THE SPC PRODUCT LIFE CYCLE

Defined at a Lab/Marketing Off-Site Meeting

Monterey Dunes
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Preface

Software Publishing Corporation's business is to develop and market quality software products. The purpose of this document is to describe the Product Life Cycle - how products are created and delivered to the customer. For the new employee, it serves as a tutorial. For experienced people, it serves as a reference guide.

Chapter 1 describes how product concepts make the transition from an idea to an approved product on the R&D Plan. Chapter 2 discusses the product team - the members, their responsibilities, and how the team should work. Chapter 3 explains the User Specification Document (USD) - a two-part document that describes the features of the product and the manual. Chapter 4 details the Product Marketing Plan (PMP) -another two-part document that describes all the marketing activities required to introduce a product to the marketplace. Chapter 5 shows the Master Schedule, explaining its importance and how it is maintained. Chapter 6 covers the procedures necessary to release a product to Manufacturing. Chapter 7 describes the ongoing life of the product after first shipments--how a product is updated, and the steps involved in product obsolescence. Finally, the appendices contain checklists and forms that are used during each phase of the product life cycle. (These forms can be xeroxed by team members from their copy of this document and used for their product team activities.)

While this document focuses mainly on the development of new products, the same procedures are applicable for other development efforts--product updates and OEM versions. In these other instances, the documents produced may be abbreviated, as described in the chapters.

Chapter 1 - The Product Concept

Overview

The product concept is the first stage in the development of an SPC product. This stage starts after the idea for a new product is conceived. It consists of a preliminary investigation into the feasibility of building and marketing the product, and ends with a formal recommendation to continue development or abandon the idea. If the recommendation is to continue development, approval of the General Manager is required before the next phase of the Product Life Cycle can be started.

Where Do New Products Come From?

Ideas for new products or important enhancements to current products can occur anywhere within SPC. The company commitment to an open communications environment is vital to encouraging creativity throughout the organization.

Informal discussions help to refine a product concept. At some point, the product concept must attract the attention of a product champion, typically a project and/or product manager. This champion, with his or her manager's OK and support, makes a time commitment to investigating the new product idea and selling it to SPC. Before approval is sought, the champion role expands so that both a project manager and product manager are involved.

The Product Concept Proposal

The two product champions are responsible for preparing a product concept proposal. This proposal is a brief business plan which is presented to the General Manager and his/her staff. This document addresses two principal areas: the market need for the product and the technological feasibility.

A tentative outline would be:

1. Product code name -- champions' choice, but must be unrelated to the function of the proposed product.

2. Product definition -- features and benefits to consumer

3. SPC strategic fit -- does the product complement current or future SPC product offerings?

4. Market considerations -- what is the market size, estimated market share/annual unit volume, estimated price, competitive frame, distribution channel, and support issues?

5. Technological considerations -- operating environment, minimum system configuration, development system, etc.

6. Preliminary resource estimates and product development schedule

Appendix A contains a checklist (page A-2) for use when preparing the Product Concept Proposal, and the corresponding Approval Form (page A-3).

Approval

This product concept is reviewed and refined by the champions and their respective managers. When complete, it is presented to the General Manager and his/her staff for approval. A meeting or brief presentation is often appropriate - the exact manner in which approval is sought is at the product champions' discretion.

If approval is given, the initial product team (see Chapter 2) is assigned and a Product Information Book is prepared by the Product Manager. This book is simply a binder, divided into sections, that will hold all the documents, correspondence, and signed approval forms pertaining to the product throughout its life.

When to get approval

If the concept is not approved, the General Manager provides a brief statement of why the idea was rejected. The concept proposal and this statement is then filed in the "Almost Great Ideas" book (kept by the Software Librarian), to provide a history of ideas that failed and why.

Getting the Product on the R&D Plan

After a product concept is approved, the next step is to formally include the product in the R&D plan. The Director of Product Development alters the R&D plan based on recommendations from his or her staff. Relative priorities and resource availabilities are considered and the R&D plan is modified and re-issued.

Once the Product is on the R&D Plan, official staffing takes place, and work begins on the User Specification Document and the Product Marketing Plan (see Chapters 3 and 4).

→ implementation

Chapter 2 - Product Team

Overview

Software Publishing Corporation is built on the principle that the greatest results are achieved by a team effort. A group of individuals, each with his/her own area of expertise, produces superior results when they work together toward a common goal. This does not mean that exceptional individual performance is not encouraged; in fact, it is expected. But exceptional individual performance must be leveraged and coordinated with the efforts of others in order to assure sustainable company performance. A sustainable high level of performance distinguishes Software Publishing with its customers, retailers, distributors, OEM accounts, and stockholders.

The product team is the working nucleus of SPC. The objective of the team is to manage and implement all steps associated with the conceptualization, development, production, and marketing of products. Through summaries distributed after each team meeting, the team is responsible for communicating product status to the rest of the organization. In addition, team members have a responsibility to represent their departments and to check out team recommendations and decisions with their managers.

Members of the Team

The product team consists of eight (8) members:

- Product Manager
- Project Manager
- Documentation
- Marketing Communications
- Sales
- Training
- Support
- Manufacturing

The team is initially formed when the Product Manager and Project Manager get together to champion a new product concept. When the concept is approved, the remaining six (6) members of the team are assigned. It is expected that at this time, department managers will be assigned as the team members. When activity in one of

these areas is about to begin, it is the manager's responsibility to assign someone from his/her organization to function as the product team member.

The current list of team members should be kept up to date in the Product Information Book.

Responsibilities Common to All Team Members

Each team member has the following business responsibilities:

- **Customer satisfaction**

  Software Publishing is in business to serve our customers. It is important that every team member think of how the work they are doing will impact the customer. Whether it be the writer describing a certain feature in the manual, or a support specialist answering a question on the phone, each person should strive toward making sure our customers are satisfied with our products. **Quality** and **simplicity** should be reflected in everything we do.

- **Profitability**

  Software Publishing is also in business to make a profit. It is important that every team member be aware of how the work they are doing will impact the company's profit. Whether it be the Project Manager deciding that two disks are required, or the Product Manager selecting a particular promotion, each person should strive toward getting the maximum return for each dollar spent.

In addition to these global responsibilities, each team member has specific individual responsibilities.

Individual Responsibilities

Product Manager

- Market research to assist in determining product concept viability
- Market research to assist Project Manager and Writer in developing their respective portions of the User Specification Document

- o Develop and get approval of Product Marketing Plan
- o Communicate major changes in PMP and get re-approval
- o Set product introduction schedule
- o Coordinate execution of product introduction
- o Set packaging release schedule
- o Coordinate marketing activities necessary for Manufacturing Release
- o With Project Manager, train internal training staff
- o Document and distribute product team meeting summaries
- o Maintain the Product Information Book and the Master Schedule
- o Initiate production hold procedures
- o Manage product obsolesence

o Coordinate marketing and R&D activities to counter competitive threats.

Project Manager

- o Technical research to determine product concept viability
- o Develop, arrange peer review, and get approval of the program portion of the USD
- o Maintain USD in current state as design matures, until it is superseded by the first Alpha Release
- o Set program release schedule
- o Build the product
- o Be responsible for technical accuracy of program
- o Be responsible for program quality (write test plan and get assistance from Lab Services for testing if needed)
- o Prepare and verify master diskette for Manufacturing Release
- o Archive the product
- o With Product Manager, train internal training staff

- Provide product fixes on an expeditious basis

Documentation

- Develop, arrange review, and get approval of the Document Plan portion of the USD
- Write the manual
- Work with the programmers to design the on-line Help, and write the text for the Help screens
- Develop the Sampler file(s)
- Be responsible for the technical accuracy of the manual
- Set manual release schedule
- Prepare and proof final artwork for Manufacturing Release
- Provide manual fixes on an expeditious basis

Marketing Communications

- Announce to press
- Arrange for product reviews
- manage trade show support

Sales

- Announce to field
- Get orders

Training

- Update training courses
- Train field

Support

- Update Answers book

Manufacturing

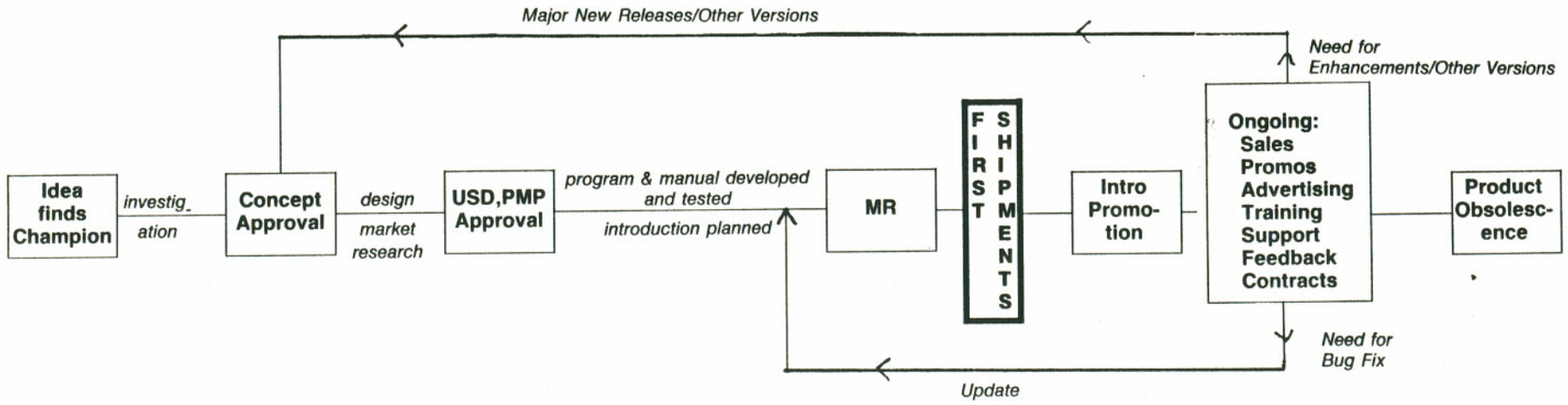
- Order inventory
- Assemble
- SHIP!!!

Diagram of Team Activities

The diagram on the next page shows an overview of the Life Cycle of a typical SPC product.

Product Life Cycle at SPC

From Cradle to Grave



Team Dynamics

The environment at Software Publishing is one of open communication and mutual respect. We believe that open communication fosters the best ideas. It is especially important for the product team. Every member of the team should freely share any information with all other members of the team. Although interest in other team members' activities is encouraged, it is important to remember that each person is an expert in his/her own field, and his/her ideas and judgements should be respected.

One of the dangers of team interaction is that it degrades into decision by committee. It is very important that team members do not allow this to happen. Although every team member may have a different opinion on a particular subject, there is always one person who is responsible. The person responsible varies depending on the issue, but whoever is responsible must take care to make the best final decision. If, after considerable thought, any team member strongly disagrees with a decision, s/he should take the issue to his/her manager and try to get resolution.

The following guidelines contribute to a successful team:

- Share a common goal
- Have mutual trust
- Show respect for opposing views
- Be reasonable
- Do your part
- Don't do the other guy's job
- Sell rather than tell
- If you don't know, ask
- Keep the organization informed
- Develop tolerance for uncertainty
- Remember a team is not a committee

Meetings

Meetings should be held when interactive communication is required between two or more product team members. If interaction is not required, written communication is preferred. Any member of the team may call a team meeting.

It is important to remember that meetings take a substantial amount of time, which is our most precious resource. Therefore, anyone calling a meeting should document the objective of the meeting, the agenda (including start time and end time), and who must be there and distribute it prior to the meeting. The following conventions are recommended to determine attendees and distribution lists:

1. From: Person(s) calling the meeting

2. Requested Attendees: People who must be at the meeting to accomplish the objectives

3. cc: All remaining team members and their managers, up through and including the General Manager.

Meetings should start on time.

Summaries of each meeting should be prepared by the Product Manager and distributed to the same list described above. They should be filed in the Product Information Book to keep an accurate history of the evolution of the product along its life cycle.

Chapter 3 - Team Documents Prepared by the Lab

Overview

This chapter describes the two documents prepared by the Lab during program development: the User Specification Document (USD) and the Document Plan. The USD describes, in as much detail as possible, the product to be built. The Document Plan explains all documentation planned for the product. The Document Plan is technically part of the USD; however, since it is prepared by a different person and distributed at a different time, it is described separately later in this chapter.

The User Specification Document (USD)

The USD eventually consists of 5 sections. Section 1 is a one-page summary that gives an overview of the product and its development plan. Section 2 is a detailed functional description of the product. Section 3 is the lab schedule for the project. Section 4 is the test plan for the product. Sections 3 and 4 are most likely added to the USD some time after the initial USD approval. Section 5 is the Document Plan, which is produced and distributed separately by the Writer (see section later in this chapter).

Section 1: Summary Page

Each USD issued will begin with a one-page summary form (see p. A-4). Listed below are some suggestions on filling out the form:

Code name: The code name assigned during the product concept stage.

Version number: The version number for the first release of a new product is always A:00. Thereafter, the version number is incremented **whenever** a new program disk is released to Manufacturing. The scheme for incrementing the number is as follows:

A:00 to A:01	minor change	bug fixes support of new OS add new peripheral
A:01 to A:10	incremental → manual supplement, narrowly defined feature extensions/ enhancements	
A:00 to B:00	major update	new hardware new features new manual new interface

Product overview: A very brief description of the product, telling what the product is, what it does, and what it does not do. You might mention here any whizzy features that make the product "special".

Lab parts list: What parts of the final product will the Lab actually produce? Example: program diskette with setup and backup, sampler diskette, manual, and crippled product.

Hardware/software requirements: What hardware and software are minimally required to run the product? Does the product offer any additional features with more hardware and/or software? Example: Runs under MS-DOS versions 1.1 and 2.0. Requires 64k memory, one double-sided, double-density disk drive, and a printer. Sorting requires 128k memory.

Product limits: List here any product limits you think are important. Example: Maximum of 1000 forms per data base; each form can have up to 32 items.

Connections with other products: What are the product's links to outside itself? Will the product read information generated by, or write information acceptable to, any other products, either SPC or non-SPC? Can the product be "integrated" with another? Will the product be able to read files generated by its earlier version(s)?

Time, resources needed to build the product: An early, perhaps rough estimate at about how many weeks or months of Lab effort are required to build the product. If there are any requirements for special resources, such as the availability of a particular development system, they should be mentioned.

Miscellaneous: Put here anything else you would like the readers of your USD to know without requiring them to read the functional description which follows.

Section 2: Functional Description

The **functional description** of the product is a description of what the product does, and what the user has to do to make it work. If done properly, the functional description should be complete enough to allow a first draft of the manual to be written (almost) without the Writer ever seeing the product.

Some guidelines to writing the functional description:

* If it is a large document, it should contain a table of contents and be divided into chapters. This way you avoid the need of reissuing the entire functional description when only a part is changed.

* Initially, it's good to produce a rough version or two of the functional description to stimulate discussion, get ideas, and in general improve the product's design.

However, the final functional description must be as detailed as possible. Vague descriptions in a functional description really mean that the design is incomplete.

* The functional description should include a description of the underlying model of the product. Example: WRITE models a sheet of paper, showing page boundaries and margins just as the final printed copy will appear.

* If the product is missing an expected feature, you should explain why.

* Remember, a picture is worth a thousand words. In particular, menus and other screen displays should definitely be included in the functional description.

* Similarly, a prototype is worth a thousand pictures. You might consider distributing with the USD a diskette containing a prototype/mockup of the product.

* Avoid generalities such as "The F8 function key is used to duplicate text." Much better is "To duplicate text, do as follows: Step 1. Press the F8 key. The cursor will become an inverse video rectangle. Step 2..."

Section 3: Lab Schedule

The lab schedule is created and maintained by the Project Manager. Its most important date is the MR (Manufacturing Release) date for the program diskette, and for some short projects this may be its only date. More typically, the lab schedule will contain the following dates:

* Alpha release: The product is "up and staggering"; i.e., it isn't fully functional, it can only do some useful work, and it certainly has bugs, but it can serve the purpose of giving others a first look at the product. If a product has a long development schedule, two or more alpha releases might be scheduled, each offering an additional piece of the final product.

* Beta release: The product is fully functional, i.e., all functions have been implemented and debugged to a usable point, including copy protection and any utilities such as setup and backup. It isn't yet the final version because it still has bugs. This is the version that Testing, Support, Training, and selected outsiders get to use.

* Manufacturing release (MR): The product is finished, and ready for disk duplication. The MR approval form is signed at this time.

* Release to archive: All archival materials have been prepared and given to the lab software librarian. The archive approval form is signed at this time.

Section 4: Test Plan

The test plan is prepared by the Project Manager to assist others, notably the Lab Testing group, in the testing of the product. Note, however, that **the project manager is solely responsible for the quality and integrity of the final product.** The test plan should address at least all the items on the checklist in Appendix A (p. A-5), with special emphasis on the following three items:

* A list or matrix of every system configuration to be tested (machine type, operating system, memory, number of disk drives, peripherals, etc.)

* A list of the features to be tested, with attention drawn to those features which need extra testing, such as those that are new or have been modified.

* A list of the product limits which need to be tested, e.g., "See if the product permits you create a document of 32k bytes".

Distribution, Review, and Approval

USD signoff meeting

The USD (except Section 5, the Document Plan) is written by the Project Manager and distributed to the product team members, his/her Section Manager, the Documentation Manager, the appropriate Group Product Manager, and the General Manager and his/her staff. Sections 1-3 are approved by the Director of Product Development before development work begins, and Section 4 by the Section Manager before the Beta Release. See the USD Approval Form on p. A-6.

The USD is updated as necessary so that it always reflects the currently-planned product, until the Alpha Release. Unless major changes occur, such updates are usually a memo from the Project Manager to the team, with copies to the corresponding managers, up to and including the General Manager. When major changes do occur, the Project Manager reissues Sections 1-3 of the USD, highlighting changes by noting them in the cover memo or by using a print enhancement such as boldface type in the actual copy. After the Alpha Release, the program itself supersedes the USD. Changes made to the program are still documented, but usually in team meeting summaries.

USDs for Alternate Retail Machines and OEM Versions

When a new product is developed, it is generally targeted first at one machine. Later, it is adapted for other machines supported by SPC in the retail market and for machines for which we have an OEM contract. A simplified USD is prepared for either of these situations. The simplified USD consists of:

Section 1: Summary Page. Same as for new products.

Section 2: Functional Description. A description of the base product used for development (e.g., Version A:01 of the product for Selected MS-DOS Computers); and a list of functional differences between the base and the new product.

Section 3: Lab Schedule. Same as for new products.

Section 4: Test Plan. A statement of the test strategy (e.g., OEM products must test the machine adapter code and run confidence tests on the unmodified source), a list of every system configuration to be tested, list of features to be tested, and product limit tests.

USDs for Product Updates

When a product is updated (i.e., major feature changes occur), a simplified USD is issued, as described for Alternate Retail Machines, above. Sometimes, when the whole product line is updated at one time, a family-wide USD will be issued by the appropriate Section Manager, rather than repeating common information in individual USDs.

Section 5: Document Plan

A Document Plan is prepared for each product produced at SPC, describing the general approach, structure, and contents of the manual being planned for the product. The timing and extent of the Plan vary for new products, alternate-machine products, updates, and OEM products. The description that follows applies to new products. It is followed by a discussion of the differences for each of the other kinds of products.

Document Plan for New Products

Work begins on the Document Plan when it is appropriate for a Writer to begin work on the project. At the very earliest, the Document Plan is issued several weeks after the USD has been issued and approved. However, for products with a lengthy development cycle, the Writer may not become an active team member for some months after USD approval, and in these cases the

Document Plan is delayed accordingly.

The Document Plan consists of at least seven sections. Its intent is to allow team members (and their managers) to evaluate the general approach, the organization, and the completeness of the planned manual. The sections are:

- Audience profile
- Brief description of the basic structure of the manual
- Detailed outline of the manual, including all chapter headings, with annotations as necessary to explain them.
- Fundamental assumptions made about customer use of the product and manual (standard configuration, path through the instructional material, etc.)
- Description of the planned example set
- Preliminary schedule (Alpha and Beta Release dates are coordinated with USD dates)
- Description of any other planned documentation-related material, such as Quick Reference Cards, Help facility, sampler files, and tutorial material for Trial Size Version (if planned).

Distribution, Review, and Approval

The Document Plan is distributed to all team members and the Documentation Manager for review, and to the appropriate Group Product Manager, and Director of Marketing for information purposes. It is available to any other interested parties. Approval of the Document Plan is by the Documentation Manager, after team comments have been evaluated (see the Document Plan Approval Form on p. A-7).

signoff meeting?

Maintenance of the Document Plan

The Document Plan is typically prepared only once, and not updated, except for the schedule. It is superseded by the Alpha Release of the manual. Before that release, any planned changes that deviate substantially from the Plan are communicated in writing to the rest of the team, after approval by the Writer's manager.

Document Plans for Additional Retail Products

A simplified Document Plan is produced for these products. It

consists of a description of the manual used as the base for the new version, and a list of all required changes. Typically, the list would include global changes (such as key assignments or device names), and detailed changes to each chapter and appendix (such as the need to modify the list of required equipment, to add an appendix unique to the new machine, etc.).

Document Plans for Product Updates

When a product is updated (such as from Version A to Version B), documentation changes are usually required. The Document Plan for an update is also simplified, listing only the changes from the previous version, again divided between global changes and specific changes to chapters or appendices. Sometimes, when the whole product line is updated at one time, a family-wide Document Plan will be produced by the Documentation Manager, rather than repeating common information in multiple individual Plans.

Document Plans for OEM Products

For OEM products, the simplified Document Plan is written by the Documentation Manager as soon as the USD is completed, and is attached as part of the contract. Again, this is a very brief list of the changes anticipated from the "core" manual for that product. It pays special attention to changes that might be required in the Getting Started chapter and in the appendices, and explains any assumptions made about the particular machine.

Chapter 4 - Team Documents Prepared by Marketing

Overview

This chapter describes the two documents prepared by Marketing during the development of the product: the Product Marketing Plan (PMP) and the Introduction Plan. The Product Marketing Plan (PMP) summarizes for the whole organization the planned new product, its market and competition, the financial implications to the company, and all the marketing activities planned for its introduction to the marketplace.

The Introduction Plan, while technically a section of the PMP, is described separately. Its description lists the specific steps necessary to devise a plan for introducing the product most effectively and efficiently.

The Product Marketing Plan

Contents of the PMP

The following outline describes the contents of a typical PMP:

I. PMP Summary Page (see p. A-8)

This page summarizes, on one page, the plan outlined below. It also calls attention to particular issues/ challenges that need to be considered by the reviewers.

II. Product Definition

- A. Market Size Dynamics, Trends
- B. Market Share and Ranking Objective
- C. Target Consumer - Description & Summary of needs (Research Findings)
- D. Positioning
- E. Description
- F. Key Benefits
- G. Summary of Major Features
- H. Integration with other Products
- I. Name (Code)
- J. Price
- K. Packaging
- L. Channels of Distribution
- M. Computers and Peripherals Supported
- N. Update, Return and other Policies
- O. Other Issues like Solutions

III. Competition

- A. Major Competitors using same Points as Section I

B. Their Strength and Weaknesses
C. Summary of Market Research Findings

IV. Financial Plan

A. Unit Volume Forecast
B. Summary of Marketing Expenses and Staffing
C. Estimate of Payout of Marketing Expenses
D. Estimate of Cost of Goods Sold
E. Analysis of Gross Margin - compared to other products
F. Profit Forecast

V. Downside Risks

A. Financial
B. Company Image

VI. Introduction Plan

(see separate section in this chapter)

VII. Manufacturing Plan

A. Material List
B. Assembly Procedure
C. OEM Guidelines, if necessary

Distribution, Review, and Approval

The PMP is written by the Product Manager and reviewed by his/her management shortly after concept approval, hopefully at the same time as the first draft of the USD. It is updated and re-approved when sections previously unfinished can be filled in (e.g., the Introduction Plan) or when major changes happen --schedule, budget, or market changes. The goal is that the PMP be a living document that always reflects the current marketing plans for the product.

There are three planned approval stages for the PMP: when it is first prepared, when enough information is available to complete the plan, and when the Introduction Plan is added. In addition, changes to the Plan that affect budget or schedule, require re-approval.

At initial release, the PMP is approved through all levels of Marketing management up to the Director of Marketing. The same approval applies to subsequent releases, except that the revised plan must be reviewed with the team before approval is sought, and the Director of Sales must also approve. A sample approval form is shown on p. A-9.

When a change affects only a small portion of the PMP, it is not necessary to re-issue and re-approve the entire PMP; rather, the update may be a brief statement submitted to the team and to Marketing and Sales management that describes the changed information.

Contribution of Other Team Members

The Product Manager should rely heavily on their team members to contribute material for the sections for which those team members have expertise. For example, the Product Manager should rely on the PR specialist to contribute the section of the Introduction Plan which deals with the Press Release and Press Tour.

The Introduction Plan

Determining the Introduction Approach

For each project, or distinct and separable part of each project, a number of questions must be answered before the correct introduction approach can be finalized. These questions are discussed below.

Who is the target of this effort? Each project or part of a project should focus on a **single** audience: the consumer, the dealership owner, the retail salesperson, the rep organization, the press, industry analysts, or another clearly definable group.

What is the objective of this effort? Ultimately, the objective of all marketing and sales programs is to increase sales and profits over the long term. To be helpful in focusing work on a particular project, a narrower objective is required, such as to increase product awareness, to prod the target to take some action (i.e., visit a dealership, order in product early so it's on the shelf by the time consumers hear of it, etc.) etc.

It is important to be clear on the objective, and to continually evaluate specific proposals on how well they meet the objective. Each element should have one primary objective and at most one secondary objective.

What vehicle most effectively and efficiently achieves this objective? This is the point at which detailed proposals are developed. The final program is chosen from among the alternatives considered based on relative effectiveness (marketplace impact) and efficiency (cost).

What time frame maximizes the impact of the effort most efficiently? Timing is critical to marketplace success.

Introductions and promotions are carefully timed to take into account seasonality, competitive activity, important trade shows, magazine and other feature articles, etc. --- anything that could impact the success of the product affects its timing and is weighed in the scheduling decision.

What will it cost? How many more units will have to be sold to cover that cost at fully loaded pre-tax profit (currently approximately 17% of wholesale price)? Is it profitable? SPC is in business to make money. Every opportunity must be evaluated on its potential contribution to revenues and profits versus its costs, and how long it will take to recover the initial investment given increased sales and profits. New product introductions can cost hundreds of thousands of dollars in marketing materials even before Manufacturing Release, so it is important to evaluate the effectiveness of this spending before it is implemented.

Contents of the Introduction Plan

Appendix A contains a checklist (p. A-10) of all the possible elements of a new product introduction. The following outline describes the contents of a typical Introduction Plan. Contingency plans should also be included, as fallbacks to the main approach if a critical component of the Plan doesn't work out.

A. Advertising -- Copy Strategy, Media, Budget
    1. Consumer
    2. Trade
    3. Co-op

B. Promotion -- Strategy, Budget
    1. Consumer
    2. Dealer
    3. Rep
    4. Hardware Manufacturer Co-op
    5. Selling/Merchandising Materials needed

C. Announcement - In Rough Chronological Order
    1. Reps
    2. Distributors/Dealers
    3. Press/Key Industry Analysts
    4. Press Tour
    5. Hardware Manufacturers Co-announcement
    6. Trade Show
    7. Review Copies
    8. Installed Base
    9. PFS User Group
    10. Target Consumers

D. Training
   1. In-house
   2. Reps
   3. Dealers

E. Technical Support
   1. Answers Book Update
   2. Information

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D. Training
   1. In-house
   2. Reps
   3. Dealers

E. Technical Support
   1. Answers Book Update
   2. Information

Chapter 5 - The Master Schedule

Use?

Overview

Of all the documents prepared by the product team, the Master Schedule impacts the most people. In the early stages of development, the only dates on the schedule are the Alpha, Beta, and MR dates for the program diskette, and the estimated ship date. The MR date appears on the R&D Plan and, from there, makes its way into all departments at SPC. For example, the revenue forecast is prepared directly from the R&D Plan; thus, a one-month slip in a product could impact seriously the Controller's cash-flow planning.

We cannot overemphasize the importance of creating realistic schedules in the beginning, and meeting every milestone along the way. However, recognizing that unforeseen problems or opportunities can cause a legitimate schedule delay, we stress the importance of keeping the rest of the organization informed at all times. The Master Schedule, in concert with the R&D Plan and team meeting summaries, is used for this purpose.

Preparation of the Master Schedule

Until roughly six months before shipment of a product, the Master Schedule consists only of the program release dates. The Product Manager fills these dates into the Master Schedule Form (see p. A-12), distributes it to the team, places a copy in the Product Information Book, and posts one copy outside his/her office. Whenever other dates become known, and especially as the Introduction Plan is completed, these dates are filled in on the same form.

Changes in the Shipment Date

When a change occurs that affects the final ship date for the product, the following steps are taken:

- Before informing the team, the team member who has the problem consults with his/her manager to see if other resources can be applied to the project to avoid the schedule slippage. Together, they will decide if the problem or opportunity warrants a schedule slippage.

- If a slippage cannot be avoided, the Director of Product Development is consulted. If s/he agrees that the schedule should be changed, the Product Manager is notified immediately. The Product Manager then informs the rest of the team and management, up through and including the General Manager, and updates the Master Schedule.

Chapter 6 - Manufacturing Release

Trial sizes go through Prod. Dev. / Lab. not Prod. Mkts

Overview

Manufacturing Release (MR) is the process by which the product components make the transition from their developers to Manufacturing. This is a very serious step: "real" money is spent in a big way as the product is manufactured and assembled, and SPC's reputation is on the line every time a new product is shipped out the door.

The product components include the master program disk, any auxiliary disks, the manual, diskette label(s), manual cover, and package. These components begin the manufacturing process at different times, since they require varying amounts of time to produce. Therefore, MR occurs separately for each component. (Unless qualified, the term MR at SPC is used to mean the release of the program diskette.)

As SPC's product line grows, it becomes even more important that each component be carefully checked before MR takes place. The following procedures and checklists were produced to make that process easier and more reliable for individual team members and their managers.

Description of MR Components

The table below shows the components of MR for a typical product, the team member responsible for the development of each component, the date (relative to the desired ship date) when MR is required, and the necessary approval.

Component	Who Is Responsible	What Is Released	Required MR Date	Final Approval
Program Disk	Project Mgr.	Mstr. Disk	SD-6 wks	Section Mgr.
Sampler Disk	Project Mgr.	Mstr. Disk	SD-6 wks	Section Mgr.
Manual	Writer	Approved BL	SD-7 wks	Doc. Mgr.
Package	Product Mgr.	Approved BL	SD-6 wks	Grp.Prod.Mgr.
Label	Product Mgr.	Artboards	SD-9 wks	Grp Prod.Mgr.
Manual Cover	Product Mgr.	Artboards	SD-8 wks	Grp Prod.Mgr.
In-Box Materials	Product Mgr.	Artboards	SD-5 wks	Group Product Mgr.

Pam should update

(see next page for notes)

SD = Ship Date
BL = Blueline
Notes: 1. MR is considered to have started for the disk only when the Master Disk (not the Evaluation Disk) has been turned over to Manufacturing.

2. The Manufacturing Department requires approval signature of the specified manager in the responsible team member's functional area before production can occur.

MR Checklists and Release Forms

Appendix A contains the following checklists and release forms:

Checklist and Release Form for Program/Sampler Disks

Checklist and Release Form for the Package Sleeve

Checklist and Release Form for the Label

Checklist and Release Form for the Manual
(Artboards and Blueline)

Checklist and Release Form for Product Archives

It is suggested that the appropriate checklist be used by each team member when presenting a product component to his/her manager for MR approval.

Product Archives

The Lab currently stores in a product file all source code, system software, and instructions necessary for an engineer who is not familiar with the software to recreate an Evaluation Disk. Text files and typesetting files used to produce the manual are also included. These files, called the product archives, are duplicated in their entirety in a bank safe-deposit box.

MR for OEM Products

The procedures for MR for OEM products is exactly the same as for other products. Since OEM contracts sometimes require special handling, the checklists include specific items that are unique to OEM products. Since OEM shipments are usually a single large quantity, our financial exposure is even greater than with retail products, thus special care is indicated.

Chapter 7 - Product Life After MR

Overview

This chapter describes activities in the life of a product that take place after MR. Roughly six weeks after MR of the program diskette, first shipments occur. During the first few months after shipment, there is a flurry of activity as the Introduction Plan is implemented, including the introductory promotion and special advertising. After that, the product settles into a maintenance phase, with ongoing advertising, PR, promotional activities, and (of course) tremendous revenue to the company.

Events that might interrupt this maintenance phase are: bugs and subsequent fixes, a serious bug that requires a shipment hold, and new hardware or competitive pressure that indicates the need for a product update. Finally, at the end of the life cycle, a decision is made to remove the product from the SPC price list, and product obsolescence occurs.

Bug Reporting

Product integrity is a key ingredient of SPC's success and reputation. It is maintained by careful testing of products prior to MR, and careful reporting and fixing of problems (i.e., "bugs") found after initial shipment. **It is extremely important that any SPC employee who experiences a bug or other unexplainable happening report the problem immediately, using the procedure described below.** The form used to report bugs is shown on p. A-23.

How a Bug Is Handled (Program). When a bug is found, the person finding it (or hearing about it from a customer) fills out the form and gives it to the Software Librarian. The Software Librarian enters the information into a PFS file, then distributes copies of the report to the Project Manager and to the Product Manager. The two people notified discuss the bug report as soon as possible. They decide on its severity (on a scale from 1 to 5) and respond to the Software Librarian within 3 working days (same day for severity 1 or 2). Note that the response could be "we don't know and don't think it important enough to worry about right now". The Software Librarian passes that information on to the person who reported the bug and to Technical Support. Any subsequent correspondence regarding the bug are sent to the person who reported the bug as well as other affected persons.

The list on the next page shows examples of the kinds of bugs that fall into each severity category:

* Prod. support verifies that it's a bug
* who duplicates bug? proj. mgr
* verify Project Mgr.
* mutually determine severity
ranking priority on peripheral list.
* * no tracking mechanisms weekly — Product Support. Prod. Mgrs. get back with resolution

Severity	Example
1	(Hold Shipment). Crashes the program, destroys data base, turns document into garbage; generally, does not work as advertised, affects most users, or affects some users cataclysmically. For the manual, an error of fact that causes serious user confusion.
2	(Fix Quickly and Slip into Inventory). Arithmetic is incorrect in REPORT in certain isolated cases; generally, program can still be used by most users, and bug affects only a small subset of users or causes only an inconvenience.
3	(Fix with next batch of bug fixes). When both a monochrome and color monitor are installed on GRAPH, it doesn't recognize the existence of the color monitor.
4	(Consider for next update). GRAPH cuts off the data point when displaying if the number is greater than 10 to the 30th and if you are displaying an area chart.
5	(Feature). FILE renumbers forms in reverse order when changing design.

multiple bugs? severity 2

How a Bug is Handled (Manual). The same reporting procedure and form are used for manual bugs, i.e., the form is filled out and given to the Software Librarian. Since most manual bugs are typography or layout problems, bug reports are given by the Software Librarian only to the Writer. If the Writer determines that a bug causes any problem in manual usability, s/he consults with the Product Manager to assign a severity level and, when necessary, call a team meeting or initiate the shipment hold procedure. As a rule, all known manual bugs are fixed at the next printing.

When the Team Gets Involved. A team meeting must be called when either the Product Mgr or the Project Manager (or Writer) believe the bug is Severity 1 or 2. In other cases, the team is consulted when the Product Mgr, Project Mgr, or Writer feel it is appropriate.

Shipment Hold Procedure

Shipment is held on a product when the team agrees that the bug is Severity 1. Generally, this is in the case of a catastrophic consequence of using the product, such as (but not limited to):

- o the bug destroys a thousand forms
- o the bug causes program crashes
- o the bug in a manual causes serious user confusion

If **either** the Product Mgr or the Project Mgr (or the Writer) believes the bug to be Severity 1, the following procedure is followed:

1. The Product Manager (or alternatively, the Project Manager) fills out the Shipment Hold Form to place the product on temporary hold for one working day. This allows time for the team to meet and for the responsible team member to investigate the problem.

2. The Product Manager calls a team meeting as quickly as possible (usually the same day).

3. If the team decides that the bug is really Severity 2, the Product Manager releases the temporary hold. (In the case of a disagreement, assume it is Severity 1, arrange a meeting for the whole team with the Directors of Product Development and Marketing and let them decide.)

4. If the team decides that the bug is Severity 1, the Product Manager writes a memo on behalf of the team which describes the problem and recommends a Shipment Hold until the cause of the problem is identified and solved. The Product Manager arranges a meeting with the Directors of Product Development and Marketing, and the Project Manager (or Writer). Another Shipment Hold Form is prepared before this meeting. If the shipment hold is approved, both Directors sign the Shipment Hold Form. The Product Manager delivers the signed form to Manufacturing, and sends a memo to all functional areas in the company informing them of the hold.

5. When the bug is fixed, the standard MR procedure is followed, with special emphasis on testing. Note that the version number is always incremented. When the hold is released, the Product Manager issues a memo to all functional areas in the company informing them that the hold has been released.

Product Updates

Product Updates happen when one of the following situations exists:

- o New hardware or a new operating environment appears in the marketplace, and SPC wants to support it with

the product. (E.g., a new low-cost plotter might trigger an update to GRAPH, and MS-WINDOWS might instigate updates to the entire family.)

- Competitive pressure is causing us to lose sales, particularly because of the lack of a certain feature. (For example, Version B:00 of WRITE includes right-justification simply because many dealers feel that a word processor without it isn't good.)

- The product has been shipping for some time, and SPC wants to provide a mid-life kicker to stimulate sales.

When a Product Mgr or Project Mgr feel that an update is in order, s/he takes on the "champion" role once again and returns to the Product Concept stage. The entire development phase happens again, including Concept Approval, USD (with the version number incremented) and PMP, etc.

Product Obsolescence

Although infrequent, products occasionally must be declared obsolete. Product sales and popularity tend to follow a curve, with increasing sales during the first year of product life, a period of stable sales for some time after that, and a long period of diminishing sales at the end of its life. At some point, SPC will decide that the sales of a particular product do not justify the cost of inventory. This decision is usually made because the hardware becomes obsolete. At that time, the Product Mgr should obsolete the product formally by filling out the Product Obsolescence Form (see page A-25). Approval of this form is by the Director of Marketing. Following approval, the Product Mgr informs all functional areas of the official date of obsolescence.

clarify

Appendix A - Checklists and Approval Forms

Contents:

Checklist for Product Concept Recommendation

* Is the product in line with an SPC strategic direction ? Check with the President's overall strategy and the R&D strategy published by the VP of Engineering.

* Is the product unique, or does it complement current or future SPC product families?

* What is its potential contribution to SPC (volume & profit)?

* Does the product provide tangible value to consumers?

* Does the anticipated technology provide a suitable operating environment for the product, i.e., "Build no product before its time"

* Opportunity costs -- is there another product which would generate a better business for SPC?

* Should the product be developed outside SPC, or used elsewhere within SPC?

* Have you checked the "Almost Great Ideas" book to see if this idea has been considered previously?

Product Concept Approval Form

Product Code Name _____

Product Description _____
_____
_____
_____
_____
_____

Market considerations _____
_____
_____
_____
_____
_____

Technological considerations _____
_____
_____
_____
_____

3 signatures

Resource estimates and schedule:

Engineering months _____
Writer months _____
Introduction costs (K$) _____
Release date (quarter/FY) _____

Separate cc from signoffs

Too many signoffs.

Prepared by:

_____ _____
Project Mgr Product Mgr

Section Mgrs.?

Approved by:

_____ _____
General Manager Date

If not approved, reason for rejecting:
_____
_____
_____

USD Summary Form

Product Code Name: _____ **Version #:** _____

Product overview: _____

_____

_____

_____

_____

_____

Substitute complete USD for this

Lab parts list: _____

_____

_____

Hardware/software requirements: _____

_____

_____

_____

_____

Product limits: _____

_____

_____

_____

_____

Connections with other products: _____

_____

_____

_____

_____

Time, resources needed to build product: _____

_____

_____

_____

Miscellaneous: _____

_____

_____

_____

_____

_____

Checklist for Preparation of a Test Plan

Be sure to include all of the following on the test plan:

- All supported machines
- All supported peripherals
- All supported versions of DOS
- Different memory configurations (128, 256, 512)
- All supported disk formats (3-1/2", 5-1/4")
- All program functions
- Performance tests
- Limit testing
- Integration with other products
- Copy protection
- Utility programs
- Hard disk
- Sampler disk
- Help screens
- General reliability (can someone crash it?)
- Does it have the correct version #?

If this is an OEM product, were you able to test it using the acceptance test procedure that will be used by the OEM?

When do we review? Testing formality

USD Approval Form

Product Code Name_____

Project Manager _____

Date of Approved USD _____

Initial Approval

Section Manager _____ Date _____

Director of Prod. Dev. _____ Date _____

Approval of Test Plan

Testing Manager _____ Date _____

Section Manager _____ Date _____

Addressing on-line help?

Document Plan Approval Form

Product Code Name_____

Writer _____

Date of Approved Document Plan _____

Initial Approval

Documentation Mgr_____ Date _____

PMP Summary Form

Product Code Name _____ **Version #** _____

System _____

Product Description: _____

_____

_____

_____

Key Benefits: _____

_____

_____

Integration with Other Products: _____

_____

_____

Proposed Price: _____

Packaging (standard/other--summarize other) _____

_____

_____

Channels of Distribution (dealers/reps, rackjobbers, OEM, etc.)

_____

Summary of Competition:

_____

_____

_____

Summary of Unit Volume & Profit Forecast:

_____

_____

_____

Summary of Downside Risks:

_____

_____

Type of Introduction (major, combined, etc.) **and Budgeted $$:**

_____

_____

Product Marketing Plan Approval Form

Eliminate

Initial Approval

Group Product Manager _____ Date _____

Director of Marketing _____ Date _____

Second Approval

Reviewed with Team on _____

Group Product Manager _____ Date _____

Director of Marketing _____ Date _____

Director of Sales _____ Date _____

Approval of Introduction Plan Section

Reviewed with Team on _____

Group Product Manager _____ Date _____

Director of Marketing _____ Date _____

Director of Sales _____ Date _____

Checklist - The Elements of an Introduction

Below is a detailed checklist of all the possible elements of a new product introduction.

PACKAGING

* write packaging objectives (PM)
* write template objectives (PM)
* write package copy and specify graphics (PM)
* write template copy (PM)
* specify diskette labels (PM)
* work with outside graphics designer to obtain final art (MC)

PROMOTION

* develop trial size (PM/R&D/D)
* develop introductory promotions for dealers, reps, consumers (PM)
* develop selling and merchandising materials, including:
  - selling organizer/talk sheet
  - advertising slicks
  - package stickers and inserts
  - rebate coupons
  - product information sheet
  - brochure updates

  (PM/MC)

TRAINING

* initially train training staff (PM/R&D)
* develop training course section (copy points - PM; final - T)
* update other training materials such as Softeach slide show (T)

TECHNICAL SUPPORT

* initially train technical support staff (PM/R&D)
* write Answers book section (TS)
* provide accurate feature set, pricing and timing information to dealers and consumers who contact SPC (TS)
* track version numbers and associated changes (TS)

MANUFACTURING

* develop material list, including cost of direct materials and labor (PM)
* write assembly procedure (PM)

SALES

* initially train sales staff (PM/R&D)
* write letter to reps (draft - PM; final copy - S)
* provide early production run copies of program diskette and photocopies of typeset manual to reps for sell-in (PM/S)
* organize road show (S)

ANNOUNCEMENT

* write press release (copy points - PM; final copy - MC)
* coordinate press tour (MC)
* send out review copies and encourage press coverage (MC)
* write article for PFS newsletter (copy points - PM: final copy - MC)
* send trial size to installed base, user groups, etc. (PM)
* develop materials to show at trade show (copy points - PM; final - MC)
* work with hardware vendors (systems, peripherals) to co-announce; appear in their approved software lists, ads, literature, etc.; co-promote; etc. (PM)

ADVERTISING

* write copy and media strategies to guide advertising agency in creative development and media selection and placement (PM)
* manage advertising agency development of ads and media schedules (ads - PM; media schedule - MC)
* obtain reprints of ads and distribute to the reps (PM)

Key

PM = product management
MC = marketing communications
R&D = lab
D = documentation
T = training
TS = technical support
S = sales
M = manufacturing

Checklist for Program Disk Release

1. Did the team review the program before submitting it to the duplication house?

2. Does this program match the product line standards?

3. Has the design been subjected to peer review?

4. Has it been tested according to a detailed test plan? Did the test plan include all the items on the Test Plan Checklist?

5. Have you made any last-minute changes that might affect the manual, the help screens, or the package?

5. Is everything on all the disks:
   Sample files referenced in the manual?
   Latest version of utility programs?
   If applicable, both swapping and non-swapping versions?
   PROOF dictionary?

6. Did you verify the evaluation disk, both with a byte-by-byte check and by a cursory functional check? Does the evaluation disk match the master program disk you kept at SPC during the evaluation process?

7. Have you archived the program, including Release Notes? (Did you send the Release Notes to Technical Support?)

8. Have you prepared an Incoming QC procedure?

9. Does the program have the correct version number?

10. If you have used code from other programs, did you use the latest version?

If this is an OEM product:

11. Did you test it using the acceptance test procedure that will be used by the OEM?

12. Does it satisfy the contract requirements? (Is the contract signed?)

13. Has the OEM approved the disk?

Program/Sampler Diskette

Release to Manufacturing

Date _____

Program Name _____ System _____ Version _____

Disk Duplicator (check one):

__ Dysan
__ Xemag
__ Other _____

Reason for Release (If this is a revision, list changes that have been made):

_____
_____
_____
_____
_____

Submitted by _____
Project Mgr.

Approved by _____
Section Mgr.

To Be Completed by Manufacturing

Date Received _____

SPC Part Number _____

Vendor _____

Date Put Into Production _____

Date Duplicated Disks Received by SPC _____

Manufacturing Approval _____

PM involvement limited to appropriateness for target audience

Checklist for Manual Release

1. Did the team review a final draft prior to typesetting?

2. Did you proofread the artboards according to the checklist?

3. Did you verify the blueline according to the checklist?

4. Did the Testing Group verify the instructions and screens on the art boards?

5. Have you compared your list of required equipment with the copy for the back of the box?

6. Did a second person check both the artboards and the blueline?

7. If this is an OEM product, have you satisfied any special requirements of the manufacturer (for example, extra cards, version numbers, and catalog numbers for the Tandy products)?

Checklist for Proofreading Art Boards

Manual _____

___ 1. Check the manual for completeness:
- ___ Does the title page match the contents?
- ___ Are all the chapters there?
- ___ Are all the pages there?
- ___ Are there page numbers & running heads on each page?

___ 2. Check the Table of Contents for typos, etc.
- ___ Does it contain each chapter and section heading?
- ___ Is it indented properly for subheadings?
- ___ Are the page numbers correct?

___ 3. Read the manual through carefully, checking for typos, truncated sentences, missing sections, etc.
- ___ Are indented sections done properly?

___ 4. Check all headings--are they correct? Are they the right size?

___ 5. Check to see that all hand artwork has been done--keys in boxes, arrows drawn, etc. (Compare against marked-up copy.)

___ 6. Check each screen carefully:
- ___ Design screens for FILE not in inverse video?
- ___ On screens with inverse, are all items in inverse?
- Are any overlays correct?
- ___ Is the text that follows an inverse item aligned

properly?
___ Does the message area show the correct thing (retrieve spec says RETRIEVE SPEC, multi-page forms show * next to the page number, %full meter is at a reasonable setting)?

___ 7. Check the index for typos, etc.
___ Are the sections divided correctly?
___ Does it contain everything it should?
___ Are the page numbers correct?

___ 8. Provide all needed instructions for the printer, including a mask for the screens and instructions for grey numbers and bottom lines on chapter headings.

Checklist for Proofing Bluelines

Check the blueline copy over carefully. Anything wrong with it will be wrong on the printed copy, and the printer is not liable even if he originated the error. It's a good idea to make multiple passes through the proof copy, checking for a specific thing or related group of things each time. Make sure to check the following:

___ 1. Check the manual for completeness:
___ Does the title page match the contents?
___ Is the User Group card there?
___ Is the User Group card coded correctly?
___ Are the chapters there?
___ Are all the pages there?
___ Are there page numbers on each page?
___ any extra material (User Group cards, inserts for an OEM, etc.) is correct and in the correct order?

___ 2. Check for problems in the printing procedure itself:
___ Smudges or blotches on type or empty spaces?
___ Cracks in letter or lines?
___ Straight pages?
___ Legible, equally-dense printing throughout (not faint in one section)?

___ 3. Check all screens with excruciating detail and care:
___ Are all items on the Art Board Checklist correct?
___ On screens that have inverse, are all the inverse items there? Does the inverse stop at the right place?
___ Is the text that follows an inverse item properly aligned (only a problem for old manuals with overlays)?
___ Are the forms filled in as described in the text?
___ Does the light gray background appear for all screens?
___ The black border around the screen shape does NOT appear (printer uses this for registration only, and opaques it out before making the blueline)

Manual

Release to Manufacturing

Date _____

Manual Name _____ System _____ Version _____

Printer:

__ West Coast
__ Muller
__ Other _____

Reason for Release (If this is a revision, list changes that have been made):

_____
_____
_____
_____
_____

Attach signed blueline copy and submit to Manufacturing.

Submitted by _____
Writer

Approved by _____
Documentation Mgr.

To Be Completed by Manufacturing

Date Received _____

SPC Part Number _____

Date Put Into Production _____

Manufacturing Approval _____

Checklist for Package Sleeve Release

1. Did the team review the copy before typesetting?

2. Is the right product name and system listed?

3. Have you specified the correct PMS colors?

4. Is the correct information on the spine?

5. Have you checked the list of supported machines and peripherals? Have you compared it with the list in the manual?

6. Have you checked the screen picture against the finished product?

7. Do the bullets and callouts reference the correct item?

8. Are any stickers required for this product? Is the artwork included?

9. If this is an OEM product, have all special requirements (hot stamps, stickers, version numbers, catalog numbers, and so forth) been met?

10. If this is an OEM product, have they approved the artwork?

11. Have you proofread all copy?

12. Is the integration message correct?

13. Is SPC's name and address included?

14. Is this sleeve consistent with other products in the product line?

15. Have you included instructions for assembling the entire product with this artwork? (Assembly instructions are simply what goes in the box and in what order.)

Checklist for Label Release

1. Is the product name and system correct?

2. Are the PMS colors correctly specified?
3. Does it include any required copyright notices? (SPC, Apple, UC Regents, etc. Check with the Project Manager to make sure you know what outside software he has used)

4. If this is an OEM version, are there special requirements, such as a Licensing statement, version number, TRSDOS version number, etc.)

5. If this is an OEM version, has the OEM approved the artwork?

6. Is there a label for every disk in the box?

7. Is this artwork consistent with others in the product line?

Packaging/Promotional Materials

Release to Manufacturing

Date _____

Program Name _____ System _____ Version _____

Description (check one or more):

__ Package sleeve
__ Label
__ Other _____

Reason for Release (If this is a revision, list changes that have been made):

_____
_____
_____
_____
_____

Submitted by _____
Product Mgr.

Approved by _____
Grp. Product Mgr.

To Be Completed by Manufacturing

Date Received _____

SPC Part Number _____

Vendor _____

Date Put Into Production _____

Manufacturing Approval _____

Checklist/Approval Form for Program Release to Archives

Product Code Name _____

Product Name _____ Version # _____

Date Submitted to Archive _____

Submitted by _____

Approved by _____

Include the following items:

__ All source files for the product
__ All system software needed to build the product (compiler, linker, OS, swapper, etc.)
__ Detailed instructions on how to compile the program
__ Copy of Master Disk
__ Version containing Debug code
__ Release Notes (description of changes made for a new release, list of known bugs and why they were not fixed, etc.)
__ Other programmer's notes (copy protection details, software tools used, other peculiarities)

To Be Completed by Software Librarian

Date Received _____ Received by _____

Disposition _____
_____
_____
_____

Checklist/Approval Form for Manual Release to Archive

Product Name _____ Machine _____

Version # _____ Date Submitted to Archive _____

Submitted by _____

Include the following items:

__ All manual text files, clearly marked with file names and the name of the word processor used to produce them

__ Typesetting files, if applicable, clearly marked

Artwork prepared by (vendor) _____

Printed by _____ Printing Date _____

To Be Completed by Software Librarian

Date Received _____ Received by _____

Disposition _____
_____
_____
_____

Product Problem (Bug) Report

Report Number _____

Submitted by _____ Date _____

Program Name _____ System _____ Version _____

CONFIGURATION

Memory Size _____ Number of Diskette Drives _____ Capacity _____

Brand of Hard Disk _____ Capacity _____

Operating System _____ OS Version # _____

Printer (Mfg./Model) _____ Modem (Mfg./Model) _____

Plotter (Mfg./Model) _____ Other (Mfg/Model) _____

Other Peripheral Card _____

PROBLEM/SUGGESTION

Category

☐ diskette ☐ manual ☐ package

Brief Description of Problem (abstract for data base)

_____

_____

_____

_____

_____

Please attach details of the problem (how to duplicate, samples, and any additional information). If the problem is with the manual, be sure to indicate the page number.)

RESPONSE (To Be Completed by Lab Services)

Referred to _____ Date Referred _____

Response By _____ Response Date _____

Response _____

_____

_____

_____

Will be corrected in Version # / Revision _____

Severity

☐ 1 (Recommend shipment hold)
☐ 2 (Fix as quickly as possible)
☐ 3 (Fix at next update)
☐ 4 (Consider for next major release)
☐ 5 (Feature)

Other Affected Products/Systems _____

Product Obsolescence Form

Product name _____ System _____ Version _____

Date first shipped _____

Average units shipped over last 6 months _____

Average revenue over last 6 months _____

Reason for obsoleting product _____

Inventory on hand _____

Book value of inventory _____

Legal issues _____

Special customer issues _____

Recommended by:

_____ _____

Product manager Project manager

Approved by:

_____ _____

VP of Marketing Date

Product Obsolescence Form

Product Name _____ Machine _____ Version _____

Date First Shipped _____

Units and Dollars Shipped Last Month: _____ Units $ _____

Reason for Obsoleting Product _____

_____

_____

_____

_____

_____

_____

where does this officially reside => in PLC book in Software Lib.

Recommended by:

_____ _____

Product Manager Project Manager

Approved by:

_____

Director of Marketing

Checklist for Package Sleeve Release
Additions/Changes/Deletions
Page A-18

Deletions

1. Remove question 15. Instructions for assembling the product are created as part of the Product Marketing Plan.

Additions

1. Is SPC's international name(s) and address(es) included?

2. Have you checked the list of supported networks? Have you compared it with the list in all other materials (collateral materials, documentation)?

Changes

1. Change question 6 to: Are all visuals (charts, graphs, screen shots, etc.) included and correct (outlines of captions, pages, etc.)?

Checklist for Label Release
Additions/Changes/Deletions
Page A-18

Additions

1. Is the version number correct?

2. Is the disk type properly and clearly labelled (Program Disk, Dictionary Disk, etc.)?

Packaging/Promotional Materials
Release to Manufacturing
Page A-20

Recommendation:

1. Delete this exhibit. The sign-off by the Product Manager and Group Product Manager on the back of the artboards constitutes approval of the article. Rewrite all references to Exhibit A-20 to reflect this approval procedure.

Checklist for Package Sleeve Release

1. Did the team review the copy before typesetting?

2. Is the right product name and system listed?

3. Have you specified the correct PMS colors?

4. Is the correct information on the spine?

5. Have you checked the list of supported machines and peripherals? Have you compared it with the list in the manual?

6. Have you checked the screen picture against the finished product?

7. Do the bullets and callouts reference the correct item?

8. Are any stickers required for this product? Is the artwork included?

9. If this is an OEM product, have all special requirements (hot stamps, stickers, version numbers, catalog numbers, and so forth) been met?

10. If this is an OEM product, have they approved the artwork?

11. Have you proofread all copy?

12. Is the integration message correct?

13. Is SPC's name and address included?

14. Is this sleeve consistent with other products in the product line?

15. Have you included instructions for assembling the entire product with this artwork? (Assembly instructions are simply what goes in the box and in what order.)

Checklist for Label Release

1. Is the product name and system correct?

2. Are the PMS colors correctly specified?
3. Does it include any required copyright notices? (SPC, Apple, UC Regents, etc. Check with the Project Manager to make sure you know what outside software he has used)

4. If this is an OEM version, are there special requirements, such as a Licensing statement, version number, TRSDOS version number, etc.)

5. If this is an OEM version, has the OEM approved the artwork?

6. Is there a label for every disk in the box?

7. Is this artwork consistent with others in the product line?

Packaging/Promotional Materials

Release to Manufacturing

Date _____

Program Name _____ System _____ Version _____

Description (check one or more):

__ Package sleeve
__ Label
__ Other _____

Reason for Release (If this is a revision, list changes that have been made):

_____
_____
_____
_____
_____

Submitted by _____
Product Mgr.

Approved by _____
Grp. Product Mgr.

To Be Completed by Manufacturing

Date Received _____

SPC Part Number _____

Vendor _____

Date Put Into Production _____

Manufacturing Approval _____