

DIGITAL DIGEST

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NEW RESEARCH

This market research digest is designed to give you a glimpse of some of the research that Digital Tech Consulting is preparing for publication. Here is some of the research currently available from DTC:

Set-top Box Forecasts for Emerging Markets: Digital Cable, DTH Satellite, and IPTV Platforms

Digital TV Receivers Worldwide History and Forecasts (2000-2010)

For more information, please visit us online at: www.dtreports.com.

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CableCARDS: Life After Seven-Oh-Seven

by Antonette Goroch, Senior Analyst

Now that the much anticipated 7/07 deadline for CableCARDS has passed, with very few waivers granted, the nagging question rises to the surface: So what's the impact?

It's unlikely that the CableCARD rule's greatest impact will be its main intent – to make more cable set-top boxes (STBs) available in retail stores. Its most immediate impact will likely be a general rate hike for cable service, and the introduction of non-STB devices – namely the PC – as receivers of cable TV programming.

The original intent of the law, which stems from the 1996 Telecommunications Act and bans cable operators from using STBs with integrated conditional access, was to open up the STB market to retail competition, reasoning that a greater number of STB vendors would be better for consumers. In addition, the CableCARD solution will allow consumers to purchase cable STBs at retail and continue to use those boxes if they move to an area where cable TV service is purchased from a different provider.

To some degree the STB market has opened up, with new vendors like Pace, Panasonic, Samsung and Thomson now shipping product into the U.S. But the vast majority of STBs (well over 90%) are still from Motorola and Cisco, and it's not clear that this is changing anytime soon. STB price points are rather high, even for standalone DVRs like Tivo, and thus a lease model is still prevalent (a trend even among rival DTH satellite operators). This puts bulk orders in the hands of a small number of vendors, even with the addition of the removable security and the theoretical ability to buy cheaper units at retail.

A more subtle impact is that CableCARDS enable another form of video entertainment on the PC. There are a number of Media Center PCs entering the market in the second half of 2007 that support CableCARDS using the OCUR (OpenCable Unidirectional Receiver) spec, which CableLabs developed in late 2005 with help from Microsoft. OCUR allows the consumer to use an external CableCARD reader, connected via USB to their HTPC (Home Theater PC) to receive cable TV programming. Content is converted into either the Windows Media format or Real's Helix to copy protect programming, and from there the PC can act as any other DVR.

While in the STB-only context a unidirectional CableCARD might seem lacking (since it eliminates features like on-demand programming and an interactive guide), in the HTPC context it may be a very compelling alternative. Indeed, S1Digital's new Media Center PC has two CableCARD slots to support simultaneous recording of two programs at once, and then programming can be accessed and shared by users across the home network.

After a decade of foot dragging on CableCARDS, the cable operators' response to the July deadline was to impose a rate hike in the fall, which they blame on

increased costs from the CableCARD transition. Be assured, their investment in upgrading to CableCARD compliance has not been small, since new equipment is needed at both consumer premises and at the head-end. And it's easy to sympathize with the cable operators, since they are unlikely to see much in the way of increased revenues from this investment.

But consumers turned off by rate hikes have other pay TV options to consider from both IPTV and DTH satellite (both are exempt from the integrated security rules, much to the chagrin of the cable industry), meaning cable operators may yet yield a negative impact from the regulations.

While it's probably still too soon to say what the ultimate impact of the CableCARD will be, it's clear that the market and technology digital media industry trends are towards greater levels of standardization and interplay among devices. As long as cable operators capitalize on the standardization and don't hinder it, they will find success.

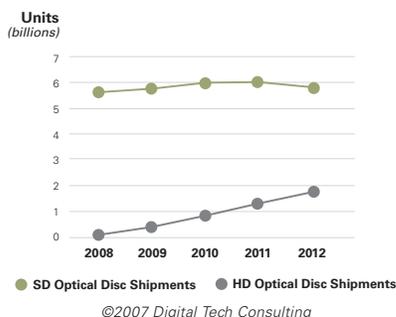
HD-DVD/Blu-ray Format War: Who Cares?

In the overall picture of how consumers will view high-definition video in the future, identifying a winner of the HD-DVD/Blu-ray format war isn't particularly important.

With no clear end in sight to the skirmish, high-definition (HD) Optical Discs and device shipments will not match the success of their Standard Definition (SD) predecessors regardless the outcome of the format war, according to research from our report *DVD & HD-DVD/ Blu-ray: Worldwide Shipment History and Forecasts*.

DTC estimates that more than 5.5 billion pre-recorded SD DVD discs will ship into the market in 2008 with slight growth through its peak in 2011. However, with estimates of HD-DVD/Blu-ray pre-recorded discs shipping over 170 million units in 2008, even with a much sharper growth curve, DTC projects that HD discs still won't come close to approaching SD disc shipments in the foreseeable future. Although these HD disc projections are for the early years of the new formats' lives, it seems unlikely, given the

Standard Definition vs. High Definition Packaged Media Shipments



plethora of HD programming distribution options consumers will have, that high-definition DVD will eventually evolve into the Goliath that has become the SD DVD industry.

Although the acquisition of video programming over the Internet is in its infancy stages, it is a foregone conclusion that electronic distribution will have a negative impact on the packaged media business. Not only are consumers mostly satisfied with SD DVDs, but they are likely to have the alternatives of the Internet, pay TV VOD, and pre-recorded programming played back from solid-state devices when they are ready to try out a new way to consume programming. DTC believes that there will be a demand for physical media for years to come, but it isn't likely to dominate the way the DVD does today.

In 2008 the more than 250 million PC and peripheral devices estimated to ship will operate as DVD play back and/or record devices. And more than 140 million dedicated DVD player/recorders are expected to ship in 2008. Add in the 35 million videogame devices that will playback pre-recorded DVDs, and nearly a half-billion devices will ship in 2008. However of those nearly half billion units, DTC estimates that only a small fraction of those will support HD formats – about 5%, growing to 13% by 2012.

To date, despite the rapid price declines of the new devices, few consumers have made the high-definition DVD plunge. This is primarily for two reasons: 1) high consumer satisfaction with SD DVDs; and 2) fear of obsolescence if one format wins out over the other.

Efforts by major consumer electronics manufacturers to build devices that support both formats may be the answer, but with prices that sometimes surpass the price of buying both devices that support either HD-DVD or Blu-Ray separately, it's an unlikely near-term solution. If the stalemate continues, however, it could be a viable long-term solution.

Whichever format consumers eventually adopt for their HD play back on a physical medium, it's unlikely that it will reach the enormity of today's DVD business.

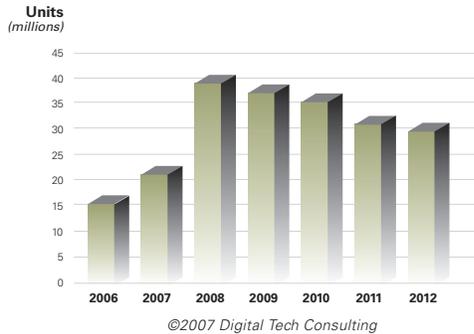
The End of Analog TV: Making the Most of the U.S. Digital TV Transition

Two obvious beneficiaries of the February, 2009 end of U.S. analog TV transmissions – savvy set-top box manufacturers and consumer-electronics retailers – already have their sales and distribution plans in place for the anticipated shopping spree scheduled to begin in January, 2008.

And the opportunity – although not without risk – could be huge. DTC forecasts a 72% growth in U.S. digital terrestrial TV receiver sales in 2008 as the National Telecommunications and Information Administration's (NTIA) coupon system goes into effect and receiver suppliers ship millions of digital- to-analog (D-to-A) converters to retailers across America.

The NTIA's D-to-A Converter Box Coupon Program, as authorized in the Digital Television Transition and Public Safety Act of 2005, is designed to facilitate the U.S. transition from analog to digital terrestrial broadcasts. Between January 1, 2008, and March 31, 2009, all U.S. households will be eligible to request up to two coupons, worth \$40 each, to be used toward the purchase of up to two, D-to-A converter boxes, while appropriated funds are available.

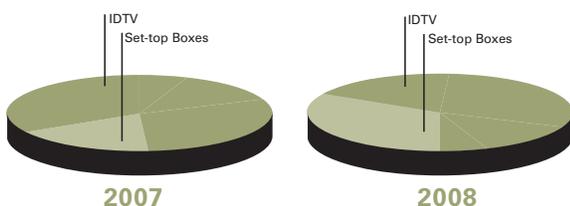
US DTT STB and IDTV Shipments 2006-2012



However, the window of opportunity for perceived beneficiaries is minuscule at best. After the spike in sales between 2007 and 2008 the market begins a healthy decline with shipments forecasted to fall to 29 million, a drop of almost 10 million units from the spike in 2008. But a much bigger opportunity will be missed if the shut off is only viewed as a way for converter suppliers to move millions of low-end, low-margin boxes. Integrated digital TV (IDTV) shipments are forecasted to increase as well, as DTC believes that some pay TV households that receive terrestrial signals on non-primary sets will likely choose to replace some of those analog sets with flat-panel digital TVs instead of hooking them up to D-to-A converters. Although the STB category will represent the greatest amount of growth in receivers next year, DTC estimates 23% growth in IDTV sales for 2008.

The expected spike in IDTV sales should also translate into increased pay TV business if cable, satellite and IPTV providers effectively promote their services to consumers who see the end of analog television as a catalyst to replace one or more of their analog TVs with new digital sets. The opportunity to sell second-and third-set service (especially premium HD packages) into existing pay TV households could deliver a welcomed spike in service providers' ARPU.

US DTT STB vs. IDTV



A snapshot of the forecasted ratio between U.S. ATSC STB and IDTV sales between 2007 and 2008 illustrates the dramatic surge of low-end product (D-to-A converters will range from about \$50-\$70) entering the market next year.

But the large volume boost suppliers and retailers will realize won't necessarily translate into a profit boost. Margins for the D-to-A STBs will be very slim, so retailers and suppliers will need to treat them like any other "loss leader" product – as a way to sell consumers other goods and "stepped-up" products once those consumers step through the sliding-glass doors. If they don't succeed in that, then the chance to benefit from the massive amounts of media that will be devoted to "the end of analog TV" will have largely gone to waste.

The data and analysis in this issue of Digital Digest is just a high-level snapshot of the market intelligence that DTC generates every day. More in-depth research and analysis is available to our customers on all of these topics and more.

Custom Consulting - DTC delivers to our customers objective, critical feedback and unbiased in-depth market research. We cover a wide range of topics in the consumer digital industry and our analysts are located around the world to gather the hard-to-find research that companies need for success.

Custom Reports - DTC specializes in custom research because we recognize that companies need specific research and analysis tailored to their individual business issues. Instead of paying for syndicated market research that is solely defined by the research company, DTC can tailor its data and analysis to deliver the specific analysis you need.

The list below outlines just some of the industries that DTC covers on an in-depth and daily basis:

- ATSC
- Digital Cable
- Digital Terrestrial TV (DTT)
- DVB-T
- DVD PCs
- DTH Satellite
- IPTV
- Non-PC DVD Devices
- Personal Media Players
- Prerecorded DVDs
- Receivers
- Videogame Consoles
- 1394 Devices

If you have any questions please don't hesitate to call Lee at DTC at 214.915.0930 or you can email Lee Forsythe at leeforsythe@dtcreports.com.

NEW REPORTS FROM



Digital Tech Consulting

***The Global IPTV Market
ROI Business Models, Value Chain,
and Forecasts***

February 2007 US \$2,999

DTC breaks down the IPTV market from every angle. There is an inclusive list of global IPTV deployments including the system's name, system launch date, encoder vendors, set-top box vendors, middleware and application software vendors along with DRM information. The report also includes the top ten IPTV systems along with associated vendors, and number of subscribers. The report contains a five year forecast for IPTV total subscribers by region, total revenues by region, and total STB units shipped.

Many will find our ROI Business Models section very beneficial. In this section we layout revenues, costs, and profits over a five year period associated with three typical IPTV system deployment scenarios.

***PMP Growth Forecast 2007 - 2012:
Portable Video Creates
Need for Dedicated Devices***

May 2007 US \$495

This report tracks and analyzes the dedicated Portable Media Player market from forecasting worldwide shipments to identifying major suppliers and their market share.

Understanding the PMP market is an essential part of building a portable digital media strategy and this report examines the role of the dedicated PMP against a backdrop of new converged products being tested in the market. Additional analysis includes the rate at which MP3 players will adopt video applications, and the relationship between PMPs and online media services.

Digital Tech Consulting is a market research firm providing strategic information and analysis to help companies succeed in the consumer digital marketplace. To learn more about DTC and how our analysts might help your company, please visit us online at www.dtcreports.com or call 214.915.0930.

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