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BDO TECH

WHERE DO SOFTWARE COMPANIES STAND IN AN INTEGRATED WORLD?

By Hank Galligan, BDO USA

This fall, iTunes Radio, a new Internet radio service, shipped out to millions of iPhone and iPad owners. The new software, which comes pre-installed on iOS 7, has already enjoyed noteworthy publicity attracting more than 11 million unique listeners after just five days on the market. While iTunes Radio is not the first or, some may argue, best Internet radio software on the market, its integrated structure could be the key to its success.

As Larry Ellison, CEO of Oracle, noted at an Oracle OpenWorld conference in August 2013, "You have to be in the hardware business and the software business to get the best possible system." Oracle is not the only company looking at the hardware-software strategy.

Google has shifted to a more hardware-centric model with Android, Microsoft has partnered with Nokia, and Samsung held its first-ever developer conference this past summer.

In addition to hardware convergence, software companies are also taking the route of web-based software integration. Software as a service (SaaS) has a significant impact on the stand-alone software business as a more accepted delivery model for many software applications, including office and messaging software, management software, invoicing and accounting among others.

Amidst the trend for tight integration and SaaS delivery, what are the risks for stand-

▶**DID YOU KNOW...**

According to market research firm *Deltek*, IT outsourcing, including cloud services, is projected to see modest growth – from $26 billion in fiscal year (FY) 2013 to $26.4 billion in 2018.

T-Mobile expects to add a total of 1.6 million to 1.8 million postpaid customers this year, cites *The Wall Street Journal*.

Small to midsized private software companies experienced a median 30 percent revenue growth rate from 2011 to 2012, while private software-as-a-service (SaaS) companies achieved an even higher growth rate of 35.1 percent, according to *OPEXEngine and the Software & Information Industry Association*.

According to *Gartner*, the growth of 3-D printers is projected to be 75 percent in the coming year, and 200 percent in 2015.

On Facebook's latest earnings call, officials noted a decrease in daily users, specifically among younger teens, as the social media site may be feeling the heat from alternative sites such as Tumblr and Snapchat that skew toward a younger demographic according to *ReadWriteWeb*.

According to *The Wall Street Journal,* Nokia and Samsung agreed to extend a broad licensing deal through 2018.

WHERE DO SOFTWARE COMPANIES STAND

alone software companies and the software industry, and where is this trend headed?

▶ INCREASED COMPETITION

As evidenced by Adobe's recent announcement that it is discontinuing its popular Creative Suite software products in favor of its cloud-based creative cloud subscription service, competition between stand-alone software and integrated models (in this case SaaS) is increasing. While stand-alone software companies traditionally have owned enterprise software, including order fulfillment, supply chain, manufacturing and financial operations-related software, SaaS companies are becoming increasingly sophisticated and over time are likely to target more of these industries.

In the entertainment arena, an epic battle is playing out between personalized Internet radio software companies. While iTunes Radio's launch certainly made waves, Pandora, Spotify and Last.fm are stepping up their game to stay ahead of the competition. For Pandora, this means owning the tablet space, as evidenced by the recent rollout of a new version of its software specifically tailored for Android tablets. Because Pandora is not tied to a particular hardware device, it has the opportunity to acquire users over multiple platforms. However, it is now competing with solutions that are integrated with hardware, which may put the service at a competitive disadvantage.

▶ INTELLECTUAL PROPERTY AND SECURITY RISKS

As more software companies choose to integrate their products with other companies' hardware in order to compete in a more integrated market, software companies are also taking proactive measures to protect their intellectual property, lest they give away "the keys to the kingdom."

Microsoft is one example of a company that was previously known for its stand-alone software products, but now is becoming more eager to integrate hardware into its product offerings. According to *Geek.com,* Microsoft is gathering patents for a computer in the shape of a pair of glasses with a camera built

into the middle of the frame. This shows how software companies are now creating and protecting their own set of hardware products to compete in the market.

Not only should software companies make sure they protect their investment in engineering, programming and design, they also need to ensure any licensing deals take into account potential inventions and patents affiliated with them. They also need to ensure they are protected in the event of illegal sharing, counterfeit production or patent infringement.

Dropbox and Samsung's mobile partnership certainly embodies a successful licensing model. According to Lars Fjeldsoe-Nielsen, Head of Mobile at Dropbox, "The big challenge for us was growth – there are so many cloud services out there, the user is spoiled for choice. That's why we worked with guys like Samsung – Samsung is differentiating itself through amazing hardware and they want to be the biggest. For Dropbox the deal gave us instant distribution, while Samsung got a great service." Through their partnership, Dropbox and Samsung have seen increased sales and both companies can stay ahead of their competitors in the cloud-based storage and smartphone markets.

▶ RISKS TO INNOVATION

While there is no doubt that Apple's achievement in terms of integrating software and hardware led other companies to attempt to emulate its model, its success has proven very challenging to replicate. Hardware and software development require different skill sets, and many firms face challenges when managing disparate business units.

As software companies push to integrate with hardware, innovation may be sidelined. According to a recent article published by Wharton Business School's *Knowledge@ Wharton*, vertical integration, which was a successful strategy for Apple, is desirable for some products, but multiple models are necessary in the technology industry to ensure innovation and novelty are not lost. According to Wharton experts, products that are commoditized such as PCs and semiconductors do not typically benefit from vertical integration, and are reverting

to becoming more specialized. Alternatively, products that are differentiated, such as mobile computing, smartphones and tablets, benefit most from vertical integration.

One company that successfully managed this integration, Nest Labs, is led by Tony Fadell, one of the creators of the iPod and iPhone. Nest Labs, which makes thermostats for the "connected home" is a unique integration of software and hardware that allows a thermostat to adjust a home's temperature automatically based on user behavior. In October 2013, Nest announced the launch of Nest Protect, a smoke and carbon monoxide protector.

▶ WHERE ARE WE HEADING?

While stand-alone software companies are evolving to an integrated world, where are we in the transition? In response to Adobe's decision to shift from packaged software to a cloud subscription service, Microsoft published a blog post declaring that while the company sees this transition as inevitable, it will continue to take place over time, likely within a decade. In the meantime they are staying committed to offering software sold as a package – in addition to subscription services.

The bottom line, however, is that technology is shifting, and traditional software companies need to adjust to remain relevant. They should be considering a broadened platform, be it partnering with a hardware device or connecting to the cloud, while simultaneously protecting their intellectual property and remaining innovative. Above all, software companies should be focused on finding easy and intuitive solutions for their customers to use their product. It's a competitive environment, but adapting will afford software companies the best chance to compete and find success in the new paradigms.

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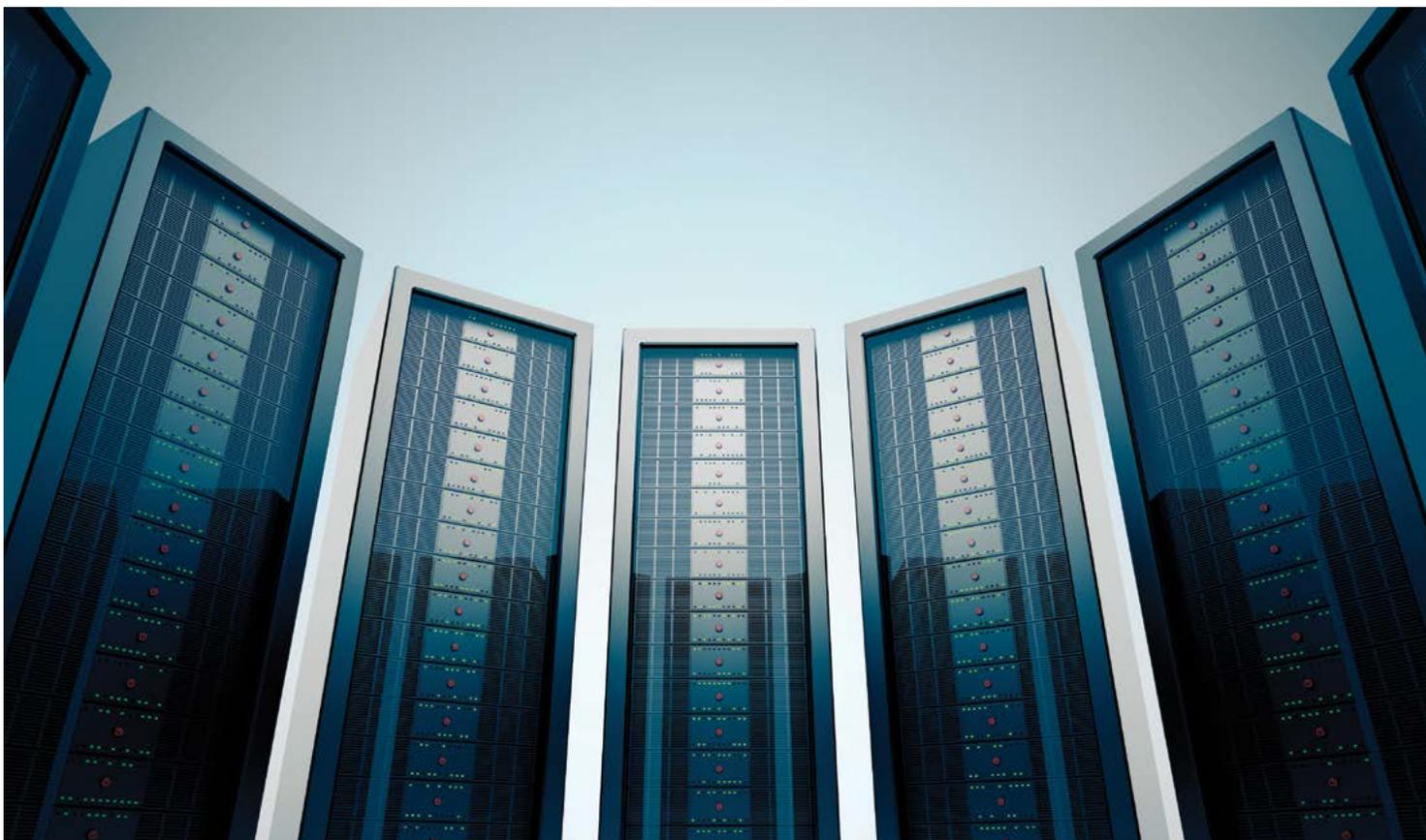
COMPUTER FORENSICS IN THE CLOUD: CONSIDERATIONS FOR CLOUD SERVICE PROVIDERS

By Michael Barba, BDO Consulting

Cloud computing is one of the hottest topics in information technology (IT) today, with more and more organizations turning to infrastructure-as-a-service and software-as-a-service providers to streamline data storage, access and retrieval processes, and reduce overall IT costs.

And while this paradigm shift toward the cloud makes it easy for companies and their employees to retrieve, restore and access documents and other forms of electronically stored information (ESI)—it also means that organizations now need to be able to protect ESI both in traditional computing, network and storage devices, as well as in the cloud environment. This dynamic becomes particularly acute when an organization is responding to a data breach or is involved in litigation. In fact,

the cloud environment adds a range of legal and technical complexities to collecting and analyzing forensic evidence.

What does this mean for service providers? As the gatekeepers of large volumes of organizational data, cloud service providers (CSPs) need to be prepared to work with consultants and legal teams seeking access to their stored information. This starts with an understanding of how the investigation will be conducted.

▶ DATA COLLECTION AND FORENSIC PROCESS

Forensic practitioners seeking to locate and review a company's crucial data will need to investigate all locations in which that data would be stored. The fact that cloud environments are an extension of an organization's infrastructure makes them a critical component in this process. Forensic professionals can make use of various processes to retrieve and collect information from CSPs, among them:

COMPUTER FORENSICS IN THE CLOUD

- **Direct Physical Access to the Data** – Allows a forensic practitioner access to the facility in which the data is housed.

- **Remote/Direct Access to the Data** – Allows a forensic practitioner to work directly with an IT professional within the CSP organization.

- **Remote Forensic Access to the Data** – Allows for a forensic practitioner to work directly from the organization's facility or even from a location remote from the organization.

All three methods for gaining access to the data have benefits and drawbacks that should be considered carefully. Direct physical access to the data tends to be the method preferred most by forensic practitioners because they are able to connect their own hardware and software tools of choice to the physical servers that are hosting the data. This type of access, however, may cause privacy concerns for most software providers given that data from multiple organizations may be stored on the same server. Conversely, remote access to the data gives CSPs more control over their content and how it is collected but is often considered a weak investigative method for the forensics team, which needs to prove that the full spectrum of data was covered in its research.

▶ PREPARING FOR AN INVESTIGATION

There must be a balance in the relationship between the CSP, its client and the forensic team. Before blocking certain types of access, software providers can work with the practitioners to determine the types of tools that will be used and how the data will be extracted, ensuring that expectations are aligned.

It's also important to confirm that the examination is contained and that data from the organization being investigated is isolated from the full range of data available on the server. Any costs involved and who is paying should also be clearly communicated at the outset to avoid discrepancies over fees that may arise during an investigation.

PErspective in Software

THE SOFTWARE INDUSTRY IS POISED TO ATTRACT SUBSTANTIAL ATTENTION FROM TECHNOLOGY INVESTORS.

With the recent leap in popularity of big data, mobile computing and software-as-a-service (SaaS), to name a few, alongside new opportunities presented by cloud-based technologies, software is garnering greater investor and private equity interest. In fact, according to data from Thomson Reuters, **in 2012 software and Internet transactions accounted for 76 percent of the total private equity deal value in the technology industry** – a marked increase from 2011 when deal value was evenly distributed across technology services.

Much of this shift can be attributed to the evolving nature of the technology industry: the push to integrate mobile and social into company offerings, the need for analytics and big data capabilities at companies large and small, the expectation that services and supply chain companies, which were traditionally hardware companies, will be integrated with software.

With such growing demands being placed on the technology industry, software innovation is key. Private equity investment provides a great opportunity for company turnarounds, providing the capital needed to expand offerings, and to integrate multiple technologies under one roof.

On top of it all, the Twitter IPO's early success has placed the technology industry even more squarely in the spotlight, and the investor community is viewing the industry with greater appreciation and excitement. While its early days yet to determine the true effects, one thing is clear: the increasing interest in the software space is only going to continue on its upward trajectory.

PErspective in Software is a feature examining the role of private equity in the software industry.

To ensure client organizations are able to quickly identify and locate the data they need when it comes to time-sensitive matters, CSPs must anticipate the potential for litigation and clearly articulate how much access will be provided in the initial service-level agreements with client organization. Doing so will not only ensure that the end user is aware of the policies in place during a potential catastrophic event such as a data breach or litigation, but will also help ease the business impact of the subsequent forensic investigation. Finally, having clearly established internal processes for allowing access to data in advance protects CSPs from potential litigation risks of their own, which can result from non-responsive information being shared.

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COMING SOON

Final Standards on Revenue Recognition

The joint project between the Federal Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) on revenue recognition is slated to close this year, with final standards due out this quarter, according to the FASB's technical plan. The new standards will take effect in January 2017 for public companies and January 2018 for private companies, and BDO is poised to help its software and technology industry clients address what the changes will mean for them.

In addition to drawing on the firm's decades of experience navigating complex revenue recognition issues, nine BDO leaders will be contributing to industry-focused task forces appointed by the AICPA to respond with a guide that will help companies apply the new standards to industry-specific transactions. Wendy Kim, an assurance director in the Software practice will serve on the Software task force, and Ken Gee, an assurance partner in the Technology & Life Sciences practice will serve on the steering committee.

Wendy, Ken and all our professionals stand ready to respond to the new standards with timely guidance, ongoing education and an "on-the-ground" perspective to help your company prepare for compliance. Please feel free to contact us with any questions or concerns as the new standards are released.

MARK YOUR CALENDAR…

The following is a list of upcoming conferences and seminars from the leading technology associations and business bureaus:

DECEMBER 2013

December 8-11
Pacific Rim Summit on Industrial Biotechnology and Bioenergy
Westin Gaslamp Quarter
San Diego, Calif.

December 11-13
Dell World 2013
Austin Convention Center
Austin, Texas

JANUARY 2014

January 7-10
International CES
Las Vegas Convention and World Trade Center & The Venetian
Las Vegas, Nev.

January 27-30
Healthcare IQ's Software Design for Medical Devices Europe
Location: TBD
Munich, Germany

FEBRUARY 2014

February 10-12
Arctic Technology Conference
George R. Brown Convention Center
Houston, Texas

February 24-27
GSMA's Mobile World Congress 2014
Fira Gran Via
Barcelona, Spain

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