the default setting for children younger than 13 is used, the child may encounter difficulties accessing a web site from which to download a file-sharing program. However, once a file-sharing program is installed on the computer, the file-sharing program can be used to access pornography even under the default setting for children younger than 13.

<sup>&</sup>lt;sup>13</sup>Internet Guard Dog requires prior parental consent for all Internet applications. Before a child could operate a file-sharing program on a computer with Internet Guard Dog installed, the child must request his or her parent to authorize the use of the file-sharing program.

<sup>&</sup>lt;sup>14</sup>Some of these programs offer parents the option of blocking access to applications that are specifically identified by the parent. However, this feature is not an effective way to block access to file-sharing programs given the number of file-sharing programs that are available for a child to download. Some of these programs also offer parents the option of preventing children from entering specifically identified words or phrases. This feature is also not an effective way

Two of the parental control programs, Cyber Sitter and Norton Internet Security 2001, do have advanced options that parents can configure to prevent access to peer-to-peer networks through file-sharing programs. Both of these programs have components that can function like "firewalls," allowing parents to block access to the computer "ports" that are used by file-sharing programs.

#### **C.** Filters Within File-Sharing Programs

At least two file-sharing programs, BearShare and LimeWire, purport to offer filtering options that screen out pornographic content. These options, however, are not effective parental controls. Parents may not know that their children are using these programs and so may be unaware of the parental control option. Even if parents are aware that their children are using these programs, the parental control feature can be deactivated by simply "unchecking" a box, with no parental password being required. And even if the parental control feature is activated, it does not effectively block out all pornographic content.

In addition, these filtering options appear to apply only to a small number of file-sharing programs. They do not prevent children from downloading other file-sharing programs or using them to access pornography.

#### VI. USE OF FILE-SHARING PROGRAMS BY CHILDREN

There are no data available on the number of individuals under 18 who are currently using file-sharing alternatives to Napster. Although some data are available on the number of persons who download and use these programs, these data do not identify the age of the individuals.

Experts consulted by the Special Investigations Division, however, consistently expressed the view that many of the users of these programs are likely to be under 18. Lee Black, the Director of Research at Webnoize, stated:

We don't have hard data, but based on anecdotal evidence and what we know about Napster, children, and new Internet technologies, it's clear that many teenagers are using the Napster alternatives. Kids will be the first to take advantage of the emerging file-sharing programs. They've grown up with the Internet, don't have a lot of disposable income, and like getting free music and videos online.<sup>15</sup>

Similarly, Alex Walsh, Vice President of Market Research for the Recording Industry

to block access given the number of different words or phrases that can be used to search for pornography on file-sharing programs.

<sup>&</sup>lt;sup>15</sup>Electronic mail (July 24, 2000).

Association of America, stated: "Many kids are likely to be using these file-sharing services." 16

One reason that experts expect that high percentages of children are likely to be using file-sharing programs is that high numbers of children used Napster. A survey by the Pew Internet & American Life Project in November and December 2000 found that 53% of children ages 12 to 17 -- more than 7 million youth -- had downloaded music from the Internet. That was the highest percentage of any age bracket surveyed. A February 2001 survey conducted by Family PC magazine found that one out of three teens ages 12 to 17 had downloaded songs through Napster. As Napster's appeal diminishes, experts anticipate that teens will rapidly turn to alternative file-sharing programs.

#### VII. CONCLUSION

File-sharing programs that provide access to peer-to-peer networks are surging in popularity. This trend poses a special problem to parents who do not want their children accessing free pornographic content through these programs. Such content may appear in response to simple searches such as "Britney Spears." These risks are compounded because many popular parental filters do not block access to pornography through file-sharing programs.

<sup>&</sup>lt;sup>16</sup>Telephone interview (July 25, 2001).

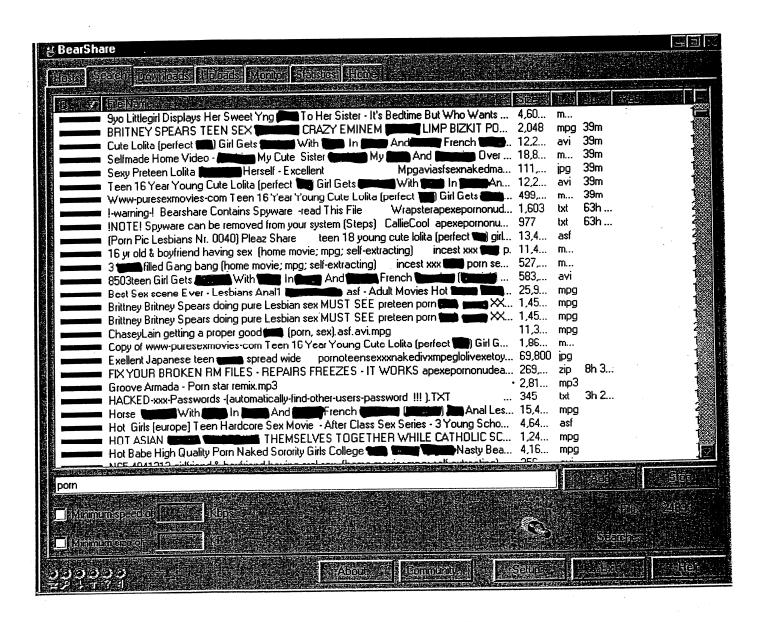
<sup>&</sup>lt;sup>17</sup>Sharlene K. Johnson, *Survey Says*, Family PC Magazine (February 2001).

Appendix 1: Top 30 Most Popular Queries on the Gnutella Network (June 26, 2001)

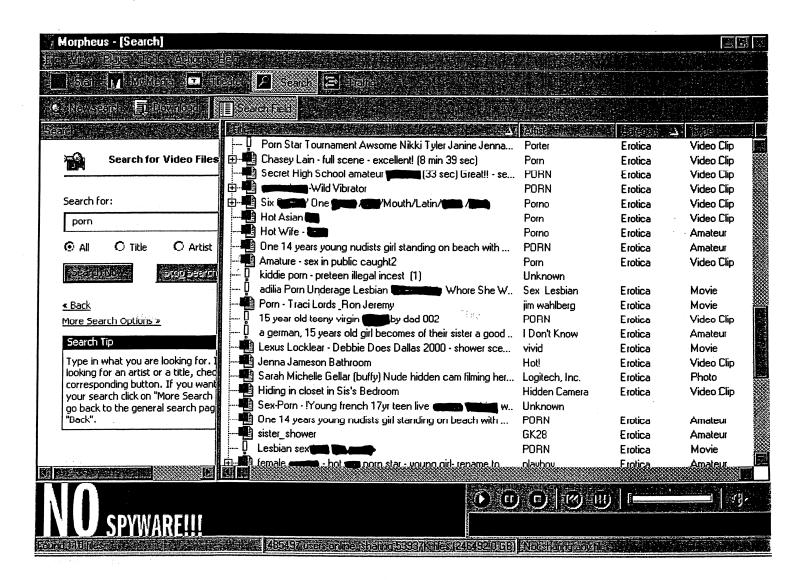
Rank	Query
1	divx
2	porn
3	star trek voyager
4	sex
5	xxx
6	teen
7	saving private ryan
8	preteen
9	lolita
10	madonna
11	stays crunchy even
12	steely dan - citizen steely
13	rage against the
14	gina wild
15	slayers
16	rape
17	gay
18	jenna jameson
19	fk
20	anal
21	matrix
22	metallica
23	sleepy hollow avi
24	britney spears
25	lesbian
26	girls gone wild
27	avi
28	porno
29	suicidal tendencies
30	incest

Source: www.Gnutellameter.com

# Appendix 2: Snapshot of Search Results for "Porn" on BearShare (July 20, 2001)



## Appendix 3: Snapshot of Video Search Results for "Porn" on Music City Morpehus (July 24, 2001)



## Appendix 4: Snapshot of Video Search Results for "Britney Spears" on Aimster (July 24, 2001)

