

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Implementation of the Child Safe Viewing Act;) MB Docket No. 09-26
Examination of Parental Control Technologies for)
Video or Audio Programming)

REPORT

Adopted: August 27, 2009

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By the Commission: Chairman Genachowski and Commissioners Copps, McDowell, Clyburn and Baker
issuing separate statements.

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I. INTRODUCTION

1. We submit this Report to Congress pursuant to the Child Safe Viewing Act of 2007 (“Child Safe Viewing Act” or “Act”).¹ The Act directs the Commission to provide, by August 29, 2009, an assessment of the current state of the marketplace with respect to: the existence and availability of advanced blocking technologies;² methods of encouraging the development, deployment and use of such technologies that do not affect the packaging or pricing of programming; and the existence, availability and use of parental empowerment tools and initiatives already in the market.³

2. The Act addresses the drastic changes in the media landscape that affect children. Specifically, in the last two decades, electronic media has assumed an increasingly integral role in the lives of children.⁴ As a result of a number of technological innovations and the growing convergence of media, children today can access the same content sources from a variety of media platforms, many of which are portable.⁵ This increasingly complex media environment carries both risks and opportunities

¹ See Child Safe Viewing Act of 2007, Pub. L. No. 110-452, 122 Stat. 5025 (December 2, 2008). The Act requires the Commission to issue a report to Congress no later than 270 days after the date of enactment of the Act (*i.e.*, by August 29, 2009). See *id.* at Section 2(c). Because this day falls on a Saturday, we are submitting this Report to Congress on the next business day, Monday, August 31, 2009.

² Congress defined “advanced blocking technologies” as “technologies that can improve or enhance the ability of a parent to protect his or her child from any indecent or objectionable video or audio programming, as determined by such parent, that is transmitted through the use of wire, wireless, or radio communications.” *Id.* at Section 2(d).

³ See *id.* at Section 2(a).

⁴ For example, a recent Nielsen survey reports that children from two to 11 years of age are spending 63 percent more time online than they did five years ago. See The Nielsen Company, *Growing Up, and Growing Fast: Kids 2-11 Spending More Time Online*, July 6, 2009, http://blog.nielsen.com/nielsenwire/online_mobile/growing-up-and-growing-fast-kids-2-11-spending-more-time-online/.

⁵ For example, according to a recent survey, 77 percent of teens in the U.S. have their own mobile phone. See The Nielsen Company, *How Teens Use Media*, June 2009, at 8, (continued....)

for the nation's children. Among other things, children are able to use the various platforms to discover new opportunities for education that will help prepare them to become full participants in our economy and democracy. At the same time, however, they can be and often are exposed to harmful material that is inappropriate and unsuitable for minors.

3. Pursuant to the Act, the Commission adopted a *Notice of Inquiry* (“*NOI*”) on March 2, 2009, in response to which the Commission received numerous comments.⁶ This report is a summary of the record developed in response to that *NOI*—drawing certain conclusions from the comments submitted as well as identifying additional important questions that remain unresolved.

4. In this Report, we categorize and analyze the available options within each medium. We describe the comments the Commission received regarding the kinds of advanced blocking technologies and other parental control tools that exist and are available with respect to over-the-air television; cable and satellite television; audio-only programming; wireless services; non-networked devices such as videocassette recorders (“*VCRs*”) and DVD players; and the Internet. We discuss commenters' views regarding a variety of technologies and ratings systems and whether any of these technologies or ratings systems could be used across multiple media platforms. Finally, we address the existence, availability, and use of parental control tools and initiatives already in the market, and discuss efforts to address online safety issues.

5. *Conclusion.* Taken as a whole, the record indicates that no single parental control technology available today works across all media platforms. Moreover, even within each media platform, these technologies vary greatly with respect to the following criteria: (i) cost to consumers; (ii) level of consumer awareness/promotional and educational efforts; (iii) adoption rate; (iv) customer support; (v) ease of use; (vi) means to prevent children from overriding parental controls; (vii) blocking content/black listing; (viii) selecting content/white listing; (ix) access to multiple ratings systems; (x) parental understanding of ratings systems; (xi) reliance on non-ratings-based system; (xii) ability to monitor usage and view usage history; (xiii) ability to restrict access and usage; (xiv) access to parental controls outside of the home; and (xv) tracking. In addition, a common theme that runs throughout the comments is the need for greater education and media literacy for parents and more effective diffusion of information about the tools available to them. Many commenters urge the government to play a more substantial role in meeting this need.

6. *Further questions.* While the Commission received many responses to the *NOI*, and the record provides a substantial amount of useful information, it nonetheless fails to address key questions central to a full understanding of how parental control technologies can best be used to protect children

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http://blog.nielsen.com/nielsenwire/reports/nielsen_howteensusemedia_june09.pdf. According to one source, U.S. teens rank second in the world in terms of mobile Internet penetration. *See id.* at 8-9 (in the first quarter of 2009, 37 percent of U.S. mobile subscribers aged 13-17 used their wireless devices to access the Internet, and 18 percent to view videos). Further, video is more prevalent online, as indicated by a recent report noting that by 2013, global online video will represent 60 percent of consumer Internet traffic – up from 32 percent this year. *See Cisco Visual Networking Index: Forecast and Methodology, 2008-2013*, June 9, 2009, http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html.

⁶ *See In the Matter of Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming*, Notice of Inquiry, 24 FCC Rcd 3342 (2009) (“*NOI*”). Appendix A and B contain a list of comments and reply comments received in response to the *NOI*. In addition to the comments listed in Appendix A and B, the Commission received approximately 9,900 brief comments, the vast majority of which expressed general support for the use of parental control technology to enhance parents' ability to protect their children.

in an evolving digital media marketplace. For example, the following issues, among others, remain unresolved:

- To what extent are parents aware of the control technologies that exist today?⁷ Does parental awareness differ among media?;
- Are there reasons besides lack of awareness that keep parents from using these technologies? If so, what are they, and do they differ among media?;⁸
- It appears that adoption of control technologies may be greater for the Internet than for broadcasting and other traditional media sources: Why is this so?;⁹
- Are there data to determine the pace of innovation in parental control technologies, whether innovation is proceeding at a pace consistent with other consumer technologies, and whether evolving needs of parents, caregivers, and children are being satisfied in a timely manner?

7. The Commission intends to issue a further *Notice of Inquiry* to explore these issues and others related to the goal of protecting children and empowering parents in the digital age.

II. TELEVISION

8. Television continues to have a “uniquely pervasive presence in the lives of all Americans.”¹⁰ In spite of the increase in the number of other types of media to which children are exposed, television remains the medium of choice among children.¹¹ Children ages 8 to 18 devote about 50 percent of their total media time to television and watch on average more than three hours of television each day.¹² More than two-thirds of children in this age range have televisions in their

⁷ To the extent there is data, estimates of awareness vary dramatically. For example, estimates of awareness of the V-chip among parents vary from 49 percent to 69 percent. See *infra* ¶ 16. Estimates of awareness of MVPD controls among parents vary from 45 percent to 90 percent. See *infra* ¶ 57. Data regarding other technologies is lacking.

⁸ For example, with respect to the V-chip, the record indicates that a lack of understanding of the ratings system and difficulty in using the V-chip are two factors limiting parental adoption of the V-chip. See *infra* ¶¶ 19, 25, 27. Data regarding other technologies is lacking.

⁹ For example, estimates of V-chip usage vary from 5 percent to 16 percent of parents and one study concludes that only 17 percent of parents use cable parental controls, whereas another study finds that half of parents have filtering or monitoring software installed on computers used by teens. See *infra* ¶¶ 17, 57, 145, 151. Data regarding other technologies is lacking.

¹⁰ *FCC v. Pacifica*, 438 U.S. 726, 748 (1978), quoted in *Action for Children’s Television v. FCC*, 58 F.3d 654, 659 (D.C. Cir. 1995).

¹¹ Some of the data on television viewing patterns does not distinguish between over-the-air broadcast television and pay services, such as cable and satellite television.

¹² See Donald F. Roberts and Ulla G. Foehr, *Trends in Media Use*, Spring 2008, at 18 (Table 2) (“*Trends in Media Use*”). See also Donald F. Roberts, Ulla G. Foehr, and Victoria Rideout, *Generation M: Media in the Lives of 8-18 Year-olds*, Kaiser Family Foundation, March 2005, at Appendix 3.3 (“*Generation M: Media in the Lives of 8-18 Year-Olds*”). According to this study, 8-18 year-olds watch on average just over three hours of TV each day and nearly four hours when videos, DVDs, and pre-recorded shows are included. *Id.* at 1-34. In addition, children this age spend about 1¾ hours each day listening to music (including radio, CDs, tapes, or MP3 players), one hour each day on the computer outside schoolwork, and just under 50 minutes each day playing video games. *Id.* at 1-34.

bedrooms.¹³ Children younger than eight devote about two-thirds of their media time to television viewing and watch on average two hours of television daily.¹⁴ More than one-third of children younger than eight have television sets in their bedroom.¹⁵ Thus, children's exposure to potentially objectionable content on television remains a primary concern.

9. As directed by the Act, we examine below parental control tools currently available to over-the-air television viewers and to subscribers of cable, satellite, and other Multichannel Video Programming Distributor ("MVPD") service. In addition, we discuss other technologies that are available now, that are under development, or that could be used in the future to help parents monitor their children's television viewing, as well as methods of encouraging the development, deployment, and use of such technology by parents that do not affect the packaging or pricing of a content provider's offering. The discussion below reflects that a range of blocking technologies is available to parents today to help guide their children's television viewing. For over-the-air viewers, the V-chip provides a baseline tool that is available to all families that own a V-chip-equipped television set or converter box. The Senate Report accompanying the Child Safe Viewing Act indicates that the Act stems from Congressional concern with the efficacy of the V-chip, given its limited use by parents, as well as a desire to ensure that blocking capability continues to be available to consumers as technology advances. The Senate Report cites Section 551(d) of the Telecommunications Act of 1996 (the "1996 Act")¹⁶ and notes that this provision requires the Commission "'to take such action as the Commission determines appropriate' to assess alternative program blocking technologies and to expand the V-chip requirement, if necessary, to facilitate the use of alternative technologies that may not rely on common ratings."¹⁷

10. We examine below current V-chip use rates as well as the following potential improvements to the V-chip scheme: (i) increasing the accuracy and transparency of the TV Parental Guidelines, as well as promoting awareness of the ratings by increasing the size of the ratings icon on the screen, lengthening the time the icon remains on the screen, and playing an aural tone when the icon

¹³ See *Trends in Media Use* at 14 (Table 1). See also *Generation M: Media in the Lives of 8-18 Year-olds* at 13 (Table 3-E). A November 2005 survey of 513 parents of children ages 2-17 conducted by Russell Research found that 64 percent of parents surveyed allowed their child to have a television in his or her bedroom. See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids' TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

¹⁴ See *Trends in Media Use* at 18 (Table 2).

¹⁵ See *id.* at 14 (Table 1).

¹⁶ See The Telecommunications Act of 1996, Pub. L. No. 104-104, § 551(d), 110 Stat. 56, 141-142 (1996) (codified at 47 U.S.C. § 330(c)(4)). See also Victoria Rideout & Elizabeth Hamel, *The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers and their Parents*, Kaiser Family Foundation (2006). This study showed that children age six and under spend about an hour and 20 minutes each day watching TV and that 33 percent had a TV in their bedroom. *Id.* at 8, 18.

¹⁷ S. Rep. No. 110-268, at 2 (2008), as reprinted in 2009 U.S.C.C.A.N. 2196, 2197. We note that Section 330(c)(4) of the Communications Act provides that the Commission shall amend its V-chip rules if it determines that an alternative blocking technology exists that meets the following conditions: (i) enables parents to block programming based on identifying programs without ratings; (ii) is available to consumers at a cost which is comparable to the cost of technology that allows parents to block programming based on common ratings; and (iii) will allow parents to block a broad range of programs on a multichannel system as effectively and as easily as technology that allows parents to block programming based on common ratings. See 47 U.S.C. § 330(c)(4). This Report responds specifically to the directive of Congress in the Child Safe Viewing Act to issue a Report on "advanced blocking technologies" as defined therein. We do not in this Report address whether an "alternative blocking technology" exists as contemplated in Section 330(c)(4).

appears; (ii) using the V-chip to filter inappropriate television commercials and embedded advertising content; (iii) using the V-chip to “whitelist” programs (*i.e.*, using content descriptors to affirmatively select rather than simply block programming); (iv) allowing parents to choose from among multiple independent ratings systems in conjunction within the V-chip; (v) addressing potential intellectual property issues that may impede efforts to improve the V-chip and the current ratings system; and (vi) promoting awareness and understanding of the V-chip through government and industry educational efforts. Apart from the V-chip, there is a wide array of parental control technologies for television, including tools offered by MVPDs, as well as VCRs, DVD players, and digital video recorders (“DVRs”), that permit parents to accumulate a library of preferred programming for their children to watch.¹⁸ We examine below the range of blocking capabilities offered by MVPDs. We also examine a number of other blocking technologies, some of which are currently in use and some that are either being developed or offer promise for the future.

A. V-Chip

11. The V-chip is the only advanced blocking technology available to the 11 percent of TV households that exclusively rely on over-the-air television that does not require purchasing an additional piece of equipment.¹⁹ As a result of the DTV transition, many households that rely on older over-the-air television sets that do not incorporate V-chip technology now have V-chip capability through their DTV converter boxes for the first time.²⁰ Congress adopted the V-chip requirement in 1996 as part of the Parental Choice in Television Programming Act.²¹ In addition to directing the Commission to adopt a V-chip requirement,²² the 1996 Act directed that, if the industry did not adopt voluntary rules for rating video programming, the Commission should prescribe guidelines and recommended procedures for program ratings.²³ The broadcast, cable, and movie industries subsequently voluntarily created the TV

¹⁸ Parental control technologies for non-networked devices, such as DVD players, are discussed in Section VI below.

¹⁹ See The Nielsen Company, *2008-2009, Universe Estimates, Media Related TV Households and Penetrations by County within DMA*, July 2009. It should be noted that households that subscribe to a pay service and thus are not included in the 11 percent figure may not connect all sets to that service, so that the V-chip may be the only freely available blocking technology that would allow parents to control the programming that their children watch on those television sets connected to over-the-air antennas.

²⁰ See 47 C.F.R. § 15.120; *Technical Requirements to Enable Blocking of Video Programming Based on Program Ratings*, 13 FCC Rcd 11248 (1998). All television sets manufactured in the United States or shipped in interstate commerce that met certain size thresholds had to be equipped with a V-chip system effective on January 1, 2000, so some older television sets do not contain a V-chip. See 47 C.F.R. § 15.120(b). Moreover, the V-chip requirement currently applies only to (i) television broadcast receivers with picture screens 33 centimeters (13 inches) or larger in diameter; (ii) television broadcast receivers with displays in the 16:9 aspect ratio that are 19.8 centimeters (7.8 inches) or greater in height; and (iii) digital television receivers without an associated display device. See *id.* We note that portable and mobile DTV receivers are either in the market today or under development that do not meet these size thresholds. See http://www.amazon.com/Haier-HLT71-7-Inch-Portable-LCD/dp/tech-data/B001E78UQY/ref=de_a_smtd. There is no data in the record as to whether these receivers are being manufactured with V-chips included.

²¹ See 47 U.S.C. § 303(x) (added by The Telecommunications Act of 1996, Pub. L. No. 104-104, § 551(c), 110 Stat. 56, 141 (1996)).

²² *Id.*

²³ Section 303(w) of the Communications Act (added by The Telecommunications Act of 1996, Pub. L. No. 104-104, § 551(b)(1), 110 Stat. 56, 140 (1996)) directed the Commission to “[p]rescribe (1) . . . guidelines and recommended procedures for the identification and rating of video programming that contains sexual, violent, or (continued....)

Parental Guidelines for rating television content, and the Commission recognized the guidelines as meeting the requirements of the 1996 Act.²⁴

12. The TV Parental Guidelines contain both age and content-based ratings. The age-based ratings are: TV-Y (all Children); TV-Y7 (directed to older children – age 7 or older); TV-G (general audience); TV-PG (parental guidance suggested); TV-14 (parents strongly cautioned-may be unsuitable for children under 14); and TV-MA (mature audience only - may be unsuitable for children under 17). The content-based descriptors are: V (violence); FV (fantasy violence in older children’s programming); S (sexual content); D (suggestive dialogue); and L (strong language in programming). The guidelines apply to most television programming, including both broadcast and cable programming, except for news and sports programming and advertisements.²⁵

13. The rating system used by the film industry is different from the TV Parental Guidelines. The current Motion Picture Association of America (“MPAA”) film ratings are: G (general audiences – all ages admitted); PG (parental guidance suggested - some material may not be suitable for children); PG-13 (parents strongly cautioned - some material may be inappropriate for children under 13); R (restricted - under 17 requires accompanying parent or adult guardian); and NC-17 (no one 17 and under admitted). Broadcasters currently transmit in their program stream a table that includes both the TV Parental Guidelines and the MPAA ratings for movies. The V-chip uses both rating scales simultaneously when filtering content.²⁶ In addition, ratings information is displayed in the form of an

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other indecent material about which parents should be informed before it is displayed to children ... and (2) with respect to any video programming that has been rated, and in consultation with the television industry, rules requiring distributors of such video programming to transmit such rating to permit parents to block the display of video programming that they have determined is inappropriate for their children.” 47 U.S.C. § 303(w). Section 551(e) stated that the provisions codified in Section 303(w) would take effect one year after enactment of the 1996 Act, “but only if the Commission determines ... that distributors of video programming have not, by such date, (A) established voluntary rules for rating video programming that contains sexual, violent, or other indecent material about which parents should be informed before it is displayed to children, and such rules are acceptable to the Commission; and (B) agreed voluntarily to broadcast signals that contain ratings of such programming.” See *The Telecommunications Act of 1996*, Pub. L. No. 104-104, § 551(e), 110 Stat. 56, 142 (1996).

²⁴ The television industry submitted its TV Parental Guidelines to the Commission in 1997. Initially, the guidelines only contained age categories. See *Implementation of Section 551 of the Telecommunications Act of 1996, Video Programming Ratings*, Report and Order, 13 FCC Rcd 8232, 8235, n.19 (1998) (“*TV Parental Guidelines Order*”). The television industry subsequently supplemented the guidelines with content descriptors. See *id.* The Commission found the guidelines acceptable and found that the industry had agreed to broadcast signals containing the ratings. See *id.* at 8245-46, ¶¶ 27-31. We note that the Commission in 1998 simply approved the voluntary ratings “rules;” it did not make any determination as to the sufficiency of their application. On the contrary, the Commission emphasized that “to be useful, the rating system must be applied in a consistent and accurate manner,” and that the industry had committed “to independent scientific research and evaluation of the rating system once the [V]-chip is in place.” *Id.* at 8243, ¶ 22. It expressed its expectation “that the research and evaluation of the rating system, once the system has been in use, will allow for adjustments and improvements,” and it “view[ed] this commitment as an important element of the proposal” before it. *Id.* In short, the Commission in 1998 simply granted the industry’s request to “give the rating system a fair chance to work.” *Id.* at 8246, ¶ 32.

²⁵ Cable customers without a set-top box can use the V-chip functionality on their television sets in the same manner as over-the-air viewers. Customers with a set-top box have the option of using parental controls on their television and/or set-top box. Cable set-top boxes often have advanced features beyond the standard V-chip functionality that make use of those controls more desirable. See *infra* Part II.B.

²⁶ See *Common Sense Media Comments* at 8.

icon at the beginning of, and often after commercial breaks during, all rated programming.²⁷

14. While this Report specifically addresses advanced blocking technologies available to parents, we also note that the time channeling of indecent or profane broadcasts remains a vital tool for shielding children from exposure to objectionable broadcast content. Congress has directed the Commission to enforce the statutory prohibition on the broadcast of “any obscene, indecent, or profane” language over the public airwaves.²⁸ As directed by Congress, the Commission has adopted regulations specifying that obscene material may not be broadcast at any time²⁹ and indecent material may not be broadcast between the hours of 6 a.m. and 10 p.m.³⁰ The Commission does not regulate indecent or profane³¹ broadcasts outside that time period. Evidence of the V-chip’s limited efficacy in facilitating parental supervision of children’s exposure to objectionable broadcast content has reinforced the necessity of the Commission’s regulation.³² Moreover, such regulation of broadcast television provides some measure of confidence to parents that their children will not encounter the same kind or amount of objectionable content on that medium that they might find elsewhere.³³

1. V-chip Data

15. Congressional concern regarding the use and reliability of the V-chip and the associated TV Parental Guidelines is reflected in the legislative history of the Child Safe Viewing Act. As noted in the Senate Report concerning the Child Safe Viewing Act, studies conducted since the V-chip requirement and TV Parental Guidelines were adopted suggest that the V-chip is not widely used and many parents remain unaware of it.³⁴

16. A 2007 study conducted by the Kaiser Family Foundation, and cited by Congress in the Senate Report, showed that less than half of parents who had purchased a television set since 2000, when the requirement that television sets over 13 inches be equipped with a V-chip went into effect, were

²⁷ See Joint Comments of the National Association of Broadcasters (“NAB”), the National Cable & Telecommunications Association (“NCTA”), and the Motion Picture Association of America (“MPAA”) at 2.

²⁸ 18 U.S.C. § 1464.

²⁹ 47 C.F.R. § 73.3999(a).

³⁰ 47 C.F.R. § 73.3999(b) (adopted pursuant to Public Telecommunications Act of 1992, Pub. L. No. 102-356, § 16(a), 106 Stat. 954). See *Action for Children’s Television v. FCC*, 58 F.3d 654, 669-670 (D.C. Cir. 1995) (en banc), cert. denied, 516 U.S. 1043 (1996).

³¹ In *Complaints Against Various Broadcast Licensees Regarding Their Airing of the “Golden Globe Awards” Program*, Memorandum Opinion and Order, 18 FCC Rcd 19859 (EB. 2004), review granted, 19 FCC Rcd 4975, 4981 (2004), the Commission established a “safe harbor” period from 10 p.m. to 6 a.m. during which profane material may be legally broadcast as a narrowly tailored means of vindicating its compelling interest in assisting parents and protecting minors, consistent with the D.C. Circuit’s decision that the same “safe harbor” period for indecent material is consistent with the Constitution. See *Action for Children’s Television*, 58 F.3d at 667.

³² See, e.g., *Complaints Against Various Licensees Regarding Their Broadcast of the Fox Television Program “Married By America” on April 7, 2003*, Forfeiture Order, 23 FCC Rcd 3222, 3235 ¶ 36 (2008).

³³ See *FCC v. Fox Television Stations, Inc.*, 556 U.S. ___, 129 S.Ct. 1800, 1819 (2009) (“The Commission could reasonably conclude that the pervasiveness of foul language, and the coarsening of public entertainment in other media such as cable, justify more stringent regulation of broadcast programs so as to give conscientious parents a relatively safe haven for their children.”).

³⁴ See S. Rep. No. 110-268, at 2 (2008), as reprinted in 2009 U.S.C.C.A.N. 2196, 2197.

aware that they had a V-chip.³⁵ A June 2007 national survey of 1,000 parents of children age 18 and younger conducted by Luntz Maslansky Research/Hart Research and commissioned by TV Watch, an organization that opposes government control of TV programming,³⁶ found that 69 percent of parents surveyed were aware of the V-chip.³⁷ Similarly, a November 2005 survey of 513 parents of children ages 2-17 conducted by Russell Research, also commissioned by TV Watch, found that only 49 percent of parents surveyed were aware of the V-chip.³⁸ The Senate Report cites a study conducted from 1999-2001 by the Annenberg Public Policy Center that also showed that many parents are not aware that they have a V-chip.³⁹

17. Additional studies cited in the Senate report also indicate that few parents use the V-chip. The 2007 Kaiser Family Foundation study showed that only 16 percent of parents have used the V-chip.⁴⁰ The November 2005 Russell Research Survey commissioned by TV Watch found that five percent of parents used the V-chip.⁴¹ A 2004 study conducted by the Kaiser Family Foundation showed that 15 percent of parents have used the V-chip.⁴² The Annenberg Study conducted from 1999-2001

³⁵ See *id.* (citing *Parents, Children & Media: A Kaiser Family Foundation Survey* (June 2007), at 9 (“2007 Kaiser Family Foundation Study”)).

³⁶ TV Watch describes itself as a “broad-based coalition that opposes government control of TV programming and promotes the use of tools like content ratings and parental controls.” See TV Watch, *Who We Are*, <http://www.televisionwatch.org/WhoWeAre/Default.html>. TV Watch consists of 27 individuals and organizations, including CBS, the Minority Media and Telecommunications Council, NBC Universal, News Corporation, The Creative Coalition, and the National Academy of Recording Artists, among others. See *id.*

³⁷ See Luntz Maslansky Strategic Research and Hart Research, *TV Watch Survey of Parents Topline*, June 2007, <http://www.televisionwatch.org/junepollresults.pdf> (“June 2007 Luntz Maslansky Research/Hart Research Survey”), at 5.

³⁸ See Press Release, “Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids’ TV,” November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

³⁹ See S. Rep. No. 110-268, at 2 (2008), as reprinted in 2009 U.S.C.C.A.N. 2196, 2197 (citing The Annenberg Public Policy Center, *Parent’s Use of the V-Chip to Supervise Children’s Television Use*, at 2, http://www.annenbergpublicpolicycenter.org/Downloads/Media_and_Developing_Child/Childrens_Programming/20030402_Children_and_TV_Roundtable/20030402_ParentsVchip_report.pdf (“Annenberg Study”)).

⁴⁰ See *id.* (citing *2007 Kaiser Family Foundation Study*). A March 2007 Zogby poll of 1000 adults nationwide commissioned by PTC found that 11 percent of those surveyed used the V-chip or cable box parental controls. See *PTC Declares the Industry’s V-Chip Education Campaign a Failure*, March 15, 2007, <http://parentstv.org/PTC/news/release/2007/0315.asp>. The study does not distinguish between the percentage of those surveyed who used the V-chip and the percentage of those surveyed who used cable box parental controls.

⁴¹ See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids’ TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>. The June 2007 Luntz Maslansky Research/Hart Research Survey commissioned by TV Watch found that 67 percent of parents surveyed used “either the V-chip or other parental blocking controls.” See *June 2007 Luntz Maslansky Research/Hart Research Survey* at 5. The study, however, does not define the term “other parental blocking controls.” Moreover, the study does not distinguish between the percentage of parents who use the V-chip and the percentage of parents who use “other parental blocking controls.”

⁴² See S. Rep. No. 110-268, at 2 (2008), as reprinted in 2009 U.S.C.C.A.N. 2196, 2197 (citing *Parents, Children & Media: A Kaiser Family Foundation Survey* (Fall 2004)).

found that only eight percent of the families studied had the V-chip programmed and were using it.⁴³

18. The limited number of parents who have used the V-chip find it beneficial. The 2007 Kaiser Family Foundation Study found that “nearly three out of four parents (71 percent) who have tried the V-Chip say they find it ‘very’ useful, a higher proportion than for any of the media ratings or advisory systems.”⁴⁴ The November 2005 Russell Research Survey commissioned by TV Watch found that 56 percent of parents surveyed found the V-chip useful.⁴⁵

19. The Annenberg Study cited in the Senate Report showed that many parents find that “programming the V-chip is a multi-step and often confusing process.”⁴⁶ The study also stated that “no fewer than five menus must be navigated and parents must move quickly or programming menus disappear.”⁴⁷ Other studies have also shown that parents consider the V-chip complicated to program and use.⁴⁸

20. Both children’s advocates and industry commenters cite studies showing low usage of the V-chip to support their arguments as to whether the V-chip or TV Parental Guidelines should be changed. Children’s advocates point to the studies as proof that the V-chip scheme needs to be improved and that more education about the V-chip is needed to increase parental awareness and use of the V-chip.⁴⁹

21. Some commenters that oppose changes to the V-chip, on the other hand, argue that these studies show that the V-chip is ineffective and unnecessary. They argue that the relatively low level of V-chip use is due not only to some of the asserted problems with the V-chip, but also to the fact that many families use other kinds of parental control tools and parenting strategies to monitor and guide their children’s media use.⁵⁰ The 2007 Kaiser Family Foundation Study found that 65 percent of parents surveyed said they “closely” monitor their children’s media use.⁵¹ While only one in six parents (16

⁴³ See *id.* (citing *Annenberg Study* at 2). The study also showed, however, that “[f]amilies who received detailed information about the meaning of the TV ratings and how to use their television’s parental controls feature ... were significantly more likely to try the V-chip than families who did not.” *Annenberg Study* at 3.

⁴⁴ See *2007 Kaiser Family Foundation Study* at 10. The June 2007 Luntz Maslansky Research/Hart Research Survey commissioned by TV Watch found that 83 percent of parents surveyed were satisfied with the effectiveness of the V-chip or “other blocking tools” in limiting inappropriate television programming available to children in the home. See *June 2007 Luntz Maslansky Research/Hart Research Survey* at 5. The study, however, does not define the meaning of the term “other blocking tools.” Moreover, the study does not distinguish between the percentage of parents who found the V-chip effective and the percentage of parents who found “other blocking tools” effective.

⁴⁵ See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids’ TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

⁴⁶ See S. Rep. No. 110-268, at 2 (2008), as reprinted in 2009 U.S.C.C.A.N. 2196, 2197 (citing *Annenberg Study* at 3).

⁴⁷ See *Annenberg Study* at 3.

⁴⁸ See Scantlin, R.M., Jordan, A., *Families Experiences With the V-chip: An Exploratory Study*, *The Journal of Family Communication*, 6(2) (2006) at 139-159. Parents must navigate five screens in order to engage the V-chip as a blocking tool. *Id.*

⁴⁹ See, e.g., Children’s Media Policy Coalition (“CMPC”) Comments at iii; Common Sense Media Comments at 8; Smart Television Alliance Reply at 1.

⁵⁰ See, e.g., Comments of Center for Democracy and Technology (“CDT”) at 7; CEA Comments at 7-8, 15; PFF Comments at 19-20.

⁵¹ See *2007 Kaiser Family Foundation Study* at 1.

percent) reported they had ever used the V-chip, parents said they used a variety of other tools to help them monitor their children's media use, including setting rules about when children can use media and what channels they can watch, keeping the TV and/or computer in a public space in the home, or blocking TV channels through their cable service.⁵²

22. The 2007 Kaiser Family Foundation Study also found that the main reason parents had not used the V-chip is that an adult is usually nearby when their children watch TV.⁵³ The June 2007 Luntz Maslansky Research/Hart Research Survey commissioned by TV Watch found that 73 percent of parents monitored what their children watch on television.⁵⁴ The November 2005 Russell Research Survey commissioned by TV Watch found that 63 percent of parents surveyed watch television with their children and 61 percent personally restrict the television shows their children are allowed to watch as a way to avoid exposure to inappropriate content.⁵⁵ According to data collected in 2004 by the U.S. Census Bureau, 47 percent of teenagers were subject to restrictions imposed by their parents on what, when, and for how long they watched television, up from 40 percent in 1994.⁵⁶ Conversely, a 2005 survey of children – rather than parents – concluded that parents do not always enforce rules about television use. According to the survey conducted by the Kaiser Family Foundation, 46 percent of children said their parents had rules about television viewing, but only 20 percent said the rules were enforced most of the time and 23 percent said the rules were enforced some, little, or never.⁵⁷

23. A number of commenters assert that the rate of use of the V-chip as well as other parental controls should be considered in light of the number of households that might need or want these tools.⁵⁸ According to the Progress and Freedom Foundation (“PFF”), less than 32 percent of households have children and in at least half of those homes the children are either above or below the age when parental control technologies are generally useful.⁵⁹

⁵² See *id.* at 1, 8.

⁵³ See *id.* at 10.

⁵⁴ See *June 2007 Luntz Maslansky Research/Hart Research Survey* at 3.

⁵⁵ See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids' TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

⁵⁶ See U.S. Census Bureau, *Parents More Active in Raising Their Children; More Children Get Television Restrictions*, Oct. 31, 2007, available at <http://www.census.gov/Press-Release/www/releases/archives/children/010850.html>. The study also found that (i) 68 percent of three-to-five-year-olds were subject to restrictions imposed by their parents on what, when, and for how long they watched television, up from 54 percent in 1994; and (ii) 71 percent of six-to-eleven-year-olds were subject to restrictions imposed by their parents on what, when, and for how long they watched television, up from 60 percent in 1994. See U.S. Census Bureau, *A Child's Day: 2004 (Selected Indicators of Child Well-Being)*, at Table D12 (2007), available at http://www.census.gov/population/socdemo/well-being/2004_detailedtables/04tabD12.xls.

⁵⁷ See Donald F. Roberts, Ulla G. Foehr, and Victoria Rideout, *Generation M: Media in the Lives of 8-18-Year-Olds*, Kaiser Family Foundation (March 2005) at Appendix 3.3.

⁵⁸ See CDT Comments at 7 (the low level of V-chip use reflects the reality that many parents are less concerned about television content than some advocacy groups are and many families have other parenting strategies to monitor their children's television use). See also PFF Comments at 8-10, 19-20; CEA Reply at 6.

⁵⁹ See PFF Comments at 8-16. PFF has produced several reports providing comprehensive surveys of parental controls. See, e.g., Adam Thierer, *Parental Controls & Online Child Protection: A Survey of Tools and Methods* (Summer 2009) (available at <http://www.pff.org/parentalcontrols/>).

2. Potential Improvements to the V-chip

24. Commenters that advocate changes to the V-chip scheme focus largely on changes to the television ratings system. The V-chip's effectiveness depends on accurate program ratings. In general, these commenters argue for improvements in the way the TV Parental Guidelines are applied, the addition of new content descriptors to broaden the scope of the content that can be filtered, and steps to ensure that the V-chip can function effectively with multiple, independent ratings systems. Implementation of most of the proposed changes would require coordination among broadcasters, ratings providers, and standards-setting organizations. Commenters opposed to changes to the V-chip generally assert that, in light of the continuing move away from broadcast television to MVPDs and the Internet, both of which can support a broad array of filtering tools and rating schemes, a redesign of the V-chip scheme at this time is unwarranted and resources should be allocated instead toward educational efforts about the V-chip and other parental empowerment tools.⁶⁰

a. TV Parental Guidelines

25. As discussed above, the broadcast, cable, and movie industries voluntarily created the TV Parental Guidelines for rating television content. The 2007 Kaiser Family Foundation study raised concerns that parents lack a basic understanding of the TV Parental Guidelines. The study showed that, although more than 80 percent of parents have heard of the TV ratings, most do not understand what they mean.⁶¹ Only 30 percent of parents with children between two and six could name any of the ratings used for children's programs (TV-Y, TV-7, or TV-G).⁶² Only 11 percent of parents with children in this age range knew that the content rating FV had anything to do with violence, and nine percent thought it meant "family viewing."⁶³ While more than half of parents of older children that had heard of the TV ratings understood the meaning of the TV-14 and TV-MA age-based ratings and the "V" content descriptor, only 36 percent of these parents understood that "S" designates a show with sexual content and only two percent knew that "D" indicates suggestive dialogue.⁶⁴ A March 2007 Zogby poll of 1000 adults nationwide commissioned by the Parents Television Council ("PTC") found that only 8 percent of those surveyed correctly identified all of the content descriptors.⁶⁵ Some studies, however, indicate that parents who use the ratings find them useful. A 2007 Kaiser Family Foundation study concluded that, among parents who use ratings, 53 percent found the movie ratings very useful and 49 percent found the TV ratings very useful.⁶⁶ The November 2005 Russell Research Survey commissioned by TV Watch found that 96 percent of parents surveyed are familiar with the ratings and 85 percent find them useful.⁶⁷

26. To increase awareness of the TV Parental Guidelines, the National Association of

⁶⁰ See, e.g., CDT Comments at 8.

⁶¹ See *2007 Kaiser Family Foundation Study* at 8.

⁶² See *id.*

⁶³ See *id.*

⁶⁴ See *id.* at 9. An earlier study conducted by the Annenberg Public Policy Center found that only six percent of parents studied could name one of the ratings for children's programs (TV-Y, TV-Y7, or FV) and only four percent correctly identified the meaning of the "D" content rating. See *Annenberg Study* at 3.

⁶⁵ See *PTC Declares the Industry's V-Chip Education Campaign a Failure*, March 15, 2007, <http://parentstv.org/PTC/news/release/2007/0315.asp>.

⁶⁶ See *2007 Kaiser Family Foundation Study* at 9.

⁶⁷ See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids' TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

Broadcasters (“NAB”), the National Cable Television Association (“NCTA”), and MPAA explain that programmers have increased the size and frequency of the onscreen ratings icon in response to concerns about its visibility.⁶⁸ NAB, NCTA, and MPAA explain that, if the program is more than one hour in length, the icon will reappear at the beginning of the second hour.⁶⁹ In addition, they state that many broadcast and cable networks display the ratings icon after each commercial break to alert viewers of the TV rating throughout the program.⁷⁰ Comcast notes that the networks it owns or manages, such as PBS Kids Sprout, G4, E!, Style, Golf Channel, Versus, and the Comcast SportsNets, utilize larger and more frequent ratings icons than are commonly used by other networks.⁷¹

27. Several commenters contend that the current V-chip scheme has not achieved its full potential in part because the TV Parental Guidelines are confusing and are applied inaccurately and inconsistently to television programming.⁷² Children’s Media Policy Center (“CMPC”), Morality in Media, and the PTC cite studies criticizing the industry for failing to use content descriptors for some material containing violence, sexual behavior, sexual dialogue, and adult language.⁷³ Based on a review of 546 hours of prime time programming on 608 individual programs on six broadcast networks (ABC, CBS, Fox, NBC, CW, and MyNetworkTV) during the November 2006 and February 2007 sweeps period, PTC concluded that 67 percent of the shows reviewed that contained potentially offensive content lacked one or more of the appropriate content descriptions.⁷⁴ CMPC asserts that the prevalence of inconsistent and inaccurate age-based and content-based ratings should not be surprising as networks and distributors assign these ratings to their own programs and have an economic incentive to underrate programs to avoid the lower advertising revenues typically commanded by more restrictive ratings.⁷⁵ While the record does not reflect any studies finding that viewers stopped using the V-chip after determining that the ratings were inaccurate, some commenters argue that the alleged lack of accuracy in

⁶⁸ See NAB/NCTA/MPAA Comments at 9. See also *TV Parental Guidelines Order*, 13 FCC Rcd at 8243, ¶ 24 (“Under the *TV Parental Guidelines*, rating icons and descriptors will be displayed for 15 seconds at the beginning of a program Also, the size of the icon has been increased from the initial proposal so that it will occupy more than 40 scan lines on the television screen.”).

⁶⁹ See NAB/NCTA/MPAA Comments at 9.

⁷⁰ See *id.*

⁷¹ See Comcast Comments at 4. See also Cox Comments at 6 and Appendix B.

⁷² See, e.g., CMPC Comments at 6; Morality in Media Comments at 1; PTC Reply at 1, 3.

⁷³ See CMPC Comments at 21 (citing Dale Kunkel, *et al.*, *Deciphering the V-chip: An Examination of the Television Industry’s Program Rating Judgments*, 52 J. Commc’ns 112, 136 (2002)). See also PTC Reply at 3 (citing Parents Television Council, *The Ratings Sham II*, April 16, 2007, <http://www.parentstv.org/PTC/publications/reports/ratingsstudy/RatingsShamII.pdf> (“2007 PTC Report”)); Morality in Media Comments at 1 (citing 2007 PTC Report and Toni Fitzgerald, *Two Profs Beat Up on Kids TV Ratings: Study Finds More Physical Aggression in TV-Y and TV-7*, Media Life Magazine (March 6, 2009)).

⁷⁴ See 2007 PTC Report at 1. The study also concluded that 54 percent of shows containing suggestive dialogue lacked the “D” descriptor; 63 percent of shows containing sexual content lacked the “S” descriptor; 42 percent of shows containing violence lacked the “V” descriptor; and 44 percent of shows containing foul language lacked the “L” descriptor. See *id.*

⁷⁵ See CMPC Comments at 6. See also Morality in Media Comments at 1 (V-Chip ratings system is a “classic case of putting the fox in charge of the henhouse”).

the television ratings is one factor limiting the use and effectiveness of the V-chip.⁷⁶

28. Although the television industry established a TV Parental Guidelines Monitoring Board (“Monitoring Board”) to ensure that the rating guidelines are applied accurately and consistently, CMPC and PTC argue that the Monitoring Board has very little real authority and fails to take action on many complaints.⁷⁷ These commenters point out that 18 of the 24 Monitoring Board members are associated with the industry.⁷⁸ CMPC states that the Monitoring Board passes most complaints on to the appropriate broadcast network and only takes action after a significant number of complaints have been lodged against a specific program episode.⁷⁹ CMPC and PTC argue that increased transparency and public involvement in the processes of the Monitoring Board would improve the way ratings are applied.⁸⁰ Among other things, these commenters propose that meetings of the Monitoring Board could be made open to the public and that the Monitoring Board should publicly disclose complaints regarding applications of the ratings and how they have been resolved.⁸¹ These commenters also suggest that the Commission play a role in ensuring that parents are aware of the Monitoring Board and its procedures, perhaps by requiring broadcasters to air information or public service announcements to educate parents about the Monitoring Board.⁸²

29. The NAB, NCTA, and MPAA state that the Monitoring Board meets regularly to review complaints and, “when there are widespread and verifiable complaints about a particular show’s rating, may decide whether that rating is appropriate.”⁸³ These commenters state that the Monitoring Board has redoubled its efforts to ensure that ratings are applied consistently and recently took steps to improve consistency in the application of content descriptors.⁸⁴ NAB, NCTA, and MPAA state that they are open

⁷⁶ See PTC Reply Comments at 3 (“The clear and unavoidable conflicts of interest that arise from entities producing and rating their own content have yielded a deeply flawed and largely inaccurate ratings system. In fact, that alone may be a significant cause of parents’ lack of adoption of the current system.”); CMPC Comments at 6.

⁷⁷ See CMPC Comments at 6-7; PTC Reply at 5-6.

⁷⁸ See CMPC Comments at 6-7. See also PTC Reply at 4.

⁷⁹ See CMPC Comments at 7.

⁸⁰ See *id.* at 9; PTC Reply at 3-5.

⁸¹ See CMPC Comments at 9; PTC Reply at 5.

⁸² See CMPC Comments at 9; PTC Reply at 5.

⁸³ NAB/NCTA/MPAA Comments at 9. According to these commenters, the Monitoring Board has received widespread and verifiable complaints about only a handful of programs since creation of the guidelines. See *id.* at 9 n.21. NAB, NCTA, and MPAA also note that ratings are applied on an episode-by-episode basis, so different shows within a series can have different ratings. See *id.* at 7. In addition, programs can be edited differently depending upon the time of day they are aired, which could result in different ratings for the same program. See *id.*

⁸⁴ See *id.* at 9-10. According to NAB, NCTA, and MPAA, industry standards and practices executives have had regular meetings and calls to review ratings issues, which have resulted in a more common and consistent understanding of how ratings should be applied. See *id.* at 9. Among other things, these conversations revealed that companies had been applying the content descriptor portion of the TV ratings differently. Some companies were applying the content descriptors to explain why a program was assigned a particular age-based rating. For example, if a program was rated TV-PG because it contained moderate levels of violence and strong language, those companies added a “V” and an “L” content descriptor to the age-based rating. Other companies were applying a content descriptor only if the program contained more than a moderate level of the specific content at issue. For example, these companies rated a program TV-PG with no descriptor if it contained moderate levels of violence, language, sexual dialogue, and/or sexual activity. These companies would add a content descriptor only when specific content was at the high end of the moderate range. See *id.* at 10. After working with the Monitoring Board, (continued....)

to ideas about how to promote and improve the work of the Monitoring Board.⁸⁵ They note that the Monitoring Board's website already invites public comments and complaints and that the Commission provides information about the Monitoring Board on its website, including a link to the TV Parental Guideline website.⁸⁶

30. CFIRS suggests using the V-chip for additional "black listing," *i.e.*, adding additional content descriptors to enable the V-chip to block programs based on certain content.⁸⁷ CFIRS suggests that additional descriptors could be added for use of alcohol, tobacco, and illegal drugs to permit parents to filter programming with this content.⁸⁸ NAB, NCTA, and MPAA, however, argue that adding new content descriptors to the V-chip scheme would increase the complexity of the ratings and thereby cause new confusion among parents and decrease the rate of use and effectiveness of the V-chip.⁸⁹

31. Further study is required to determine the extent to which improving the accuracy and transparency of the existing TV Parental Guidelines would make the V-chip more effective and thereby increase its use by parents. The Commission intends to explore these and other issues in a forthcoming *NOI*.⁹⁰ Among other things, we intend to consider: (i) whether action by the Monitoring Board, including through its handling of complaints about inappropriate ratings, might improve the Guidelines' accuracy and transparency; (ii) whether increasing the size of the ratings icon on the screen, lengthening the time the icon remains on the screen, and playing an aural tone when the icon appears would increase awareness of the Guidelines; (iii) whether adding more content descriptors to the TV ratings would yield benefits for parents or lead to greater confusion; and (iv) whether and to what extent alternative ratings systems have the potential to provide additional options for parents to control their children's television viewing.⁹¹

b. Rating Advertising

32. Some commenters advocate that the existing V-chip scheme be modified to take account of inappropriate television commercials and embedded advertising content so these could be blocked using the V-chip.⁹² According to CMPC, studies show that many parents are as concerned about inappropriate advertising content as they are about inappropriate program content.⁹³ The Annenberg Study conducted from 1999-2001 found that parents were concerned that the V-chip did not block

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the industry agreed to apply the content descriptors in a consistent manner to explain age-based ratings, which NAB, NCTA and MPAA state has resulted in the use of many more descriptors in programming today. *See id.*

⁸⁵ *See id.* at 3.

⁸⁶ *See id.* at 8. *See* www.fcc.gov/parents (containing a link to www.tvguidelines.org – the TV Parental Guidelines website, which contains information about how to contact the Monitoring Board to file a complaint).

⁸⁷ *See* CFIRS Comments at 3.

⁸⁸ *See id.*

⁸⁹ *See* NAB/NCTA/MPAA Reply at 9.

⁹⁰ *See infra* section XI.

⁹¹ *See infra* section II.A.2.b.

⁹² *See* CMPC Comments at 9-13. The Coalition for Independent Ratings Services ("CFIRS") supports including content descriptors in commercials that promote alcohol or certain prescription drug use. *See* CFIRS Reply at 5. *See also* PTC Reply at 6-7 (noting its belief that advertising could be rated with minimal effect on advertising revenue).

⁹³ *See* CMPC Comments at 10.

commercials and promos for upcoming programs.⁹⁴ CMPC argues that, although movie studios have taken some steps to limit advertisements for R-rated movies viewed by children under 17, these efforts have not been sufficient.⁹⁵ CMPC contends that assigning ratings to commercials so they can be blocked using the V-chip would give parents greater control and would lead networks and distributors to make better decisions regarding which commercials are appropriate given a program's intended audience.⁹⁶ CMPC also submits that parents are concerned about product placement and embedded advertising in children's programming and that the V-chip could be used to address these concerns if networks and distributors added a new content descriptor to the program ratings identifying programs with this advertising content.⁹⁷ CMPC suggests that including a content descriptor for embedded advertising would not be burdensome as broadcasters and cablecasters are already required to make sponsorship announcements in programs for which consideration is received.⁹⁸

33. Media industry and advertising commenters strongly oppose expanding the V-chip to include ratings for advertisements and embedded advertising. These commenters argue that allowing consumers to block advertisements could undermine a critical source of economic support for television programming,⁹⁹ and that expanding the V-chip scheme to require additional ratings and possibly ratings icons appearing on the screen would increase consumer confusion regarding the ratings.¹⁰⁰ In addition, these commenters assert that rating advertisements would be a serious logistical challenge in light of the number of advertisements aired each day¹⁰¹ and could also pose technical challenges if advertisements were required to be listed in electronic program guides ("EPGs") in order to be blocked in the same way that programs are blocked using the V-chip.¹⁰² Wi-LAN, a company that currently owns patents to V-

⁹⁴ See *Annenberg Study* at 4 ("In several focus groups, mothers complained that the V-chip did not block content about which they are concerned – specifically commercials, promos for upcoming television programs and news.").

⁹⁵ See CMPC Comments at 10-11. The movie studios have agreed not to advertise R-rated movies during television programs where 35 percent or more of the audience is under 17. See Comments of the Association of National Advertisers ("Advertisers") at 6-7. However, the Federal Trade Commission has found that this restriction does little to limit ads in television shows viewed by teens because few network and syndicated programs popular with teens have under-17 audiences greater than 35 percent. See CMPC Comments at 11 (*citing* Federal Trade Commission, *Marketing Violent Entertainment to Children: A Fifth Follow-up Review of Industry Practices in the Motion Picture, Music Recording, and Electronic Game Industries* (April 2007)). In addition, the Children's Advertising Review Unit ("CARU") of the Council of Better Business Bureaus has found that several major film studios have run ads for PG-13-rated movies during programs on Nickelodeon and Cartoon Network viewed by younger children. *Id.*

⁹⁶ See CMPC Comments at 11.

⁹⁷ See *id.* at 9-10.

⁹⁸ See *id.* at 12-13.

⁹⁹ See Advertisers Comments at 8-11; Advertisers Reply at 13.

¹⁰⁰ See Advertisers Reply at 15.

¹⁰¹ See *id.* at 10; NAB/NCTA/MPAA Reply at 12-13. According to advertisers, there are several hundred thousand new and newly revised TV commercials each year, each of which would have to be examined in person for a rating to be assigned. In addition, commercials often have several variations (60 seconds, 30 seconds, 15 seconds), each of which could have a different rating. See Advertisers Reply at 10.

¹⁰² See NAB/NCTA/MPAA Reply at 12-13. According to these commenters, advertisements would have to be treated as programs in order to be blocked using Program and System Information Protocol ("PSIP"), and thus would have to be listed on EPGs, effectively making EPGs unusable. See *id.* at 12. DTV Innovations states that it is possible to rate commercials in the same way programs are rated, but that due to a limited amount of space in the (continued....)

chip technology, argues that digital V-chip technology is capable of providing blocking technology for commercials without adversely affecting EPG functionality.¹⁰³

34. With respect to using the V-chip to filter product placements and other embedded advertising techniques, commenters note that the Commission already has a separate proceeding on embedded advertising pending and contend that issues related to embedded advertising should be addressed in that proceeding.¹⁰⁴ In that proceeding, the Commission noted that embedded advertising in children's programming would run afoul of its policy requiring broadcasters to use separations or "bumpers" between programming and commercials during children's programming to help children distinguish between advertisements and program content.¹⁰⁵ The Commission also invited comment on what additional steps it should take to regulate embedded advertising in programming directed to children.¹⁰⁶ We will address those issues in that proceeding.

35. Economic and technical issues surrounding use of the V-chip to block inappropriate television commercials and embedded advertising warrant further study. The Commission intends to explore these and other issues in a forthcoming *NOI*. Moreover, with respect to the specific issue of embedded advertising, the Commission is currently conducting a proceeding examining this issue.

c. White Listing – Use of Content Descriptors to Select Programming

36. A number of commenters support adding new content descriptors to the V-chip scheme. Some commenters support "white listing." For example, they propose adding a machine-readable E/I content descriptor to program metadata to permit parents to use the V-chip to affirmatively select educational and informational programs identified by broadcasters with an "E/I symbol."¹⁰⁷ Broadcasters are currently required to identify core children's educational programs by displaying the

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EPG to display event titles, introducing commercial ratings would segment the existing guide into multiple segments rendering it unreadable to the consumer. *See* DTV Innovations Comments at 2. DTV Innovations states that the Advanced Television System Committee ("ATSC") A/65 specification could be modified to address this issue for new receivers, but that legacy receivers would be a concern. *See id.*

¹⁰³ *See* Letter from Murray Eldon, Director, Communications, Wi-LAN V-chip Corp. to Marlene H. Dortch, Secretary, FCC, MB Docket No. 09-26 (July 24, 2009). Wi-LAN conducted a demonstration for Commission staff of the V-chip capability to block commercials. *See id.* The demonstration showed a working model that does not treat commercials as separate events under the PSIP standard and does not adversely affect EPG functionality. *See id.*

¹⁰⁴ *See* Advertisers Comments at 11 n.17. *See also* *Sponsorship Identification Rules and Embedded Advertising*, Notice of Inquiry and Notice of Proposed Rule Making, 23 FCC Rcd 10682 (2008) ("*Sponsorship Identification NPRM*").

¹⁰⁵ *See* *Sponsorship Identification NPRM*, 23 FCC Rcd at 10692, ¶ 6 and 10691-92, ¶ 16.

¹⁰⁶ *See id.* at 10691-92, ¶ 16.

¹⁰⁷ *See* CMPC Comments at 13-14; Common Sense Media Comments at 8-9; Smart Television Alliance Comments at 4-5. Among other requirements, the Children's Television Act of 1990 ("CTA") requires the Commission, through its review of television broadcast license renewal applications, to consider whether commercial television licensees have served "the educational and informational needs of children." *See* Children's Television Act of 1990, Pub. L. No. 101-437, 104 Stat. 996-1000, *codified at* 47 U.S.C. § 303b. To implement the CTA, the Commission adopted a processing guideline pursuant to which broadcasters that aired at least three hours per week of programming "specifically designed" to serve the educational and informational needs of children ages 16 and under (otherwise known as "core" programming) could receive staff-level approval of the CTA portion of their license renewal applications. *See* 47 C.F.R. § 73.671.

symbol “E/I” on the screen throughout the program,¹⁰⁸ but there is no requirement that this information be embedded in the program stream for use with the V-chip. Commenters supporting this change assert that allowing parents to use the V-chip to select desirable programming rather than simply blocking objectionable programming would increase the V-chip’s effectiveness as a parental control mechanism.¹⁰⁹

37. A number of commenters assert that in light of the relatively low use of the V-chip and the increasing number of alternative parental control tools available to MVPD subscribers, further investment in the V-chip is unwarranted.¹¹⁰ The Consumer Electronics Association (“CEA”) states that the current E/I icons that appear on core children’s programs are displayed through different mechanisms than the V-chip rating scheme.¹¹¹ NAB, NCTA, and MPAA maintain that parents would find it cumbersome and impractical to use the V-chip and an E/I descriptor to select programming affirmatively as it would require that a parent block all other programs except those designated E/I.¹¹²

38. Further study is needed to determine whether and, if so, how to revise the TV Parental Guidelines to permit parents to use the V-chip as an affirmative tool to “white list,” or select, educational and informational programming for their children. The Commission intends to explore these and other issues in a forthcoming *NOI*. Among other things, we intend to consider the feasibility of labeling E/I content in the Genre Descriptor to allow television manufacturers to offer sets capable of reading and responding to the E/I descriptor.¹¹³

d. Independent and Multiple Rating Systems

39. Section 2(b) of the Child Safe Viewing Act directed the Commission to examine advanced blocking technologies that “operate independently of ratings pre-assigned by the creator of such video or audio programming”¹¹⁴ and that enhance the ability of a parent to protect his or her child from indecent or objectionable programming “as determined by such parent.”¹¹⁵ Almost all commenters that address this issue support the concept of allowing parents to choose from among multiple independent ratings systems to help them identify programming that best reflects their personal views of what television content is appropriate for their children.¹¹⁶ Commenters also generally agree that there are a number of independent providers currently offering ratings for television content that have websites

¹⁰⁸ 47 C.F.R. § 73.671(c)(5).

¹⁰⁹ See, e.g., CMPC Reply at 7-8; CFIRS Comments at 3; Common Sense Media Comments at 8-9.

¹¹⁰ See, e.g., CDT Comments at 7-8; DISH Network Comments at 2, 5; Motorola Comments at 3.

¹¹¹ See CEA Reply at 8. According to CEA, the ATSC system supports labeling of E/I content through the Genre Descriptor defined in the A/65 PSIP standard. See *id.*

¹¹² See NAB/NCTA/MPAA Reply at 11-12.

¹¹³ The ATSC A/65C PSIP standard supports labeling E/I content through the Genre Descriptor, but not within the content advisory descriptor (which contains the ratings data). See CEA Reply at 8. While carriage of the Genre Descriptor is mandatory in the A/65C PSIP standard, neither the standard nor the Commission’s rules presently require labeling of E/I content in the Genre Descriptor. See 47 C.F.R. § 73.682(d) (incorporating by reference ATSC Doc. A/65C, ATSC Program and System Information Protocol for Terrestrial Broadcast and Cable, Revision C With Amendment No. 1, dated May 9, 2006).

¹¹⁴ Child Safe Viewing Act at Section 2(b)(4).

¹¹⁵ *Id.* at Section 2(b)(5).

¹¹⁶ See, e.g., CMPC Comments at 8; Common Sense Media Comments at 7-8; PFF Comments at 138.

where parents can access information about program recommendations.¹¹⁷ CMPC identifies four organizations – PTC, Common Sense Media, Plugged In Online, and Moral Metric – that have developed their own alternative rating systems for television programming.¹¹⁸ The CFIRS website provides links to 13 independent providers that offer some form of rating, blocking, or filtering of content for television, as well as numerous providers of similar services for movies, video games, music, and the Internet.¹¹⁹ In addition, a number of independent ratings providers have entered into partnerships with MVPDs to increase consumer access to these alternative ratings. For example, Common Sense Media has entered into agreements with certain MVPDs to make its ratings available to their subscribers.¹²⁰ Comcast makes Common Sense Media’s reviews of movies and television programs available on its video on demand (“VOD”) service and on Comcast.net.¹²¹ Cox Communications, Inc. (“Cox”) links to Common Sense Media through its “Take Charge Parents” web page.¹²² DIRECTV makes Common Sense Media’s programming information and reviews available through its DIRECTV.com website, where a parent can access the DIRECTV programming guide and click on any television show or movie title to link directly to Common Sense Media’s information on the program.¹²³ After reviewing the ratings, a parent can return to the menu to access DIRECTV’s “Locks and Limits” program and block a program that is undesirable.¹²⁴ For programming that is appealing for family viewing, parents can use DIRECTV’s “DVR Scheduler” function by simply clicking on the “Record to Receiver” tab and scheduling the program to record on their home DVRs.¹²⁵ DIRECTV anticipates that, rather than going through the DIRECTV.com website, in the future its subscribers will be able to access the Common Sense Media ratings directly through the on-screen programming guide.¹²⁶

40. While there are many independent ratings systems available to parents for viewing online and through pay television services, at this time the V-chip still operates only with the TV Parental Guidelines and the MPAA ratings. Three elements are required in order for a rating system to be used to block or select programming using the V-chip: (i) programmers must rate their content according to the rating system; (ii) broadcasters and other program distributors must transmit the program ratings in the program streams; and (iii) receivers must be able to process the ratings. All three elements are in place now for the TV Parental Guidelines, but would need to be implemented for any new or revised ratings system, including the addition of any new content descriptor(s).

¹¹⁷ See, e.g., Comcast Comments at 9; CEA Comments at 7, 10; DISH Network Comments at 6; Smart Television Alliance Comments at 2.

¹¹⁸ See CMPC Comments at 8. Common Sense Media notes that its website had over 7 million visitors in 2008. See Common Sense Media Comments at 7.

¹¹⁹ See www.independentratings.org. The CFIRS site states that its goal is to provide a link to all known independent ratings providers and requests information about other providers that may not be listed. A list of organizations that provide ratings is also attached as Appendix 2 to the CFIRS Comments. See also PFF Comments at 138-142 (list of independent media rating sources).

¹²⁰ See Comcast Comments at 6; NCTA Supplemental Comments at 11-12; DIRECTV Comments at 10-11.

¹²¹ See Comcast Comments at 7.

¹²² See NCTA Comments at 12 (citing <http://www.cox.com/takecharge/partners.asp>).

¹²³ See DIRECTV Comments at 11.

¹²⁴ See *id.*

¹²⁵ See *id.*

¹²⁶ See *id.*

41. In the *NOI*, the Commission asked whether, if multiple rating systems were offered in conjunction with the V-chip, parents could use more than one system at a time and how they could move from one system to the other.¹²⁷ Common Sense Media points out that the V-chip currently operates with two separate ratings systems, the TV Parental Guidelines and the MPAA movie ratings, and that parents can program the V-chip to apply both ratings to content based on rankings selected by parents.¹²⁸ Common Sense Media claims that additional independent ratings could be added to this system and would co-exist with the current ratings.¹²⁹ For example, the V-chip could be programmed to block any content given a Common Sense Media rating of “off for age 13 and above” or an MPAA rating of PG-13; both filters would work in concert to block objectionable programming.¹³⁰ DTV Innovations disagrees, stating that an issue could arise when two networks send different ratings for the same program.¹³¹ Although programs currently have either a TV Parental Guidelines or MPAA rating, they both come from the same table. Adding an additional ratings system may add complexity to the system and great care will be needed to avoid confusing the user. Moreover, broadcasters claim that it would be infeasible to provide third-party ratings systems with advance copies of network programming.¹³² They also argue that providing advance copies would raise competitive and piracy concerns.¹³³

42. As noted in the *NOI*, the Commission has generally endorsed the concept of an “open V-chip,” one that can accommodate ratings other than the existing TV Parental Guidelines, by recognizing that the ability to modify the current rating system is beneficial and by requiring that most television sets have the capacity to respond to changes in the TV ratings.¹³⁴ Ratings systems are carried in Rating Region Tables (“RRTs”). ATSC, which maintains the list of rating region assignments, originally assigned 0x01 (RRT 1) to the United States. RRT 1 carries the current U.S. rating system (the TV Parental Guidelines and MPAA ratings). Prior to the *Second DTV Periodic Report and Order*, television sets were designed to convey only the ratings information contained in RRT 1. In the *Second DTV Periodic Report and Order*, the Commission stated that “[w]e generally believe that the ability to modify the current content advisory system is beneficial” and that “to ensure the ability to modify the content advisory system, receivers must be able to process newer RRT version numbers or use new rating region codes as suggested by ATSC.”¹³⁵ The Commission also revised Section 15.120(d)(2) to, among other

¹²⁷ See *NOI*, 24 FCC Rcd at 3348, ¶ 21.

¹²⁸ See Common Sense Media Comments at 8.

¹²⁹ See *id.*

¹³⁰ See *id.*

¹³¹ See DTV Innovations Comments at 2-3.

¹³² See Letter from Anne Lucey, CBS, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 09-26 (Aug. 11, 2009), at 1-2 (“Broadcasters Aug. 11 *ex parte*”).

¹³³ See *id.*

¹³⁴ See *NOI*, 24 FCC Rcd at 3348, ¶ 21 and, *supra*, ¶ 11, note 20. See also *Second Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, Report and Order, 19 FCC Rcd 18279, 18347-48, ¶ 156 (2004) (“*Second DTV Periodic Report and Order*”); *Children’s Television Obligations of Digital Television Broadcasters*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 22943, 22965, ¶ 63 (2004) (“We also believe that DTV technical standards should not foreclose the option of using V-Chip technology to support multiple rating systems.”).

¹³⁵ *Second DTV Periodic Report and Order*, 19 FCC Rcd at 18347-48, ¶ 156. In its Reply Comments, CEA urges the Commission to resolve an issue pending in the Commission’s Second DTV Periodic Review proceeding regarding the downloadable V-chip requirement. See CEA Reply at 11-12. CEA filed a Petition for Reconsideration of the *Second DTV Periodic Report and Order* arguing that receivers should be required to respond (continued....)

things, state that “[d]igital television receivers shall be able to respond to changes in the content advisory system.”¹³⁶ Subsequent to the adoption of the *Second DTV Periodic Report and Order*, the ATSC reserved rating region code 0x05 (RRT 5) for an unspecified alternative U.S. rating system or systems. Because the Commission has required that most television receivers in the U.S. be designed to respond to downloadable ratings, televisions built since the requirement became effective can receive information broadcast over the air that could be used to present new or alternative ratings schemes. To date, however, the rating parameters for RRT 5 have not been defined. Before a new ratings scheme can be offered by a third party, broadcasters would have to agree to use the alternative rating system in their programming. It also would be necessary for various industries to reach a common understanding about the rating system or systems to be used in conjunction with RRT 5. This process may require the involvement of the ATSC and CEA, which share responsibility for standards-setting for RRT 5,¹³⁷ in addition to broadcasters, rating service providers, content providers, and receiver manufacturers.¹³⁸

43. A number of commenters express concern about whether RRT 5 provides sufficient space in receivers to extend the current television ratings and/or to process multiple ratings systems. For example, the National Hispanic Media Coalition supports expansion or revision of the rating system and translation of the system into Spanish.¹³⁹ As discussed above, CFIRS suggests using the V-chip for additional “black listing” of programs containing certain content, such as use of alcohol, tobacco, and illegal drugs.¹⁴⁰ CFIRS argues that adding content descriptors in English and Spanish for E/I programming, tobacco use, and substance abuse (drugs and alcohol) would require two-thirds of the space in RRT 5, thus making it difficult to add a new rating system in both English and Spanish.¹⁴¹ According to CFIRS, simply translating the existing TV Parental Guidelines into Spanish would use up almost all of the additional space allocated for ratings, leaving almost no space for any new ratings content.¹⁴² Thus, CFIRS argues that receivers should be required to respond to additional RRTs.¹⁴³ CEA disagrees, arguing that RRT 5 could hold an additional four or five bilingual dimensions (*i.e.*, content

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to only one additional RRT (specifically, RRT 5) in addition to RRT 1. See CEA, Petition for Reconsideration and/or Clarification, MB Docket No. 03-15 (Nov. 3, 2004). CFIRS and other parties have filed oppositions to the CEA Petition, arguing that television sets should not be limited to only one additional RRT and that more capacity is needed to accommodate additional and improved ratings systems. See Coalition for Independent Ratings Services, Opposition and Comments, MB Docket No. 03-15 (Jan. 21, 2005); Tim Collings and Tri-Vision International Ltd., Opposition, MB Docket No. 03-15 (Nov. 22, 2004). The CEA Petition remains pending. As we stated in the *NOI*, the specific issue raised in the CEA Petition regarding RRTs will be resolved in the Second DTV Periodic Review proceeding. See *NOI*, 24 FCC Rcd at 3348, ¶ 21 n.59.

¹³⁶ See 47 C.F.R. § 15.120(d)(2).

¹³⁷ CEA states that it is the standards organization responsible for RRT 5 and is an ANSI-accredited standards development organization that practices open standards development processes and procedures. See CEA Reply at 12. CEA further states that all parties interested in helping to define the ratings parameters for RRT 5 have been long-invited to participate in the process. See *id.* at 12-13.

¹³⁸ See CEA Comments at 19. According to CEA, these parties would need to encode rating schemes into RRT 5 so that the resulting configuration screens for blocking preferences are sensible and usable by consumers. *Id.*

¹³⁹ See National Hispanic Media Coalition Comments at 2.

¹⁴⁰ See CFIRS Comments at 3.

¹⁴¹ See CFIRS Comments at 5-6 and Appendix 1.

¹⁴² See *id.*

¹⁴³ See *id.* at 5. See also Coalition for Independent Ratings Services, Opposition and Comments, MB Docket No. 03-15 (Jan. 21, 2005), at 7, 9-11.

descriptors) beyond the three (E/I, tobacco, substance abuse) identified by CFIRS.¹⁴⁴ According to CEA, RRT 5 provides enough capacity to support multiple ratings schemes, and concerns about potential capacity constraints and the need to add another RRT for use for program ratings are premature and unfounded.¹⁴⁵ The issue of the number of RRTs that television sets are required to process will be decided in a separate proceeding.¹⁴⁶

44. With respect to the transmission of ratings in the program stream, some commenters assert that most broadcasters currently do not have the required software to be able to transmit the new ratings table, RRT 5.¹⁴⁷ DTV Innovations states that it has a software patch that is currently available for use by stations to upgrade their facilities to permit transmission of RRT 5.¹⁴⁸ DTV Innovations, CMPC, and CFIRS propose that the Commission require a live field test of the ability of broadcasters to transmit new ratings information and of digital receivers to process new RRT version numbers.¹⁴⁹ We note that because a new ratings system has not yet been identified for RRT 5, it is unclear whether broadcasters are currently required to transmit, or have the ability to transmit, that ratings region table.¹⁵⁰

45. Some commenters call on the Commission to provide an incentive to broadcasters to carry alternative ratings in their program streams so that the V-chip can be used to filter programs based on these ratings.¹⁵¹ The National Hispanic Media Coalition asserts that this is a necessary step for any alternative rating system to be incorporated in the V-chip scheme.¹⁵² PTC states that no broadcaster has yet agreed to carry the alternative ratings system PTC or other organizations have developed.¹⁵³ Broadcasters agreed voluntarily to transmit the current television ratings.¹⁵⁴ PFF and Advertiser commenters, among others, argue that a government mandate requiring broadcasters to carry particular ratings would raise First Amendment concerns.¹⁵⁵ In particular, broadcasters, including the major

¹⁴⁴ See CEA Reply at 13.

¹⁴⁵ See *id.*

¹⁴⁶ See *supra* note 135.

¹⁴⁷ See CFIRS Comments at 6; DTV Innovations Comments at 2.

¹⁴⁸ DTV Innovations states that it has developed a software patch for stations that provide the capability to transmit new ratings information and will provide the patch for “no charge” to its 300 existing station clients. See DTV Innovations Comments at 2.

¹⁴⁹ See DTV Innovations Comments at 2. See also CMPC Comments at 8 (urging the Commission to ensure that DTV receiver manufacturers are in compliance with the mandate that the V-chip be able to respond to changes in the content advisory system); Letter from Dominic J. Perri, Executive Director, CFIRS to Marlene H. Dortch, Secretary, FCC, MB Docket No. 09-26 (July 1, 2009).

¹⁵⁰ In the *Third DTV Periodic Report and Order*, 23 FCC Rcd 2994 (2007), the Commission stated that it “expect[s] broadcasters to fully implement PSIP to the extent that ATSC A/65C requires.” See *id.* at 3081, ¶ 188. ATSC A/65C states: “An RRT defining the rating system for a given region shall be included in the TS (transport stream) if a content advisory descriptor in use refers to that region...”. See ATSC A/65C at 22. Although RRT 5 has been assigned for use in the U.S, because it does not currently contain ratings information, it is unclear whether it is “in use” within the meaning of A/65C.

¹⁵¹ See CMPC Comments at 8; PTC Reply at 5.

¹⁵² See National Hispanic Media Coalition Comments at 2-3.

¹⁵³ See PTC Reply at 5.

¹⁵⁴ See *TV Parental Guidelines Order*.

¹⁵⁵ See, e.g., PFF Comments at 108-109; Advertisers Reply at 13-15.

networks, assert that “any government mandate that would require broadcasters and other content providers to carry, use or adopt a third party ratings system would constitute compelled speech in violation of the First Amendment.”¹⁵⁶ CFIRS argues that the lack of certainty about the implementation of alternative or new ratings systems, not only in over-the-air broadcasts but also in cable, satellite, and TV-tuner-equipped computers, will deter entities from investing resources in developing alternative ratings.¹⁵⁷

46. The record developed in response to the *NOI* indicates that a number of independent providers currently offer ratings for television content. As discussed above, the Commission has generally endorsed the concept of an “open V-chip” and has adopted requirements to ensure that digital television receivers can respond to changes in the content advisory system. The Commission intends to explore these and other issues in a forthcoming *NOI*.

e. Other Changes to the V-chip

47. In addition to the proposed changes discussed above, there are a number of other suggestions in the record for ways to increase the use and effectiveness of the V-chip. For example, CFIRS proposes that the industry offer a V-chip button on television remote controls that would take consumers directly to the V-chip menu.¹⁵⁸ CEA asserts that manufacturers would offer such a dedicated V-chip button if demand existed and suggests that the fact that one has not been offered demonstrates that there is little demand for such a tool.¹⁵⁹ CFIRS also proposes that the packaging for TV sets should include an insert, separate from the owner’s manual, that clearly explains how to program the V-chip¹⁶⁰ and that TV set manufacturers sell “family friendly” sets that are already pre-programmed at a given V-chip setting.¹⁶¹ CEA argues that both of these proposals are unnecessary and that pre-programmed TV settings could cause confusion and would be burdensome for the majority of American households that do not require content blocking.¹⁶²

48. Further study is needed to assess these proposals and to consider what efforts, if any, manufacturers could take to increase awareness and usage of the V-chip. At this point, it is unclear how effective any such efforts would be in increasing awareness and usage of the V-chip. The Commission intends to explore these and other issues in a forthcoming *NOI*.

f. Intellectual Property Issues Related to the V-chip

49. The *NOI* also invited comment on whether there are intellectual property concerns that could affect efforts to improve the V-chip and the current ratings system, including efforts to develop an

¹⁵⁶ See Broadcasters Aug. 11 *ex parte* at 2. These commenters note that the TV Parental Guidelines were adopted voluntarily and contend that, beyond the constitutional considerations, the Commission’s statutory authority in this area is limited to only voluntary ratings schemes. See, e.g., *id.* at 1; NAB/NCTA/MPAA Joint Comments at 19-20 (citing Sec. 551(b)(1) of 1996 Act, codified at 47 U.S.C. § 303(w)(1)); NAB/NCTA/MPAA Reply at 9-10, 14-15.

¹⁵⁷ See CFIRS Reply at 5.

¹⁵⁸ See CFIRS Comments at 5. Wi-LAN supports this proposal. See Wi-LAN Comments at 5.

¹⁵⁹ See CEA Reply at 9. CEA also suggests that a V-chip button could cause consumer confusion because many families rely on blocking technologies provided by MVPDs rather than the V-chip. See *id.*

¹⁶⁰ See CFIRS Comments at 5.

¹⁶¹ See *id.* Wi-LAN also proposes that the V-chip default be set to provide the maximum protection against inappropriate material. See Wi-LAN Comments at 5.

¹⁶² See CEA Reply at 9-10.

“open V-chip.”¹⁶³ The Commission noted that there is a patent on the technology that may be necessary to enable television receivers to respond to multiple RRTs and invited comment on whether the patent applies and if the license terms for this technology are reasonable.¹⁶⁴ Wi-LAN Inc. (“Wi-LAN”) states in its comments that it has merged with Tri-Vision International Ltd. (“Tri-Vision”), the former V-chip patent holder, and now holds patents “related to flexible V-chip technology.”¹⁶⁵ According to Wi-LAN, the V-chip patent is licensed to 98 companies representing more than two-thirds of the brand name DTV receivers presently available for sale in the United States.¹⁶⁶ Wi-LAN states that it makes licenses available to all DTV receiver manufacturers under “reasonable and non-discriminatory terms.”¹⁶⁷ In addition, Wi-LAN states that, regarding the processing of additional RRTs, no additional royalties would be required beyond those already being paid under existing licenses and, therefore, companies with existing licenses are free to provide enhanced V-chip capabilities at no additional cost.¹⁶⁸ CEA responds by noting that, in 2004, it filed a Petition for Reconsideration of the *Second DTV Periodic Report and Order* in which it requested that the Commission prevent competitive abuse through the patent process.¹⁶⁹ CEA states that “nothing in the record [of this proceeding] alleviates this concern or moots the need for Commission action on CEA’s Petition for Reconsideration.”¹⁷⁰

50. TiVo is the only other commenter that directly addresses whether the Wi-LAN patent applies to the technology required to process multiple RRTs. According to TiVo, the Commission did not mandate use of the Wi-LAN patent in the *Second DTV Periodic Report and Order* proceeding and “the mere ability to respond to changes in TV ratings systems” is not patented by Wi-LAN.¹⁷¹ With respect to whether the Wi-LAN license terms are reasonable, TiVo argues that Wi-LAN’s proposed per unit royalty rate is far in excess of the amount a DTV receiver manufacturer would have agreed to pay to add the claimed feature to a product in the absence of a Commission mandate.¹⁷² According to TiVo, where a patent holder has advocated a regulatory mandate that could make some or all manufacturers use a particular patent, a reasonable royalty should be based on what parties would have agreed *ex ante*

¹⁶³ See *NOI*, 24 FCC Rcd at 3349, ¶ 22.

¹⁶⁴ See *id.*

¹⁶⁵ See Wi-LAN Comments at 1. The Tri-Vision or Wi-LAN patent will be referred to herein as the Wi-LAN patent.

¹⁶⁶ See *id.* at 5.

¹⁶⁷ See *id.*

¹⁶⁸ See *id.*

¹⁶⁹ See CEA Reply at 13-14; CEA, Petition for Reconsideration and/or Clarification, MB Docket No. 03-15 (Nov. 3, 2004). *But see* Tim Collings and Tri-Vision International Ltd., Opposition, MB Docket No. 03-15 (Nov. 22, 2004). See also *supra* note 135.

¹⁷⁰ See CEA Reply at 13-14.

¹⁷¹ See TiVo Comments at 8. According to TiVo, infringement requires that the alleged infringer practice each step recited in a patent claim, and several of the claims in the Wi-LAN patent are irrelevant to television receivers. See *id.* at 8-9 n.2.

¹⁷² See TiVo Reply at 3. TiVo argues that a reasonable royalty for the Wi-LAN patent would be nominal or zero. See TiVo Comments at 9 n.3. According to TiVo, because Tri-Vision advocated for a mandate that may require use of its patent, a reasonable royalty rate for the patent should be related to the value to consumers and manufacturers apart from any government mandates. See *id.* According to TiVo, consumers and manufacturers would generally find a nearly unlimited capacity to update ratings schemes by receiving updates embedded in video channels to add very little value, so a reasonable royalty for this patent would be minimal or zero. See *id.*

rather than after the regulatory mandate has been adopted.¹⁷³ TiVo also argues that many manufacturers felt they had no choice but to take a license from Wi-LAN or face either expensive and unpredictable patent litigation or fines for non-compliance with a Commission rule.¹⁷⁴

51. Sanyo asserts that it is “patently unreasonable” that it and other manufacturers are required to pay “considerable” amounts for a technology that is not currently in use by consumers.¹⁷⁵ Sanyo urges the Commission to adopt a rule prohibiting companies from paying licensing fees for patented technology in digital television sets prior to the date that such technology is actually utilized by consumers.¹⁷⁶ TiVo and Sanyo also urge the Commission to require that any party that participates in a proceeding before the Commission disclose all intellectual property interests that may be affected by the proceeding.¹⁷⁷ In addition, these commenters, as well as CEA, ask the Commission to examine the intellectual property issues related to enabling television receivers to respond to multiple RRTs and note that some entities were expecting “a financial windfall” that television manufacturers and consumers might be required to fund.¹⁷⁸

52. We will continue to monitor marketplace developments to determine whether unreasonable royalty or licensing policies are impeding efforts to improve the V-chip and the current ratings system. We note that there are pending proceedings in which the Commission is considering intellectual property licensing terms involving the V-chip as well as DTV receivers.¹⁷⁹

3. Educational Efforts

53. Many commenters agree that educating parents about the V-chip and the TV Parental Guidelines is the most important step toward increasing parental use of the V-chip.¹⁸⁰ A number of commenters suggest that the government could play a role in publicizing the V-chip scheme by, for example, conducting a public awareness campaign, airing public service announcements (“PSAs”), and establishing a website that explains to parents the various consumer electronics choices that allow them to control viewing.¹⁸¹

¹⁷³ See TiVo Reply at 3.

¹⁷⁴ See *id.*

¹⁷⁵ See Sanyo Comments at 1-2.

¹⁷⁶ See *id.* at 3.

¹⁷⁷ See *id.* at 3-4. See also TiVo Comments at 9 n.3.

¹⁷⁸ See CEA Comments at 21; Sanyo Comments at 2-3; TiVo Comments at 8-9.

¹⁷⁹ We will address the CEA Petition regarding licensing terms for the V-chip in the Second DTV Periodic Review proceeding. See *supra* note 135. We also note that the Commission is currently examining intellectual property issues involved in the manufacture of DTV receivers. See Petition for Rulemaking and Request for Declaratory Ruling Filed by the Coalition United to Terminate Financial Abuses of the Television Transition, LLC, MB Docket No. 09-23 (filed Jan. 2, 2009). See also *Technical Requirements to Enable Blocking of Video Programming Based on Program Ratings*, Report and Order, 13 FCC Rcd 11248, 11262, ¶ 42 (1998); *Revised Patent Policies of the Federal Communications Commission*, Public Notice, 3 FCC 2d 26 (1961).

¹⁸⁰ See, e.g., PFF Comments at 102; CDT Comments at 14; Common Sense Media Comments at 7; CFIRS Comments at 4; Smart Television Alliance Reply at 1.

¹⁸¹ See AT&T Comments at 4; CDT Comments at 7; Common Sense Media Comments at 10; FOSI Comments at 13; Joint Comments of CDT, CEA, ACLU et al (“Industry and Public Interest Groups Joint Comments”) at 4; PFF Comments at 110; Smart Television Alliance Comments at 3. We note that the Commission has already established (continued....)

54. According to NAB, NCTA, and MPAA, the television industry has engaged in a wide variety of public awareness efforts since the creation of the TV Parental Guidelines and the introduction of the V-chip.¹⁸² In 1999, NAB, NCTA, and MPAA, together with the Kaiser Family Foundation and children's advocates, established the V-chip Education Project, which featured a series of TV PSAs, a booklet with information about the V-chip and the TV Parental Guidelines, as well as a toll-free telephone number and a website.¹⁸³ More recently, in 2006, NCTA, NAB, the broadcast networks, MPAA, CEA, and the satellite industry joined with the Ad Council to launch a \$340 million national multi-media "TV Boss" campaign to educate families about how they can monitor their children's television consumption.¹⁸⁴ The campaign included TV PSAs, as well as a website and a variety of educational materials about the V-chip and the TV ratings.¹⁸⁵

55. Further study is required to determine the most effective ways to educate parents about the V-chip and the TV Parental Guidelines in order to increase V-chip use and awareness. The Commission intends to explore these and other issues in a forthcoming *NOI*.¹⁸⁶

B. MVPD Parental Controls

56. The Commission invited comment in the *NOI* on advanced blocking technologies for television, other than the V-chip, that either currently exist or are under development.¹⁸⁷ Because approximately 89 percent of TV households subscribe to an MVPD service,¹⁸⁸ the parental control tools offered by cable, satellite, and telephone companies comprise a significant part of the technologies used by parents to monitor their children's television viewing. CEA states that, as a practical matter, cable and satellite-provided controls are the primary blocking tools used in most households.¹⁸⁹

57. The June 2007 Luntz Maslansky Research/Hart Research Survey commissioned by TV Watch indicated that 90 percent of parents were aware that cable and satellite providers offer controls that allow parents to block channels that they do not want their children to watch.¹⁹⁰ The November 2005 Russell Research Survey commissioned by TV Watch found that 63 percent of parents surveyed were familiar with cable parental controls and 45 percent were familiar with satellite parental controls.¹⁹¹ Moreover, the same survey found that 17 percent of families studied used cable parental controls and 12

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websites that provide information about the V-chip and the TV Parental Guidelines. See <http://www.fcc.gov/vchip/> and <http://www.fcc.gov/parents/>.

¹⁸² See NAB/NCTA/MPAA Joint Comments at 11.

¹⁸³ See *id.*

¹⁸⁴ See *id.* at 12.

¹⁸⁵ See *id.* at 12-13.

¹⁸⁶ See *infra* section XI.

¹⁸⁷ See *NOI*, 24 FCC Rcd at 3349, ¶ 23.

¹⁸⁸ See The Nielsen Company, *2008-2009, Universe Estimates, Media Related TV Households and Penetrations by County within DMA*, July 2009.

¹⁸⁹ See CEA Comments at 8.

¹⁹⁰ See *June 2007 Luntz Maslansky Research/Hart Research Survey* at 5.

¹⁹¹ See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids' TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

percent used satellite parental controls, whereas only 5 percent used the V-chip.¹⁹²

58. The November 2005 Russell Research Survey commissioned by TV Watch also concluded that 66 percent of parents surveyed found cable blocking technology useful and 57 percent found satellite blocking technology useful.¹⁹³ Cox states that a survey it conducted in 2004 showed that 60 percent of the parents surveyed found that parental controls on cable boxes were the most valuable monitoring tool for television.¹⁹⁴

59. Some commenters contend that the parental control devices that MVPDs provide to their subscribers are both more user-friendly than the V-chip and offer a greater variety of options in terms of monitoring children's television viewing.¹⁹⁵ Both analog and digital cable boxes allow parents to block channels and lock the settings with passwords.¹⁹⁶ Newer digital boxes offer more extensive filtering capabilities that allow programs to be blocked by rating, channel, or program title.¹⁹⁷ The current generation of digital cable set-top boxes also permits parents to set up their controls so that children are unaware that a particular channel or program is available on a particular television set.¹⁹⁸ Channels and programs on the skip channel list will not be displayed on the TV screen and in some cases can be omitted from display in the program guide.¹⁹⁹ Some boxes also allow customers to block access to an entire service, such as VOD, and allow customers to block content based on time and day.²⁰⁰ NCTA states that cable operators are working to make these blocking capabilities easier for customers to use.²⁰¹

¹⁹² See *id.* A March 2007 Zogby poll of 1000 adults nationwide commissioned by PTC found that 11 percent of those surveyed used the V-chip or cable box parental controls. See *PTC Declares the Industry's V-Chip Education Campaign a Failure*, March 15, 2007, <http://parentstv.org/PTC/news/release/2007/0315.asp>. The study does not distinguish between the percentage of those surveyed who used the V-chip and the percentage of those surveyed who used cable box parental controls.

¹⁹³ See *Survey: Parents Combine Old-Fashioned TV Rules and Latest Blocking Technologies to Manage Kids' TV*, November 28, 2005, <http://www.televisionwatch.org/NewsPolls/PressReleases/PR008.html>.

¹⁹⁴ See Cox Comments at 3.

¹⁹⁵ See, e.g., DISH Network Comments at 5; CEA Comments at 7, 10; Funai Comments at 3.

¹⁹⁶ See PFF Comments at 21; DISH Network Comments at 6 (discussing password protection for satellite set-top boxes). Parents can also purchase aftermarket devices that block specific cable channels. See <http://www.familysafemedia.com/index.html>. According to NCTA, operators of cable systems serving more than 90 percent of cable customers offer free channel blocking to customers who do not otherwise have the means to block unwanted channels. See NCTA Supplemental Comments at 8. Comcast states that it will block any channel upon request and for no charge. See Comcast Comments at 3. Depending on the technology used, a channel or channels can be blocked indefinitely within the entire household or on a particular television within the household. In addition, the Communications Act mandates that cable operators block certain channels. See also 47 U.S.C. § 560(a) ("Upon request by a cable service subscriber, a cable operator shall, without charge, fully scramble or otherwise fully block the audio and video programming of each channel carrying such programming so that one not a subscriber does not receive it.").

¹⁹⁷ See PFF Comments at 21. See also Comcast Comments at 3-4; NCTA Supplemental Comments at 8-9.

¹⁹⁸ See NCTA Supplemental Comments at 10. See also PFF Comments at 21; DirectTV Comments at 7; DISH Network Comments at 6; AT&T Comments at 6.

¹⁹⁹ See, e.g., Comcast Comments at 4; Cox Comments at Appendix B at iv.

²⁰⁰ See NCTA Supplemental Comments at 10-11; Cox Comments at Appendix B, p. iii.

²⁰¹ See NCTA Supplemental Comments at 11. See also CEA Comments at 10 (regarding the tru2way platform which CEA states enables cable operators to deploy advanced program guides with innovative blocking features).

60. Digital set-top boxes offer a variety of different menu options from which to gain information about a show's rating and to activate parental controls.²⁰² Programs can be blocked according to the TV Parental Guidelines' age-based ratings or content descriptors, or by a combination of the two.²⁰³ Movies can be blocked according to MPAA ratings.²⁰⁴ A customer can view MPAA ratings for movies and block particular movies based on those ratings, thereby enabling the customer to select movies appropriate for family viewing.²⁰⁵ In addition, many digital cable boxes provide access to information about the TV Parental Guidelines, including descriptions of the content labels in the information bar (e.g., TV-PG, V/ V=moderate violence), as well as full ratings information, including content labels in the description of a highlighted program that appears in the TV listings grid.²⁰⁶ In addition, several cable operators offer links on their websites to the websites of third-party rating services. For example, Time Warner Cable, Cox, and Comcast provide links to the Common Sense Media programming reviews.²⁰⁷

61. The cable industry has voluntarily undertaken specific actions to promote the availability of parental control tools in cable technology.²⁰⁸ In 2004, the cable industry commenced a new education effort, "Control Your TV," which produced additional PSAs as well as websites, in both English and Spanish, promoting the availability of cable's blocking technology as well as resources devoted to media literacy and education.²⁰⁹ In addition, cable companies provide other assistance to help parents with parental controls, including telephone hotlines, websites, and instructional short programs and videos.²¹⁰

62. Local telephone companies that offer video service also provide customers with the ability to control their children's television viewing.²¹¹ Verizon, for example, uses the same set-top boxes as other cable companies.²¹² AT&T notes that its U-verse Television service allows parents to, among other things, block channels, record programs, set limits on ordering and watching on-demand

²⁰² See NCTA Supplemental Comments at 9-10.

²⁰³ *Id.* at 9.

²⁰⁴ See *id.* at 10.

²⁰⁵ See *id.*

²⁰⁶ See *id.*

²⁰⁷ *Id.* at 12. See also Comcast Comments at 6-7; Cox Comments at 8-9.

²⁰⁸ NCTA and MPAA, along with NAB, assert that the First Amendment and the Communications Act limit the Commission's authority to establish new mandates concerning alternative ratings systems. See NAB/NCTA/MPAA Joint Comments at 19-20; NAB/NCTA/MPAA Reply at 14-15.

²⁰⁹ See NCTA Supplemental Comments at 5. The NCTA "Control Your TV" website provides a description of the parental controls offered by cable television providers. See <http://controlyourtv.org>.

²¹⁰ See Comcast Comments at 5-6 (brochure, telephone hotline, website, video); Cox Comments at 4 (Take Charge instruction sheets and website). See also DIRECTV Comments at 3-4 (describing its website and its "Basics Show" which runs continuously on one of the DIRECTV channels).

²¹¹ See AT&T Comments at 6 (regarding U-verse Television); Verizon Comments at 4-6 (regarding FiOS TV). See also USTelecom Comments at 6 (noting that smaller companies are also offering state of the art video networks that provide parental controls).

²¹² See PFF Comments at 23. See also Verizon Comments at 4-6. For FiOS TV customers, a variety of parental control options are available through the DVR offered to Verizon's FiOS customers. See *id.* at 5

videos, and prevent a channel or VOD from appearing in the EPG listing.²¹³

63. Satellite providers also offer parental control capabilities through their set-top boxes.²¹⁴ Satellite providers state that, without any government mandate, the industry has developed tools that are more effective and user-friendly than the V-chip and that these tools have proven to be a key marketing and subscriber retention tool for video providers.²¹⁵ Both DISH Network and DIRECTV have established a relationship with a third-party ratings service, Common Sense Media, and state that they anticipate that in the future the Common Sense Media ratings will be available on information screens accessible through their on-screen programming guides.²¹⁶

64. In its Reply Comments, Motorola, Inc. (“Motorola”) provides information about its advanced server technology called TV Firewall which it expects to be ready for deployment in cable headends in 2010.²¹⁷ Motorola states that TVFirewall will offer the same kind of capabilities available now to many cable subscribers but will also permit parents to make affirmative viewing choices, create a pre-selected library of programming for their children to view, customize parental control configurations for each set-top box in the home, specify the time periods during each day when a child is allowed to view programming, and log the viewing activity of each set-top box.²¹⁸ TVFirewall will be configured via a graphical user interface (“GUI”) that is available online and can be accessed from any device that can access the Internet, including web-enabled mobile devices.²¹⁹ The GUI will allow parental control configurations to be customized for each set-top box in the home.²²⁰ TV Firewall will utilize switched digital video (“SDV”) technology to control access to cable content.²²¹ The parental control settings for each set-top box in the home will be maintained in servers at the cable headend.²²² When a child tunes to a particular channel, the set-top box will send an inquiry to the server to confirm whether the set-top box is authorized to tune to that channel.²²³

65. TVFirewall will allow for white listing of content selected by parents.²²⁴ Specifically, Motorola explains that the playlist support feature of TVFirewall will allow parents to use the GUI to select programs that they want their children to view.²²⁵ The programs selected will create a playlist for

²¹³ See AT&T Comments at 6.

²¹⁴ See DISH Network Comments at 4-6; DIRECTV Comments at 3-11.

²¹⁵ See DISH Network Comments at 4-6.

²¹⁶ See *id.* at 6; DIRECTV Comments at 11.

²¹⁷ See Motorola Reply at 4-8.

²¹⁸ See *id.* at 4-8.

²¹⁹ See *id.* at 4-5.

²²⁰ See *id.* at 4.

²²¹ In contrast to the traditional cable architecture, in which all channels are typically delivered to all customers at all times regardless of whether anyone is watching, SDV enables operators to allocate bandwidth based on usage levels, thereby enabling more effective bandwidth utilization. SDV must be enabled on the network, but a particular channel does not have to be switched, in order for TV Firewall to work. See *id.* at 7-8 n.11.

²²² See *id.* at 7.

²²³ See *id.*

²²⁴ See *id.* at 7.

²²⁵ See *id.*

the set-top box.²²⁶

66. In addition to the parental control tools available through set-top boxes and programming guides, many MVPDs offer subscribers the option of purchasing a bundle of “family friendly” channels.²²⁷ For example, DISH Network offers “DishFAMILY”²²⁸ and DIRECTV offers a “Family Choice” bundle of channels.²²⁹ Major cable operators, including Comcast, Time Warner, Cox, Insight Communications, Mid-Continent, and Bright House, also offer family packages.²³⁰ In addition, a satellite service called Sky Angel offers over 70 channels of Christian and family friendly programs.²³¹

67. While the record reflects that MVPD parental control technologies exist, the record is lacking data in a number of areas regarding MVPD parental control technologies, as explained further below, which the Commission intends to explore in a forthcoming *NOI*.²³²

C. Other Parental Control Devices for Television

68. The Commission invited comment in the *NOI* on advanced blocking technologies for television, other than the V-chip and other than those provided by MVPDs, that either currently exist or are under development.²³³ Pursuant to the directive of the Child Safe Viewing Act, the Commission invited comment specifically on technologies that operate based on ratings established by an entity other than the creator of the programming²³⁴ and on technologies that can filter language based upon information in closed captioning.²³⁵ As discussed below, while the record reflects that “other parental control devices” for television (*i.e.*, parental control devices and technologies other than the V-chip and those provided by MVPDs) exist, the record is lacking data in a number of areas regarding these devices,

²²⁶ *See id.*

²²⁷ *See* CEA Comments at 10. We note that the Commission adopted a *Notice of Proposed Rulemaking* in September 2007 in which it sought comment on concerns raised by MVPDs regarding certain wholesale programming practices. *See Program Access Rules and Examination of Programming Tying Arrangements*, MB Docket No. 07-198, Notice of Proposed Rulemaking, 22 FCC Rcd 17791, 17862, ¶ 119 and 17867, ¶ 133 (2007). In response to the *NPRM*, a number of MVPDs alleged that programmers often demand tier or minimum penetration requirements, pursuant to which the programmer will make its content available only if the MVPD carries it on one of the MVPD’s most highly penetrated tiers and will specifically preclude the MVPD from placing the station or network on anything other than one of the most highly penetrated tiers. *See, e.g.*, American Cable Association Comments (MB Docket No. 07-198) at 14-16, 18, 27-43; Broadband Service Providers Association Comments (MB Docket No. 07-198) at 19-24; DISH Network Comments (MB Docket No. 07-198) at 2-3, 14-16. Some MVPDs have claimed that these alleged tier or minimum penetration requirements limit their ability to offer themed tiers, including “family friendly” tiers. *See* ACA Comments (MB Docket No. 07-198) at 43; BSPA Comments (MB Docket No. 07-198) at 19; DISH Network Comments (MB Docket No. 07-198) at 2.

²²⁸ *See* DISH Network Comments at 7.

²²⁹ *See* PFF Comments at 23.

²³⁰ *Id.*

²³¹ *See* www.skyangel.com. *See also* PFF Comments at 23-24.

²³² *See infra* section XI.

²³³ *See NOI*, 24 FCC Rcd at 3349, ¶ 23.

²³⁴ *Id.* at 3348, ¶ 20. *See also* Child Safe Viewing Act at Section 2(b)(4).

²³⁵ *See NOI*, 24 FCC Rcd at 3349, ¶ 24. *See also* Child Safe Viewing Act at Section 2(b)(3).

as discussed below, which the Commission intends to explore in a forthcoming *NOI*.²³⁶

1. TiVo's KidZone

69. As noted in the *NOI*, TiVo offers a service to its subscribers called KidZone that permits parents to block, select, and/or record programming for their children based on a list of recommended programs developed by independent organizations including PTC, KIDS FIRST!, and Common Sense Media.²³⁷ TiVo states that it developed KidZone after its research showed that parents found the V-chip “confusing and difficult to configure.”²³⁸ Using KidZone, parents turn on program blocking for live and recorded television by selecting an appropriate age range: 6 and under; 9 and under; or 12 and under. Pursuant to the default settings for each age range, KidZone blocks shows with ratings above a certain level (*e.g.*, for ages 9 and under, shows with a rating of TV-PG, TV-14 and TV-MA are blocked) and shows with certain content labels (*e.g.*, for ages 9 and under, D, S, L, V and FV are all blocked).²³⁹ Parents have the option of changing these default settings for the indicated age range.²⁴⁰ KidZone will also block entire channels so that the children are permitted to tune into only those channels that parents likely would approve for children in that age range (*e.g.*, PBS, ABC Family, Nickelodeon, Disney and Animal Planet, among others, are permitted by default for ages 9 and under).²⁴¹ KidZone allows parents to override the TV Parental Guideline ratings and default settings and permit viewing of particular programs and channels based on their own assessment of the appropriateness of the content for their children.²⁴²

70. TiVo explains that KidZone allows for both white listing and black listing of particular shows.²⁴³ Specifically, KidZone provides parents with the option to indicate that particular shows are or are not permitted for live or recorded viewing.²⁴⁴ TiVo states that when the parents see the title of a show that they do or do not want their children to view, the parents have the option to affirmatively allow or prevent recording of the program.²⁴⁵

71. In addition, KidZone provides parents with access to KidZone Guides, which lists programs recommended by independent ratings organizations, as well as programs identified by

²³⁶ See *infra* section XI.

²³⁷ See TiVo Comments at 3. Approximately 3.3 million customers, both within and outside of the United States, subscribe to the TiVo service. See TiVo, Inc., SEC Form 10-K (April 3, 2009), at 41.

²³⁸ See TiVo Comments at 2.

²³⁹ See *id.* at 3.

²⁴⁰ See *id.*

²⁴¹ See *id.*

²⁴² See *id.* Comcast set-top boxes with TiVo functionality do not currently support the KidZone feature, but they do support other parental control features. See Letter from Ryan G. Wallach, Counsel for Comcast, to Ms. Marlene H. Dortch, Secretary, FCC, MB Docket No. 09-26 (July 24, 2009), at 2. TiVo and DIRECTV announced that they are working to introduce a DIRECTV DVR featuring the TiVo Service that includes KidZone in the second half of 2009. See DIRECTV and TiVo to Launch New HD DIRECTV DVR with TiVo Service, available at <http://www.directv.com/DTVAPP/global/contentPage.jsp?assetId=P4900010>.

²⁴³ See TiVo Comments at 3.

²⁴⁴ See *id.*

²⁴⁵ See *id.*

broadcasters as E/I.²⁴⁶ Parents can review the recommended programs and select any individual programs for recording or choose to record all of the recommendations.²⁴⁷ The KidZone Now Playing List provides a list of the shows recorded by the parents for viewing by their children.²⁴⁸ When parents want to watch their own programs, they enter a password to exit KidZone.²⁴⁹ The TiVo DVR can be set to automatically re-enter KidZone after a period of time, or the parents may choose to re-enter KidZone at any time.²⁵⁰

72. According to TiVo, the KidZone usage rate is about equivalent to the V-chip usage rate.²⁵¹ As discussed above, the Kaiser Family Foundation conducted two studies, one of which found that 15 percent of parents have used the V-chip²⁵² and the other of which found that 16 percent of parents have used the V-chip.²⁵³ TiVo estimates that 30-35 percent of households with a TiVo DVR have children and, among those households, KidZone usage has never exceeded the 15 percent to 16 percent V-chip usage rate found in the 2004 and 2007 Kaiser Family Foundation Studies.²⁵⁴ In addition, TiVo states that parents it surveyed who use KidZone report that they value the feature highly, similar to the findings regarding the V-chip in the studies conducted by the Kaiser Family Foundation.²⁵⁵

73. TiVo states that it surveyed recent purchasers of TiVo DVRs.²⁵⁶ Among recent purchasers in households with children 13 years of age and younger, only 29 percent were aware of KidZone prior to purchase.²⁵⁷ Among these households that were aware of KidZone, 61 percent said that it was important or very important in increasing their purchase interest.²⁵⁸ Among recent purchasers of TiVo DVRs in households with children that were aware of KidZone prior to purchase, 49 percent reported that KidZone was important or very important in increasing their purchase interest.²⁵⁹ TiVo also states that the research it conducted during the development of KidZone showed that parents were using the TiVo DVR to record shows for their children rather than using the V-chip to block programming.²⁶⁰

²⁴⁶ *See id.* at 3-4.

²⁴⁷ *See id.* at 4.

²⁴⁸ *See id.*

²⁴⁹ *See id.*

²⁵⁰ *See id.*

²⁵¹ *See id.*

²⁵² *See Parents, Children & Media: A Kaiser Family Foundation Survey* (Fall 2004).

²⁵³ *See 2007 Kaiser Family Foundation Study*.

²⁵⁴ *See* TiVo Comments at 4. *See also supra* ¶ 17.

²⁵⁵ *See* TiVo Comments at 4. We note that TiVo did not provide statistics to substantiate this claim. By comparison, the 2007 Kaiser Family Foundation Study found that “nearly three out of four parents (71%) who have tried the V-Chip say they find it ‘very’ useful, a higher proportion than for any of the media ratings or advisory systems.” *See 2007 Kaiser Family Foundation Study* at 10.

²⁵⁶ *See* TiVo Comments at 4.

²⁵⁷ *See id.* at 4-5.

²⁵⁸ *See id.*

²⁵⁹ *See id.* at 5.

²⁶⁰ *See id.*

2. TVGuardian

74. Section 2(b)(3) of the Act specifically requires the Commission to consider technologies that filter language based on closed captioning information.²⁶¹ In the *NOI*, the Commission noted that TVGuardian is a currently available technology that uses closed captions to identify inappropriate content in television programs.²⁶² According to TVGuardian, its technology is an “Advanced Foul Language Filtering Technology” (“AFLFT”) that reads the closed captioning that is embedded and required in most forms of television programming.²⁶³ When the technology encounters a word that the viewer has deemed objectionable, the captioned phrase is muted and a non-offensive version of the phrase appears on the screen.²⁶⁴ TVGuardian argues that, unlike the V-chip which blocks objectionable programs, AFLFT offers families the best of both worlds – they can watch the shows they enjoy without the objectionable language.²⁶⁵ Parents can choose between multiple filter levels, ranging from very strict to tolerant, and can select specific kinds of offensive speech to filter, such as racial/hate slurs, offensive religious references, and sexual terms.²⁶⁶

75. In the *NOI*, the Commission noted that closed captions are not always synchronized perfectly with the audio, and thus the captions may appear slightly before or after the time words are spoken as part of the on-screen program.²⁶⁷ The *NOI* invited comment on whether this lack of synchronization affects the use of captions to block inappropriate comment.²⁶⁸ TVGuardian states that, while errors within the closed captions may reduce the accuracy rate of its technology slightly, its accuracy level is only slightly less than 100 percent.²⁶⁹ In contrast, TVGuardian asserts that the V-chip ratings often do not contain appropriate content descriptors, such as an “L” warning on a program containing numerous offensive words.²⁷⁰

76. TVGuardian states that a survey it commissioned in 2007 shows that 70 percent of families with children, and 62 percent of all viewers surveyed, are uncomfortable with the language on TV, and 38 percent of viewers without pay TV service would be more likely to choose pay TV if language filtering were available.²⁷¹ TVGuardian reports that its technology was first sold as an add-on hardware solution – a \$99 box that could be connected between the TV and cable or satellite box or a

²⁶¹ Child Safe Viewing Act at Section 2(b)(3) (requiring the Commission to consider advanced blocking technologies that “can filter language based upon information in closed captioning”).

²⁶² See *NOI*, 24 FCC Rcd at 3349, ¶ 24. TVGuardian can operate with both networked and non-networked technologies. Accordingly, we also discuss TVGuardian in Section VI below pertaining to non-networked devices.

²⁶³ See TVGuardian Reply at iii.

²⁶⁴ See *id.*

²⁶⁵ See *id.* Most of the approximately 9,900 brief comments the Commission received in response to the *NOI* express support for foul language filtering technology in general, and many of these commenters mention TVGuardian specifically.

²⁶⁶ See *id.* at 4.

²⁶⁷ See *NOI*, 24 FCC Rcd at 3349, ¶ 24.

²⁶⁸ See *id.*

²⁶⁹ See TVGuardian Comments at 21.

²⁷⁰ See *id.*

²⁷¹ See *id.* at 29-30.

VCR tuner – and subsequently was built into some DVD players and VCRs.²⁷² TVGuardian states that over 12 million DVD players with TVGuardian technology have been sold to date.²⁷³ According to TVGuardian, however, hardware containing TVGuardian technology is no longer being manufactured and fewer and fewer DVD players are being built with the TVGuardian feature.²⁷⁴

77. TVGuardian states that, for foul language filtering to work in the digital world, the filtering must be either built into the pay-TV receiver for viewers that subscribe to pay-TV service or into the TV for viewers without pay-TV.²⁷⁵ According to TVGuardian, it has repeatedly offered its technology to major cable and satellite companies and has been repeatedly turned down.²⁷⁶ TVGuardian explains that it offered this technology to various MVPDs for free, subject only to the condition that TVGuardian would receive half of any fee an MVPD charges its subscribers for the service.²⁷⁷ TVGuardian urges the Commission to include in this report a “strong recommendation that Congress ensure that providers enable consumers to have access to AFLFT.”²⁷⁸

78. According to NAB, NCTA, and MPAA, MVPDs have met with TVGuardian and elected not to use its technology.²⁷⁹ These commenters contend that the Commission should not pick technology winners and losers.²⁸⁰ Comcast states that incorporation of TVGuardian technology into set top boxes would be neither easy nor inexpensive and urges the Commission to decline to recommend such a mandate to Congress.²⁸¹ Comcast also points out that TVGuardian acknowledges that its technology has been incorporated into consumer electronics devices that consumers interested in the technology can purchase.²⁸² Comcast states that it conducted research on TVGuardian and concluded that the technology would be of limited use to its customers, that there were potential legal and technical concerns related to its deployment, and that incorporation of the technology into set-top boxes would not be a good business decision.²⁸³ TiVo and Comcast state that they have doubts that the TVGuardian technology would work well nationwide across a wide variety of close captioned video programs.²⁸⁴ These commenters also oppose “mandates of particular technology implementations without a thorough

²⁷² See *id.* at 26.

²⁷³ See *id.*

²⁷⁴ See *id.* at 5. As discussed in Section VI below, TVGuardian explains that, in the past few years, DVDs have been increasingly distributed with the Subtitles for the Deaf and Hard-of-Hearing (SDH) format rather than closed-captions, which limits the usefulness of TVGuardian technology in DVD players. See *id.* at Appendix C at 3.

²⁷⁵ See *id.* at 40.

²⁷⁶ See *id.* at 5-9.

²⁷⁷ See *id.* at 8.

²⁷⁸ See TVGuardian Reply at iv. See also *id.* at 12 (the “government should require that cable, satellite and IPTV providers permit families to have access to AFLFT so that the public interest can be served.”).

²⁷⁹ See NAB/NCTA/MPAA Reply at 15-16.

²⁸⁰ See *id.*

²⁸¹ See Comcast Reply at 3.

²⁸² See *id.* at 3.

²⁸³ See *id.* at 4.

²⁸⁴ See TiVo Comments at 9 n.4; Comcast Reply at 3-4.

cost/benefit analysis and an understanding of all intellectual property issues.²⁸⁵

3. CC +

79. Caption TV Inc.'s CC+ is another example of a technology that filters language based on closed captioning information, but it also has the capability of filtering objectionable video content.²⁸⁶ According to Caption TV, CC+ permits viewers to selectively block images, soundtrack, and captioning text in television programming.²⁸⁷ Depending upon the level of sensitivity selected by the viewer, the CC+ technology mutes specific words, partially or totally blocks nudity and sex, and partially or totally blocks violence.²⁸⁸ Caption TV explains that it has developed a software development kit for inserting filter codes that allows specific and precise blocking of portions of the audio and video.²⁸⁹ The filter codes, inserted in Line 21 by the captioner, provide cues to the hardware that allow it to perform the filtering.²⁹⁰ Caption TV says that the CC+ technology can be implemented into any closed captioning encoding software program, such as that used in many personal computers and digital cable and satellite set top boxes.²⁹¹ TVGuardian maintains that technologies such as CC+, as well as ClearPlay and CustomPlay,²⁹² are not ready for use in television programming.²⁹³ TVGuardian contends that, unlike technologies like TVGuardian that rely on existing closed captioning data, technologies such as CC+ require every frame of every scene of each program to be manually screened and coded in advance for objectionable content.²⁹⁴ By analogy, TVGuardian notes that it took twelve years to add closed captioning to the majority of television programming.²⁹⁵ TVGuardian argues that the incorporation of CC+ into the wide range of devices and platforms mentioned in the Child Safe Viewing Act would represent an overwhelming burden for the media industry.²⁹⁶ According to TVGuardian, another challenge for these technologies is that they filter on the basis of subjective judgment calls rather than foul language that is relatively easier to define.²⁹⁷

80. Caption TV states that parents can customize the list of words to be muted from the audio and/or replaced in the closed caption readout, can filter portions of a scene containing the selected level of nudity, and can filter portions of a scene containing the selected level of violence.²⁹⁸ Unlike the V-

²⁸⁵ TiVo Comments at 9 n.4. *See also* Comcast Reply at 3-4.

²⁸⁶ *See* Caption TV Comments at 1.

²⁸⁷ *See id.* at 3.

²⁸⁸ *See id.* at 2.

²⁸⁹ *See id.*

²⁹⁰ *See id.*

²⁹¹ *See id.* at 4.

²⁹² *See infra* ¶¶ 119-120 for discussion of the ClearPlay and CustomPlay technologies for non-networked devices.

²⁹³ *See* TVGuardian Comments at 15.

²⁹⁴ *See id.* at 16.

²⁹⁵ *See id.*

²⁹⁶ *See id.* at 15-16.

²⁹⁷ TVGuardian notes that even the Commission has concluded that violence is difficult to define. *See id.* at 16 (citing *In the Matter of Violent Television Programming And Its Impact on Children*, Report, 22 FCC Rcd 7929, 7931 (2007)).

²⁹⁸ *See* Caption TV Comments at 2.

chip, which blocks entire programs, CC+ permits filtering to be performed on portions of a program, blocking the objectionable material and allowing the unobjectionable material to pass through the filter.²⁹⁹ Caption TV states that the CC+ technology is compatible with the V-chip and that a prototype “Set Top Box Decoder” has been developed together with Tri-Vision, the original V-chip patent holder.³⁰⁰ According to Caption TV, CC+ can be developed into the V-chip menu so parents can choose to activate CC+ or the V-chip from the same screen and with the same access code.³⁰¹

4. Digital Watermarking

81. Two commenters, Digimarc Corporation (“Digimarc”) and the Digital Watermarking Alliance (“DWA”), propose that the Commission consider digital watermarking technology as a possible alternative to the V-chip.³⁰² As these commenters point out, the V-chip was developed only for television distribution.³⁰³ In contrast, Digimarc and DWA assert that digital watermarking could permit advanced content blocking across numerous delivery platforms.³⁰⁴

82. Digital watermarking is a technology whereby a digital code that is imperceptible to humans but detectable by computers, networks, and other electronic devices is embedded in media or other content.³⁰⁵ When a device reads a digital watermark, it can allow the content to be viewed or not viewed.³⁰⁶ Because watermarks remain embedded in the content through subsequent manipulations, copying, and format conversions, they permit this technology to be used across a variety of media delivery platforms including television, cable, satellite, wireless devices, non-networked devices, and the Internet.³⁰⁷ According to Digimarc and DWA, digital watermarking is currently in use in many applications.³⁰⁸ For example, it is used in preventing unauthorized access to copyrighted work and in deterring counterfeiting of currency.³⁰⁹ In addition, the Nielsen Company uses digital watermarking in television broadcasts to track viewership among families participating in audience measurement.³¹⁰ Digimarc and DWA assert that, because watermarking is content-specific rather than hardware, software, device, or distribution-specific, this technology is one of the very few, if not the only, technology capable of operating across multiple content types and platforms.³¹¹ Digimarc and DWA request in their comments that the Commission consider how digital watermarking technology might provide content

²⁹⁹ *See id.*

³⁰⁰ *See id.* at 1.

³⁰¹ *See id.* at 4.

³⁰² *See* Digimarc Comments at 2; DWA Comments at 5. Digital watermarking can operate with both networked and non-networked technologies. Accordingly, we also discuss digital watermarking in Section V regarding wireless devices and Section VI pertaining to non-networked devices.

³⁰³ *See* Digimarc Comments at 9; DWA Comments at 3.

³⁰⁴ *See* Digimarc Comments at 4; DWA Comments at 5.

³⁰⁵ *See* Digimarc Comments at 2.

³⁰⁶ *See id.* at 3.

³⁰⁷ *See id.* at 4-6.

³⁰⁸ *See* Digimarc Comments at 8 and Appendices A-C; DWA Comments at 4.

³⁰⁹ *See* Digimarc Comments at 3. *See also* DWA Comments at 4.

³¹⁰ *See* Digimarc Comments at 3.

³¹¹ *See id.* at 4. *See also* DWA Comments at 5.

identification for purposes of parental control of media content.³¹² In addition, Digimarc suggests that the Commission should recommend to Congress the deployment of other technologies, such as digital watermarking, as an alternative to the V-chip.³¹³

83. CEA contends that digital watermarking is not a viable replacement for the V-chip.³¹⁴ According to CEA, proponents of digital watermarking have sought legislation for years to incorporate this technology in televisions to control the conditions under which consumers can access content that may be subject to copyright protection.³¹⁵ CEA contends that, by advocating watermarking in this proceeding, the proponents are seeking another avenue to accomplish the goal of requiring televisions to incorporate Digital Rights Management (“DRM”) functionality.³¹⁶ CEA states that fair use proponents, including many consumer electronics manufacturers and public interest groups, have opposed these attempts as inconsistent with the Supreme Court’s *Sony Betamax* decision.³¹⁷ In addition, CEA explains that the ownership and licensing terms of any necessary intellectual property rights would have to be examined before mandating digital watermarking or similar technologies.³¹⁸

5. Other Technologies

84. In addition to the technologies discussed above, there are a variety of other kinds of parental control tools available by which to monitor television use. These include after-market television time management tools that allow parents to restrict the time of day or aggregate number of hours that children watch programming,³¹⁹ as well as remote controls made for children (*e.g.*, the Weemote) that have just a few large buttons that permit a child to select only certain television channels pre-selected by

³¹² See Digimarc Comments at 10; DWA Comments at 7. Digimarc advocates a joint industry and government effort to promote the development of parental controls. See Digimarc Comments at 6 n.2 (“Fostering broad adoption of advanced blocking technologies will require government and industry leadership, orchestration of all the stakeholders, and an underlying recognition that consumer value is paramount. Where there is consumer value, there is incentive within industry to innovate and offer solutions. Since the market for parental control to date has not been of sufficient size to stimulate broad-based innovation or deployment, government and industry should pursue orchestrated industry approaches wherein parental controls are a component of a full set of features that offer commercial value.”).

³¹³ See Digimarc Reply at 1.

³¹⁴ See CEA Reply at 10.

³¹⁵ See *id.*

³¹⁶ See *id.*

³¹⁷ See *id.* See also *Sony Corp. of America v. Universal City Studios*, 464 U.S. 417 (1984) (“*Sony Betamax*”) (establishing that recording programs for later viewing in the privacy of the user’s home is a noncommercial use permitted under the fair use doctrine).

³¹⁸ See CEA Reply at 10-11. See also TiVo Reply at 3.

³¹⁹ See PFF Comments at 24. PFF explains that the Family Safe Media website sells TV time management tools that allow parents to restrict the time of day or aggregate number of hours that children watch programming. See *id.* (citing www.familysafemedia.com/tv_time_management_tools_-_par.html). PFF explains further that devices such as the Bob TV Timer by Hopscotch Technology and the TV Allowance television time manager feature PIN-activated security methods and tamper-proof lock boxes that make it impossible for children to unplug or reset the device. See *id.* (citing www.hopscotchtechnology.com, www.tvallowance.com). PFF states that “credit-based” devices such as the Play Limit box require children to place time tokens in a metallic lockbox to determine how much TV or game time is allowed. See *id.* (citing www.playlimit.com).

parents.³²⁰ In addition, as noted by PFF, devices such as VCRs, DVD players, DVRs, and VOD services permit parents to accumulate libraries of selected programming for their children and control when it will be viewed.³²¹

III. VIDEO GAMES

85. The *NOI* sought comment on whether to examine blocking technology for video game players and video games.³²² As noted in the *NOI*, video game players are not included among the devices specifically identified in Section 2(b)(2) of the Act, and video games are not mentioned in the Senate Report and were not discussed in the Senate hearing on the Act.³²³ In light of the popularity of video games among children and concerns expressed regarding their content, however, the Commission sought comment on whether to examine methods of controlling access to video games in this proceeding.³²⁴

86. The majority of commenters that address this issue take the position that video games should not be reviewed in this proceeding.³²⁵ In general, these commenters contend that the Act is silent with respect to video games and, in any event, the video game industry already provides one of the most robust voluntary rating systems available.³²⁶ Although we conclude that video game players and video games are not the focus of the Child Safe Viewing Act, we did receive some comments on parental controls used in the video game industry, and report on those here. Moreover, we intend to explore issues pertaining to parental controls for video game players and video games in a forthcoming *NOI*.³²⁷

87. According to PFF, the video game industry rating system is “in many ways the most sophisticated, descriptive, and effective ratings system devised by any major media sector in America.”³²⁸ Virtually all games sold at retail in the U.S. are rated by the Entertainment Software Rating Board (“ESRB”) pursuant to a system of six age-based ratings and more than 30 content descriptors.³²⁹ Common Sense Media also provides independent video game ratings.³³⁰ In addition to appearing on the video game packaging, the ESRB ratings are also available digitally in the game metadata thereby

³²⁰ *See id.* at 25.

³²¹ *See id.* at 26.

³²² *See NOI*, 24 FCC Rcd at 3345, ¶ 11.

³²³ *See id.* at 3345, ¶ 11.

³²⁴ *See id.*

³²⁵ *See, e.g.*, CDT Comments at 6; Digital Media Association (“DMA”) Comments at 2; Microsoft Comments at 4. *See also* Entertainment Software Association (“ESA”) Comments at 3-8 (arguing that the Commission has neither direct nor ancillary jurisdiction to regulate video games, including video game content or video game rating systems).

³²⁶ *See* CDT Comments at 6; DMA Comments at 2; Microsoft Comments at 4; ESA Comments at 3-8. A description of the Entertainment Software Rating Board (“ESRB”) ratings is contained at Exhibit 1 of the ESA Comments.

³²⁷ *See infra* section XI.

³²⁸ PFF Comments at 48.

³²⁹ *See* ESA Comments at 9. According to ESA, at least three specially-trained raters review all game content against a wide range of criteria, and the ESRB assigns the rating after an “extensive deliberative process.” *Id.*

³³⁰ *See* Common Sense Media Comments at 2.

enabling video game platforms to screen content based on the ratings.³³¹ Virtually all current generation video game platforms contain tools that block by ESRB rating, including Microsoft Xbox 360, Nintendo's Wii, Sony PlayStation 3, and Windows Vista operating system.³³² Some devices also allow parents to control with whom their children play video games online and how and when they play, as well as to restrict or track the amount of time the children spend playing the games.³³³ According to ESA, surveys show that, because of the usefulness of the video game ratings and outreach programs sponsored by the industry, 86 percent of parents who purchase video games are aware of the ESRB ratings and 78 percent regularly check the rating before making a video game purchase.³³⁴ According to the 2007 Kaiser Family Foundation Study, 58 percent of parents who have used the video game ratings found them useful.³³⁵ Moreover, the Federal Trade Commission ("FTC") examines the marketing and advertising practices of major media sectors, including video games.³³⁶ The FTC recently found that, whereas 42 percent of children were able to purchase an M-rated video game in 2006, that percentage fell to 20 percent in 2008.³³⁷

88. Common Sense Media maintains that the rating assigned by ESRB no longer applies if a user downloads a modification or utilizes the game's online functions to play other networked users.³³⁸ In response, ESA says that ESRB does rate authorized game downloads and online content created by the video game publisher.³³⁹ According to ESA, an issue arises only with user-created content or user chats – which is not an issue unique to video games.³⁴⁰ ESA contends that no rating system or control device can anticipate the extemporaneous world of the Internet. Moreover, ESA states that ESRB-rated games contain a warning notifying parents that online interactions are possible in connection with game play and that such interactions are not rated.³⁴¹

³³¹ See ESA Comments at 10.

³³² See *id.* See also CEA Comments at 12, Nintendo Reply at 2.

³³³ See ESA Comments at 10.

³³⁴ See *id.* at 11 and Exhibit 2.

³³⁵ See 2007 Kaiser Family Foundation Study at 9. According to a survey of 8-18 year-olds, 21 percent say that their parents have rules about which video games they can play. See *Generation M: Media in the Lives of 8-18 Year-olds* at 17 and Appendix 3.4.

³³⁶ See *id.* at 12-13; PFF Comments at 55-56. See, e.g., FTC, *Marketing Violent Entertainment to Children: A Fifth Follow-up Review of Industry Practices in the Motion Picture, Music Recording & Electronic Game Industries* (April 2007), available at <http://www.ftc.gov/reports/violence/070412MarketingViolentEChildren.pdf>.

³³⁷ See FTC, *Press Release, Undercover Shoppers Find It Increasingly Difficult for Children To Buy M-Rated Games* (May 8, 2008), available at <http://www.ftc.gov/opa/2008/05/secretshop.shtm>. But see Patrick M. Garry & Candice J. Spurlin, *The Effectiveness of Media Rating Systems in Preventing Children's Exposure to Violent and Sexually Explicit Media Content: An Empirical Study*, 32 OKLA. CITY U. L. REV. 215, 233-5 (2007) (reporting results of a survey that showed that 58 percent of children between the ages of 9 and 15 had played a game rated Mature (M) or Adults Only (AO); 47 percent of children between the ages of 9 and 15 owned an M or AO-rated game; and that of the children who purchased the games themselves, 90 percent were not asked for their age).

³³⁸ See Common Sense Media Comments at 2.

³³⁹ See ESA Reply at 3-5.

³⁴⁰ See *id.*

³⁴¹ See *id.*

IV. AUDIO-ONLY PROGRAMMING

89. The *NOI* also sought comment on whether to examine blocking technology designed for content that is audio only (*e.g.*, music), or technologies designed for content that combines audio and video (*e.g.*, television programs), or both.³⁴² Section 2(b)(2) of the Act requires the Commission to consider “advanced blocking technologies” that may be appropriate across a wide variety of “devices capable of transmitting or receiving video *or* audio programming.”³⁴³ Moreover, Section 2(d) of the Act defines “advanced blocking technologies” as technologies that can improve or enhance the ability of a parent to protect children from any indecent or objectionable “video *or* audio” programming.³⁴⁴ Although the Commission explained in the *NOI* that the legislative history indicates that Congress was focused primarily on television content,³⁴⁵ the text of the Act directs the Commission to consider blocking technologies for audio-only programming. Accordingly, we discuss here the few comments the Commission received on the issue of parental controls used for audio-only programming. In addition, the Commission intends to explore issues pertaining to parental controls for audio-only programming in a forthcoming *NOI*.³⁴⁶

90. Most commenters addressing the issue contend that we should not examine audio-only programming in this proceeding.³⁴⁷ In general, these commenters agree that Congress did not intend for the Commission to inquire into music or radio.³⁴⁸ Commenters also note that, since the 1980’s, the music industry has administered a voluntary parental advisory labeling program to warn parents if an album contains explicit lyrics concerning sex, violence, or drug use.³⁴⁹ The program is run by the Recording Industry Association of America on behalf of record companies and producers who decide which songs and products receive the ratings. According to the 2007 Kaiser Family Foundation Study, 56 percent of parents who have used the music ratings found them very useful.³⁵⁰ In addition to ratings provided by the music industry, there are a number of independent websites that provide music reviews for parents, including Common Sense Media and Plugged In Online, as well as user-generated music reviews and sites that permit parents to examine music lyrics.³⁵¹

91. PFF explains that not every portable music player on the market today offers embedded parental control capabilities, but Apple and Microsoft offer some controls on their devices and are

³⁴² See *NOI*, 24 FCC Rcd at 3344, ¶ 7.

³⁴³ Child Safe Viewing Act at Section 2(b)(2) (emphasis added).

³⁴⁴ Child Safe Viewing Act at Section 2(d) (emphasis added).

³⁴⁵ See *NOI*, 24 FCC Rcd at 3344, ¶ 7.

³⁴⁶ See *infra* section XI.

³⁴⁷ See CDT Comments at 4; DMA Comments at 2; Google Comments at 10; National Association of Recording Merchandisers (“NARM”) Comments at 1.

³⁴⁸ See CDT Comments at 4; DMA Comments at 2; Google Comments at 10; NARM Comments at 1.

³⁴⁹ See PFF Comments at 43. The labeling of explicit lyrics does not include age-based categories because the music industry contends that music is not amenable to such classification. See NARM Comments at 2.

³⁵⁰ See 2007 Kaiser Family Foundation Study at 9. In addition, a study of children aged 8-18 showed that 16 percent say their parents have rules about what kind of music they can listen to and 14 percent say their parents check parental warnings or ratings on music. See *Generation M; Media in the Lives of 8-18 Year-olds* at Appendix 3.4.

³⁵¹ See PFF Comments at 48.

committed to improving these capabilities.³⁵² The iTunes software contains parental controls that enable parents to disable all podcasts, online radio, music sharing, or access to the iTunes Store.³⁵³ On the iTunes store, music containing explicit lyrics is labeled “Explicit,” and movies are labeled with MPAA movie ratings and other content descriptors.³⁵⁴ Parents can restrict downloading of music that contains the “Explicit” label.³⁵⁵ Parents can also designate the movie and TV ratings that are appropriate for their children, thereby restricting a child’s access to anything rated above that level.³⁵⁶

92. With respect to terrestrial radio, the Center for Democracy and Technology (“CDT”) claims that there does not appear to be any significant perception of a problem with inappropriate content.³⁵⁷ The National Hispanic Media Coalition, however, counters that many Latinos are particularly concerned about inappropriate sexual content on Spanish language radio and requests that the Commission inquire into blocking technology for such content.³⁵⁸ We note, however, that we are unaware of any current blocking technology that would allow parents to protect their children from indecent or objectionable audio programming on terrestrial radio.³⁵⁹ Moreover, CDT’s assertion that there is not a perception of a problem with regard to terrestrial radio is inconsistent with the history of the Commission’s indecency enforcement, which has focused predominantly on broadcast radio,³⁶⁰ and the fact that the Commission continues to receive numerous radio broadcast indecency complaints.

93. With respect to satellite radio, CDT notes that satellite radio offers subscribers the option to block channels that frequently use explicit language.³⁶¹ PFF explains that satellite radio subscribers can choose from a variety of plans, or purchase channels a la carte, to exclude any channels that might include programming with explicit language or lyrics.³⁶²

V. WIRELESS DEVICES

94. In the *NOI*, the Commission sought comment on blocking and filtering technologies for wireless devices, recognizing that wireless devices present additional challenges due to technical aspects and because mobile phones are typically operated by children away from the purview of their parents.³⁶³

³⁵² See PFF Comments at 44.

³⁵³ See *id.* at 45.

³⁵⁴ See *id.*

³⁵⁵ See *id.*

³⁵⁶ See *id.*

³⁵⁷ See CDT Comments at 4.

³⁵⁸ See National Hispanic Media Coalition Comments at 3.

³⁵⁹ Moreover, the record has no data indicating whether HD Radio™ receivers have channel blocking capabilities. See CDT Comments at 4 (noting that satellite radio allows subscribers to block channels).

³⁶⁰ While the Commission’s most recent indecency enforcement actions have involved television, the Commission over the course of its history enforcing the indecency regulations has focused predominantly on broadcast radio. See, e.g., *Industry Guidance on the Commission’s Case Law Interpreting 18 U.S.C. § 1464 and Enforcement Policies Regarding Broadcast Radio*, 16 FCC Rcd 7999 (2001).

³⁶¹ See CDT Comments at 4. See also <http://www.xmradio.com/help/index.xmc>.

³⁶² See PFF Comments at 44.

³⁶³ See *NOI*, 24 FCC Rcd at 3353, ¶ 27.

With respect to wireless issues, the Commission received comments primarily from wireless providers; therefore, the discussion below largely does not reflect input from consumers and non-carrier entities. We intend to explore the issues discussed in Section XI below pertaining to parental controls for wireless devices, in particular seeking comments from consumers and non-carrier entities, in a forthcoming *NOI*.

95. In the *NOI*, the Commission asked what role the Government should play in ensuring that blocking and filtering tools are made available to parents so that children can be shielded from inappropriate content.³⁶⁴ Industry commenters assert that, even in the absence of regulation, the industry has developed a wide range of blocking technologies and parental control features; therefore, government regulation is unnecessary at this time.³⁶⁵ They further contend that the competitive market has responded to consumer demands for parental controls and predict that more advanced filters and access controls are in development.³⁶⁶ On the other hand, some consumers support a government requirement that filtering technologies be embedded across all platforms of consumer devices that support video applications, including wireless devices.³⁶⁷ Specifically, for example, some consumers express support for making TVGuardian (or similar products) available on all devices that support video content.³⁶⁸

96. The record was limited with respect to wireless solutions (both in terms of number and type of commenters discussing wireless issues and the specific issues addressed). Below we provide a factual overview of the marketplace and the wireless industry's efforts to educate parents on the options available to them to block unwanted mobile content. We discuss below child protection measures for content offered directly by wireless providers and content available over the Internet that is accessed via wireless devices. We also address non-content-based blocking and filtering technologies and other empowerment tools available to parents. Finally, we discuss the impact of wireless open platforms on these technologies, future developments, and educational efforts. We will address remaining questions regarding wireless solutions in a forthcoming *NOI*.³⁶⁹

A. Wireless Industry Guidelines and Content Controls

97. As described in the *NOI*, CTIA and participating wireless carriers have voluntarily adopted child protection measures, both for content offered by wireless providers as well as content available over the Internet and accessed via wireless devices.³⁷⁰ Beginning in 2004, CTIA and

³⁶⁴ See *id.* at 3355, ¶ 33.

³⁶⁵ See, e.g., CTIA Comments at 2-3; Sprint Comments at 1-2; Verizon Comments at 11-12; T-Mobile Reply at 1, 3.

³⁶⁶ See CTIA Comments at 12. CTIA believes that companies and content providers who are not under the Commission's jurisdiction would be more likely to participate and follow CTIA-sponsored best practices, which can be adjusted in response to changing consumer expectations and new technologies and applications "in contrast to government mandated regulations that require years of lengthy administrative proceedings to review and revise." *Id.*

³⁶⁷ See, e.g., Comments of Jennifer White at 1; Tracie Hall at 1; Bill Buhl at 1.

³⁶⁸ See, e.g., Comments of Mike Coker at 1; Art Gillespie at 1; Johna Oldfield.

³⁶⁹ See *infra* section XI.

³⁷⁰ See *NOI*, 24 FCC Rcd at 3353-54, ¶ 29; CTIA Comments at 4. CTIA notes that filters and blocking technologies for carrier-provided content do not include filters for "any end-user generated content (for example, on message boards, chat rooms, or blogs)." CTIA Comments at 4. We also note that the International Telecommunications Union (ITU) has issued draft industry guidelines as part of its Child Online Protection (COP) Initiative, which recognizes CTIA's Guidelines as an approach to protecting children from inappropriate mobile content. The draft (continued....)

participating wireless carriers began developing Carrier Content Classification and Internet Access Control Guidelines.³⁷¹ Under these guidelines, participating carriers agree to develop content classification standards and educate consumers about these standards and ratings.³⁷² With respect to Carrier Content (*i.e.*, content that is available through a carrier's managed content portal and third-party content for which customers may be billed directly by their wireless carrier), carriers generally divide these materials into "Generally Accessible Carrier Content," which is available to all consumers, and "Restricted Carrier Content," which is available to wireless users 18 years of age or older or younger users only with specific parental authorization.³⁷³

98. Further, CTIA's voluntary Internet Access Control Guidelines require participating carriers to provide consumers with parental control tools for wireless handsets that are designed to restrict access to content available via the public Internet or other public data networks.³⁷⁴ With respect to this third-party content, the nationwide wireless carriers currently provide consumers with the ability to block all Internet access on their devices and are either providing or researching solutions to provide controls with the ability to limit specific Internet content or sites on consumers' devices (to be implemented on a carrier-by-carrier basis).³⁷⁵ Although CTIA has developed both the Carrier Content Classification and Internet Access Control Guidelines, it emphasizes that implementation of these guidelines is left to the individual wireless carriers or third-party vendors.³⁷⁶ Further, many of these tools cannot block or filter inappropriate user-generated content, such as "sexting."³⁷⁷

99. With respect to content controls provided directly by wireless carriers, CTIA explains that wireless carriers currently provide parents with many parental control tools that allow parents to control directly the content their child can access.³⁷⁸ For example, Sprint provides a free content blocking control service that permits parents to restrict Internet access to only designated websites

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industry guidelines are available at: <http://www.itu.int/osg/csd/cybersecurity/gca/cop/guidelines/index.html>. Final Guidelines on COP are expected in October 2009.

³⁷¹ See CTIA Comments at 3-4.

³⁷² See *id.* at 4.

³⁷³ See *id.* According to CTIA, "Restricted Carrier Content" consists of material that is generally recognized as appropriate only for adults 18 years of age or older, such as material that may contain strong violence or may be sexually explicit, or material that is legally restricted to persons at least 18 years of age, such as lotteries and gambling. *Id.*

³⁷⁴ See *id.* at 5-6.

³⁷⁵ See *NOI*, 24 FCC Rcd at 3354, ¶ 30. See also CTIA Comments at 6.

³⁷⁶ See CTIA Comments at 5. Each of the four nationwide wireless carriers generally follows these guidelines in implementing their individual filtering and blocking technologies. See *id.* at 7-9.

³⁷⁷ "Sexting" is used to describe texting of sexual images via mobile devices. Once the images are more widely distributed, there are unintended legal consequences to such distribution. Thierer, A., "Parental Controls & Online Protection: A Survey of Tools and Methods," PFF *Special Report*, Ver. 4, Summer 2009 (Thierer Report), at 111-112, available at <http://www.pff.org/parentalcontrols/>. As Thierer notes, neither laws nor parental controls are likely to be "of much help" in this area. "Legal responses are difficult to craft...[a]nd the only technological solution to this problem is for parents to simply not purchase a phone for their teen that has a camera," which is difficult given the proliferation of wireless handsets that include cameras. See *id.* at 112.

³⁷⁸ See CTIA Comments at 6.

deemed appropriate for children 17 and under.³⁷⁹ According to Sprint's Parental Controls web site, parents may manage this service either online or on the wireless handset itself.³⁸⁰ T-Mobile offers Web Guard: a free service that restricts access to adult-oriented content.³⁸¹ According to T-Mobile's web site, Web Guard is an optional service available on specific rate plans only (targeting Web access data plans).³⁸² It blocks adult-oriented content (but not user-generated content), such as content featuring alcohol, drugs, gambling, pornography, mature content, violence, and weapons.³⁸³ AT&T's MEdia™ Net Parental Control service allows parents to restrict access to inappropriate content.³⁸⁴ Specifically, AT&T's service (which has no recurring charge to its customers) filters inappropriate Internet content to wireless devices, provided the user has a compatible handset.³⁸⁵ Verizon Wireless offers a free service called Content Filters, which allows parents to set customized limits based on specific age levels: (1) "C7+" for content recommended for children ages seven and older (similar to TV-G); (2) "T13+" for children ages 13 and older (similar to TV-PG/TV 14 or PG 13 rated movies); and (3) "YA17+" for children ages 17 and older (similar to TV-MA or R-rated movies and explicit rated songs).³⁸⁶ This service allows parents to ensure that their children receive only age-appropriate content over their Verizon Wireless device, including content accessible through the Internet (over Verizon Wireless' Mobile Web 2.0 Browser), V CAST Music and Video, and short code message campaigns.³⁸⁷

³⁷⁹ See Sprint Comments at 2.

³⁸⁰ See http://nextelonline.nextel.com/en/services/safety_security/parental_control.shtml. On its web site, Sprint notes that access to certain parental control features varies, depending on the type of wireless handset used, and recommends that parents consult their phone's User Guide for further details.

³⁸¹ See T-Mobile Reply Comments at 2. See also CTIA Comments at 8.

³⁸² For more information on T-Mobile's Web Guard, see http://www.t-mobile.com/shop/addons/services/information.aspx?PAsset=FamilyWireless&tp=Svc_Tab_FW101ProtectYourKids

³⁸³ See T-Mobile's Web Guard FAQs at: <https://support.t-mobile.com/doc/tm23350.xml?related=y&Referring%20Related%20DocID%20List%20Index=5&navtypeid=6&pageid=7&prevPageIndex=9>.

³⁸⁴ See CTIA Comments at 7; AT&T Comments at 7.

³⁸⁵ See CTIA Comments at 7. See also AT&T's FAQ's on MEdiaNet at: http://www.wireless.att.com/learn/messaging-internet/media-entertainment/faq.jsp#parental_controls_decide. On its web site, AT&T states that it does not offer content that is obscene or pornographic in nature, but there is some MEdia Net content that may not be appropriate for those under age 18—like chat and dating sites—that the Content Filter will block when turned "on."

³⁸⁶ See Verizon Comments at 7. According to Verizon Wireless's web site, the following content can be filtered: (1) "Explicit" labeled music on V CAST Music; (2) Content on V CAST Video; (3) Websites accessible via wireless device; and (4) Short code-based messaging campaigns (4 to 6 digit phone numbers that subscribers use to obtain content or participate in various programs. Standard messaging rates apply to short codes. Premium charges may apply for certain short codes). Verizon Wireless states: "Content from other sources, including Get It Now, is not consistently filtered by the service at this time. The service does not filter calls or messages sent by customers to other customers (this includes any content created by customers and sent directly by them to other customers) or content previously available on phones before the service was enabled." http://support.vzw.com/faqs/Features%20and%20Optional%20Services/content_filtering.html#item1. See also https://wbillpay.verizonwireless.com/vzw/nos/uc/uc_content_filter.jsp; PFF Comments at 65; CTIA Comments at 9.

³⁸⁷ See Verizon Comments at 7. See also CTIA Comments at 9. On its web site, Verizon indicates that Content Filtering works on most mobile phones, most PDAs, and most PC cards, but will not work on BlackBerry® devices, any device with a static IP address or on search results provided through the Get It Now or Song ID search (continued....)

100. With respect to content controls created by third parties, a number of applications have been developed to filter Internet content accessed via wireless devices. Ace*Comm's Content Patrol offers a third-party network-based solution that allows filtering of wireless web and Wireless Application Protocol ("WAP")-based content.³⁸⁸ Further, several parental control applications have been developed for the iPhone platform,³⁸⁹ which, in the United States, operates only on the AT&T network. One of these applications, the Mobicip browser (available to parents for a monthly fee), provides real-time content filtering at three pre-defined, age-based levels.³⁹⁰ Further, Microsoft recently announced the Windows Marketplace for Mobile, which will allow parents to prohibit applications containing adult content, including applications featuring excessive violence, consumption of alcohol, sexual content, and excessive profanity.³⁹¹

1. Using Content Controls

101. The *NOI* also requested comment on whether content controls were effective and easy to understand and activate by parents, and sought information on the extent to which parents use them.³⁹² According to PFF, the Yankee Group reports that 72 percent of teens between ages 13 and 17 already have a mobile phone.³⁹³ The Commission did not receive any data on parental use of content controls for wireless devices. While we do not have precise data on parental use of content controls, according to a recent survey, among those teens whose parents are aware they go online through a cell phone, only one in five have parents that limit or control that online time and just over half have parents who have talked to them about Internet safety on their cell phone.³⁹⁴ Wireless providers comment regarding the

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capabilities. Additionally, the music filtering capabilities of the service do not work on devices with certain V CAST Music software (Music v01.0 or v01.01); and the Internet filtering capabilities will not work with devices utilizing Mobile Web 1.0, or on devices that use the Venturi data compression software, including phones tethered to PCs or PC cards, unless the compression software is turned off. Verizon Wireless notes that Content Filtering may not work outside the National Enhanced Services Rate and Coverage Area. *See* http://support.vzw.com/faqs/Features%20and%20Optional%20Services/content_filtering.html#item1.

³⁸⁸ *See* CTIA Comments at 10.

³⁸⁹ *See* PFF Comments at 68; CTIA Comments at 11. These applications – Mobicip, Safe Eyes Mobile, and iWonder – consist generally of a browser that replaces the installed Apple browser on the device. *See* PFF Comments at 68. While PFF notes that these filtering tools currently work only with Apple's iPhone, it asserts that this "will likely change in coming months." *See id.* at 68-69.

³⁹⁰ *See* CTIA Comments at 11; PFF Comments at 68 (noting that Mobicip costs \$9.99 for the premium version of its software). Another iPhone application, the Safe Eyes Mobile browser (which has a retail price of \$19.95), allows parents to choose from 35 categories to determine the specific types of content that will be allowed or blocked, and allows parents to change settings remotely through a web-based interface. *See* PFF Comments at 68. A third iPhone application, iWonder, works in a similar fashion to Safe Eyes Mobile, allowing parents to disable wireless web browsing or block access to certain web sites (and costs \$14.99). *See* CTIA Comments at 11; PFF Comments at 68.

³⁹¹ *See* Microsoft Comments at 11. Windows Marketplace for Mobile allows consumers to download applications for wireless phones running Microsoft's upcoming Windows Mobile 6.5 software.

³⁹² *See NOI*, 24 FCC Rcd at 3354, ¶ 31.

³⁹³ *See* PFF Comments at 63.

³⁹⁴ Cox Communications Teen Online & Wireless Safety Survey: Cyberbullying, Sexting, and Parental Controls (May 2009) at 49. The survey was conducted by Harris Interactive for Cox Communications, in Partnership with the National Center for Missing & Exploited Children® (NCMEC) and John Walsh, regarding teen (ages 13-18) use of the Internet and wireless devices. The survey found that about one in five teens go online via their wireless phone, and among those, one in five say that their parents are not aware that they do. *Id.* at 48. According to a (continued....)

ease with which parents can activate, use, and learn about carriers' content controls. Sprint and Verizon assert that their controls are easy to use and activate through the customer's wireless handset, the carrier's website, or by calling customer care.³⁹⁵ AT&T notes that its content control service, "AT&T Smart Limits™," includes a suite of wireless parental controls and an online portal that explains all of the parental control features available for its services, including directions on how to use the controls for wireless, Internet, video and home phone services.³⁹⁶

102. The Commission also sought comment on how the content rating systems operate.³⁹⁷ In response, the Commission received extremely limited information. As discussed above, a number of wireless carriers offer certain blocking or filtering technologies.³⁹⁸ They do not, however, provide in their comments further specifics regarding the mechanisms used to filter inappropriate content.³⁹⁹ CTIA notes that the Safe Eyes Browser system uses "a blacklisted website address categorization and filtering approach to prevent viewing of and visits to certain sites."⁴⁰⁰ With respect to how content is rated, the nationwide wireless carriers appear generally to follow CTIA's guidelines. Specifically, Verizon states that its content classification levels are similar to TV Parental Guidelines and MPAA rating systems.⁴⁰¹ According to AT&T's web site, AT&T uses an internal content review process to determine whether content is appropriate for minors.⁴⁰² T-Mobile uses a third party vendor to assist in reviewing and blocking content for its Web Guard feature, which maintains the list of blocked URL's.⁴⁰³ Microsoft also notes that the ESRB, which provides video games rating information, recently has begun rating games that are playable on mobile phone handsets.⁴⁰⁴

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Nielsen survey, 62 percent of teens using mobile devices say that parents have "placed at least one restriction on their mobile use." See Nielsen, *How Teens Use Media*, June 2009, at 8-9. In both of these surveys, however, it is unclear whether parents are limiting their child's mobile phone/mobile Internet use via an advanced blocking technology, or through a parental rule (e.g., prohibiting mobile phone/Internet use at the dinner table).

³⁹⁵ See Sprint Comments at 2-3; Verizon Comments at 7-8.

³⁹⁶ See AT&T Comments at 6. See also www.att.com/smartlimits.

³⁹⁷ See *NOI*, 24 FCC Rcd at 3354, ¶ 31.

³⁹⁸ See *supra* ¶¶ 98-100.

³⁹⁹ Although the carriers do not describe in their comments how precisely the content is filtered, they do provide some specific information on their web sites regarding what type of content is filtered. For additional information on specific content controls, see the following web sites: AT&T (<http://www.wireless.att.com/learn/messaging-internet/media-entertainment/faq.jsp#controls>); Sprint (http://nextelonline.nextel.com/en/services/safety_security/parental_control.shtml); T-Mobile (http://www.t-mobile.com/shop/addons/services/information.aspx?tp=Svc_Tab_IncludedServices&tsp=Svc_Sub_ContentControl); and Verizon (https://wbillpay.verizonwireless.com/vzw/nos/uc/uc_content_filter.jsp).

⁴⁰⁰ CTIA Comments at 11.

⁴⁰¹ See Verizon Comments at 7.

⁴⁰² See http://www.wireless.att.com/learn/messaging-internet/media-entertainment/faq.jsp#parental_controls_decide. AT&T notes it is also participating in CTIA's industry efforts to develop content ratings, which, according to AT&T, "may be used in conjunction with Parental Controls in the future."

⁴⁰³ See T-Mobile's Web Guard FAQs at: <https://support.t-mobile.com/doc/tm23350.xml?related=y&Referring%20Related%20DocID%20List%20Index=5&navtypeid=6&pagetypeid=7&prevPageIndex=9>.

⁴⁰⁴ See Microsoft Comments at 11.

2. Filtering Content Using Digital Watermarking

103. Digimarc and DWA suggest that digital watermarking would be an effective way to enable parents to filter inappropriate content accessible across various distribution platforms, including wireless devices.⁴⁰⁵ Digital watermarking enables the use of any rating system, allowing parents to block or allow content based on a set of labels parents can select. Rating systems and their associated labels can be provided either by content owners, content distributors (such as satellite, cable, or the Internet), or vendors of devices, and digital watermarks from one vendor can work and coexist with other digital watermarks from other vendors.⁴⁰⁶ Some consumers express support for a uniform rating system across all platforms.⁴⁰⁷ Because digital watermarking allows ratings-related information to be embedded into the content itself,⁴⁰⁸ it might allow parents more precise Internet blocking technologies than those technologies implementing CTIA's Internet Content Access Control guidelines, which enable parents to block access to specific web sites. As discussed above, however, some commenters express concern that digital watermarking could also be used for DRM functionality and that intellectual property licensing terms for this technology are unknown.⁴⁰⁹

B. Non-Content-Based Blocking and Filtering Technologies

104. In addition to the content-based blocking technologies described above, the *NOI* also sought information on any other types of technologies currently available to consumers for use on wireless devices.⁴¹⁰ Commenters mention several technologies that allow parents to view the information children receive over their wireless devices.⁴¹¹ For example, the "iWonder" browser, for use on Apple's iPhone, allows parents to view remotely from their own computer or wireless device the web sites that the child visits and also allows parents to disable wireless web browsing or block access to certain web sites.⁴¹² As referenced in the *NOI*, eAgency's "Radar – My Mobile Watchdog" parental monitoring system is a handset-based solution that sends parents an alert when a child receives calls and messages from unauthorized or unapproved sources and also allows parents to view and archive remotely all of the text, e-mail, and instant messages that their child sends and receives.⁴¹³ Ace*Comm's "Content Patrol™" service also offers a range of services that allow parents to restrict usage of wireless devices, such as restricting use to certain times of day or limiting the specific phone numbers a child can

⁴⁰⁵ See, e.g., Digimarc Comments at 2, 4-5, 10; DWA Comments at 6. Digital watermarking is discussed in greater detail in Section II.C.4 above.

⁴⁰⁶ See Digimarc Comments at 5; Digimarc Reply at 2, 4. Digital watermarks can carry both semantic information and a reference number and can block based on ratings. See Digimarc Comments 5-6. For example, when a mobile device is enabled to read the watermark, it can allow parents to set parameters of content accessibility, such as: Block all "Mature Audience" content and/or "look up sub-rating of designated 'Mature Audience' and block 'TV-14' and higher designations." See *id.* at 5.

⁴⁰⁷ See, e.g., Comments of Nancy Brennan at 1; Robert Matthews at 1.

⁴⁰⁸ See DWA Comments at 6.

⁴⁰⁹ See *supra* ¶ 83. See also CEA Reply at 10-11; TiVo Reply at 3.

⁴¹⁰ See *NOI*, 24 FCC Rcd at 3354-55, ¶ 32.

⁴¹¹ See, e.g., CTIA Comments at 10-11; PFF Comments at 66.

⁴¹² See CTIA Comments at 11.

⁴¹³ See *id.* at 10; PFF Comments at 66. According to PFF, this service costs \$10 per month for one user or \$15 per month for an entire family. See PFF Comments at 66.

call.⁴¹⁴

105. In addition to restricting access to inappropriate content or monitoring messages, wireless carriers themselves also provide tools to help parents set customized limits for each child. Although specific parameters – including cost of the service – vary by provider, these services allow parents to manage how and when children use their phones, including limitations on time, dollar amount, and number of messages or downloads a child receives.⁴¹⁵ Many wireless carrier plans also allow parents to place restrictions on the specific individuals that their children are permitted to contact on their mobile phones.⁴¹⁶ Below, we provide brief descriptions of the parental control limits offered by the nationwide wireless carriers, as well as a survey of location-based services and other technologies that have been developed to aid parents in monitoring and limiting their child’s mobile phone usage.

1. General Limits on Wireless Phone Use

106. *AT&T*. With AT&T’s Smart Limits for Wireless™, parents can set monthly limits on the number of text and instant messages their children send and receive; the amount of web-browsing allowed per billing cycle; the dollar amount of downloadable purchases (e.g., ringtones, games); and the times of day when the phone can be used for texting, browsing, or outbound calling.⁴¹⁷ Through this program, parents can also block messages or calls to certain numbers.⁴¹⁸

107. *Sprint*. Sprint’s free parental controls give parents the ability to (1) restrict premium content purchases; (2) disable data usage and access to the Internet; (3) disable text messaging entirely or block incoming text messages from specific numbers; and (4) limit incoming and outgoing voice calls to phone numbers specified in the handset’s phone book.⁴¹⁹ Parents can also lock device features, such as the handset’s camera, on particular wireless devices.⁴²⁰

108. *T-Mobile*. One of T-Mobile’s services, Family AllowancesSM, allows parents to manage their child’s account activity to reduce overage charges and control their child’s phone usage.⁴²¹ For a monthly fee, the Family AllowancesSM service allows parents to assign allowances for minutes, messages, and downloads to multiple lines on the account.⁴²² In addition, parents can set up to ten “Always Allowed”SM and ten “Never Allowed”SM numbers, and block usage during certain times of the

⁴¹⁴ See CTIA Comments at 10.

⁴¹⁵ See PFF Comments at 65.

⁴¹⁶ See *id.* at 65-66.

⁴¹⁷ See AT&T Comments at 6; see www.att.com/smartlimits. See also CTIA Comments at 7; PFF Comments at 65.

⁴¹⁸ See AT&T Comments at 6; see also CTIA Comments at 7; PFF Comments at 65.

⁴¹⁹ See Sprint Comments at 2. See also http://nextelonline.nextel.com/en/services/safety_security/parental_control.shtml; CTIA Comments at 8.

⁴²⁰ See Sprint Comments at 2; CTIA Comments at 8.

⁴²¹ See T-Mobile Reply at 1; see http://www.t-mobile.com/shop/addons/services/information.aspx?PAsset=FamilyWireless&tp=Svc_Tab_FW101FamilyAllowances.

⁴²² See T-Mobile Reply at 1-2.

day (in most cases).⁴²³ T-Mobile also offers – free of charge – its Message Blocking Service, which allows parents to block incoming and outgoing text messages (SMS), picture messages (MMS), instant messages (IM), and e-mail.⁴²⁴

109. *Verizon Wireless.* Verizon Wireless provides “Usage Controls,” which, for a monthly fee per line, allow parents to: (1) limit the times of day during which their child can use messaging or wireless data services; (2) block calls or messages to or from certain phone numbers; (3) set monthly voice minute and messaging allowances and receive free alerts when a child approaches or reaches the allowance; and (4) designate trusted numbers from which a child can always be reached, even outside of the designated time of use and regardless of usage allowances.⁴²⁵

2. Location-Based Services and Other Technologies

110. CTIA has developed a set of Consumer Best Practices guidelines to protect user privacy for Location-Based Services.⁴²⁶ Many wireless carriers offer global positioning system (“GPS”) tracking technology in their mobile handsets, which allows parents to locate their children and monitor their whereabouts.⁴²⁷ Sprint’s Family Locator service allows parents to monitor a child’s location by using the GPS chip in the mobile phone.⁴²⁸ Verizon Wireless offers the ChaperoneSM Family Locator service, a tool that helps parents monitor the location of a child’s wireless phone at all times using either the ChaperoneSM Website or the ChaperoneSM Parent application on parents’ own mobile phones.⁴²⁹ The ChaperoneSM service also includes Child Zone capabilities, which allow parents to establish geographical boundaries around specific locations, such as school, home, or soccer practice.⁴³⁰ In addition to carrier-provided services that assist parents in tracking their child’s location, a number of third parties offer location-based services. The Wherify “Wherifone” offers GPS location tracking via the Internet, and

⁴²³ See *id.* at 1-2; CTIA Comments at 8-9. “Always Allowed”SM numbers are reachable even when a user has exceeded a set maximum, and 911 calls do not count against the allowed numbers and minutes. See CTIA Comments at 8-9.

⁴²⁴ See T-Mobile Reply at 2-3. See also CTIA Comments at 8.

⁴²⁵ See Verizon Comments at 8; CTIA Comments at 9. See also https://wbillpay.verizonwireless.com/vzw/nos/uc/uc_home.jsp. Parents can customize these settings for each line on the account. Designated trusted numbers are limited to other lines on the same account.

⁴²⁶ See CTIA Comments at 18. According to CTIA, under these guidelines, Location-Based Services providers must give notice to users about how location information will be used, disclosed, etc., and must give users the opportunity to give their consent prior to certain uses (such as disclosing information to third parties). See CTIA Comments at 18-19. These guidelines assist parents by ensuring that social mapping and networking services do not allow unauthorized individuals to monitor their children’s whereabouts. See PFF Comments at 69-70.

⁴²⁷ See PFF Comments at 65-66.

⁴²⁸ Sprint’s service costs 5 dollars monthly per family. See Sprint Comments at 2. See also http://www.nextel.com/en/services/gps/familv_locator.shlml.

⁴²⁹ See Verizon Comments at 8

⁴³⁰ See *id.* See also http://products.vzw.com/index.aspx?id=fnd_chaperone; CTIA Comments at 9; PFF Comments at 68. When a child carrying a registered Chaperone service mobile phone arrives at or leaves the Child Zone, the parent receives a notification via text message. See Verizon Comments at 8. Parents can elect to receive text message alerts notifying them of the location of the child’s phone at a specific date/time, similar to a curfew check. See *id.*

includes an SOS panic button for emergencies.⁴³¹ Guardian Angel Technology produces a GPS mobile phone that also allows parents to monitor their children's movements via the Internet.⁴³² In addition to using Location-Based wireless services to monitor one's child, another application is "social mapping." Social mapping allows subscribers to find others on a digital map and then instantly network with those individuals through social networking utilities.⁴³³ CTIA and the industry are currently working to create safeguards to ensure that information over social mapping networks is not shared inappropriately.⁴³⁴

111. In addition to usage controls available for wireless services and location-based services, specific mobile devices have been designed for younger users. For example, Firefly Mobile has created a voice-only phone for very young children that allows them to call their parents and emergency services via pre-programmed numbers that are represented by icons on the mobile phone.⁴³⁵ Verizon Wireless's "Migo," like the Firefly Mobile phone, also has a limited number of buttons for parents to program.⁴³⁶ Enfora's TicTalk phone (in partnership with the educational toy maker LeapFrog Enterprises) allows parents to restrict numbers that can be called only during certain times of the day and determine at what times during the day the phone can ring.⁴³⁷

C. Open Platform Issues

112. The *NOI* also sought comment on how blocking and filtering will be affected as wireless carriers move toward open platforms.⁴³⁸ CTIA asserts that wireless consumers have unprecedented access to "open" third-party devices, content, and applications.⁴³⁹ Although not commenting in this

⁴³¹ See PFF Comments at 67. The "Wherifone" also allows parents to program phone numbers and can restrict the downloading of games and text messages. See *id.*

⁴³² See *id.* The Guardian Angel GPS phone allows parents to keep a record of their child's precise movements for a 30-day period. See *id.* For instance, when a child is traveling in a car, the phone can monitor how fast the car is going and the direction in which it is heading. See *id.*

⁴³³ See PFF Comments at 69; Thierer Report at 110-111.

⁴³⁴ For example, Google, Loopt, and Helio have already established user privacy safeguards. See CTIA Best Practices and Guidelines for Location-Based Services, www.ctia.org/business_resources/wic/index.cfm/AID/11300. See, e.g., Loopt's safety and privacy guide, <https://loopt.com/loopt/beSafe.aspx>.

⁴³⁵ See PFF Comments at 67 (the Firefly Mobile phone contains only five buttons, two of which "have small icons symbolizing Mom and Dad...[and] comes in several colors and contains a variety of accessories geared toward kids").

⁴³⁶ See *id.* at 68.

⁴³⁷ See *id.* at 67. Parents can also enter phone numbers that children can call at any time of day. See *id.*

⁴³⁸ See *NOI*, 24 FCC Rcd at 3354-55, ¶ 32. In the *700 MHz Second Report and Order*, 22 FCC Rcd 15289 (2007), the Commission adopted an "open platform" rule that requires licensees of the Upper 700 MHz Band C Block to allow consumers to use the handset of their choice and download and use the applications of their choice, subject to certain reasonable network management conditions that allow the licensee to protect the network from harm. Following adoption of this rule, some wireless carriers have announced that they will voluntarily make their networks more open to devices and/or applications.

⁴³⁹ See CTIA Comments at 16. Further, CTIA notes that "As open device and application initiatives take hold in the marketplace, CTIA expects both carriers and third party vendors will continue to focus on the task of introducing groundbreaking technologies that not only provide additional open platforms and applications, but also on providing a new generation of parental controls that are as effective in an open environment as they are within a carrier's walled garden." *Id.* at 17.

proceeding, other entities have recently criticized the claims of “openness” of wireless networks in related Commission proceedings.⁴⁴⁰ CTIA notes that wireless carriers have made great strides in ensuring that third-party content filtering applications and access controls can be compatible with wireless devices and services.⁴⁴¹ CTIA also asserts that parents can independently download third-party parental control solutions to their wireless devices through various sources, including wireless “app stores,” web sites, and other outlets.⁴⁴²

D. Future Developments

113. The *NOI* also sought information on blocking or filtering technologies for wireless devices that are currently in development.⁴⁴³ Although the record on this issue was scant, commenters briefly addressing the issue predict that more advanced filters and access controls for wireless devices will be developed.⁴⁴⁴ Given the competition within the wireless industry, however, carriers report that they cannot disclose their specific competitive offerings prior to launch.⁴⁴⁵ Some individual commenters support extending filtering technology, such as TVGuardian, to mobile devices.⁴⁴⁶ Further, some individuals indicate they are willing to pay a modest fee for this service – less than \$5 for 6 months, for example.⁴⁴⁷

E. Educational Efforts

114. In the *NOI*, the Commission requested information on how wireless providers educate consumers on existing filtering technologies, as well as how consumer and trade organizations should publicize the development, deployment, and use of filtering technologies.⁴⁴⁸ CTIA reports that wireless carriers such as Sprint have worked with the National Center for Missing & Exploited Children (“NCMEC”) and the National Education Association (“NEA”) to develop educational tools and initiatives aimed to improve wireless and Internet safety awareness.⁴⁴⁹ Specifically, Sprint’s

⁴⁴⁰ See, e.g., Letter from Christopher Libertelli, Skype S.A.R.L., to Julius Genachowski, Chairman, FCC, RM-11361, WT Docket No. 09-66 (Jun. 29, 2009); Letter from Ben Scott and Chris Riley, Free Press, to Michael Copps, Acting Chairman, FCC, WC Docket No. 07-52 (Apr. 3, 2009).

⁴⁴¹ See CTIA Comments at 9-10.

⁴⁴² See *id.*

⁴⁴³ See *NOI*, 24 FCC Rcd at 3354-55, ¶ 32.

⁴⁴⁴ See, e.g., CTIA Comments at 12 (“more advanced filters and access controls are most certainly on the way”); T-Mobile Reply at 3 (“T-Mobile continues to enhance [its parental control] offerings, as well as explore other initiatives that would be useful for parents in managing their children’s online experiences”); PFF Comments at 70.

⁴⁴⁵ See Sprint Comments at 3 (“Sprint does have additional parental control features under development that it intends to offer parents in the future. But as the Commission will appreciate, given the intense competition within the wireless industry, Sprint cannot disclose its competitive offerings prior to launch.”).

⁴⁴⁶ See, e.g., Comments of Brenda Prosser at 1; Diane Finnan at 1; William Bauza at 1; Art Gillespie at 1.

⁴⁴⁷ See, e.g., Comments of Curtiss Wilson at 1; Barbara Jenkins at 1; James Sammons at 1.

⁴⁴⁸ See *NOI*, 24 FCC Rcd at 3355, ¶ 33.

⁴⁴⁹ See CTIA Comments at 8. In addition to ways to make a child’s wireless experience safer, in 2005 the wireless industry and The Wireless Foundation partnered with the United States Department of Justice and NCMEC to create the Wireless AMBER Alerts™ Program, a “key example of the wireless industry’s commitment to harnessing the convenience and ubiquity of wireless technology to safeguard children.” *Id.* at 13. The Wireless AMBER Alerts™ (continued....)

4NetSafetySM program provides individuals with the tools and information they need to teach minors how to use the Internet more safely.⁴⁵⁰ Through this program, individuals can also access (for free) the bNetS@vy, an online resource created by the NEA Health Information Network (“HIN”) that offers adults information to help teach children – and pre-teens in particular – how to navigate the Internet safely.⁴⁵¹ Verizon Wireless notes that on its website it has posted a set of recommendations about steps parents can take to control their children’s access to certain materials – regardless of the technology platform used.⁴⁵²

115. Similarly, Cox’s “Take Charge” program includes a web site to educate parents, which includes a list of chat acronyms that children use on cell phone text messages and instant messages.⁴⁵³ Cox states that in 2009, its Take Charge program will emphasize safety on wireless phones and will focus on smartphones’ Internet access and the importance of using parental controls with mobile devices.⁴⁵⁴ In its comments, Cox notes that it will conduct new research on teen behavior patterns on the Internet using mobile devices.⁴⁵⁵ In May 2009, Cox released a report summarizing its findings.⁴⁵⁶

116. In addition, the Wireless Foundation, a non-profit organization established by CTIA’s member companies in 1991, educates children, parents, teachers, and policymakers about the tools the wireless industry provides to ensure that children are safe while using wireless technology.⁴⁵⁷ For example, it maintains a “Wireless Online Safety” section on its website, which contains information for

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Program provides free text messages available to wireless subscribers who have signed up to receive such messages when a child has been abducted, thereby allowing alert recipients to serve as the extra “eyes and ears that public safety officials vitally need” in such situations. *See id.*

⁴⁵⁰ *See* CTIA Comments at 8; Sprint Comments at 3-4.

⁴⁵¹ *See* Sprint Comments at 4.

⁴⁵² *See* Verizon Comments at 10-11 (“These include: talking to children to create an environment that allows honest and open dialog with children about their media activities and experiences; using all available parental control software to filter out potentially harmful, inappropriate, or offensive content; surfing the Internet, watching TV, and enjoying wireless content together with their children to help them learn to recognize and anticipate the risks associated with certain online content; using usage controls and parental controls software to monitor television, personal computer, phone, and wireless use and setting limits where appropriate; moving the TV and personal computer to open areas of the home, with the screens facing out and visible at all times, to better monitor children; and joining their children’s online social networks so that parents can make sure they know who their children’s online and wireless friends are”). *See* <http://parentalcenter.verizon.radialpoint.net/>.

⁴⁵³ *See* Cox Comments at 5. Cox notes a 2005 survey that showed that only five percent of the surveyed parents knew that “POS” was an alert to others in the chat that there was a “Parent Over their Shoulder” and that only four percent knew that “P911” was an alert that a parent was nearby. *See id.*

⁴⁵⁴ *See id.* (Cox “continues to examine and evaluate emerging content filtering technologies, such as editable video-on-demand content and technologies using customizable rating systems”).

⁴⁵⁵ *See id.* at 11.

⁴⁵⁶ *See* Cox Communications Teen Online & Wireless Safety Survey: Cyberbullying, Sexting, and Parental Controls (May 2009), available at http://www.cox.com/takeCharge/includes/docs/2009_teen_survey_internet_and_wireless_safety.pdf.

⁴⁵⁷ *See* CTIA Comments at 13. Further, in 2008, CTIA created the Wireless Child Safety Task Force, which aims to further deter child pornography on wireless networks while safeguarding consumer privacy. *See id.* at 15. This Task Force also plans to develop an educational initiative to inform parents and children about best practices for safe wireless Internet behavior. *See id.* CTIA has submitted the Wireless Child Safety Task Force for inclusion in the International Telecommunications Union’s “Child Online Protection Initiatives Around the World” program. *See id.*

parents and educators, such as links to wireless carriers' content access controls, and a "model Family Cell Phone Usage Agreement – a contract that parents can use to frame family discussions about safe and responsible use of wireless devices, and to educate the entire family regarding the potential threats to children from harmful content, unwanted contact, and inappropriate conduct."⁴⁵⁸ The wireless industry has also been active in the Family Online Safety Institute ("FOSI"), a Washington-based, international organization established to identify best practices in the field of online safety.⁴⁵⁹ Additionally, CTIA notes that the wireless industry is participating in the National Telecommunications and Information Administration's Online Safety and Technology Working Group.⁴⁶⁰

VI. NON-NETWORKED DEVICES

117. In the *NOI*, the Commission inquired as to the existence and availability of blocking technologies for non-networked devices capable of receiving video or audio programming, particularly DVD players and VCRs.⁴⁶¹ We noted that, unlike wired, wireless, or Internet platforms, which directly distribute video or audio content to consumers, DVD players and VCRs are dependent on video discs or videotapes to distribute content, and that this situation gives parents greater control over DVD players and VCRs than they have over other distribution platforms.⁴⁶² We invited comment on whether blocking technologies exist or are under development for DVD players and VCRs and, if so, how these technologies compare to blocking technologies available for other distribution platforms and networked devices.⁴⁶³ We also sought comment on whether blocking technologies exist for similar non-networked devices, such as digital audio players (MP3 players) and portable media players, and, if so, the extent to which those technologies might be used by parents.⁴⁶⁴ Additionally, we inquired as to what methods would be effective in encouraging the development and use of such technologies.⁴⁶⁵ Finally, we inquired whether the MPAA rating system generally used for movies on DVDs and video tapes is effective.⁴⁶⁶

118. Only a few commenters address these issues. CustomPlay, PFF, TVGuardian, Digimarc, DMA, and DWA each discuss blocking technologies that are applicable to various distribution platforms, including DVD players, VCRs, and similar non-networked devices, such as digital audio players and portable media players.⁴⁶⁷ No commenter specifically addresses the effectiveness of the

⁴⁵⁸ See *id.* at 13-14.

⁴⁵⁹ See *id.* at 15; FOSI Comments at 3-5. On April, 22, 2009, The Wireless Foundation and FOSI co-sponsored a wireless online safety conference, with a focus on wireless-specific aspects of online safety such as mobility and location-based services. See FOSI Press Release at <http://www.fosi.org/cms/index.php/pr2009/43-pr-2009/358-wireless-online-safety-conference.html>. Appendix A of FOSI's comments provides a summary chart of the online safety initiatives of its members.

⁴⁶⁰ See CTIA Comments at 16. CTIA notes that the Working Group was established under Section 214 of the Protecting Children in the 21st Century Act. See *id.* (citing Protecting Children in the 21st Century Act, Pub. L. No. 110-385, § 214, 122 Stat. 4096, 4103-04 (Oct. 10, 2008) (to be codified at 15 U.S.C. § 6554)).

⁴⁶¹ See *NOI*, 24 FCC Rcd at 3355, ¶ 34.

⁴⁶² See *id.* at 3355-56, ¶ 35.

⁴⁶³ See *id.* at 3356, ¶ 36.

⁴⁶⁴ See *id.*

⁴⁶⁵ See *id.*

⁴⁶⁶ See *id.*

⁴⁶⁷ See CustomPlay Comments at 3, 4; PFF Comments at 27-32; TVGuardian Comments at 19-20, 26 and Appendix C; Digimarc Comments at 5; DMA Comments at 6-8; DWA Comments at 5-7. NARM addresses audio-only (continued....)

MPAA rating system with regard to movies on DVDs and video tapes.

119. CustomPlay states that it has developed a content customization system that utilizes the capabilities of random access technologies, such as DVD players and VOD services, to selectively play, skip, or mute portions of a motion picture.⁴⁶⁸ CustomPlay notes that information provided by a source other than the motion picture identifies the content of segments in that picture.⁴⁶⁹ According to CustomPlay, this information enables a random access device to customize, in real time, the presentation of a motion picture, and this customization is responsive to a viewer's content preference for a level of explicitness in 14 separate categories of possible objectionable content.⁴⁷⁰

120. PFF notes that one company, ClearPlay, produces a unique DVD player that eliminates profanity, violence, and nudity from certain movies.⁴⁷¹ PFF states that ClearPlay does not produce pre-edited DVDs, but rather places filters into its DVD player, enabling it to know when to skip or mute while the movie is playing.⁴⁷² Therefore, PFF states, consumers do not have to purchase special DVDs; rather, they only need to purchase a ClearPlay DVD player and download the codes for their movies to activate the filtering controls.⁴⁷³ PFF explains that ClearPlay's MaxPlay DVD player retails for under \$70 and comes loaded with the filters for about 1,000 popular movies, with access to new movie filtering codes available at a monthly membership fee of \$7.95.⁴⁷⁴ PFF reports that ClearPlay's technology has raised copyright concerns and was opposed by many movie directors and studios, but PFF observes that in 2005 Congress exempted services like ClearPlay from any copyright liability.⁴⁷⁵ PFF notes, however, that other types of pre-edited DVD software service – “scrubbed” DVDs – were ruled to violate copyright laws by a U.S. district court judge in 2006 and are no longer available.⁴⁷⁶

121. As discussed above, TVGuardian is an example of a technology that filters language based on closed captioning information.⁴⁷⁷ TVGuardian states that its AFLFT has already been deployed in approximately 12 million DVD Players, VCRs, and combination units.⁴⁷⁸ According to TVGuardian, over the past two years, DVDs have been increasingly distributed with a new caption format, called Subtitles for the Deaf and Hard-of-Hearing (“SDH”), rather than closed-captions in the television format

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devices and asserts that Congress did not intend for the Commission to address technologies relating to such devices, including MP3 players and other portable audio devices. *See* NARM Comments at 1.

⁴⁶⁸ *See* CustomPlay Comments at 1.

⁴⁶⁹ *See id.*

⁴⁷⁰ *See id.*

⁴⁷¹ *See* PFF Comments at 42.

⁴⁷² *See id.*

⁴⁷³ *See id.*

⁴⁷⁴ *See id.*

⁴⁷⁵ *See id.* PFF notes that this legislation – The Family Movie Act of 2005, Pub. L. No. 109-9, Title II, 119 Stat. 223 (2005) (codified at 17 U.S.C. § 101 note) – was included in The Family Entertainment and Copyright Act of 2005, Pub. L. No. 109-9, 119 Stat. 218 (2005), and was signed into law on April 27, 2005. *See id.*

⁴⁷⁶ *See id.* at 43.

⁴⁷⁷ TVGuardian can operate with both networked and non-networked technologies. Accordingly, we also discuss TVGuardian in Section II.C above pertaining to devices for television.

⁴⁷⁸ *See* TVGuardian Comments, Appendix C at 3.

standard.⁴⁷⁹ TVGuardian states that its technology cannot easily read the SDH format.⁴⁸⁰ TVGuardian states that its technology faces a similar problem with Blu-Ray players.⁴⁸¹ TVGuardian explains that its technology works for movies shown on television (broadcast or pay-TV) because the standard closed-captioning format is required by law.⁴⁸²

122. As discussed above, Digimarc and DWA discuss the potential for digital watermarking to provide advanced blocking for non-networked devices, as well as across multiple media platforms.⁴⁸³ Digimarc recommends that the Commission focus on approaches to parental control in which the data that enables such control is contained in the content itself, such as digital watermarking.⁴⁸⁴ As also discussed above, CEA expresses concern that proponents of digital watermarking are using the issue of parental controls over objectionable content as an avenue to accomplish their goal of requiring televisions and other devices to incorporate DRM functionality.⁴⁸⁵ In addition, CEA argues that watermarking raises a number of intellectual property and other technical issues.⁴⁸⁶

123. While the record reflects that parental control technologies exist for DVD players, VCRs, and similar non-networked devices, the record is lacking data in a number of areas regarding parental control devices for these devices that the Commission intends to explore in a forthcoming *NOI*.⁴⁸⁷

VII. INTERNET

A. Internet

124. The *NOI* asks about “technologies that can improve or enhance the ability of a parent to protect his or her child from any indecent or objectionable video or audio programming” that “may be appropriate across a wide variety of distribution platforms, including ... Internet platforms.”⁴⁸⁸ During the first quarter of 2009, children between the ages of two and 11 spent an average of one hour and 45 minutes per month watching video over the Internet, and teens between the ages of 12 and 17 spent two hours and 50 minutes per month watching video over the Internet.⁴⁸⁹ This section will concentrate on video programming accessible over the Internet, and is informed by previous online safety work. After providing a technical discussion regarding the availability of video on the Internet, we consider the variety of parental controls. We discuss how numerous solutions are available that address different risks, and note that an effective approach to online safety requires multilayered solutions, including

⁴⁷⁹ *See id.*

⁴⁸⁰ *See id.*

⁴⁸¹ *See id.*

⁴⁸² *See id.*

⁴⁸³ *See generally* Digimarc Comments; DWA Comments. Digital watermarking can operate with both networked and non-networked technologies. Accordingly, we also discuss digital watermarking in Sections II.C and V above pertaining to networked devices (television and wireless).

⁴⁸⁴ *See* Digimarc Comments at 1.

⁴⁸⁵ *See* CEA Reply at 10.

⁴⁸⁶ *See id.* at 10-11. *See also* TiVo Reply at 3.

⁴⁸⁷ *See infra* section XI.

⁴⁸⁸ *See NOI*, 24 FCC Rcd at 3356, ¶ 37. *See also* Child Safe Viewing Act at Section 2(b)(1), 2(d).

⁴⁸⁹ *See* The Nielsen Company, *A2/M2 Three Screen Report, 1st Quarter 2009*, at 3, Table 3. In addition, teens aged 13-17 spent an average of 6 hours and 30 minutes per month watching video on a mobile telephone. *Id.*

software solutions, network service provider solutions, content service provider solutions, education, acceptable use policies, and supervision. The record is lacking data in a number of areas regarding Internet parental control technologies, which we intend to explore in a forthcoming *NOI*.⁴⁹⁰

B. Introduction

125. The complexities of the Internet present unique challenges.⁴⁹¹ On the Internet, a multitude of individuals, applications, and content⁴⁹² interact, with no centralized points of control.⁴⁹³ The same content can be hosted at a variety of sites. Individuals can create content, making it available to everyone in the world.

126. The number of suppliers of online video and audio is almost limitless, the supply chain is fragmented, and the content can come from sources outside the jurisdiction of the United States.⁴⁹⁴ Video and audio can be delivered through web pages, email attachments, chat rooms, text messages and tweets, bulletin boards, peer-to-peer file sharing, and video and audio applications.⁴⁹⁵ While there are some video hosts that dominate the video market, such as the top online video site YouTube, anyone with access to online storage can make videos and audio recordings available. Producers of content may be commercial or non-commercial, individuals or corporations.⁴⁹⁶

127. As noted in the *NOI*, the Internet as an open network permits parents to select among a

⁴⁹⁰ See *infra* section XI.

⁴⁹¹ See Dick Thornburgh and Herbert S. Lin, *Youth, Pornography, and the Internet*, Computer Science and Telecommunications Board, National Academies Press (2002), at 3 (“NAS Report”) (“[C]ompared to other media, the Internet has characteristics that make it harder for adults to exercise responsible supervision over children’s use of it.”); *Final Report of the COPA Commission Presented to Congress* (2000), <http://www.copacommission.org/report/executivesummary.shtml>, at 13 (“COPA Report”) (“unlike one-way broadcast media, the Internet is inherently multi-directional and interactive.”).

⁴⁹² See COPA Report at 13 (“thousands of access providers and millions of potential publishers provide content online.”).

⁴⁹³ See Dr. Tanya Byron, *Safer Children in a Digital World: the Report of the Byron Review* (2008) (“Byron Review”) at 5 (“there is no obvious single point at which editorial control can be exercised. This means that it is very difficult for national Governments to reduce the availability of harmful and inappropriate material”); NTIA Study of Technology Protection Measures pursuant to the Children’s Internet Protect Act, Report to Congress, Children’s Internet Protection Act, Pub. L. 106-554, Study of Technology Protection Measures in Section 1703, Sec. I (2003), http://www.ntia.doc.gov/ntiahome/ntiageneral/cipa2003/CIPAreport_08142003.htm (“CIPA Study”) Sec. II.A (describing Internet as “decentralized”). Examples of governments having difficulty imposing control over Internet content, including video content, abound. See, e.g., Brian Stelter & Brad Stone, *Web Pries Lid Off Iranian Censorship*, N.Y. Times (Jun. 22, 2009), <http://www.nytimes.com/2009/06/23/world/middleeast/23censor.html>.

⁴⁹⁴ See COPA Report at 13 (“Material published on the Internet may originate anywhere, presenting challenges to the application of the law of any single jurisdiction.”); *American Civil Liberties Union v. Gonzales*, 478 F. Supp. 2d 775, 789 (E.D. Pa. 2007) (“*Gonzales*”) (discussing amount of adult websites that are outside the United States).

⁴⁹⁵ Specific types of video and audio applications are discussed below. See NAS Report at 6 (discussing different applications that can distribute offensive content).

⁴⁹⁶ See NAS Report at 4 (Congress requested that the National Academies of Sciences “conduct a study of computer-based technologies and other approaches to the problem of the availability of pornographic material to children on the Internet.”) at 4. See also *Gonzales*, 478 F. Supp. 2d at 798-799; *American Civil Liberties Union v. Mukasey*, 534 F.3d 181, 200 (3rd Cir. 2008) (“*Mukasey*”) (discussing commercial and non-commercial content).

wide variety of parental control technologies available in a competitive market.⁴⁹⁷ On the Internet, safety solutions can operate independently without coordination with, cooperation with, or permission from content producers or network service providers. As discussed below, the disaggregation of content, sources, applications, access, and networks on the Internet means that there is no single Internet safety solution. As the COPA Report stated, “[m]ethods to protect children from content harmful to minors must be effective in this diverse and decentralized environment.”⁴⁹⁸ As many others have concluded, online solutions are complex.⁴⁹⁹

128. The Commission asked in the *NOI* how the value of the Internet as an educational and informational tool for children can be balanced against efforts to ensure children’s online safety.⁵⁰⁰ Commenters note the importance of recognizing that the Internet provides a positive opportunity for children, giving them educational opportunities, information, social interaction, and the ability to become creators of content.⁵⁰¹ The recent Internet Safety Technical Task Force (“ISTTF”) Report stated that “[m]any youth in the United States have fully integrated the Internet into their daily lives. For them, the Internet is a positive and powerful space for socializing, learning, and engaging in public life.”⁵⁰² Commenters also note, however, that the Internet also poses risks to children.⁵⁰³ As one expert has noted, “[d]ata is beginning to reveal risks to young people in terms of increased exposure to sexually inappropriate content, contributions to negative beliefs and attitudes, stranger danger, cyberbullying and access to inappropriate content from sites which may promote harmful behaviors. Moreover, there are issues relating to commercial content and contact with young people.”⁵⁰⁴ While a number of online risks exist, the Child Safe Viewing Act specifically directs the Commission to address indecent or offensive video and audio programming.⁵⁰⁵

129. Commenters urge, and we agree, that it is important to balance the benefits of being online with the risks. CDT states that “[t]he opportunities and benefits for minors of one of the primary

⁴⁹⁷ See *NOI*, 24 FCC Rcd at 3360, ¶ 42.

⁴⁹⁸ COPA Report at 13.

⁴⁹⁹ See, e.g., NAS Report at 11 (“Contrary to statements often made in the political debate, the issue of protecting children from inappropriate sexually explicit material and experiences on the Internet is very complex.”)

⁵⁰⁰ See *NOI*, 24 FCC Rcd at 3361, ¶ 43.

⁵⁰¹ See, e.g., USTelecom Comments at 3; Verizon Comments at 9; CDT Comments at 15. See also CIPA Study, Exec. Sum. (“In homes, schools, and libraries across the nation, the Internet has become a valuable and even critical tool for our children’s success. Access to the Internet furnishes children with new resources with which to learn, new avenues for expression, and new skills to obtain quality jobs.”); Byron Review at 2, 6 (noting specifically the advantages that IT offers for individuals with disabilities); NAS Report at 1 (“The Internet provides convenient access to a highly diverse library of educational resources, enables collaborative study, and offers opportunities for remote dialog with subject-matter experts. It provides information about hobbies and sports, and it allows children to engage with other people on a near-infinite variety of topics.”).

⁵⁰² *Final Report of the Internet Safety Technical Task Force: Enhancing Child Safety and Online Technologies*, Berkman Center for Internet & Society (2008) (“ISTTF Report”) at 4.

⁵⁰³ See AT&T Comments at 4-5; CIPA Study, Exec. Sum.; Byron Review at 2, 4; NAS Report at 3; *What are the Risks for Children Online*, GetNetWise, <http://kids.getnetwise.org/safetyguide/danger/>.

⁵⁰⁴ Byron Review at 4. See also ISTTF Report at 4 (noting “dangers of sexual exploitation, online harassment, and bullying, and exposure to problematic and illegal content” and noting “in most cases [risks are] not significantly different than those they face offline.”).

⁵⁰⁵ See Child Safe Viewing Act at Section 2(d).

‘new media platforms’ – the Internet – far outweigh the risks.’⁵⁰⁶ Moreover, as discussed below, a growing number of technologies assist parents in minimizing the risks while introducing children to the vast benefits of the Internet.

C. Previous and Current Online Safety Work

130. Several commenters encourage the Commission to be aware of the existing body of online safety reports and relevant case law.⁵⁰⁷ As AT&T, for example, states “[m]embers of the Internet community, parents groups, state and government officials and other organizations already have compiled a substantial body of work regarding the risks children face online, and the variety of parental control and online child protection tools and methods already available, as well as those on the horizon.”⁵⁰⁸

131. As noted in the *NOI*, the safety of children online has been a primary concern of families and Congress since the Internet was first available for public use.⁵⁰⁹ Congress has addressed this issue through numerous laws.⁵¹⁰ Commenters urge the Commission to be sensitive to the constitutional issues previous federal laws have raised.⁵¹¹ There have also been several federally mandated reports:⁵¹² (i) the

⁵⁰⁶ CDT Comments at 15. *See also* CIPA Study, Exec. Sum.; Byron Review at 4; NAS Report at 1 (“[W]e must approach our need to protect children with care to avoid placing unnecessary restriction on the many positive features of the Internet.”).

⁵⁰⁷ *See, e.g.*, AT&T Comments at 4-5; CDT Comments at 10.

⁵⁰⁸ AT&T Comments at 2.

⁵⁰⁹ *See NOI*, 24 FCC Rcd at 3357, ¶ 38.

⁵¹⁰ *See, e.g.*, Telecommunications Act of 1996, Sec. 501 *et. seq.*, The Communications Decency Act, Pub. L. No. 104-104, 110 Stat. 56 (1996), *codified at* 47 U.S.C. § 230 (ruled unconstitutional in part in *Reno v. ACLU*, 521 U.S. 844 (1997)); Children’s Online Protection Act (COPA), Pub. L. No. 105-277, 112 Stat. 2681-2736 (1998), *codified at* 47 U.S.C. § 231 (2000) (struck down as unconstitutional on First Amendment grounds in *ACLU v. Mukasey*, 534 F.3d 181 (3d Cir. 2008), *cert. denied*, (129 S. Ct. 1032 (2009)); Children’s Online Privacy Protection Act of 1998 (COPPA), Pub. L. No. 105-277, 112 Stat. 2581-728 (1998), *codified at* 15 U.S.C. §§ 6501-6508 (2000); Children’s Internet Protection Act (CIPA), Pub. L. No. 106-554, 114 Stat. 2763, 2763A-335 (2000), *codified at* 47 U.S.C. § 254(h), 20 U.S.C. § 9134 (2000); Dot Kids Implementation and Efficiency Act of 2002, Pub. L. No. 107-317, 16 Stat. 2766, *codified at* 47 U.S.C. § 941 (2002); Truth in Domain Names Act of 2003, Pub. L. No. 108-21, *codified at* 18 U.S.C. § 2252B (2003); Providing Resources, Officers and Technology to Eradicate Cyber Threats to Our Children Act of 2008, Pub. L. No. 110-401, 121 Stat. 4229 (2008) (to be *codified at* 18 U.S.C. §§ 2258A-E; 42 U.S.C. §§ 17601, 17611-16) (hereinafter PROTECT Our Children Act of 2008); Child Protection and Sexual Predator Punishment Act of 1998, Pub. L. No. 105-314, 112 Stat. 2974 (1998); Reporting of Child Pornography by Electronic Communication Service Providers, Pub. L. No. 101-647, 104 Stat. 4806, *codified as* 42 U.S.C. § 13031 (requires IPSs, when they become aware of potential child pornography, to report this to the National Center for Missing and Exploited Children); Keeping the Internet Devoid of Sexual Predators Act of 2008 (hereinafter KIDS act of 2008), Pub. L. No. 110-400, 122 Stat. 4224 (2008), *codified as* 42 U.S.C.A. § 16915 (2008) (requiring sex offenders to register their online identifiers); Protecting Children in the 21st Century Act, Broadband Data Improvement Act, Pub. L. No. 110-385, Sec. II, Protecting Children in the 21st Century Act (2008); *see also*, Adam Walsh Child Protection and Safety Act of 2006, Pub. L. No. 109-248, 120 Stat. 587 (2006) (*codified as* amended in scattered sections of 42 U.S.C.) (mandated Internet access to state sex offender registries, facilitating public access to information); Child Pornography Prevention Act, Pub. L. No. 104-208, § 121, 110 Stat. 3009 (1996), *codified as* 18 USC § 2252 (1996).

⁵¹¹ *See* CDT Comments at 13-14 (stating “the constitutional limits on government regulation of online content do not change depending on whether the content previously had been broadcast over the air.”); Industry and Public Interest Groups Joint Comments at 3-4; EFF Reply at 3.

Final Report of the COPA Commission;⁵¹³ (ii) the National Academies of Science Report;⁵¹⁴ and (iii) the NTIA Study of Technology Protection Measures pursuant to the Children's Internet Protect Act.⁵¹⁵ There has also been federal law enforcement activity and educational programs. As AT&T noted, a great deal of work has also been done by non-U.S. Government entities which have examined and worked towards child online safety.⁵¹⁶

132. Most recently, in the Broadband Data Improvement Act, Congress directed NTIA to establish the Online Safety and Technology Working Group ("OSTWG")⁵¹⁷ "to review and evaluate the status of industry efforts to promote online safety through educational efforts, parental control technology, blocking and filtering software, age-appropriate labels for content or other technologies or initiatives designed to promote a safe online environment for children."⁵¹⁸ OSTWG's online safety mandate is broad, covering all online content and applications. The OSTWG includes 34 expert participants (many of whom have commented in this proceeding) from a diversity of corporations, organizations, and government agencies concerned with online safety.⁵¹⁹ OSTWG has until June 4, 2010 to submit a report to Congress, which we expect will expand on many of the issues raised in this *Report*.

D. The Availability of Video on the Internet

133. As noted in the *NOI*, online video and audio can be delivered in many different ways.⁵²⁰ Many sites stream video and audio to an audience. An individual goes to a host site and requests a

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⁵¹² In addition, PROTECT Act of 2008 requires the Department of Justice to file several reports on topics such as its strategy for protecting children, its forensic resources and capabilities, and the progress of the Internet Crimes Against Children Task Forces. See PROTECT Act of 2008, Pub. L. 110-401 (2008).

⁵¹³ COPA Report, Executive Summary (Congress directed the COPA Commission to "identify technological or other methods that . . . will help reduce access by minors to material that is harmful to minors on the Internet.").

⁵¹⁴ See NAS Report (Congress requested that the National Academies of Sciences "conduct a study of computer-based technologies and other approaches to the problem of the availability of pornographic material to children on the Internet").

⁵¹⁵ See Report to Congress, Children's Internet Protection Act, Pub. L. 106-554, Study of Technology Protection Measures in Section 1703, Sec. I (2003), http://www.ntia.doc.gov/ntiahome/ntiageneral/cipa2003/CIPAreport_08142003.htm (Congress directed NTIA "to evaluate whether currently available Internet blocking or filtering technology protection measures and Internet safety policies adequately address the needs of educational institutions").

⁵¹⁶ See AT&T Comments at 4-5. See, e.g., ISTTF Report; Byron Review; *Making Wise Choices Online*, Family Online Safety Institute (2008) ("FOSI Report"); *Safer Internet for Children: Qualitative Study of 29 European Countries*, Directorate General Information Society and Media, European Commission (2007); *Protecting Children in the Internet Age*, New York State Senate Task Force on Critical Choices (2007).

⁵¹⁷ See *NOI*, 24 FCC Rcd at 3358, ¶ 38; Online Safety and Technology Working Group, National Telecommunications and Information Administration, Department of Commerce, <http://www.ntia.doc.gov/advisory/onlinesafety/>.

⁵¹⁸ Broadband Data Improvement Act, Pub. L. 110-385, Sec. 214(b) (2008); See also CDT Comments at 10 ("The Commission does not have any independent authority or experience with content on the Internet, and in light of the OSTWG effort the Commission should not reach out beyond the terms of the Act to address Internet content generally.").

⁵¹⁹ Online Safety and Technology Working Group: Participants, National Telecommunications and Information Administration, Department of Commerce, <http://www.ntia.doc.gov/advisory/onlinesafety/participants.html>.

⁵²⁰ See *NOI*, 24 FCC Rcd at 3356-57, ¶ 37.

specific video; the host streams the video to the individual while it is being played, and the video is not otherwise stored on the individual's computer. The host may use a proprietary application embedded in the webpage to display the video, with copyright protection built in, limiting the ability of the individual to view the video in any other way. In order to view the video, the individual generally must be online. Examples of sites using this delivery method include YouTube, Hulu, and Fox Interactive.

134. Another delivery method is for the individual to download the video or audio file onto the individual's computer and play it on demand. The individual may search and find video or audio files and elect to download them. Alternatively, the individual might subscribe to a video or audio feed. Whenever a new video or audio file is released, it is automatically downloaded to the individual's computer and is available to be played; this is known as podcasting and vodcasting.⁵²¹ Generally, the file is stored on the individual's computer, and the individual can play the files whenever and for as long as the individual wants. Some television sets have the ability to download shows and movies built directly into the set.⁵²²

135. An alternative means of video and audio file download distribution involves peer-to-peer ("P2P"). P2P applications allow individual computer users to transmit data directly to another user, without the use of an intermediate network service. The P2P software and services⁵²³ permit individuals to search the computers of other participants for the desired content, and individual members act as hosts, distributing content from their computers. This is a highly decentralized system of content distribution.⁵²⁴

136. Finally, audio and video files can be transferred across the Internet in the same way that any other data can be transferred: email, file transfers, bulletin boards, social networks, and more.⁵²⁵ Files can also be ripped and burned from the network and then distributed on CDs or DVDs.

⁵²¹ Generally, podcasting is a series of audio recordings that can be subscribed to by individuals using RSS ("Really Simple Syndication"). Having subscribed, whenever the content creator releases a new recording, that recording will automatically be downloaded to the individual's computer or MP3 player. Likewise, vodcasts are a series of video recordings that can be subscribed to by individuals and automatically downloaded.

⁵²² Examples of sites where video and audio content, such as TV shows or movies, can be downloaded include iTunes, Amazon, and Audible. See, e.g., <http://www.apple.com/itunes/>; <http://www.amazon.com/Video-On-Demand/b?ie=UTF8&node=16261631>; <http://www.xbox.com/en-US/live/>. Services such as NetFlix and Blockbuster now allow customers to download movie rentals. <http://www.netflix.com/HowItWorks#faq8>; <http://www.blockbuster.com/download>.

⁵²³ See, e.g., BitTorrent, <http://www.bittorrent.com/>; Kazaa, <http://www.kazaa.com/>; Limewire, <http://www.limewire.com/>.

⁵²⁴ See OECD Glossary of Statistical Terms (Aug. 29, 2003), <http://stats.oecd.org/glossary/detail.asp?ID=6095> ("Peer-to-peer is a communication structure in which individuals interact directly, without going through a centralized system or hierarchy."); Clay Shirky, *What is P2P . . . And What Isn't*, O'Reilly OpenP2P (Nov. 24, 2000), <http://www.openp2p.com/pub/a/p2p/2000/11/24/shirky1-whatisp2p.html>; Ed Felten, *More on Berman-Coble's Peer-to-Peer Definition*, Freedom to Tinker (Sept. 10, 2002), <http://www.freedom-to-tinker.com/blog/felten/more-berman-cobles-peer-peer-definition>; Rudiger Schollmeier, *A Definition of Peer-to-Peer Networking for the Classification of Peer-to-Peer Architectures and Applications*, Computer Society (2002). *P2P File Sharing*, iKeepSafe.org, http://www.ikeepsafe.org/PRC/topics/?action=display_article&article_id=52.

⁵²⁵ See Simon Byers, Lorrie Cranor, Eric Cronin, Dave Kormann, and Patrick McDaniel, *Analysis of Security Vulnerabilities in the Movie Production and Distribution Process*, in *Proceedings of the 2003 ACM Workshop on Digital Rights Management*, October 27, 2003, Washington, DC. (discussing sources for and methods of content distributed online); Peter Biddle, Paul England, Marcus Peinado, and Bryan Willman, *The Darknet and the Future of Content Distribution*, Microsoft, <http://msl1.mit.edu/ESD10/docs/darknet5.pdf>.

137. There is a great diversity of video and audio content online from a wide variety of sources. Many sources of video and audio programs traditionally seen on television are making their content available over the Internet.⁵²⁶ Services such as Hulu permit individuals to watch television programs and movies that are streamed to computer screens.⁵²⁷ A wealth of educational video is also available online.⁵²⁸

138. The ease and affordability of video and audio content creation has resulted in an explosion of content creators. New digital cameras, editing software, and video hosting services allow anyone, including children, to become creators of content.⁵²⁹ Some cameras and editing software are affordable and high quality. Digital cameras are now ubiquitous. People are producing video and audio content prolifically; YouTube reports that 20 hours of video is uploaded to its service every minute.⁵³⁰ Online safety organizations praise online material that helps show parents how to teach their children how to create content with new media tools.⁵³¹

139. Individuals can also create short video messages.⁵³² Video chatting is the use of short recorded videos or real time video to engage in conversations. Many forums, including YouTube, permit participants to post video comments as well as write comments. Social networks permit the uploading of video, some of which may be more formal productions, and some of which amount to an individual simply recording a message. Other chat features allow two or more people to talk to each other in real time much like a telephone call. These opportunities raise their own set of parental concerns.⁵³³

E. Discussion

140. In the *NOI*, the Commission invited comment on technologies available or under development to control children's access to Internet content, as well as any other parental empowerment tools currently available.⁵³⁴ We agree with those commenters who recognize that there is no one solution

⁵²⁶ See, e.g., <http://www.cbs.com/video/>; <http://abc.go.com/>; <http://www.fox.com/>; <http://www.nbc.com/>; <http://www.pbs.org/video/>; <http://mlb.mlb.com/mlb/subscriptions/index.jsp>.

⁵²⁷ Hulu is a joint effort of NBC Universal, News Corp, ABC, and Providence Equity Partners. See <http://www.hulu.com/>. See also <http://www.veoh.com/>; <http://www.joost.com/>.

⁵²⁸ See NAS Report at 9 (commenting on the importance of having “compelling, safe, and educational Internet content that is developmentally appropriate, educational, and enjoyable”). Examples of sites providing educational video include Smithsonian Kids, Discovery Education, iTunes University, Disney Educational Production. A number of educational videos can be found on hosting sites such as YouTube.

⁵²⁹ See ISTTF Report at 5; *Top 10 Safety Tips for Video-Sharing*, ConnectSafely (Sept. 3, 2007), <http://www.connectsafely.org/Safety-Tips/top-10-safety-tips-for-video-sharing.html> (“Many kids today are video-literate – able to communicate in a medium once reserved for highly trained professionals with expensive equipment.”).

⁵³⁰ See Ryan Junee, *Zoinks! 20 Hours of Video Uploaded Every Minute!*, YouTube Blog (May 20, 2009), <http://www.youtube.com/blog?entry=on4EmafA5MA>

⁵³¹ See *Creating with Digital Media*, <http://www.commonsemmedia.org/creating-digital-media>. See, e.g., *A Common Sense Approach to Internet Safety*, Common Sense Media, YouTube (May 29, 2008), <http://www.youtube.com/watch?v=cQ1ZqiYzSTw>.

⁵³² See PFF Comments at 90 (noting chat capabilities).

⁵³³ *Video Chatting*, <http://www.commonsemmedia.org/video-chatting>

⁵³⁴ See *NOI*, 24 FCC Rcd at 3360, ¶ 41.

at present to address online safety concerns.⁵³⁵ As discussed above, there is a wide array of content, applications, sources, experiences, and risks online. Different parents have different concerns, and the same parents may have different concerns for children of different ages.⁵³⁶ Numerous solutions are available that address different risks. With this complexity, an effective approach requires multilayered solutions including public education and consumer empowerment technologies and methods, among others.⁵³⁷

141. Commenters state that there is an unprecedented abundance of parental control tools available in the market today. PFF filed in the record a comprehensive list of such parental control technologies.⁵³⁸ Commenters assert the competitive marketplace of parental control tools fosters innovative solutions and a diversity of choices for parents.⁵³⁹

142. Commenters point to the recent COPA District Court decision which found that parents have easy access to affordable⁵⁴⁰ parental control tools.⁵⁴¹ The COPA District Court found that filters

⁵³⁵ See AT&T Comments at 5 (there is “growing consensus that there is no single silver bullet to keep children safe online, nor is there an “easy technological fix to shield children from harmful content or to keep them from behaving inappropriately online”); FOSI Comments at 5-6 (“The ISTTF’s report found that there is no one silver bullet to keeping kids safe online and that education is essential to protecting kids online.”); PFF Comments at 72. See also ISTTF Report at 6 (“Technology can play a helpful role, but there is no one technological solution or specific combination of technological solutions to the problem of online safety for minors.”); NAS Report at 13 (“Though some might wish otherwise, no single approach – technical, legal, economic, or educational-will be sufficient. Rather, an effective framework for protecting our children from inappropriate materials and experiences on the Internet will require a balanced composite of all of these elements, and real progress will require forward movement on all of these fronts.”).

⁵³⁶ See CIPA Study at Sec. IV.A. (recommending “Establish flexible policies that accommodate different ages and implement education settings with varying degrees of supervision”); NAS Report at 2.

⁵³⁷ See PFF Comments at 99. See also ISTTF Report at 6 (stating “a combination of technologies, in concert with parental oversight, education, social services, law enforcement, and sound policies by social network sites and service providers may assist in addressing specific problems minors face online”); *Gonzales*, 478 F. Supp. 2d at 794 (explaining that filtering technology has improved in part because the services “provide multiple layers of filtering”). COPA Report at 7-9 (“no single technology or method will effectively protect children from harmful material online” but “[r]ather. . . a combination of public education, consumer empowerment technologies and methods, increased enforcement of existing laws, and industry action are needed to address this concern”).

⁵³⁸ See PFF Comments at 78-79. See also Advertisers Comments at 4; AT&T Comments at 7; Joint Comments of CDT et al at 12 (“The Internet is a major ‘parental empowerment’ success story, with effective and easy-to-use tools that offer parents a wide variety of approaches to online safety.”); Comcast Reply at 2; FOSI at 5-6; EFF Reply at 2 (“The record is abundantly clear that these technologies continue to be created, deployed, and extensively advertised”).

⁵³⁹ See PFF Comments at 6 (“A marketplace of controls and filters can then develop that is more closely tailored to the diverse values of the citizenry”); EFF Reply at 2; Comcast Reply at 2; AT&T Comments at 6 (mandating a single solution would “stifle future progress in this area’ by encouraging service providers to build to the standard or rule rather than continuing to innovate and invest to meet new online threats and challenges as they appear”). See also *Gonzales*, 478 F. Supp. 2d at 795 (“There is a high level of competition in the field of Internet content filtering. That factor, along with the development of new technologies, has also caused the products to improve over time.”); CIPA Study, Sec. III (“NTIA also found that more companies are increasingly entering the market for Internet content protection technology” and companies are “increasing the amount of money that they put into their research and development divisions”).

⁵⁴⁰ See COPA Report, Sec. II (reviewing costs of online safety tools).

are “easy to install, configure, and use and require only minimal effort by the end user to configure and update.”⁵⁴² While there are many different tools offering different types of solutions, these tools may be bundled together in the operating system or by the network service provider, offering parents the ability to open, click, and turn on parental control tools without having to purchase or download additional software. Parental control tools are built into several operating systems, including Windows Vista and Mac OS X. Windows 7 will also reportedly have parental control tools built in.⁵⁴³ Network service providers frequently offer parental control tools bundled into the software package provided to new customers.⁵⁴⁴ They are frequently offered for free.⁵⁴⁵ Off-the-shelf tools can be purchased in stores⁵⁴⁶ and are available online for download. As several commenters note, online safety organizations, such as GetNetWise, also make online safety tools easy to find, with online searchable directories that can help parents find the specific tools that they need.⁵⁴⁷ Given this range of options, commenters assert that there is no single solution to provide Internet safety; rather, many solutions can be used together to tailor an approach appropriate for each family.⁵⁴⁸ We will discuss many of these options below, including software filters, monitors, safe applications, labels, flags, safe search, and parent and caregiver driven solutions.

143. Studies have found that Internet parental control tools on the market are effective⁵⁴⁹ and that those who use these tools are generally pleased with their performance.⁵⁵⁰ Some commenters point out that these tools are not foolproof.⁵⁵¹ CDT and other commenters observe, however, that while these

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⁵⁴¹ See *Mukasey*, 534 F.3d at 201; *Gonzales*, 478 F. Supp. 2d at 793; COPA Report, Sec. II.B. Filtering/Blocking. See also Industry and Public Interest Groups Joint Comments at 13-14.

⁵⁴² *Mukasey*, 534 F.3d at 201; *Gonzales*, 478 F. Supp. 2d at 793.

⁵⁴³ See Microsoft Comments at 7; PFF Comments at 79-81; FOSI Comments at 8. See also Microsoft VISTA Parental Controls, <http://www.microsoft.com/protect/products/family/vista.msp>.

⁵⁴⁴ See PFF Comments at 77; NCTA Comments at 12-13 (noting efforts of broadband Internet providers). See *Gonzales*, 478 F. Supp. 2d at 793 (“Because most ISPs offer filtering products, a parent does not have to do anything to obtain a filter other than to activate it through the ISP’s Web site or to call the ISP.”).

⁵⁴⁵ See *Gonzales*, 478 F. Supp. 2d at 793 (“AOL’s filter is now even available for free to anyone who wants to use it, even non-AOL subscribers.”).

⁵⁴⁶ See *Gonzales*, 478 F. Supp. 2d at 793 (“Non-ISP filtering products vary in cost, ranging from approximately \$20 to \$60.”).

⁵⁴⁷ See GetNetWise Tools for Families, <http://kids.getnetwise.org/tools/>. See CDT Comments at 5; PFF Comments at 75 (noting GetNetWise’s comprehensive list). See also Internet Filter Software Review 2009, <http://internet-filter-review.toptenreviews.com/> (providing side by side comparison of top ten filtering products). Many others provide information and reviews of online safety products, including Filtering Facts, <http://filteringfacts.org/filter-reviews/>, PC Magazine, <http://www.pcmag.com/category2/0,2806,1639158,00.asp>, Monitoring Software Reviews, <http://www.monitoringsoftwarereviews.org/>, and Filter Review, <http://www.filterreview.com/>; PFF Comments at 76.

⁵⁴⁸ See FOSI Comments at 5-6, 13; AT&T Comments at 5.

⁵⁴⁹ See *Gonzales*, 478 F. Supp. 2d at 795-797 (“filters generally block about 95% of sexually explicit material”).

⁵⁵⁰ See CIPA Study, Exec. Sum., Sec. V (concluding “currently available technology measures have the capacity to meet most, if not all, of [educational institutions’] needs and concerns.”); *Gonzales*, 478 F. Supp. 2d at 794 (“A study done by AOL found that 85 percent of parents are highly satisfied with their AOL Parental Control products, and that 87 percent of parents find them easy to use. Surfcontrol has also found that customer response is positive and 70 to 80 percent of their customers renew their subscriptions to Surfcontrol’s filter.”).

⁵⁵¹ See PFF Comments at 2; EFF Reply at 7 (noting that the content to be reviewed by filtering companies is vast, and much of the review is not done by humans but by automated reviews).

tools are not perfect, they have undergone significant improvements over the past ten years and parents are increasingly using them.⁵⁵² There have been a number of studies, including the COPA Report and the CIPA Review,⁵⁵³ that examined the strengths and weaknesses of different technologies and different specific solutions.

1. Software Solutions

144. Software solutions can be downloaded, installed, and implemented by parents on their home computers and networks, and used by care givers at schools and other locations. Types of software solutions include filters; white lists; and monitors, reports and time controls.

145. *Filters.* The Commission asked in the *NOI* about filtering solutions, and many commenters discuss this technology.⁵⁵⁴ Filters act as gatekeepers, controlling the flow of content.⁵⁵⁵ Filters generally follow one of three strategies: (i) blacklist: any content on the filter's list is blocked;⁵⁵⁶ (ii) white list: any content on the list is permitted;⁵⁵⁷ and (iii) dynamic: content is analyzed dynamically and in real time to determine whether it should be permitted.⁵⁵⁸ An April 2007 study by the Pew Internet & American Life Project found that 53 percent of parents of online teens have filtering software installed on the computer their child uses at home.⁵⁵⁹

⁵⁵² See Industry and Public Interest Groups Joint Comments at 13-14; FOSI Comments at 5-6.

⁵⁵³ See CIPA Review Sec. I.A. ("Even the most sophisticated and current technology tools are not one hundred percent effective.") and Sec. II.A. (exploring how filtering technology both overblocks – blocks content that should be permitted – and underblocks – fails to block content that should have been blocked).

⁵⁵⁴ See *NOI*, 24 FCC Rcd at 3358, ¶ 39; see Industry and Public Interest Groups Joint Comments at 5; Advertisers Comments at 4; AT&T Comments at 9; Comcast Comments at 5; Cox Comments at 2; Microsoft Comments at 7; NCTA Comments at 12; USTelecom Comments at 7; Verizon Comments at 9; Google Comments at 5; CFIRS Comments at 2; PFF Comments at 7.

⁵⁵⁵ See PFF Comments at 73; *Mukasey*, 534 F.3d at 199; *Gonzales*, 478 F. Supp. 2d at 789; COPA Report, Sec. II.B.

⁵⁵⁶ See Microsoft Comments at 7; *American Civil Liberties Union v. Gonzales*, 478 F. Supp. 2d at 790 ("Black lists are lists of URLs or Internet Protocol ("IP") addresses that a filtering company has determined lead to content that contains the type of materials its filter is designed to block."); see also COPA Report, Sec. II.B. Filtering/Blocking.

⁵⁵⁷ See PFF Comments at 82-84; *American Civil Liberties Union v. Gonzales*, 478 F. Supp. 2d at 790 ("White lists are lists of URLs or IP addresses that a filtering company has determined do not lead to any content its filter is designed to block, and, thus, should never be blocked. A very restrictive filter, like a 'walled garden' filter, might block all URLs except those included on a white list.").

⁵⁵⁸ See *American Civil Liberties Union v. Gonzales*, 478 F. Supp. 2d at 790 (stating that "dynamic filters analyze the words on the page, the metadata, the file names for images, the URLs, the links on a page, the size of images, the formatting of the page, and other statistical pattern recognition features, such as the spatial patterns between certain words and images, which can often help filters categorize content even if the actual words are not recognized").

⁵⁵⁹ See Pew Internet and American Life Project, *Teens, Privacy and Online Social Networks*, April 2007, at v, available at http://www.pewinternet.org/~media/Files/Reports/2007/PIP_Teens_Privacy_SNS_Report_Final.pdf.pdf ("2007 Pew Study"). A March 2005 study by the Pew Internet & American Life Project found that 54 percent of parents of online teens have a filter installed on their home computer, up from 41 percent in December 2000. See Pew Internet and American Life Project, *Protecting Teens Online*, March 17, 2005, at 7-8, available at http://www.pewinternet.org/~media/Files/Reports/2005/PIP_Filters_Report.pdf.pdf ("2005 Pew Study"). The questions regarding filtering were asked differently in the 2005 and 2007 studies, thus they cannot be directly compared. *2007 Pew Study* at v n.1.

146. As noted in the *NOI*, the list of what is blocked (or permitted) may be generated through an automated analysis, human review, or by user options.⁵⁶⁰ Individuals can select different blocking services that may block based on different criteria, permitting parents to select a service that addresses their concerns.⁵⁶¹ Most software products allow parents to configure the software further to block the type of content to which the parent objects. In addition, filtering software will often permit the parent to add specific sites that they desire to be blocked.⁵⁶² Frequently, different accounts can be created for different children in a household, with appropriate settings for each.⁵⁶³ The list of blocked (or permitted) content may be updated regularly by the filtering service or by a third party service that reviews Internet content. Generally filters give parents the ability to use a password to turn off the filters when desired.⁵⁶⁴

147. We recognize that filtering technology has its limitations. There is a wide body of literature on the limitations of filters.⁵⁶⁵ The amount of content on the Internet is vast, making it difficult for humans to review each site.⁵⁶⁶ Filtering technology both overblocks (blocks access to sites that should otherwise be accessible) and underblocks content (permits access to sites that should be accessible).⁵⁶⁷

148. While online parental controls continue to improve and are able to inform parents when children attempt to tamper with or alter the settings,⁵⁶⁸ children can still circumvent them by moving to an unfiltered device, moving to another location without filters, using a proxy server, or accessing websites that create ways to bypass content filters.⁵⁶⁹ Filters are not generally restricted to one type of Internet application or one type of content, such as video or audio programming. Instead, generally,

⁵⁶⁰ See *NOI*, 24 FCC Rcd at 3358, ¶ 39.

⁵⁶¹ See FOSI Comments at 6.

⁵⁶² See PFF Comments at 73; AT&T Comments at 9; Comcast Comments at 5; NCTA Comments at 12-13. See also *Gonzales*, 478 F. Supp. 2d at 790, 792.

⁵⁶³ See PFF Comments at 79-81; Microsoft Comments at 7.

⁵⁶⁴ See COPA Report, Sec. II.B; see also CSTB Report, p. 6-7; GetNetWise Tools Filtering Out Sexually Explicit Content, <http://kids.getnetwise.org/tools/blocksex>.

⁵⁶⁵ See PFF Comments at 2-4; see also COPA Report, Sec. II.B. Filtering/Blocking (discussing strengths and weaknesses of filtering technology); Nancy Kranich, "Why Filters Won't Protect Children or Adults," *Library Administration and Management*, Vol. 18, No. 1, Winter 2004, <http://www.ala.org/ala/aboutala/offices/oif/ifissues/issuesrelatedlinks/whyfilterswontprotect.cfm>; *REPORT: See No Evil: How Internet Filters Affect the Search for Online Health Information*, Kaiser Family Foundation (Dec. 13, 2002), <http://www.kff.org/entmedia/20021210a-index.cfm>; *Internet Blocking in Public School*, EFF (Sept. 9, 2002), http://w2.eff.org/Censorship/Censorware/net_block_report/.

⁵⁶⁶ See EFF Reply at 7; NAS Report at 6 (stating that "the volume on the Internet is so large that it is impractical for human beings to evaluate every discrete piece of information for inappropriateness").

⁵⁶⁷ See CIPA Study, Sec. II.A & B (noting that "the technology measures also sometimes block online educational content sought by teachers."); NAS Report at 10 (discussing limitations of technology).

⁵⁶⁸ See *Gonzales*, 478 F. Supp. 2d at 795.

⁵⁶⁹ See Tom A. Peter, "Internet Filters Block Porn, But Not Savvy Kids," *Christian Science Monitor*, April 11, 2007, <http://www.csmonitor.com/2007/0411/p13s02-lihc.htm>; see also NAS Report at 11-12 ("Technology can pose barriers that are sufficient to keep those who are not strongly motivated from finding their way to inappropriate material or experiences. Further, it can help to prevent inadvertent exposure to such materials. But, as most parents and teachers noted in their comments to the committee, those who really want to have access to inappropriate sexually explicit materials will find a way to get them.").

filters are designed to work on any application or content with which a child might interact, including website visits, e-mail, instant messaging, websites visited, chat rooms, and other activities.⁵⁷⁰

149. Pursuant to Section 2(b)(3) of the Act, the *NOI* specifically asked about advanced blocking technologies that “can filter language based upon information in closed captioning.”⁵⁷¹ Broadcast TV closed captioning is not required for Internet video services and is generally not available. Some services offer video producers a closed captioning feature, but it is not based on the same standards as broadcast TV closed captioning.⁵⁷² Because several different captioning technologies are used on the Internet, solutions based on filtering closed captioning would have to be adapted to work for different Internet content sources in order to be effective.

150. *White Lists*. The Commission also asked in the *NOI* about child safe zones that “white list” safe content and block out unwanted content. The Commission asked whether parents know about this option and find it effective.⁵⁷³ PFF comments that child friendly applications are available on the market that allow children to do only things that are safe or approved by parents.⁵⁷⁴ These include web browsers that permit children to access only content within a walled garden or on a white list, browsers with filtering technology built in, and messaging programs that permit children to message and e-mail only individuals added to the address book by the parent.⁵⁷⁵ Examples of such applications include Firefox’s Glubble, which, once loaded, locks the Firefox browser so that a password is required before a user can access the Internet. Parents can then establish a user account for their children that allows them access only to a set of prescreened, kid-friendly websites.⁵⁷⁶ Other video applications have been designed specifically for children, such as the Kideo Player and Totlol.com.⁵⁷⁷

151. *Monitors, Reports, and Time Controls*. The Commission asked in the *NOI* about monitoring and recording devices.⁵⁷⁸ Solutions that commenters mention include tools that can monitor a child’s activities, deny access to certain applications or pieces of hardware (e.g., a webcam), report to

⁵⁷⁰ See AT&T Comments at 9; PFF Comments at 73; Verizon Comments at 9.

⁵⁷¹ *NOI*, 24 FCC Rcd at 3352, ¶ 24 (quoting Child Safe Viewing Act at Section 2(b)(3)).

⁵⁷² See *New Captions Feature for Videos*, YouTube Blog (Aug. 28, 2009), http://www.youtube.com/blog?gl=GB&hl=en-GB&entry=7RN6iHLHX_w (enabling a feature that permits, but does not require, video producers to add captioning to their videos); Hulu – Support, http://www.hulu.com/support/content_faq (“The closed-captioning data that’s used for broadcast TV isn’t easily translated for online use, so we’re investigating alternative solutions to boost our closed-captioning coverage.”). See also TVGuardian Frequently Asked Questions, <http://tvguardian.com/gshell.php?page=FAQ&PHPSESSID=86cdfbdd52e288ad79b69695a8b82e10> (describing TVGuardian as a solution that filters based on closed captioning from TV and DVDs).

⁵⁷³ See *NOI*, 24 FCC Rcd at 3359, ¶ 41.

⁵⁷⁴ See PFF Comments at 82-84. See also *Gonzales*, 478 F. Supp. 2d at 790.

⁵⁷⁵ See PFF Comments at 82-84. See also Advertisers Comments at 4; Comcast Comments at 5; Microsoft Comments at 7; 9.

⁵⁷⁶ See PFF Comments at 82.

⁵⁷⁷ Kideo Player, <http://www.kideoplayer.com/>, describes itself as a “A fun and safe way to ‘channel surf’ YouTube.” Totlol – Video for Kids, Babies, Toddlers, Pre and School Kids, Tweens and Parents, <http://www.totlol.com/>, describes itself as “a video website designed specifically for children. It is community moderated. It is constantly growing. It is powered by YouTube.”

⁵⁷⁸ See *NOI*, 24 FCC Rcd at 3359-60, ¶ 41.

the parent on what the child has done online, and limit time on the computer.⁵⁷⁹ Monitors can record the specific addresses of pages visited by children; thus, in the case of a video service like YouTube, parents can know specifically what videos have been watched.⁵⁸⁰ Time control software can control how much time a child is online, and when a child is online.⁵⁸¹ Each member of a family can have a separate account that is configured according to his or her needs.⁵⁸² Microsoft notes that such features are built into Windows Vista and reports that they will be included in Windows 7.⁵⁸³ These features are also built into Apple OS X.⁵⁸⁴ An April 2007 study by the Pew Internet & American Life Project found that 45 percent of parents of online teens have monitoring software that records what their children do online.⁵⁸⁵

152. While these tools can be very useful to caregivers, they too have their limitations. The COPA Commission observed:

Monitoring and time-limiting technologies can be effective when used in the home because they influence children's activities and require involvement of parents. These technologies can be effective for email and other non-Web communication, and for access to global content. Monitoring and time-limiting technologies encourage greater parental involvement in the child's online experience; however, because a parent learns of activities only after the fact, effectiveness in reducing accidental access to harmful to minors materials may be limited.⁵⁸⁶

2. Network Service Provider Solutions

153. Many commenters provide information on how network service providers help promote online safety. Many network service providers include parental control software in the materials provided to new subscribers, in addition to making this software available on their websites.⁵⁸⁷ They

⁵⁷⁹ See FOSI Comments at 5-6; AT&T Comments at 9; Comcast Comments at 5; Cox Comments at 5; Verizon Comments at 9; PFF Comments at 74. According to GetNetWise, "monitoring tools inform adults about a child's online activity without necessarily limiting access. Some of these tools simply record the addresses of Web sites that a child has visited. Others provide a warning message to a child if he/she visits an inappropriate site." GetNetWise, *Tools that Monitor Computer Activity*, <http://kids.getnetwise.org/tools/monitors> (providing a list of available monitoring applications). See also *Gonzales*, 478 F. Supp. 2d at 792; NAS Report at 11; COPA Report, Sec. II.F.15 (discussing monitoring and time-limiting technologies as "Use (typically at the PC) of software that creates logs showing details of a child's online activities and, optionally, enforces rules regarding the amount of time that may be spent online. Such systems may track both web use and email and instant messaging activities.").

⁵⁸⁰ See PFF Comments at 73, 75; AT&T Comments at 9; Verizon Comments at 9. See also *YouTube and Your Teen*, <http://www.common sense media.org/youtube-and-your-teen>. See also Marian Merritt, *YouTube is Top Kid Destination; How to Enjoy it Safely*, (Jun. 24, 2009), <http://community.norton.com/t5/Ask-Marian/YouTube-Is-Top-Kid-Destination-How-To-Enjoy-It-Safely/ba-p/111256> ("OnlineFamily.Norton will report on the videos that children are watching or searching for.").

⁵⁸¹ See PFF Comments at 81; AT&T Comments at 9; Comcast Comment at 5; Microsoft Comments at 7.

⁵⁸² See Microsoft Comments at 7; PFF Comments at 81; NCTA Comments at 13.

⁵⁸³ See Microsoft Comments at 7.

⁵⁸⁴ See Microsoft Comments at 7; PFF Comments at 81.

⁵⁸⁵ See *2007 Pew Study* at v.

⁵⁸⁶ COPA Report, Sec. II.F.15.

⁵⁸⁷ See PFF Comments at 77; NCTA Comments at 12-13; USTelecom Comments at 7; FOSI Comments at 7; AT&T Comments at 9; Comcast Comments at 5; Verizon Comments at 10. See also GetNetWise *How ISPs are Helping*, <http://kids.getnetwise.org/tools/isoptions>. See also 47 U.S.C. § 230(d) ("A provider of interactive computer service (continued....)

provide educational material on their websites and host educational events.⁵⁸⁸ Network service providers also support the work of online safety nonprofit organizations.⁵⁸⁹ Many of these network service providers have participated in government working groups such as NTIA's OSTWG⁵⁹⁰ and the COPA Commission,⁵⁹¹ as well as private sector efforts such as the Internet Safety Technical Task Force ("ISTTF") at the Berkman Center.⁵⁹²

3. Content Service Provider Solutions

154. Commenters discuss content service providers' efforts to promote online safety, which provide additional parental tools.⁵⁹³ Content service providers offer a series of solutions, many of which also increase the parents' ability to make their children's online experiences positive.

155. *Acceptable Use Policies.* The Commission asked in the *NOI* about acceptable use and "takedown" policies.⁵⁹⁴ Commenters explain that content hosting sites and services may have acceptable use policies and terms of service that indicate what content is acceptable and when unacceptable content will be taken down.⁵⁹⁵ If content is found that violates the acceptable use policy, the service may take it down from the site and may terminate the account of the individual that posted it. Sites may actively review their content, or they may review the content when notified by a visitor that the content is problematic.

156. *Labels.* The *NOI* also asked about labeling capabilities.⁵⁹⁶ Content creators can label
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shall, at the time of entering an agreement with a customer for the provision of interactive computer service and in a manner deemed appropriate by the provider, notify such customer that parental control protections (such as computer hardware, software, or filtering services) are commercially available that may assist the customer in limiting access to material that is harmful to minors."); Internet Tax Freedom Act, Sec. 1101(f)(1), codified at 47 U.S.C. § 151 nt. (Internet Tax Freedom Act "shall also not apply with respect to an Internet access provider, unless, at the time of entering into an agreement with a customer for the provision of Internet access services, such provider offers such customer (either for a fee or at no charge) screening software that is designed to permit the customer to limit access to material on the Internet that is harmful to minors.").

⁵⁸⁸ See AT&T Comments at 9-10; NCTA Comments at 13-14; Cox Comments at 2; Comcast Comments at 8; FOSI Comments at 10-11. See also AT&T Parental Controls and Online Safety, <http://www.att.com/gen/landing-pages?pid=6456>; *Power to Learn: a service of Cablevision*, Internet Smarts, http://www.powertolearn.com/internet_smarts/index.shtml; Charter Communications, <http://www.charter.com/Visitors/NonProducts.aspx?NonProductItem=65>; Comcast.net Security Channel, <http://security.comcast.net/>; COX Take Charge Smart Choices for your Cox Digital Home, <http://www.cox.com/takecharge/>; Verizon Parental Control Center, <http://parentalcenter.verizon.radialpoint.net>

⁵⁸⁹ See USTelecom Comments at 8-9; <http://www.cox.com/takecharge/>; Sprint Comments at 3.

⁵⁹⁰ See USTelecom Comments at 8-9

⁵⁹¹ See COPA Commission Commissioners, <http://www.copacommission.org/commission/commissioners.shtml>.

⁵⁹² See CDT Comments at 15; Internet Safety Technical Task Force, Members, Berkman Center, <http://cyber.law.harvard.edu/research/isttf/members>.

⁵⁹³ See, e.g., AT&T Comments at 9-10; Google Comments at 6.

⁵⁹⁴ See *NOI*, 24 FCC Rcd at 3360, ¶ 41.

⁵⁹⁵ See Google Comments at 4, 6. See also YouTube Community Guidelines, http://www.youtube.com/t/community_guidelines. See, e.g., Flickr Community Guidelines, <http://www.flickr.com/guidelines.gne>; Second Life Safety Tips for Teens and Parents, <http://secondlife.com/policy/security/teensafety.php>.

⁵⁹⁶ See *NOI*, 24 FCC Rcd at 3359, ¶ 40.

their content,⁵⁹⁷ providing semantic information about the content or a reference number for the content.⁵⁹⁸ This reference number can be used to look up the content in a database and determine whether it is appropriate.⁵⁹⁹ A number of hosting sites require content uploaders to identify their content.⁶⁰⁰

157. *Flags and Tags.* An alternative strategy that commenters discuss is to have the community that interacts with the content flag or tag the content.⁶⁰¹ The amount of video content being uploaded to the Internet is more than any hosting service or filtering service can manually review for compliance with its acceptable use policy. By “crowdsourcing”⁶⁰² the review of content to the community that interacts with the content, services can have many people looking at large amounts of content, increasing the effectiveness of the acceptable use policy.⁶⁰³ When problematic content is encountered, anyone viewing the content can click on the flag and identify how the content in question violates the site’s acceptable use policy. When a video receives a certain number of flags, it may come to the attention of the hosting service, which may then review the video and decide whether it comports with the guidelines and whether it should be taken down. A number of video hosting sites follow this approach.⁶⁰⁴

158. Another strategy is for the interacting community to tag content. Tagging is not directed so much at identifying *objectionable* content, as it is directed at simply identifying content. Individuals

⁵⁹⁷ The terms “tags,” “labels,” and “flags” are used differently by different sites, and are somewhat interchangeable.

⁵⁹⁸ See W3C Semantic Web Activity, <http://www.w3.org/2001/sw/> (W3C is the standards body for the World Wide Web).

⁵⁹⁹ See, e.g., PFF Comments at 95 (The Family Online Safety Institute is developing the Internet Content Rating Association (ICRA) which “is helping to develop improved Internet filtering systems through comprehensive website labeling and metadata tagging.”); See also Website Reviews Kids Websites, <http://www.common sense media.org/website-reviews>. The COPA Report described labeling as “[v]oluntary action by content sources to indicate that a site or particular content meets a particular standard or fits a particular category. The ‘label’ can take the form of a metatag, or entry into a database listing, or display of a seal. The use of a label may be audited.” COPA Report, Sec. II.C.6. At the time, the COPA Commission noted that “labeling” had not been widely adopted by publishers. *Id.*

⁶⁰⁰ See Promoting Videos: Tags definitions, YouTube, <http://www.google.com/support/youtube/bin/answer.py?hl=en&answer=55769>; YouTube Glossary: Category, <http://www.google.com/support/youtube/bin/answer.py?hl=en&answer=94328>. One method of labeling content could be through digital watermarks. Digimarc Corporation Comments at 5-6; Digimarc Corporation at 5-6. Digital watermarking is discussed above.

⁶⁰¹ See PFF Comments at 98; Google Comments at 6.

⁶⁰² See Jeff Howe, *The Rise of Crowdsourcing*, WIRED (June 2006), <http://www.wired.com/wired/archive/14.06/crowds.html>.

⁶⁰³ See PFF Comments at 95.

⁶⁰⁴ See Google Comments at 6; PFF Comments at 98 (noting efforts of YouTube, Flickr, and MySpace). YouTube’s efforts will be discussed in greater detail below. See, e.g., Flickr: Help: Content Filters, <http://www.flickr.com/help/filters/#258>; Facebook Facebook Safety, <http://www.facebook.com/help/search.php?hq=report#/safety/> (“You can help Facebook by notifying us of any nudity or pornography, or harassment or unwelcome contact by clicking on the “Report” link located on pages throughout the site.”); Vimeo FAQ, How Do I Report Abuse, <http://www.vimeo.com/help/faq>; Google Webpage Removal Request Tool, <https://www.google.com/webmasters/tools/removals?pli=1> (offering the option to identify “inappropriate webpage or image that appears in our SafeSearch filtered results.”).

interacting with content can tag that content as worthy of reading and identify what type of content it is.⁶⁰⁵ They can tag the content with keywords that, like labels, help to identify the content. For example, someone may tag a photo with the names of the individuals in the photo and where the photo was taken. Or one might tag a news article with keywords that identify the topics of the article. Like labels, tags can be used to help find (or avoid) the type of content for which individuals are looking.⁶⁰⁶

159. *Safe Search.* Several search engines provide settings that enable individuals to set the search engine to a restrictive setting that filters the responses returned. Many services such as Google, Flickr, and AOL provide safesearch features.⁶⁰⁷ According to Google, “[m]any users prefer not to have adult sites included in search results (especially if children use the computer). Google’s SafeSearch screens for sites that contain explicit sexual content and deletes them from your search results. No filter is 100 percent accurate, but SafeSearch should eliminate most inappropriate material.”⁶⁰⁸

160. *Age Verification.* The *NOI* also asked about age verification solutions.⁶⁰⁹ Age verification solutions require the user to verify his or her age, sometimes by using a credit card number or an independently issued identification.⁶¹⁰ Commenters note that it is generally not effective as a tool in online environments where minors are likely to participate.⁶¹¹

161. *Tools Used by Specific Online Video Services.* As noted above, the diversity of sources for online video and audio is almost infinite. There are, however, certain notable large players. According to Nielsen Online,⁶¹² in April 2009 the top five online video sites as measured by streams were YouTube (58.1 percent), Hulu (3.9 percent), Yahoo! (2.2 percent), Fox Interactive (2.1 percent), and Nickelodeon (1.9 percent). YouTube stands out as one of the most popular sites on the web (all websites included),⁶¹³ most popular video site, and most popular site among children.⁶¹⁴ The second

⁶⁰⁵ See PFF Comments at 95.

⁶⁰⁶ There are many popular tagging services that inform participants in a community regarding what other members of the community have found interesting and worth reading. See, e.g., Delicious, <http://delicious.com/>; reddit.com: what’s new online, <http://www.reddit.com/>; Digg, <http://digg.com/>. See also *Social Networks and Bookmarking*, Pew Internet & American Life Project (Jan. 24, 2005), <http://www.pewinternet.org/PPF/p/1035/pipcomments.asp>.

⁶⁰⁷ See FOSI Comments at 8. See also Google SafeSearch, <http://www.google.com/support/websearch/bin/answer.py?hl=en&answer=35892>; Flickr: Help: Content Filters: What is Safesearch, <http://www.flickr.com/help/filters/#249>; AOL SafeSearch, <http://about-search.aol.com/>.

⁶⁰⁸ See <http://www.google.com/support/websearch/bin/answer.py?hl=en&answer=35892>.

⁶⁰⁹ See *NOI*, 24 FCC Rcd at 3360, ¶ 41.

⁶¹⁰ See COPA Report at II.D.

⁶¹¹ See CDT Comments at 13; PFF Comments at 90. See also *Mukasey*, 534 F.3d at 195; *Gonzales*, 478 F. Supp. 2d at 800 (finding that “there is no evidence of age verification service or products available on the market to owners of Web sites that actually reliably establish or verify the age of Internet users” and “nor is there evidence of such service or products that can effectively prevent access to Web pages by a minor”); COPA Report, Sec. II.D.8.

⁶¹² See *YouTube Maintains Top Rankings by Total Streams and Hulu Grows 490% Year-Over-Year, According to Nielsen Online*, (May 14, 2009), http://www.nielsen-online.com/pr/090514_2.pdf.

⁶¹³ See *comScore Media Matrix Ranks Top 50 US Web Properties for May 2009*, (Jun. 23, 2009), <http://www.comscore.com/content/download/2589/27981/file/comScore%20Media%20Matrix%20Ranks%20Top%2050%20U.S.%20Web%20Properties%20for%20May%202009.pdf>

⁶¹⁴ See Mariam Merritt, *YouTube is Top Kid Destination; Hot to Enjoy it Safely*, (Jun. 24, 2009), <http://community.norton.com/t5/Ask-Marian/YouTube-Is-Top-Kid-Destination-How-To-Enjoy-It-Safely/ba-p/111256>

most popular video site has only 4 percent market share, demonstrating how profuse the offering of video sites is.⁶¹⁵ The top audio download services include iTunes, Amazon, Napster, and others.⁶¹⁶ The amount of online video and audio content continues to grow.⁶¹⁷ We review below some of the solutions online video services have employed in order to promote online safety.

162. *YouTube*. YouTube is a video hosting site where anyone anywhere can upload short videos to his account and share them with the world.⁶¹⁸ YouTube has enabled a number of safety features, leveraging community review and input.⁶¹⁹ YouTube uses flags and Community Guidelines.⁶²⁰ Each video page has a button under the video called “flag.” To use the flags, an individual must sign into the YouTube service, click on “Flag”, and choose among six categories: (1) sexual content, (2) violent or repulsive content, (3) hateful or abusive content, (4) harmful dangerous acts, (5) spam, and (6) infringes my rights.⁶²¹ In addition, YouTube has Community Guidelines that prohibit pornography or sexually explicit content, animal abuse, drug abuse, under-age drinking and smoking, bomb making, graphic or gratuitous violence, shock or gross out material, copyright violations, hate speech, predatory behavior, stalking, threats, and spam. YouTube states that content uploaders who are found to have violated the YouTube Community Standards once will be given a warning, and a strike will be placed on the account that lasts six months. If in that six months the uploader receives a second strike, the account will be temporarily disabled. If no further strikes are received during the period, the account will be restored. If a third strike is received, the account will be terminated.⁶²²

163. YouTube promises to enforce its Community Guidelines:

YouTube staff review flagged videos 24 hours a day, seven days a week to determine whether they violate our Community Guidelines. When they do, we remove them. Sometimes a video

⁶¹⁵ See Chris Anderson, *The Long Tail*, Wired Magazine (Oct. 2004), <http://www.wired.com/wired/archive/12.10/tail.html>.

⁶¹⁶ See Eliot Van Buskirk, *Zune Eats Creative's Lunch, Grapping 4 Percent of MP3 Player Market*, WIRED (May 12, 2008), http://www.wired.com/listening_post/2008/05/ipod-loses-mark/ (as of Q108 listing Apples market share of MP3 players as 71%, SanDisk 11%, Creative 2%, and Microsoft 4%); Sam Costello, *Top 4 Music Download Services*, About.com, http://ipod.about.com/od/downloadservicereviews/tp/top_download_services.htm.

⁶¹⁷ See *Online TV Grows in Popularity*, (Sept. 4, 2008), <http://www.tnsglobal.com/news/news-CA47962D13C744DD9A4BEDCAA07AF42E.aspx>; Greg Sandoval, *Study: Web-video viewers to top 1 billion by 2013*, CNET (May 27, 2008), http://news.cnet.com/8301-10784_3-9952659-7.html?part=rss&subj=news&tag=2547-1_3-0-20; Ben Worthen, *Cisco Says Internet Video to Explode*, Wall Street Journal (Jun. 9, 2009), <http://blogs.wsj.com/digits/2009/06/09/cisco-says-internet-video-to-explode/>.

⁶¹⁸ See YouTube Company History, <http://www.youtube.com/t/about>.

⁶¹⁹ See *Safety, education, and empowerment on YouTube*, The Official Google Blog (Dec. 11, 2008), <http://googleblog.blogspot.com/2008/12/safety-education-and-empowerment-on.html>.

⁶²⁰ See http://www.youtube.com/t/community_guidelines.

⁶²¹ Each of those categories has several subcategories. For instance, sexual content is broken down into (a) graphic sexual activity, (b) nudity, (c) suggestive, but without nudity, and (d) other sexual content. See http://www.youtube.com/t/community_guidelines.

⁶²² See *Accounts and Policies: General Policy Enforcement Information*, <http://help.youtube.com/support/youtube/bin/answer.py?hl=en&answer=92486>; *Flagging on YouTube: The Basics*, <http://www.youtube.com/watch?v=ZA22WSVICZ4/>. See Marian Merritt, *YouTube is Top Kid Destination; How to Enjoy it Safely*, (June 24, 2009), <http://community.norton.com/t5/Ask-Marian/YouTube-Is-Top-Kid-Destination-How-To-Enjoy-It-Safely/ba-p/111256>.

doesn't violate our Community Guidelines, but may not be appropriate for everyone. These videos may be age-restricted. Accounts are penalized for Community Guidelines violations and serious or repeated violations can lead to account termination. If your account is terminated, you won't be allowed to create any new accounts.⁶²³

164. Each video posted to YouTube can have comments posted by the community, discussing the video. Individuals who uploaded videos to their accounts can moderate the comments posted at their videos, requiring pre-approval before any comments are posted⁶²⁴ or deleting offensive comments,⁶²⁵ block users whose comments they consider inappropriate,⁶²⁶ or permit only friends to post comments to their videos.⁶²⁷

165. Online safety organizations encourage parents to go to YouTube and become familiar with the content that their children are accessing.⁶²⁸ Parents can also use monitoring software, discussed above, to receive reports about which YouTube videos a child has watched.

166. *Other Video Services.* Other online video and audio services also include safety features. Yahoo! Video, which permits individuals to upload their own videos, follows a strategy similar to YouTube's, with guidelines and the ability of the community to flag offensive content.⁶²⁹ Hulu streams TV shows and movies and offers parental controls that will block minors' access to mature content.⁶³⁰ iTunes, which enables individuals to download music and shows on demand to be enjoyed on a computer, TV, or handheld device, offers a feature whereby parents can block the downloading of songs or videos with explicit language and sends a receipt to the email on the account whenever content is purchased.⁶³¹

167. As commenters note, there are also a number of video and audio sites that are walled gardens, providing only family friendly content.⁶³² Examples of child safe zones include Yahoo! Kids

⁶²³ YouTube Community Guidelines, http://www.youtube.com/t/community_guidelines.

⁶²⁴ See Getting Started: Comments on my videos, <http://www.google.com/support/youtube/bin/answer.py?answer=58123>.

⁶²⁵ See Learn More: Removing comments on my videos, <http://www.google.com/support/youtube/bin/answer.py?answer=56112>.

⁶²⁶ See Abusive Users: Blocking users, <http://help.youtube.com/support/youtube/bin/answer.py?answer=56113>.

⁶²⁷ See Learn More: "Friends-only" messages, <http://www.google.com/support/youtube/bin/answer.py?answer=67057>.

⁶²⁸ See Marian Merritt, *YouTube is Top Kid Destination; How to Enjoy it Safely*, (Jun. 24, 2009), <http://community.norton.com/t5/Ask-Marian/YouTube-Is-Top-Kid-Destination-How-To-Enjoy-It-Safely/bap/111256>; *YouTube and Your Teen*, <http://www.common sense media.org/youtube-and-your-teen>.

⁶²⁹ See Guidelines, <http://video.yahoo.com/guidelines>.

⁶³⁰ See CDT Comments at 10. Hulu Support, <http://www.hulu.com/support/account> ("Parental Controls Users are required to be logged into an account and over the age of 18 in order to view mature content (films rated R, TV-MA shows) on Hulu. Unfortunately, we do not have a setting that allows for more customized parental controls at this time. The best suggestion we can offer is to log out of your Hulu account while watching with younger children; this will block mature content.").

⁶³¹ See CDT Comments at 10; PFF Comments at 45; *iTunes: Using Parental Controls*, <http://support.apple.com/kb/HT1904>.

⁶³² See, e.g., PFF Comments at 88. See also COPA Report, Sec. II.F.14.

(kids.yahoo.com), PBS Kids (pbskids.org), Nickelodeon (nick.com), Cartoon Network (cartoonnetwork.com), TV Disney.com (home.disney.go.com), and .Kids.US.⁶³³

4. Parent and Care Giver Driven Solutions

168. Outside of any technical solution, the record in this proceeding suggests that there are a series of best practices that parents and all adult care givers can follow in order to promote children's safety.⁶³⁴ These generally include education, acceptable use policies, and supervision.

169. *Education.* The *NOI* asked what role education should play in protecting children from objectionable content, especially given the ways in which blocking technology may be circumvented.⁶³⁵ Commenters,⁶³⁶ previous reports,⁶³⁷ experts, case law, and government officials agree that the key to online safety is education. Children need to be educated regarding Internet safety and media literacy. The National Academy of Sciences states that “[w]hile both technology and public policy have important roles to play, social and educational strategies to develop in minors an ethic of responsible choice and the skills to effectuate these choices and to cope with exposure are foundational to protecting children.”⁶³⁸

170. Education is also needed for parents, teachers, and care givers.⁶³⁹ As the National Academies of Sciences stated, “[a]dults must be taught to teach children how to make good choices on the Internet. They must be willing to engage in sometimes-difficult conversations.”⁶⁴⁰ Educational materials and resources are increasingly available online,⁶⁴¹ including educational materials dealing with video and audio.⁶⁴² Internet Service Providers are also aggregating and making available to their subscribers educational materials.⁶⁴³

⁶³³ See .Kids.US – Play, Learn, Surf, <http://www.kids.us/>. See also COPA Report, Sec. II.E.10 & 11. Some parties noted that .kids.us has had limited success. CDT Comments at 12.

⁶³⁴ See, e.g., AT&T Comments at 6, FOSI Comments at 10.

⁶³⁵ See *NOI*, 24 FCC Rcd at 3361, ¶ 43.

⁶³⁶ See CDT Comments at 14; FOSI Comments at 12.

⁶³⁷ See, e.g., COPA Report, Sec. II.A.2 (“As families are the first line of defense in raising and protecting children, education programs can be highly effective in giving caregivers needed information about online risks and protection methods, and access to technologies and ways to get help.”).

⁶³⁸ NAS Report at 12. See also Byron Review at 2-4; NAS Report at 9.

⁶³⁹ See ISSTF Report at 6; CIPA Study at Sec. IV.A (recommending parent and school staff education).

⁶⁴⁰ NAS Report at 10.

⁶⁴¹ See NCTA Comments at 13-14; Verizon Comments at 10; Google Comments at 6. See also CIPA Study at Sec. IV.A (recommending Child Media Literacy education); COPA Report, Sec. II.A.2. See, e.g., *Become a Common Sense School*, <http://www.common sense media.org/schools>.

⁶⁴² See, e.g., *Top 10 Safety Tips for Video-Sharing* (Sept. 3, 2007), <http://www.connectsafely.org/Safety-Tips/top-10-safety-tips-for-video-sharing.html> (“Many kids today are video-literate – able to communicate in a medium once reserved for highly trained professionals with expensive equipment.”).

⁶⁴³ See Verizon Comments at 10; Cox Comments at 7; NCTA Comments at 13-14. See also COPA Report, Sec. II.A.1. Online Information Resources (“Internet companies have made substantial efforts to make these online information resources available.”) The COPA Report states, “While not directly preventing access to harmful to minors materials, online information resources are essential to protecting children, as they can effectively provide access to technologies, information for families online, and hotlines to reach and report to authorities. Easily (continued....)

171. AT&T observes that the government has an important role in providing educational opportunities and resources.⁶⁴⁴ The FTC has operated, in partnership with several government agencies, the educational project OnGuard Online.⁶⁴⁵ In 2008, the Broadband Data Improvement Act directed the FTC to engage in a public awareness campaign “to promote the safe use of the Internet by children.”⁶⁴⁶ Individual agencies also have their own separate educational programs.⁶⁴⁷

172. Internet safety courses are increasingly being taught in schools,⁶⁴⁸ and several states have online safety as a part of their required school curriculum.⁶⁴⁹ The Broadband Data Improvement Act also amended the Children’s Internet Protection Act (“CIPA”) requirements for schools receiving funding from the Commission’s universal service fund program known as the E-rate program. Section 215 of the Broadband Data Improvement Act now requires participating schools to educate “minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms and cyberbullying awareness and response.”⁶⁵⁰

173. *Acceptable Use Policies.* Acceptable use policies, in which expectations regarding Internet use are established in the home, can be a part of the educational experience between children and parents or caregivers. According to a study of children aged 8-18 with a computer in their home, 28 percent reported that they have rules about how much time they spend on the computer, 32 percent said there are explicit rules about what they can do on the computer, and 30 percent said their parents usually know what Web sites they access.⁶⁵¹ These acceptable use policies can help educate children regarding the limits of safe and appropriate behavior, and when they might stray into risky areas. More formal, institutional acceptable use policies, such as the acceptable use policies drafted by educational institutions and posted near computers, serve a similar purpose. Model acceptable use policies are available online.⁶⁵²

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accessible online, the “one-click-away” approach is well-designed to make sure that notice of available technologies is provided at common points of entry to the Internet.” COPA Report, Sec. II.A.1.

⁶⁴⁴ See AT&T Comments at 5-6 (contending that federal, state and local governments “should allocate resources to better educate parents and children regarding the risks children face online and the tools available to protect them”). See also Byron Review at 8 (recommending “a properly funded public information and awareness campaign”).

⁶⁴⁵ See OnGuard Online, <http://www.onguardonline.gov/>.

⁶⁴⁶ Broadband Data Improvement Act, § 212, codified at 15 U.S.C. § 6552.

⁶⁴⁷ See, e.g., ED Technology Internet Safety, <http://www.ed.gov/about/offices/list/os/technology/safety.html>; Project Safe Childhood, US Dept. of Justice, <http://www.projectsafechildhood.gov/>; A Parent’s Guide to the Internet, <http://www.fbi.gov/publications/pguide/pguidee.htm>. See also FOSI Comments at 14 (“what is lacking [is] a high level of coordination and leadership” for the different agencies.); Byron Review at 8 (recommending “an authoritative ‘one stop shop’ for child internet safety” information).

⁶⁴⁸ See NCTA Comments at 13-14; see also Byron Review at 8 (noting important role of schools in equipping children to stay safe online); ISTTF Report at 6 (recommending greater resources be allocated to schools and libraries to assist them in providing education about online safety).

⁶⁴⁹ See, e.g., VA. CODE ANN. § 22.1-70.2 (Michie 2003) (acceptable Internet use policies for public and private schools); CAL. EDUC. CODE § 51871.5 (West 2008); 105 ILL. COMP. STAT. 5/27-13.3 (2009).

⁶⁵⁰ Broadband Data Improvement Act, Sec. 215, codified as 47 U.S.C. § 254(h)(5)(B)(iii).

⁶⁵¹ See *Generation M: Media in the Lives of 8-18 Year-olds* at 17 and Appendix 3.4.

⁶⁵² See CIPA Study Sec. IV (“Most of the commenters expressed a great deal of satisfaction with the evolution and use of safety policies...”); NAS Report at 9, 235; COPA Report, Sec. II.F.16 (“Involvement of parents and institutions in expressly establishing guidelines through an acceptable use policy or family contract can have a (continued....)”).

174. *Supervision.* As FOSI observed, supervision of children is crucial.⁶⁵³ Supervision may vary. It may initially include sitting side-by-side while teaching a child online literacy,⁶⁵⁴ placing a family computer where it can be viewed by parents, occasionally reviewing social network accounts, or using software tools to monitor online usage.⁶⁵⁵ Common Sense Media offers simple supervision recommendations. For example, if you give permission to your children to upload videos, they suggest that you ask to see the videos before they are uploaded.⁶⁵⁶

VIII. UNIVERSAL STANDARDS

175. The Child Safe Viewing Act directed the Commission to consider advanced blocking technologies that “may be appropriate across a wide variety of distribution platforms” and “may be appropriate across a wide variety of devices capable of receiving video or audio programming.”⁶⁵⁷ Today, there is no single universal rating technology or system that applies across all media sectors.⁶⁵⁸ As discussed above, however, voluntary content ratings systems currently exist within each media sector – television, movies, music, video games, and the Internet – and much of the content within each sector is rated.⁶⁵⁹ In addition, a wide variety of organizations provide independent ratings for television programming, movies, music, video games, and Internet content.⁶⁶⁰

176. Some commenters argue that imposing either a mandatory advanced blocking technology or ratings standard to apply across all media platforms would be impractical and unworkable.⁶⁶¹ With respect to a technical standard, commenters note that wired, wireless, and Internet platforms differ widely in terms of their technical capabilities.⁶⁶² They assert that a single technology designed to work across platforms would by necessity have to be reduced to a lowest common denominator in terms of

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significant positive impact on awareness and behavior, although they do not themselves directly reduce access by minors to harmful to minors material.”). *See also* Family Contract for Online Safety, <http://www.safekids.com/contract.htm>; *Using Family Contracts to Help Protect Your Kids Online*, (Oct. 21, 2006), <http://www.microsoft.com/protect/family/guidelines/contract.msp>; *Internet Safety Plan*, <http://www.webwisekids.org/internet-safety-plan.pdf>.

⁶⁵³ *See* FOSI Comment at 9.

⁶⁵⁴ *See also* Marian Merritt, *YouTube is Top Kid Destination; How to Enjoy it Safely*, (Jun. 24, 2009), <http://community.norton.com/t5/Ask-Marian/YouTube-Is-Top-Kid-Destination-How-To-Enjoy-It-Safely/ba-p/111256> (discussing how to the YouTube features to improve the safety of your child’s experience).

⁶⁵⁵ *See* CIPA Study Sec. IV.A; NAS Report at 9.

⁶⁵⁶ *See* *YouTube and Your Teen*, <http://www.common sense media.org/youtube-and-your-teen>.

⁶⁵⁷ Child Safe Viewing Act at Section 2(b).

⁶⁵⁸ *See* PFF Comments at vi, 112.

⁶⁵⁹ *See id.* at 112.

⁶⁶⁰ *See, e.g.*, CEA Comments at 7, 10; Common Sense Media Comments at 7; CMPC Comments at 8; Comcast Comments at 9; DISH Network Comments at 6; PFF Comments at 138-142; Smart Television Alliance Comments at 2.

⁶⁶¹ *See, e.g.*, CDT Comments at 14; Industry and Public Interest Groups Joint Comments at 8-12; NAB/NCTA/MPAA Comments at 21-22.

⁶⁶² *See* Industry and Public Interest Groups Joint Comments at 8 (noting that there is a significant difference in capability between, for example, an in-home computing device and a small portable device). *See also* NAB/NCTA/MPAA Comments at 21 (noting that the interfaces and protocols used in various consumer electronics devices for accessing content on platforms vary and are not designed to handle a single blocking technology).

technical capabilities, thereby losing the greater flexibility and control currently provided by individual media platforms.⁶⁶³ Commenters also point out that a move to a single technology, whether voluntary or mandated, would stifle the drive to innovate within each platform, thus hindering the cause of empowering parents.⁶⁶⁴ While commenters generally oppose a mandated cross-platform technology, one commenter notes that particular companies or interest groups could pursue the development of such a technology and could create a niche market for a cross-platform solution.⁶⁶⁵ Several commenters urge the government to take steps to encourage industry and trade associations to work together to develop a universal parental control technology.⁶⁶⁶ As discussed above, digital watermarking is one possible technology that might provide a means of creating standards that work across multiple media platforms.⁶⁶⁷

177. With respect to a universal media rating system, some commenters argue that mandating such a rating system would require re-educating the public, which would be expensive and could result in consumer confusion.⁶⁶⁸ In addition, NAB, NCTA, and MPAA contend that media providers and consumer electronics companies would be required to install new filtering technology to accommodate the new rating standard, which would be expensive and would likely pose an issue with respect to legacy content and devices.⁶⁶⁹ Some commenters also assert that a universal ratings standard would destroy innovation by requiring a government-approved, “one-size-fits-all” approach that would result in less useful and effective ratings than those currently in use.⁶⁷⁰ Finally, commenters question how a universal rating system would be selected, pointing out that media ratings and content-labels are inherently subjective and inevitably reflect the perspectives and values of the person evaluating the content.⁶⁷¹ In addition, some commenters contend that imposition of mandatory government ratings poses significant First Amendment concerns.⁶⁷²

178. Although industry commenters in general oppose the notion of mandating universal ratings, other commenters argue that individual groups could offer a cross-platform rating scheme.⁶⁷³

⁶⁶³ See AT&T Comments at 11; NAB/NCTA/MPAA Comments at 22; Verizon Comments at 12.

⁶⁶⁴ See Industry and Public Interest Groups Joint Comments at 9; AT&T Comments at 4; CEA Comments at 2. See also DMA Comments at 12-13 (noting that the effort to develop DRM solutions across media platforms was unsuccessful, and suggesting that parental controls developed to suit specific applications would be more likely to succeed). Some commenters argue that government adoption of the V-chip led to less innovation in content blocking for broadcast television than for other media platforms. See, e.g., Industry and Public Interest Groups Joint Comments at 9; AT&T Comments at 12.

⁶⁶⁵ See Industry and Public Interest Groups Joint Comments at 10.

⁶⁶⁶ See, e.g., Common Sense Media Comments at 5; TiVo Comments at 6; CFIRS Comments at 7-8; DISH Network Comments at 8.

⁶⁶⁷ See, *supra*, section II.B.4. But see CEA Comments at 10-11 (expressing concern that digital watermarking could also be used for DRM functionality and that intellectual property licensing terms for this technology are unknown). See also TiVo Reply at 3.

⁶⁶⁸ See, e.g., NAB/NCTA/MPAA Comments at 20. See also ALEC Comments at 7.

⁶⁶⁹ See NAB/NCTA/MPAA Comments at 20.

⁶⁷⁰ See PFF Comments at vi. See also ESA Comments at 7-8.

⁶⁷¹ See NAB/NCTA/MPAA Comments at 19. See also Industry and Public Interest Groups Joint Comments at 11.

⁶⁷² See PFF Comments at 114-117; Industry and Public Interest Groups Joint Comments at 12.

⁶⁷³ See Industry and Public Interest Groups Joint Comments at 12. See also CFIRS Comments at 7.

CFIRS advocates the creation of such a group to create and maintain common standards for rating, filtering, and blocking content across multiple platforms.⁶⁷⁴ According to CFIRS, many industries have standards bodies that create and maintain agreed-upon standards, and such a body could create a common standard for media that would allow consumers to move more easily from one system to the next and make comparisons.⁶⁷⁵ CFIRS urges the Commission to state the need for an industry ratings standard and convene a ratings oversight group to work on its development.⁶⁷⁶ Common Sense Media also asks the Commission to consider forming a task force to consider the information received in this proceeding, the potential interoperability of technology and filtering across media, and the incentives that might need to be put into place to facilitate interoperability and to address other issues with respect to parental controls.⁶⁷⁷

IX. ENCOURAGING THE DEVELOPMENT AND USE OF PARENTAL CONTROLS

179. Except for those commenters that call for specific action with respect to their own particular technologies,⁶⁷⁸ commenters generally oppose the imposition of any specific new government mandate in the area of parental controls on the ground that mandates would chill innovation and investment in new control technology.⁶⁷⁹ Instead, many commenters that consider the question of how to encourage the development, deployment, and use of parental controls agree that, in order to accelerate the rate of adoption of parental control technologies, the government and industry must undertake efforts to promote and educate consumers regarding these technologies.⁶⁸⁰

180. A number of commenters suggest that the government could play a role in expanding awareness of the need for and availability of parental control technology and in encouraging industry to cooperate to further improve parental control solutions.⁶⁸¹ Some commenters ask the Commission to engage in a public service campaign to educate parents about the availability of parental control tools.⁶⁸² Common Sense Media urges the Commission to focus on the need for greater media literacy in schools and to support the funding of media literacy programs through the Department of Education and other

⁶⁷⁴ See CFIRS Comments at 7. See also ALEC Reply at 7.

⁶⁷⁵ See CFIRS Comments at 7.

⁶⁷⁶ See *id.* at 8. CFIRS also recommends that the group coordinate a comprehensive list of ratings services across all platforms, analysis of the accuracy of ratings, and usage rates for ratings. See *id.* at 7.

⁶⁷⁷ See Common Sense Media Comments at 5.

⁶⁷⁸ See, e.g., TVGuardian Reply at 12 (urging the government to require that cable, satellite and IPTV providers permit consumers to have access to its filtering technology); Digimarc Reply at 1 (suggesting that, as an alternative to the V-Chip, the Commission consider recommending to Congress the deployment of alternative technologies, such as digital watermarking).

⁶⁷⁹ See, e.g., NAB/NCTA/MPAA Comments at 18; Industry and Public Interest Groups Joint Comments at 8-9; CEA Reply at 14-15.

⁶⁸⁰ See, e.g., Smart Television Alliance Comments at 7; TV Watch Comments at 1; Verizon Comments at 12; Advertisers Reply at 5. The Electronic Frontier Foundation was the only commenter to expressly oppose government action to “encourage or support” parental control technologies. See EFF Reply at 1.

⁶⁸¹ See, e.g., AT&T Comments at 3-4; Verizon Comments at 12; CMPC Reply at 3.

⁶⁸² See, e.g., FOSI Comments at 13. See also TiVo Comments at 5 (suggesting that the government, industry, and trade associations partner on an outreach campaign similar to that created for the DTV transition). The National Hispanic Media Coalition notes that the Spanish-speaking community in particular may not understand the TV Parental Guidelines, indicating that education may be particularly necessary to reach this community. See National Hispanic Media Coalition Comments at 1.

agencies.⁶⁸³ Commenters also encourage the government to provide research grants⁶⁸⁴ and create comprehensive websites with information about advanced blocking technologies.⁶⁸⁵ As noted above, both the CFIRS and Common Sense Media suggest that the Commission establish a working group or task force to consider issues raised in this proceeding.⁶⁸⁶ NAB, NCTA, and MPAA also support the idea of a parental control task force.⁶⁸⁷ DISH Network proposes that the Commission identify industry “best practices” with respect to the creation and deployment of blocking technologies as well as the promotion of these tools.⁶⁸⁸

181. As noted above, industry commenters provide information about their efforts to inform the public about parental controls and rating systems, including public service campaigns, website links, and customer hotlines. Some commenters propose that industry take other specific steps such as including easy-to-understand instructions in all user manuals explaining how to set up parental controls and what the ratings mean.⁶⁸⁹ In addition, some commenters suggest that embedded controls could have pre-established default settings before they are shipped or downloaded.⁶⁹⁰ The Electronic Frontier Foundation (“EFF”), however, argues that such default settings would require the many users that are not interested in parental controls to opt-out and would cause significant consumer confusion.⁶⁹¹ Others point out that industry will respond if there is significant demand for kid-friendly products and that cable and satellite providers are already differentiating their product offerings on the basis of the parental control options they provide.⁶⁹²

182. One commenter argues that the Commission should approach consumer education about parental control technology in a manner similar to its recent effort to educate consumers about the nation’s DTV transition. As suggested by TiVo, government, industry, and trade associations could partner on an outreach campaign similar to that created for the DTV transition to highlight the V-chip and other advanced blocking technologies.⁶⁹³

183. Both NTIA and the Commission played important roles in facilitating the DTV transition. NTIA focused initially on establishing the technical requirements for the “coupon-eligible” digital-to-analog converter boxes, which allow older televisions to be used to view digital broadcast signals. NTIA also handled public awareness and distribution of the converter box coupons. The Commission’s primary role in the transition was to spearhead and coordinate a nationwide DTV Consumer Education Initiative. The initiative included industry efforts, some of which were required by

⁶⁸³ See Common Sense Media Comments at 10.

⁶⁸⁴ See, e.g., Industry and Public Interest Groups Joint Comments at 4; FOSI Comments at 13.

⁶⁸⁵ See TiVo Comments at 5.

⁶⁸⁶ See CFIRS Comments at 7-8; Common Sense Media Comments at 5. FOSI also proposes that the Commission work to bring groups together to work on parental control issues. See FOSI Comments at 13.

⁶⁸⁷ See NAB/NCTA/MPAA Reply at 16.

⁶⁸⁸ See DISH Network Comments at 8 (citing Remarks of Commissioner Jonathan S. Adelstein, *Stuck in the Mud: Time to Move an Agenda to Protect America’s Children* (Media Institute Speech), June 11, 2008, at 20).

⁶⁸⁹ See PFF Comments at 102. See also CFIRS Comments at 5.

⁶⁹⁰ See CFIRS Comments at 5; Wi-LAN Comments at 5.

⁶⁹¹ See, e.g., EFF Reply at 7.

⁶⁹² See, e.g., DISH Network Comments at 8; Motorola Reply at 3.

⁶⁹³ See TiVo Comments at 5.

regulation,⁶⁹⁴ and direct outreach by the Commission, which increased in scope and intensity as additional funding from Congress was directed towards the effort.⁶⁹⁵ Industry participants included television manufacturers and MVPDs, among others. Television broadcasters were particularly active partners. The Commission required broadcasters to air PSAs and educational programs about the transition,⁶⁹⁶ and broadcaster organizations like the NAB and the Association of Public Television Stations prepared PSAs and programs that were made available to, and aired by, broadcasters nationwide.⁶⁹⁷

184. The Commission's direct consumer education efforts were underway for many years prior to the transition,⁶⁹⁸ but they intensified in the year prior to the transition. In early 2008, for example, the Commission hosted workshops targeted at groups most at risk of losing service due to the transition,⁶⁹⁹ and contracted with a media services company to produce billboards, literature, and radio and television PSAs to reach citizens directly.⁷⁰⁰ The Commissioners and Commission staff worked on the ground with stakeholders and consumers, in several dozen television market areas most likely to be affected by the transition.⁷⁰¹ In early 2009, after the transition date was extended, the Commission not only continued its ongoing direct outreach efforts, but was provided with significant funding by Congress to expand those efforts and fund scores of targeted contracts that created walk-in DTV help centers and provided in-home installation focused in at-risk markets, while expanding the Commission call center to serve citizens nationwide

185. In the fast-moving period prior to the transition, the Commission worked closely with regulatees, both at the national policy level and within local communities, to maintain flexibility while still ensuring that citizens had access to the information they needed. For their part, many regulatees went beyond the obligations imposed by our rules to ensure that consumers were fully educated – this

⁶⁹⁴ See generally *DTV Consumer Education Initiative*, MB Docket No. 07-148 (“consumer education docket”).

⁶⁹⁵ See, e.g., FCC Announces Digital Television Consumer Education Workshop on September 26, 2007, Press Release (July 16, 2007); FCC Expands National Digital Television Education And Awareness Campaign, Targets Outreach In Wilmington, NC, Press Release (June 4, 2008); FCC Announces Extensive Nationwide Initiative For DTV Outreach, Press Release (August 18, 2008); FCC Creates Television Public Service Announcements And Educational Video To Help Prepare For Transition To Digital, Press Release (September 17, 2008); FCC Announces \$12 Million Call Center Contract To Assist DTV Call Center Capability, Press Release (January 16, 2009); FCC Releases Solicitations For DTV Transition Assistance As Part Of A Comprehensive Consumer Outreach And Support Effort, Public Notice, DA 09-689 (March 26, 2009); 30 Days And Counting To DTV Transition: FCC Concentrates On Preparing Consumers For June 12 Deadline, Press Release (May 13, 2009); 8 Days And Counting To DTV Transition: Free In-Home Installation Available For Consumers In Many Markets, Press Release (June 4, 2009); FCC Continues DTV Outreach Across The Nation: Call Center Receives Over 900,000 Calls In Days Surrounding Transition, Press Release (June 15, 2009).

⁶⁹⁶ 47 C.F.R. § 73.674.

⁶⁹⁷ See generally *Implementation of the DTV Delay Act*, MB Docket No. 09-17, Third Report And Order And Order On Reconsideration, 24 FCC Rcd 3399 (2009).

⁶⁹⁸ See, e.g., Chairman Powell To Kickoff Consumer Education Initiative On Transition To Digital Television, Press Release (September 28, 2004).

⁶⁹⁹ FCC Releases Agenda for April 1, 2008, Digital Television Consumer Education Workshop Focusing on Low-Income Consumers, Press Release (March 20, 2008).

⁷⁰⁰ RFQ08000005 – FCC Digital Television (DTV) Consumer Education Support Services, awarded to Ketchum, Incorporated on 02/13/2008.

⁷⁰¹ FCC Announces Extensive Nationwide Initiative For DTV Outreach, Press Release (August 18, 2008).

was particularly true for broadcasters, whose customers were of course most directly affected by the change. Finally, Congress committed tens of millions of dollars, over and above the Commission's normal budget, in order to ensure that sufficient staffing and oversight resources were available for effective DTV consumer education. Without this additional funding, the Commission's efforts would have continued to be effective, but clearly could not have been nearly as extensive, particularly in regard to contractors.⁷⁰²

186. The Commission could take a similar approach to raising consumer awareness of the availability of parental controls and how to use them. Presumably this would be on a smaller scale, as the DTV transition was a singular event that required extraordinary funding and commitment of resources, by both the government and the private sector. We intend to explore in a forthcoming *NOI* whether and, if so, what efforts would promote and educate consumers regarding parental control technologies and thereby accelerate the pace of adoption of these technologies.

X. CRITERIA FOR PARENTAL CONTROL TECHNOLOGIES

187. The record demonstrates that parental control technologies vary greatly among media platforms, and even among different providers within the same media platform, with respect to various criteria. Below, we discuss these various criteria and, to the extent available in the existing record, provide examples of how different parental control technologies compare with respect to each criteria. Going forward, we believe these criteria will be useful in comparing and contrasting the usefulness and effectiveness of parental control technologies across various media platforms. As discussed below, these criteria are as follows: (i) cost to consumers; (ii) level of consumer awareness/promotional and educational efforts; (iii) adoption rate; (iv) customer support; (v) ease of use; (vi) means to prevent children from overriding parental controls; (vii) blocking content/black listing; (viii) selecting content/white listing; (ix) access to multiple ratings systems; (x) parental understanding of ratings systems; (xi) reliance on non-ratings-based system; (xii) ability to monitor usage and view usage history; (xiii) ability to restrict access and usage; (xiv) access to parental controls outside of the home; and (xv) tracking.

188. *Cost to Consumers.* The cost of a parental control technology is an important consideration for parents. The record indicates that many parental control technologies are included in the price of a service or device with no additional cost apparent to the consumer. For example, most televisions come equipped with a V-chip.⁷⁰³ Most MVPDs offer some form of parental control included with the price of the service, although the most advanced features require parents to purchase or lease a digital set-top box.⁷⁰⁴ Many wireless parental control technologies are included within the cost of the wireless service.⁷⁰⁵ For Internet usage, parental control technologies are often built into operating systems or included within the price of Internet access.⁷⁰⁶ Other parental control technologies, however,

⁷⁰² According to Nielsen, in September 2008, 8.4 percent of American households remained completely unready for the transition, with neither an over-the-air digital tuner or access to digital broadcast signals through an MVPD. By February 15, 2009, two days before the original date of the transition, that number still stood at 4.4 percent. Within a month of the final completion of the transition, due in large part to ongoing Commission education efforts, the number had dropped to close to 1 percent. *See* 200,000 American Homes Have Upgraded To Digital Since June 28, Nielsen Media Alert (July 16, 2009).

⁷⁰³ *See supra* note 20.

⁷⁰⁴ *See id.* ¶ 59.

⁷⁰⁵ *See id.* ¶ 99.

⁷⁰⁶ *See id.* ¶ 142.

may require parents to pay recurring fees. For example, a ClearPlay DVD player, which blocks profanity, violence, and nudity from movies, requires a monthly membership fee of \$7.95 in order to receive filtering codes for movies beyond the 1,000 movies provided with the device.⁷⁰⁷ Some content filtering applications provided by third-parties for wireless devices and Internet usage require users to pay a one-time or recurring fee.⁷⁰⁸

189. *Level of Consumer Awareness/Promotional and Educational Efforts.* Efforts to promote and to educate the public about a particular parental control technology may lead to an increase in awareness and adoption of the technology. The record reflects that industry has undertaken various measures to promote and to educate the public about their parental control technologies, including advertising campaigns, PSAs, websites, customer hotlines, and written materials.⁷⁰⁹ As discussed above, further study is needed to assess whether and, if so, what additional efforts to promote and to educate consumers regarding parental control technologies would accelerate the rate of awareness and adoption of these technologies.⁷¹⁰ With the exception of three technologies, the record does not indicate the level of consumer awareness for the various parental control technologies discussed. With respect to the V-chip, studies have found that the percentage of parents that are aware of the V-chip varies from less than half to 69 percent.⁷¹¹ With respect to MVPD parental control technologies, studies have found that the percentage of parents that are aware of these technologies varies from 45 percent to 90 percent.⁷¹² Among recent purchasers of TiVo DVRs in households with children 13 years of age and younger, 29 percent were aware of KidZone parental control technology prior to purchase.⁷¹³

190. *Adoption rate.* The extent to which a particular parental control technology has been adopted by parents may provide an indication of how well that product has been promoted, how well parents have been educated about the product, and how useful and effective that technology is for parents. With the exception of three technologies, the record does not indicate the adoption rate for the various parental control technologies discussed. With respect to the three technologies for which we have data, the adoption rates appear low. Specifically, with respect to the V-chip, studies have found that the percentage of parents that use the V-chip varies from 5 percent to 16 percent.⁷¹⁴ With respect to MVPD parental control technologies, one study found that 17 percent of families studied used cable parental controls and 12 percent used satellite parental controls.⁷¹⁵ With respect to TiVo's KidZone, the usage rate among parents has never exceeded 15 percent to 16 percent.⁷¹⁶

191. *Customer Support.* Once a parent starts using a particular control technology, effective customer support in addressing questions from parents may increase understanding and usage of the

⁷⁰⁷ See *id.* ¶ 120.

⁷⁰⁸ See *id.* ¶ 100.

⁷⁰⁹ See *id.* ¶¶ 53-54, 61.

⁷¹⁰ See *id.* section IV.

⁷¹¹ See *id.* ¶ 16.

⁷¹² See *id.* ¶ 57.

⁷¹³ See *id.* ¶ 73.

⁷¹⁴ See *id.* ¶ 17.

⁷¹⁵ See *id.* ¶ 57.

⁷¹⁶ See *id.* ¶ 72.

technology. The record contains some information regarding the extent to which providers of various parental control technologies described herein offer continuing customer support for parents using their technologies.⁷¹⁷ Providing information on websites and use of hotlines are two methods providers use to provide customer support.

192. *Ease of use.* The extent to which a parental control technology is easy for parents to understand and use will increase its adoption rate among parents. While various providers claim their parental control technologies are easy to use,⁷¹⁸ the record does not contain data demonstrating that parents agree with these claims. With respect to the V-chip, the record indicates that many parents find programming the V-chip to be a confusing process and prefer parental control technologies provided by MVPDs.⁷¹⁹

193. *Means to Prevent Children from Overriding Parental Controls.* Most parental control technologies use password protection to prevent children from overriding the settings established by the parent.⁷²⁰ With respect to Internet parental control technologies in particular, however, the record reflects that children have various means to override these controls.⁷²¹

194. *Blocking Content/Black Listing.* Most parental control technologies provide parents with the ability to “black list,” or block certain content from viewing by children.⁷²² Technologies differ, however, in their ability to target specific content for blocking.

195. The V-chip, for example, is limited to blocking entire programs based on the TV Parental Guidelines and MPAA ratings.⁷²³ Most MVPD set-top boxes are more flexible than the V-chip, providing parents with the ability to not only block entire programs based on TV Parental Guidelines and MPAA ratings, but to also block entire channels, entire services (such as VOD), and channels at specified times of day.⁷²⁴ They also have the ability to block adult-oriented titles from appearing in

⁷¹⁷ See, e.g., Comments of Comcast at 5-6 (provides information to customers about parental controls in customer welcome kit, provides a telephone hotline and maintains a website to assist customers with parental control tools, and provides an instructional video available on Comcast’s VOD service and on Comcast cable systems’ instructional channels); Cox at Appendix B, page iv (provides information to customers about parental controls in a welcome kit and maintains a website with information about parental controls); DIRECTV at 3-4 (runs an instructional video continuously on one of its channels providing information about the DIRECTV system including the “Locks and Limits” parental controls and maintains a website). See also Supplemental NCTA Comments at 6-7. Wireless carriers also noted that they maintain websites and customer care lines where customers can obtain information about parental controls. See, e.g., Sprint Comments at 2-3; Verizon Comments at 7-8; AT&T Comments at 6.

⁷¹⁸ See *supra* ¶¶ 101, 142.

⁷¹⁹ See *id.* ¶ 19.

⁷²⁰ See *id.* ¶ 59 (password protection for MVPD parental control technologies); *id.* ¶ 71 (password protection for TiVo’s KidZone); *id.* ¶ 146 (password protection for Internet parental control technologies).

⁷²¹ See *id.* ¶ 148 (discussing ways to circumvent Internet filters).

⁷²² See *id.* ¶ 11 (V-chip), ¶ 59 (MVPDs), ¶ 70 (TiVo KidZone), ¶ 74 (TVGuardian), ¶ 79 (CC+), ¶ 87 (video games), ¶ 98 (wireless); ¶¶ 145-149 (Internet).

⁷²³ See *id.* ¶¶ 12-13. The record indicates that some parents would like the flexibility to use the V-chip to block inappropriate commercials as well as programming content based on additional descriptors, such as alcohol, tobacco, and illegal drugs. See *id.* ¶¶ 30, 32.

⁷²⁴ See *id.* ¶ 59.

programming guides and to designate channels to be skipped when channel surfing.⁷²⁵ Some devices, such as TVGuardian and CC+, appear to provide even more flexibility. Rather than blocking entire programs or channels, these devices filter specific content within programs, such as foul language or nudity, thereby enabling families to view a program without the objectionable content.⁷²⁶

196. Wireless and Internet parental control technologies provide even greater ability to selectively target content for blocking. With respect to wireless service, both carriers and third-party application developers offer parents the ability to block all Internet access on a device or only specific sites and content based on certain criteria.⁷²⁷ T-Mobile, for example, blocks adult-oriented content, such as content featuring alcohol, drugs, gambling, pornography, mature content, violence, and weapons.⁷²⁸ With respect to the Internet, a wide array of filtering software and web browsers are available that permit parents to block certain content based on criteria specified by the parent.⁷²⁹ Many of these Internet technologies also allow parents to set different blocking criteria for different children in the household.⁷³⁰

197. *Selecting Content/White Listing.* Some of the parental control technologies discussed have the ability to “white list,” or allow parents to affirmatively select the programming that can be viewed by their children. For example, TiVo’s KidZone provides parents with the ability to white list, including selection of programs identified by broadcasters as E/I.⁷³¹ Motorola states that its forthcoming TVFirewall server technology for MVPDs will allow for white listing of content selected by parents.⁷³² Some wireless providers also offer parents the ability to restrict their children’s wireless Internet usage to only certain sites.⁷³³ For example, Sprint permits parents to restrict Internet access to designated websites deemed appropriate for children 17 and under.⁷³⁴ With respect to the Internet, filtering software and web browsers, such as Firefox’s Glubble, allow children to access only sites approved by their parents.⁷³⁵ We note above that further study is needed on the issue of using the V-chip as an affirmative tool to select E/I programming for children.⁷³⁶

198. *Access to Multiple Ratings Systems.* Some of the parental control technologies discussed enable parents to access multiple independent rating systems for blocking or selecting programming. For example, TiVo’s KidZone permits parents to block, select, and/or record programming based on a list programs recommended by PTC, KIDS FIRST!, and Common Sense Media.⁷³⁷ In addition, a

⁷²⁵ See *id.*

⁷²⁶ See *id.* ¶¶ 74-80.

⁷²⁷ See *id.* ¶¶ 98-100.

⁷²⁸ See *id.* ¶ 99.

⁷²⁹ See *id.* ¶¶ 145-149.

⁷³⁰ See *id.* ¶ 146.

⁷³¹ See *id.* ¶ 71.

⁷³² See *id.* ¶ 65.

⁷³³ See *id.* ¶ 99.

⁷³⁴ See *id.*

⁷³⁵ See *id.* ¶ 150.

⁷³⁶ See *id.* ¶¶ 36-38.

⁷³⁷ See *id.* ¶ 69.

number of MVPDs provide their subscribers with web-based access to ratings and reviews established by Common Sense Media.⁷³⁸ DIRECTV anticipates that in the future its subscribers will be able to access the Common Sense Media reviews and ratings directly through a programming guide on their TV screen rather than on the Internet.⁷³⁹ The record also reflects that it is technically possible to allow parents to access multiple independent ratings systems through the V-chip, but this option is not currently available.⁷⁴⁰

199. *Parental Understanding of Ratings Systems.* For parental control technologies that rely on common ratings to block content, the extent to which parents are familiar with the ratings system used by a parental control technology will greatly increase its usefulness among parents. With the exception of the TV Parental Guidelines, the record does not contain data demonstrating whether parents are familiar with the ratings systems developed for other media platforms. With respect to the TV Parental Guidelines, the record indicates that most parents have heard of the ratings but many do not understand what they mean.⁷⁴¹ To increase awareness, some MVPD set-top boxes allow parents to review descriptions of ratings and content labels on their television screens.⁷⁴²

200. *Reliance on a Non-Ratings-Based System.* Given conflicting studies on the usefulness of the TV Parental Guidelines,⁷⁴³ a parental control technology that blocks or selects programming without the use of ratings may be attractive to parents.⁷⁴⁴

201. *Ability to Monitor Usage and View Usage History.* Some of the parental control technologies discussed allow parents to monitor and view the history of their children's media usage. For example, some wireless applications, such as the "iWonder" browser for use on Apple's iPhone, allow parents to view remotely from their own computer or wireless device the websites that the child visits.⁷⁴⁵ Other wireless applications send parents an alert when a child receives calls and messages from unauthorized sources and allow parents to view and archive remotely all of the text, e-mail, and instant messages that their child sends and receives.⁷⁴⁶ Similarly, various Internet applications allow parents to view a list of sites visited by children.⁷⁴⁷

202. *Ability to Restrict Access and Usage.* Some of the parental control technologies discussed enable parents to restrict access to and usage of particular media. For example, television time management tools, as well as Motorola's forthcoming TVFirewall technology, allow parents to specify

⁷³⁸ See *id.* ¶ 60.

⁷³⁹ See *id.* ¶ 63.

⁷⁴⁰ See *id.* ¶¶ 39-46.

⁷⁴¹ See *id.* ¶ 25.

⁷⁴² See *id.* ¶ 60.

⁷⁴³ See *id.* ¶ 25.

⁷⁴⁴ As discussed above, Section 330(c)(4) of the Communications Act provides that the Commission shall amend its V-chip rules if it determines that an alternative blocking technology exists that "enables parents to block programming based on identifying programs without ratings" and satisfies certain other specified criteria. See 47 U.S.C. § 330(c)(4). See also *supra* note 17.

⁷⁴⁵ See *id.* ¶ 104.

⁷⁴⁶ See *id.*

⁷⁴⁷ See *id.* ¶ 151.

the aggregate number of hours or the times of day when their children are permitted to watch television.⁷⁴⁸ Similarly, wireless applications allow parents to restrict usage of wireless devices to certain times of day, blocks calls or messages to and from certain phone numbers, and limit the number of text and instant messages a child sends and receives.⁷⁴⁹ Various Internet applications also allow parents to limit the number of hours or the times of day when their children are permitted to be online and to specify the individuals to which a child can send emails or messages.⁷⁵⁰

203. *Access to Parental Controls Outside of the Home.* Some of the parental control technologies discussed enable parents to set parental control settings from outside of the home, using a web-based interface. For example, Motorola's forthcoming TVFirewall technology will be accessible to parents from any device that can access the Internet, including web-enabled mobile devices.⁷⁵¹ Some wireless applications, such as Sprint's Parental Controls web site, allow parents to specify online the websites a child's wireless device is permitted to access and to set other usage restrictions.⁷⁵²

204. *Tracking.* While not possible for fixed technologies, some wireless devices offer parties the ability to locate their children and monitor their whereabouts using GPS technology.⁷⁵³

XI. NEED FOR ADDITIONAL DATA REGARDING PARENTAL CONTROL TECHNOLOGIES

205. The record developed in response to the *NOI* provides a general indication of the parental control technologies that are available to parents today. With respect to many of the parental control technologies discussed in this Report, however, the record is lacking data in five key areas: (i) level of consumer awareness; (ii) pace of adoption; (iii) ease of use; (iv) familiarity with ratings systems; and (v) pace of innovation. For example, for many technologies, the record does not have data explaining the extent to which parents are aware of and are using the parental control technology. To the extent that awareness and usage rates are low, as is the case with the V-chip, the record does not have sufficient data to fully understand the reasons underlying this phenomenon. Moreover, while the record provides a sense of what technologies exist today, the record does not have data to determine whether the pace of innovation in parental control technologies is proceeding at a level that ensures that new parental control features and devices are being developed at a rate responsive to evolving parental and caregiver needs. We discuss below the areas where additional data, surveys, and studies are needed. We intend to explore these and other issues in a forthcoming *NOI*. The list below is illustrative and is not meant to serve as a definitive list of items to be addressed by the *NOI*.

206. *Level of Consumer Awareness.* Further study is needed to determine (i) the extent to which parents are aware of specific parental control technologies; (ii) to what extent does the level of awareness differ among media; and (iii) whether and, if so, what additional promotional and educational efforts would be effective in increasing awareness of these parental control technologies.

207. *Pace of Adoption.* Further study is needed to better understand (i) the extent to which parents are using specific parental control technologies; (ii) to the extent that the usage rate is low, what

⁷⁴⁸ See *id.* ¶ 64.

⁷⁴⁹ See *id.* ¶¶ 104-105.

⁷⁵⁰ See *id.* ¶¶ 150-151.

⁷⁵¹ See *id.* ¶ 64.

⁷⁵² See *id.* ¶ 99.

⁷⁵³ See *id.* ¶ 110.

reasons, if any, besides lack of awareness keep parents from using parental control technologies, and to what extent do these reasons differ among media;⁷⁵⁴ and (iii) whether and, if so, what actions could be taken to increase use of these parental control technologies. Moreover, it appears that there may be greater adoption of technologies on the Internet than broadcasting and other traditional media sources.⁷⁵⁵ Further study is needed to determine the reasons for these different adoption rates among media.

208. *Ease of Use.* Further study is needed to determine (i) what, if any, features of specific parental control technologies parents find confusing and difficult to use; and (ii) if such features exist, whether and, if so, how these technologies could be improved to make them easier for parents to use.

209. *Parental Understanding of Ratings Systems/Content Evaluation Methodology.* Further study is needed to determine (i) whether parents understand the various ratings systems currently in use and the way content is evaluated for blocking and other purposes in conjunction with specific parental control technologies; (ii) if the level of understanding is low, whether that lack of understanding is impeding use of particular parental control technologies; and (iii) whether and, if so, what steps can be taken to increase understanding.

210. *Pace of Innovation.* Parental control technologies vary greatly among media platforms, and even among different providers within the same media platform, with respect to the criteria identified in Section X. Further study is needed to determine the pace of innovation in parental control technologies, whether it is proceeding at a pace consistent with other consumer technologies (e.g., computers, mobile phones and broadband devices), and whether evolving needs of parents, caregivers, and children are being satisfied in a timely manner.

211. With respect to gathering additional data concerning online safety, we are mindful that research and literature in this area are extensive. As noted above, there have been multiple federal studies, private sector studies, and litigation that comprehensively explored online safety. Continued reexamination of online safety is necessary to ensure the protection of children. As noted above, in order to explore these issues further and to gather the latest data and expertise, Congress in the Broadband Data Improvement Act directed the Assistant Secretary of Commerce for Communications and Information to establish the Online Safety and Technology Working Group (“OSTWG”).⁷⁵⁶ That group, which consists of representatives from the business community, public interest groups, and other groups and Federal agencies, is charged with reviewing and evaluating the following issues:

- (1) the status of industry efforts to promote online safety through educational efforts, parental control technology, blocking and filtering software, age-appropriate labels for content or other technologies or initiatives designed to promote a safe online environment for children;
- (2) the status of industry efforts to promote online safety among providers of electronic communications services and remote computing services by reporting apparent child pornography under section 13032 of title 42, United States Code, including any obstacles to such reporting;

⁷⁵⁴ For example, with respect to the V-chip, the record indicates that a lack of understanding of the ratings system and difficulty in using the V-chip are two factors limiting parental adoption of the V-chip. *See supra* ¶¶ 19, 25, 27. Data regarding other technologies is lacking.

⁷⁵⁵ For example, estimates of V-chip usage vary from 5 percent to 16 percent of parents and one study concludes that only 17 percent of parents use cable parental controls, whereas another study finds that half of parents have filtering or monitoring software installed on computers used by teens. *See supra* ¶¶ 17, 57, 145, 151. Data regarding other technologies is lacking.

⁷⁵⁶ *See* Broadband Data Improvement Act, Pub. L. 110-385, Sec. 214 (2008).

- (3) the practices of electronic communications service providers and remote computing service providers related to record retention in connection with crimes against children; and
- (4) the development of technologies to help parents shield their children from inappropriate material on the Internet.⁷⁵⁷

212. The OSTWG held its first meeting on June 4, 2009 and must report its findings and recommendations to the Assistant Secretary and to Congress within one year of that first meeting (*i.e.*, by June 4, 2010). The Commission is participating in the OSTWG and recognizes the important work the OSTWG is engaged in to improve the data and information available for policy makers. The Commission will consider how to best engage the work of the OSTWG in order to ensure that the policy process is well informed on these important issues.

XII. CONCLUSION

213. The record in this proceeding demonstrates that a market exists for advanced blocking technologies and other parental empowerment tools, although data is lacking in certain key areas, such as awareness and usage levels, which warrant further study. Educational programs to increase awareness of parental control technologies have the potential to accelerate the rate of development, deployment, and adoption of these technologies. Parental control technologies vary greatly among media platforms, and even among different providers within the same media platform, with respect to various criteria. While there are technologies in existence for each media platform, there is not currently a universal parental control technology that works across media platforms. To explore these issues and how to maximize benefits and minimize harms to children in this rapidly changing environment, the Commission intends to issue a further *Notice of Inquiry* exploring these issues and others relating to protecting children and empowering parents in the digital age.

XIII. ORDERING CLAUSES

214. Accordingly, **IT IS ORDERED** that, pursuant to the authority contained in sections 4(i), 303(g), 303(r) and 403 of the Communications Act, 47 U.S.C. §§ 154(i), 303, and 403, and pursuant to the Child Safe Viewing Act of 2007, this Report **IS ADOPTED**.

215. It is **FURTHER ORDERED** that the Office of Legislative Affairs shall deliver copies of this Report to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

⁷⁵⁷ *Id.* See also Online Safety and Technology Working Group, National Telecommunications and Information Administration, Department of Commerce, <http://www.ntia.doc.gov/advisory/onlinesafety/>.

APPENDIX A

Commenters Filing in MB Docket No. 09-268*

Adam Thierer, The Progress & Freedom Foundation
Association of National Advertisers, Inc.
AT&T, Inc.
Caption TV Inc.
Center for Democracy and Technology
Children's Media Policy Coalition
Coalition for Independent Ratings
Comcast Corporation
Common Sense Media
Consumer Electronics Association
Cox Communications, Inc.
CTIA-The Wireless Association
CustomPlay, LLC
Decency Enforcement Center for Television
Digimarc Corporation
Digital Media Association
Digital Watermarking Alliance
DIRECTV, Inc.
DISH Network LLC
DTV Innovations, LLC
Entertainment Software Association
Family Online Safety Institute
Google, Inc.
Joint Comments of Industry & Public Interest Groups
Joint Comments of National Cable Television Association, National Association of Broadcasters, and
the Motion Picture Association of America
Microsoft Corporation
Morality in Media
Motion Picture Association of America
National Association of Recording Merchandisers
National Cable & Telecommunications Association
National Hispanic Media Coalition
Richard Kahlenberg
Sanyo Manufacturing Corporation
Smart Television Alliance
Sprint Nextel Corporation
TiVo Inc.
TVGuardian, LLC
TV Watch
United States Telecom Association
Verizon
Wi-LAN V-chip Corporation

APPENDIX B**Reply Comments**

American Legislative Exchange Council (“ALEC”)
Association of National Advertisers, Inc. (“ANA”), the American Advertising Federation (“AAF”), and
the American Association of Advertising Agencies (“AAAA”)
Children’s Media Policy Coalition
Coalition for Independent Ratings
Comcast Corporation
Consumer Electronics Association
Digimarc Corporation
Electronic Frontier Foundation
Entertainment Software Association
Funai Electric Co., Ltd. and Funai Corporation, Inc.
ION Media Networks
Microsoft Corporation
Motorola Inc.
National Association of Broadcasters, National Cable Television Association and
the Motion Picture Association of America
Nintendo of America Inc.
Parents Television Council
Smart Television Alliance
T-Mobile USA
TiVo Inc.
TVGuardian, LLC

* The Commission has also received thousands of comments from concerned individuals in this proceeding. These comments are available through the Commission’s electronic comment filing system.

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI**

Re: *Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming, MB Docket No. 09-26*

In the Child Safe Viewing Act of 2007, Congress instructed the Commission to conduct an inquiry into parental control technologies. Over the past six months, the Commission has compiled a record on existing technologies as well as technologies still in development. This report summarizes our findings.

I cannot think of a more critical topic for the Commission to be considering right now than how to ensure that our children are protected from inappropriate content. Government has a vital role to play in helping parents and protecting children, while honoring and abiding by the First Amendment. For decades, parents have worried about shielding their children from harmful material on television and in our popular culture. In recent years, the explosion of new technologies has significantly increased the availability of inappropriate content and elevated parents' concerns.

We recognize that technology has created profound new challenges for parents by vastly expanding the scope and quantity of media available to our children. But technology also can—and must—be part of the solution. Parents must have access to control technologies that can appropriately limit their children's exposure to unsuitable material.

And we must encourage the development of parental control technologies so that they keep pace with innovation in the rest of the technology and information marketplace. It seems that every time we step into a consumer electronics store, there are a vast new array of devices and inventions that improve on what was available just months ago. As a society, we must find ways to promote that same rapid and ongoing improvement for the tools that we rely upon to protect our children.

The report that we issue today details the technologies that are available to parents today – as well as technologies that are in development – to control their children's access to media. While the record that was created in response to inquiry contains some important information for parents, it also raises important questions and exposes the need for further study of this essential issue. In the days ahead, the Commission will initiate a new notice of inquiry that will seek to gather new information on this topic as well as others related to children and media in the digital age.

**STATEMENT OF
COMMISSIONER MICHAEL J. COPPS**

Re: *Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming, MB Docket No. 09-26*

I am pleased to support submittal of this Report to Congress in response to the mandate of the *Child Safe Viewing Act of 2007*. As I continue to discuss our nation's media with people throughout the country, I consistently hear from parents about the programming their children are exposed to—on broadcast television, on cable or satellite, on the Internet, on their mobile devices. Graphically violent and indecent content is all too present. While I hear many voices, there is one common refrain: parents, concerned about the many images their children see on these different modes of distribution, seek reliable, effective ways to protect their children from inappropriate content.

Media and communications technologies present all of us—especially our children—with new opportunities for learning and acquiring skills to succeed in our increasingly technology-driven society. At the same time, these advances pose large and growing challenges to parents' ability to control the content to which their children are exposed. Parents are the first line of defense in protecting their children against these barrages of violent and indecent images. But parents must be armed with information about programming content and the tools to prevent their children's exposure to objectionable content.

As required by the *Child Safe Viewing Act*, the Commission issued a Notice of Inquiry to examine advanced blocking technologies currently available across a range of media platforms and devices. The resulting Report shows that industry has responded to parents' concerns by developing several blocking and filtering options intended to aid parents in protecting their children from objectionable programming. However, the Report also reveals a multiplicity of complicated, disparate technology tools which each apply only to specific media, and, in some instances, only to specific providers. So parents are challenged to become familiar with, and learn to use, all sorts of different blocking tools and program ratings systems. No wonder parents have such a hard time! Just as bad, even when a parent successfully masters all this, his or her children often are able to find the same programming online or on their wireless devices.

For all the gains new technology tools may bring us, let's not jump to the conclusion that technology alone is necessarily the whole answer. It may very well be that we need to consider other options, beyond technology-based solutions, to halt the bombardment of our kids with objectionable programming. I am encouraged that this Report acknowledges that the record compiled so far fails to address all key questions when it comes to protecting children in the evolving digital media marketplace. I want to make sure this acknowledgment receives the attention it merits. The Commission will be pursuing this issue further with a subsequent Notice of Inquiry. The Commission, the Congress, and all of us as citizens have more work to do before we understand all the myriad causes underlying the decline of child-friendly programming standards. In the final analysis, it may be that other tools—a voluntary code of conduct, a Commission rule, a federal statute—may be needed to meet the goals of true child safe viewing.

I am grateful to Congress for providing the opportunity for the Commission to begin serious inquiry into these important questions. I particularly thank Senator Mark Pryor and his colleagues for their leadership in bringing these issues to the fore. I also commend FCC Chairman Julius Genachowski for his leadership in bringing this Report to Congress. It is my hope and expectation that the Commission will continue to work towards a comprehensive solution that will do an effective job in protecting America's children.

**STATEMENT OF
COMMISSIONER ROBERT M. MCDOWELL**

Re: *Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming, MB Docket No. 09-26*

I am pleased to join with my colleagues in delivering – on time – our Report to Congress pursuant to the Child Safe Viewing Act. Spearheaded by the efforts of Senator Mark Pryor of Arkansas, Congress directed us to report on the existence and efficacy of various “advanced blocking technologies” that permit parents to shield their children from inappropriate video and audio content when such content is distributed across a wide range of electronic communications systems. Thanks to the labor of staffers across the Commission – including those in the Media Bureau, Wireless Telecommunications Bureau, Wireline Competition Bureau, Office of Engineering and Technology and Office of Strategic Planning and Policy Analysis – the agency has produced a comprehensive overview of the information submitted in the docket.

Our 90-page Report makes plain that an array of filtering technologies have proliferated across broadcasting, cable, satellite, wireless, and Internet platforms. As the father of three young children, I am keenly interested in the availability and usefulness of parental-control mechanisms. As a regulator, I note that many of the most innovative new systems and devices have come into being in response to consumer demand rather than government mandate. The Report, by bringing much wide-ranging data together in one document, should provide a solid empirical foundation for future inquiry in this arena. The Report also makes plain that despite what we now know about existing parental-control technologies, we still lack data and analysis required to grapple with such thorny issues as the need for possible improvements, if any, to existing systems and the scope of our legal authority to take actions that some may see as desirable.

Again, I thank the Commission staff for its work in helping us to produce a data-filled document. I hope that Members of Congress find it useful in getting up to speed on the technological advancements that communication service and content providers have delivered to date to help American parents guide and protect their children.

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: *Implementation of Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming, MB Docket No. 09-26; Report*

I commend Senator Mark Pryor and the Senate Committee on Commerce, Science and Transportation for compelling the Commission to take stock of the current technologies that afford parents greater control over the content available to their children through various media. Today's Report is a small step forward in our larger quest to ensure that the digital age is a thoroughly positive one for parents and their children.

On a daily basis, parents are faced with the seemingly insurmountable challenge of monitoring what their children are viewing. Especially in today's economy, where parents may be forced to work harder and longer to make ends meet, many children have more time without direct supervision. Under these conditions, our duty is to find ways to help parents maintain a presence even when they are not actually there. Families deserve that level of security and peace of mind.

Today's Report catalogues the myriad blocking technologies available across a variety of platforms and describes the lack of consistency among and within those platforms. It appears that many parents are unaware of these technologies or, even if aware, they have been unable to figure out how to use them. The upshot is that parents are currently wading around in a digital gumbo, either unfamiliar with the many available tools or simply overwhelmed by them.

What remains unexamined is exactly why parents have not adopted the various advanced blocking technologies. Are they simply unaware? Are the technologies too confusing? Is the discontinuity in the ratings a factor? These are critical questions that must be answered if we are to come to grips with why the V-chip and other technologies of its kind have failed to become a meaningful part of the viewing experiences of American families. The information is out there; our job is to find and cultivate it.

I thank the various bureaus and offices that worked hard to produce this Report in a timely fashion. I look forward to working with them, the Chairman, and my fellow Commissioners to further this inquiry and provide families with meaningful control over the many forms of media available to their children.

**STATEMENT OF
COMMISSIONER MEREDITH A. BAKER**

Re: *Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming, MB Docket No. 09-26, Report*

One of the most important and demanding jobs is that of a parent. The barrage of indecent, violent or otherwise objectionable programming to which our children have access can present a daunting parenting challenge. Because extreme images and words have a powerful influence on the behavior of our children, parents must have the tools to allow them to identify harmful content so that they can protect their families. Recent surveys reveal a low rate of V-chip use—according to a 2007 study by the Kaiser Family Foundation, only about 16 percent of parents have used this technology.

With the emergence of additional “new” media—such as advanced wireless devices and the Internet—that can deliver audio and video programming to our children, the challenges confronting parents have multiplied. Now, material can be accessed on portable devices outside of the home, far from parental supervision.

I am encouraged that the Commission has engaged in this fresh, top-to-bottom review of this important subject, leading to the Report to Congress that we have adopted today. I have a long-standing interest in finding ways to protect our children from harmful material. During my previous tenure as Acting Administrator of the National Telecommunications and Information Administration, we convened a working group to consider ways to shield them from inappropriate online content. As we recognized then, all parents want to keep their children safe.

Today’s Report categorizes and analyzes the sizeable record compiled in our proceeding. The Commission has heard from a wide range of commenters and compiled information about the various rating systems and blocking tools available for matter delivered over a wide variety of media platforms. We have also received comments on how we can encourage the development, deployment and use of improved mechanisms to assist parents. Despite the volume and breadth of the record, however, today’s Report is only the initial step in this process. As we note, there is much data that we still require, and a number of legal questions that we may need to resolve, including those involving the First Amendment and the extent of our statutory authority. I am pleased that additional proceedings are contemplated to seek out this necessary information, and I encourage all interested parties to make their views known.

While increased Commission regulation should not be the solution here, I cannot agree with those industry commenters who maintain that the *status quo* is acceptable. Parents must be provided access to reliable programming ratings information and easy to use blocking and filtering tools. Because such technologies must be improved, we need a full, collaborative effort by all stakeholders, pooling their resources and expertise. Together, we can build on the V-chip and fashion new, more technologically advanced mechanisms to enable parents to protect their children from harmful content over any platform. In light of the current level of V-chip use, we must also find ways to more effectively reach out to parents and make them familiar with these resources, so that they will become more comfortable using them.

I am pleased to vote in favor of this Report, and want to recognize the hard work and long hours logged by the Media Bureau in its preparation, as well as the valuable contributions of the Wireless Telecommunications Bureau, the Office of Engineering and Technology, and the Office of Strategic Planning and Policy Analysis. As a result of their efforts, the Commission is prepared to assist in the development of a new generation of parental control tools. I look forward to working in this effort with all interested parties, along with the Chairman, my fellow Commissioners and our dedicated FCC staff. Together, we can make a real difference in helping our nation's parents foster the healthy development of America's greatest resource: our children.