

Use any project network computer program available to you to develop the schedule for activities (see Case Appendix for further instructions)—noting late and early times, the critical path, and estimated completion for the project. Prepare a short memo that addresses the following questions:

1. Will the project as planned meet the October 25th deadline?
2. What activities lie on the critical path?
3. How sensitive is this network?

Case

Nightingale Project—B



Rassy and the team were concerned with the results of your analysis. They spent the afternoon brainstorming alternative ways for shortening the project duration. They rejected outsourcing activities because most of the work was developmental in nature and could only be done in-house. They considered altering the scope of the project by eliminating some of the proposed product features. After much debate, they felt they could not compromise any of the core features and be successful in the marketplace. They then turned their attention to accelerating the completion of activities through overtime and adding additional technical manpower. Rassy had built into her proposal a discretionary fund of \$200,000. She was willing to invest up to half of this fund to accelerate the project, but wanted to hold onto at least \$100,000 to deal with unexpected problems. After a lengthy discussion, her team concluded that the following activities could be reduced at the specified cost:

- Development of voice recognition system could be reduced from 15 days to 10 days at a cost of \$15,000.
- Creation of database could be reduced from 40 days to 35 days at a cost of \$35,000.
- Document design could be reduced from 35 days to 30 days at a cost of \$25,000.
- External specifications could be reduced from 18 days to 12 days at a cost of \$20,000.
- Procure prototype components could be reduced from 20 days to 15 days at a cost of \$30,000.
- Order stock parts could be reduced from 15 days to 10 days at a cost of \$20,000.

Ken Clark, a development engineer, pointed out that the network contained only finish-to-start relationships and that it might be possible to reduce project duration by creating start-to-start lags. For example, he said that his people would not have to wait for all of the field tests to be completed to begin making final adjustments in the design. They could start making adjustments after the first 15 days of testing. The project team spent the remainder of the day analyzing how they could introduce lags into the network to hopefully shorten the project. They concluded that the following finish-to-start relationships could be used to

- Order stock parts could be reduced from 15 days to 10 days at a cost of \$20,000.
 - Order custom parts could be reduced from 15 days to 10 days at a cost of \$20,000.
 - Training sales representative completed 5 days after the project starts.
- As the meeting adjourns, Rassy presented and try to develop a project network. You are to prepare a report to the following questions:

1. Is it possible to meet the deadline?
2. If so, how would you recommend why? Assess the relative impact of each activity on shortening project duration.
3. What would the new schedule be?
4. What other factors should be considered?

CASE APPENDIX: TECHNICAL

Create your project schedule and network diagram. Provide the following information:

1. The project will begin the first week of May.
2. The following holidays are observed: May 4, Labor Day (fourth Thursday in November); May 18, Memorial Day (first Monday in May); and May 27, Mother's Day (second Sunday in May).
3. If a holiday falls on a Saturday or Sunday, then Monday is observed.
4. The project team works Monday through Friday, 9 a.m. to 5 p.m.
5. If you choose to reduce the duration of an activity, then it must be for the specific activity. For example, if you reduce the duration of the database to 37 days at a cost of \$35,000, you cannot reduce the duration of the entire project to 37 days at a cost of \$35,000.
6. You can only spend up to \$100,000 to reduce the duration of the project. Do not incur any additional costs.

Case

The "Now" Wedding



On December 31 of last year, Lauren and Connor announced that she and Connor had decided to get married. After recovering from the shock of the announcement, the following conversation resulted:

Lauren: January 21,