Providing Services to Users Through Data Networks: A Case Study of a Credit Reporting Company

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Providing credit information about people to corporate customers is a growth business in the U.S. We discuss the network of a company that collects information about the credit history of customers and provides it to lending and credit companies, life and health insurance companies, property and casualty insurance companies. The accuracy of the information is critical and also speed is essential in responding to queries. This company has developed a technology center to capture, process, and distribute this information. This company has been expanding and modifying its network to place itself in the forefront with regards to information technology.

Telecommunications and networking are increasingly recognized as important strategic areas in businesses. Planning and implementing telecommunications systems was recently evaluated as the 10th most important issue by 104 MIS executives (Niederman et al., 1991). As information becomes more and more critical to companies in gaining and sustaining competitive advantage, the flow of that information within and across companies hinges upon dependable, adaptable networks. The purpose of this paper is to discuss how a service company has used its network to add to its competitiveness. The paper discusses the business of the company, its network structure, and its future plans. It also contrasts this network design with networks used by travel agencies and banks (Clemons and Row, 1991; Clemons and Weber, 1990).

End-Users of the Company’s Information Products

A company that delivers credit information to corporate customers is trading a product that is in essence information. The company’s major role is to collect accurate information from many sources, assemble it, and send it to customers. Table 1 shows how the firm assembles data into products for its corporate customers.

Typical corporate customers of consumer information are:

Lending and Credit Companies - Credit information is provided to credit and lending companies to verify past credit worthiness, and is used for insurance purposes for predicting potential fraudulent claims.

Life and Health Insurance Companies - When an individual applies for insurance, the insurance company may verify the applicant’s habits with co-workers/family members, and provide claims history information from previous insurance carriers. This information is used by the insurance company for better risk assessment.

Property and Casualty Insurance Companies - When a consumer applies for automobile or home owner’s insurance, the insurance company can be supplied with the applicant’s motor vehicle report, past claims histories submitted to previ-
Table 1: Examples of Services Offered

<table>
<thead>
<tr>
<th>PRODUCT NUMBER</th>
<th>PRODUCT DESCRIPTIONS</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>A database of automobile claims history information. Used by property and casualty insurance companies for assessing new insurance applicants.</td>
</tr>
<tr>
<td>2</td>
<td>A database of drivers and addresses. Used by property and casualty insurance companies to identify all possible drivers in a household.</td>
</tr>
<tr>
<td>3</td>
<td>A database of health claims history information. Used by life and health claims processors to identify possible fraudulent claims.</td>
</tr>
<tr>
<td>4</td>
<td>A database of all drivers in a state including the drivers' accidents and violations.</td>
</tr>
<tr>
<td>5</td>
<td>A copy of all medical records for an applicant obtained from the physician. Used to identify any pre-existing conditions.</td>
</tr>
<tr>
<td>6</td>
<td>A collection of physical measurements and body fluids. These are analyzed to determine any high risks applicants such as those with high blood pressure.</td>
</tr>
<tr>
<td>7</td>
<td>A report verifying information given to an insurance company applicant. The report may include information obtained through a phone.</td>
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ous insurance carriers, a listing of all potential drivers in a household, and inspection information concerning the property being insured.

**High Risk Employers** - Employee background checks are done for companies that require high security such as nuclear plants, government research agencies, air lines, etc. The information can include past public records, post-graduate degree verification, drug screening, and reference checking.

Much emphasis is placed on the accuracy of the information delivered. Simultaneously, the speed with which requests can be received, processed and returned to customers is also important. Therefore, an excellent network and telecommunications architecture is essential to the bottom-line success of this company. This company retains development teams who are responsible for developing mainframe and personal computer (PC) software that customers use to order and receive information. Since this company is critically dependent on internal and external networks, it has to continuously modify networking and communications facilities to fit business needs.

**The Company’s Network**

The company’s home office is located in a major metropolitan center with 53 regional offices responsible for performing regionalized, manual data collection. A technology center was recently completed that houses all system hardware, programmers and support personnel for the network. The network links the regional offices to the home office and provides field offices with similar systems and support. The home office network includes connectivity to the mainframe system that houses the database products. Five regional data centers support the communications between the regional offices and the home office.

The network is based on DecNet adapted in-house with DEC VAX and Micro-VAX equipment. DEC was chosen as the main vendor because when the network was first conceptualized, DEC was only company that had the equipment appropriate for linking together the large number of offices.

**Processing of Customer Queries**

For many years, the information supplied to this company’s customers was gathered on an as needed basis where field representatives would talk directly to consumers and report their findings to the original requestor. With automation, information is solicited from insurance companies and credit lenders via tape, and the consumer information is stored for easier management and acquisition.

Two VAX machines are located in the data center in the main office and are used for sending and receiving information from customers. When a customer requests a report from any of the databases, the orders are created by one of two methods:

1. A software package (SP), has been created so that it runs on either a mainframe or PC. The order information is keyed in by the user and transmitted from the customer location to a VAX machine in the home office. If the PC software is used, the SP software communicates via a Hayes asynchronous modem into one of six phone lines connected to the Vax. If mainframe software is used, the SP software can communicate with a number of bisynchronous communication protocols, and the order information is sent to the VAX.

2. Customers also have the option of creating their own
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