Chapter Thirteen

Progress and Performance Measurement and Evaluation

Structure of a Project Monitoring Information System

- Creating a project monitoring system involves determining:
  - *What* data to collect
  - *How*, *when*, and *who* will collect the data
  - How to *analyze* the data
  - How to *report* current progress to management

Project Monitoring Information System

- Information System Structure
  - What Data Are Collected?
    - Current status of project (schedule and cost)
    - Remaining cost to complete project
    - Date that project will be completed
    - Potential problems to be addressed now
    - Cost and/or schedule overruns and the reasons for them
    - Forecast of overruns at time of project completion

Project Monitoring Info. System (cont'd)

- Information System Structure (cont'd)
  - Collecting Data and Analysis
    - Who will collect project data?
    - How will data be collected?
    - When will the data be collected?
    - Who will compile and analyze the data?
  - Reports and Reporting
    - Who will receive the reports?
    - How will the reports be transmitted?
    - When will the reports be distributed?

Project Progress Report Format

- Progress since last report
- Current status of project
    1. Schedule
    2. Cost
    3. Scope
- Cumulative trends
- Problems and issues since last report
    1. Actions and resolution of earlier problems
    2. New variances and problems identified
- Corrective action planned

The Project Control Process

- Control
  - The process of comparing actual performance against plan to identify deviations, evaluate courses of action, and take appropriate corrective action
- Project Control Steps
  1. Setting a baseline plan
  2. Measuring progress and performance
  3. Comparing plan against actual
  4. Taking action
- Tools for Monitoring Time Performance
  - Tracking Gantt chart
  - Control chart
  - Milestone schedules

Baseline and Tracking Gantt Charts

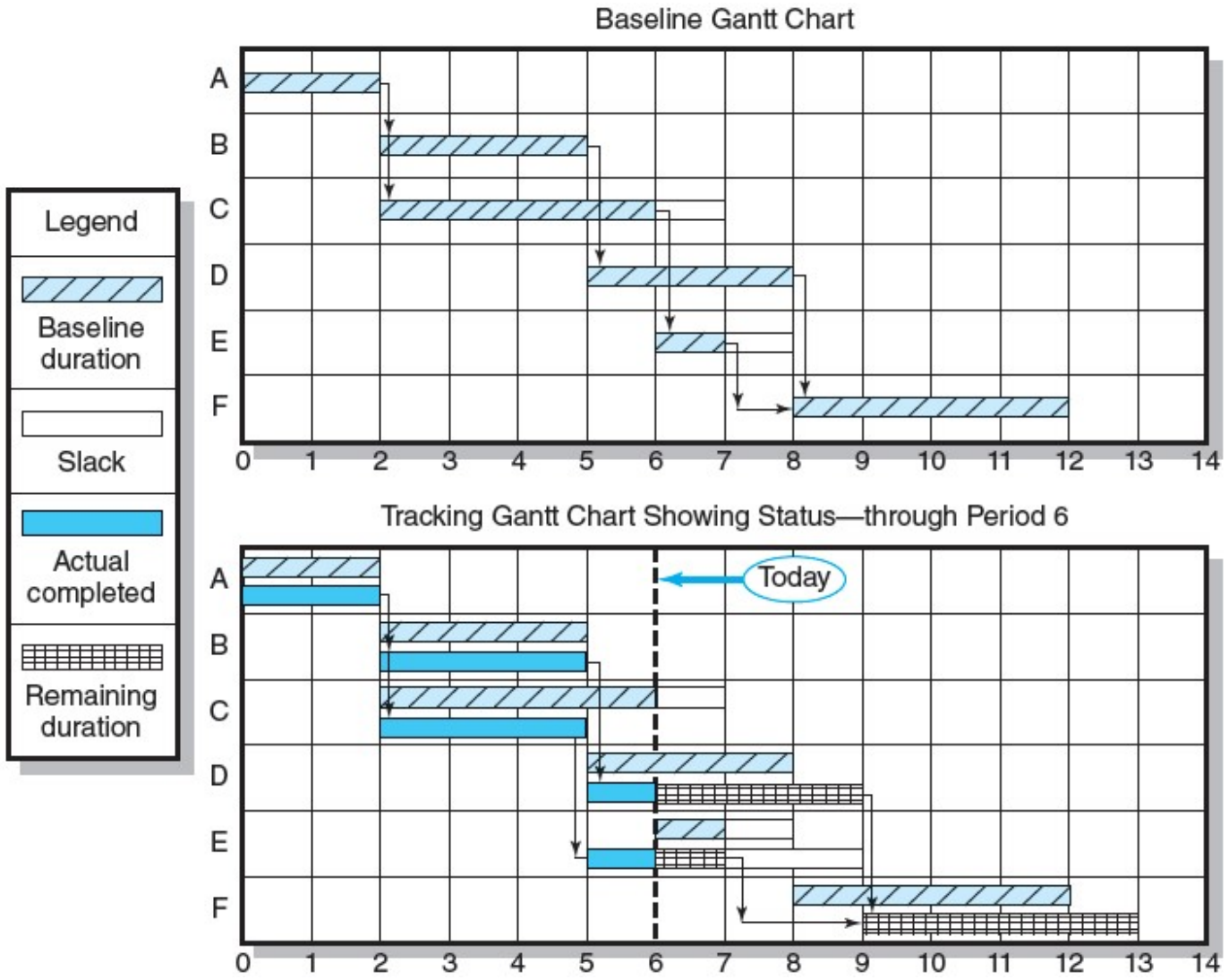

FIGURE 13.1

Project Schedule Control Chart

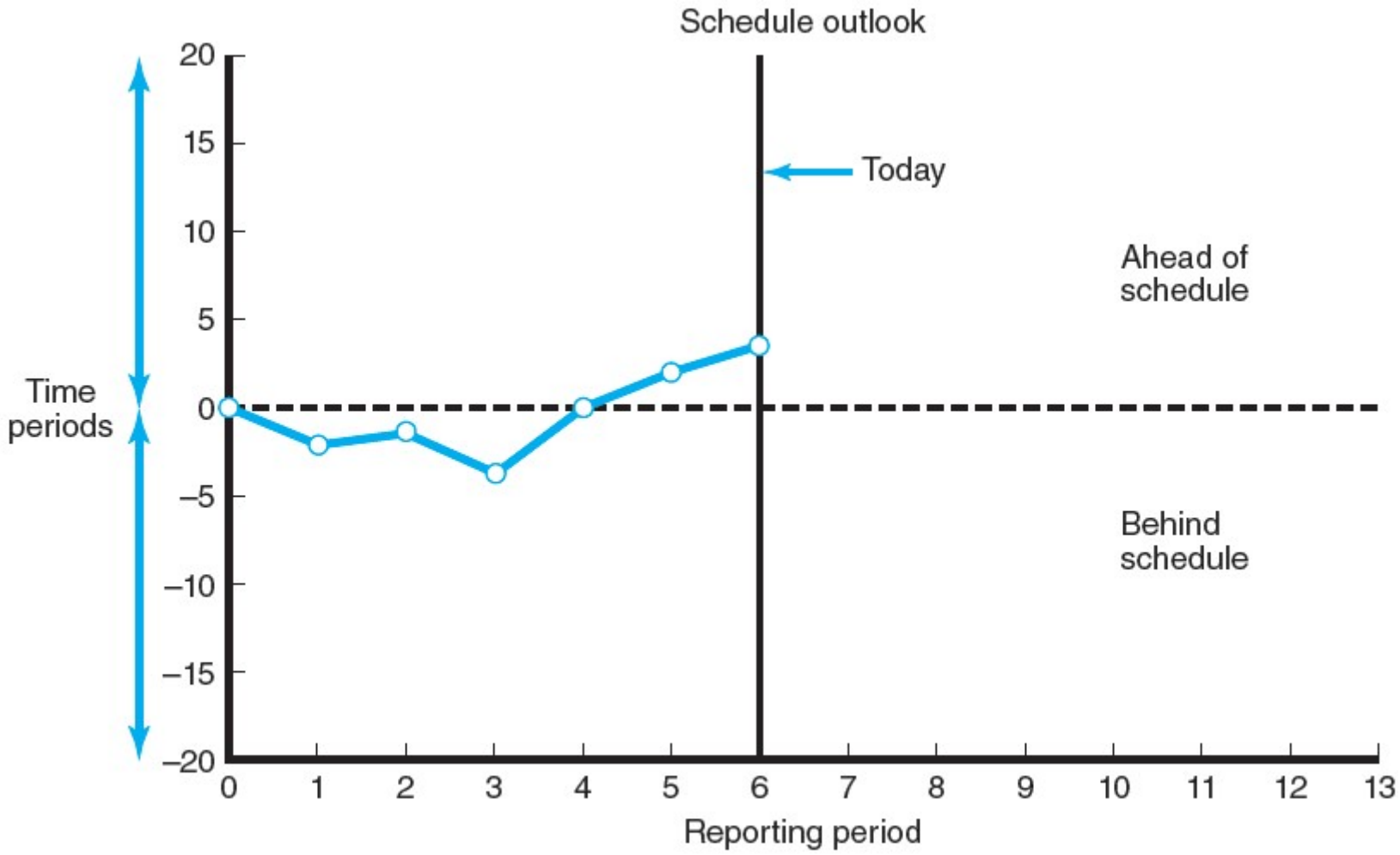

FIGURE 13.2

Development of an Earned Value Cost/Schedule System

- Time-Phase Baseline Plan
  - Corrects the failure of most monitoring systems to connect a project's actual performance to its schedule and forecast budget.
    - Systems that measure only cost variances do not identify resource and project cost problems associated with falling behind or progressing ahead of schedule.
- Earned Value Cost/Schedule System
  - An integrated project management system based on the earned value concept that uses a time-phased budget baseline to compare actual and planned schedule and costs

Glossary of Terms

EV	**Earned value for a task is simply the percent complete times its original budget. Stated differently, EV is the percent of the original budget that has been earned by actual work completed. [BCWP—budgeted cost of the work performed].**
PV	**The planned time-phased baseline of the value of the work scheduled. An approved cost estimate of the resources scheduled in a time-phased cumulative baseline [BCWS—budgeted cost of the work scheduled].**
AC	**Actual cost of the work completed. The sum of the costs incurred in accomplishing work. [ACWP—actual cost of the work performed].**
CV	**Cost variance is the difference between the earned value and the actual costs for the work completed to date where CV = EV – AC.**
SV	**Schedule variance is the difference between the earned value and the baseline line to date where SV = EV – PV.**
BAC	**Budgeted cost at completion. Total budgeted cost of the baseline or project cost accounts.**
EAC	**Estimated cost at completion.**
ETC	**Estimated cost to complete remaining work.**
VAC	**Cost variance at completion. VAC indicates expected actual over- or under-run cost at completion.**

TABLE 13.1

Cost/Schedule Graph

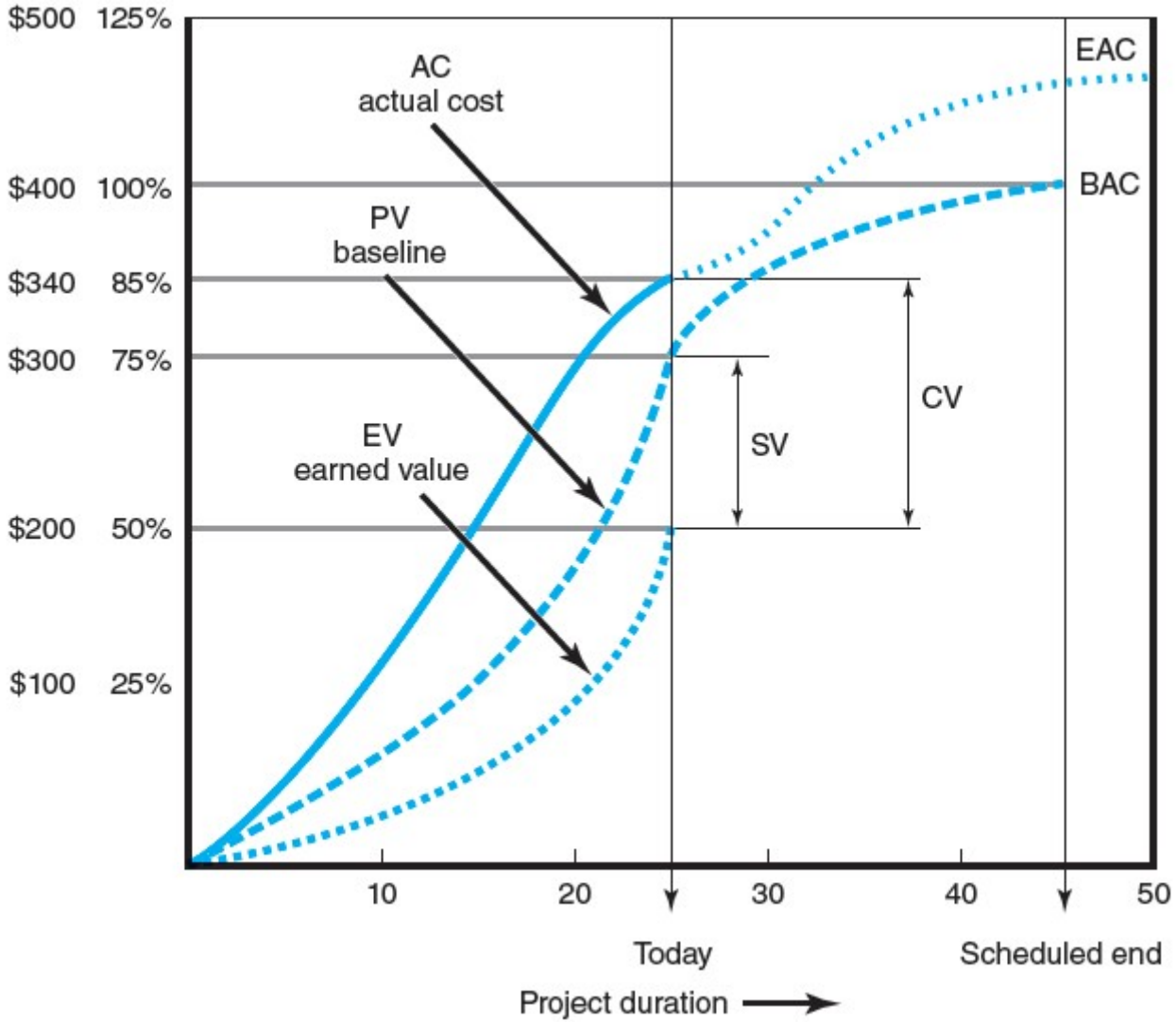

FIGURE 13.4