CRASHING

(a) Float:

The difference between the latest start time and earliest start time of an activity iscalled as float. Float is a measure of the amount of time by which the start of an activitycan be delayed consistent with the completion of the project on time.

(b) Total Float:

Total float of an activity is defined as the difference between the maximumduration of time available for the completion and duration required to carry out thatduration.

Resource leveling:

The aim is reduce the peak resource requirements and smooth out period to periodassignment within a constraint on the project duration.

Crashing:

Higher amounts of direct activity cost would be associated with smaller activityduration times, while longer duration time would involve comparatively lower directcost. Such deliberate reduction of activity times by putting in extra effort is calledCrashing.

various methods of presenting project schedules.

Communicating the project schedule is a vital ingredient in successful project

management. A good presentation will greatly ease the manager's problem of

understanding the multitude of activities and their inter-relationships. Moreover,

numerous individuals and parties are involved in any project, and they have to understand

their assignments. Graphical presentations of project schedules are particularly useful

since it is much easier to comprehend a graphical display of numerous pieces of

information than to sift through a large table of numbers. Early computer scheduling

systems were particularly poor in this regard since they produced pages and pages of

numbers without aids to the manager for understanding them. It is extremely tedious to

read a table of activity numbers, durations, schedule times, and floats and thereby gain an

understanding and appreciation of a project schedule. In practice, producing diagrams

manually has been a common prescription to the lack of automated drafting facilities. Indeed, it has been common to use computer programs to perform critical path scheduling and then to produce bar charts of detailed activity schedules and resource assignments manually. With the availability of computer graphics, the cost and effort of producing graphical presentations has been significantly reduced and the production of presentation aids can be automated.

Network diagrams for projects have already been introduced. These diagrams provide a powerful visualization of the precedences and relationships among the various project activities. They are a basic means of communicating a project plan among the participating planners and project monitors. Project planning is often conducted by producing network representations of greater and greater refinement until the plan is satisfactory.

An Example Bar Chart for a Nine Activity Project

Bar charts are particularly helpful for communicating the current state and schedule of activities on a project. As such, they have found wide acceptance as a project representation tool in the field. For planning purposes, bar charts are not as useful since they do not indicate the precedence relationships among activities. Thus, a planner must remember or record separately that a change in one activity's schedule may require changes to successor activities. There have been various schemes for mechanically linking activity bars to represent precedences, but it is now easier to use computer based tools to represent such relationships.

1. Normal cost:

Normal cost is the lowest possible direct cost required to complete an activity.

2. Normal time:

Normal time is the maximum time required to complete an activity at normal cost.

3. Crash time:

Crash time is the minimum possible time in which an activity can be completedusing additional resources.

4. Crash cost:

Crash cost is the direct cost i.e., anticipated in completing an activity within thecrash time.

 Define activity cost slope.

Activity cost slope is the rate of increase in the cost of activity per unit with adecrease in time. The cost slope indicates the additional cost incurred per unit of timesaved in reducing the duration of an activity.

Activity Cost slope =crash cost – Normal cost .Normal time – Crash time