National Cable & Telecommunications Association
25 Massachusetts Avenue, NW – Suite 100
Washington, DC 20001
(202) 222-2300

www.ncta.com

Neal M. Goldberg
Vice President and General Counsel

(202) 222-2445
(202) 222-2446 Fax

June 5, 2007

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CS Docket No. 97-80

Dear Ms. Dortch:

On Monday, June 4, 2007, Dan Brenner, Senior Vice President for Law & Regulatory Policy at the National Cable & Telecommunications Association ("NCTA"), William Check, NCTA's Senior Vice President, Science & Technology, Paul Glist of the law firm Davis Wright Tremaine, and I met with Monica Desai, Chief of the Media Bureau, and Andrew Long, Tom Horan and Brendan Murray of the Media Bureau staff. In that meeting we discussed progress that has been made by the cable and consumer electronics ("CE") industries on a number of fronts in bringing "digital cable ready" products to the market including:

1. **The OpenCable Platform**. In November, 2005, NCTA responded to a Media Bureau request seeking proposals to bring two-way products to market as soon as possible. The cable industry's response was based on marketplace use of the OpenCable Platform as a standardized "middleware" layer, which is now being incorporated in retail "two-way" digital cable ready devices as well as in operator-supplied set-top boxes.[1]

    - The OpenCable Platform middleware definition is now standardized at the ITU and at SCTE, and is similar to the many standardized middleware solutions that are used internationally in MHP, GEM, ACAP, Blu-Ray, and cell phones. Interactive cable applications – fully-featured interactive cable program guides, video-on-demand ("VOD"), "switched" channels, interactive programming enhancements, "voting," e-commerce, cross-platform applications like caller ID on the TV, and other evolving advanced services – can be written once to the OpenCable Platform and

[1] *See* Report of the National Cable & Telecommunications Association on Two-Way (Interactive) Digital Cable Ready Televisions, CS Docket No. 97-80, filed November 30, 2005.

can then interact with a wide variety of leased and retail hardware devices, allowing innovation on both sides of the middleware.

- Over a dozen independent CE companies, including leaders in HDTV technology such as Samsung, Panasonic and LG Electronics, have signed OpenCable licenses with the cable industry's research and development center, CableLabs;[2] their OpenCable DTVs have been exhibited at the 2006 and 2007 Consumer Electronics Shows,[3] and the use of the OpenCable Platform solution has been endorsed in joint filings of CEA and NCTA, as well as in earlier agreements.[4]

- An international and United States patent licensing pool exists for the OpenCable Platform. Patent licensors include Philips, Panasonic, Samsung, OpenTV, Comcast, and Time Warner Cable. The patent pool has established a license and royalty fee structure available to any potential licensee on a reasonable and non-discriminatory basis. The license and fee structure fairly apportions the patent fees payable to both service providers, and device manufacturers, as both benefit from OpenCable Platform technology.

2. **Multi-Stream CableCARDs for One-Way Devices.** Multi-Stream CableCARDs ("M-Cards") enable devices to unscramble more than one programming stream so, for example, a viewer may record one descrambled program while viewing another descrambled program. CableLabs, with the assistance of consumer electronics parties, including representatives from TiVo, Motorola, Soleki Systems Corporation,

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[2] *See* "Cable TV's New Aim: Free Us From Tangle of Boxes and Remotes," *Wall Street Journal*, February 21, 2007, at B1 ("[M]anufacturers such as Panasonic, Samsung and LG already have designed OCAP TV sets that will eliminate the need for set-top boxes, the scourge of many a home-entertainment center. With OCAP TVs scheduled to be available as early as this year, users just have to attach a cable and the set will get video-on-demand, advanced program guides and other interactive features from cable."). To date, the CHILA license, which covers the hardware for interactive TVs, has been signed by major CE companies including Samsung, LG Electronics, Panasonic, Toshiba, ADB, Thomson, Digeo, CISCO/Scientific-Atlanta, Motorola, Stezar, SunPlus, Markus, Himax, Funai Electric, and Video Without Boundaries, as well as by IT and component manufacturer companies such as ATI, Broadcom, Digital Keystone, and Micronas. The companion license for OpenCable Platform technology enables retail digital cable-ready devices to receive the full panoply of cable operator services, including an interactive guide and VOD services, as well as interactive applications and services. It has been signed by, among others, Samsung, Panasonic, LG Electronics, and Toshiba.

[3] *See* Letter from Neal M. Goldberg, NCTA, to Ms. Heather Dixon, Legal Advisor to Chairman Martin, CS Docket No. 97-80, February 23, 2007 (a copy of this filing is attached as Attachment A hereto).

[4] *See e.g.*, Joint NCTA/CEA Status Report, filed October 14, 2005 ("The parties have agreed to proceed on the basis that interactive Digital Cable Ready devices (iDCRs) will use the OpenCable Application Platform (OCAP)."). *See also* Memorandum of Understanding Between the Cable and CE Industries, Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices and Compatibility Between Cable Systems and Consumer Electronics Equipment, Further Notice of Proposed Rulemaking, 18 FCC Rcd 518 (2003), Appendix B, Memorandum of Understanding, §4.3.

Digeo Interactive, Digital Keystone, and ViXS, redesigned the test suite requirements for "one-way" retail devices (such as TiVo's DVR) to enable such devices to use multistream CableCARDs in multistream mode, enabling viewers to watch one channel while recording another.[5]

3. **Switched Digital Video.** Switched Digital Video ("SDV") is a significant bandwidth management technology employed by cable operators to offer more programming choices, more High Definition, Standard Definition, and on-demand channels; to deliver faster Internet access speeds and the innovative services those speeds enable, including digital voice service; and to deploy more interactive two-way services.[6] When TiVo raised concerns that its one-way DVRs could not access two-way SDV linear channels, the cable industry responded promptly and engineers from cable and TiVo are working now to find a solution. TiVo's President and CEO Tom Rogers recently testified that "There is good news. We have pointed out this problem to the cable industry. To their great credit, they have said, we want to work this out, we want to work this through…. We are hopeful that it will be solved."

4. **Digital Cable Ready PCs.** Working with Microsoft, AMD and others, the cable industry developed a "one-way," CableCARD-enabled "digital cable ready" receiver for use with Vista PCs. The agreement allows consumers to enjoy one-way cable programming, including premium high definition content, on their personal computers and throughout the home on compliant network-connected devices. The receiver and compatible Vista PCs are now being sold by Hewlett Packard and will be available soon from other manufacturers as well.

5. **Two-Way Digital Cable Ready PCs.** Building from the one-way digital cable ready PC success, the cable industry is working to develop a two-way digital cable ready receiver for PCs, and to accelerate the deployment of OpenCable Platform devices and services in that environment.

6. **Two-way OpenCable IT Solution.** The cable industry is also working directly with chip manufacturers to deliver two-way OpenCable Platform services in ways that may be better suited to their implementations in the PC environment.

In response to questions, we explained the many problems with the proposal advanced by certain CE and IT companies in a November, 2006 FCC filing. We reiterated points made in an NCTA *ex parte* filing on December 11, 2006 (a copy of which is attached as Attachment B). In particular we noted that the market-based OpenCable Platform approach submitted to the Commission by the cable industry at the Media Bureau's request in November, 2005 is currently

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[5] *See* Letter from Neal M. Goldberg, NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80, filed March 26, 2007.

[6] AT&T's U-Verse video service utilizes SDV to deliver *all of its channels* throughout its entire footprint. Verizon also uses a form of switched video delivery for its video-on-demand channels.

bringing two-way plug and play products to market and can do so much faster than the approach advanced by the CE filing could ever do.

In addition, we discussed the status of the current discussions between the cable and CE industries regarding two-way digital cable ready products and described the progress that has been made to date.

Finally, we discussed a number of approaches to promoting the "commercial availability" goals of Section 629 of the Communications Act, particularly in light of the facts that the statutory mandate applies to all MVPDs, and that over 30% of MVPD customers receive their services from an MVPD other than a traditional cable company. In particular, we discussed three approaches (not mutually exclusive) to promote the goals of Section 629:

- **The OpenCable Platform.** As noted above, major consumer electronics manufacturers – including Samsung, the world leader in HDTV; Panasonic, maker of the best-selling plasma TVs; and LG, the world's largest provider of flat-panel displays – are bringing innovative two-way, digital cable-ready products to market using the OpenCable Platform.

- **Enhanced Separate Security Device for all MVPDs**. Another approach that is being explored is an enhanced separated security device, in a new form factor that puts MVPD technology into a small device (about the size of an iPod) supplied by the MVPD. The goal is to provide a unified and simpler experience for the consumer, using one remote control associated with the retail device, in a way that can permit the retail device to interoperate with all MVPD networks, whether traditional cable, satellite, or telephone. The OpenCable Platform would be used in the device supplied by cable operators, but it is not a necessary component, so any MVPD's services could be accessed with this approach if the device had the requisite connectors to the television and MVPD technology. Such an "all-MVPD" device is critical to promoting the commercial availability of navigation devices since providers other than traditional cable companies have over 30% of the MVPD market.

- **Gateway Device for all MVPDs.** Following discussions between CEA and the telephone industry in 2006, CEA and a number of telephone companies announced a proposal for a gateway device that could transmit MVPD programming onto home networks.[7] Although this solution is more complicated than the enhanced separate security device approach, it is a home network-based retail approach that would enable all MVPDs to carry video programming throughout the home.

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[7] Press Release, "AT&T, BellSouth, Verizon and CEA Announce Principles on Device Attachment," March 15, 2006. *See also* "Bells, Electronics Industry Strike Internet TV Deal," *Tech Daily*, March 16, 2006.

If you have any questions, please contact the undersigned.

Respectfully submitted,

/s/ Neal M. Goldberg

Neal M. Goldberg

cc: Monica Desai
Andrew Long
Tom Horan
Brendan Murray

Attachments

ATTACHMENT A

cable

National Cable & Telecommunications Association
25 Massachusetts Avenue, NW – Suite 100
Washington, DC 20001
(202) 222-2300

www.ncta.com

Neal M. Goldberg
Vice President and General Counsel

(202) 222-2445
(202) 222-2446 Fax

February 23, 2007

Ms. Heather Dixon
Legal Advisor, Media Issues
Office of Chairman Kevin Martin
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: CS Docket No. 97-80 (Commercial Availability of Navigational Devices); PP Docket No. 00-67 (Compatibility Between Cable Systems and Consumer Electronics Equipment)

Dear Ms. Dixon:

There has been much debate in the above-referenced dockets and elsewhere about the best way to bring "two-way" digital cable ready products to market so consumers may access cable services without the need for a set-top box supplied by the cable operator. Some have sought government intervention to micromanage a solution to the complex technical and business issues involved in bringing two-way products to market. In contrast, the cable industry, with support from a number of major consumer electronics ("CE") companies, supports a market-based approach based on the OpenCable Applications Platform ("OCAP") – *an approach that is working to bring two-way products to market much faster than any hypothetical approach could ever do.*

Several leading CE manufacturers are building two-way, OCAP-enabled products for retail and many of those products were displayed at the 2007 Consumer Electronics Show. Furthermore, major cable operators have committed to using OCAP in their own leased set-top boxes and have started to deploy support for OCAP for those devices and for retail devices. They remain committed to the deployment schedule for OCAP technology and support outlined by NCTA in filings with the Commission last year. It is in the business interest of the cable industry to roll out OCAP rapidly to leased and retail products because OCAP streamlines and improves the cable business and because OCAP provides applications developers and consumers with an interactive platform which is fully competitive with IPTV and other video services.

In this regard, I am enclosing for your information a February 21, 2007 *Wall Street Journal* article which reports on cable operators' support for two-way "plug and play" television sets, set-top boxes and other products which use OCAP. As the article observes, "manufacturers such as Panasonic, Samsung and LG already have designed OCAP TV sets that will eliminate the need for set-top boxes, the scourge of many a home-entertainment center. With OCAP TVs,

scheduled to be available as early as this year, users just have to attach a cable and the set will get video-on-demand, advanced program guides and other interactive features from cable."

I am also enclosing a recent press release from CableLabs describing the numerous OCAP-enabled "two-way" products displayed at the 2007 Consumer Electronics Show. The CableLabs press release notes that "with more than a dozen manufacturers displaying two-way 'plug-and-play' TVs, set-top boxes and other cable-ready devices, the just completed 2007 Consumer Electronics Show marked a significant milestone in the cable industry's efforts to bring interactive digital TV services to consumers that will not require the use of a leased set-top box."

In addition, the same press release reports that "High-Definition Cable Content [is] Now Available on PCs." As the release states, "a new technology interface that will allow consumers for the first time to view high-definition and other digital cable content on new Microsoft Vista-enabled personal computers was also displayed at CES. The cable interface for personal computers – called OCUR or OpenCable Unidirectional Receiver – will initially support one-way services (e.g., linear programming) while a two-way interactive interface is being developed."

If you have any questions, please feel free to contact me.

Sincerely,

/s/ Neal M. Goldberg

Neal M. Goldberg

cc: Ms. Marlene Dortch (for inclusion in CS Docket No. 97-80 and PP Docket No. 00-67)
Monica Desai, Chief, Media Bureau
Andrew Long
Brendan Murray

Attachments

THE WALL STREET JOURNAL. ONLINE
February 21, 2007

PORTALS

Cable TV's New Aim: Free Us From Tangle Of Boxes and Remotes

By PETER GRANT

When it comes to innovation, the cable TV industry has been long on talk but slow on action. For years, cable executives have promised viewers they'd soon be using remotes to shop, play games, interact with advertisers and vote contestants off the island. But these and many other features, for the most part, haven't been delivered.

Meanwhile, innovations appear daily on the Internet. Some prognosticators predict the Internet eventually will beat cable in the battle for the living room, with most of the entertainment Americans consume piped over the Web to television sets. That would leave cable operators with the unglamorous and less lucrative job of providing the pipes.
But now something is happening that may tilt the playing field more to the cable guys' advantage. After more than six years of development by CableLabs, the industry's research and development arm, cable operators are rolling out technology that could facilitate new applications and help cable TV maintain its dominant position in home entertainment.

The technology addresses an age-old problem at the root of the cable industry. Because the industry grew up as thousands of separate systems, there was little consistency in the technology used, making service upgrades difficult. This remained true even though many systems were consolidated by giants such as Comcast and Time Warner. Just to add a feature like a news ticker on the bottom of the screen, for example, software has to be modified many times to fit different set-top boxes and network gear in a multitude of systems.

The new technology, with the cumbersome name of OCAP, for Open Cable Application Platform, is software that behaves like an operating system that runs on digital cable set-top boxes and other devices. OCAP, then, is to set-top boxes what Microsoft Windows is to computers. Adding a new feature, like the ticker, is an easy task regardless of the cable system. That ease is expected to spark a flurry of creativity among software companies, as new applications will no longer have to be tailored to fit separate cable systems.

Even better, manufacturers such as Panasonic, Samsung and LG already have designed OCAP TV sets that will eliminate the need for set-top boxes, the scourge of many a home-entertainment center. With OCAP TVs, scheduled to be available as early as this year, users just have to attach a cable and the set will get video-on-demand, advanced program guides and other interactive features from cable.

OCAP also enables manufacturers to design a unit combining DVD players, digital video recorders and other devices within a set-top box. So, cable subscribers won't need to lease boxes from their operators -- income hardly worth the capital outlay -- to get all of the interactive features. Any OCAP device they buy from an electronics retailer will do the trick, as long as the cable system has been upgraded for it.

Some manufacturers predict a slew of new devices to follow, such as one that could pipe in cable TV while grabbing photos, music and videos off home computers. Some see OCAP even helping to solve that other curse: multiple remotes.

But be patient. Like any new technology, OCAP still faces significant obstacles and uncertainty. It will have an impact only if it's used in enough cable systems to attract the attention of software companies and device makers who need to sell in large volumes.
The good news is that a few of the largest cable operators are moving quickly to deploy OCAP, hoping to head off growing competition from phone companies, satellite TV and the Internet. Time Warner plans to install its first OCAP set-top boxes in subscribers' homes in May, and is scheduled to have all of its systems OCAP-ready by July. Time Warner Cable subscribers will first see the benefit of this later this year, when the company uses OCAP to enhance its program guide.

Other cable operators aren't far behind. Comcast, the largest cable company with more than 23 million subscribers, plans to deploy OCAP in two markets before year's end. Cox Communications, another large operator, hopes to be able to begin trials for OCAP devices in a half-dozen markets this year.

But no matter how fast cable operators move, their progress in deploying OCAP is going to be limited by the tens of millions of digital cable boxes already in place. Most of those boxes don't have the memory or the processing power to run OCAP. For OCAP to reach critical mass, cable operators must offer enough advanced features -- at a good price -- to convince consumers to order the new devices.

Cable companies don't have a luxury of time. While some consumer-electronics companies are working with OCAP, others -- like Sony, Hewlett-Packard and Apple -- are developing devices that bypass cable operators altogether by routing movies, TV shows and other content from the Internet to the TV.

The race is on.

Contact:

Mike Schwartz
CableLabs
303-661-9100
m.schwartz@cablelabs.com

FOR IMMEDIATE RELEASE

2007 CES Featured Cable's Two-Way Future; High-Definition Cable Content Now Available on PCs

CableLabs® Briefs Two-Way Licensees at CES

Louisville, Colorado, January 24, 2007 – With more than a dozen manufacturers displaying two-way "plug-and-play" TVs, set-top boxes and other cable-ready devices, the just completed 2007 Consumer Electronics Show marked a significant milestone in the cable industry's efforts to bring interactive digital TV services to consumers that will not require the use of a leased set-top box.

The new plug-and-play devices will use the cable industry's software platform – called OCAP™ or OpenCable™ Applications Platform – to facilitate the delivery of interactive applications and services. Major cable operators are rolling out support for the new OCAP platform on their networks in 2007 and 2008, setting the stage for wide availability of the new two-way plug-and-play devices.

In addition to the two-way devices, a new technology interface that will allow consumers for the first time to view high-definition and other digital cable content on new Microsoft Vista-enabled personal computers was also displayed at CES. The cable interface for personal computers – called OCUR or OpenCable Unidirectional Receiver – will initially support one-way services (e.g., linear programming) while a two-way interactive interface is being developed.

"The 2007 CES demonstrated how far cable and our manufacturer partners have come in preparing to bring consumers a whole new array of interactive TV devices," said Dr. Richard R. Green, President and CEO of CableLabs®. "This progress clearly shows that the world's largest consumer electronics manufacturers are adopting and developing products that incorporate cable's interactive TV software," he added.

Thirteen companies displayed two-way plug-and-play cable-ready products at CES this year, including a LG plasma TV that won a CES 2007 Innovations Award. Products that were displayed, and their manufacturers, included:

- Samsung – Exhibited a high-definition DVR set-top box that includes a CableCARD™ interface. (Samsung has previously won CableLabs certification for a two-way, OCAP-enabled cable-ready digital television.) Cox Communications announced at the show it has signed an agreement with Samsung to accelerate development of OCAP-based interactive services on Samsung's HDTV sets and other products. Some of these services, including the GuideWorks interactive program guide, began testing in Cox's Gainesville, Florida Division last month.

- Panasonic – Displayed a high-definition digital plasma television running the full-featured Comcast i-Guide™, including video on demand and other interactive applications using OCAP standard middleware. In a press conference, Panasonic announced that this device would be trialed with Comcast during 2007 and be deployed in retail in 2008.
- LG Electronics – Showed a newly CableLabs certified, fully two-way plug-and-play cable-ready digital plasma television using OCAP.
- Thomson – Demonstrated a two-way plug-and-play cable-ready OCAP-enabled DCI 9000 set-top box with NDS OCAP middleware.
- TiVo® – Showed the TiVo DVR guide running on an OCAP-compatible, Motorola leased set-top box running TVNav, with plans to port to full OCAP. This will support a market trial of a Comcast service offering where customers can choose to use the TiVo interface with their cable service.
- Scientific Atlanta, a Cisco company – Showed the Explorer 8550HDC two-way cable-ready set-top box, with support for CableCARD, OCAP, advanced codecs, and DOCSIS®. The exhibit included a Flickr™ application running on OCAP; Flickr is a photo sharing Web service.
- Motorola – Displayed a line of interactive set-top boxes, including OCAP. Comcast expanded its purchase agreement for a number of OCAP-based set tops including Motorola's "Follow Me TV" multi-room DVR technology.
- VividLogic – Showed reference designs for set-top boxes and digital televisions.
    - Mitsubishi – Mitsubishi has licensed an OCAP middleware stack from supplier VividLogic.
    - Pioneer – Pioneer has licensed an OCAP middleware stack from supplier VividLogic.
    - Funai – Funai has licensed an OCAP middleware stack from supplier VividLogic.
- ADB – Displayed a prototype two-way cable-ready set-top box using OCAP and a CableCARD interface.
- Digeo – Exhibited a Moxi™ multi-room DVR with CableCARD interface; Moxi's DVR application has been ported to OCAP.
- Broadcom – Displayed a reference design for a two-way cable-ready television or two-way cable-ready set-top using OCAP and a CableCARD.

At least two other companies not listed above also showed OCAP-related products in private meetings.

The new cable-ready OCUR solution for personal computers includes a CableCARD interface, and allows for the display of one-way services, such as high-definition video, on Microsoft Vista-enabled personal computers. The manufacturers that displayed this product included:

- Microsoft
- AMD
- Dell
- Hewlett-Packard

- Gateway
- Toshiba
- Niveus – featuring a “dual OCUR design” which allows viewing two channels at the same time.

CableLabs Briefing

Also during CES, CableLabs briefed 10 companies that have signed the license which enables them to build two-way interactive cable-ready products, called CableCARD-Host Interface License Agreement, or CHILA. By signing the CHILA license, a company obtains necessary intellectual property rights and signals its intent to design cable-ready products that can display two-way cable-delivered interactive services, such as interactive program guides, video on demand, enhanced television, etc., without the need for a set-top box.

The briefing included information about MSO activities now underway to provide support of OCAP on the cable network in 2007 and 2008. They also briefed manufacturers about developer conferences planned for 2007 and supported by a growing array of tool developers and systems integration support, as well as lab support activities available at CableLabs in the coming year.

Companies in attendance included Advanced Digital Broadcast, SA; AMD, Digeo, Digital Keystone, Funai Electronics Co., Ltd.; LG Electronics, Inc.; NEC, Panasonic Corporation of America, Samsung, Toshiba American Consumer Products, LLC; and Vidiom.

The complete list of companies that have signed the two-way CHILA license also includes: Broadcom Corporation, Himax Technologies, Inc.; MAKUS Inc.; Micronas GmbH; PC Partner, Stexar Corp.; Sunplus Technology Co, LTD; Tata Elxsi Limited; Thomson; Video Without Boundaries, Inc.; VividLogic Inc. and ViXS Systems Inc.

About CableLabs

Founded in 1988 by members of the cable television industry, Cable Television Laboratories is a non-profit research and development consortium that is dedicated to pursuing new cable telecommunications technologies and to helping its cable operator members integrate those advancements into their business objectives. Cable operators from around the world are members. CableLabs maintains web sites at www.cablelabs.com; www.packetcable.com; www.cablemodem.com; www.cablenet.org; and www.opencable.com.

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ATTACHMENT B

cable

National Cable & Telecommunications Association
25 Massachusetts Avenue, NW – Suite 100
Washington, DC 20001
(202) 222-2300

www.ncta.com

Neal M. Goldberg
General Counsel

(202) 222-2445
(202) 222-2446 Fax

December 11, 2006

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CS Docket No. 97-80

Dear Ms. Dortch:

On Friday, December 8, 2006, William Check, Senior Vice President, Science & Technology for the National Cable & Telecommunications Association ("NCTA"), Paul Glist from the law firm of Cole, Raywid & Braverman, Kevin Leddy, Senior Vice President of Development of Time Warner Cable, Timothy Dodd, Vice President of Technology Policy of Time Warner Cable, Mark Coblitz, Senior Vice President of Strategic Planning of Comcast Corporation, Dallas Clement, Senior Vice President, Strategy & Development of Cox Communications, and I met with Donna Gregg, Chief of the Media Bureau as well as the following Bureau staff: Andrew Long, Rick Chessen, Mary Beth Murphy, Steven Broeckaert, John Wong, Michael Lance, Alison Greenwald, Brendan Murray and John Gabrysch. We discussed the November 7, 2006 filing by certain consumer electronics ("CE") and IT companies addressing issues regarding two-way "plug-and-play" devices. We made the following points:

The marketplace OCAP approach developed by the cable industry and major CE companies is bringing two-way plug and play products to market now, much faster than any hypothetical approach could ever do.

- OCAP is a middleware solution that provides innovative and constantly-evolving applications to multiple hardware platforms. Like the middleware solutions used internationally in MHP, GEM, ACAP, Blu-Ray, and cell phones, OCAP leverages the Java development and deployment base. OCAP allows a wide variety of consumer electronics devices to have access to new services without the delay imposed by needless standards activity on an application-by-application and device-by-device basis. Interactive cable applications can be written once to OCAP and can then interact with a wide variety of leased and retail hardware devices, thereby avoiding the need to write each application to the native features of each set-top box or TV.

- OCAP is already standardized at the SCTE, an ANSI-accredited standards body, and CE, IT, and cable interests have all had, and will continue to have, the opportunity to steer the development of OCAP now and into the future. Further, a worldwide patent pool for OCAP has been established, based on reasonable and non-discriminatory terms; the majority of patent holders are CE manufacturers. Both Comcast and Time Warner Cable are members of the OCAP patent pool, as are middleware and applications developers such as Open TV.
- All CE companies committed to using OCAP middleware for two-way plug-and-play products in the negotiated Cable-CE Plug-and-Play Agreement submitted to the FCC in 2002. No matter how CEA seeks to gloss over this fact, the most recent CEA proposal reneges on this commitment.
- In the meantime, over a dozen independent CE companies, including leaders in HDTV technology such as Samsung,[1] Panasonic[2] and LG Electronics,[3] have signed the OCAP and CHILA licenses with the cable industry's research and development center, CableLabs, to manufacture two-way retail devices. These companies, and more than 50 other equipment, application, and implementation vendors, have invested years of effort and millions of dollars in developing this OCAP middleware solution to permit commercial availability of retail navigation devices that receive interactive cable operators' program guides, video-on-demand ("VOD"), "switched" channels, interactive programming enhancements and other advanced services.
- Two-way OCAP plug-and-play products have been built by CHILA/OCAP signatories, have been exhibited at the 2006 Consumer Electronics Show, and are being tested in live trials in a number of cable operator systems.
- Major cable operators have committed to using and supporting OCAP in their own leased set-top boxes, and are beginning deployment now. It is in the business interest of the cable industry to roll out OCAP rapidly to leased and retail products, because OCAP streamlines and improves the cable business and because OCAP provides applications developers and consumers with an interactive platform which is fully competitive with IPTV.
- In response to questions about the deployment of OCAP, we explained that the cable industry is rapidly deploying OCAP in systems and set-top boxes as promised in prior commitments, and ahead of the schedule NCTA proposed in November 2005. Approximately 4 million homes are passed with OCAP today

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[1] Samsung is now the world leader in HDTVs. "Who's the World's HDTV Leader?" TVPredictions.com, November 27, 2006 ("Sony … will now have to cede that title to a Korean company. … Samsung is selling more TVs – and generating more revenue – than any other set manufacturer in the world.")

[2] "Panasonic was the best-selling plasma TV brand in the United States this year …." *See* "Panasonic Plasma HDTV Goes From Wish List to Reality for Many This Holiday Season," http://money.cnn.com/news/newsfeeds/articles/prnewswire/NYTH18116112006-1.htm.

[3] "LG is the world's largest producer of flat-panel displays …." "Interview: LG Electronics," http://www.physorg.com/printnews.php?newsid=66310119.

and OCAP deployment in Time Warner, Comcast and Cox systems is targeted by the end of 2008. OCAP is being optimized in coordination with real systems and manufacturers. Multiple guides, multiple VOD applications, switched digital applications, interactive advertising, caller ID, email viewers, on screen subscriptions, and even the TiVo interface are being ported to OCAP. OCAP is currently on Time Warner set-top boxes supplied by Cisco/Scientific-Atlanta and by retail manufacturers (Samsung), as well as on retail two-way OCAP DTVs manufactured by Samsung. Other retail manufacturers are rapidly developing competing OCAP DTVs. Panasonic is developing OCAP set-top boxes.

- CEA is wrong in suggesting that the cable industry is trying to disadvantage retail products to get "cash cow" returns from leased boxes. Cable operators repeatedly have said they'd like nothing more than to get those equipment expenses off of their books in order to focus on developing and deploying innovative services to consumers. Leased equipment is priced under FCC regulations at cost plus no more than 11.25% return. As equipment costs are recovered, those recovered costs are removed from the FCC permitted equipment pool. In the markets deregulated through effective competition, competition provides an even tighter limit on cost recovery. Payback is constrained by law and by the market to eliminate any "cash cow" suggested by CEA.

The approach submitted by competitors to CHILA signatories is not a "compromise."

- The proposal insists instead that the cable industry provide selected two-way services through specific protocols designed for each application. It is a proposal for perhaps the most intrusive regulatory regime ever established. It demands a complete redesign of every part of cable architecture: headends, networks, guides, guide data, VOD, multistream CableCARDs, and leased set-tops. For example, multistream CableCARDs would become miniature set-top boxes, with more resources, more memory, more processing power and higher cost. VOD servers would have to be restructured in ways that have long been rejected by the VOD vendors. Cable operators would be compelled to break their contracts with program guide vendors.

- The proposal cannot lead to a more rapid deployment of two-way retail devices than is possible with the current approach. The proposal does not acknowledge that there are no standards, no intellectual property clearances, and no manufacturers to implement it. At least eight new lengthy standardization efforts would be required to meet the CEA approach. Cable's next generation of downloadable security would require a total redesign. The cable industry cannot simultaneously redesign OCAP, redesign DCAS, get them promptly deployed, and develop a "protocols" approach designed solely to deliver a small piece of cable service in a manner never marketed or sold by cable. In short, the proposal would impose substantial costs on cable customers and cable operators alike and substantial delays on the rollout of new cable services and technologies.

- The proposal does not seek "parity" with low-end leased set-top boxes. Low-end set-top boxes are non-portable, single-tuner, standard definition, non-DVR devices and deliver cable services exactly as ordered by the consumer from each cable operator, using a low-cost digital converter. The proposal explicitly requests that the "low-end" be augmented with high-definition and DVR functionality as well as national portability. Every CE manufacturer today has the opportunity to build a low-end set-top box, but, except for Pace, CE manufacturers have instead produced HDTVs that cost thousands of dollars. They are not promising to do anything else even under this proposal. The claim of parity is merely a stalking horse to undermine OCAP.

The CE companies who submitted the proposal want a free ride on the cable industry's multi-billion dollar investment in cable networks and services.

- Cable operators have spent billions of dollars buying programming and equipment and designing their networks to deliver state-of-the-art, rapidly-evolving interactive services to their customers. These cable-delivered services, such as caller ID on the TV, instant polling/voting, interactive advertising, or Time Warner Cable's Start Over service, are being deployed today.
- The proposal would force the cable industry to disassemble its services so CE companies can repackage cable's offerings as their own for viewing on their devices. This will make it impossible for consumers or operators to know what cable services a cable customer will be able to receive on a CE device and how they will be displayed.
- Under this proposal, "cable-ready" DTVs will not deliver cable services as consumers have bought them or in the way they have been marketed and delivered by their cable operator. The DTV would strip away services, features, parental controls, cable navigators, reminders, and privacy profiles – and each TV would do so in different ways.
- Attempting to carve up and limit cable services in this manner would create a regulatory quagmire for the Commission, the cable and CE industries, and consumers. Moreover, consumers have the right to receive the services that a cable company has contracted to deliver and have them delivered in the manner consumers expect.
- DTVs built to the proposal would be instantly archaic. They would be incapable of receiving cable's interactive services, such as Time Warner Cable's Start Over service, caller ID on the TV, interactive programming, and wireless video. The CE proponents are repeating a mistake made four years ago by the CE manufacturers who told the cable industry that cable customers only wanted linear cable channels and had no interest in VOD. When they finally built those limited one-way digital cable-ready products, the consumers who bought them wanted the VOD that those devices did not deliver. The current proposal to create "two-way" DTVs limited to VOD is equally blind to the rapid evolution of cable's interactive programming, and will likewise disappoint and confuse cable customers.

The proposal would chill innovation contrary to the mandate of Section 629.

- The cable industry has been a leader in innovation, investing over $100 billion in private, risk-capital in fiber-based networks since the 1996 Telecommunications Act was passed. Myriad new services and products have been developed and deployed. By contrast, this proposal would freeze innovation in cable's interactive video services, including VOD, electronic program guides, interactive programming enhancements as well as emerging interactive services by subjecting them to a time-consuming, expensive and unnecessary redesign and standardization process. No innovations in OCAP would be permitted without an FCC rulemaking or permission from CE manufacturers. The entire cable industry would first have to agree on a single approach, then standardize it, before launching a service. Time Warner's popular Start Over service could not have been developed or deployed under the CEA approach. Under CEA's approach, programmers could not deliver two-way interactive programming to retail devices advertised as two-way "digital cable ready." Cable could not roll out new interactive services without first subjecting them to testing by the CE industry. Cable could not change existing cable services for the life of deployed legacy CE products. Cable operators could not migrate to switched video (as now used by AT&T) without FCC or CE industry approval, thus delaying the expansion of network capacity for higher-speed data, telephony, digital simulcast, more VOD, new program networks, and more high-definition. Innovation cannot occur rapidly on these terms.
- The proposal would enable some CE companies which are behind the curve to delay their CE competitors from delivering innovative new services.
- The proposal would discard the substantial investment and progress made to date by the cable industry and others on OCAP and on cable's next generation of downloadable security ("DCAS") and dictate that the cable industry and CHILA signatories shift their attention to the development of non-OCAP and other solutions dictated by self-selected CE and IT companies.
- The proposal is contrary to the Commission's policy of technological and competitive neutrality by seeking to impose burdensome new requirements on cable but not on cable's DBS, telco, wireless, and Internet competitors. CE, IT, and competing MVPDs do not operate in the market under the constraints on innovation they propose for cable. Instead, they rapidly innovate their products and services, rolling our new products with non-standardized, non-interoperable interfaces, music players, remote controls, menus, HD DVDs, computer memory, chips, gaming stations and games, and offering new services that don't work on old devices. DBS, Verizon, and AT&T rely on integrated leased set-top boxes for the launch of new service. All these companies innovate without waiting for standardization or government permission. Applying restrictions only to cable is unprecedented government intervention in the private marketplace.

- The proposal requires a 180-degree change in course, not for the benefit of consumers, but instead to favor certain pet technologies and projects of certain CE and IT companies. Those companies have business reasons for placing obstacles in the path of CHILA signatories who are in the forefront of bringing two-way OCAP products to market. For example, OCAP is based on Sun's Java technology, while Microsoft and its CE partners are deploying competing Microsoft IPTV devices, and DCAS utilizes a hardware-based chip while Intel's current chips use software-based security.
- Even if it could be implemented, by imposing costly and highly invasive regulations exclusively on the cable industry and consumers, the proposal would contravene Congress' directive to the Commission that, in implementing Section 629, it should "avoid actions which would have the effect of freezing or chilling the development of new technologies and services."

The proposal does not meet the realities of intellectual property rights in the market.

- There are hundreds of third party IPR rights surrounding program guide design and formats and VOD offerings, the two technology areas addressed by the proposal. Cable operators had to pay approximately $750 million to clear the IPR rights for offering their own program guides. CE manufacturers have had four years to add their own program guides to one-way digital cable-ready DTVs, but to date every retail DTV has confronted the same IPR, and has chosen to use the Gemstar guide or none at all. Even if CE manufacturers bought metadata from the same suppliers that provide cable guides, they will not have solved the issue of third party IPR in this technology. Likewise, every VOD vendor has IPR rights that will not go away through the proposed VOD "standardization" effort.

The proposal would jeopardize the security of the cable network in violation of Section 629(b) of the Act.

- Development of cable's downloadable security would no longer be subject to non-disclosure protections which are essential to the development of effective network security, again contrary to the congressional mandate in Section 629. It should be obvious that a security system must keep certain information secret that might otherwise be used to try to break its security. Every commercially successful deployed pay-TV security system uses confidentiality as a defense against hacking. Almost every consumer electronics product is developed using a non-disclosure environment. CE companies used non-disclosure agreements to develop AACS security for HD-DVD devices which will display the same high-end content that cable will be protecting with DCAS.
- Cable operators would be forced to use content protection technologies that have not been properly vetted for use with cable content and do not have the support of the studios and other content suppliers for cable distribution. Cable would not be able to provide a competitive service – with high-value programming consumers want – under these conditions.

- In response to questions about the use of software-only security in cable systems, we explained that we found no European (or other) evidence of purely "software-based" downloadable security in retail-like devices as proposed in the November 7 filing. European cable systems, like those in the United States, rely on hardware-based security. Even the "software" used in AT&T's IPTV set-tops is hardware based: it is delivered to a specific, proprietary set-top which controls the video path in hardware built to AT&T's specification – not to retail devices that go into the market without such constraints. A software-only solution is currently not suitable as protection for all of the high-value content carried on cable. DCAS is responsible not only for protecting the security of cable networks and the highest-value early release high-definition content, but the keys to the conditional access business of Motorola, Cisco/Scientific-Atlanta, and other vendors.
- In response to questions about content provider support for the cable industry's approach to DCAS, we explained that the Motion Picture Association of America has specifically rejected a software-only downloadable security approach and specifically supported DCAS's use of a hardware root of trust for the high value copyrighted content delivered via cable. *See* Comments of the Motion Picture Association Of America, Inc., CS Docket No. 97-80, February 6, 2006, pp 4-5 (attached as Exhibit A).

For all of these reasons we argued that the filing submitted by certain CE and IT companies will not bring two-way plug-and-play products to market soon (if ever), violates Section 629 of the Act, and would substitute government mandates for marketplace negotiations which are working to bring two-way products to market right now.

If you have any questions, please contact the undersigned.

Respectfully submitted,

/s/ Neal M. Goldberg

Neal M. Goldberg

cc: Donna Gregg
Andrew Long
Rick Chessen
Mary Beth Murphy
Steven Broeckaert
John Wong
Michael Lance
Alison Greenwald
Brendan Murray
John Gabrysch
Heather Dixon
Rudy Brioché
Bruce Gottlieb
Chris Robbins
Cristina Pauzé

Ms. Marlene H. Dortch
December 11, 2006

EXHIBIT A

COMMENTS OF THE MOTION PICTURE ASSOCIATION OF AMERICA, INC.

CS Docket No. 97-80, February 6, 2006, pp 4-5

2. An Effective Downloadable Conditional Access System Must Have a Hardware Root of Trust.

DCAS can only operate effectively in the form of authenticated software loaded and executed within a DCAS Secure Microprocessor Chip since the system relies upon a hardware "root of trust" within the specialized microprocessor Chip. DCAS cannot provide the same level of security if it were to be implemented in the form of a software application that was downloaded and executed on a general purpose computer, as suggested in the comments filed by Dell, H-P, Intel and Sony Electronics, Inc. In fact, if DCAS were implemented as a downloadable software application with a software "root of trust," it would greatly expose the security of the system to software attacks, which could be developed and easily distributed over the Internet.

for cable navigation devices. It is important that the security elements of DCAS be implemented in a consistent manner across all cable navigation platforms to ensure that high-value, copyrighted content is never exposed to unauthorized copying and/or redistribution.

The MPAA restates its support of the goal of Dell, H-P, Intel and Sony Electronics, Inc. in enabling the general purpose computer as a cable navigation platform to enhance the competitive marketplace for navigation devices. However, the MPAA does not see the need to eliminate the security afforded by the DCAS Secure Microprocessor and its hardware "root of trust" as necessary to achieve this goal.