

November 4, 2004

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

**Re: *Ex Parte*: In the Matter of Implementation of Section 304 of the
Telecommunications Act of 1996: Commercial Availability of
Navigation Devices, CS Dkt. No. 97-80**

Dear Ms. Dortch:

On November 3, 2004, Mark DePietro, Vice President, Product Management for Consumer Entertainment Solutions, Motorola Broadband Communications Sector, Dale Papovitch, Director, Regulatory Affairs, Motorola Broadband Communications Sector, Frank Buono, Willkie Farr & Gallagher LLP, and the undersigned met with the following Commission staff to discuss issues relating to the navigation devices proceeding: Bill Johnson, Rick Chessen, John Wong, Natalie Roisman, Steve Broeckaert, and Alison Greenwald.

Mr. DePietro, Ms. Papovitch, and counsel urged the Commission to eliminate the ban on navigation devices with embedded security (“integration ban”) and made the following points in support of that position:

- The integration ban would substantially increase equipment costs for consumers. There is record evidence that the additional per-unit cost to a cable operator of a CableCARD-Host combination would be approximately \$72-93 more than the cost of an integrated set-top box with the same functionality. While technological advances in the last two years have reduced this cost range somewhat, the additional incremental costs associated with a CableCARD-Host combination are still significantly above the \$20 figure cited by certain other parties in this proceeding.

- The ban would also stymie the development of a low-cost digital-to-analog set-top box by adding substantially to the cost of such a device. Congress and the Commission have recognized the importance of such low-cost devices to the digital transition. Raising the cost of these devices will undermine their appeal and thereby slow the transition.
- The ban would force all cable customers to bear additional costs even though the enhanced portability of CableCARD-enabled devices provides no added value for customers who prefer to lease, rather than purchase, their set-top boxes, because those boxes stay within one operator's cable system.
- The ban would remove a cost-effective choice for consumers. Many consumers prefer leasing an integrated set-top box from their cable operator. Others may want to buy a CableCARD-enabled TV at retail. The best public policy is to continue to let consumers make the equipment choice that best fits their needs.
- The ban is unnecessary to enable the development of a retail market for CableCARD-enabled devices. Many CE manufacturers are rolling out dozens of such products this year and expect to sell up to one million of these devices in the coming months, even in the absence of a ban on integrated devices. While many of these devices are integrated digital cable-ready TVs, other innovative CableCARD-enabled devices are also being introduced. For example, the attached press release describes a CableCARD-enabled HDTV cable decoder box/DVR from Sony that is likely to have strong consumer appeal. In addition, the market for these and other CableCARD-enabled products (which MSOs may have no interest in deploying) can coexist with the market for integrated set-top boxes (which MSOs do have an interest in deploying).
- Motorola is also facilitating the development of a competitive marketplace for integrated set-top boxes. It has licensed its conditional access technology to Pace, Panasonic, ADB, and others. There is also nothing to prevent the emergence of a retail market for such integrated devices. Shaw, the leading cable operator in Canada, has successfully pursued a retail strategy for its integrated set-top boxes. Secondary markets for such products have also developed through mechanisms such as eBay.
- Motorola and the rest of the cable industry have devoted considerable resources to making the CableCARD a success. The attached articles describing customers' positive experiences with the CableCARD demonstrate that these efforts are paying off. Claims that there are large scale technical problems with the CableCARD are overstated. As with any new product (like the cable modem, for example), some glitches can be expected. But the cable and CE industries are committed to working to resolve any potential issues as was done, for example, with cable modems.

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- Motorola fully supports ongoing negotiations to complete an agreement on two-way digital cable-ready devices. The number of parties involved in the discussions and the complexity of two-way issues are affecting the pace of the negotiations. At the very least, the Commission should afford the parties additional time to work through these issues so that an optimal, mutually-agreeable two-way standard is adopted. If, however, the integration ban were to remain in place, it could cause the negotiations to break down and lead to the existence of a suboptimal two-way standard, or competing, incompatible standards. That would be a bad result for consumers and all concerned.

Kindly direct any questions regarding this matter to my attention.

Sincerely,

/s/ Jonathan A. Friedman

Jonathan A. Friedman

Counsel for Motorola, Inc.

cc:

Bill Johnson

Rick Chessen

John Wong

Steve Broeckaert

Natalie Roisman

Alison Greenwald

Attachments

1 of 2 DOCUMENTS

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Communications Daily

October 21, 2004, Thursday

SECTION: Mass Media Notes**LENGTH:** 160 words**BODY:**

Multi-industry meetings continue on bidirectional plug-&-play set tops, but "I can't even begin to guess" when there might be an agreement, Brian Smith, of Philips, Cable Working Group chmn., told the CEA Video Div. Tues. at the CEA Industry Forum in San Francisco. As for unidirectional plug-&-play, Panasonic's Peter Fannon, CEA Video Div. chmn., told us the "experience" of rolling out CableCARD-ready products "in general has been very good in most places." Still, Fannon said, CE will continue to press its case at the FCC and elsewhere that digital cable ready DTV products be made "fully competitive." CableCARD problems generally have been "resolved promptly," Fannon said. He said he's sympathetic to cable, because CableCARDs afford "a raft of very complex issues." But at the same time, he said, "there shouldn't be any issues that aren't insurmountable." Moreover, he said, cable had "6 years' notice" to get CableCARDs right. — PG

LOAD-DATE: October 20, 2004

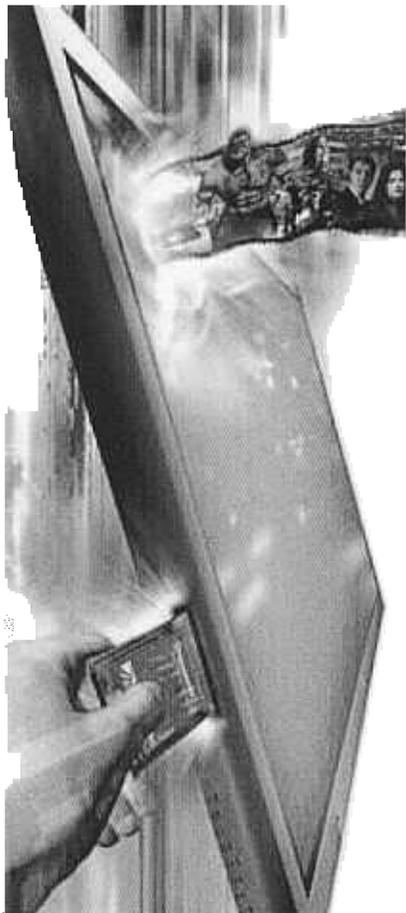
Wild Card

Goodbye cable box, hello CableCARD

By Gary Merson

Illustration by Eric Yang

October 2004



Before premium cable channels like HBO began appearing 30 years ago, you were more likely to have a bowl of waxed fruit atop your TV than a black box that changed channels. But cable-TV signals began to be encrypted to keep basic-cable subscribers from watching the new channels, and suddenly upscale viewers had to rent a decoder box from the local cable operator.

Well, the set-top cable box may finally be on the way out. After a decade of wrangling and posturing, the cable-TV industry bowed to a Federal Communication Commission (FCC) mandate and as of July 1 agreed to offer CableCARD, a credit-card-size "conditional-access device" that promises to unfetter TV viewers from their hard-wired and butt-ugly cable boxes. You'll find CableCard slots on most new "integrated" HDTVs — that is,

models with built-in digital tuners — from all the top manufacturers. Insert your leased CableCARD in the slot and you can watch every analog, digital, and high-definition channel you were seeing through your cable box, including premium channels.

Although CableCARD reduces clutter and simplifies hookup, it is a one-way system for now, which means it doesn't support interactive services like video on demand. You'll still be able to watch pay-per-view programs, but you'll have to order them the old-fashioned way — by calling customer service instead of simply pushing a few buttons on your remote control.

You also won't get the interactive program guide from your cable provider, but don't despair. Many CableCARD-ready sets have TV Guide On Screen, a free interactive service that lists all your cable channels and doesn't need a phone connection. A number of companies are working on a two-way version of CableCARD, but it's not expected to be available for at least a couple of years.

Most cable companies charge less for CableCARD than for their high-def cable boxes, and all major providers currently require a

service call to have a CableCARD installed and activated. As you can see from the "CableCARD Fares" chart ([click to view PDF](#)), fees vary between \$19.95 and \$60.

Getting Started

To see how well CableCARD works, I called my local cable company, Cablevision, and arranged to have a card installed in a Panasonic TH-37PD25 enhanced-definition plasma TV, one of the first CableCARD sets on the market.

Lucky me, I was the first Cablevision subscriber in my area to order CableCARD, so they sent the company's two top installers. I watched as they inserted the card into the back of my TV — as easy as sliding a cartridge into a Gameboy. Then they plugged the cable from the wall into antenna jack A on the back of the TV and screwed the over-the-air antenna connector into the B jack. The TV's tuner decodes over-the-air digital and analog signals as well as digital cable signals that are decrypted by the CableCARD.

After everything was hooked up and the card was in the slot, a unique "Host ID" number appeared onscreen. Another ID number is printed on the card. One of the installers called the cable company to report the two numbers. A minute later, HBO was onscreen, and I was surfing a channel lineup identical to what I got through the set-top box.

Performance Lowdown

Putting the CableCARD through its paces, I timed a channel change using the up/down control on the TV's remote. (You can also use the numeric keypad for direct channel selection.) It took 2 to 3 seconds to get picture and sound for both standard- and high-definition digital cable channels, but that was no more than with the Scientific Atlanta 4200 HD cable box. I left the box connected to the TV so I could compare the picture quality on standard-def channels using CableCARD with that delivered by the component-video output of the Scientific Atlanta box. The all-digital CableCARD picture was clearer. High-def programs downconverted to enhanced definition, meaning 480p (progressive-scan) format, also looked great through either the CableCARD or the box.

One nice side benefit of CableCARD is that it freed up the TV's single HDMI (High Definition Multimedia Interface) input for other gear — like a DVD player equipped with an HDMI or DVI (Digital Visual Interface) output. I didn't have such a player on hand, so I used an adapter to connect the cable box's DVI output to the TV's HDMI input and conducted another informal comparison. The CableCARD image was again slightly clearer than the image from the box.

The Bottom Line

CableCARD delivers on its promise. It lets you use your TV's remote control for all cable *and* over-the-air programs, it frees up an input that would otherwise be connected to a cable box, it can provide excellent picture quality, *and* it may even save you a little money. Unless you just can't live without video on demand, CableCARD is an option well worth considering, but you'll have to request it from your cable company. And don't let 'em talk you out of it!

THE FRONT LINE: OCTOBER 22, 2004**CableCARD is coming to a PCMCIA slot near you! What's it all about?**

by Peter H. Putman, CTS

CableCARD is a new way to watch digital cable TV programs without a cable set-top receiver. Instead, a PCMCIA card plugs into a slot on your TV, giving you access to standard and premium SDTV and HDTV programs.

CableCARD has been in the works for several years, starting with an agreement among 14 manufacturers and CableLabs in late 2002 to bring the technology to market. Spurred on by the FCC's mandates to include terrestrial digital TV tuners in big screen TVs starting in July of 2004, manufacturers worried that such sets wouldn't sell well unless they could also receive digital cable programming.

The first crop of CableCARD TV sets started showing up in Best Buy and Tweeter stores around here in July. I managed to procure several review units for a hands-on test here in my studio with the able and willing assistance of Comcast personnel including Keith Boyd at Comcast University, Mark Bogle, Brian Saylor, and Janet Steiner of Comcast's Ivyland (PA) regional office, and David Landsman of Comcast's Plymouth Meeting (PA) call center.

An extensive report on those tests will appear in the February 2005 issue of Stereophile Ultimate AV magazine. In the meantime, here are some interesting things I learned (and a few I found out the hard way):

First, CableCARD is a 100% one-way system. All it lets you do is receive programs. These programs can't be time-shifted (unless you have special equipment), nor will you see any electronic program guide (EPG) info with them – that require a two-way path between TV and cable system head end.

You also can't order pay-per-view (PPV) or use video-on-demand (VOD) with CableCARD – at least, not this implementation of it. All you can do is order and pay for specific tiers of channels and watch them to your heart's content, which is something more akin to the old analog 'basic cable' service model.

If you purchase a CableCARD set (usually labeled with the "Digital Cable Ready" logo), you'll need to get a card from your local cable company. Some charge a rental for it; others provide it as part of the service (which is what Comcast does). Once this card is plugged into your TV, a set-up screen will provide you with four strings of numbers which you will, in turn, provide to your cable customer service representative to enable the service.

The three CableCARD TVs I tested all describe this service differently. One explained that I would first have to obtain an application to get CableCARD service and that I should "contact my customer service representative to discuss receiving an application". That's as far as the description went.

The other TVs were a bit more succinct in explaining how CableCARD worked (fortunately) but provided vastly different on-screen menus on how to set it up. With a CableCARD, there is no need to do a digital channel scan – the card contains all of the available channel information.

Problem is, only one of those two sets had any kind of menu that would show me a list of the available digital cable stations. The other set required me to push the channel up/down button to navigate, or write down channel numbers on my own for future reference.

Because of a design flaw, one of the sets required that I always connect digital cable signals through the main antenna input, which is fine. However, this input shows up on screen labeled as "AIR", which is not fine! To make matters more confusing, off-air digital TV signals must then be connected to the second or auxiliary antenna input, which shows up in the menu as (you guessed it) "CABLE".

The cards are not particularly difficult to install (see photos) but they must be inserted carefully into a pair of guide rails before they are homed into place. Otherwise, you run the risk of bending or damaging the pins, which is a manufacturer (not cable company) repair issue.

On two of the sets, you can have off-air digital TV and digital cable connected at the same time, switching back and forth between antenna/cable inputs as desired. On the third set, only one digital RF input is provided, so if you want to hook up a second digital TV source, you'd have to use the DVI or HDMI inputs.

Despite all of these quirks, the CableCARDS worked like a champ in all three sets. One word of caution – don't try to pull an authorized card from one set, plug it into another DCR TV, and expect it to work. Ain't gonna happen!

You'll need to re-authorize that new TV and there will be a new set of numbers to read back to your cable company. And if you realize your science experiment isn't going to work and put the card back into its original set, it will not work there without re-authorization. (Best to leave well enough alone!)

In a nutshell: CableCARD works very well. If you just want to watch and don't care about interactive services, it's a simple way to get digital cable. Of course, if you decide you do want all that interactive stuff, you can always turn in your card and get a full-blown cable set-top receiver from your cable company.

Figure 1A – Here's a CableCARD slot on the rear panel of a DLP rear-projection TV...

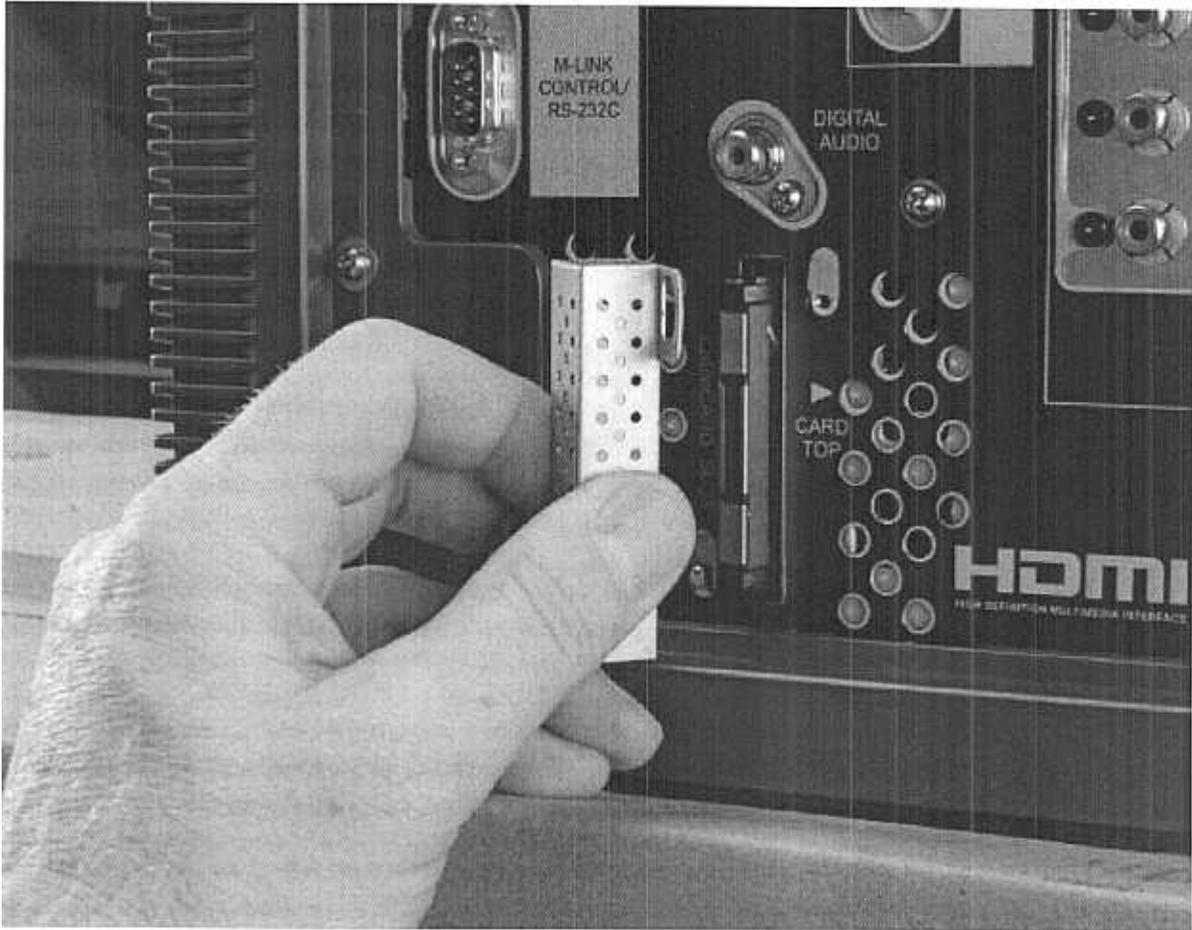


Figure 1B - ...but you must be careful not to jam the card in its guide rails.

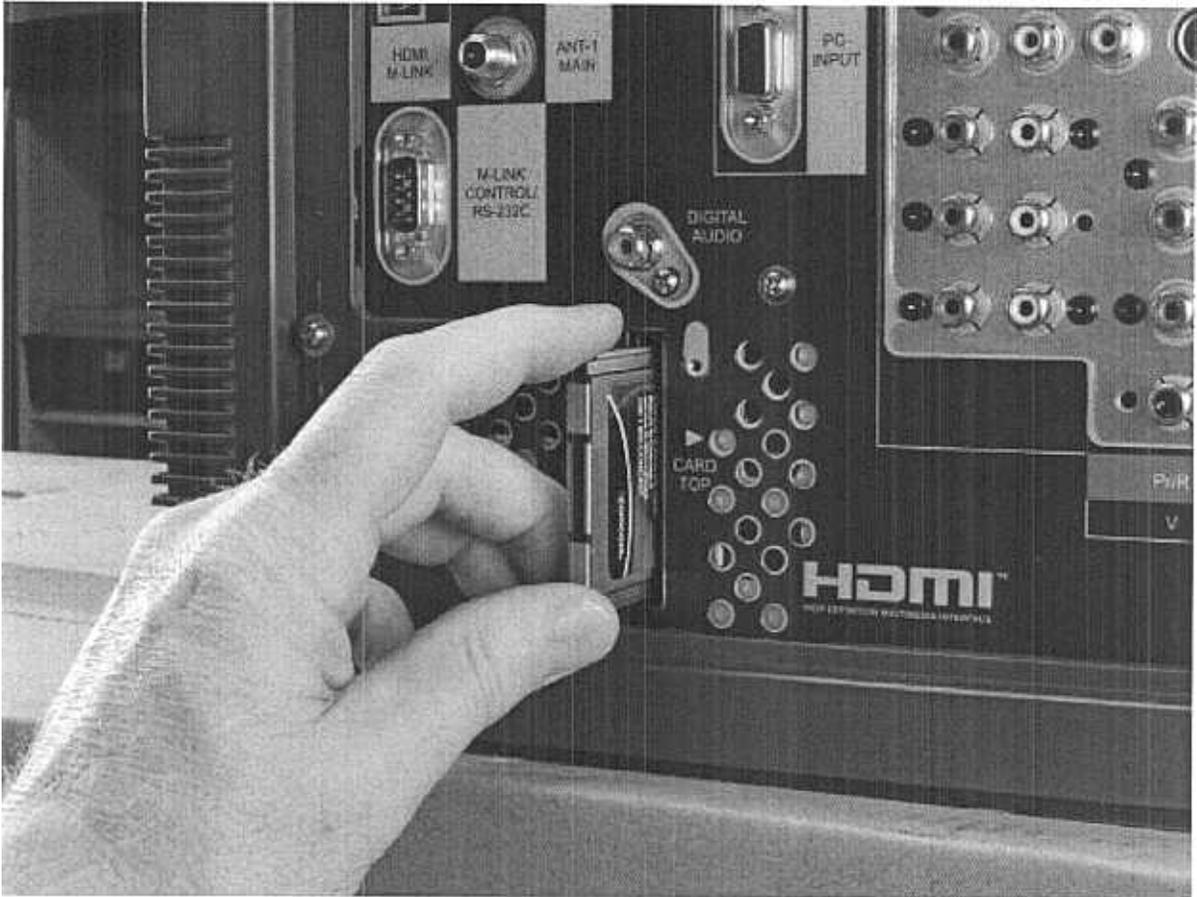


Figure 2A – Here's the slot on a new integrated plasma TV.



Figure 2B – Installation into this slot is a piece of cake.

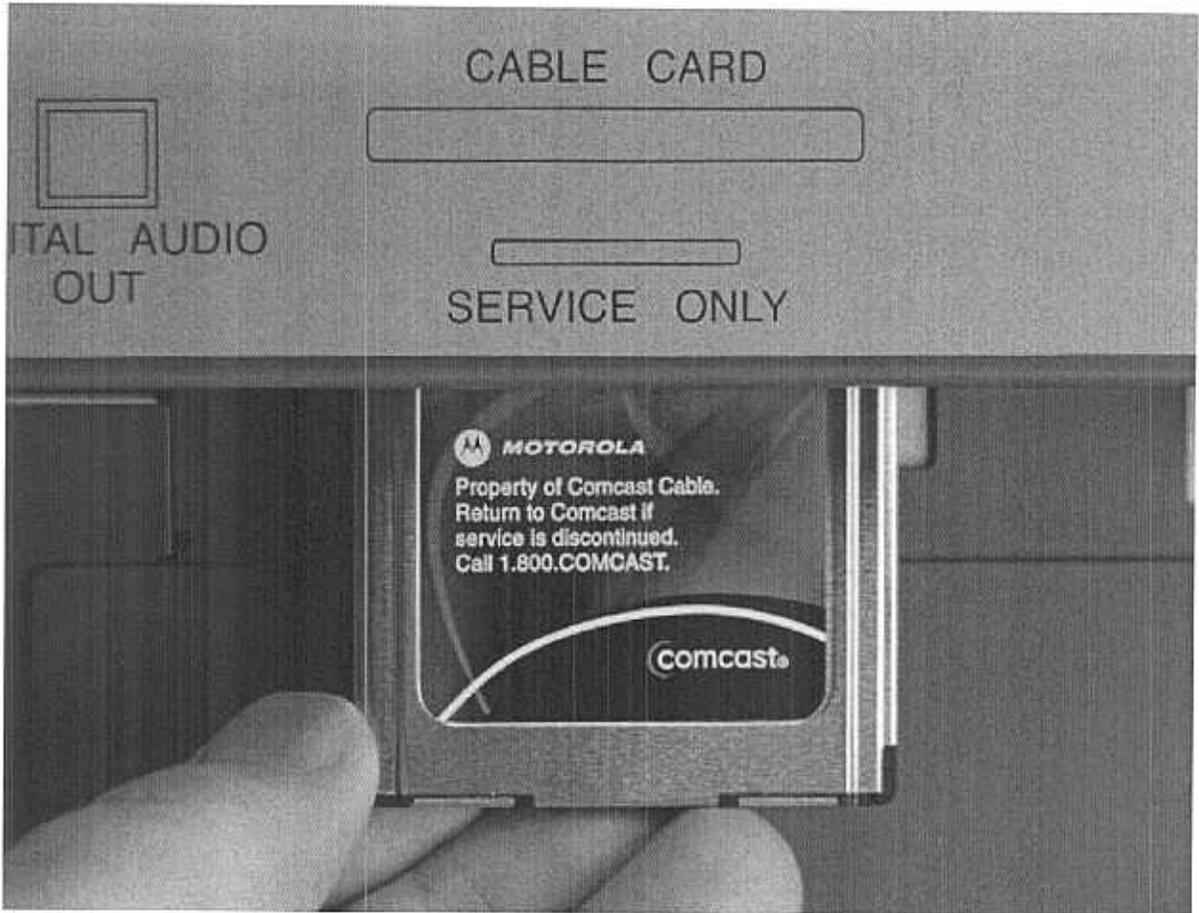


Figure 3A – Even outboard AV control centers have CableCARD slots.

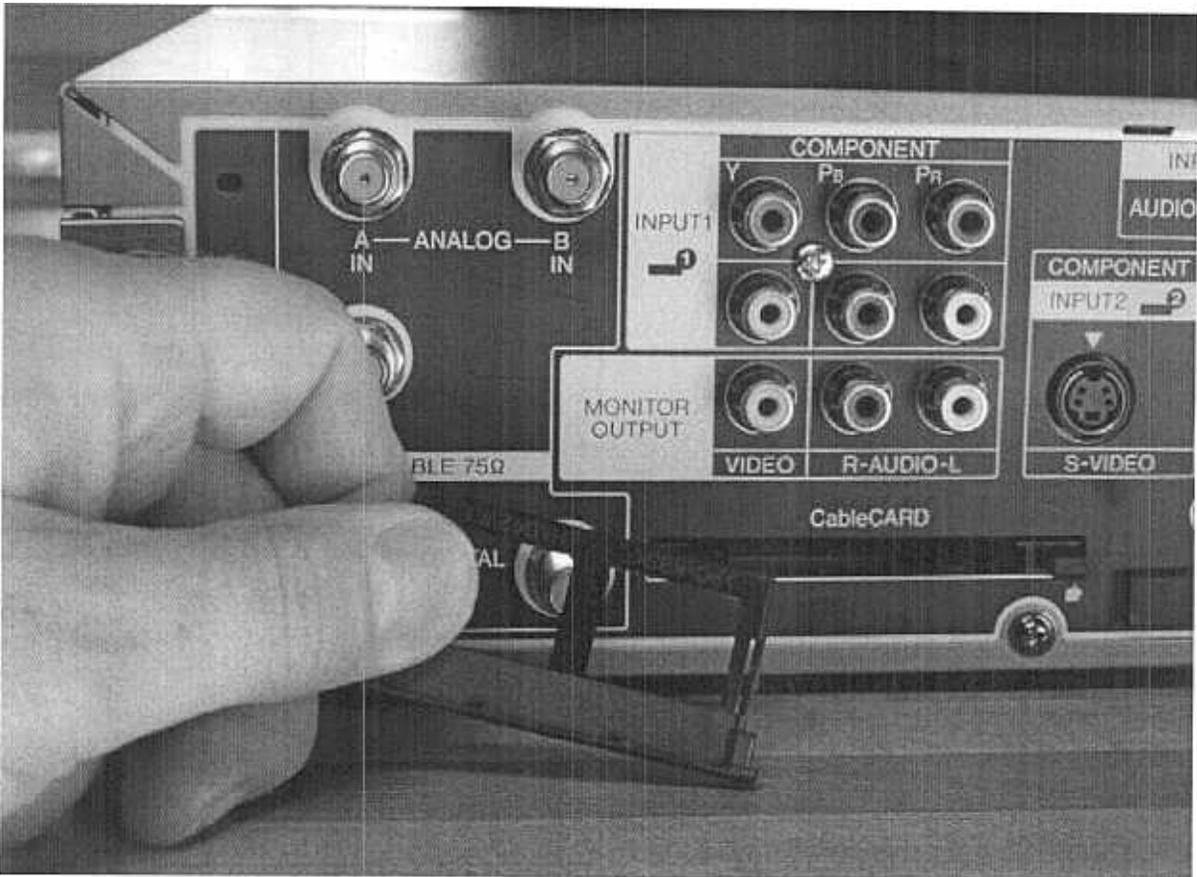


Figure 3B – This is the easiest installation of all.

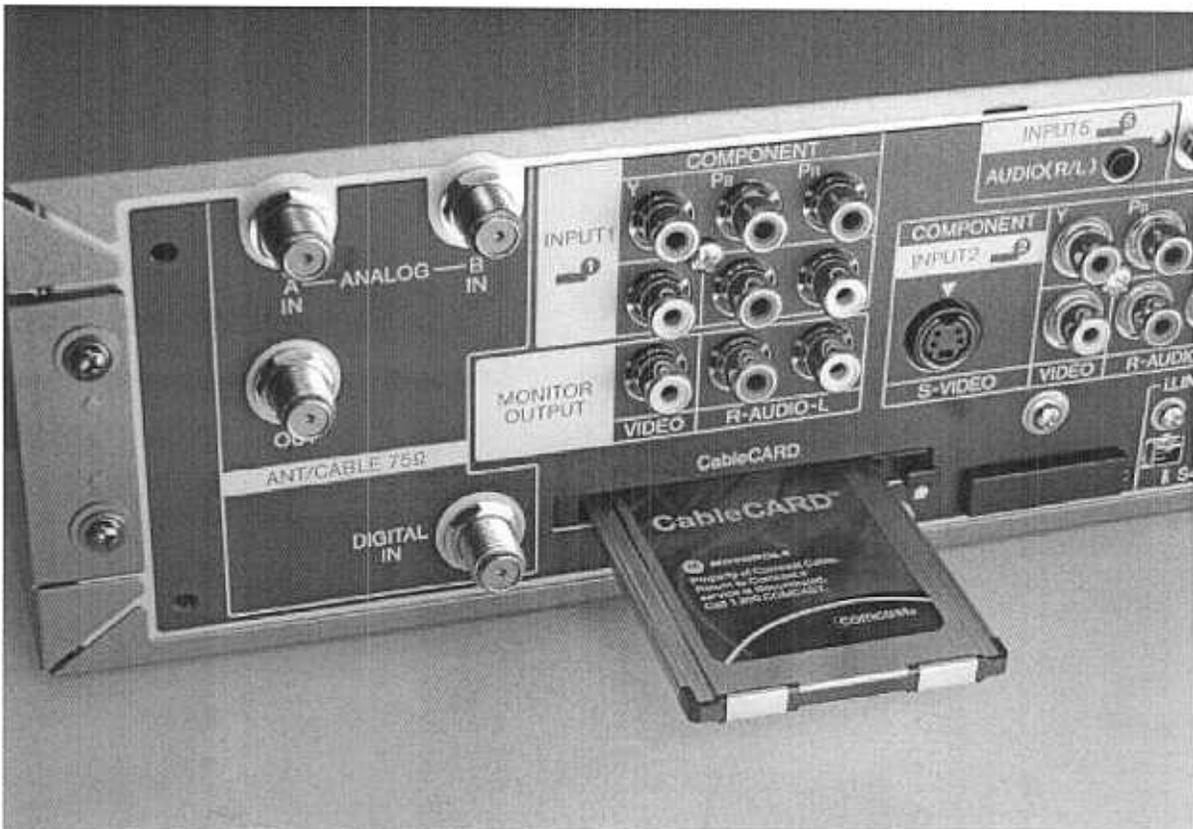


Figure 4 – Here's a typical OSD of available digital cable channels.

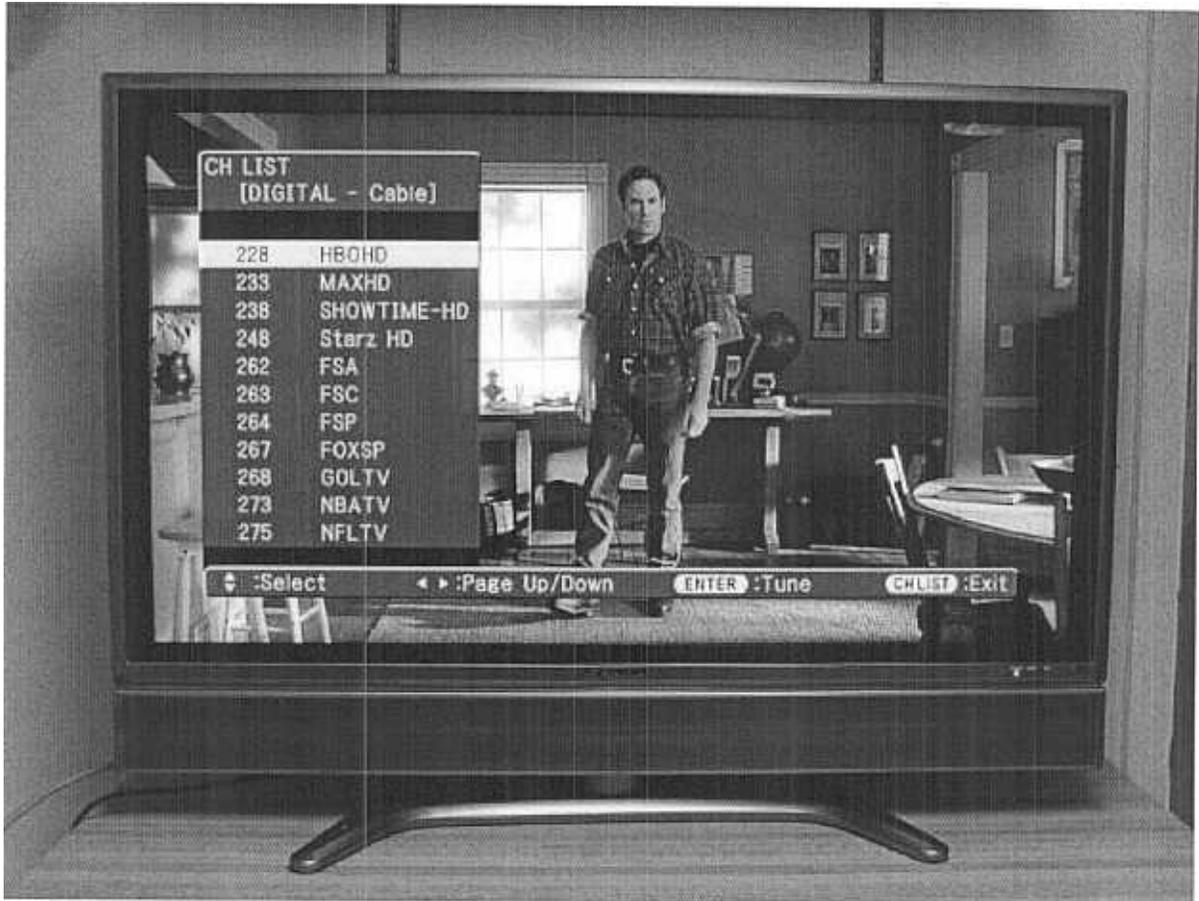


Figure 5 – Here's a typical OSD of available off-air digital channels.



Want to know more about those CableCARD TVs? Look for the February 2005 issue of Stereophile Ultimate AV, which should be hitting newsstands in late December of this year.

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TWICE

August 9, 2004

SECTION: News; Pg.**LENGTH:** 843 words**HEADLINE:** Sony Unveils HD PVRs, More HDTVs**BYLINE:** By Greg Tarr**BODY:**

RANCHO BERNARDO, CALIF.—Sony will introduce this fall the first CableCARD-enabled HDTV cable decoder boxes with built-in hard-drive recorders, and ATSC tuning.

The set-top boxes, which Sony showed to select members of the press visiting its new sales and marketing headquarters here, will be available in two models, differing only by hard-drive capacity. The DHG-HDD250 (\$799 suggested retail) will carry a single 250GB hard drive, while the DHG-HDD500 (\$999) will add a second 250GB hard drive for a total of 500GBs recording capacity.

The two units will be capable of storing up to 20 hours or 60 hours of high-definition programming at one time, respectively. Users will program recorders via the latest iteration of TV Guide's subscription-free electronic programming guide, including HDTV program indicators on the grid.

Both set-top boxes will include HD component video and HDMI with HDCP video outputs, but lack IEEE-1394 connectivity. The boxes will include selectable resolution output for use with a wide variety of television displays.

Greg Gudorf, Sony Home Products Group television marketing VP, said the company will position the products primarily for retail distribution, although it will also entertain discussions with cable operators interested in carrying the devices.

Gudorf said Sony will use the set-top devices to address the 10 million homes with HDTV monitors that still lack any HDTV tuner solutions, and the 30 million digital cable households that have not yet added HD-boxes.

The company also showed a handful of HDTV products, including a 50W-inch fully integrated, digital-cable-ready high-definition plasma set. The KD-50SX955 (\$7,999 suggested retail) features Sony's floating-glass cosmetic design, and features built-in ATSC and NTSC tuners and a digital CableCARD slot for uni-directional cable plug-and-play capability.

The set can be mounted on a wall or placed on the included swivel stand featuring integrated wire management to hide source cables. Other features include a proprietary S-Master Series digital amplifier with 100-watt power, and an included 50-watt subwoofer.

In direct-view LCD TV, Sony will ship in September its M series lineup, including the 23W-inch KLV-23M1 (\$1,999), HDTV monitor with below-screen speakers, center-channel input and Sony's WEGA Engine video processing.

New Grand WEGA rear-projection LCD television HDTV sets include the entry-level WE series features a 17-inch cabinet depth, fully integrated ATSC and NTSC tuners, S-Master Series audio amplification and digital CableCARD slot. The KDF-50WE655 will ship in the fall at a price to be announced. entry and set-up series model, including in

The step-up WF line features a re-engineered chassis that cuts down the height of the cabinet below the screen, where the light engine is housed, to make the set look more like a flat-panel television.

The step-up WF series features 10 percent improvement in brightness and also adds a CableCARD slot and integrated

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digital and analog tuning. The 60W-inch KDF-60WF655 will ship in the fall at a price to be announced.

Gudorf said Sony plans to "hit the market hard this fall" with a message that promotes the advantages of LCD-based rear-projection technology over competing microdisplay approaches.

"You are going to hear a technology story from us behind LCD that will once and for all explain why in addition to being an excellent value, LCD technology is a win," he said.

In developing its current TV display strategy for 2004, Sony looked to compensate for missed opportunities related to an under-forecasted demand for digital television in general, and non-CRT displays, specifically.

At the same time, the company said it would continue to benefit from its strengths in direct-view CRT manufacturing, as the older approach continues to demonstrate picture superiority and resilience in the changing marketplace.

The transition from analog TV to digital is "really happening and it is happening with gathering speed," Gudorf said. He also said the industry expected digital televisions to represent 54 percent of television sales in 2003, but actually hit 59 percent.

Gudorf acknowledged sales of non-CRT-based television products were also surprisingly strong last year. In 2002, non-CRT products represented 10 percent of industry sales, but sales of direct-view plasma and LCD displays, LCD-rear-projection and other fixed-pixel technologies were expected to take 25 percent of television sales in 2003, but they actually topped 30 percent.

"We are looking forward to seeing 2004 results because we expect to see a real surge in non-CRT," Gudorf said. At the same time, the CRT section of the business remains quite strong, particularly in wide-tube models, he said.

Gudorf said the company will focus its digital direct-view CRT models on 16:9 configurations, adding that the company recently received a surge in demand from the introduction of a \$999 30W-inch model. Currently gone from the lineup are 4:3 40-inch products.

LOAD-DATE: August 10, 2004