Chapter 1
Web Portals Research: Treating the Portal as an Innovation

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ABSTRACT
The topic of Web Portals, despite appearing to cover quite a narrow area, is an extremely diverse one. Amongst other things, it covers the technology of portals, how portal software is implemented and the many and varied applications and business uses to which portals can be put. This chapter investigates various approaches to portals research, concentrating on research related to the human aspects of portals and portal applications. It also introduces the idea that as a portal must be adopted before it can be used a worthwhile approach is to consider the portal as an innovation. The chapter then distinguishes between inventions and innovations and argues that there is nothing automatic about adoption of an innovation, and that this adoption can best be investigated through the lens of innovation theory. In particular, the chapter looks at how innovation translation, from actor-network theory, can be used in this regard and offers examples of how this can be done.

INTRODUCTION
Web Portals have been in use now for over a decade and have become an extremely important aspect of the Web. They are now quite ubiquitous and a considerable amount of research has been done into portal technology and its applications. One source of portals research is the Encyclopedia of Portal Technology and Applications (Tatnall, 2007b) that contains two hundred research articles from around the world relating to portal design, implementation and use. These articles cover a wide range of topics ranging from the complex to the very simple. One area of research in the encyclopaedia discusses the nature, characteristics, advantages, limitations, design and evolution
of portals, while at the other end of the spectrum several investigations centre round semantic portals and some philosophical portal issues (Tatnall & Davey, 2007).

An obvious question to ask before going much further though is: what is a portal? There are many different views on what constitutes a web portal and this term is still rather overused, taking on a somewhat different meaning depending on the viewpoint of the people involved in the discussion (Tatnall, 2007b:Preface). In general terms, not related to the Web, the word ‘portal’ can be seen to mean “a door, gate or entrance” (Macquarie Library, 1981) and in its simplest form the word just means a gateway, but often a gateway to somewhere other than just to the next room. The Oxford Reference Dictionary defines a portal as: “A doorway or gate etc, especially a large and elaborate one” (Pearsall & Trumble, 1996).

In relation to portals research the definition that is adopted will often depend on the interests of the researcher and the topic or nature of the research. Researchers discussing portal technology or portal implementation issues often define the concept of a portal quite tightly suggesting, for example, that it must conform to certain standards (Polgar & Polgar, 2007a, 2007b), that it must be customisable by the user, or that it must have certain specific features (Tatnall, 2005b). Those researching portal applications, on the other hand, are usually not very interested in the technology itself and what goes on inside a portal, but rather in how it is used. They often use a much broader definition that suggests in general terms that a portal is just a gateway to the information and services on the Web. Using this definition, a Web portal can be seen to consist of a Web site whose main purpose is to find, and to gain access to other sites, but also to provide the services of a guide that can help to protect the user from the chaos of the Internet and direct them towards a specific goal. It can be seen to aggregate information from multiple sources and makes this information available to various different users (Tatnall, 2007b). More than this however, a Web portal should be seen as providing a gateway not just to useful sites on the Web, but to all network-accessible resources whether they involve intranets, extranets, or the Internet (Tatnall, 2005a). In other words a portal offers easy centralised access to all relevant network content and applications (Tatnall & Davey, 2007).

THE PORTAL AS AN INNOVATION

Just because a portal exists it cannot automatically be assumed that organisations or individuals will want to adopt or to use it. A portal will only be adopted if potential users make a decision to do so and the adoption of a technological innovation, such as a portal, occurs for a variety of different reasons. Thus the first step in researching the use of a portal by an organisation (or an individual) is to investigate why it was adopted, and so consider the portal as a technological innovation. This can be done by examining the adoption of the portal through the lens of innovation theory.

It is important at this stage to distinguish between invention and innovation. 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. 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 portal 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
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