

A Note on a SOA Initiative

April. 2009

Hi all, from time to time thoughts about 'what th' *** are we doing' come to me! So, for what it's worth, here is what I am thinking lately --Since I have had a chance to teach some 90+ courses at university in marketing, management, informatics, research, and general studies math, these experiences have shaped some of the thoughts discussed below.

**** Cut to the Chase *****

I am suggesting we carefully investigate SOA (service oriented architecture/platform) as an umbrella approach that could inform our Business, Finance, and (IT) Informatics programs. SOA is based on the mature technologies of Web Services and extends them in more general ways to encompass more organizational requirements. This general perspective encompasses all of the 'ilities' we direct our courses to answer (reliability, composability, maintainability, security, extensibility, agility, . . .) (fyi- ASU for example, has a *services* engineering curriculum).

I suggest that all these courses could be synchronized to take advantage of this direction. Not necessarily in totality, but if WIU is primarily a business oriented university, then choosing a perspective that emphasizes the path to business automation, and its ancillary activities, would be a good educational attraction as well as a coherent marketing theme. (Note: my pet theme of "Quantitative Infusion" is just one facet of enabling business/technical analyses and automation:-))

Blue ocean anyone?

***** More Detail *****

SOA initially, is the interface mapping between underlying processes that can be implemented using any underlying technology, of any type, J2EE, .NET, or other.

In other words, at an initial phase, SOA technologies could tie together legacy systems via standalone web services. At a deeper level, applying SOA ideas in the first place, involves modeling and implementing using the service-oriented perspective which would make the underlying processes themselves modular and composable as well.

Having an engineering background, I am always on the look out for general principles or perspectives that might help me to tie areas and disciplines together. SOA looks like one of those general perspectives like Object Orientation, Client-Server, Distributed Architectures, or Federated Services, that ties together a lot of loose ends. SOA encompasses all of those and more, in a general framework.

From a technical side SOA, employs out all the technical guns our programs can offer allowing plenty of room for creative applications.

From a business side SOA puts a premium on business orientation and process analyses and so all of the business courses could at least have a component addressing this theme. (It would be neat to see a student business-tech team apply these ideas in a semester project)

SOA - A service oriented perspective that informs: visioning, requirements, analysis, design, implementation, testing, deployment, management, maintenance, all focused on BUSINESS AUTOMATION.

SOA & Business Automation

The overall service oriented development and application arena is still increasing in market share and interest. (the attached web address indicates IBM's interest)

'Doing SOA' emphasizes a 'service' perspective

service oriented --> business analysis modeling

service oriented--> technical application modeling

leading to the construction/deployment of composable federated modules..

I am not going to go through all the courses that might be re-oriented toward such as service architecture but that would be a worthwhile exercise.

I can see how any course could incorporate these ideas:

Project Management for developing such an infrastructure

Economic analyses of all facets

Software selection and deployment (make or buy decisions)

Security - this is a whole world of opportunity given interactive federated systems

Summary:

These are just some thoughts about how to gather all (most? some?) of our efforts into one general direction. For myself, this is a whole world of opportunity since SOA uses all the skills I could possibly acquire, plus a few more!! I am currently teaching a beginning SOA/Web Services class and learning right along with my students. Next, I am teaching an XML class where the basics of the SOA technology 'stack': XML, XML-Schema, XPath, XSLT, WSDL, BPEL, plus additional WS-* specs are described and implemented. Finally I get to teach an IT 650 S/W development class where again, having an overarching perspective, will drive the course direction. This is what I meant by an overarching perspective for all the courses.

As Scott McNeely said once at a Java One conference, "the idea is to get all the wood behind the arrowhead".

(At least I think that's what he said! :-))

cheers

rob r

SOA Notes from Erl and Such (In progress!!)**

The idea is to preserve the service contract even though the underlying plumbing can change. WSDL looks like it is the crucial technology . . .

Service orientation and OO - not competitors

(note to eric 0506)Yes, the technology has moved on a bit from 2001 when I first studied it :-)

At the heart of our current situation is the usual task of modeling business services and technology *services*.

SOA & Business Automation

via a middle 'flex layer that goes up to business processes and down to tech modules.

The difference is the relentless concentration on the structure of services and how they can be designed to achieve all the 'ilities'. This is exactly like the sequence we went thru with OO. first the programming, then the design, then the analysis and much later, the requirements, vision is in there somewhere :-)

Hopefully we can now do a little more analysis (at least) earlier this time before locking into programs! (although history shows me that - probably not) :-)

cheers

rob