The Technical Term Paper will include the detailed response to the network design request. The document will be submitted in MS Word and will be between 10-15 pages with graphics embedded within the document.

**Background**

You are a small network design company called Wide-IP that is looking for that big break. As the CTO of the Wide-IP company, you recently made a persuasive presentation of your company's approach to designing networks at a large industry event. The CEO of Fiction Corporation, a large retail chain, was impressed by your presentation. It looks like you've finally got your break! You have a small team of 10 technically proficient staffers with a strong background in project management, networking, and internetworking skills that include PMP, Network+, CCNP, and CISSP credentials.

You have been selected by Fiction Corporation to develop a network design document and plan without an RFP.

**Overview**

Fiction Corporation, a large national retail chain of 10,000 employees and 500 retail outlets, is migrating its one primary data center operation to a new headquarters building several miles away. The company wishes to upgrade its network and correct any security flaws in its infrastructure as part of this move. The Fiction CEO has informed you that the capital budget for this migration cannot exceed $500,000 and must not interrupt business operations. What follows is a brief background that will serve as your foundation in developing the network design.

The data in the center supports remote retail locations, an off-site 100 seat call center and 3 remote warehousing operations 24 hours a day with annual uptime at 99.9%. Any significant downtime to its production systems would impact Fiction Corporation's operations and profitability. From the data processing viewpoint, the move includes 2 large UPS, 4 RS/6000 AIX application servers, 10 virtualized servers and 20 PC servers.

The network consists of approximately 500 remote location retail stores connected via frame relay (with ISDN backup) to 10 routers at the data center running a common LAN shared by the entire organization. The retail operations also run WLANs that are on its own subnet. You will have a T1 link and ISDN as a primary backup. Network managers also need to monitor the status of remote systems. The SNMP management system must be able to detect and report failure of the remote system or its communications link and the status of individual applications.

The company wishes a seamless migration that minimizes impact to its customers and employees. Any gaps in this background will require you to make sound technical and persuasive assumptions that satisfy the customer's goals that are within the budget guidelines.

You were selected in part due to your detailed analysis and agreement to an implementation cost that will not exceed $500,000. Your network migration plan will be in phases with noted milestones. Key to the success of this plan is the availability of a T1 link between the remote sites to support remote bridging and development of configurations for all the remote routers.

Include the following in your assignment:
1. Title page
2. Table of contents
3. Executive summary
4. Project goal
5. Project scope
6. Design requirements:

a. Business goals
b. Technical goals
c. User communities and data stores
d. Network applications

7. Current state of the network
8. Logical design
9. Physical design
10. Results of network design testing

11. Discuss the availability of a T1 link.
11. Implementation plan with a project schedule
12. Project budget with a return on investment calculation
13. Design document appendix