

MegaFrame - Case Study

Problem: A manufacturing company, with three locations in Massachusetts and two in Rhode Island was in need of a solution. The primary objective was to provide all the locations access to a centralized database at the company's headquarters. A second objective was to provide Internet access - primarily for email purposes to all locations.

In the course of putting together viable solutions the company contacted several vendors: the local phone company, a large carrier, and several ISPs (including **MegaNet**). Eventually the decision makers narrowed the list to two possible technology solutions, Point to Point (PTP) connections from each location back to company headquarters or Frame Relay. Frame Relay in its simplest explanation is a private wide area network offered by the local phone company, telephone carriers and advanced network service providers.

Point to Point (PTP) Model

Point to Point was available through all the companies contacted. The model was very simple. The manufacturing company would order private T-1 lines between each of their 4 remote locations and have the circuits provisioned back to company headquarters, with a fifth T-1 provisioned from the company headquarters to the Internet. The disadvantages became clear when the company started to calculate the costs involved. PTP lines are priced according to mileage, the further away a location is from company headquarter the more costly the PTP line. It was becoming evident that the PTP solution was looking less appealing due to one of the locations remoteness to the other 4 sites and the charges that would be incurred to connect this location. All the proposals except **MegaNet's** included an inter-lata charge for crossing state lines, this added an additional \$1200 per line on the two out of state locations. **MegaNet** is able to reduce these charges because we can allow customers to use our existing private network between the two states. Equipment cost was another consideration. Each PTP line requires equipment on both ends of the line, at a cost of about \$2000 per end. The final cost consideration was the price of the T-1 line to the Internet. With five locations needing access to the Internet over one T-1 line the company realized they would need to purchase more bandwidth to provide stable performance. The company decided to concentrate on a Frame Relay network model.

Frame Relay (FR) Model

Frame Relay was offered by the local telephone company, the large carrier, and **MegaNet**. The advantages of Frame Relay over PTP were immediately obvious after a thorough evaluation of the PTP deployment. The FR model required the installation of one T-1 circuit at each location including company headquarters. This fact translated into immediate cost savings of \$8000 on equipment, as they would only need one set of equipment at each location. The monthly recurring cost per Frame line was equal at all locations, however the two out of state lines still incurred additional inter-lata charges. **MegaNet**, because of its existing private network, only charged an additional \$200 per inter-state frame connection, as opposed to the \$1200 the large carrier and the local telephone company charged. The FR network also offered an option not available with PTP: the addition of extra Permanent Virtual Circuits (PVC) that create virtual paths between locations. Unlike the PTP model with all network traffic dependent on the main company headquarters, PVCs allow for direct connectivity between individual locations and the Internet if necessary. With the addition of low bandwidth PVCs from each location directly to the Internet instead of company headquarters, the company would be able to save money and run an efficient network. Internet bandwidth fees were reduced, Internet traffic would travel directly to the Internet and not through company headquarters reducing any potential performance degradation, and each location was given flexibility on the amount of bandwidth required.

Solution: The contract was awarded to **MegaNet Communications** on the basis of the following. 1. **MegaNet's** cost per connection was on average 25% lower on instate connections and 65% lower on intra-state connections than the local phone company and large carrier. 2. **MegaNet** offered 24 hour equipment replacement and free configuration. 3. One of the decision makers in the manufacturing company had deployed a Frame Relay network with the local phone company in a past position. Remembering the problems associated with the installation and the multiple departments within the phone company that need to coordinate the deployment, he found solace in the fact that **MegaNet** assigned one technician to the company's FR network. This technician would design, build, and remain the technical contact for the company's FR network. 4. **MegaNet** was equipped with the same telecommunications equipment used by the carrier and local phone company. 5. **MegaNet** worked closely with the customer in understanding their needs and developing a cost effective and appropriate solution.