

Pert example essay



**ASSIGN
BUSTER**

A simple six-activity project is used to illustrate: the identification of project activities, development of activity time estimates, the development of the project network, the development of the PERT/CPM critical path and the probability of on-time completion using the critical path, the development of the critical chain, and the probability of on-time completion using the critical chain. The case can be readily extended to discuss the effects of activity crashing, as well as the proper placement of buffers within the critical chain network.

The overall objective is simply to illustrate the development and use of the critical chain in single project management. In this exercise, I ask the students to assume that they are interested in “knocking over” a Jewelry store. (Some instructors may balk at the idea of using a robbery as an example. The concepts can be taught using a different story line for the project network? one possible project would be writing a group paper for class. The students are divided into groups of three? representing the three would-be felons. They are told that they are to plan a cat burglary rather than simply walking into the cuisines with weapons drawn. They should plan to do this at night because the police have a longer response time and because the night patrolman comes by every 50 minutes. The store has an external alarm, a Jewelry safe, an office alarm, and a safe full of securities in the office.

They are given the diagram in Figure 1 and asked to develop a list of all of the activities that need to be completed in order to completely clean out the store. After they are given a few minutes to develop the list of activities,

compare their lists to the following: A, disarm the exterior alarm system; B, disarm the office alarm system;

I provide the following activity durations: 20 minutes to disable the exterior alarm system; 7 minutes to disable the office alarm system, 7 minutes to crack and clean out the office safe, 14 minutes to crack the Jewelry safe, 4 minutes to stuff the contents of the Jewelry safe into bags, and 10 minutes to gather all of the loot and exit the premises. The total of all activity time estimates is 62 minutes. Ask the students if they should abort the plan since the total time of the activities (62 minutes) is greater than the allowable time (50 minutes).

Students quickly recognize that all activities do not need to be performed sequentially, but rather, that some activities can be accomplished in parallel whereas others must be in a specific technological order. The next step would be to decide the proper order in which to proceed. The exterior alarm must be disabled before any of the other activities can begin. But once inside the store, they realize that the office alarm and safe can be attacked while the Jewelry safe is being opened.

I tell the students that they are all in this thing together, and stipulate that everyone must exit the building as a group? either they all are caught or they all get away clean. After some discussion about how to create an ordered list of activities, I introduce the activity-on-node method of diagramming a project.