

How To Organize Project Documents

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Introduction: Many documents are generated in the course of a software project: specifications, design documents, procedures, source files and more. This paper describes a simple way to organize them.

The Benefits of Organizing Project Documents: The source of a product is the people who make it and the working foundation for the final product is the documents they use. Organizing this foundation results in faster, more effective product development.

An organized reference system will:

1. Help you know where you are.
2. Give you an overview of the whole project so that you can take short cuts.
3. Reduce the cost of locating, evaluating and changing the design apart from the code implementation.
4. Reduce time spent in integrating because better fitting can be made at an abstract level.

Classifying Documents: Organizing documents is an exercise in classification and what makes one classification better than another is its intended use or purpose. The purpose of the documents in a software project is to aid a team of engineers in making the product.

This implies that:

1. Since engineers don't like to waste their time any more than the next man, the cost of organizing documents must be low enough to make it worth while.
2. A wide variety of documents may be generated such as specifications, designs and source code.
3. Any engineer may make a document.
4. Any engineer may need to access a document.

Organization Scheme: The simplest solution is to just pile the documents into a box as they are generated, but that makes it hard to know what documents there are and how to find the ones you want. The next simplest solution is to treat documents simply *as* documents regardless of the type and list them in a log as they arrive, which is what I do. This system imposes no limits on the types of documents that may be tracked: even books and videos can be tracked by using a sheet of paper as a forward reference in the main file.

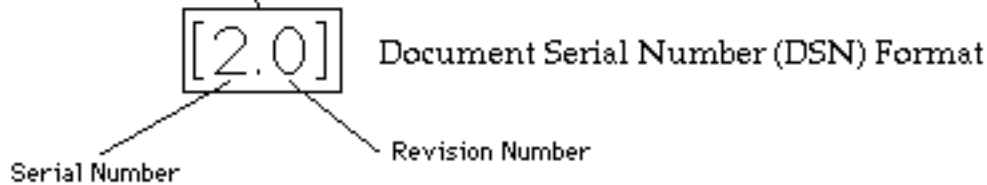
The System: For the last fifteen years I've used the following system to organize my development documents for both team and solo projects and have found that it works great, saving many times the cost of using it.

How To Use The Document System

1. Buy a book to serve as the document log for your project. It will be formatted like this:

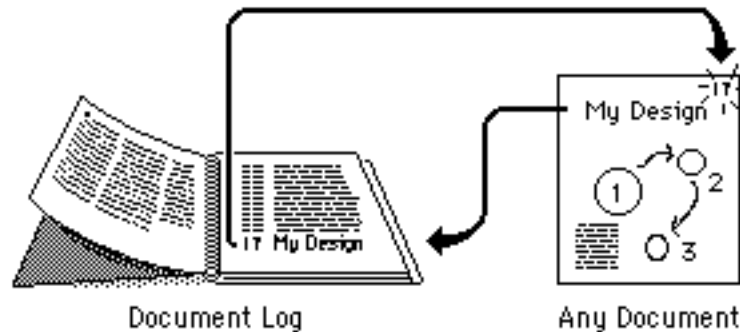
Document Log Format

Document Index For Project: AM			
DSN	Date	Author	Title
[1.0]	7.15.90	TL	"Data Type Definition Form"
[2.0]	7.16.90	TL	"Recording Scripts"



2. Register a document in the log like this:

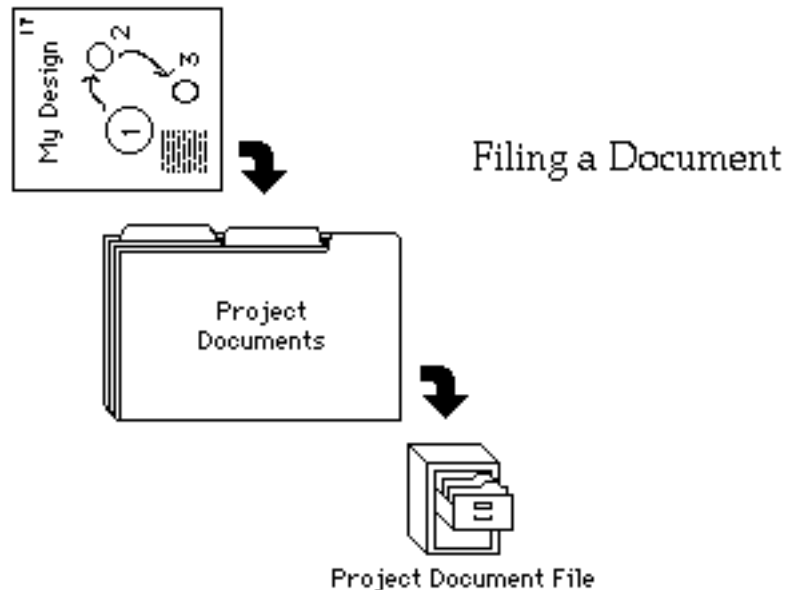
Registering a Document



- Write the author's initials, title of the document and the current date in the log.
- Look up the next available serial number, or if the document being registered is a revision, just increment the revision number extension.
- Write the serial number on the upper right corner of your document, putting the number inside square brackets to mark it as a document serial number.

I keep a 'To Be Registered' file that accumulates documents until I get enough to make it worth while to sit down and assign numbers to them. If I wait a while some documents become obsolete and I can toss them before even registering them.

3. After you have finished using a document, file it so it can be found later:



Filing A Document: Documents are filed in serial number order in the document filing cabinet for your project. Note that revisions to documents are filed next to the originals because of the format of the document serial number.

Retrieving A Document: Look up the title of the document in the log, get the serial number, and then look up the document in the filing cabinet for the project.

Replacing A Document: If you remove the document from the file eventually you need to put it back because it may be the only existing copy. I keep a 'To Be Filed' folder that allows me to defer filing until enough documents pile up to make it worth while. I look in the 'To Be Filed' folder if I don't find what I'm looking for in the main file.

To avoid wasted duplication of documents, and the necessity for a project librarian, this system assumes that each team member is a responsible adult capable of not losing documents. The assumption here is that the cost of recovering the rare lost document is less than the overhead cost of enforcing a lending library scheme.

Maintaining the Document Index: One of the nice aspects of this document system is its simplicity; you don't need any computer hardware or fancy software to use it effectively. The document index is a simple list of documents which is normally maintained in a book in hand written form.

As an enhancement I have found the legibility and automated searchability of a typed document index to be worth the effort of periodically transcribing the document index into a text file and

sorting it to collect document revisions together in the index. Additions to the typed document index are written by hand at the end of the index until I accumulate a page or so of new entries and then I update the typed version.

References: This system was inspired by the system used by the CIA to organize the mountain of reports they accumulate: each intelligence report is treated simply *as* a report and assigned a serial number. Reports can then be classified in multiples ways for various purposes by reference to document serial numbers. Filing and retrieval are simple.