Chapter 4.24
Client/Server and the Knowledge Directory

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INTRODUCTION

Data, information, and knowledge are three related but not interchangeable concepts. Data are a set of discrete, objective facts about events. Information is organized data presented in context. Data become information when their creator adds meaning or value. Similarly, knowledge derives from information as information derives from data. Knowledge can be viewed as information in context, together with an understanding of how to use it. Knowledge can be either explicit (knowledge for which a person is able to make available for inspection) or tacit (knowledge for which a person is unable to make available for inspection) (Brooking, 1999; Davenport & Prusak, 1998). In Table 1, a list of knowledge that is particularly critical for business organizations is given.

Knowledge is an intellectual property that although paid for in part by the employer is a difficult asset to control, as it is fragmented in documents, policies, procedures, and other data storage mediums. Another challenge for management is to retain this knowledge in a form that is easily retrievable. This is not an easy task, since the enterprise must first identify the location of all needed knowledge, and second, determine the easiest way to retrieve it.

There are many definitions of knowledge management, but the Gartner Group (1999) description seems most appropriate for the perspective expressed in our article: “Knowledge management
promotes an integrated approach to identifying, capturing, retrieving, sharing, and evaluating an enterprise’s information assets. These information assets may include databases, documents, policies and procedures, as well as the un-captured tacit expertise and experience stored in individual workers’ heads.”

This definition implies that information assets are plentiful and are stored in numerous locations throughout the organization. Storage options include documents, documents in document management systems, groupware such as Lotus Notes, and expert or knowledge-based systems (Brooking, 1999). Physically these information assets can be electronically stored on compact disk, laser disk, mechanical hard drives, microfilm, microfiche, and embedded in computer programs. Further, information assets are also stored in books, documents, and other paper-based medium.

**BACKGROUND**

In a world of multiple computer languages, database management systems, assorted collaborative and group support software, network technologies, and data storage methods, it can be a difficult and complex problem to locate and retrieve enterprise knowledge. If KM promotes an integrated approach to identifying, capturing, retrieving, sharing, and evaluating an enterprise’s information assets, then the challenge is to create a knowledge management system in order to get the right information to the right person at the right time.

“An integrated and integrative technology architecture is a key driver for Knowledge Management Systems (KMS) … KMS seem to require a variety of technologies: database and database management, communication and messaging, and browsing and retrieval. The need for seamless integration of the various technologies may lead to the dominance of the Internet and Internet-based KMS architectures” (Alavi & Leidner, 1999). Alavi and Leidner (1999) also note that “organizational intranets will also play a dominant role in support of internal knowledge management activities due to cost-effective technical capabilities including: access to the legacy systems, platform independence, access to multimedia data formats, a uniform and easy-

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**Table 1. Knowledge that is particularly critical (Brooking, 1999)**

<table>
<thead>
<tr>
<th>Knowledge of a particular job</th>
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<tbody>
<tr>
<td>Knowledge of who knows what in a company</td>
</tr>
<tr>
<td>Knowledge of how to get things done in a company using the corporate culture</td>
</tr>
<tr>
<td>Knowledge of who is best to perform a particular job or task</td>
</tr>
<tr>
<td>Knowledge of corporate history (how and why)</td>
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<tr>
<td>Knowledge of business customs</td>
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<tr>
<td>Knowledge of a particular customer account</td>
</tr>
<tr>
<td>Knowledge of how to put together a team that can achieve a particular task</td>
</tr>
<tr>
<td>Knowledge of how to approach a particular problem that is difficult to solve</td>
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</tbody>
</table>
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