‘Driving into the Cloud’: Reflections on Importance of a Blended Learning Approach

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ABOUT SMS

(About SMS: SMS Management & Technology (SMS) [ASX:SMX] is Australia’s leading consulting, technology services and enterprise solutions company employing over 1,400 professionals. Established in 1986, SMS is best known for delivery excellence. SMS helps its clients improve their business performance through the implementation of strategy and the delivery of business and technology projects. SMS recently completed a project to deploy Google’s Gmail solution to 1.2 Million students for the NSW Department of Education and Training. SMS has a full service offering including a strong Operational Learning and Change practice as well as applications build and consultancy services.)

When recently hiring and driving several cars in succession, my colleague and I reflected on the many different dashboard layouts and indicator lever systems even within the same make of vehicle. In one car we noticed that the indicator lever simply clicked mechanically into position and stayed there until manually cancelled. Others, I’ve observed, automatically cancel depending on the position of the steering wheel while some rely on a “soft-touch” electronic system that is maddeningly difficult to use. We found that headlights go off automatically when some cars are parked and for other cars they don’t. Sometimes the brake pedal must be depressed to engage certain gears, but not in all cars. In one vehicle, I had to find a special starter button and press it while the brake was on, but used a key in most others. On some occasions, the car used its onboard electronics to shift automatically when going down a hill – a feature not present on all vehicles.

This story reminds me of how far we’ve come since the highly standardised processes and uniform offerings of F. W. Taylor’s Industrial Age. The famous quote by Henry Ford seems to sum up that period well:
“[you can have] any colour – so long as it’s black”

Today we’re seeing not just the complete customisation of a car’s interior – from colour and seat upholstery to equipment options – but also a variation of how they are used by people. This is exemplified by cars like the 2006 BMW M5, for example, that has 279 combinations of settings, from tractional control through to suspension and steering. Certainly, these features are quite sensible and perfectly logical from the perspective of the designer and engineer, but they do create a frustrating experience when shifting from one vehicle to another. It forces people to re-familiarise with what are essentially just basic controls in a manner that was probably not required as late as the 80s when a higher level of mechanical standardisation was more apparent and designs were largely more functional. What it offers to the average person, unfortunately, is the prospect of diminishing user interoperability due to overwhelming small variations.

In a world where technology reins, and user-options and control are king, are the Information Age equivalents suffering from the same risk of over complicating the user experience? Does this observation have relevance to today’s web portals and personal information management systems? And what about the impact of diversification of technologies in the emerging “Cloud Computing” scenarios?

As little as five years ago, web browsing was fairly basic with a certain consistency of experience reinforced by a fairly simplistic interface. Today, however, open APIs, mash-ups, and Web 2.0 software, can provide a highly personalised user experience. When such techniques migrate to the enterprise, should we be concerned? Should we adopt the Taylorist management approach and look to enforce standardisation? Is standardisation only something of concern to the “process worker” who needs a standardised function to be efficient? Should we celebrate the richness and diversity offered by the capability of social media within the Enterprise? Should we rely on the fact that the incoming work force is completely comfortable with their Web 2.0 software and embraces the opportunity to customise and personalise their interface to match their own preferences for working with information? What of the debate over “busy”, rigid, processes driven management versus “burst” information and knowledge-centric ways of working?

Many organisations are now leveraging all the social media tools of the Enterprise 2.0 environment, from wikis to blogs, to promote organisational learning and collaboration, with staff as well as with external stakeholders and clients. In the not too distant future, the issue of a standardised operating system environment across the enterprise is likely not to matter, so long as the application can run in any browser, whether on an iPhone or Blackberry, or on a standard desktop PC. From a client services perspective this promises an amazing choice of collaboration and service options. Enterprises will be able to optimise their service’s processing and data storage
requirements, with their own preferences in mind. Clients will be able to personalise use and when and from where they access them, as will the organisation’s staff. Some organisations may even end up being fully in-house and centralised, while other applications and datasets will be Cloud-based. Ultimately, Cloud Computing is set to offer more flexibility and potential costs benefits, but there is a need to keep eyes fully open and not expect a “silver bullet” that will be the proverbial “one ring to rule them all”.

What then is the balance between supporting customisation of the user experience to enable individuals to do the work they need to in the way that suits their personal needs, and the ability of the organisation to support staff and assist them in the event of a technology problem?

Our view is that a blended learning approach can be helpful whenever new systems are required to be deployed— an approach we call “Operational Learning and Change”. The essence is to take a benefits realisation approach to systems usage, taking into account how each group of users, whether internal or external, is expected to use the system, and then to design the most effective learning tools and process change paths to maximize system effectiveness. In some cases, the most appropriate learning approach, particularly within Communities of Practice, is peer-support with minimal formal training. In other cases, elearning, formal instruction provides greater support. At other times, just-in-time support through context sensitive help is more suited to problem solving at the point of need. Even leveraging individual rating and recommendation of content can be a means by which users themselves are able to support others and help reduce the burden of selecting the most efficient mechanism for accessing the information they need to do the job. Ultimately, this suggests that while we may crave standardisation within the enterprise for simplicity of management processes and practices, a one-size-fits-all approach does not “fit all”. Learning approaches, therefore, must mirror the diversity of the environment, the needs of staff, and the richness and unique customisation of the systems and tools themselves.

The diversity of the web environment, though, must be taken into account. The ability to service clients and the needs of staff in the move to Cloud Computing will depend on a range of factors such as performance, remote access needs, privacy and security aspects as well as price. The pricing must of course take into account the costs of changing from existing applications and platforms, and the costs of re-development, as well as the bandwidth and storage costs. One certainty is that there will be great opportunity as well as some confusion in the marketplace, especially given that some approaches will fail, some will be too expensive for broad use and some will no doubt prove unreliable or lacking in performance for specific uses.

Remember that our industry is littered with over-hyped promises of silver bullets: for example the PC Networks (intended to kill the mainframe), and before that CASE (Computer Aided Software Engineering) over-hyped as a way
to obviate human-based programming, client-server models, n-tier architectures etc. In the end, in all of these examples, a coexistence emerged with the new technologies adding to existing environments rather than replacing them. In other words, a new balance of productivity and cost-benefit resulted. In similar vein, we believe the future will not be an either/or for Cloud Computing versus centralised in-premises computing, but a combination, and the clients of the future will be the winners by being able to deploy the best model for the best purpose.

Challenges associated with the new Cloud Computing models are already emerging. The challenge for developers will be to apply the disciplines of development across multiple platform technologies and computing models. This is not an easy challenge. The challenge for CIOs will be to fully comprehend the needs of users and the alignment with the business strategy. The challenge for CEOs will be understanding and predicting the future trends of the market and remembering the strategic importance of providing a really great experiences for end-users with sufficient standardisation to make efficient work methods possible without restricting the innovation and creative flair that Gen Y users will bring to organisations.

In the end, the ultimate challenge, of course, is to mirror the diversity of the deployed environment with appropriate learning tools, to help simplify access to, and manipulation of, the web resources themselves – to take our vehicle analogy this would be akin to simplifying the interface to the 279 options without diminishing the user’s actual ability to customise their experience.

In previous edition of the journal one of the authors presents an approach to such simplification without forcing everyone to “have any colour they like as long as it’s black”. We applaud such thinking and believe more research and practical experience will be required to enable the ultimate benefits to users of Cloud Computing to be fully realised.

Paul Cooper has an IT career of 25 years has lead or participated in a number of technology innovations for corporate and blue chip clients with the end user experience at the centre. Some highlights include leading the technical architecture effort for the first standard operating environment deployed within a major corporate in Australia) which resulted in a standardised desktop, mail, applications suite and back-end mainframe environment being implemented), development of a progressive Business Technology Plan for a major Victorian Government Department which resulted in a major standardised delivery environment being established. More recently, Cooper lead the establishment of the Emerging Business stream within his firm with a particular emphasis on the potential of cloud computing and social computing to improve work practices and reduce costs. Cooper has a Ph.D in biochemistry (Melb University) and a grad dip in business (Org Change) from RMIT University. Cooper
has held a number of senior consulting and management positions with SMS and currently holds the position of Emerging Business Director and Health & Public Sector lead with SMS Management & Technology Ltd.

Matthew Hodgson is an experienced social media and cloud computing strategist with 15 years experience in eGovernment, information architecture, information management and knowledge management, working with the government and commercial sector to deliver innovative solutions to difficult web problems. Hodgson has published papers in the areas of social psychology, has lectured at the University of Canberra on social computing, and has quickly gained a reputation as one of the most engaging speakers on information architecture, social change, communication and knowledge sharing in Australia. Matthew is currently the regional lead for Web and Information Management in Canberra for SMS Management & Technology Ltd.
A new research journal involves an element of risk. Will it meet a practical need? Will it play a unique role in an often-crowded area? Has it addressed an audience? And, most importantly, will researchers contribute their work to attract the audience and make it a success?

The fields of web portals and Service Oriented Architecture generally today face two new challenges: First is the impact of the international economic situation on enterprise appetite for new technology investment. This comes alongside a second challenge, a debate on whether SOA will meet its promise or has been oversold by its advocates. Contributions in this and our previous two issues have already begun to address these questions.

With the third issue of the *International Journal of Web Portals*, readers can begin to form an opinion on these questions. In this issue we continue introducing additional features:

*An introduction to portals and SOA.* In this issue we commence a background series by Ed Young addressing issues associated with the contemporary architectural approaches and adoption of loosely-coupled services. The editors plan to publish a series of four articles starting with the full review of the current research publications. In this issue, we publish two parts: PART I and PART II. PART I explores the Service Oriented Architecture (SOA) paradigm which unifies disparate, heterogeneous technologies in attempt to resurrect legacy technology silos with a Service ‘face-lift’. The article introduces current views, and critically reviews variety of research articles in this field. PART II draws extensively on published research in the past two years. This part concentrates on the technology of SOA particularly, Semantics, Representational Start Transfer (REST), Object Orientation and Operations and Quality aspects.

*Business case studies.* This issue carries the second of a series of case studies based on the experience of business practitioners in the front line of implementing Service Oriented Architecture and web portals in medium and large enterprises using a range of tools and approaches.

*Extended book reviews.* We also plan to commence a series of in-depth book reviews. In these reviews we introduce
the reviewed book as well as concepts or products the book deals with. In this fashion, we believe we can provide the reader with valuable information associated with new products available on the market and new portal and SOA book releases.

Alongside this we continue to benefit from research contributions from industry product leaders.

Through these and other innovative approaches we hope to meet our goal of providing a research journal addressing the interests of both academic researchers and industry practitioners. Are we succeeding? We welcome your feedback.

*Jana Polgar and Greg Adamson*