Practical Web Development: A Systematic Process

*How to Make Useful and Usable World Wide Web Sites*

DRAFT ... DRAFT ... DRAFT

April 4, 2002

Elizabeth Boling and Theodore Frick

Department of Instructional Systems Technology
School of Education
Indiana University Bloomington

Copyright, 1999 - 2002
All rights reserved
Table of Contents

Chapter One: The Big Picture
- Who should read this book?
- How do Web sites usually get developed?
- What’s wrong with Webbie’s story?
- The way it should be done: Practical Web Development
- Practical Web Development: A Systematic Process
- User-centered design for the Web
- But can user-centered design guarantee a “perfect” Web site?
- Summary

Chapter Two: Getting Started
- A quick walk through the basic steps of Practical Web Development
- What am I going to need to do this job?
  - Expertise
  - Computing resources
  - Support
- Now that I have a team, computer resources, and support from the organization, what do I do next?

Chapter Three: Analyze Your Needs and Those of the Users
- What is needs analysis?
- Why conduct needs analysis?
- What kind of wants and needs are we talking about?
- What should already be done before needs analysis?
- How is a needs analysis conducted?
  - Agree on the goals for the Web site
  - Identify your audience
  - Identify the stakeholders
  - Find out what the users and stakeholders need, and how they are meeting those needs now
  - Sample preparation for a needs analysis
  - Gather information from users, information providers, and stakeholders
  - Analyze and synthesize your data
- After needs analysis, what’s next?
Chapter Four: Make a paper prototype of the Web site

What is a paper prototype? ..................................................
Why should I make a paper prototype? ..................................
Getting started ................................................................
Information structures in your paper prototype: what should be on each page? ....
What should be included in the prototype? ................................
What should not be included in the prototype? ...............................
Make a notebook of pages ..................................................
Make an observation sheet to use during testing ..........................
Get an expert review of the prototype ......................................
Test the prototype yourself ..................................................

Chapter Five: Test the paper prototype

Start with the big three: authentic subjects, authentic tasks, and authentic conditions .
Make a test plan ..............................................................
Coordinate observers .......................................................  
Identify and recruit subjects ...............................................  
Conduct the sessions ........................................................
Analyze the results ..........................................................
Paper prototyping: What do I do next? .....................................

Chapter Six: Make a computer prototype

What is a computer prototype? .............................................
Why should I make a computer prototype? ............................
Getting started ................................................................
Choose standard elements for your pages ............................... 
Mock up a visual identity for your site ...................................
Design your identity to work for pages at different levels of the organization ....
Consider visibility, legibility and readability of text on the screen .......
Create the pages of the prototype .........................................
Check the prototype yourself ..............................................

Chapter Seven: Test the computer prototype

Remember authentic subjects, authentic tasks, and authentic context ..............
Make a test plan ..............................................................
Prepare the computer equipment you will need ..........................
Coordinate observers .......................................................  
Identify and recruit subjects ...............................................  
Conduct the sessions ........................................................
Analyze the results ..........................................................
Computer prototyping: What do I do next? ...............................
Chapter Eight: Build the Web Site: Optimize it for practical use
What should already be done? ...............................................
What about help with HTML and graphics production? ...........................
Building the site: How do I do it? ............................................
Optimizing performance of the Web site ..............................................
   Optimizing organization of files
   Keep files small to optimize the performance of your Web site
   Optimizing Web page production and maintenance
The next generation of the Web ..................................................

Chapter Nine: Bug testing and final checking
Conduct a spelling and grammar check ........................................
Test browser and platform compatibility ....................................
Test every link ........................................................................
Accessibility issues .............................................................
   Personal privacy
   Copyright and plagiarism
Adding links that point to other sites ........................................
Documentation for the future ..................................................
   Document for the people who will come after you
   Document for yourself
   Where should you document?
   What should you document?
What do I do next, after the Web site is built? ..............................
   Celebrate!
   Advertise the site
   Prepare for the long haul

Chapter Ten: Maintain the Web Site
What is maintenance and why should I do it? ..............................
Maintaining the site: How to do it? ..............................................
   Identify resources for maintenance
   What can you do to help maintenance efforts?
   Define the skills it takes to do different parts of the maintenance work
   Argue for a centralized Webmaster
   If necessary, train people to do routine maintenance
   What is included in routine technical maintenance?
   Troubleshoot problems
   Support information providers
   Conduct on-going evaluation of the Web site
Building and Maintenance: What to do next? ..............................