Interview

SaaS 2.0

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Abstract Software-as-a-service refers to software provided and used in a utility computing context where the services provider delivers the functionality of the application or utility infrastructure software over a network, through a services interface. In this interview with Bill McNee, CEO of Saugatech, Michael Moon gets the scoop on his concept of SaaS 2.0.
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Michael Moon: If everyone would make his or her formal introductions; why don't we start with you, Bill?

Bill McNee: My name is Bill McNee, I'm the founder and CEO here at Saugatech. The firm is around 7 years old, and we're headquartered in Westport, CT.

Michael Moon: And I'm Michael Moon, the editor-in-chief for the JDAM. Just for context, the Journal of DAM tracks an area by its namesake, DAM, which comprises specialized multimedia databases for rich media material; we generally refrain from using the term "content" to emphasize the fact that DAM usually focuses on managing assets, ie rich media files which someone explicitly designed for re-expression, republishing and subsequent transformation into more fungible formats.

So, Bill, would you spend a few minutes defining SaaS and perhaps compare and contrast SaaS with the traditional market of licensed, on-premises software.

Bill McNee: I'll be happy to do so. Here's our definition of SaaS, which we define in a much broader way than some of the earlier pure-play SaaS vendors have defined it; vendors who have often attempted to define SaaS in too narrowly. SaaS ultimately will become a ubiquitous form of application deployment management, and not all of the attributes of some of the pure-plays should necessarily be applied, so here's our definition:

— Software-as-a-service refers to software provided and used in a utility computing context where the services provider delivers the functionality of the application or utility infrastructure software over a network, through a services interface. Typically this functionality is solved by a subscription model or on a utility pay-as-you-go (PAYG), or per-unit basis. So, some of the pure-plays like to think of this as something that absolutely has to be in the cloud (public internet), and we don't necessarily think that's true. We think that there's going to be a wide range of hybrid implementations, and tight linkages to on-premise software. I think one of the things we very much agree with the pure-plays around SaaS, and actually aren't even a requirement, are multi-tenant data architectures. From a user's perspective, they really don't give a flying hoot. What is important, however, from a vendor's perspective, is to be able to create the appropriate leverage through the implementation of SaaS to a multi-tenant data structure, and that's how the money's

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being made here, and that's how the economies are being brought to bear here, relative to traditional software.

Michael Moon: So one of the functions of SaaS entails bringing a set of business services or functions to a end-user organization at considerably lower cost than deploying software, and the deployment process tends to be much faster?

Bill McNee: We use a model, which we defined in the report we published a year ago, that differentiates between even earlier generations of SaaS — what we refer to as SaaS 1.0. We now see a shift to SaaS 2.0. We've been teased about the use of the 2.0 moniker, more than a year and a half ago, but I think all it was meant to be is a marker to differentiate between what has been going on early in the cycle versus where it will be going. SaaS 1.0 is an environment which, in many ways, is all about cost control. It's about cost-effective software delivery with key attributes being that many of the applications that have been deployed have been stand-alone applications under an 80/20 rule. This 80/20 rule is that 80 per cent of the functionality is good enough, limited configurability, focus on TCO, rapid deployment, as you had mentioned, with the implementation of a multi-tenant data structure. We see that world, and what we refer to as SaaS 1.0, largely coming to an end, while those attributes will continue to be very important.

While it is important always to maintain some level of efficiency and cost-effectiveness; the world of SaaS is moving towards a much broader set of issues — as SaaS becomes more tightly coupled with broader enterprise architecture. And we believe that even as early as late 2005, early 2006, we entered the second wave of SaaS, or SaaS 2.0, what we refer to as integrated business solutions, and a period of more mainstream SaaS adoption. The adoption data that we have from a recent web research programme we conducted with over 250 business and IT executives, is very strong, with distribution across all regions, worldwide as well as customer segments and industries shows just remarkable adoption figures. It's just amazing.

The numbers are just astronomical. We are forecasting that, in particular, the number of companies worldwide that have at least one SaaS solution in place has risen from about 11 per cent to about 26 per cent in the last year. If you include those that are not necessarily fully deployed, but are in prototype implementation or are planning to implement later this year, that number rises to 45 per cent.

Michael Moon: You draw a distinction between what I'll call a point solution — and popular point solutions include Salesforce.com, or say, QuickBase by Intuit versus fuller suites of software which you might get with NetSuite or any of those kind of ERP accounting systems.

Bill McNee: I think that's not quite how we're using the term. We consider a point solution to be a stand-alone implementation of anything. We're not trying to compare that to a more robust core statement of record-oriented application. It's more a question of whether it's stand-alone and not integrated into the rest of the enterprise.

Michael Moon: And you're saying that the data you just cited refers to integrated SaaS solutions?

Bill McNee: That data is for anybody deploying any SaaS application.

Michael Moon: Including point solutions. Ok.

Bill McNee: We are in the very steep part of the adoption curve.

Michael Moon: That gets to an issue that I wanted to spend just a few minutes on, what I'll call deployment issues. In our coMichael Moonunity, DAM, there are a number of SaaS providers, including Getty Images and Corbis to name couple of the larger ones. Users of those systems report to us three things, and I'd like your comments on these issues. One, SaaS applications consist of more functionality than they envision using. They like the idea of headroom, but in terms of the overall set of functionalities, many of SaaS DAM systems have way more functionality than what they need. Two, the users seem to stumble around a lot, saying, "what do we do now" or "what do we do next", "what do we do later", in terms of things to automate or things to bring online. Third, uses struggle with the inherent intangibility of the software and the hybrid intangibility of SaaS software; they have trouble socializing a new way of using a new SaaS DAM system.

Bill McNee: Let's take these one at a time. The first issue, I think that's an interesting

observation; however, I think it's always a question of, what is the customer willing to pay for. I think that the earlier generations of SaaS were more of an 80/20 rule, where 80 per cent was good enough and the focus was around cost control, but I believe that SaaS is firmly moving into a new phase, and it's not about that anymore. The economics for SaaS are so overwhelmingly compelling that rather going from 80/20 to 90/10 to 95/5, the issue moves beyond cost savings, becomes about business value received.

Michael Moon: That's it. How do users unlock the full business value inherent in the promise of SaaS?

Bill McNee: Different customers are going to have different value propositions. In some cases, we are replicating traditional on-premise applications in the clouds (internet), though frankly, I don't see that as the biggest opportunity here. We're creating new applications that have not necessarily been deployed in a traditional, on-premise model — either through a multi-tenant data architecture that allows for greater economics, or through the implementation of new technologies, whether they be mash-up technologies, the deployment of SOA (service-oriented architecture), and greater integration-oriented technologies that have allowed us to do things that we've never been able to do before.

There's a great example of this in the world you are involved with, a company called Prolific Software, headquartered in Portland, Oregon. They are at the intersection of collaboration, content management and mobility. They provide a very unique solution. Corbis is one of their clients. I think Getty Images is also one of their clients. They provide the *ability* to provide customized, one-to-one marketing tools, leveraging rich media technologies. These abilities never could have been implemented in a traditional, on-premise software architecture. It's very exciting. And, it really plays to the strengths of this transition, moving from SaaS 1.0, which is about cost effectiveness — the 80/20 rule; to where SaaS is heading with SaaS 2.0.

In our opinion, it's all about deep and tight integration with on-premise data and processes and workflow, and we're at the very beginning of that. It's got collaboration aspects, and not only inter-company collaboration but intra-company collaboration. So, SaaS 2.0, we've defined as two different waves. SaaS 2.0 wave 2 is mainstream adoption, integration with the core business portfolio, what we refer to as SaaS integration platforms and we have a whole world of SaaS integration platforms, which really, in essence, are emerging platforms which provide critically important integration, application sharing and integration management services. One expression of that is the application exchange world defined by salesforce.com. It is only one of many expressions of that.

We view it, however, more as a platform, rather than as one aspect of a platform, which is the integration capability. We view SaaS, or SaaS Integration Platforms (SIPs), as providing that integration function, but also as providing an application-sharing environment with all of the provisioning capabilities; providing all of the delivery management services required to effectively deliver SaaS applications to the end-user customer. I mean, there are billing issues, charge-back issues, a whole stack of about six different layers for all of the back end functionalities required to effectively manage SaaS.

We also see a major shift from SaaS 1.0, where the focus was around configurability, right? We have a series of templates, we have this 80/20 rule, we can configure applications. And while configurability will not go *away*, we're moving to a much richer environment where in fact the customer, and in particular as SaaS has a very high adoption rate, not only with SMBs but with large enterprises, the large enterprise is going to demand a higher level of customization of the application to really meet their unique business workflows. We've already started to see some of that occurring. We've seen sophisticated customization at the user-interface level. We've seen some interesting and novel ways of customizing at the data-model level through a variety of different implementations of multi-tenant data structures. We've also started to see greater customization at the process layer, though we're just at the very beginning of that. But longer term, when you really talk about why will American Express, or General Motors, or some of these very large companies, ultimately, deploy SaaS. Mostly the big companies, the large enterprises,

multi-billion dollar companies, are using SaaS around the edges, and tying in mission-critical applications that already exist behind the firewall, with very tight process-integration of new stuff in the cloud. But ultimately we do see, in the 2009–2012 time period, an increasingly high percentage of companies going to SaaS-focused deployments of ERP, and human resource management supply-chain, *core systems of record*, under a SaaS architecture. Now, will we see a big, huge, rip and replace? No. But when those systems are ready to be retired, clearly, alternative, SaaS-based applications will emerge, whether they will be from WorkDay, which is Dave Duffield's new gig after he sold PeopleSoft to Oracle. And other companies, an attempt by impact over time to move upmarket. So, ultimately, the winners, we believe, in terms of who is going to be able to succeed in this new world, especially with large enterprise, mission-critical-oriented SaaS deployments, will be those that are able to provide the ability to customize business workflows and integrate them with enterprise business processes. Yesteryear's SaaS 1.0 applications are not architected that way. Ultimately, this is going to get very complex. SaaS as a term will go away. SaaS will just become another part of IT architecture. But we're still in this mainstream adoption phase, we're in a very, very steep curve, we are seeing very high penetration rates, not only in terms of just adopting your first SaaS application, but we're starting to see deeper penetration and radiation within major accounts. (Figure 1)

Michael Moon: Well, Bill, that would also suggest, if this follows typical adoption curves that you and I have seen in probably the last 10–20 years, at some point in this rapid uptake or rapid adoption phase, some of the rats begin running out of the woodpile. What are some of the deployment issues that are now beginning to emerge with larger and more diverse groups, outside of the classic, early adopter mindset? What kind of organizational and management issues are emerging as people are driving SaaS applications deeper into their core processes?

Bill McNee: Well, I think that's a very good question. I would say I haven't really thought deeply about that yet, but number one are requirements to put in place standardized integration APIs. I think that's very important, that we move away from not only integrating islands of automation with unique, one-on-one, not one-off APIs.

Michael Moon: Is that beyond just simply having a middleware strategy?

Bill McNee: Well, this is part of our whole SIP (SaaS Integration Platform)-oriented approach. We ultimately believe that there will be four to five major players emerging. Obviously Salesforce.com is there, we think WebEx will become one of them, we think IBM and Microsoft will play here. There may be an open-source approach through RedHat, where

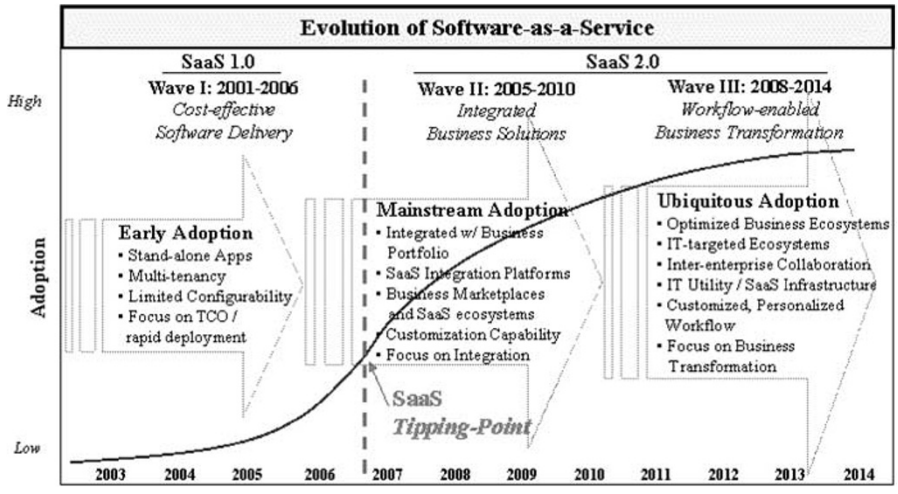

Figure 1: Three waves of SaaS evolution. *Source*: saugatuck technology. The focus of SaaS shifts over time from cost-effective delivery of stand-alone application services (Wave I), to integrated business solutions enabled by web services APIs and ESBs (Wave II), to workflow- and collaboration-enabled business transformation (Wave III)

organizations, large enterprises in particular, will push back. Where today, many SaaS applications are doing one-off integrations of their applications within the context of on-premise data and process, that IT organizations will want to standardize a way of approaching this, so that you'll almost *plug into* the SaaS integration platforms, which will provide a uniform set of integration APIs, back into the enterprise. And they'll be better able to manage that. I think that's one whole set of issues.

I think there's also a whole set of issues around SaaS growing up to become more mission-critical, and issues related to SOAs, I think, will become very important, and we've seen some of the stubbles from Google, over the last week or two, but that's only the tip of the iceberg. We see the ability to deliver mission-critical application workloads, in some ways, almost easier for an external organization to do a better job than internal IT.

Michael Moon: We have found Indian outsourcing firms — Infosys, WiPro, Satyam, Tata — playing a major role in advanced DAM deployments that we now call digital supply-chains for content. These Indian firm all have the highest levels of certification in process methodologies such as CMMI (Capability Maturity-Model Integration), and other disciplines linked the ITIL (IT Infrastructure Library) framework, that include management and statistical quality control frameworks for delivering IT services.

Bill McNee: That's right on.

Michael Moon: So, do you envision that kind of standardization around SIPs (SaaS Integration Platforms), falling in line with broad SOA (Service-oriented Architecture) initiatives and other kinds of more comprehensive IT service management frameworks.

Bill McNee: I would say we're still pretty early in ITIL, and frankly, many of the dominant vendors of traditional software are trying to get their handles around it, as a methodology for selling and positioning traditional systems management.

Michael Moon: I think many of the major software companies have failed; they do not have coherent, integrated service-fulfillment methodology. Instead they have a general framework for delivering technical and professional services, but little or no systematization and closed-loop feedback for on-going improvement to the delivery of technical and professional services (and the reason that the Indian firms continue to beat the pants of all the other System Integrators in traditional and SaaS segments).

Bill McNee: I would say that will, over time, become an important issue. How it gets addressed and rolls out in the three to 5 years from now, I'm not exactly sure.

Michael Moon: We continue to watch with utter fascination firms such Tata, Wipro, Infosys and so on. These firms that have spent the hundreds of millions dollars and countless hours and late nights perfecting the service-delivery processes: structured, documented, systematized processes for the research, specification, deployment, managed and retirement of complex systems and IT infrastructures. I'm curious as to your take on the role of system integration firm in facilitating the rapid deployment of otherwise very robust SaaS systems and platforms.

Bill McNee: I think it's a terrific question, and it really plays to part of our scenario. In many ways, as we've moved from SaaS 1.0 to SaaS 2.0, and SaaS 2.0 will even evolve further, beyond this integration phase to really focus around workflow and collaboration. That's ultimately what this is about. And it's about business transformation. I think that as SaaS evolves to really become a robust platform, not to replicate yesteryear's applications in the cloud. But to come down in terms of delivering a new platform for delivering business services, and part of that is delivering applications in the cloud, part of that is delivering a variety of value-added business capabilities. If that's ultimately what this is about, of which SIPs are a major foundational element — and we've identified five different classes of SIPs. Transaction-oriented SIPs like AppExchange. Collaboration-oriented SIPs like WebEx Connect, which is about to go live in the next month or so. We've seen consumer and business service-oriented exchanges such as Axiom, from American Express powered by Reardon commerce. We've seen initiatives from Lexus-Nexus, powered by Progress software. I think, ultimately, the world is not only going to be pure-play SaaS vendors, who are providing these application-sharing platforms, but big-business

	Wave I: 2001-2006 SaaS 1.0 *Cost-effective* *Software Delivery*	Wave II: 2005-2010 SaaS 2.0 *Integrated* *Business Solutions*	Wave III: 2008-2014 SaaS 2.0 and Beyond *Workflow-enabled* *Business Transformation*
Worldwide Adoption Rates (*)	**Early Adoption** • SMB (Adoption: 0%-9%) • Large Enterprise (Adoption: 0%-14%)	**Mainstream Adoption** • SMB (Adoption: 6%-60%) • Large Enterprise (Adoption: 9%-75%)	**Ubiquitous Adoption** • SMB (Adoption: 42%-80+%) • Large Enterprise (Adoption: 63%-85+%)
Motivation	• Cost and short-term payback • Speed of implementation	• Support distributed workforce • Mission-critical DB-driven applications	• Manage virtual value chain • Enhance internal processes
Key Solutions	• SMB-focused CRM/SFA, HR, F&A—including SMB suites • Email and Web conferencing • LE non-core functions at the "edge"	• Email, Web conferencing • Business Intelligence / Analytics • Procurement & Sourcing • Compliance	• ERP / Supply Chain suites • Vertical & Horizontal ecosystems • Security-as-a-Service • Core back / front-office apps (F&A, HR) - both SMB & LE
Infrastructure	• Multi-tenancy databases • Limited configuration • Browser-accessible, net-native	• SaaS Integration Platforms (SIPs) • Customization • Composite SaaS applications	• SIPs evolve as cloud-based computing platforms • Distributed, adaptive workflow platforms
Technologies	• Standalone application services • Extract & populate integration	• Web Services integration APIs • Web 2.0 mashups	• Robust security services • Collaboration & mobility SIPs
Drivers	• Reduce operating costs • Speed of deployment	• Simplify software management • Supplement on-premise software	• Internal-external collaboration • Data security
Inhibitors	• Data privacy & security	• Data privacy & security	• Vendor lock-in
Buying Attributes	• Price / performance of a "good enough" feature set • Configuration, not customization	• Integration with existing business workflow • UI and process customization	• Inter-enterprise collaboration • Workflow customization • Brand over function
Pricing & Licensing	• Transaction-based • User-based • Consumption-based	• User-based (approx. 70%) • Company size (approx. 10%) • Transaction-based (approx. 10%-15%)	• User- or enterprise-based • Value-based metrics • Published SLAs
Key Challenges	• Application / data integration	• Workflow integration	• Personalized, customized workflow

Figure 2: Through 2010, simple configuration will give way to deeper and richer customization requirements at the user interface, data structure, process and workflow layers

brands, that bring a market an ecosystem of services. They might not be technology application services, but business services, around human resource management, etc. It could very well be in DAM. (Figure 2)

So, in this world, as the value proposition shifts from cost control to value proposition and business services, it is increasingly butting up against, at the same time, the BPO providers, who are needing to re-engineer their applications and their business proposition, into a more repeatable and cost-effective model.

We're going to see a new class of managed services being offered, from the traditional BPO providers as they package up their stuff, as well as an unbundling, and a potential new business service delivery model whereby, in procurement, for example, we might very well see a company such as British Petroleum licensing Ktara, which is a leading, SaaS-based internet vendor, and having one of the Indian outsourcers be the service provider.

Michael Moon: That's what we've seen in terms of the largest, most successful DAM implementations in the media and entertainment business.

Bill McNee: I think that is going to be a new way of doing business. Now, there's also a whole new breed of cat, that is emerging to be flexible and provide unique and specialized services for specific business-processes. Blue Wolf is a great example. They're one of the players who do a lot of work with Salesforce.com.

Michael Moon: Thank you very much, Bill.

