What groups of people write about portals, and why do they do so? Clearly one group is the business community that build, market or implement them. Their interest is typically about portal characteristics, portal technology, portal implementation and the uses of portals. Perhaps another group is the end user, although probably not enough of these write about their experiences. They are mainly interested in portal applications and implementation issues. The third group is, of course, university academics who research and teach about portal technology, portal implementation and portal applications. Their interests tend to be much broader and to cover the whole range of portal topics. I fit into this third category.

In an article in the first issue of this journal (Tatnall, 2009) I suggested that one way of categorising research into portals is to put it into one of the following three categories:

- **Portal technology**: research into network infrastructure and the technical design and construction of portal software
- **Portal implementation**: research issues concerned with the implementation of portals in specific organisations
- **Portal applications**: research into the many uses of portals, and the consequences of this use

No doubt there are other possible classifications, but this one will do for now. I base this categorisation on the work I did in putting together the *Encyclopedia of Portal Technology and Applications* (Tatnall, 2007) three years ago. The encyclopaedia contained two hundred research articles and represented, at the time, the range of topics that academics and industry researchers were investigating. Despite appearing to cover quite a narrow area, the topic of Web Portals is extremely diverse, covering aspects of each of the above categories. Portals have now become an extremely important aspect of the Web and are now quite ubiquitous.

Portal technology itself is researched by many of those involved in its design and implementation. Commercial portal products and vendors also have an important role to play, and their investigation and evaluation provides a profitable avenue of research. As well as the technology itself, researchers also investigate issues involved in the implementing of portal applications. Not all implementation issues are technical, however, as *people* use portals and must also be considered as part of any implementation. If the portal is not adopted and used as intended then its success must be questioned. One aspect of portal use is the consequences of this use: what did the business gain from the portal? The largest group of articles in the encyclopaedia examined portal uses and applications.
There is no typical research methodology relating to portals research as this depends very much on what type of research is being undertaken. The approach used in investigating technical portal issues or in explaining the nature of new products will be quite different to that used when exploring why one company adopted and made use of a portal in one way while another company used a similar product quite differently.

University research and teaching that relates to portals and issues concerned with portals takes place both in departments of Computer Science and Information Systems, in universities where these disciplines are separated. In most Australian universities this is the case and Computer Science departments are usually located within Faculties of Science or Engineering, while Information Systems departments are typically located within Faculties of Business. Their location, of course, largely determines the way that these departments view topics like web and intranet portals, with Computer Science typically looking at the more technical aspects of the topic, while Information Systems often concentrates primarily on portal applications.

University teaching about portals occurs in both undergraduate and postgraduate courses. In many cases, courses in Computer Science deal with issues like the necessary networking infrastructure and hardware, portal software and programming, and customisation. Information Systems courses, as previously mentioned, tend to concentrate on portal applications. In some cases this is largely descriptive, but in others it adopts a socio-technical stance looking also at issues of adoption and use by people in different situations. Both course types often consider portal vendors and the range of portal products on the market.

This is not to say that you will necessarily find subjects within degree courses in either type of department that have the word ‘portal’ in their title. In Information Systems at Victoria University, for example, the most thorough treatment of web and intranet portals is undertaken in a subject called Internet Technologies in Business and comprises about two or three of the twelve 2-hour lectures. We look a little at portal technology, but concentrate on web and intranet portal implementation and applications.

Certainly in an Australian Faculty of Business, eCommerce subjects and courses are under considerable pressure to mainstream. In the late 1990s many Information Systems departments began introducing single eCommerce (or eBusiness) subjects and also complete courses made up from a number of such subjects. At this time the area was new, seen as exciting and did not really fit into standard Information Systems courses. Over the intervening ten or twelve years eCommerce has become commonplace in business and the need for separate subjects and courses has decreased. The content is still there, but in many cases it has been mainstreamed into standard Information Systems courses. It should then be asked what this has done to teaching about portals, and the answer is much the same: as portals are now quite well known there is less need to teach specifically about them, and much of this content has also now entered the mainstream of business courses. The same is not, however, completely true of Computer Science, where specific teaching about portal technology and implementation often still remains.

What should universities be doing about teaching and researching portals and portal technology? How should they determine what is important in this area? I am sure that the editors of this journal would be interested to canvas your views on this topic.

Arthur Tatnall

REFERENCES


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.

This issue contains a good mix of research and practitioners’ articles. The article titled “Portals Then and Now: Development and Use of Portals in Australia and Bangladesh” by Arthur Tatnall et al investigates the evolution of two different types of web portals, one in Bangladesh and the other in Australia. The initial data collection was conducted in the early 2000s and revisited in 2009. The idea of a web portal is not new, but in the last few years the portal concept has gained considerably in importance as new types of portal are developed and new uses found for portal technology. The article begins with a brief classification of the types of portals in use today and then considers some of the advantages conferred on a business in using portal technology.

Developed and developing countries have different problems in making use of e-commerce and see the advantages and problems of using portals rather differently. In the article we examine and compare case studies of a Horizontal B-B Industry Portal in Melbourne, Australia, and a Vertical Industry Portal in Dhaka, Bangladesh.

With the fourth issue of the International Journal of Web Portals, readers can begin to form an opinion on these questions.

In this issue we also continue introducing additional features:

- An introduction to portals and SOA. In the last issue we commenced a background series by Ed Young, PhD student from Victoria University, Melbourne, Australia, addressing issues associated with the contemporary architectural approaches and adoption of loosely-coupled services. The editors found the research work of this young student interesting and decided to publish a series of four articles starting with the full review of the current research publications.

PART I and PART II explored 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 introduced current views, and critically reviews variety of research articles in this field. PART III delivered critical view of the published research in the past two years. This part concentrated on the technology of SOA particularly, semantics, protocols such as
Representational Start Transfer (REST), Object Orientation and Operations and Quality aspects. In the 4th issue, we continue with **PART IV**. It examines the impact of mobility on the contemporary SOA architectural styles and frameworks. The workforce becoming increasingly dynamic as information demand is everywhere and all the time. Pervasive information is the only way to keep up and the only way to persistently consume this information is through mobility and availability. Contemporary IT architectural approach is for an orchestrated, agnostic, federated enterprise through the adoption of loosely coupled open Service interfaces. There is currently little consideration made for mobile service support as part of SOA design although it figures significantly in business and technology concerns. This article further explores the current research in the field of mobile service discovery, consumption, composition and orchestration. The article also attempts to look at the advances in the development of mobile middleware which could support mobile SOA. The article is very appropriately titled **MOBILISING THE ENTERPRISE**.

**Business case studies and discussions.** The 3rd issue carried 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. In this issue we are introducing the first of the series of discussions focusing on the issue of creating successful portals by Joe Lamanitia, MediaCatalyst B.V., Netherlands.

**Extended book reviews.** In the 3rd issue we commenced a series of in-depth book reviews. In these reviews we attempted to introduce not only the reviewed book but also the concepts or products the book deals with and explain them. 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. In this issue we look at the Open Source ESB in Action by Tijs Rademakers and Jos Dirksen (reviewed by Jana Polgar). This book as one of a few sources of information for IT architects as well as integration developers who wish to use an open source Enterprise Service Bus (ESB). The book provides the introduction to the two open source ESB’s - Mule and ServiceMix ESBs - with plenty of examples.

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.

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