FAQ's

1. **What is the difference between PERT and CPM?**

PERT	CPM
PERT stands for Program Evaluation and Review Technique	CPM stands for Critical Path Method
It's a probabilistic tool using 3 estimates of duration	It's a deterministic tool, uses only single estimate of duration
It's a basically tool for planning	CPM can be used to control both time and cash
PERT is more suitable for R&D related projects	CPM is best suited for routine projects where time and cost is accurate.
PERT is event oriented	CPM is activity oriented

2. **What are the steps in the PERT Planning Process?**

   PERT planning involves the following steps:

   1. Identify the specific activities and milestones.
   2. Determine the proper sequence of the activities.
   3. Construct a network diagram.
   4. Estimate the time required for each activity.
   5. Determine the *critical path.*
   6. Update the PERT chart as the project progresses.

3. **Explain PERT time estimates in detail.**

   Time Estimation
   A distinguishing feature of PERT is its ability to deal with uncertainty in activity completion times. For each activity, the model usually includes three time estimates:
   1. Optimistic time (To)
   2. Most likely time (Tm)
   3. Pessimistic time (Tp)

   Te = (To+4Tm+Tp)/6
   Te= weighted arithmetic average time

   The expected time for each activity can be approximated using the following weighted average This expected time might be displayed on the network diagram.
   Variance for each activity is given by: $[(Tp - To) / 6]^2$

4. **What are PERT benefits and limitations?**

   Benefits
   • Expected project completion time.
   • Probability of completion before a specified date.
   • The critical path activities that directly impact the completion time.
   • The activities that have slack time and that can lend resources to critical path activities.

Limitations

The activity time estimates are somewhat subjective and depend on judgment. In cases where there is little experience in performing an activity, the numbers may be only a guess. In other cases, if the person or group performing the activity estimates the time there may be bias in the estimate.

The underestimation of the project completion time due to alternate paths becoming critical is perhaps the most serious.