Network Design Proposal Summary

# Summary

This network design proposal was created to update the communication network between multiple locations in the Maryland public education system. This reports was composed of 5 main sections: Feasibility Study, Network Needs Analysis, High-Level Network Design, Detailed Design Documentation, and Cost-Benefit Analysis. The feasibility study describes the overall system in its current state, design assumptions, objectives of the network proposal, intended users, and physical information about the locations using the network. The network needs analysis combines network objectives with current network usage data. The high level network design further details diagrams of the proposed network setup, referencing specific technology devices and medium. Costs, availability, performance, and maintainability of the proposed technology devices are listed in the Detailed Design Documentation section. The report finishes with a cost-benefit analysis of the proposed changes. An appendix is also added detailing network usage.

# Strengths

Three strengths of this report supporting the network design proposal are: Details of network analysis, details of the equipment proposed, and feasibility study readability.

The details of the network analysis are specific to the clients. The analysis highlights specific data type and sources to be used within the network. Listing information as Microsoft Word, voice and video, and graphics makes this analysis simple and clear to the reader. Data speed, load variation, and storage requirements are also included. These requirements use a combination of current network user data as well, as well as coordination with the number of users in the system.

The equipment proposed to be used in the system is detailed in multiple ways. Two sections of equipment detail are High-Level network design and Detailed design documentation. This High-Level network design is a chart giving a representation of the equipment, with specific detail for each type of device in each type of network. This representation also shows with which mediums each location will communicate with each other. The mediums and equipment information are further detailed in the Detailed Design Documentation section. This documentation uses actual numbers and facts to make powerful statements.

The third strength highlighted in this document is the Feasibility Study section. This section details the information about the proposal as it pertains to the client. Objectives of this proposal are clearly enumerated in this section. Objectives include update the current system, secure service, information processing, and collaboration. The distance between impacted locations and intended users are also listed. The overall information listed takes into consideration who will be reading the report. Outside regulatory agencies and other unfamiliar with this situation can more easily understand the proposal ideas.

# Weaknesses

Two weaknesses of this report are technical definitions and inconsistent facts.

Although the overall information listed is readable by different audiences, some of the technical information is very detailed. In the Feasibility Study, terms such as LAN, WAN, and ASCII are included. These terms are not defined later in the report. These terms are used repeatedly used in the text and diagrams, which are used to support the proposal. A picture using undefined terms may not provide the actual value across all reading audiences.

The next weakness is inconsistent facts. In the Network Needs Analysis, an observation is mentioned for LAN usage during the times period January to March 2001. Alone, these dates and following data of network traffic volume helps to support the load estimates. A network usage chart is used in the Appendix, however, detailed for January to March 2000. It is possible the author intended to title the chart for year 2001 or uses this chart placed, not matching supporting text. Another use of inconsistent facts is in the Cost Benefit Analysis. The benefits sections contains products such as “Decreased Anxiety”, “Less Training Time”, and “Increased Staff Morale”. Although “Increased Staff Morale” is in an Intangible Benefits section, “Decreased Anxiety” is not. Without supporting facts such as medical reports supporting anxiety trends and current training times of Office of Education staff, these products could be regarded as opinions. These bad facts could easily diminish the credibility of the rest of the paper.