

DIGITAL DIGEST

A Quarterly Journal Providing Market Research From Digital Tech Consulting



Digital Tech Consulting

JANUARY 2006

IN THIS ISSUE

MPEG-4 AVC/H.264 Growth Portends Spread of Digital Video
page 1

Thinning Margins Leave Manufacturers Eager to Resolve HD Disc Format Wars
page 2

New Frontiers in Mobile Content: Broadcast TV
page 3

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:

FEATURED REPORT

The Second Edition of The Business of Digital Copyright: Content Protection and Management in the Consumer Digital Era

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

Published by

Digital Tech Consulting, Inc.

Publisher

Myra Moore

Editor

Antonette Goroch

Contributing Analysts

John Fletcher
Antonette Goroch
Lucas Graves
Steve Vonder Haar

214.915.0930

Fax 214.915.0931

www.dtcreports.com

MPEG-4 AVC/H.264 Growth Portends Spread of Digital Video Across Many Platforms

As the inaugural year of commercial MPEG-4 AVC deployment comes to an end, the standards-based advanced video compression technology has found its way into a variety of devices and markets, reflecting the diversity of its uses. While most of the units shipping with AVC in 2005 came from just a couple of categories, an increasing momentum across categories will fuel dramatic growth over coming years. Indeed, DTC's recent research estimates MPEG-4 AVC unit shipments will jump from under 50 million units in 2005 to nearly 300 million in 2007.

Internet media players make up the vast majority of MPEG-4 AVC units shipped today. These consist entirely of Apple's QuickTime media player, which is available as a free download or as a retail "professional" package. Apple has been an early and ardent proponent of AVC as a standardized advanced video codec.

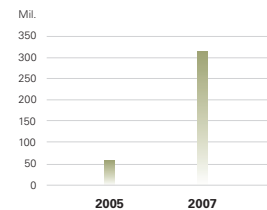
The second most significant category is video games. Sony, already a giant in the video game space, is the driving force behind MPEG-4 AVC in the market. The MPEG-4 AVC-based Playstation Portable (PSP), which DTC estimates to have shipped about 11 million units in 2005, leads Sony's offerings. And shipments of the Playstation 3 (PS3), designed to include a Blu-ray drive and MPEG-4 AVC decoding, are scheduled to ship in the spring of 2006. The pie chart below illustrates how this emerging video compression technology is estimated to be distributed over multiple platforms in 2006.

Apple clearly dominates the overall market with its popular media players and the newly available video-capable iPod. Our estimates indicate a market share of over 80 percent for Apple, with Sony a distant second at nine percent in 2006.

This will not remain the case for long, however. By 2010, we predict a far more diverse picture for the next-generation codec. Internet media players and video game devices will remain important categories, but mobile units and TV handsets will substantially outweigh both (see related mobile TV article).

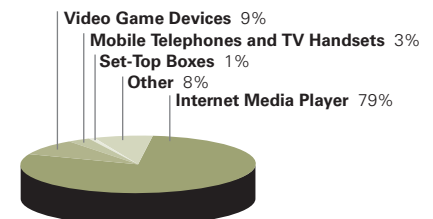
Set-top boxes using MPEG-4 AVC are just beginning to deploy in a handful of DTH satellite and video DSL systems, but by 2010, we expect them to make up

Estimated Annual MPEG-4 AVC Product Shipments



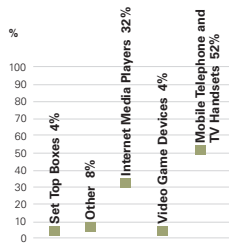
©2005 Digital Tech Consulting

MPEG-4 AVC Product Shipments by Platform: 2006



©2005 Digital Tech Consulting

MPEG-4 AVC Product Shipments by Platform: 2006



©2005 Digital Tech Consulting

four percent of total products shipped, equal to the video game device segment.

Another characteristic of the early market for the advanced video compression technology is the vast majority of all programming will be encoded and decoded in standard definition. The new advanced video codecs have been touted for their ability to make greater amounts of high-definition (HD) available. But it will be some years before AVC will be used in any significant way for HD video.

The first place HD content will begin to emerge in a meaningful way is in advanced set-top boxes for DTH satellite services, primarily in the United States during 2006, gathering steam in 2007. DirecTV, the largest U.S. DTH satellite operator, began selling its first MPEG-4 AVC-HDTV boxes in Detroit, the first market the company is targeting for its roll out of local HD offerings. DirecTV quietly launched its HD service in Detroit in late October, 2005, but it is expected to quickly expand to other major market cities. The company says more such launch announcements are expected in the remaining weeks of 2005.

Echostar, the other U.S. DTH satellite operator, will no doubt be soon to follow, though it has kept mum on its specific rollout plans. If it hasn't begun offering its new MPEG-4 AVC HD programming by the end of the year, it will certainly begin by the first quarter of 2006, when the two U.S. operators will be joined by a number of European launches. Indeed, BSkyB in the UK and Premiere in Germany both have firm plans for 2006 launches of new MPEG-4 AVC HD services.

Thinning Margins Leave Manufacturers Eager to Resolve HD Disc Format Wars

Razor thin margins for both DVDs and PCs are leaving manufacturers eager for new technologies that will boost profits and sales. Key among these are the competing Blu-ray and HD-DVD optical disc formats, currently stalled in a format war.

With set-top and PC DVD devices reaching mass-market status in many parts of the world, the format war currently gripping the industry is creating increasing discomfort for many who are watching a bottom line.

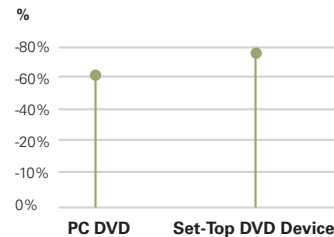
Dropping Prices

While once the vanguard of a whole new wave of digital consumer electronics products, the DVD format has experienced an inevitable steady decline in price as it has penetrated the mainstream market place. The average price for an entry-level DVD-PC has dipped a dramatic 54 percent over the past eight years (see chart below).

Although DVD PCs, in some cases, can still demand a premium, more and more entry level PCs will include DVD drives as the DVD usurps the CD as a standard optical-disc drive.

Set-top DVD devices, meanwhile, have seen an even more dramatic decrease. Over the same period, average retail price for entry-level DVD Players (non-recordable) have dropped 77 percent, from 1997 (see chart).

Average Retail Price Decline 1997-2005

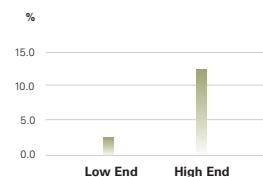


©2005 Digital Tech Consulting

Profits Lie In High-End Models

Such price erosion has increased the desire for new technologies that can carry higher retail prices and energize sales. High-end set-top DVD devices (defined as DVD recorders with digital connectors, progressive scan features and advanced remote controls), add a 28 percent premium to the entry-level retail average. After assembly, components and royalty costs are deducted, entry-level and high-end set-top DVD devices average wholesale mark ups of 1.2 percent and 13 percent respectively.

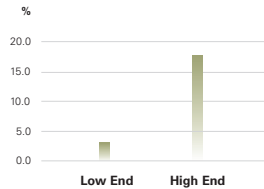
DVD Set-Top Device Wholesale Margin



©2005 Digital Tech Consulting

High-end DVD PCs—models with increased RAM, large hard disk drives and faster processors — average gross wholesale markups of 18 percent. Entry-level DVD PCs, models a step above entry-level non-DVD PCs, manage only a 3.5 percent wholesale markup (see chart below).

DVD PC Wholesale Margin



©2005 Digital Tech Consulting

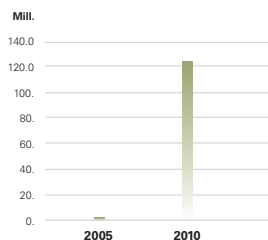
As more and more DVD devices gravitate to the lower-end of the product spectrum, it becomes apparent that a protracted format war over the next generation optical disc format will have many device makers hoping for a peace treaty to prop up the bottom line.

New Frontiers in Mobile Content: Broadcast TV

Broadcast television on mobile phones may appear to be just one more feature of a Swiss Army Knife-like gadget, but DTC believes that it will play a much bigger role than that of a miniature cork screw.

Such services hold promise for incremental revenue increases for mobile service providers as these services will offer packages of TV and other programming for an additional service fee. Though just a handful of service providers have concrete plans to offer broadcast mobile TV in the next 18 months, DTC expects it will be widely available around the globe by 2010. In 2005, we estimate there will be about 200,000 broadcast mobile TV subscribers in 2005 growing to more than 120 million in 2010 (see chart below).

Estimated Mobile Broadcast TV Subscribers



©2005 Digital Tech Consulting

As video features like handset camcorders and video clips have spread, achieving an undeniable momentum, parts of the industry are now shifting focus from services that distribute video over wireless data networks, to video offerings that rely on dedicated broadcast frequencies.

Four main broadcast infrastructures are emerging to deliver television content to handsets: DMB in South Korea, which began satellite broadcasts early in 2005; ISDB-T in Japan, which is scheduled to begin in 2006; DVB-H with trials underway today in the United States and Europe and with official launches slated for 2006; and Qualcomm's MediaFLO architecture, which is slated to begin service in late 2006 or 2007.

But commercial mobile TV subscription services are just making their way to the market during 2005, and will reach only a small portion of the installed base of video equipped handsets during 2006. Though there are numerous mobile TV trials that will be taking place in several countries during 2006, most of these will not have commercial launches until 2007.

Indeed, only a few will have launched broadcast quality video content commercially by 2006: SK Telecom in Korea, which launched in early 2005 and NTT Docomo in Japan, which will launch in early 2006. Crown Castle has announced that it will begin service in the United States during 2006. These services all offer mobile TV packages as a subscription tier, but pay-per-view options are also envisioned as the infrastructure evolves.

ABOUT DTC

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.dtreports.com or call 214.915.0930.

Subscription Request

Not on the *Digital Digest* mailing list? For a free subscription, please fill in this form and fax it to 214.915.0931, or sign up online at www.dtreports.com.

Name _____

Job Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Email _____

918 Dragon Street
Dallas, TX 75207

DIGITAL DIGEST

A Quarterly Market Research Journal From DTC



Digital Tech Consulting

