

# Registration and Login: A Simple Solution

JANUARY 2004



**Janice Fraser**  
Partner  
[janice@adaptivepath.com](mailto:janice@adaptivepath.com)

# Introduction

In 1996, anyone who wanted to download the Netscape Web browser or use its services had to persevere through 20 steps, fill out 26 fields of information, read more than 500 words of instruction, and click over to a partner site to download an authentication certificate, which he or she then “presented” at the Netscape site.

Few design problems on the Web have been well and truly solved. Thankfully, registration is one that has.

In his book *About Face*, Alan Cooper (founder of Cooper, an interaction design firm) wrote one of the most important things I’ve read as a designer:

Our conscious mind is constantly reducing visual input into patterns...the philosophy is to present the components on the screen as recognizable visual patterns [so that] the user can choose, on a purely pattern-matching, unconscious level, which objects to consider consciously.

Through this lens, the objective of good registration design is to reduce the interface to its simplest form, leveraging patterns to elicit correct input from the user while requiring minimal conscious thought.

The solution we’ve presented here provides an effective pattern-based approach to enrolling new users on a Web site.

# Contents

Why this is a sound solution	3
About the wireframes	3
Page layout	4
Authentication: username vs. email address	4
Forgotten passwords: hint, reset, or email?	4
Error handling	4
Flow diagram and wireframes	5

## Why this is a sound solution

A solid registration process leaves very little room for user error. To develop a solution, we looked across the Web for the most efficient, error-resistant designs and talked to designers about their successful (and unsuccessful) registration systems. We chose design conventions that are widely used, easily recognizable by users, and appropriate for a range of Web sites.

Remember the Netscape registration: 26 form fields and 500 words of instruction over 20 steps. Each field and step was an opportunity for the user to make a mistake—to type incorrectly, misunderstand instruction, and abandon the process. By contrast, our simple solution has only three form fields and 18 words in one step.

One design manager in our research uses a Six Sigma metric, “roll throughput yield,” to measure the effectiveness of her site’s registration process. To calculate this metric, find the percent of successful completions for each step in the process and multiply the percentages in sequence, like this:

80% of people completed step one. Of those, 60% completed step two. Of those, 75% completed step three.

$80\% \times 60\% \times 75\% = 36\%$

The roll throughput is 36%.

Every input field or selection increases the chance of error, which decreases the roll-throughput yield. You can imagine that in Netscape’s 20-step registration process the roll throughput was very low. By contrast, the roll throughput of the Simple Solution registration system is very high.

## About the wireframes

You’ll notice several things about the Log In and Register Wireframes.

1. Every page element included is essential to the sign-up task and has been reduced to its simplest form:

- Headlines and form labels provide succinct instructions.
- Supporting text is brief, polite, and neutral of voice.
- There is no global or local navigation. Users don’t need to go from registration to another section of the site, so global navigation doesn’t help. And anything that doesn’t help hinders.
- There are no contextual links. Registration is possibly the least appropriate place to market content, products, and services.
- There are no Search, Help, or My Account links. Help is provided in context.

Cleaning out the interface focuses attention on page elements that help the user take the correct actions quickly.

2. Like signs on a highway, labels are brief, consistent, and repetitive.

- Page titles are verbs or verb phrases that summarize the primary purpose of the page (Log In, Forgot Your Password?). Verb-based page titles provide strong information describing what the user is about to do.
- The same key words are used when linking to a page. (The link “Please register now” points to a page entitled “Register.”)
- Action buttons repeat the most important instructive verb on the page (Log in, enter).

When instructions, titles, links, and buttons are concise and well matched, they guide and affirm user decisions.

3. Marketing questions have been omitted. Purchase transactions, satisfaction surveys, and usage tracking provide more appropriate

opportunities to gather information from users. Before adding any such questions, consider that every piece of data we request during registration will reduce the roll throughput yield, because people will inevitably make mistakes.

4. Legal agreements and policies are accessible through links. The full text is not displayed on the registration pages. We have found no evidence that displaying text of agreements increases the likelihood that they will be read; however, there is ample evidence that displaying agreement text significantly reduces the roll throughput yield.

## Page layout

These wireframes are not intended to show a complete visual design treatment, but they do show a highly functional page layout based on visual patterns.

Input boxes are aligned in a single column with right-aligned labels placed to the left of the box. This eliminates clutter and creates a strong vertical line that guides the user through the page. The lower right-hand placement of the action button breaks the pattern, suggesting completion and continuation.

Options outside the primary flow of registration, such as “Forgot your password?,” are presented below the action button and aligned left. This outside placement provides a visual cue that these options are alternatives to the main function of the page.

## Authentication: username vs. email address

Amazon showed us that it’s possible to have a secure site with robust community that uses an email/password authentication scheme. And thank goodness. For a long time, selecting a username was one of the most error-prone aspects of registration, as users tried to think of a unique name that they might be able to remember. Use email addresses to uniquely identify users.

## Forgotten passwords: hint, reset, or email?

Customer-service centers report that a significant number of calls are about authentication problems. This is upsetting for users and expensive for companies. For the Simple Solution, we wanted a secure, self-serve password recovery scheme with very few steps (so that it wouldn’t adversely affect the roll-throughput yield). We ruled out the “hint” scheme, because it can be prone to error (forgetting your answer) or, paradoxically, not secure (many people may know your mother’s maiden name). Likewise, we ruled out the “reset your password” scheme, because it is unnecessarily complicated. Forgetting a password doesn’t make it somehow less effective.

For the Simple Solution, we chose the “email my password” scheme. It’s a one-step process that leverages what the user already knows (how to get their email). And it’s secure enough for most transactions.

This scheme, paired with email-address authentication, will significantly reduce authentication customer service calls.

## Error handling


Even this very simple registration system must plan for errors. The Register and Log In Flow Diagram shows where data is checked for accuracy. When errors are found, the user is returned to the page where the error occurred.

Just below the headline the error is described in clear, succinct language, and a graphic symbol marks the input field where the error occurred. Both the symbol and the description appear in red. Additional options like “Forgot my password” provide safe passage from unrecoverable error loops.

The wireframe shows a registration form for 'Company Name'. It includes a 'Register' section with a red error message: 'Please provide a complete email address'. Below this, there are three input fields: 'Email address:' (with a red exclamation mark icon and an example 'info@example.com'), 'Choose a password:', and 'Type it again to confirm:'. A 'Register' button is at the bottom right. At the very bottom, there is a link: 'I have an account, but forgot my password.'

## Flow diagram and wireframes

The flow diagram depicts how users move through the process, and what decisions the system makes at key points. The four wireframes provide the design essentials.

 **Company Name**

**Log In**

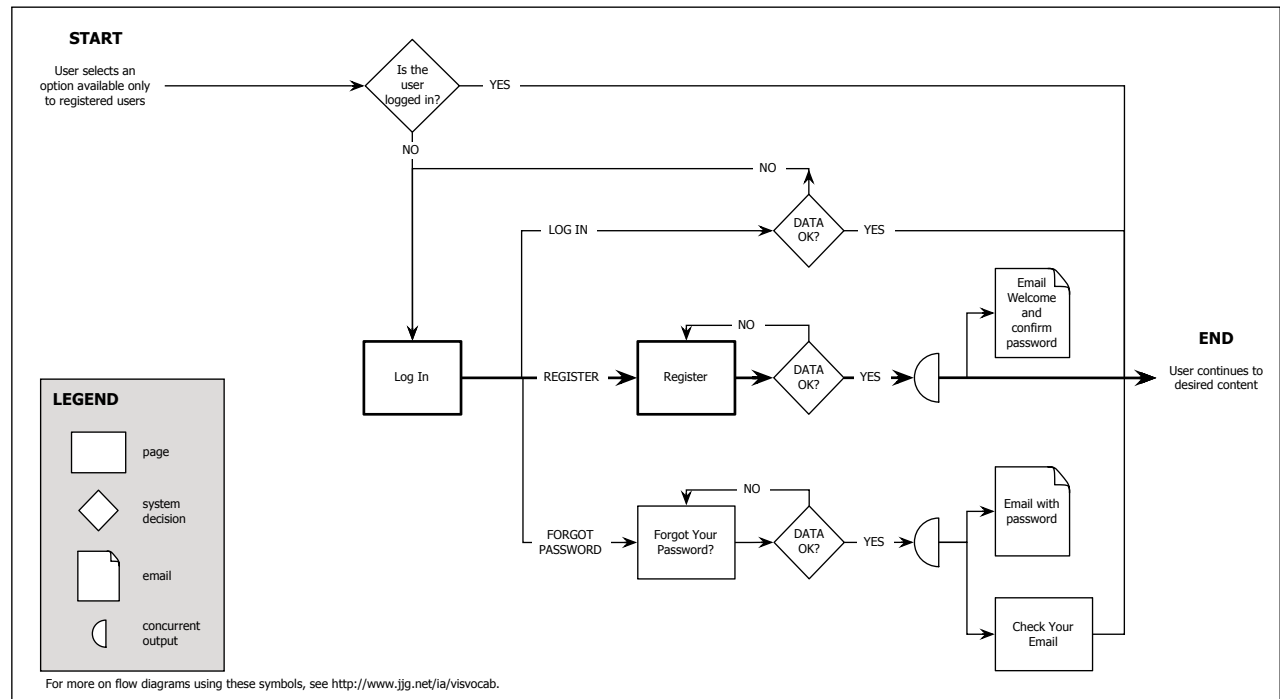
**Email address:**

**Password:**


If you don't have a password, please [register now](#).

[Forgot your password?](#)

Log In page



Registration and Log In flow diagram

 **Company Name**

**Register**


**Email address:**

**Choose a password:**

**Type it again to confirm:**

I have an account, but [forgot my password](#).

Register page

 **Company Name**


**Forgot Your Password?**

We will send your password to you by email.

**Enter your email address:**

(If you have changed your email address, please [register again](#).)

Forgot Your Password page

 **Company Name**

**Check Your Email**

Your password has been sent to you by email. Please check your email and enter your password to log in.

**Password:**

Check Your Email page

## About the author

---

**Janice Fraser** is a founding partner of Adaptive Path. Her odd passion for registration systems began at Netscape in 1996. Since then, she has designed registration systems for the United Nations, VeriSign, The Economist, and many other Web sites. Janice recently left the faculty of San Francisco State University, where she taught interaction design for four years. She is a featured speaker at the Nielsen Norman Group User Experience events, and is co-author of "Measuring the Value of User Experience," a research report for managers to be published by Adaptive Path in 2004.

## About Adaptive Path

---

Adaptive Path advises organizations on user experience strategies, helping them realize the maximum value from their product design and development investments. The company's founders are recognized around the world as industry leaders. Adaptive Path also shares its experience and expertise through publications, public workshops, and private corporate training.

Adaptive Path's clients include Sony, PBS, Yamaha, PeopleSoft, Cathay Pacific, and the United Nations. The company is headquartered in San Francisco.

The Hobart Building  
582 Market St. Suite 602  
San Francisco, CA 94104  
1-877-708-3481

[info@adaptivepath.com](mailto:info@adaptivepath.com)  
[www.adaptivepath.com](http://www.adaptivepath.com)

