

Capital Mergers & Acquisitions, LLC (CMA Group)

Winners and Losers in the Apple Ecosystem - Applications, Accessories and Appliances.

Mobile applications and accessories will continue to create big winners as the acceleration of mobile device software utility and functionality continues to evolve at a blistering pace. Traditional consumer electronic appliances, particularly "media" appliances like handheld games, GPS, video and MP3 players remain at significant risk unless they quickly evolve. While outside the scope of this report - rapid adoption of Google's Android platform will be the key to success for many "dumb", single function appliances, creating a vast set of multi-device opportunities for Android developers and chipset manufacturers.

Summary

Apple is chipping away at the market share of consumer electronic "appliances" (devices that perform a single function such as a GPS unit, a TV, a digital camera, or an MP3 player) through the development of innovative functionality that enhances their iPhone and iPad. Apple's uncanny ability to create a stable unified hardware and software computer experience presents significant opportunities in the mid-sized device and hand held realms. Appliances, like GPS devices, were often created to perform a single function in order to provide a reliable user experience. Apple's ability to utilize a shrunk down computer (iPad, iPhone, iPod) to provide a reliable customer experience across multiple applications presents a formidable challenge to consumer electronic appliance manufacturers. When was the last time that you rushed to the store to buy that, once ubiquitous "appliance", the almighty calculator? Without the "utility" presented by multiple appliances in one device (i.e. iPhone and iPad), appliance manufacturers need to rethink strategy fast.

Mobile applications and accessories allow the iPhone and the iPad to operate as a gaming platform, a business tool, a book/newspaper, a video editing platform, a video and music media console, a remote control, and many other appliances in addition to being a mobile communications device.

Big industry shifts occur when innovators create radical change with chipset driven, utility improvements. We at CMA Group foresee the Apple ecosystem winners being: 1) Applications that provide appliance-based functions (e.g. GPS, games, cameras etc. - imagine those enhanced with value-added functionality like social commentary or predictive intelligence (at 5pm there is so much traffic on Sunset Boulevard that my GPS tells me to go another route) and 2) Accessories that support the increased functionality of the iPhone and iPad such as interesting battery and power form factors, cases with electronic functionality (please let me know my pulse rate iPhone), and interactive toys. Our friends at SAP Ventures, Intel Capital and Eden Ventures are investing in things that will bring more intelligence to the more ubiquitous appliances.

We project the losers to be certain consumer electronics appliances that provide a single function, particularly graphics and media oriented handheld devices. Forrester estimates, that up to 88% of consumers carry around a mobile phone every day, primarily due to the convenience of having a device that performs many functions that can fit in one's pocket. If consumer electronic appliances do not adopt multi-functional capabilities, they are likely to become obsolete.

Sector: Mobile Devices

Winners

Mobile Applications

Mobile app downloads are projected to increase from 7 billion in 2009 to 50 billion by 2012.

- **Games.** Leading developers include: Zynga, Atari, Electronic Arts, SEGA, and Vivendi. Future games can take advantage of the high-resolution screen and new internal gyroscope in the iPhone 4, creating a much more engaging experience, but the real growth driver will be features that drive a more "connected" or "social" gaming experience. Imagine the possibilities with iPhone's Face Time. Forget smirking at your cousin 3,000 miles away while you beat him at mobile Chess. Imagine how immersed you can become in a virtual world with your likeness beamed into it. How about games that allow facial expression to control or influence characters. Electronic Arts must have realized this when it paid up to \$400 million dollars for Accel portfolio company, Playfish, in late 2009.
- **Entertainment.** Leading developers include: Pandora, Slide and Hulu. Entertainment developers may take advantage of the high-resolution screens of the iPad and iPhone 4, the video recording capabilities, and the forward-facing camera. We are seeing and continue to expect mobile, social interaction to be a key component of the entertainment market.
- **Productivity.** Leading developers include: MobiTech, infoSpider, Sonico GmbH, and LogMeIn. Productivity applications perform a wide range of functions including organization, office tool, management, financial and unique space shifting functions. LogMeIn, allows mobile users to remotely access their computer, and work on files from their mobile device. Handy when you promise your wife or husband that you'll leave work at the office on your next vacation, but you just can't stay away from work!
- **News.** Leading applications include applications developed by the old guard: CNN, Dow Jones & Co., and ESPN and the new guard: Huffington Post, Technorati, Digg and Newsvine. Vendors continue to seek compelling ad monetization platforms. We also expect a generation of news readers that are capable of performing intelligent actions based on data units like location and news data (news alerts are so "yesterday").

Mobile Device Accessories

According to NPD group, in 2009 consumers spent \$8.4 billion on mobile phone accessories, or, on average, \$60 per consumer. With projected sales of 7 million iPads and 42 million iPhone 4s in 2010, the market size for Apple accessories could exceed \$2.9 billion. According to Forrester, the accessories that are projected to succeed with upgraded mobile devices are:

- **High-efficiency chipsets enhance video.** These aren't quite accessories, but we have to talk about them. With mobile devices projecting high-definition (HD) video on a limited power source, chip makers must maximize output and minimize battery usage. The Apple A4 chip on the iPad and iPhone 4 supports 720p video while providing an impressive battery life. Other chips that are built to handle HD video with minimal power usage are NVIDIA's Tegra 2 and Qualcomm's Snapdragon. Recently, Intel announced that it is beginning production for tablet machines. Forrester estimates that one in every five PCs sold will be a tablet by 2015; creating a significant market opportunity for chip makers. We are also paying close attention to CE ASIC manufacturers to see how they anticipate and respond to big market shifts.
- **Batteries And Power Devices.** Leading developers include: Griffin, Belkin, Kensington, Gear 4 and Mophie. Mobile power solutions to maintain the battery are an important accessory.
- **Carrying Cases and Protectors.** Leading developers include: Griffin, Gear 4, Sena, and Incase. Carrying case and protector manufacturers will more than likely benefit from the redesigned body style of the iPhone 4 and the new iPad. These manufacturers need to evolve as well - the chipset will invade carrying cases bringing unique and enhanced functionality to devices. A "dumb" protector kit may prove to have an unacceptably low level of consumer utility in a chipset driven world.
- **Input Devices.** Leading consumer retail developers currently include Griffin, Belkin, and Monster. However, we do expect to see manufacturers develop a new generation of compelling input "appliances" such as health care appliances that are used to monitor medical conditions. The utility of the iPhone's hardware functions will also allow it to be used as an input device itself (unique joysticks, keyboards etc.) Accessories that enable touch and voice interactions are also expected to be significant. Apple's iPad, demonstrates that touch can be a viable mode for interacting with a device. Don't be mistaken as a little crazy when you are barking voice instructions to your device using Nuance Communications' Dragon software!
- **Output Devices.** Leading consumer retail developers include: Optoma, V-MODA, Schosche, Altec Lansing, and Bose. Quality and size will continue to improve as customers demand better service in more portable form factors. Look for better and smaller projectors, amplifiers, speakers and similar devices.

- **Interactive Toys.** We are witnessing the creation of a new series of physical toys with RFID, ASIC and other chipsets that allow physical interaction with iPhone games and applications. While still nascent, we expect this to be a significant market opportunity for toy developers.

Losers

Consumer Electronic Appliances

The common theme across the universe of companies that are threatened by Apple's quest for innovation, is that they are largely consumer electronic "appliances." Apple devices are projected to have a 24% market share in mobile gaming devices by 2014, according to DFC Intelligence, while Sony's (Playstation Portable) market share is expected to decrease to 11%. Fortune estimates (no brainer!) that the iPad is partially responsible for the slowed growth of netbook sales, which decreased to -13% year-over-year in the month of April, from +45% in the first quarter of 2010. Tablet sales are expected to exceed netbook sales by 2012. According to Forrester Research, consumer electronic appliances that are expected to lose market share to devices such as the iPhone and iPad are:

- **Handheld games consoles.** Apple changed the game with its iPhone and iPod touch advertising in late 2008, on the back of its new Apple App Store. Leading game publishers and brands like Atari, Electronic Arts, SEGA, and Vivendi have demonstrated the success of Apple's launch. As with everything Apple does, other mobile players will look, learn, and copy. Apple does not represent the end of the competition with dedicated consoles, but just the end of the first phase of the mobile onslaught that began with the original N-Gage.
- **Video cameras.** The video camera, despite having a better lens, competes directly with the increasing quality of mobile phones' cameras that consumers carry around with them all of the time. Mobile phones such as the iPhone 4 or the HTC EVO 4g are able to record video in 720p. Canon and Sony will need to consider chipset "functionality" strategy options as a supplement to their lens quality strategies.
- **Satellite and personal GPS navigation.** Apple gains an advantage over Satnav/personal GPS devices in many ways. Mobile handsets can integrate location with other services, such as restaurant finding or location-based photo sharing on Flickr.
- **MP3 and video media players.** Forrester expects Apple to shift to a portfolio of iPhones at different prices, either this year or next, following the precedent set by the iPod. This will increase competition with the standalone market. It's already pretty fierce today due to Sony Ericsson's Walkman phone range and Nokia's multimedia phones. Both high- and low-end portable media players will come under competitive pressure from smartphones.
- **Reading Devices.** Devices such as Amazon's Kindle and Barnes & Noble's Nook have been undercut by applications that perform reading functions on the iPad and iPhone. Barnes & Noble reports more than 1 million downloads of its own eReading application on iPhones.

And Television.....

With the success of the Apple TV, a device that syncs media files between Apple products and a television, Apple is expected to develop a proprietary TV set. Not only would this allow for seamless synchronization between Apple devices, but by leveraging its content library, Apple could also provide users access to a deep list of media for a flat monthly fee. We know that Apple is paying attention to Google. You may have noticed that GoogleTV has been announced with some of the biggest TV manufacturers in the world. It's a great time to be a consumer!

And The Almighty Set Top Box.....

Cisco and Motorola will have to embrace the almighty Android!

Selected Companies And Products Listed In This Report

Accel Partners
Altec Lansing
Apple
Atari
Barnes & Noble
Belkin
Belkin

Bluebear
Bose
Canon
Cisco
CNN
Dare Digital
Dow Jones & Co.
Electronic Arts
ESPN
Gear 4
Griffin
Hulu
Incase
infoSpider
Intel
Intel Capital
Kensington
LogMeIn
Monster Cable
Mophie
Nuance Communications
NVIDIA
Optoma
Pandora
Qualcomm
SAP Capital
Schosche
SEGA
Sena
Sonico

Capital Mergers And Acquisitions, LLC

About CMA Group

CMA Group is an investment banking firm with a principal focus on mergers, acquisitions and private equity. More information on CMA Group can be obtained at www.capitalmergers.com.