Chapter IV

The Challenge for Customer Service: Managing Heterogeneous Knowledge

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Introduction

It is a truism that customer service is the key to business success. It is particularly true given competition and new business practices lead customers to want products that are “free, perfect, now” (El Sawy et al., 1998). The trend in UK customer service, led by the U.S., is for service delivery via Call Centres to be deflected towards the Internet. Providing the knowledge to support this (O’Leary, 1998), along with relationship management (Duke et al., 1999) is a key application area for knowledge management (KM). However, the research into KM for effective customer service is minimal. What is clear is that publishing information on an intranet, extranet, or Internet does not constitute effective customer support.

This chapter takes a case study approach to exploring knowledge management for customer service. The key problem we are working towards solving is how best to deploy knowledge via distributed information systems. The case study is derived from the author’s involvement in a project for a financial institution (referred to as AFI throughout). It describes a particular approach to managing knowledge that combines elements from information retrieval (IR) with KM. A key part of this is the evaluation of alternative interfaces that take different approaches to the presentation of search results.
Analysis of the case study is supported by a definition of knowledge and a model of its use. These concepts are used to highlight key differences between information retrieval and knowledge management. The analysis provides general requirements for KM systems which are specifically identified and resolved in the case study. The applicability of the case study derives from a number of features:

- the knowledge stored in AFI’s system is heterogeneous in nature and is spread across a wide range of sources;
- the design decisions relating to the use of dynamic and static information structures by AFI reflect issues with current search technologies used on the Internet;
- the AFI system is to be rolled out from its current user group across the organisation via an intranet.

The case study enables us to propose how information, process and capabilities must be made available by KM applications in a distributed environment.

**Background**

**Information Retrieval on the Web**

Filman and Pant (1998) identify two dominant approaches to information retrieval on the Web: directories and spiders. The first are viewed as static structures to categorise content; the second as free text searches of ill-structured information. This is an extension to the recurring distinction in information retrieval between:

- static, typically hierarchical techniques for partitioning and classifying knowledge such as the Dewey Decimal library catalogue system, through to Usenet subject groups;
- dynamic search techniques that respond to individual queries and uniquely structure the search results. Examples range from Boolean searches on document keywords through full-text searching based on proximity and relevancy scores to new visualisation techniques (O’Leary, 1998c).

Although the Web can be tackled by the extension of traditional IR concepts, the “combination in a single system of information retrieval and browsing is not yet a well-established approach and is not the dominant paradigm” (Baeza-Yates and Ribeiro-Neto 1999). Despite
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