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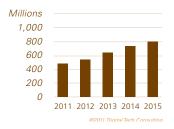
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Over the Top with Worry?

We live in an age of high anxiety. Stock markets are gyrating. Governments are falling. Protests and riots are roiling Europe. Pay TV providers don't necessarily have to fear barbarians at their gates, but they are facing something of their own existential crisis: the rise of over the top (OTT) video. At the latest sign of subscriber loss, a great wailing and gnashing of teeth can be heard about the dreaded impact of OTT and the "cord cutters" thought responsible.

Estimated Total Worlwide Digital Pay TV Subscribers



It's true that video delivered on the "open" Internet via services such as Netflix or Amazon and through devices such as game consoles, media players and, increasingly, Internet-connected televisions, presents something of a dagger pointed at the heart of the traditional pay TV business. If consumers can stream movies and TV shows on demand from the Internet at a fraction of the cost that cable, satellite and IPTV providers are charging, why wouldn't they "cut the cord" (or drop the dish) and keep only their high speed Internet connection? At least, that's the emerging conventional wisdom. But will OTT really pinch pay TV services?

Discerning cord cutter's impact is a bit like hunting for a black hole: scientists can't observe them directly, but they do look for telltale signs and infer their existence from there. From a pay TV perspective, subscriber losses can be attributed to cord cutters or the poor economy (or both, as those trends can be seen as self-reinforcing). But the collapse of new household formation in the U.S. and parts of Europe caught in the bursting real estate bubble can also curb demand for pay TV. Real Housewives can't be helping, either.

In the second quarter, the U.S. pay TV industry took a hit, losing close to 200,000 subscribers. However, with the exception of Dish Network, these losses were confined to cable TV providers. DirecTV and the nation's leading IPTV providers Verizon and AT&T all notched subscriber gains.

But that's not to say that OTT is not having an impact - it is. One area that DTC believes has been depressed by the emergence of OTT is the Video On Demand (VOD) offerings of pay TV providers. Outside of the "all you can eat" VOD bundles included in subscription offerings, fewer consumers are choosing a service provider's pay-per-view VOD offering. Growth in on-demand title units is expected to slow from 27 percent in 2011 to 14 percent in 2012, and decline steadily through 2016.

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Providers have been experimenting with ways to woo these customers by launching "premium VOD" - where movies are available for on-demand viewing the same day they hit theaters. Dish Network, DirecTV and Comcast have all dabbled in same day availability for independent films. Three major Hollywood studios also hit on the idea to charge consumers \$30 to watch a movie 60 days after it hit theaters - a "deal" most consumers have thus far shrugged off.

Those services are expected to reach 725 million by 2015, up from an estimated 486 million in 2011. Pay TV providers surely need to keep a wary eye on OTT but not necessarily a worried one. At least, not yet.

Changing the PC Game?

As with the introduction of Sport Utility Vehicles (SUVs) to urban and suburban baby boomers in the '80s, there wasn't a pent-up demand for tablet PCs. But to Apple's credit and its benefit, the tablet computer is a supply-side success story that may be remaking the computer business in the same way the SUV redefined the automobile market. PCs, although they have evolved over time, have not had a radical retooling until the advent of smart phones and tablets. And what does that retooling portend for the greater market?

"...in 2009 DTC estimates that 14% of the global PC market was made up on non-traditional mobile PC devices growing to over 20% in 2011." There is currently a shift in demand from traditional PC products like desktops and full fledge laptops to more mobile PC options like netbooks and tablets. While it can be argued that the move from desktops to laptops is the conception point of the shift, the shift was notably accelerated with the introduction of the netbook into the market; a product that seemed to bring the supermodel "thinner is better" attitude into the forefront of the PC universe. Many predicted that the netbook would experience explosive growth and even perhaps dethrone the traditional PC, but netbook sales have moderated. The iPad may be siphoning off sales from the netbook market, but the argument can also be made that netbooks were simply a "model update" that merely shrank an existing form factor without offering any innovation.

True to Apple's form, the iPad has revolutionized mobile computing. The uptake has been swift: in 2009 DTC estimates that 14% of the global PC market was made up of non-traditional mobile PC devices growing to over 20% in 2011 with impressive growth forecasted for at least the next five years, but likely beyond.

Because tablets aren't just an upgrade from the previous year's model, and the form factor refigures the physical makeup of the device, there is already an alarming impact on some businesses that are traditional suppliers in the PC market. Not only are optical disc drives omitted from the iPad, there are no direct connections for aftermarket DVD or BD drives, or any other USB-connected devices. DTC estimates that aftermarket drive shipments will drop significantly between 2010 and 2016 with over 40 million units shipping in 2010 and under 30 million in 2016. USB PC digtal TV tuner shipments are also continuously declining although not as drastically. DTC expects just over 9 million units to ship in 2012 and 8 million units to ship in 2016. Full-featured and power-dependent application programs are being replaced by pared-down apps. And a push toward less on-board storage in exchange for remote content access will have an impact on storage suppliers.

The weight of that impact will depend upon how much erosion of the traditional PC market will come at the hands of the tablet market. If tablet suppliers can create a demand for something consumers never knew they needed, they may succeed in upsetting the entire traditional PC ecosystem.

Putting a Portable Entertainment Center into the Hands of Gamers

The developments for handheld gaming devices are mirroring the evolution of the traditional console from dedicated gaming device to a miniaturized entertainment center. Handheld device makers, such as Sony and Nintendo, are beginning to step away from packaged media in service to that goal.

Nintendo's DS and DSi were not powerful enough to handle everything that a consumer would choose to run on a portable entertainment center, but the 3DS has surprised everyone with the ability to run 3D videos, stream Netflix content, and silently connect to other nearby 3DSs. Sony's PlayStation Portable (PSP) was close to being a well-rounded entertainment device, and included video content and internet connectivity, but consumers didn't embrace it in this way. Sony then jumped completely onto the downloadable content bandwagon with the PSP go, which didn't go over well with consumers. The PlayStation Vita, which is slated to enter the market in late 2011/early 2012, is a careful hybrid of the two previously mentioned PSP systems. The emphasis is on downloadable content, but physical media is still available.

Nintendo is currently conditioning users to watch video on the 3DS by dropping videos onto the handheld through silent weekly downloads onto the SD card. Old videos are regularly removed and new videos added without any cost or action from the handheld owner. An actual video service where the user could choose and purchase videos is likely around the corner, and the free videos are likely a strategy to get consumers used to watching video on their 3DS so that they'll buy content in the future.

Sony learned a few lessons about being unprepared while moving to an all downloadable content format too fast from the failure of the PSP go and is hoping to release a successful handheld with the PS Vita. Physical media is still present in the Vita, but only games and only on a new proprietary format. Downloads are highly encouraged, and required for any playback of video content.

With an estimated 34 million paid videos having been downloaded and/or streamed online in 2010, and a large percentage of those being watched on game consoles, it's no wonder that these handheld makers want to encourage this consumption. Consumers have made it known that they want to view their paid videos wherever and whenever they choose, and a handheld gaming device fits perfectly into that equation. Now that consumers have accepted game consoles as home entertainment centers in addition to gaming machines, the push toward gaming handhelds to function as "entertainment everywhere/anytime" territory is a natural evolution. The game device suppliers are counting on the 3DS and PS Vita to fulfill that role. Timing is everything, though. Smartphones and their tablet cousins may have already satisfied that demand.

"Consumers have made it known that they want to view their paid videos wherever and whenever they choose, and a handheld gaming device fits perfectly into that equation."

MISSING REVENUE?

Have you suspected that you may be leaving revenue on the table when evaluating how to use your intellectual property in the emerging-technologies markets? It's important to understand the market potential of your IP and once you've designed a licensing program, you want to make sure that you know who is using your IP and that they are accurately reporting sales. Such critical issues deserve tailored market-research expertise concentrated in quantifying technology use and potential revenue. DTC's more than 10 years of experience in helping companies manage their IP has resulted in the foundation of solid market-forecast models that account for both products and services that use very specific and sometimes obscure

technology. DTC's intellectual-property services are put to work in a number of varied situations. Our clients have employed our expertise: to forecast potential revenues for technology IP they own; conduct due diligence for IP acquisitions; identify companies using their technology; to apply our critical technology market and licensing knowledge to help in developing sound licensing terms.

For more information about DTC's technology IP services and client case studies, please contact Myra Moore at 214-915-0930, or myra@dtcreports.com.

DOMESTIC CHINESE LCD DTV QUARTERLY TRACKING SERVICE

January 2011- December 2011 US | **\$20,000**

The Chinese digital TV market is one of the most important and fastest growing markets in the world. DTC, in a joint project with China-based RedTech Advisors, now offers a LCD DTV quarterly tracking service that delivers difficult-to-obtain reliable data and creates a roadmap for the domestic Chinese TV market and its primary players.

Each report includes:

- Current and cumulative quarterly shipment estimates for LCD DTVs shipped into the Chinese market broken down by:
 - Screen size by top brands
 - Market share by top brands (including video compression technology and chip supplier by top brands)
 - Top brands by manufacturer (where available)
- Identification of 2nd and 3rd tier brands
- Concise analysis on the market, industry players and trends for each quarter.
- Mapping of brand/OEM/ODM relationships (where available)

To order the service, or for more information, please contact Myra Moore at 214.915.0930 or myra@dtcreports.com.

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 contact us at the information below.

PUBLISHER Myra Moore,

President

Digital Tech Consulting

214.915.0930 214.915.0931 fax dtcreports.com

CONTRIBUTING ANALYSTS Shelby Cunningham

Maya Jasmin Greg Scoblete Jing Sui



918 DRAGON STREET DALLAS, TEXAS 75207