

Chapter 1.3

The Ubiquitous Portal

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INTRODUCTION

The word *portal* can be used to represent many different things, ranging from the elaborate entranceway to a medieval cathedral to a gateway to information on the Internet. What all the usages have in common, though, is the idea of facilitating access to some place or some thing. In addition to its use in relation to Web portals, the term can also be used more metaphorically to allude to an entranceway to far away places or new ideas, new knowledge, or new ways of doing things. Some new, or different, ideas, knowledge, or ways of doing things have had a beneficial effect on society, while others have had a detrimental affect. A portal can thus lead to various different places, things, or ideas, both good and bad. Before a portal can be used, however, it must be adopted by the individual or organisation concerned, and adoption of technological innovations such as portals is the subject of this article.

BACKGROUND

Gateways come in all shapes and sizes, and likewise so do portals. Portals are seen everywhere (Tatnall, 2005a) and it would be difficult to make any use of the Web without encountering one. On the Web there are government portals, science portals, environmental portals, community portals, IT industry portals, professional society portals, education portals, library portals, genealogy portals, horizontal industry portals, vertical industry portals, enterprise information portals, medical and health portals, e-marketplace portals, personal/mobile portals, information portals, niche portals, and many more. Portals have become truly ubiquitous.

In literature and film also, many mentions are made of portals, although not all of the Web variety. These range from a description of the sun by William Shakespeare in *Richard II* (Act 3, Scene 3): “See, see, King Richard doth himself appear, as doth the blushing discontented sun from out

the fiery portal of the east.” (Shakespeare, 1595), to the means of moving around the universe in the TV series *Stargate SG-1*. The transportation device used by Ford Prefect and Arthur Dent in the *Hitch Hiker’s Guide to the Galaxy* (Adams, 1979) could also be considered a portal, as could the teleport mechanism employed by the crew leaving or returning to the *Enterprise* in *Star Trek*. In much science fiction and fantasy literature, a portal-like device is used to move from one place to another without the need for inconvenient (or perhaps impossible) explanations of the means of doing so. The portal (whether or not it is called this) is thus used as a *black box* (Latour, 1996) capable of almost magical transformations.

In many ways, a Web portal can also be considered as a black box that achieves its purpose of taking a user to some interesting or useful place on the Web without them needing to know how this is done. For most people, other than those involved in their design or construction, the technology of the Web portals is irrelevant. All they want to know is that it provides a convenient means of taking them to some Web location where they want to go.

Just because a portal exists, however, there is nothing automatic about organisations or individual people wanting to adopt or use it. A portal will only be adopted if potential users make a decision to do so, and such decisions are not as simple as one might naively think. Adoption of a technological innovation, such as a portal, occurs for a variety of reasons, and this is a significant study in itself. The first step to researching the use of a portal by an organisation (or individual), though, is to investigate why it was adopted. The remainder of this article will consider the portal as a technological innovation and consider portal adoption through the lens of innovation theory.

THE PORTAL AS A TECHNOLOGICAL INNOVATION

Many people use the words *invention* and *innovation* almost synonymously, but for any academic discussion of technological innovation an important distinction needs to be made between these terms. Invention refers to the construction of new artefacts or the discovery of new ideas, while innovation involves making use of these artefacts or ideas in commercial or organisational practice (Maguire, Kazlauskas, & Weir, 1994). Invention does not necessarily invoke innovation and it does not follow that invention is necessary and sufficient for innovation to occur (Tatnall, 2005b).

Clearly the portal can be seen as an invention, but the point here is that it will not be used unless it is adopted, and that means looking at it also as a technological innovation. Of course, the application of innovation theory to the adoption of a technological innovation assumes that the potential adopter has some choice in deciding whether or not to make the adoption. In the case of an organisation or individual considering the adoption and use of a portal, however, it is difficult to see any reason why they would not have a large measure of choice in this adoption decision. This makes the application of adoption theory quite appropriate when considering the use of Web portals.

ADOPTION OF TECHNOLOGICAL INNOVATIONS

There are a number of theories of technological innovation, diffusion of innovations (Rogers, 1995) probably being the best known. Other innovation theories include the technology acceptance model (Davis, 1989; Davis, Bagozzi & Warshaw, 1989) and innovation translation (Callon, 1986b; Latour, 1996; Law, 1991), informed by actor-network theory (ANT).

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