Application architecture and process design

Design

Identifying the discrepancies and shortcomings of our previous system proved much easier than developing the application architecture and process design of the proposed system. According to the National Institute of Open Schooling, the next step following the Minimal study was to test the feasibility of the new system. This step Included verifying that the proposed process met the needs of the organization, was cost effective and that the process made effective use of company resources, to include people and equipment. " The main goal of feasibility study is not to solve the problem but to achieve the scope. National Institute of Open Schooling) During the feasibility analysis, we identified which of our current resources could be utilized during the implementation of the new process. We researched the capabilities of our current infrastructure to determine If our network, peripherals and servers could support our proposed solution. This analysis showed that additional hardware, software and connectivity would be required. Although a preexisting Intranet was In place, we determined that the load and network traffic that would be produced by the new process's extensive data transfer warranted a dedicated system.

The backbone of the new system was comprised of a new HP Brilliant DALLY GO Server. According to Hewlett-Packard, the new server's dual Xenon Processor and 6 gigabytes of read only memory (RAM) would provide sufficient power to support the requirements of the new system. The ODL ass's Integrated Smart Array would also provide ample storage with the capability to house up to 1. 2 terabytes (TAB) of internal storage. (Hewlett-Packard Development Company, L. P. 2006) In addition to the hardware,

additional licensing was required for both Windows 2003 Server Enterprise and Microsoft SQL Server.

An additional HP Brilliant DALLY 64 Server was also required to support the Linux based Adductor system (vim. Deconstructions. Com) that would be responsible for storing and cataloging all the association's documents electronically. Adductor provided us with an off the shelf solution that still had the capabilities to be fine-tuned to the specific needs of our organization. Although future applications would be electronically sent to the Adductor system, previous paper files needed to be imputed into the system to fully establish a paperless filing system. Soda's 1280 Scanner met this need.

This scanner is capable of imputing the prior records at a rate Up to 7, 500 pages per day. (Eastman Kodak Company, 2005.) The determination was also made to incorporate two kiosks to allow new members to input their application information from our lobby. Once the hardware to support the new system was identified, the next step was to determine what capabilities and functions the user Interface required. A web-based application developed on ASP. NET technology was chosen for the Interface that would provide the connectively and usability required of the new system.

This application was developed from the ground up to utilize the current the new Adductor system. The application provided a friendly web-based user interface that allowed members to input their information, schedule courses and make payments. An employee interface was also developed to allow employees to view and verify applications, reproduce receipts and correct

any errors. The backbend of the application was designed to import the member's information directly into our association management database and send electric copies of all required documents to the Adductor system where they would be cataloged and stored.

This process can best be illustrated through the use of a data flow diagram. Data flow diagrams provide a way of visually displaying a system at any level of detail. The information within a data flow diagram includes a graphic representation of the system that can show data flows and data processes, as well as indicating the source and destinations of the data. The primary purpose of data flow diagramming is to provide a connection between system developers and end-users and to provide a mutually understood depiction of the system. (Koran 1997) A data flow diagram can be described as the following.

A data flow diagram (DVD) is a graphical tool that allows analysts (and users) to depict the flow of data in an information system. DVD graphically representing the functions, or processes, which capture, manipulate, store and distribute data between a system and its environment and between components within a system.