

## Introduction

This document contains a “Generic” outline for a specification and can form a good starting point for those wishing to create a formal Specification. Specifications can be formalized in another way. They have strict paragraph and section formatting embedded in the Word Document. I tend to find such formatting to be a nuisance if others, less familiar with these Word “fancy tricks”, have to work on the document. This document has very informal formatting.

## To Receive the Word Version of this Document

If you wish to receive the Word version of this document to begin editing your own specification, please send e-mail to [carl@angotti.com](mailto:carl@angotti.com) and we will be happy to send you one. If you need help in generating a specification, please feel free to call 408-739-5046 and request it.

## Specification Content

A specification should have numbered sections, paragraphs and page numbers, at a minimum. This makes it useful to refer to them in tele-conferences, etc.

The following pages show, in outline form, the beginnings of good, structured, specification.

## Cover and Signature Page (The page that follows)

This is the front page. It makes the Specification stand out from other, less serious, documentation and allows a place for the Responsible persons to "Sign Off" that they agree to this set of deliverables. It should also contain a date and Revision Number.

The signatories to the document depend upon your organizational structure. Be sure to include all of those critically responsible for creating the project completion. This could include Marketing, Production, Quality Assurance, etc. depending on the project.

Note: If you use this document as a Template, delete this page.

## **Specification Example Product**

**Document No. 12345**

Prepared by: John Doe

Date: September 1, 2001

Revision: 0.0

Signatures:

\_\_\_\_\_  
Project Sponsor

\_\_\_\_\_  
Project Manager

\_\_\_\_\_  
Engineering Manager

\_\_\_\_\_  
Project Engineer

## Section 1.0 Revision History

This is where any revisions are catalogued by the responsible person and by date. It also includes the purpose of change. This allows the tracking of changes to take place.

<b>Date</b>	<b>Change Prepared by</b>	<b>Description of change</b>
9/01/01	John Doe	Initial Release

## **Sections 2.0, 3.0 and 4.0 (If Required)**

### **Misc. Material Used for a Large Specs**

These sections become helpful for larger specifications that run into many pages. The Table of Contents and Referenced Documents might be several pages themselves

### **Section 2.0 Table of Contents**

### **Section 3.0 List of Reference Documents**

Other documents relied upon in the rest of the spec

### **Section 4.0 Product Definition**

This very brief section should as short as possible and be suitable for a management overview.

## **Section 5.0**

### **General Description of the Function of the System or Program**

This section should contain a clear, short, description of the operation of the code or the system. Ideally it works in conjunction with the Block Diagrams and other support documentation.

Block diagrams can be embedded into the document using Visio or the Drawing Function of Word, depending on their complexity.

## **Section 6.0**

### **Definition of Critical System Parameters**

This can include such items as noise, bandwidth, accuracy, drift, etc for hardware. It can include such items as response time, code size limitations, special algorithms, languages used, etc for software. These often appear in tables or lists.

## **Section 7.0**

### **Definition of User Controls and/or User Interface**

This is a description of how the user will interact with the program or system. It needs to be detailed enough to define scope, but need not be extensive. Lots of team judgment is often required here. In complex systems or programs, there may be a separate, more detailed, document to define this important function.

## Section 8.0

### Mechanical Characteristics

This includes Size, Weight, Special Materials, etc. for hardware projects. A similar section for software projects might define specifics of the physical deliverables.

## Section 9.0

### Operating and Other Design Environments

This section is common for hardware projects, but could be useful for software projects that have physical deliverables to the customer.

- a) Operating Temperature
- b) Storage Temperature
- c) Shock and Vibration d) Etc

## Section 10.0

### Tests Used to Define System or Program Operation

This area defines how the unit will be tested to verify that it meets the specifications. This describes when the "deliverables" are declared completed.

## Section 11.0

### Other Tests to Assure the Quality of the Design

This section can be critical for both hardware and software portions of projects. Groups outside of the design group will normally perform these tests.

- a) Compliance Testing - UL, VDE, FCC, etc
- b) Reliability Analysis and/or Testing
- c) Temperature Testing d) Bug checking for Firmware/Software Validation
- d) Etc