From: Dave B. Date: December 13, 1984

To: Signe Susan Re: Product Life Cycle Val Chris D.

Sam Danny Pam Diane

Dennis Linda G. Linda S.

This document recommends several changes to the Product Life Cycle document based on experiences with the WRITE IIc/IIe severity 1 bug in November 1984.

## Background

In November 1984, a severity 1 bug was discovered in the Apple IIc and IIe version of PFS:WRITE causing a shipment hold on that product and on the Apple Holiday Pack. During the resolution of this problem, it was discovered that some clarification was needed in the areas of testing and bug definition.

## Recommendations

Below are three recommendations based on the above experience.

Alter the current disk verification procedures.

We should develop procedures for doing a bit-by-bit disk compare of our in-house master against a random sample of production disks for each product to ensure that this does not reoccur.

 Clarify bug descriptions and definitions of Severity Levels.

The phrase "causes serious user confusion" which applies to the product manual in the description of a severity 1 bug should somehow apply to the program as well. The phrase should probably indicate that this applies only if the confusion is to a major number of users.

3. Change the Shipment Hold Release signatory authority.

The Hold Release Form in the Product Life Cycle (the bottom portion of the hold shipment form) needs to be amended. The Directors of Product Development and Marketing should release the shipment hold, not the Director of Manufacturing.

## Bases for Recommendations

- 1. With our current procedures for verifying disks (checking to see if they boot), we failed to catch the WRITE problem (which was caused by an incorrect master disk being used for duplication). A program that runs on the Apple IIc/e to do this comparison has already been prepared by the lab and Brad is currently looking into preparing an MS-DOS version. This utility will be able to check any two disks to verify that the contents are identical (including copy protection). Thus, a master can be compared against a random sample of production disks.
- 2. Though the team definitely felt that this was a severity 1 bug, we had difficulty justifying it based on the descriptions in the Product Life Cycle.
- This is the recommendation of the Director of Manufacturing.

## Next Steps

- Marv is working on the MS-DOS version of the disk compare utility and will work with Pam S. and Steve D. to implement the utility in Manufacturing. This should be implemented as soon as possible to prevent a reoccurence of this type of problem.
- Points 2 and 3 above should be considered by Chris D. for the next revision of the Product Life Cycle document.