SOFTWARE PROJECT PLAN

Outline and Requirements

***General comments**: The following guidelines are given in italics and represent the bare minimum required to complete this plan. Non-italicized text is to be included in your plan verbatim. All sections must be included in your plan, even if you do not feel it applies.*

1. Introduction

One or two paragraphs which introduce the document..Several sentences on the software to be developed can be included.

1.1. Scope and Purpose of Document

This document outlines the necessary time and cost estimates, risks and risk abatement, and resources required to carry out the development of the software project. This document is primarily for use by the development group, and may be used by the project sponsor as information relating to the management and resource estimates of the project.

1.2. Project Objectives

1.2.1. Objectives

Itemize the objectives of the software development. Characteristics to consider are:

1. *Intended use of the software and scope of user base*
2. *Environmental constraints in which the software will be executing*
3. *Lifetime of the software product*

1.2.2. Major Functions

Identify all the major functions of the software to be produced at a high level. For example, consider a compiled simulator project. The major functions could be:

1. *Product will provide a capability to compile a source command language into an intermediate format and store the resulting modules in a user-controllable library.*
2. *Integrate pre-compiled modules stored in the user-controllable library into an executable simulator program.*
3. *Load and execute the executable simulation program during which event times and values are stored in a file for subsequent diagnostics (diagnostic software is not to be a part of this product).*

1.2.3. Performance Issues

One or two paragraphs detailing all issues relating to the speed at which the software needs to execute. If realtime needs are important, identify them here. Even if timeliness of software execution is not an issue, say so and clearly state why there is no need to be conserned about performance.

1.2.4. Management and Technical Constraints

At a minimum provide one paragraph detailing mangagement constraints associated with the software development, and another paragraph identifing all known inpacting technical constraints. If there are a number of constraints, itemize them in lists. Constraints include computers the software is to operate on, cross compilation constraints, development time and

cost constraints, longevity constraints, memory limitations, and processor limitations (e.g., math coprocessor, peripherals).

2. Project Estimates

2.1. Historical Data Used for Estimates

Show sources and organized data obtained from prior projects that you used to in producing your estimates. Such information is available in journals and publications if direct knowledge of prior projects is not known.

2.2. Estimation Techniques

Outline all estimation techiques you used to develop your estimates in the next section.

2.3. Estimates

This is the primary section in this part of the plan. Show in detail all estimates for manpower loading, hours per task to be accomplished, and costs (yes, even forstudent projects). Show all supporting data. A complete spreadsheet form of presentationis preferred.

3. Project Risks

3.1. Risk Analysis

3.1.1. Identification

Identify all risks associated with this project. Potential risks are 1) limited time to develop software, 2) lack of software development experience of personnel, 3) lack of complete understanding of requirements, 4) improper motivation of developers, 5) lack of knowledge of implementation language.

3.1.2. Risk Estimation

Give an estimate of the importance of each risk identified above. Translate these importance factors into wighting factors to be used in the next section.

3.1.3. Evaluation

Evaluate the impact of all risks on the development and quality of the software you will be developing.

3.2. Risk Management

3.2.1. Risk Aversion Options

Identify all options available to your group to avoid or control risk. Give a table reflecting how each risk aversion technique will reduce each risk.

3.2.2. Risk Monitoring Procedures

Give several procedures in a list of step format that you will implement to reduce all risks.

4. Schedule

4.1. Project Work Breakdown Structure

Give a complete work breakdown structure for your project. This requires you to identify the major subsystems to be developed.

4.2. Task Network]

Provide a task network diagram with sufficient explanation which corresponds with the tasks and breakdown structure.

4.3. Timeline Chart

Provide a Gantt chart for the schedule of effort for your project. The schedule should be detailed to the day. Identify timelines for all tasks shown in the breakdown structure.

4.4. Resource Table

Give a table of resources to be used by task.

5. Project Resources

5.1. People

Identify the people participating in the development of the project. Provide a brief (e.g., one or two paragraphs each) biography of each person as it relates to their skill and qualifications to carry ot the project.

5.2. Hardware and Software

Identify all hardware and software resources that will be used to develop the project items. Describe whenduring the development process they will be used. Project items include reports, source code, executable code, and any other deliverables associated with the project.

5.3. Special Resources

Identify any special or unique resources, if required, that are needed. These resources are usually unique because of limited availability or high useage cost.

6. Staff Organization

6.1. Team Structure

Give an organization chart and description of the organization of the group developing the project.

6.2. Management Reporting

Describe how the members of the group will report to the leader (and possibly to each other). Identify how the group will be keeping the sponsor informed. Describe how the leader will report to the group.

7. Tracking and Control Mechanisms

Describe the policies, processes, and enforcement methods to be used to assure the development process is carried out with the lowest possible risk.

8. Appendices