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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:

FEATURED REPORT

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

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

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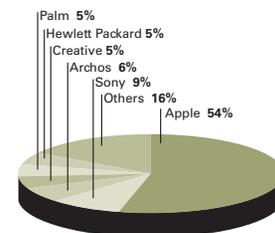
Portable Media Player Market Hits Stride

Portable video went mass market this year as audio/video PMP (Portable Multimedia Player) shipments enter the tens of millions worldwide, thanks in large part to the overwhelming success of the video iPod which we estimate has shipped 13 million units since its late 2005 launch. While not exactly answering the question of whether consumers want their video to-go, the sheer number of PMPs expected to ship in 2006 (18.1 million) gives the market an air of legitimacy.

Several recent events highlight the importance and success of the PMP in both the consumer electronics and entertainment markets. NBC noted in November 2006 that strong demand for episodes of "The Office" at the Apple iTunes store single-handedly convinced the studio to keep the show on the air. But the biggest news this year in the PMP space is Microsoft's Zune premiere, and we think its late market entry is not necessarily a hindrance to Zune's acceptance.

Other long time incumbents in the highly competitive PMP marketplace include Sony, Creative, Archos, Palm, and HP. DTC has compiled market share data for the global PMP market as indicated in the chart to the right. These data include multimedia PDAs and exclude audio-only PMPs.

2006 Global PMP Market Share



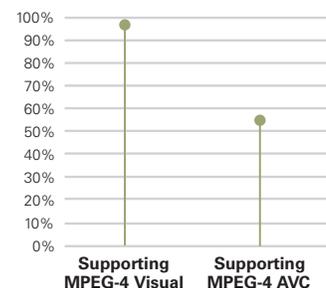
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PMP Video Codecs

Support of multiple video codecs in today's PMPs could also help boost the legitimacy of the PMP category as online viewing and acquisition of video become more mainstream. Online video is encoded in an array of video codecs, but the first PMPs, such as those from RCA and Archos, only employed the MPEG-4 Visual codec. Apple's video iPod features the MPEG-4 Visual and MPEG-4 AVC video codecs, which potentially expands the universe of programming that can be played back on the device. And the new Zune player supports an even longer list of video codecs including MPEG-4 Visual, MPEG-4 AVC, and Windows Media Video. In theory this should help foster an ecosystem where consumers can view video acquired from multiple sources.

As 2006 winds to a close, we expect to see about 99% of all PMPs shipped worldwide to have MPEG-4 Visual support out of the box, i.e. not requiring a separate software download for playback.

Video Codec Support



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Continued on next page

Higher-quality MPEG-4 AVC is currently supported primarily by video iPods and the Zune. We estimate that Apple has sold about 40 million videos from the iTunes Store since inception and we believe the bulk of these videos were encoded in MPEG-4 AVC.

Archos' new PMP models, the 404 and 604, support the AVC codec via a separate software download and are as such excluded from these shipment projections. We expect other PMP vendors to eventually support MPEG-4 AVC out of the box, following the lead of Apple and Microsoft.

At the time of the Zune launch, about 55% of all PMPs shipped worldwide supported MPEG-4 AVC, consisting almost exclusively of video iPods.

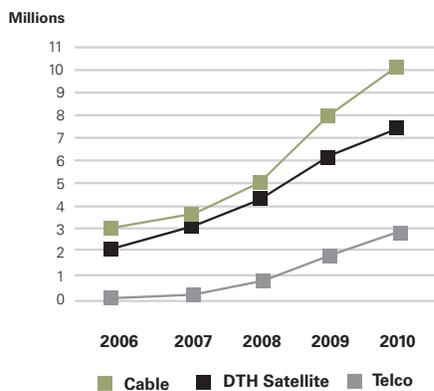
U.S. HDTV Reaching Mass Market Status

Although the digital terrestrial and High Definition (HD) television broadcast transition began eight years ago, DTC's data and analysis show that the HDTV upgrade cycle is still in its early stages.

The purchase of HDTV services from cable, satellite, and IPTV providers is just now entering mass-market status, with ample room for growth evidenced by DTC's estimated HDTV set-top box shipments through 2010. In 2006 we estimate a greater than 40 percent growth rate in HD capable STB shipments with healthy double-digit growth through 2010 (see chart below).

Although the DTH satellite providers pioneered pay TV HD offerings in the United States and will continue to log healthy growth, their newer HD competitors – cable and IPTV providers – will realize higher growth rates during the forecast period with newcomer IPTV providers logging the most dramatic HD STB shipment growth.

**U.S. HD STB Shipments:
Cable, Sat and Telco**

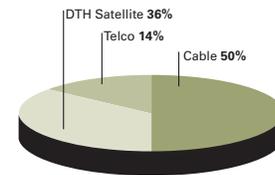


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That dramatic IPTV STB growth is largely attributed to the embryonic state of the IPTV market. By 2010, digital cable

and satellite will continue to dominate the U.S. HDTV market, but DTC estimates that as much as 14% of all HDTV STBs used in pay services will fall into the IPTV category – a significant bite out of the incumbents' pie (see chart).

**2010 U.S. HD Market Share
by STB Shipments**

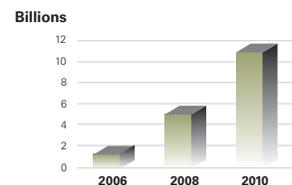


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New IPTV Models Bring New Competition

As IPTV gathers steam worldwide, this newest platform for digital media delivery is opening a plethora of new opportunities for digital content. According to DTC's forthcoming report, IPTV is expected to generate more than \$11 billion in pay TV subscription revenues by 2010 (see chart below). A range of content providers is seeking a piece of this lucrative pie, hoping to leverage new models in a new competitive terrain.

**Worldwide IPTV
Subscription Revenue**



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The content delivery model for traditional multichannel pay services via cable and DTH satellite is straightforward, with both the content packages and the service access/hardware bundled and marketed together, based on pricing tiers. Most of the new IPTV services follow this model to some degree. Large IPTV providers offer triple-play packages based on their own "Master Headend" networks, where they independently obtain deals with content providers to distribute on their own local networks. Smaller IPTV providers might employ the "Shared Headend" where they operate their own local network, but receive content packages via a satellite delivered aggregator.

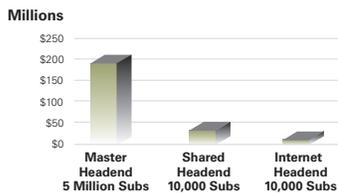
Leveraging the capabilities of an IP-based network, however, opens up a range of new content models, loosening the relationship of content services and access services. Newer

delivery models have at their core what we call "Internet Headend" services, allowing various content providers a way to market their own subscription content to TV viewers with Internet access with fewer barriers to entry than delivering IPTV via other networks. As such, some may not consider this model as true IPTV, but it's more than just a niche service, as the industry is demonstrating with robust, viable content.

NeuLion is one example of one such service, allowing content providers, such as the Chinese language KyLin TV to upload its content to a central server for a fee, where users with a corresponding set-top box can then access it. The set-top box, while manufactured by NeuLion, is also marketed by the content provider, either as part of the monthly content package, or as an upfront consumer purchase.

This Internet Headend model opens up a wide market for small content providers potentially, with relatively low upfront costs. Using this model for service, DTC estimates upfront deployment costs per sub of just \$35, compared to a large-scale triple play IPTV deployment using its own network and headend, or a smaller scale triple play deployment using its own network and a shared headend approach (see chart below).

Upfront Deployment Costs/Sub

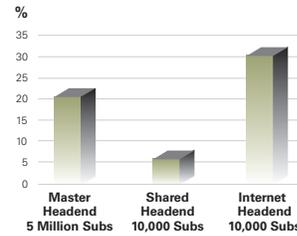


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Operating margins are attractive too since an Internet Headend based content package does not have the same network upkeep costs associated with either a shared or Master Headend system. Rather, the content provider shares revenue with the Internet Headend service.

While operating margins are strong, upfront and new-subscriber acquisition costs put a dent in profits for two years according to DTC's model, with the break even point between years two and three. On a five year timeline however, total revenue exceeds costs to the tune of a 31% gross profit margin. The chart following compares profits from the three different headend models discussed. (more detail on these models is contained in our IPTV Report)

5 Year Gross Profit



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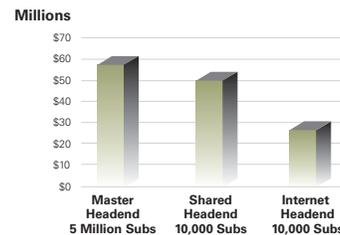
While barriers to entry are low for Internet IPTV delivery, Average Revenue Per User (ARPU) is far less than that of dedicated networks, whether wholly owned or shared. DTC's recent research suggests that monthly ARPU is just over half of that generated by a Master Headend IPTV network (see chart below). Marketing is an even greater challenge, as new content providers have neither the brand identity of established content names nor the customer relationships that local networks do.

Competitor or Ally?

The addition of a whole new class of competitors vying for consumers' pay TV spending is no doubt unwelcome news to telcos shelling out billions to upgrade their networks, while trying to simultaneously fend off existing multichannel pay TV competitors.

But our analysis suggests that the ultimate winners will be those operators who can use these new content delivery models to their own advantage, padding their content libraries with niche offerings and incrementally increasing their ARPU, alongside new niche content providers able to partner with existing operators for better marketing access to end users.

Average Revenue Per User



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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.

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