

Department of Computer Engineering

COE 443: High-Speed Networks – Spring 2001 (002)

Project Description

A corporate specializing in the business of multimedia and movie production wants to setup a network to serve the different offices of the corporation. The corporate network spans the Kingdom with three regional offices in Khobar, Riyadh, and Jeddah. Khobar office is the corporate headquarter. Moreover there are 10 branches that need to be connected to the nearest regional office. There is a total of 200 employees in the corporate. The corporate is divided into three major departments:

1. Management and client services (10+40 employee)
2. Accounting (10 employee)
3. Multimedia production (140).

Each of the employees is using a PC or a workstation according to his job. Managerial employees are mainly involved with management tasks and they intensively use PCs. Similarly clients service and accounting personnel use PCs. Sometimes client service personnel might need to send a movie to a client or run a movie that is stored in the corporate database. Multimedia production staff, on the other hand, use high-performance image processing machines such as Silicon Graphics for picture and movie rendering.

The client wants to interconnect those offices with the following objectives in mind:

1. Maximum utilization
2. Minimum cost
3. Expandability
4. Security
5. Video on demand, if possible.