

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:

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

Online Media Services: *Forecasts, Business Models and Analysis*

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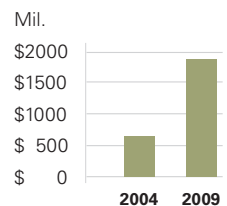
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Global Market for Digital Content Protection Technologies To Explode

According to DTC's latest research into digital rights management and content protection technologies, new business models and delivery pipelines will continue to fuel growth in this global market, making up an increasing portion of the whole. The newly published second edition of *The Business of Digital Copyright: Content Protection in the Digital Consumer Era*, projects that combined revenues from royalties and licenses for content protection technologies will near \$2 billion, a three-fold increase from 2004.

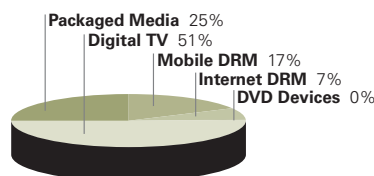
Digital TV conditional access systems, fueled by the mature digital pay services from satellite and cable operators, make up the lion's share of today's revenue stream. These traditional pay-TV providers still continue to be an important revenue stream as they implement new services like high-definition programming and PVRs. There will also be new operators as video DSL deployments are rolled out by telco players. But new pipelines like mobile phone and Internet services, which are just now gaining traction in the market, will comprise most of the market's future growth — driving much of the market's overall size.

Revenues Derived from Content Protection Technologies



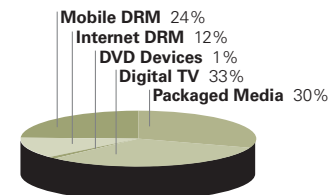
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Estimated 2006 Market Share Revenue by Product Category



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Estimated 2009 Market Share Revenue by Product Category



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Internet services, like the successful Apple iTunes Music Store or the RealNetworks RealOne subscription family of video/music services, have now demonstrated the commercial viability and future potential of the area. What seems to be an acceptable balance of content protection and consumer permissions from today's DRM systems has helped to transform once unfriendly terrain to fertile ground. Services launched widely throughout 2003 and 2004 in the U.S. are beginning to implement international versions, hoping to gather mainstream audiences worldwide.

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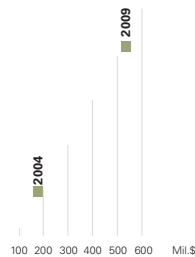
Even more significant is the increasing capabilities and sophistication among mobile phones and networks that will facilitate one of the largest opportunities in digital content distribution. Secure mobile phones, equipped primarily with the new Open Mobile Alliance DRM technology or Windows Media DRM, will make up nearly half the hardware units generating content protection license fees in 2009, and will account for nearly one quarter of all DRM license fees between hardware and content-based fees (See related article below).

Read more about DTC's new research on copy protection and digital rights management in *The Business of Digital Copyright: Content Protection and Management in the Consumer Digital Era (Second Edition)*. For more information on the report, please go to www.dtreports.com.

Mobile DRM Opportunities Untethered

Nokia's implementation of the Open Mobile Alliance DRM 1.0/2.0 technology across its smartphone 2005 product line, as well as the similar move by smartphone OS leader, Symbian, in its popular Series 60 OS, sets the stage for dramatic and rapid growth in DRM-enabled mobile phones and the high-value media content they offer. DTC research suggests that license revenues from these and other DRM technologies for mobile phones will surpass \$500 million by 2009.

Total Mobile DRM License Revenue



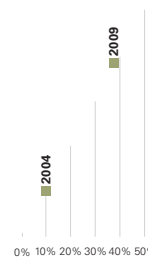
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DRM technology, primarily either OMA DRM or Windows Media DRM, is finding its way into mobile phones initially via the smartphone, an advanced voice/data hybrid device for high-bandwidth networks which enable the delivery and playback of "high-value" video and audio content. DRM-enabled high-end smartphones made up just a small fraction of the 600-plus million mobile units shipped worldwide in 2004, finding initial success largely in European markets.

Smartphones represent the higher margin growth segment for this fairly mature market, though, and this segment is forecast to account for up to a third of all shipments in 2009.

As lower-end "feature phones," which offer mid-range features like ring tones and multimedia messaging, begin to

% Total Worldwide Mobile Units Shipped With DRM

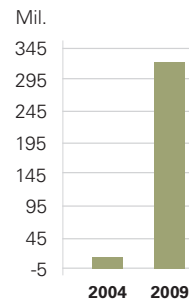


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adopt DRM technology over the next several years, DTC expects nearly 40 percent of all new mobile units shipped worldwide will contain DRM. According to DTC estimates, this implies some 300 million units will ship annually by 2009, a leap of more than 100 times over a five-year period.

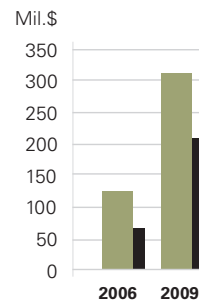
These shipments will further fuel an installed subscriber base, equipped for DRM-enabled content transactions from both premium subscriptions and per-use purchases. Of the more than 1.5 billion mobile subscribers worldwide, DTC estimates under 20 million were equipped with phones that included DRM in 2004. Robust shipments of DRM-enabled smartphones and feature phones will push that number past 500 million by 2009, clearly an attractive installed base for a variety of content providers.

Worldwide Mobile DRM Units Shipped



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Mobile DRM Revenue by Type



■ Hardware
■ Content

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Mobile subscribers demonstrated a voracious appetite for low-value content, like ring tones and screensavers, with revenues from these sources already in the billions of dollars today. DRM systems are poised to fuel these trends by increasing high-value content, like digital music or video, and the more substantial revenues they are expected to generate. By 2009, DTC expects license revenue from content-based transactions to account for some \$200 million, almost a third of overall mobile DRM license revenues.

MPEG-4 AVC to Debut in HD and SD STBs

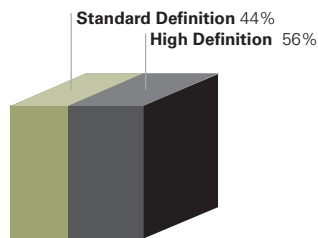
With the MPEG-4 AVC codec making its early debut in high-definition and standard-definition digital set-top boxes (STBs) this year, DTC forecasts that shipments will near 600,000 units by year-end.

Announcements early this year from major multichannel pay-TV providers will give the industry its first advance video codec products in the form of standard-definition and high-definition STBs.

HD implementations will certainly be key, making up more than half of shipments according to DTC estimates. An emphasis on using MPEG-4 AVC for high-definition programming should help ease the transition from MPEG-2 to MPEG-4 AVC. Service providers, like DirecTV, that are implementing the new codec are doing so for newly created HD channels. The majority of their subscribers are viewing standard-definition MPEG-2 video and will continue to do so for some time. For those subscribers, HD MPEG-4 AVC programming will have no impact on their service.

Certain "greenfield" systems just rolling out will be significant also, with more than 40 percent of forecast shipments coming from standard-definition STBs for these systems. For many new operators, AVC is still out of reach due to cost, leading them to hold off deployments until 2006, after initial orders help drive prices down. Some deep-pocketed players, however, such as SBC with its planned DSL TV service in the United States, will adopt AVC from the start, using its increased functionality and compression ability to help establish a crucial competitive position early in an already crowded pay-TV marketplace.

MPEG-4 AVC STB 2005 Shipments: High Definition vs. Standard Definition

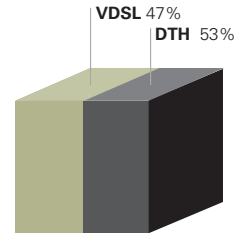


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DTH satellite and video DSL STBs will dominate these early shipments and will make up more than half of units shipped. DTH satellite, long a digital TV pioneer, will see substantial shipments based on several announced deployments of HD AVC, most significantly DirecTV and DISH Network in the United States. New VDSL systems will be equally significant, however, with several deployments of standard-definition AVC STBs planned for this year. Standard-definition implementations will allow new operators to begin establishing

their standard-definition subscriber bases more economically, while still positioning themselves for later upgrade to more sophisticated features and HD programming.

MPEG-4 AVC STB 2005 Shipments By Platform



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At least for now, VC-1 – the advanced profile version of the underlying video codec for Windows Media 9 – is mostly absent as a next-generation codec for pay-TV systems. Microsoft's efforts to plant itself into the more traditional multichannel video and consumer electronics industries by submitting VC-1 to the Society of Motion Picture Television Engineers (SMPTE) as a standard specification has not yielded the results Microsoft originally anticipated.

The VC-1 standardization process is currently incomplete, while the MPEG-4 AVC standard is complete and being incorporated into chips headed for set-top boxes by the third quarter of this year. With behemoth satellite service providers, like DirecTV, moving at a rapid pace to add more HD channels to their service through the significantly more efficient AVC codec, VC-1's late-comer status leaves it at a significant disadvantage.

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.dtcreports.com or call 214.915.0930.

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