Challenges and advantages of establishing an information portal for an information system on water research

Prof Pieter A. van Brakel (D.Phil)
Department of Information Studies
Rand Afrikaans University
Johannesburg, South Africa
pavb@rau.ac.za

Ms Sam Berner (PDIM)
ECognus
Brisbane, Australia
samalex61@yahoo.com

Portals, a further development from what has become known as a Web-based directory of information hub, and particularly so-called *information portals*, present unique strategic challenges in any research environment. An information or content portal is able to organize large collections of content (information resources) and based on the subjects they contain, can more effectively connect the right people with the right information. Two types of information resources are referred to: Internal, institutional and/or unpublished research-based content, as well as external content, such as large commercially available bibliographic and full text databases, news feeds, research results databases, dissertation databases, and so forth. An enterprise or institutional information portal has the capability to link and integrate internal with external content.

To put information portals into perspective, three generations of Web environments can be distinguished in an effort to indicate more clearly the features of a portal:

- An Internet Website, the most basic manifestation of Web, allows end-users to search for digital documents on water research and following relevant links to other resources; '... it is intended for public consumption without restriction".

- An intranet Web, developed for the staff of an enterprise, concentrates on providing relevant information solutions to an internal community; access is limited to an authentication process.

- On the contrary, a portal is a sophisticate gateway to the Web that allows the plethora of information on Internet and intranet Web sites to be organised and customised and personalised through a single entry point.

The following elements provide a more detailed analysis of the information portal - a mechanism that should be built into any environment where research on water, and the history of water, is taking place:

- Access point: A single gateway or logon to identify approved users. This refers to a *desktop-orientated* function: it prevents the user from having to sign onto each of the different systems that provide portal content.

- Internet tools: These are site search and navigation tools to provide users with easy access to information. Examples given are calendars and planners to allow users to input and

share events, as well as Web site and content builders, offering them the ability to create and have customized content being made availability according to individual profiles.

- Collaboration tools: These include e-mail, threaded discussions, chat and bulletin board software that offer a whole range of ways to communicate and share information.

- User customization: A typical portal prompts the first time user via a series of fill-in windows to provide information about him/her. This is then stored in the portal's database. When that user authenticates to the portal, this information will determines what he/she will see on the homepage immediately after login.

- Channel information: User-defined channels from both internal and external (information sources). Examples are, inter alia, research information, statistical or assessment information, and links to other useful sites.

- Pushed information: This refers to user-defined and selected content which is sent to legitimate users, such as news, events or specialised memos.

- User personalisation: A good portal let you take customisation one step further, that is, to enable an end-user to subscribe and unsubscribe to channels and alerts, set application parameters, create and edit profiles, add or remove links.

This paper will investigate portals from an informational departure point, and concentrate on the last four elements of the above list: Customisation, channelled information, pushed information, and user personalisation. The topic of water research, and specifically the strategic role that an information portal can play in this type of research, will be discussed in detail. A taxonomy of water information resources will be presented, indicating how these resources could be effectively made available to researchers in the various water research disciplines.

Biographies

Prof Pieter van Brakel obtained a master's degree in Information Science (1975), a D.Phil. (Information Science) (1979) and a Diploma in Tertiary Didactics (1979). e was the head of the Department of Information Studies at the Rand Afrikaans University (RAU) from 1991 to 2001, and currently the Chairperson of RAU's Internet/WWW Advisory Committee. His current research area concerns various aspects of campus portals. He has published over 50 peer-reviewed articles and chapters in local and international scholarly journals and books.

Sam Berner has a B.Ed., Postgraduate Diploma in LIS and a Postgraduate Diploma in Information Management (2002).She is a Principal of the company ECognus (Brisbane, Australia). She is a Knowledge Managment consultant, assisting small and medium-sized enterprises to benefit the most from their intellectual assets. ECognus also provides services in the area of tailored software applications and digitisation of business processes.