

PART 5 Working with Test Documentation



I. Planning Your Test Effort

II. Writing and Tracking Test Cases

III. Reporting What You Find

IV. Measuring Your Success



I. Planning Your Test Effort

1. The Goal of Test Planning

2. Test Planning Topics

I. Planning Your Test Effort

1. The Goal of Test Planning

To prescribe the scope, approach, resources, and schedule of the testing activities. To identify the items being tested, the features to be tested, the testing tasks to be performed, the personnel responsible for each task, and the risks associated with the plan.

——IEEE Standard 8291998

I. Planning Your Test Effort

1. The Goal of Test Planning

NOTE:

- **The test plan is a by-product of the detailed planning process that's undertaken to create it. It's the planning process that matters, not the resulting document.**
- **The ultimate goal of the test planning process is communicating (not recording) the software test team's intent, its expectations, and its understanding of the testing that's to be performed.**

I. Planning Your Test Effort

2. Test Planning Topics

- **High-Level Expectations**
- **People, Places, and Things**
- **Definitions**
- **Inter-Group Responsibilities**
- **What Will and Won't Be Tested**
- **Test Phases**
- **Test Strategy**
- **Resource Requirements**
- **Tester Assignments**
- **Test Schedule**



1. Planning Your Test Effort

2. Test Planning Topics

- **Test Cases**
- **Bug Reporting**
- **Metrics and Statistics**
- **Risks and Issues**

1. Planning Your Test Effort

2. Test Planning Topics

- **High-Level Expectations**

- What's the purpose of the test planning process and the software test plan?
- What product is being tested?
- What are the quality and reliability goals of the product?



I. Planning Your Test Effort

2. Test Planning Topics

- People, Places, and Things**
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1. Planning Your Test Effort

2. Test Planning Topics

- **Definitions**

- Bug
- Build
- Test release document (TRD)
- Alpha release
- Beta release
- Spec complete
- Feature complete
- Bug committee



1. Planning Your Test Effort

2. Test Planning Topics

- Inter-Group Responsibilities**

Task	Program Management	Programmers	Test	Tech Writers	Marketing	Product Support
Write vision statement for product	--				X	
Create list of product components	X					
Create Contracts	X				--	
Product design/features	X			--	--	
Master project schedule	X	---		---	---	
Produce and maintain product spec	X					
Review product spec	---	---	---	---	---	---
Internal product architecture	---	X				



1. Planning Your Test Effort

2. Test Planning Topics

- What Will and Won't Be Tested**

I. Planning Your Test Effort

2. Test Planning Topics

- Test Phases**

NOTE:

Two very important concepts associated with the test phases are the entrance and exit criteria. The test team can't just walk in to work on Monday morning, look at the calendar and see that they're now in the next phase. Each phase must have criteria defined for it that objectively and absolutely declares if the phase is over and the next one has begun.



I. Planning Your Test Effort

2. Test Planning Topics

- **Test Strategy**

I. Planning Your Test Effort

2. Test Planning Topics

- **Resource Requirements**
 - People
 - Equipment
 - Office and lab space
 - Software
 - Outsource companies
 - Miscellaneous supplies

1. Planning Your Test Effort

2. Test Planning Topics

- Tester Assignments

Table 17.1. High-Level Tester Assignments for WordPad

Tester	Test Assignments
Al	Character formatting: fonts, size, color, style
Sarah	Layout: bullets, paragraphs, tabs, wrapping
Luis	Configuration and compatibility
Jolie	UI: usability, appearance, accessibility
Valerie	Documentation: online help, rollover help
Ron	Stress and load

1. Planning Your Test Effort

2. Test Planning Topics

- Test Schedule

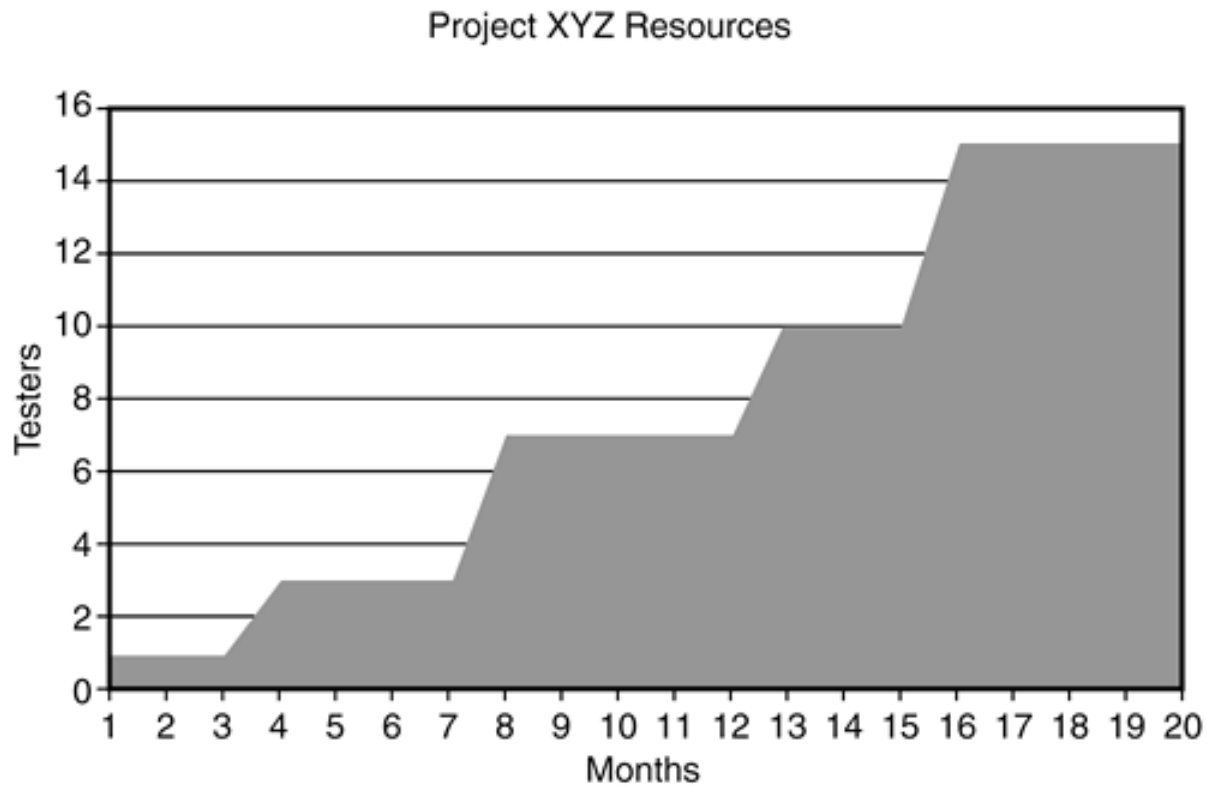


Table 17.2. A Test Schedule Based on Fixed Dates

Testing Task	Date
Test Plan Complete	3/5/2001
Test Cases Complete	6/1/2001
Test Pass #1	6/15/2001 8/1/2001
Test Pass #2	8/15/2001 10/1/2001
Test Pass #3	10/15/2001 11/15/2001

Table 17.3. A Test Schedule Based on Relative Dates

Testing Task	Start Date	Duration
Test Plan Complete	7 days after spec complete	4 weeks
Test Cases Complete	Test plan complete	12 weeks
Test Pass #1	Code complete build	6 weeks
Test Pass #2	Beta build	6 weeks
Test Pass #3	Release build	4 weeks



1. Planning Your Test Effort

2. Test Planning Topics

- **Test Cases**



1. Planning Your Test Effort

2. Test Planning Topics

- **Bug Reporting**
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1. Planning Your Test Effort

2. Test Planning Topics

- **Metrics and Statistics**

- Total bugs found daily over the course of the project
- List of bugs that still need to be fixed
- Current bugs ranked by how severe they are
- Total bugs found per tester
- Number of bugs found per software feature or area



1. Planning Your Test Effort

2. Test Planning Topics

- **Risks and Issues**
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II. Writing and Tracking Test Cases

1. The Goals of Test Case Planning

2. Test Case Planning Overview

3. Test Case Organization and Tracking



II. Writing and Tracking Test Cases

1. The Goals of Test Case Planning

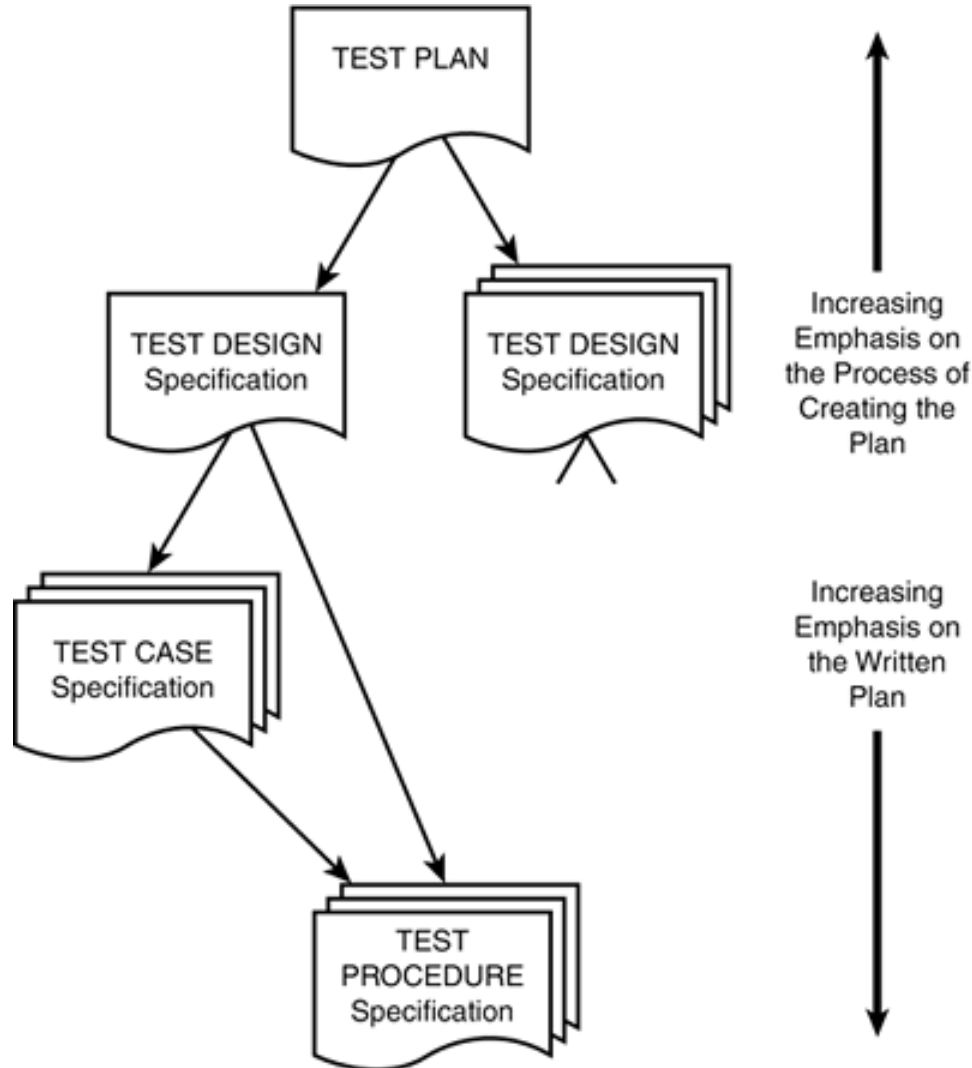
- Organization
- Repeatability
- Tracking
- Proof of testing (or not testing)

NOTE:

Don't confuse test case planning with the identification of test cases that you learned in Part II, "Testing Fundamentals." Those chapters taught you how to test and how to select test cases, similar to teaching a programmer how to program in a specific language. Test case planning is the next step up and is similar to a programmer learning how to perform high-level design and properly document his work.

II. Writing and Tracking Test Cases

2. Test Case Planning Overview



II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- Test Design
- Test Cases
- Test Procedures

II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- **Test Design**

IEEE 829 states that the test design specification "refines the test approach [defined in the test plan] and identifies the features to be covered by the design and its associated tests. It also identifies the test cases and test procedures, if any, required to accomplish the testing and specifies the feature pass/fail criteria."

II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- **Test Design**
 - Identifiers
 - Features to be tested
 - Approach
 - Test case identification
 - Pass/fail criteria

II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- **Test Case**

IEEE 829 states that the test case specification "documents the actual values used for input along with the anticipated outputs. A test case also identifies any constraints on the test procedure resulting from use of that specific test case."

II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- **Test Cases**

- Identifiers
- Test item
- Input specification
- Output specification
- Environmental needs

Test Case ID	Printer Mfg	Model	Mode	Options
WP0001	Canon	BJC-7000	B/W	Text
WP0002	Canon	BJC-7000	B/W	Superphoto
WP0003	Canon	BJC-7000	B/W	Auto
WP0004	Canon	BJC-7000	B/W	Draft
WP0005	Canon	BJC-7000	Color	Text
WP0006	Canon	BJC-7000	Color	Superphoto
WP0007	Canon	BJC-7000	Color	Auto
WP0008	Canon	BJC-7000	Color	Draft
WP0009	HP	LaserJet IV	High	
WP0010	HP	LaserJet IV	Medium	
WP0011	HP	LaserJet IV	Low	

II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- **Test Procedures**

IEEE 829 states that the test procedure specification "identifies all the steps required to operate the system and exercise the specified test cases in order to implement the associated test design."

- Identifier
- Purpose
- Special requirements
- Procedure steps

II. Writing and Tracking Test Cases

2. Test Case Planning Overview

- **Test Procedures steps**

- Log
- Setup
- Start
- Procedure
- Measure
- Shut down
- Restart
- Stop
- Wrap up
- Contingencies

Identifier: WinCalcProc98.1872

Purpose: This procedure describes the steps necessary to execute the Addition function test cases WinCalc98.0051 through WinCalc98.0185.

Special Requirements: No special hardware or software is required to run this procedure other than what is outlined in the individual test cases.

Procedure Steps:

Log: The tester will use WordPad with the Testlog template as the means for taking notes while performing this procedure. All the fields marked as required must be filled in. The Mantis bug tracking system will be used to record any problems found while running the procedure.

Setup: The tester must install a clean copy of Windows 98 on his or her machine prior to running this procedure. Use the test tools WipeDisk and Clone before installing the latest version of Windows 98. Refer to the test support doc titled "Starting Fresh" for more information on these tools.

Start:

- Boot up Windows 98.
- Click the Start Button.
- Select Programs.
- Select Accessories.
- Select Calculator.

Procedure: For each test case identified above, enter the test input data using the keyboard (not the onscreen numbers) and compare the results to the specified output.

Measure: ...

II. Writing and Tracking Test Cases

3. Test Case Organization and Tracking

- **In your head**
- **Paper/documents**
- **Spreadsheet**
- **Custom database**

Microsoft Excel - Purple Dinosaur Test Tracking.xls					
File Edit View Insert Format Tools Data Window Help					
[Icons]					
	A	B	C	D	E
1		Purple Dinosaur Test Tracking			
2	Test Suite	Test Pass	Test Pass	Test Pass	Bug ID List
	/Cases	10/15/1997	11/30/1997	1/5/1998	
3	Basic Hardware Functionality				
4	Left Arm Motion	Pass	Pass	Pass	
5	Right Arm Motion	Pass	Pass	Pass	
6	Head Motion	Fail	Pass	Pass	12
7	Touch Sensors	Pass	Pass	Pass	
8	Peek-a-Boo Sensor	Pass	Pass	Pass	
9	PC Radio Transmission	Fail	Fail	Pass	19, 22
10	PC Radio Reception	Pass	Pass	Pass	
11	TV Radio Transmission	Pass	Pass	Pass	
12	TV Radio Reception	Pass	Pass	Pass	
13	Summary	FAIL	FAIL	PASS	
14					
15	Basic Software Functionality				
16	Songs	Pass	Pass	Pass	
17	Games	Fail	Pass	Pass	13
18	Peek-a-Boo	Pass	Pass	Pass	
19	Cleanup Song	Pass	Pass	Pass	
20	Timeout Sleep	Pass	Pass	Pass	
21	Commanded Sleep	Pass	Pass	Pass	
22	VCR Broadcast Mode	Pass	Fail	Fail	14, 29
23	PC Single Unit Mode	Pass	Pass	Pass	
24	Summary	FAIL	FAIL	FAIL	
25					



II. Writing and Tracking Test Cases

1. The Goals of Test Case Planning

2. Test Case Planning Overview

3. Test Case Organization and Tracking

