Work Breakdown Structure

HEUBLEIN PM&C PROGRAM
1000 Program Plan
2000 PM&C System
  2100 Design-Phase Reports
    2101 Analyze Project Scope
    2102 Define Performance Reports
    2103 Define Project Planning
    2104 Define Revision Procedure
    2105 Define Approval/Signoff Procedure
    .
    .
    .
    2121 Define Record Retention Policy
    2122 Define Computer Support Systems Requirements
2200 Procedures Manual
    2201 Procedures Manual
    2202 Final Manual
2300 Reporting and Control System
2400 Computer Support Survey
    2401 PERT/CPM
    2402 Scheduling
    2403 Accounting
3000 General Training
  3100 Project Planning and Control Seminar
    3101 Objective Setting
    3102 WBS
    .
    .
    .

FIGURE 5 Project structure.

Project Costs

The WBS provides a listing of the tasks to be performed to achieve the project objectives; with only the WBS in hand it is possible to assemble a preliminary project estimate. The estimates based only on the WBS are preliminary because they reflect not only uncertainty (which varies considerably among types of projects), but because the allocation of resources to meet schedule difficulties cannot be determined until both the network and the schedule and resource evaluations have been completed. However, at this time the project planner can begin to hierarchically assemble costs for use at any level. First the lowest level activities of work (sometimes called "work packages") can be assigned values. These estimates can be aggregated in accordance with the WBS tree structure to give higher level totals. At the root of the tree there is only one element—the project—and the total preliminary estimated cost is available.

Figure 6 shows the costs as summarized for the PM&C program plan. This example is supplied to give the reader an idea of the nature of the costs to be expected in carrying out such a PM&C program in this type of situation. Since a project-oriented cost accounting system does not exist, out-of-pocket costs are the only incremental charges. Any organization wishing to cost a similar PM&C program will have to do so within the framework of the organizational approach to costing indirect labor. As a guide to such costs, it should be noted that in the Heublein PM&C Program, over 80 percent of the costs—both out-of-pocket and indirect—were in connection with the General Training (WBS code 3000).

Seminars were limited to two and two-and-a-half days to assure that the attendees perceived the educational process as efficient, tight, and not unduly interfering with their work; it was felt that it was much better to have them leaving with a feeling that they would have liked more rather than the opposite. Knowing the number of attendees, it is possible to determine the labor-days devoted to travel and seminar attendance; consultant/lecturer's fees can be obtained (expect preparation costs) and the incidentals (travel expenses, subsistence, printing, etc.) are easily estimated.

Network

The PM&C system at Heublein requires networks only for major projects, but encourages their use for all projects. Figure 7 shows a segment of the precedence table (used to create the network) for the PM&C Plan. All the usual principles of network creation and analysis (for critical path, for example) may be applied by the project manager to the extent that it facilitates planning, implementation, considerable emphasis PM network creation and analysis techniques in the educational phases of the PM&C Program because the network is the basis of the scheduling methods presented, is potentially of great value, and is one of the hardest concepts to communicate.

Labor costs	
Development & Design	$ 40,000
Attendees' time in sessions	60,000
Startup time of PM&C in Group	40,000
Basic Educational Package	
Consultants' fees	20,000
Attendees' travel & expenses	30,000
Miscellaneous	10,000
Total Program Cost	$200,000

Out-of-pocket costs: $60,000

FIGURE 6 Program costs.