

# Chapter 5

## Example Models

This chapter presents several examples of telecom and LAN network models. They are meant only to illustrate some types of issues you can investigate using the net-Works application. In order to ensure that the diagrams are viewable on a single page, these examples omit some equipment models that might normally have been included in the network model.

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### Telecom Model 1: Telephone Traffic

The first example demonstrates telephone traffic between three different cities with direct and alternate paths available to each. (See Figure 5.1.) In this configuration the fiber link between City A and City B might suggest that a higher volume traffic typically flows between these cities compared to the other pairs. Using this model you could investigate equipment capacity issues by manipulating capacity values, call generation rates, holding times, or possibly the call destination probabilities associated with the banks of telsets. You might also examine the effect of various equipment failures on call blocking rates in this network.

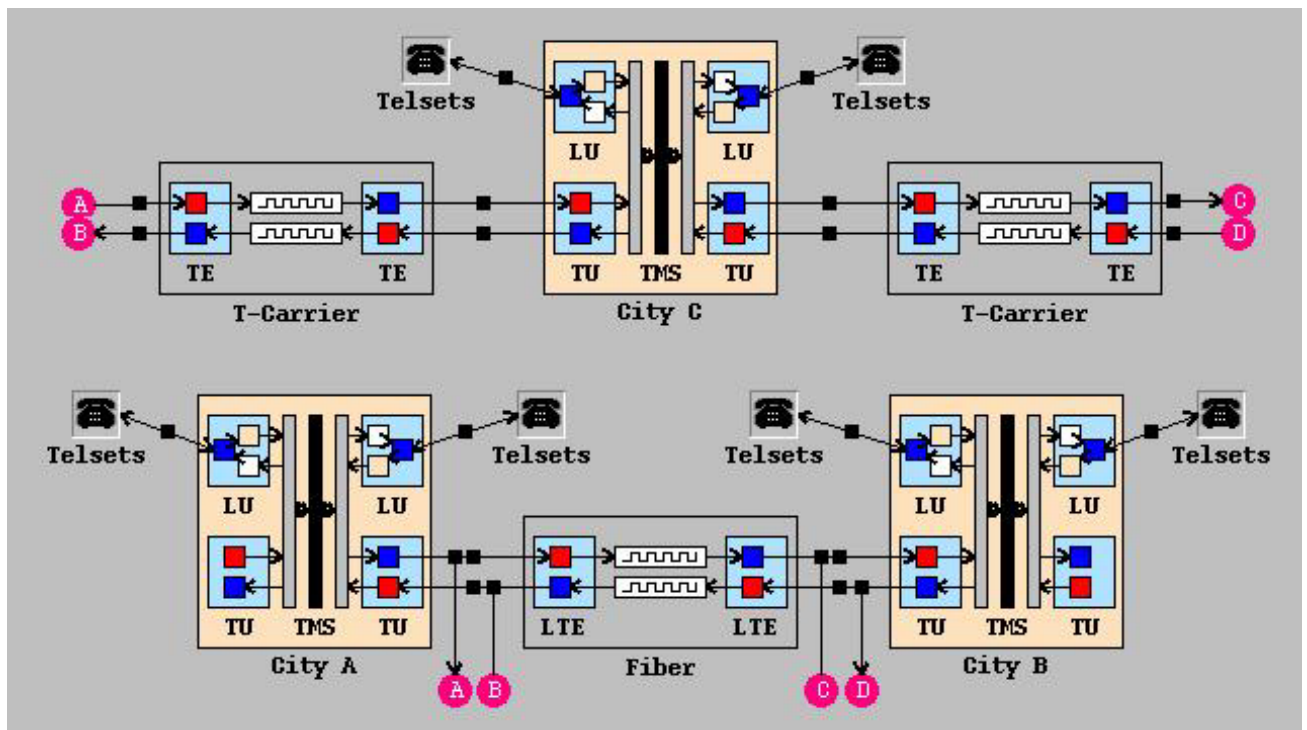


Figure 5.1. Telecom Model 1

## Telecom Model 2: Performance Issues

The telecom example shown in Figure 5.2 might be used to investigate performance issues between several locations. The section of the model between the two Toll Digital Switch models might represent an interexchange carrier segment. Using this model, you could investigate the impact of using different interexchange carriers or possibly examine the effects of replacing various pieces of equipment in the network on different performance attributes (for example, noise and delay). If you replace the local and tandem switch models with their PBX counterparts, this model could represent a small corporate network.

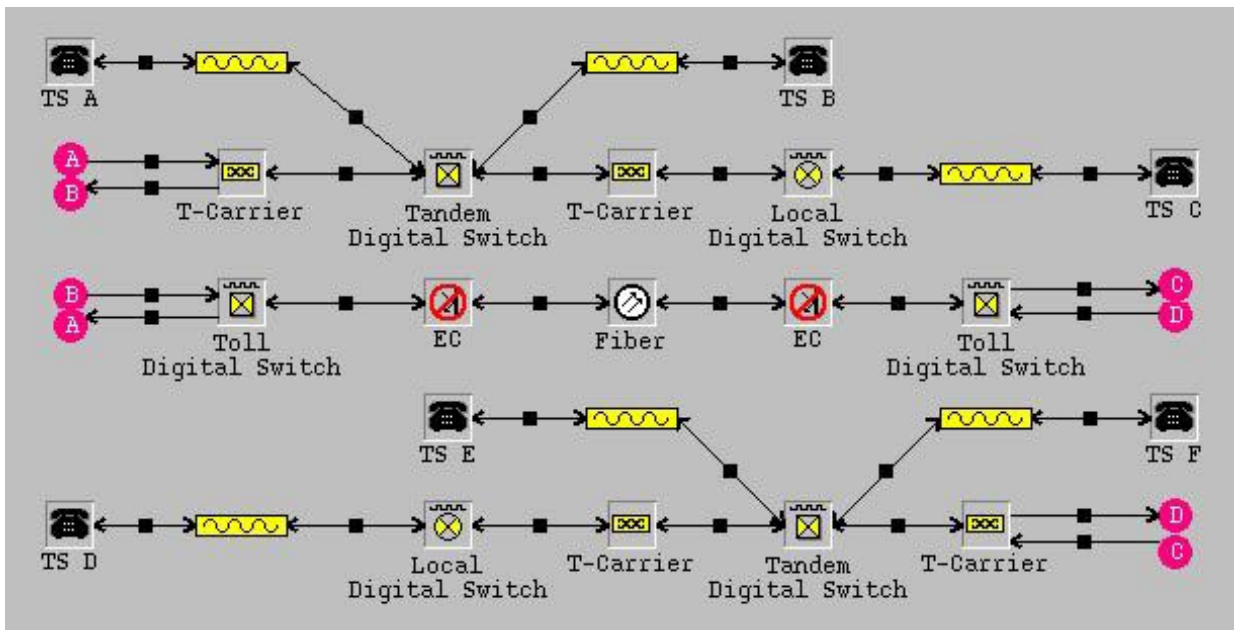


Figure 5.2. Telecom Model 2

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## LAN Model 1: Single LAN

This LAN example (Figure 5.3) depicts a single LAN architecture with multiple Computing Device models attached to a Hub model. You could use this model to investigate how different MAC protocols might impact a specific application running on your LAN. Or you could analyze the effect of changing properties of the Server model or possibly adding another Server model and then redistributing traffic. Other possibilities include changing the average length of the distance between the Computing Device models and the Hub model or maybe examining the impact of adding a new application to your network.

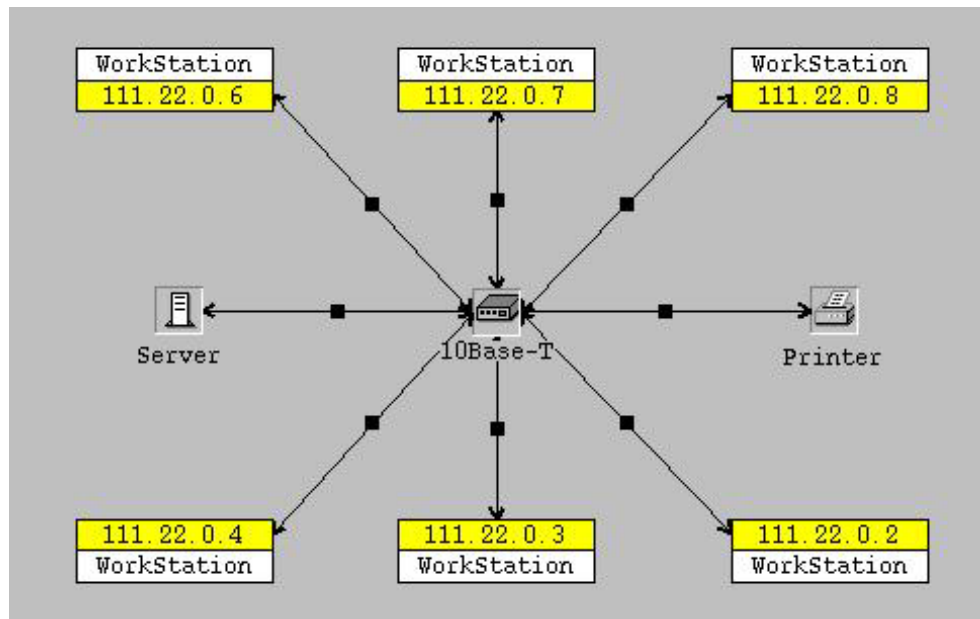


Figure 5.3. LAN Model 1

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