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more dramatic than the rise of the Internet itself.

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The Web is old news by now.

"Why do you say that?" you ask.

The answer is simple. It is now called "*Web 1.0.*"

"Who calls it that?" you might query.

Simple answer. The new generation of digital natives and the industry that supports them. The new Web is here, and it is called Web 2.0. What is new and what does it mean to the world (and accountants)? The answer is that this transformation will be even more dramatic than the rise of the Internet itself. Web 2.0 is a paradigm flip, in which the role of applications and the information that supports them exchange hierarchical roles. The information drives the new world; the applications serve as "plumbing." Software becomes a service, and social networks, communities and users act to shape the work that is being done and how that work is done.

This is bold stuff, so let's step back a moment to define the landscape of this new world. It all started when early Web Technology visionaries like Tim O'Reilly began to talk about the rise of the Web as a platform that could replace the computer as the place where applications ran and processed data. If the "network is the computer," as proposed in 1984 by one of Sun's founders (John Gage), then the new applications would run above the level of the computer itself. This would lead to an entirely new computing architecture and an entirely new user role and set of behaviors.

Information processing and the computing power to do the processing moves to the "Cloud," a virtual realm on the World Wide Web where things happen based on real-time communication, messaging and event handling. Virtual machines support a

new concept known as Software as a Service (SaaS), which is as different from

for us to *not* be overwhelmed by the sheer volumes of data will be an evermore efficient way of storing, indexing, organizing and retrieving it. Companies like Google and Yahoo! will maintain their value by these abilities more than the asset values of the information itself. As the Internet grows in complexity, it becomes "smarter" in that it enables us to use more and more complex information in simpler ways.

While we are not yet at the point where SkyNet will build Terminators and destroy mankind in a fit of technological logic-based fury, we are on the edge of having the technology change everything that we do with it. Look around. We have Facebook, Second Life, Blogs, Podcasts, Mashups and the like. Social Networking and Communities and Instant Messaging are changing the way we work and play.

Several months ago, my 16 year-old son's text messaging bill on his cell phone went over $200. He had generated thousands of text messages (this was before unlimited text plans). We immediately took texting off of his phone as punishment for the abuse. A week later, he announced that he and his girlfriend had broken up. When I asked what happened, he said, "You happened. When you took away texting, I was no longer able to communicate with her!" Whatever happened to "talking" to a girl?

The point is that there is a behavioral shift. We text, Google and GPS search our way in a world that is part real and part virtual. We demand information and response right now, wherever we are. I emphasize the word *demand*, because this is the level of user expectation from the technology and the suppliers of that technology.

So Web 2.0 is the new landscape upon which information and processing will be delivered in real-time to individuals based upon what they need when and where they want it. This is not how traditional computer applications were designed. This is not an upgrade, but rather a re-architecturing of the way in which technology is used.

What does this mean for vendors of software? First and foremost is the realization

cloud. You install nothing on your device. Your identity drives access, rights and privileges, and billing. You work, save your work, send e-mails, and import images and spreadsheets. And you are doing it "out there" instead of on your desktop or laptop.

Vendors must re-engineer all of their existing applications to become loosely coupled, highly available, scalable and secure services. Forget controlling the user interface and workflow. The products must respond to many different types of demands for use on many different types of platforms. This is SaaS at its heart. Applications are replaced by assemblies of Lego-like Web Services that are stringed together in real-time based upon what the user needs, who that user is, where that user is and when that user is.

It's quite a different worldview. Yet a number of vendors have arrived on the beach on the other side of this chasm. SalesForce not only has become a leading vendor in the SaaS space, selling sophisticated CRM and business applications, but has even begun to offer a new option call Platform as a Service (PaaS) as an option to other software builders and users that want to incorporate SalesForce Legos into their own SaaS offerings.

SAP, IBM, Oracle and Microsoft are all making progress toward this Web 2.0 paradigm. What is perhaps the biggest issue for traditional software publishers is how to charge for services rather than applications. What would be a fair way for a user to pay for Microsoft Office as a Service? Should we buy a license for personal use tied to our identity object or should we pay for it as a utility, something like ten cents an hour connect time and ten cents per gigabyte of storage per month? Such models already exist in Web 2.0 offerings like the Amazon Extended Compute Cloud (EC2), in which users pay ten cents per CPU hour to "rent" a server somewhere out on the Amazon cloud. Amazon also offers a Simple Storage System (S3) with a 15 cent per

gigabyte per month fee. Computing will become a commodity utility and software

balance sheet and 2007 corporate return" and have the documents returned as links or PDFs for viewing. The client would want to do this without calling the accountant and waiting for a response or for the delivery of the documents.

This scenario sends shock waves through both the accounting world and the software vendors that support that world. Imagine what kind of technology would be required to support such demands. First, all of the client's information would need to be stored on the Internet in a secure and available fashion. Secondly, the web-based management of this information would need to index and organize all kinds of documents and files in such a way so as to be able to respond to simple "Google-like" searches. Things like tax returns, financial statements, checks, banking records, scanned receipts, e-mails, letters and all of the rest of the documents that go into the client file would need to be stored in the "Cloud." Regulatory and security concerns would still need to be maintained. The balance between security and shareabilty would need to be vigilantly managed. The client would be able to add information himself, either by typing notes directly on to "stickies" on the documents or by e-mail or by scanning. And all of this would need to be done at little or no cost to the client (because his expectation is that web searches are free).

The software vendors will need to recast all of their offerings as SaaS products. Tax and write-up will be first, with audits and engagement management and other field-based functions following quickly. The pieces on the storage and information interchange side are already in place. We have XML and XBRL as a way to move financial and banking data around from application to application. We have Service Oriented Architectures supported by Sun, IBM, Microsoft and Oracle that will enable the next generation of tax and accounting software to enter this brave new "virtual" computing world. Security schemes configured directly to this cloud storage of confidential and sensitive information are already on the scene.

Over the past few years, the accounting market has welcomed the advent of real web-

In closing, I would like to offer an almost "Twilight Zone" observation. There is a Web 3.0 coming, and some of the pieces are already here. Look at the virtual worlds like Second Life, and you will see the future of both business and social interaction. Imagine a client doing a personal tax return in "Third Life' 10 years from now. He logs in, picks up his avatar (a graphical representation of himself in the virtual world) and strolls down the street to his accountant's virtual office. He goes in, sits down and has an interview with the accountant's avatar. He presents his documents electronically by demanding them in the virtual world from his employer, banks, brokers and others. The accountant's software reads the documents, validates and verifies, decides what additional documents or questions need to be answered, and prepares the return. The client signs the return, e-Files it, has his refund routed to his bank or authorizes a direct payment to the IRS, gets up, leaves the office, and wanders down the virtual street to order a pizza.

By the way, the pizza will still be delivered to him in the real world. The technology to eat the pizza in cyberspace will probably not arrive until Web 8.0!

Welcome to the future.

Technology