Portals

Shrideep Pallickara*

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Abstract

This document aims at providing some insights into *portals*. What constitutes a portal's expressive power and when, where and how these entitites reveal the expressive power that they encapsulate. The author refers to documents that already exist on the web, and does try to provide a miniscule snapshot of the design principles that serve as a beacon to portal providers.

This document is prepared for Dr. Patricia Burak at the OIS - Syracuse University.

1 Introduction

The Web has evolved from a static hypermedia system with limited expressiveness into a collection of services provided at different levels and is increasingly being perceived as a *critical* information repository. This information repository should however reveal only those elements of its expressive power which a user is interested in. The web, now should be what the user seeks it to be and when it seeks it to be. In the movie *Being John Malkovich* the characters discover a portal to Malkovich's mind, but it takes a puppeteer to control the portal.

por-tal[1] (pôŕtl, pōŕ-)

- A doorway, an entrance, or a gate, especially one that is large and imposing.

- An entrance or a means of entrance: the local library, a portal of knowledge.

- The portal vein.

Etymology tit bits aside, support for portals is one of the main driving forces for the present Web. Like so many intelligent information gathering and disseminations that have come and gone in the past, the portal model could be here to stay or fade away like some other computational *hula-hoop du jour*. Whatever approaches future information handlers would take, those approaches would inherit a lot of the present principles.

2 Portals - Information Repositories

Portals are essentially a gateway to an information repository. The content of this information repository is what dictates the kind of portal a site would be. This information can be very voluminous, hence portal providers tend to identify niche areas for which they provide portals. Few examples of portals include

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*3-211 CST, 111 College Place. Tel: 315-443-4884. Department of Electrical Engineering and Computer Science. shrideep@cat.syr.edu. Advisor: Dr. Geoffrey Fox

[1]Source http://www.dictionary.com

(a) http://www.cnn.com, http://www.bbc.co.uk - News as it is happening.

(b) http://www.economist.com - Weekly reports of the most significant news all around the world.

(c) http://www.webMD.com - Information regarding health issues, prescriptions and so on.

2.1 Tailor content to your needs

But portals are not only about information. Portals should be able to provide you with a *view* of the information that you are looking for. A user should be able to filter content to suit his/her needs. http://my.cnn.com is a very good example of this. It lets you choose the kind of news you are interested in. You could for example be interested only in sports, technology and not be interested in weather updates for the Antartic. Portals thus should allow you to *tailor content to your needs.*

2.2 Collaboration or Conferencing

A portal should also provide for users to discuss and exchange information. For example CNN also has the notion of message boards, where you can answer queries or post your views. The collaboration tool is essential in certain areas like education. Educational portals have a *virtual* classroom with users seperated by *digital distances* who could benefit from questions, and subsequent answers by the instructor, posed by students.

2.3 Publish-Subscribe engine

Information is not static, and is usually added to or modified. This process is referred to as publishing. Users could be interested in receiving notifications (usually e-mail) when the information changes. Users who register interest in such change notifications are called subscribers. Lets take an example here - The Sydney Olympics are going on, and you would like to see live updates for the soccer game as they are happening. http://www.olympics.com provides you with such a *livecast* where you get snapshots of plays and updated scores.

Portals usually possess such a publish-subscribe engine, which is responsible for updating information and providing notifications for users interested in such information.

2.4 Mass customization or Personalization

This involves the portal keeping track of usuage patterns, and being able to conjecture on what else the user would need. Lets say you visit http://www.barnesandnoble.com, you decide to buy Rowlings latest edition of the Harry Potter series. If you haven't already bought the earlier releases at the site, the portal should prompt you for those books.

This usually takes complex forms where, lets say you bought *Cosmos* by Carl Sagan you could be asked if you are interested in *A Brief History of Time* by Stephen Hawking. The *personalization* feature comes in when you visit the portal (a **.com** site) and the portal provides you with a notification regarding new releases which fall in the subject areas (Astrophysics) where you have registered an interest in.

2.5 Data Mining and Knowledge Discovery

It is a capital mistake to theorize before one has data.......
Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.
SHERLOCK HOLMES
Sir Arthur Conan Doyle, A Scandal in Bohemia (1891)

This relates to finding clear patterns in usuage statistics and being able to collate information together. To give a real world example consider WalMart. WalMart has identified a pattern where if someone buys baby food they usually buy diapers too. They reorganize their shelves so that these items are available easily within the same isle. This reorganization and presentation of data could take various forms. If you buy a dress, there could be matching shoes and other fashion accessories provided for you which, could go very well along with the dress you just purchased.

3 Where are we heading towards?

Portals are changing. Anything could be portal. Your house could be wired in such a way that its a portal. One example of this is provided in the IBM advertisement where a repair main arrives at the door saying that the refrigirator has a problem. On being told that "Oh... there's nothing wrong with the fridge", the response is - *Not Yet!*.

The other is of course something which has more profound implications. Lets say someone in some house has a cardiac ailment. There is a minute before the cardiac arrest actually occurs. Sensors in the house could detect this and paramedics and others in the house could react to this situation. This could save a lot of lives.

4 Summary

For the sake of brevity, I have merely touched the tip of the iceberg. Information handling can have a profound influence on the way we run our lives. The information is usually in the background, and merely reveals aspects we are interested in or is very significant to us.

5 How would portals be useful for the OIS

It could be very useful for students and administrators alike. When a student logs onto the portal, information pertinent to the student would be displayed appropriately. The portal could conjecture that since the student has been around for 9 months, he is all clear to do a full time internship. However if the student has already done full-timeCPT for 12 months he would jeopardize his Practical training if he did any more full-time CPTs. The portal could provide solutions by indicating to the student that he/she could do a part-time CPT.

This would be extremely helpful during tax filings too, where the portal could provide information only regarding tax treaties between the US and the nationality of the student. Information regarding health insuranc expiry could be notfied to the students, as also weekly updates regarding the OIS (OISNEWS) using a very simple publish subscribe engine.

Depending on the kind of questions that students, at different stages of course completion, ask *Frequently Asked Questions* (FAQ's) could be tailored to meet each students needs.