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	)	
	)	

REPLY COMMENTS OF MOTOROLA, INC.

Motorola, Inc. ("Motorola") hereby responds to the comments filed in response to the above-captioned Notice of Inquiry ("*Notice*").[1] As demonstrated by the record in this proceeding, there are a wide array of parental control options available to parents today to manage the media use of their children. Motorola agrees with numerous commenters that government intervention is unnecessary given these marketplace facts and that any technology mandates would limit further innovation and limit parents' choices. Motorola also provides the Commission with information on an innovative solution that Motorola is developing that will provide enhanced parental control features and functionality to multichannel video customers.

I. MARKETPLACE FORCES ARE PROVIDING, AND WILL CONTINUE TO PROVIDE, INNOVATIVE PARENTAL CONTROLS.

The record shows that marketplace forces are meeting consumer demand for parental control technologies. Commenters, including a number of technology companies, describe the various technical solutions and independent ratings information that are available to parents today to manage what their children watch on television, the Internet, and other video

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[1] *In re 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) ("*Notice*").

distribution platforms.[2] As one commenter explained, "There has never been a time in our nation's history when parents have had more tools and methods at their disposal . . . . Parents have been empowered with technologies, strategies, and information that can help them devise and enforce a media plan for their families that is in line with their own needs and values."[3] Importantly, parents believe they are successfully controlling their children's media use with the tools that they have on hand today.[4]

Motorola technology is helping parents in this regard. For example, Motorola's cable set-top boxes are designed to support the robust parental controls that cable operators make available to their customers today. As noted by cable industry commenters, parental control functions are delivered via the cable operator's electronic programming guide ("EPG").[5] Our

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[2] *See, e.g.*, Comcast Comments at 2-5, 6-7 (describing Comcast's parental control tools, including tools to help parents limit access to television and online video); Microsoft Comments at 5-16 (describing Microsoft's parental control technologies for a wide range of media platforms used in the home, including computers, entertainment systems, portable media players, and video games); TiVo Comments at 2-4 (describing TiVo's KidZone parental controls); Google Comments at 4-9 (describing Google's tools to "help ensure all Internet users enjoy a positive and safe online experience"); *see also* AT&T Comments at 5 ("[A] a variety of Internet service providers, communications companies, entertainment and video service providers, and others already have deployed a broad array of parental control technologies to help parents keep children safe online and prevent them from accessing inappropriate content."); Ass'n of Nat'l Advertisers Comments at 2 ("A quick inventory of available technologies reveals a diverse array of methods that permit viewers to exert control over the programming they receive."); DISH Network Comments at 2 ("The industry has demonstrated that if afforded adequate flexibility, it can create a wide variety of tools for parental empowerment to manage children's viewing."); Consumer Electronics Ass'n Comments at 5 ("More than ever before, today's parents have a multitude of advanced blocking technology options to identify objectionable content and prevent their children from accessing that content."); Nat'l Ass'n of Broadcasters ("NAB")/Nat'l Cable & Telecomm. Ass'n ("NCTA")/Motion Picture Ass'n of America ("MPAA") Joint Comments at 18 ("Clearly, there is a marketplace demand for parental control technology, and a broad array of companies is developing innovative products to meet that demand.").

[3] Progress & Freedom Found. Comments at iii.

[4] *See* NAB/NCTA/MPAA Joint Comments at 3, 17-18 (citing survey data).

[5] *See* Cox Comments at 6 ("For video, Cox leverages digital technology to offer advanced parental control options through its digital program guide. The Cox Program Guide allows parents and guardians to restrict access to video content by enabling parents to lock content by channel, by ratings, as based on the TV Parental Guidelines developed in 1996, by content advisories, and by time periods."); *see also* Comcast Comments at attachment 1 (depicting parental control features); NCTA Comments at 9.

set-top boxes provide middleware support to the EPG to enable parents to: manage their parental control passwords; lock specific channels; lock programming based on TV and MPAA ratings; lock specific programs; and lock channels during particular time periods. In addition, Motorola's software partners provide the capability to block adult titles from program listings. Furthermore, Motorola set-top boxes can also pass-through the ratings information contained in the vertical blanking interval ("VBI") of program streams, thereby enabling customers to use the V-chip capability in their TV sets if that is their preference.

As numerous commenters pointed out, the wide range of choices available to parents today has developed largely in the absence of government intervention or regulation.[6] Cable operators, for example, are providing parental controls to accommodate the needs of their subscribers and to help differentiate their services from DBS and other multichannel video programming distributor ("MVPD") competitors; likewise, numerous parental control options are available for online users. Motorola agrees with these commenters that further government regulation is unnecessary given these marketplace realities and that, in fact, any technology mandates in this area would chill investment and innovation and limit options for parents.[7]

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[6] *See, e.g.*, NAB/NCTA/MPAA Joint Comments at 18 ("Governmental restraint [has] spurred the development of [] innovative [parental control] solutions."); DISH Network Comments at 1-2("[S]eparate and apart from a government mandate, parental empowerment has flourished. The industry has developed tools that go well beyond the V-chip's capabilities to provide parents with more effective, more user-friendly, and, ultimately, more popular parental controls."); Digital Media Ass'n Comments at 13 ("[T]he most likely successful models for parental controls will continue to be those developed in the marketplace to suit specific applications and services.).

[7] *See, e.g.*, Progress & Freedom Found. Comments at 6-7 ("Government controls . . . essentially treat all households as having the same needs and values, which we know is not the case. Even though not all private controls will be equally effective, failure will be detected more rapidly and the better systems will gradually win out as more and more legitimate content is tagged and rated."); NAB/NCTA/MPAA Joint Comments at 18 ("Clearly, there is a marketplace demand for parental control technology, and a broad array of companies is developing innovative products to meet that demand. However, governmental intervention, in the form of a mandatory ratings system or technology mandates, would likely chill innovation and investment in new solutions and limit parental options for managing their children's TV viewing."); TiVo Comments at 7 ("[I]f Congress or the Commission chooses a particular technological implementation over other technically feasible alternatives, innovation will be

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II. MOTOROLA IS DEVELOPING NEW TECHNOLOGIES TO PROVIDE PARENTS ADDITIONAL CONTROL OVER VIDEO CONTENT.

The Notice requested information about emerging parental control technologies.[8] Motorola is pleased to take this opportunity to describe TV Firewall, an advanced blocking product currently under development. TV Firewall is anticipated to be ready for deployment sometime next year. TV Firewall will offer the parental controls typically available now to cable subscribers, such as blocking by rating, by program title, and by channel. It will also provide several new benefits to MVPD subscribers, including a richer and more accessible user interface, additional block-by-time features, and a program logging feature. In addition, TV Firewall will give parents the opportunity to make affirmative viewing choices for their families, by supporting a playlist feature.

TV Firewall will allow MVPD subscribers to configure parental controls via a convenient graphical user interface ("GUI") that is available online.[9] The GUI allows parental control configurations to be customized for each set-top box in the home. For example, a set-top box connected to the television in a child's bedroom can be programmed to restrict more content than

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choked off."); Verizon Comments at 11-12 ("Given the exceedingly fast evolution of communications technologies and the marketplace, the development of an extensive federal regulatory regime could hinder, rather than facilitate, the development of advanced parental control technologies. Given the speed with which new technologies are being deployed, any lengthy regulatory process aimed at mandating standardized parental control requirements could work to delay, rather than expedite, the development of advanced, state-of-the-art content filtering or blocking mechanisms. Moreover, any regulatory efforts to arrive at a 'one-size-fits-all' approach to parental control technologies very well could result in adoption of a lowest common denominator approach that would discourage carrier innovation, inhibit the development of alternatives, and ultimately leave parents with fewer, less effective tools at their disposal.").

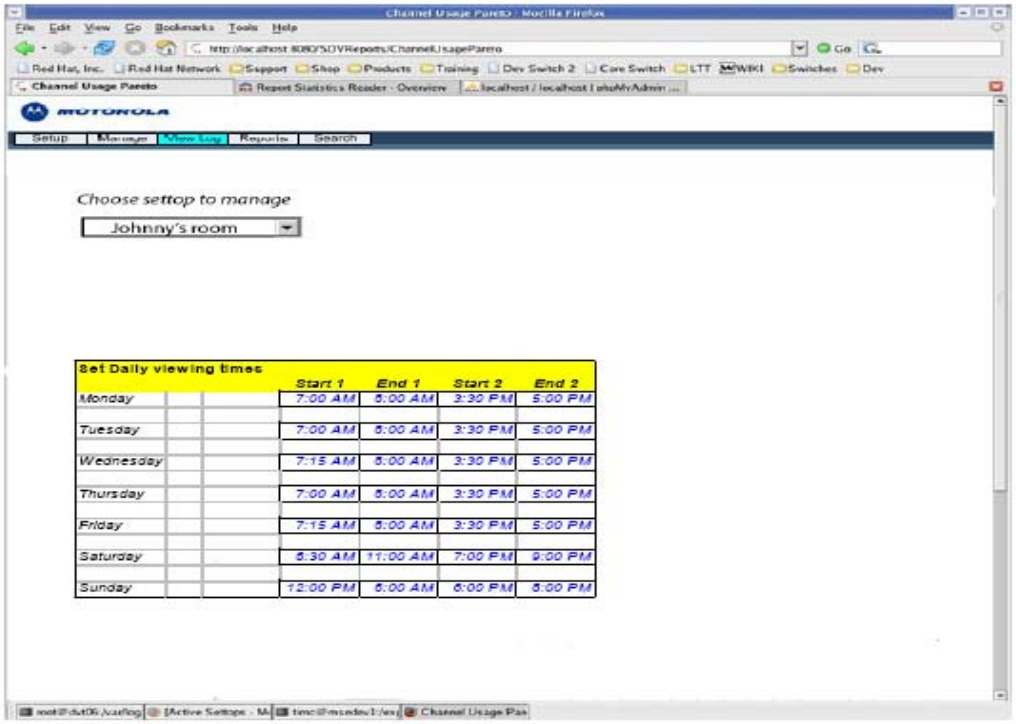
[8] *See Notice* ¶ 23 (inviting comment on "any other advanced blocking technologies for television either currently in existence or under development").

[9] The GUI could be accessed, along with billing and other subscriber account information, from the user's account on the MVPD's website. Because TV Firewall is a server technology, rather than a set-top box technology, parental controls for all set-top boxes in a household can be configured at the GUI.

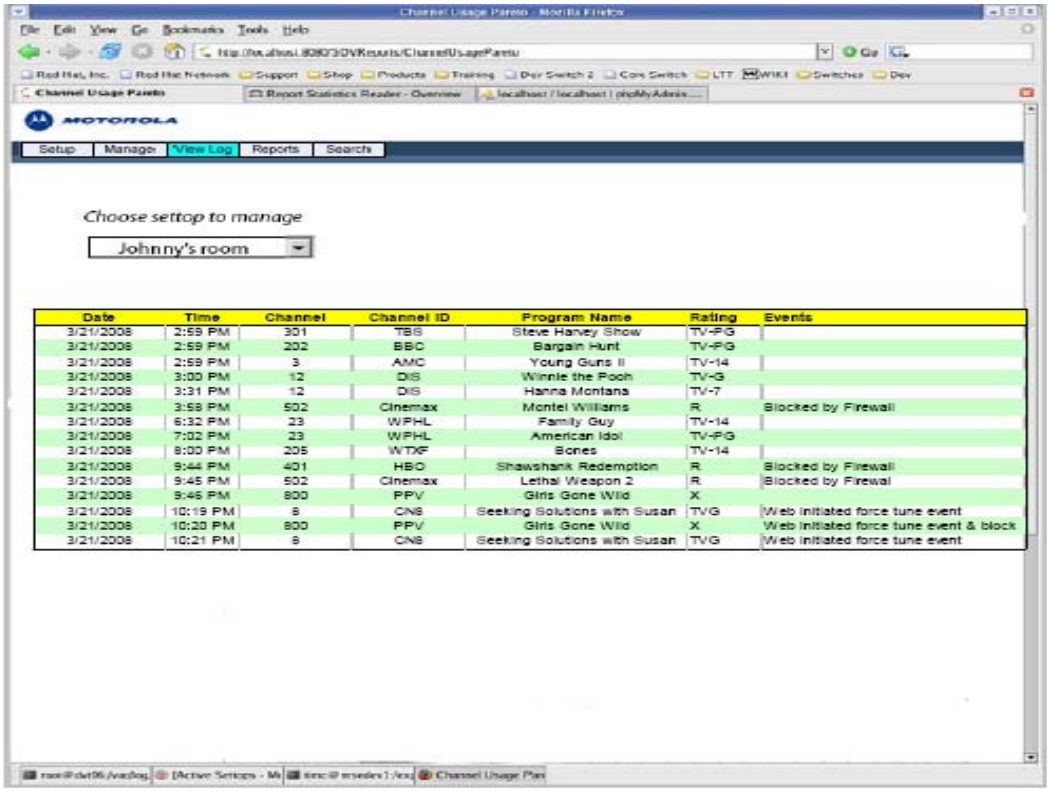
the set-top box connected to the television in the family room. For ease of use, the GUI allows the user to name each set-top in the house (*e.g.*, parents could label a set-top box in a child's room "Johnny's Room"). Parents may access the GUI from any device that can access the Internet, including from web-enabled mobile devices. Online access to the GUI will give parents the flexibility to set parental controls from wherever they are, whether at work, at a restaurant, or while traveling.

In contrast to MVPD-provided parental controls available today, a subscriber using TV Firewall can set viewing time limits or quotas from the GUI. For example, a parent could limit viewing time by establishing certain time periods during which the child can watch TV (see depiction below). When the set-top attempts to access programming during the allowable window, access to the programming is allowed. When access is attempted during a prohibited period of time, the screen provides an informational message that the programming is blocked (*e.g.*, the screen may display a message indicating "viewing window exceeded" or "viewing not authorized at this time").[10]

[10] Similarly, if the viewer attempts to tune the set-top to programming that is not authorized due to ratings restrictions or other criteria, the viewer will see a message such as "Channel blocked due to rating" or "Channel blocked by parental control."



Another unique feature of TV Firewall is its ability to log the viewing activity of each set-top box and present the logs to the parent via the GUI. This feature allows the parent to confirm operation of the TV Firewall settings and to review a complete viewing history for each set-top box in the home, as depicted below.



Date	Time	Channel	Channel ID	Program Name	Rating	Events
3/21/2008	2:59 PM	301	TBS	Steve Harvey Show	TV-PG	
3/21/2008	2:59 PM	202	BBC	Bargain Hunt	TV-PG	
3/21/2008	2:59 PM	3	AMC	Young Guns II	TV-14	
3/21/2008	3:00 PM	12	DIS	Winnie the Pooh	TV-G	
3/21/2008	3:31 PM	12	DIS	Hanna Montana	TV-7	
3/21/2008	3:59 PM	502	Cinemax	Montel Williams	R	Blocked by Firewall
3/21/2008	6:32 PM	23	WPHL	Family Guy	TV-14	
3/21/2008	7:02 PM	23	WPHL	American Idol	TV-PG	
3/21/2008	8:00 PM	205	WTXF	Bones	TV-14	
3/21/2008	9:44 PM	401	HBO	Shawshank Redemption	R	Blocked by Firewall
3/21/2008	9:45 PM	502	Cinemax	Lethal Weapon 2	R	Blocked by Firewal
3/21/2008	9:46 PM	800	PPV	Girls Gone Wild	X	
3/21/2008	10:19 PM	8	CN8	Seeking Solutions with Susan	TVG	Web initiated force tune event
3/21/2008	10:20 PM	800	PPV	Girls Gone Wild	X	Web initiated force tune event & block
3/21/2008	10:21 PM	8	CN8	Seeking Solutions with Susan	TVG	Web initiated force tune event

TV Firewall utilizes switched digital video ("SDV") technology to implement these various blocking features. The parental control settings for each set-top box in the home are maintained in servers in the cable headend. When a child tunes to a particular channel, the set-top box will send an inquiry up to the servers in the cable headend to confirm that the set-top box is authorized to tune to that channel. If the parental control settings allow for viewing, then the headend servers send a message back to the set-top box to allow for the display of the channel. If, on the other hand, the settings do not permit viewing of that channel, the headend servers will send a message back to the set-top box that the channel has been blocked. In this latter case, the TV set will display the message that the child is not authorized to view the channel.[11]

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[11] SDV can also be used for the delivery of programming channels to customers. In contrast to the traditional cable architecture, in which all channels are typically delivered to all customers at all times regardless of whether anyone in a neighborhood is watching any given channel, SDV enables operators to allocate bandwidth based on

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As some commenters suggest, the flip side of blocking programming deemed inappropriate for children is empowering parents to provide access to programming that they want their children to view. With the playlist support feature on TV Firewall, parents can create a "walled garden" for their children, allowing them to watch pre-selected programming. Using the GUI, a parent can select the programs that they want their child to view using an online EPG. The programs selected create a playlist for the set-top box. The TV Firewall will automatically tune the set-top box to the parent-approved programs in the playlist. An example playlist is shown below.

3:00 PM	**PBS**	**Clifford the Big Red Dog**	**TV-Y**
3:30 PM	**TOON**	**Tom & Jerry**	**TV-Y**
4:00 PM	**DISN**	**Winnie the Pooh**	**TV-Y**
4:30 PM	**PBS**	**Science Kids TV**	**TV-Y**

(…footnote continued)

usage levels. Channels that are heavily viewed continue to be delivered on a broadcast basis, while more lightly viewed channels can be delivered on an SDV basis, with no visible difference to the consumer. These techniques enable the cable network to be even more responsive to the preferences of its customers through more effective bandwidth utilization. TV Firewall can be implemented in a cable network independent of whether the operator elects to deliver individual programming channels on an SDV basis. In all events, given the clear public interest benefits of SDV, we urge the Commission to pursue policies that promote the deployment of SDV by cable operators.

III. CONCLUSION

As the record in this proceeding demonstrates, the marketplace is flourishing with a diverse array of options for parents to control the media content that their children encounter. The Commission's report to Congress should reflect this dynamic marketplace and note further that new innovations like TV Firewall are also in development. In light of these marketplace realities, the Commission's report should conclude that government mandates are unnecessary and would risk stifling innovation and restricting choices for parents.

Respectfully submitted,

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