SOFTWARE DEVELOPMENT PLAN

This document outline is based on the IEEE Standard 1058.1-1987 for Software Project Management Plans.

This is the controlling document for managing a software project, and it defines the technical and managerial processes necessary to deliver the project requirements.
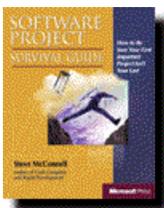
The paragraphs written in the "Comment" style are for the benefit of the person writing the document and should be removed before the document is finalized.

VERSION: DRAFT

23 NOVEMBER, 1997

[AUTHORS]

sdp.doc

REVISION CHART

This chart contains a history of this document's revisions. The entries below are provided solely for purposes of illustration. Entries should be deleted until the revision they refer to has actually been created.

The document itself should be stored in revision control, and a brief description of each version should be entered in the revision control system. That brief description can be repeated in this section. Revisions do not need to be described elsewhere in the document except inasmuch as they explain the development plan itself.

Version	Primary Author(s)	Description of Version	Date Completed
Draft	TBD	Initial draft created for distribution and review comments	TBD
Preliminary	TBD	Second draft incorporating initial review comments, distributed for final review	TBD
Final	TBD	First complete draft, which is placed under change control	TBD
Revision 1	TBD	Revised draft, revised according to the change control process and maintained under change control	TBD
Revision 2	TBD	Revised draft, revised according to the change control process and maintained under change control	TBD
etc.	TBD	TBD	TBD

PREFACE

The preface contains an introduction to the document. It is optional and can be deleted if desired.

CONTENTS

New paragraphs formatted as Heading 1, Heading 2, and Heading 3 will be added to the table automatically. To update this table of contents in Microsoft Word, put the cursor anywhere in the table and press F9. If you want the table to be easy to maintain, do not change it manually.

LIST OF FIGURES

New figures that are given captions using the Caption paragraph style will be added to the table automatically. To update this table of contents in Microsoft Word, put the cursor anywhere in the table and press F9. If you want the table to be easy to maintain, do not change it manually.

This section can be deleted if the document contains no figures or if otherwise desired.

Error! No table of figures entries found.

1. INTRODUCTION

This section should describe the project and the software product being to be built. No text is necessary between the heading above and the heading below unless otherwise desired.

1.1 Project Overview

Give a short summary of the project objectives, the software to be delivered, major activities, major deliverables, major milestones, required resources, and top-level schedule and budget. Describe the relationship of this project to other projects, if appropriate.

1.2 Project Deliverables

List all of the major items to be delivered to the customer (external customer, in-house user, etc.).

List the deliverables, delivery dates, delivery locations, delivery method (email, FTP, CD, etc.), and quantities necessary to satisfy the project's requirements.

1.3 Evolution of the Software Project Management Plan

Describe how you expect this document to evolve over time. This section should be very similar to the "Revision Chart" earlier in the document. The revision chart should list what has already been done to this document. This section should list what is expected to be done to this document.

This chart contains a plan for the document's revisions. The entries below are provided for purposes of illustration. The progression from "Draft" to "Preliminary" to "Final" and then through a section of "Revisions" is one typical approach.

Version	Primary Author(s)	Description of Version	Date Expected
Draft	TBD	Initial draft created for distribution and review comments	TBD
Preliminary	TBD	Second draft incorporating initial review comments, distributed for final review	TBD
Final	TBD	First complete draft, which is placed under change control	TBD
Revision 1	TBD	Revised draft, revised according to the change control process and maintained under change control	TBD
etc.	TBD	TBD	TBD

1.4 Reference Materials

List all the documents and other materials referenced in this document. This section is like the bibliography in a published book.

1.5 Definitions and Acronyms

Provide definitions or references to all the definitions of the special terms and acronyms used within this document.

2. PROJECT ORGANIZATION

In this section, describe the process model (e.g., lifecycle model), the organizational structure (e.g., chain of command or management reporting structure), and responsibilities of individuals on the project.

No text is necessary between the heading above and the heading below unless otherwise desired.

2.1 Process Model

Describe the following items:

- *The project's lifecycle model (e.g., waterfall model, spiral model, evolutionary prototyping model, etc.)*

- *The project's major milestones (content and dates/timing). This should include a text description of the meaning of each milestone plus a Gantt chart or other high-level description of the project's schedule.*

- *Major work products, including content and timing. These should be listed in a table like the following one:*

Work Product Name	Planned Completion Date	Placed Under Change Control?	Deliverable to Cus-tomer?	People Who Must Sign Off on the Work Product
Software Project Management Plan This is the controlling document for managing a software project, and it defines the technical and managerial processes necessary to deliver the project requirements.	TBD	Yes	No	Project Manager, Engineering Lead, QA Lead, Documentation Lead
TBD	TBD	TBD	TBD	TBD

You should consider including all of the top-level work products described in SPSG, including:

- *Change Control Plan*

- *Change Proposals*

- *Vision statement*

- *Top 10 Risks List*

- *Software Development Plan, including project cost and schedule estimates*

- *User Interface Style Guide*

- *User Manual/Requirements Specification*

- *Quality Assurance Plan*

- *Software Architecture*

- *Software Integration Procedure*

- *Staged Delivery Plan*

- *Individual Stage Plans, including miniature milestone schedules*

- *Coding Standard*

- *Detailed Design Documents*

- *Software Construction Plans*

- *Deployment Document (Cutover Handbook)*

- *Release Checklist*

- *Release Sign-Off Form*

- *Software Project Log*

- *Software Project History Document*

The items in this section (and, in general, in this document) can be fully described here, or, if they are described in sufficient detail elsewhere, that description can simply be referenced here.

2.2 Organizational Structure

Describe the internal management structure of the project. Use org charts, matrix diagrams, or other appropriate notations to describe the lines of authority, responsibility, and communication within the project.

2.3 Organizational Boundaries and Interfaces

Describe the relationships between the project and each of the following organizations:

- *Parent organization (upper management)*

- *Customer organization (internal or external)*

- *Subcontracting organization(s) (if any)*

- *QA organization, if separate*

- *Documentation organization, if separate*

- *End-user support organization, if separate*

- *Any other organizations the project interacts with*

This list should include a description of a specific person or project role that is responsible for maintaining the interface between the project and each of these other organizations.

Be sure to identify the person who has ultimate decision-making authority over the project.

2.4 Project Responsibilities

Identify and describe each major project function and activity, and identify the person(s) responsible for each function and activity. You might use a table like the one below:

Responsibility	Persons responsible
Overall Project Manager	TBD
Engineering Manager	TBD
Quality Assurance Manager	TBD
End-User Documentation Manager	TBD
Requirements Development	TBD
Software Architecture	TBD
Technical Self-Reviews	TBD
Etc.	TBD

3. MANAGERIAL PROCESS

Describe management objectives, priorities, project assumptions, dependencies, constraints, risk management techniques, monitoring and controlling mechanisms, and the staffing plan.

No text is necessary between the heading above and the heading below unless otherwise desired.

3.1 Management Objectives and Priorities

Describe the philosophy, goals, and priorities for management during the project. Consider including the following items:

- *kind of status reporting*

- *relative priorities among functionality, schedule, and budget*

- *risk management procedures*

- *approach to acquiring third party software*

- *approach to modifying or using existing software*

3.2 Assumptions, Dependencies, and Constraints

Describe the assumptions upon which the project plans are based, the dependencies of the project plans, and the constraints upon the project plans (e.g., schedule, budget, quality, functionality, etc.)

3.3 Risk Management

Describe the major risks to the project, which the project plan has been designed to address. Describe how risks will be tracked and monitored—using a Top 10 Risks list, risk officer, or so on.

3.4 Monitoring and Controlling Mechanisms

Describe how project cost, schedule, quality, and functionality will be tracked throughout the project. Consider describing the following:

- *Report contents/formats*

- *Reporting structure and frequency*

- *Audit mechanisms*

- *Project website*

- *Time accounting*

3.5 Staffing Plan

Describe the numbers and types of personnel needed to conduct the project. Describe the required skill levels, start times, duration on the project, method of obtaining the personnel, training required, and phasing out of project personnel.

4. TECHNICAL PROCESS

This section describes the top-level technical processes used on the project including the technical methods, tools, and techniques; major software documents; and supporting activities such as configuration management and quality assurance.

No text is necessary between the heading above and the heading below unless otherwise desired.

4.1 Methods, Tools, and Techniques

Describe the following:

- *The computing system environment including hardware and operating system environment;*

- *Software tools including design tools, source code control, time accounting, compiler or IDE, debugging aids, defect tracking, and so on*

- *Development methodologies including requirements development practices, design methodologies and notations, programming language, coding standards, documentation standards, system integration procedure, and so on (these will not all be defined when the first draft of the project plan is created; the section should be updated as the plans become more detailed)*

- *Quality assurance practices including methods of technical peer review, unit testing, stepping through code in a debugger, system testing, automated regression tests, and so on*

4.2 Software Documentation

List the documents that will be developed for the project, including milestones, reviews, and signoffs for each document. The documentation list might include the follow documents:

- *Change Control Plan*

- *Change Proposals*

- *Vision statement*

- *Top 10 Risks List*

- *Software Development Plan, including project cost and schedule estimates*

- *User Interface Style Guide*

- *User Manual/Requirements Specification*

- *Quality Assurance Plan*

- *Software Architecture*

- *Software Integration Procedure*

- *Staged Delivery Plan*

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- *Software Construction Plans*

- *Deployment Document (Cutover Handbook)*

- *Release Checklist*

- *Release Sign-Off Form*

- *Software Project Log*

- *Software Project History Document*

4.3 Project Support Functions

Describe or give references to other documents that describe the plans for functions that support the software development effort, including configuration management, quality assurance, and end user documentation. Whether included in this document or described elsewhere, the plans for these supporting functions should be developed in as much detail as the plans for the software itself are. (This includes responsibilities, resource requirements, schedule, budget, and so on.)

5. WORK PACKAGES, SCHEDULE, AND BUDGET

No text is necessary between the heading above and the heading below unless otherwise desired.

5.1 Work Packages

Describe the work package (i.e., task or collection of tasks) that must be completed to complete the software. Identify each work package with a unique number, and provide a diagram showing the breakdown of work packages into sub-packages.

5.2 Dependencies

Describe the dependencies both among work packages and between the project's work packages and external events.

5.3 Resource Requirements

Describe the resources required for the project week by week or month by month, depending on the length of the project. Describe the numbers and type of personnel that are used, number of computers and software used, office facilities used, training needed, budget used, and so on over the whole course of the project.

5.4 Budget and Resource Allocation

Describe the portion of the project's budget allocated to different functions (e.g., engineering, quality assurance, documentation, management). Describe how the budget will be expended over the course of the project.

5.5 Schedule

Describe the schedule for the various project functions, activities, and tasks, taking into account the various dependencies and required milestone dates and deliverable dates. You can express schedules either as absolute calendar dates or as times relative to key project milestones (e.g., "requirements signed off + 60 days").

6. ADDITIONAL COMPONENTS

Include additional components needed to manage your specific project. Possibilities include subcontractor management plans, security plans, training plans, hardware procurement plans, facilities plans, installation plans, cutover plans, and software maintenance plans.

7. INDEX

The index is optional according to the IEEE standard. If the document is made available in electronic form, readers can search for terms electronically.

8. APPENDICES

Include supporting detail that would be too distracting to include in the main body of the document.