SMASHING MAGAZINE

A Field Guide to

# Usability Testing



# **Imprint**

© 2013 Smashing Media GmbH, Freiburg, Germany
ISBN: 978-3-943075-31-1 (Version 2: August 2013)
Cover Design: Ricardo Gimenes
PR & Press: Stephan Poppe
eBook Strategy and Editing: Vitaly Friedman
Technical Editing: Cosima Mielke
Planning and Quality Control: Vitaly Friedman, Iris Lješnjanin
Tools: Elja Friedman. Syntax Highlighting: Prism by Lea Verou.
Idea & Concept: Smashing Media GmbH

# About This Book

Testing usability is vital to creating a successful website — even more so if its an e-commerce website, a complex app or any other complicated project. Unlike interviews and focus groups, a well-designed user test measures actual performance. This eBook provides a guide to A/B testing, multivariate testing, tips for increasing conversion rates and a review of testing methods and tools.

# TABLE OF CONTENTS

The Ultimate Guide To A/B Testing	3
Multivariate Testing in Action: Five Simple Steps To Increase Conver	r-
sion Rates	14
15 Essential Checks Before Launching Your Website	24
Test Usability By Embracing Other Viewpoints	34
Multivariate Testing 101: A Scientific Method Of Optimizing Design.	42
Comprehensive Review Of Usability And User Experience Testing	
Tools	51
About The Authors	84

# The Ultimate Guide To A/B Testing

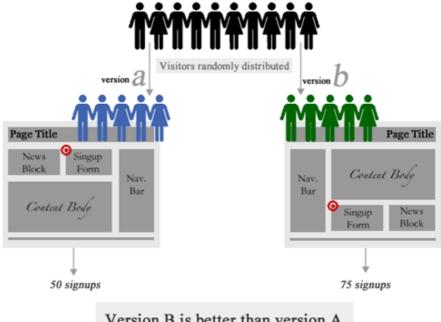
### BY PARAS CHOPRA 20

A/B testing isn't a buzz term. A lot of savvy marketers and designs are using it right now to gain insight into visitor behavior and to increase conversion rate. And yet A/B testing is still not as common as such Internet marketing subjects as SEO, Web analytics and usability. People just aren't as aware of it. They don't completely understand what it is or how it could benefit them or how they should use it. This chapter is meant to be the best guide you will ever need for A/B testing.

# What Is A/B Testing?

At its core, A/B testing is exactly what it sounds like: you have two versions of an element (A and B) and a metric that defines success. To determine which version is better, you subject both versions to experimentation simultaneously. In the end, you measure which version was more successful and select that version for real-world use.

This is similar to the experiments you did in Science 101. Remember the experiment in which you tested various substances to see which supports plant growth and which suppresses it. At different intervals, you measured the growth of plants as they were subjected to different conditions, and in the end you tallied the increase in height of the different plants.



Version B is better than version A

Large version<sup>1</sup>

A/B testing on the Web is similar. You have two designs of a website: A and B. Typically, A is the existing design (called the control), and B is the new design. You split your website traffic between these two versions and measure their performance using metrics that you care about (conversion rate, sales, bounce rate, etc.). In the end, you select the version that performs best.

# What To Test?

Your choice of what to test will obviously depend on your goals. For example, if your goal is to increase the number of sign-ups, then you might test the following: length of the sign-up form, types of fields in the form, display of privacy policy, "social proof," etc. The goal of A/B testing in this case is to figure out what prevents visitors from signing up. Is the form's length intimidating? Are visitors concerned about privacy? Or does the website do a bad job of convincing visitors to sign up? All of these questions can be answered one by one by testing the appropriate website elements.

Even though every A/B test is unique, certain elements are usually tested:

<sup>1.</sup> http://media.smashingmagazine.com/wp-content/uploads/2010/06/abtesting.gif

- The call to action's (i.e. the button's) wording, size, color and placement,
- Headline or product description,
- Form's length and types of fields,
- Layout and style of website,
- Product pricing and promotional offers,
- Images on landing and product pages,
- Amount of text on the page (short vs. long).

# Create Your First A/B Test

Once you've decided what to test, the next step, of course, is to select a tool for the job. If you want a free basic tool and don't mind fiddling with HTML and JavaScript, go with Google Website Optimizer<sup>2</sup>. If you want an easier alternative with extra features, go with Visual Website Optimizer<sup>3</sup> (disclaimer: my start-up). Other options are available, which I discuss at the end of this chapter. Setting up the core test is more or less similar for all tools, so we can discuss it while remaining tool-agnostic.

You can set up an A/B test in one of two ways:

# Replace the element to be tested before the page loads

If you are testing a single element on a Web page — say, the sign-up button — then you'll need to create variations of that button (in HTML) in your testing tool. When the test is live, the A/B tool will randomly replace the original button on the page with one of the variations before displaying the page to the visitor.

# • Redirect to another page

If you want to A/B test an entire page — say, a green theme vs. a red theme — then you'll need to create and upload a new page on your website. For example, if your home page is http://www.example.com/index.html, then you'll need to create a variation located at http://www.example.com/index1.html. When the test runs, your tool will redirect some visitors to one of your alternate URLs.

Once you have set up your variations using one of these two methods, the next step is to set up your conversion goal. Typically, you will get a piece of JavaScript code, which you would copy and paste onto a page

<sup>2.</sup> http://www.google.com/analytics/

<sup>3.</sup> http://visualwebsiteoptimizer.com/

that would represent a successful test were a visitor to arrive there. For example, if you have an e-commerce store and you are testing the color of the "Buy now" button, then your conversion goal would be the "Thank you" page that is displayed to visitors after they complete a purchase.

As soon as a conversion event occurs on your website, the A/B testing tool records the variation that was shown to the visitor. After a sufficient number of visitors and conversions, you can check the results to find out which variation drove the most conversions. That's it! Setting up and running an A/B test is indeed quite simple.

# Do's And Don'ts

Even though A/B testing is super-simple in concept, keep some practical things in mind. These suggestions are a result of my real-world experience of doing many A/B tests (read: making numerous mistakes).

### DON'TS

- When doing A/B testing, never ever wait to test the variation until after you've tested the control. Always test both versions simultaneously. If you test one version one week and the second the next, you're doing it wrong. It's possible that version B was actually worse but you just happened to have better sales while testing it. Always split traffic between two versions.
- Don't conclude too early. There is a concept called "statistical confidence" that determines whether your test results are significant (that is, whether you should take the results seriously). It prevents you from reading too much into the results if you have only a few conversions or visitors for each variation. Most A/B testing tools report statistical confidence, but if you are testing manually, consider accounting for it with an online calculator<sup>4</sup>.
- Don't surprise regular visitors. If you are testing a core part of your
  website, include only new visitors in the test. You want to avoid shocking regular visitors, especially because the variations may not ultimately be implemented.
- Don't let your gut feeling overrule test results. The winners in A/B tests are often surprising or unintuitive. On a green-themed website, a stark

<sup>4.</sup> http://visualwebsiteoptimizer.com/ab-split-significance-calculator/

red button could emerge as the winner. Even if the red button isn't easy on the eye, don't reject it outright. Your goal with the test is a better conversion rate, not aesthetics, so don't reject the results because of your arbitrary judgment.

# DO'S

- Know how long to run a test before giving up. Giving up too early can cost you because you may have gotten meaningful results had you waited a little longer. Giving up too late isn't good either, because poorly performing variations could cost you conversions and sales. Use a calculator (like this one<sup>5</sup>) to determine exactly how long to run a test before giving up.
- Show repeat visitors the same variations. Your tool should have a
  mechanism for remembering which variation a visitor has seen. This
  prevents blunders, such as showing a user a different price or a different promotional offer.
- Make your A/B test consistent across the whole website. If you are testing a sign-up button that appears in multiple locations, then a visitor should see the same variation everywhere. Showing one variation on page 1 and another variation on page 2 will skew the results.
- Do many A/B tests. Let's face it: chances are, your first A/B test will turn out a lemon. But don't despair. An A/B test can have only three outcomes: no result, a negative result or a positive result. The key to optimizing conversion rates is to do a ton of A/B tests, so that all positive results add up to a huge boost to your sales and achieved goals.

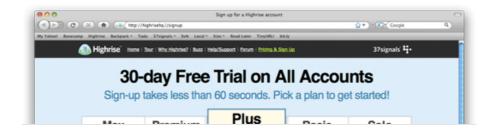
# Classic A/B Testing Case Studies

Here are some case studies to give you an idea of how people test in the wild.

Writing Decisions: Headline Tests on the Highrise Sign-Up Page<sup>6</sup> 37signals tested the headline on its pricing page. It found that "30-Day Free Trial on All Accounts" generated 30% more sign-ups than the original "Start a Highrise Account."

<sup>5.</sup> http://visualwebsiteoptimizer.com/ab-split-test-duration/

**<sup>6.</sup>** http://37signals.com/svn/posts/1525-writing-decisions-headline-tests-on-the-highrise-signup-page



# "You Should Follow Me on Twitter Here" (Dustin Curtis)

This much-hyped split-test involved testing multiple versions of a call to action for Twitter followers. Dustin found that "You should follow me on Twitter here" worked 173% better than his control text, "I'm on Twitter."



# Human Photos Double Conversion Rates<sup>8</sup>

A surprising conclusion from two separate A/B tests: putting human photos on a website increases conversion rates by as much as double. Scientific research backs this up, saying that we are subconsciously attracted to images with people.



# Google Website Optimizer Case Study: Daily Burn, 20%+ Improvement<sup>9</sup> (Tim Ferriss)

A simple variation that gave visitors fewer options to choose from resulted in a 20% increase in conversions. The winning version was also much easier on the eye than the control in its detail and text.

<sup>7.</sup> http://dustincurtis.com/you\_should\_follow\_me\_on\_twitter.html

<sup>8.</sup> http://carsonified.com/blog/design/human-photos-double-your-conversion-rate/

http://www.fourhourworkweek.com/blog/2009/08/12/google-website-optimizer-casestudy/



# Two Magical Words Increased Conversion Rate by 28%<sup>10</sup>

The words "It's free" increased the clicks on this sign-up button by 28%, illustrating the importance of testing call-to-action buttons and how minor changes can have surprisingly major results.



# Changing the Sign-Up Button from Green to Red<sup>11</sup>

Along with its other A/B tests, CareLogger increased its conversion rate by 34% simply by changing the color of the sign-up button from green to red!



# Single page vs. multi-step checkout<sup>12</sup>

If you have an online store, it is quite common to see visitors abandoning the purchase process at the time of checkout. This A/B test found out that a single page checkout process works much better at completing sales than multiple-page checkout process.

http://visualwebsiteoptimizer.com/split-testing-blog/ab-test-case-study-how-two-magical-words-increased-conversion-rate-by-28/

<sup>11.</sup> http://dmix.ca/2010/05/how-we-increased-our-conversion-rate-by-72/

<sup>12.</sup> http://www.getelastic.com/single-vs-two-page-checkout/



# "Mad Libs" style form increases conversion 25-40% 13

Defeating conventional wisdom, in this A/B test it was found out that a paragraph-styled form with inline input fields worked much better than traditional form layout. Though the result was probably specific to their offering as it wasn't replicated in another, separate A/B test<sup>14</sup>.



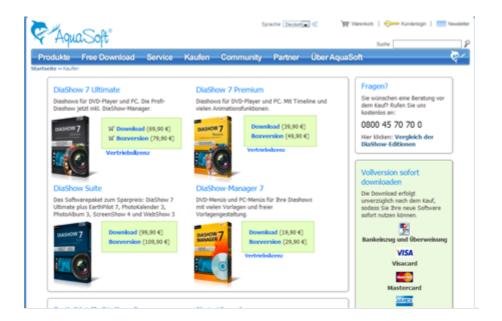
# Complete redesign of product page increased sales by 20% 15

A software product company redesigned their product page to give it a modern look and added trust building elements (such as seals, guarentees, etc.). End result: they managed to increase total sales by 20%. This case study demonstrates the effect of design on sales.

<sup>13.</sup> http://www.lukew.com/ff/entry.asp?1007

<sup>14.</sup> http://www.kalzumeus.com/2010/02/27/lesson-from-madlibs-signup-fad-do-your-own-tests/

<sup>15.</sup> http://carsonified.com/blog/business/the-business-case-for-ab-testing/



# Marketing Experiments response capture case study — triple digit increase in conversions<sup>16</sup>

Through a series of A/B tests they optimized the mailing list opt-in rate by 258%. Focus was to remove all distractions and require the visitor to only provide email address. For completing his/her complete profile, the landing page motivated the visitors with an Amazon gift card (which was again split tested).



# Tools For A/B Testing

A number of tools are available for A/B testing, with different focuses, price points and feature sets. Here are some:

 $<sup>{\</sup>bf 16.}\ http://www.marketing experiments.com/blog/research-topics/response-capture-case-study.html$ 

- Google Website Optimizer<sup>17</sup>
   A free A/B testing tool from the search giant. A great option to get started, but lacks advanced features.
- A/Bingo<sup>18</sup> and Vanity<sup>19</sup>
   Server-side frameworks for Ruby on Rails developers. Requires programming and integration in code.
- Visual Website Optimizer<sup>20</sup>
   An easy-to-use A/B testing tool, with advanced features such as WYSI-WYG editor, click maps, visitor segmentation and tag-less integration.
   (Disclaimer: my start-up.)
- Unbounce<sup>21</sup> and Performable<sup>22</sup>
   Landing-page creators with integrated A/B testing.
- Vertster<sup>23</sup>, SiteSpect<sup>24</sup>, Webtrends Optimize<sup>25</sup> and Omniture's Test&Target<sup>26</sup>
   Enterprise testing tools.

# Resources For Deep-Diving Into A/B Testing

If you've read this far, then A/B testing has presumably piqued your interest. Here, then, are some cherry-picked resources on A/B testing from across the Web.

# GET IDEAS FOR YOUR NEXT A/B TEST

- Which Test Won?<sup>27</sup>
  A game in which you guess which variation won in a test.
- 101 A/B Testing Tips<sup>28</sup>
   A comprehensive resource of tips, tricks and ideas.
  - 17. http://www.google.com/analytics/
  - 18. http://www.bingocardcreator.com/abingo/
  - 19. http://vanity.labnotes.org/
  - 20. http://visualwebsiteoptimizer.com
  - 21. http://unbounce.com/
  - 22. http://performable.com/
  - 23. http://vertster.com/
  - 24. http://sitespect.com/
  - 25. http://www.webtrends.com/products/optimize.aspx
  - 26. http://www.omniture.com/en/products/conversion/testandtarget
  - 27. http://whichtestwon.com/
  - 28. http://www.conversion-rate-experts.com/articles/101-google-website-optimizer-tips/

- ABtests.com<sup>29</sup>
   A place to share and read A/B test results.
- A/B Ideafox<sup>30</sup>
  A search engine for A/B and multivariate case studies.

### INTRODUCTORY PRESENTATIONS AND ARTICLES

- Effective A/B Testing<sup>31</sup>
   By Ben Tilly.
- Practical Guide to Controlled Experiments on the Web<sup>32</sup> (PDF)
   From Microsoft Research.
- Introduction to A/B Testing<sup>33</sup>
   From the 20bits blog.

### THE MATHEMATICS OF A/B TESTING

- Statistics for A/B Testing<sup>34</sup>
   From the 20bits blog.
- How Not to Do A/B Testing<sup>35</sup>
- What You Should Know About the Mathematics of A/B Testing<sup>36</sup>
   From my own blog.
- Easy Statistics for AdWords A/B Testing, and Hamsters<sup>37</sup>
- Statistical Significance and Other A/B Test Pitfalls<sup>38</sup>

<sup>29.</sup> http://abtests.com/

<sup>30.</sup> http://visualwebsiteoptimizer.com/ideafox.php

<sup>31.</sup> http://elem.com/~btilly/effective-ab-testing/

<sup>32.</sup> http://exp-platform.com/Documents/GuideControlledExperiments.pdf

<sup>33.</sup> http://20bits.com/articles/an-introduction-to-ab-testing/

<sup>34.</sup> http://20bits.com/articles/statistical-analysis-and-ab-testing/

<sup>35.</sup> http://www.evanmiller.org/how-not-to-run-an-ab-test.html

**<sup>36.</sup>** http://visualwebsiteoptimizer.com/split-testing-blog/what-you-really-need-to-know-about-mathematics-of-ab-split-testing/

 $<sup>{\</sup>bf 37.}\ http://blog.asmartbear.com/easy-statistics-for-adwords-ab-testing-and-hamsters.html$ 

<sup>38.</sup> http://www.cennydd.co.uk/2009/statistical-significance-other-ab-test-pitfalls/

# Multivariate Testing in Action: Five Simple Steps To Increase Conversion Rates

### BY PARAS CHOPRA 20

The attention span on the Web has been decreasing ever since Google had arrived and changed the rules of the game. Now with millions of results available on any topic imaginable, the window to grab a visitor's attention has decreased significantly (in 2002, the BBC reported it is about 9 seconds<sup>39</sup>). Picture yourself browsing the Web: do you go out of your way to read the text, look at all the graphics, and try to thoroughly understand what the page is about? The answer is most likely to be a straight "no." With bombardment of information from all around, we have become spoiled kids, not paying enough attention to what a Web page wants to tell us.

We make snap decisions on whether to engage with a website based on whatever we can make out in the first few (milli)seconds<sup>40</sup>. The responsibility for making a good first impression lies with designers and website owners. Given that the window of opportunity to persuade a visitor is really small, most designs (probably including yours) do a suboptimal job because the designer in you thinks in terms of aesthetics. However, most websites do not exist just to impress visitors. Most websites exist to make a sale. Whether it is to get visitors to subscribe to the blog feed, or to download a trial, every website ultimately exists to make a sale of some kind.

In this post we will talk about how to tweak a website for generating more sales, downloads, membership (or any other business goal) in a scientific manner, using A/B split and multivariate testing. Like everything else science-related, this chapter will explore a step-by-step, reproducible method for increasing your conversion rate (the percentage of visitors converted to customers). Also, you may be interested in the Ultimate Guide to A/B Testing that was published earlier on Smashing Magazine.

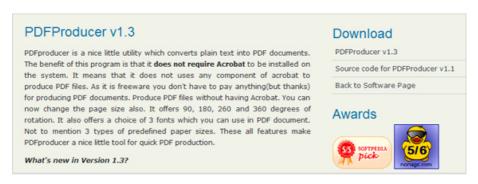
<sup>39.</sup> http://news.bbc.co.uk/2/hi/science/nature/1834682.stm

<sup>40.</sup> http://www.ingentaconnect.com/content/tandf/tbit/2006/00000025/00000002/art00003

<sup>41.</sup> http://www.smashingmagazine.com/2010/06/24/the-ultimate-guide-to-a-b-testing/

# Step 1. Identify a Challenge

How to have website visitors notice your offering, then get them to act on it? I wanted to answer that million dollar question for a software download page<sup>42</sup> on my personal homepage. That page had all the right ingredients: product name, product description, testimonials, awards, ratings and a prominent download link. Yet, only 40% of the visitors downloaded the free software. Note that almost all traffic on that page was targeted as it arrived, either through doing a Google search or via a relevant referring website. So, why didn't the remaining 60% of visitors download the software? Fixing that leaky bucket was my challenge.

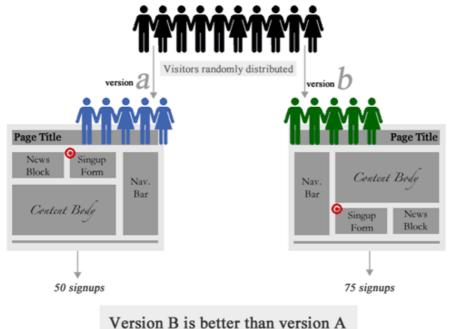


Key point: Clearly identify the goals of your website (or a particular Web page).

In my case, the desired action is to have visitors download the software and the challenge is to increase the download rate from 40% to as high as possible. Some of the most common challenges which can be solved using A/B split testing are:

- Improving sign-up rate, reducing bounce rate, increasing newsletter subscriptions,
- Increasing number of leads collected from landing page, increasing whitepaper or software trial downloads and
- Optimizing purchases and sales, converting a higher percentage of visitors to customers.

It is entirely possible that your website may be serving multiple purposes. An example would be a blog where the challenge is to get more subscribers and to increase visitor engagement (in terms of number of comments). In that case, the best strategy is to tackle one (clearly defined) challenge at a time.



version B is better than version A

Quick overview: A/B Testing. Large version<sup>43</sup>

# Step 2. The Hypothesis

The next step is to make a list of hypotheses for the low conversion rate (percentage of visitors taking the desired action). Agreed, it is tough to come up with exact reasons (that is why we are calling them hypotheses) for a low conversion rate, but there are three excellent resources to help you:

- 1) You: Yes, you! Though it is hard not to fall in love with one's own website, it is now time to be extremely self-critical. Try to step into your visitors' shoes and ask yourself, is your Web page compelling enough to engage a visitor with no background knowledge about your offering? Remember that unlike you, your visitors don't wake up in the morning saying, "Oh wow, this thing is fantastic!" Being critical towards your own website is an excellent way to improve it.
- **2) Web analytics data**: Another source for getting a list of improvement ideas is your analytics tool. Specifically, data on referral sources and search keywords can provide interesting insights. For example, a lot of visitors may be arriving on your webpage by searching for keywords which you haven't even thought about. In that case, your visitors may leave the website mistakenly thinking that your offer is not what

<sup>43.</sup> http://media.smashingmagazine.com/wp-content/uploads/2010/06/abtesting.gif

they were searching for. Addressing such cases can increase the conversion rate.

**3) Usability testing**: Getting independent feedback from a usability test will always surprise you! Perhaps you will discover that visitors are not even aware that you are offering something on the page. In that case, a great idea would be to test the color and size of a prominent call-to-action. If you don't have a large budget for usability testing, try out affordable services such as Feedback Army or UserTesting.

**Key point:** Determine what influences conversion rate.

Take feedback from others but evaluate your Web page honestly, and jot down a list of ideas on what could be affecting conversions. For my software download Web page, I had a hypothesis that the download rate was low primarily due to two reasons: a) a lot of visitors didn't notice the download link and b) many didn't know that the software is free to download.

My guess was that a normal visit went something like this: a visitor arrives at the website, sees a bunch of text, looks around for the download link, somehow misses it (possibly due to uniformity in color of headings), and finally leaves the website. Those who notice the download link probably don't go to the trouble of reading the text, where it says "... is a freeware...", so they assume that the software is a trial or a demo.

The kinds of hypotheses you may have at this step:

- Maybe your sign-up form is too long, and a shorter version will help increasing total number of sign-ups?
- Maybe your "Free Trial" button isn't noticeable; will a larger button help in more downloads?
- Maybe your headline contains a lot of industry acronyms, or is too generic?
- Maybe your landing page has no obvious next step, which is leading to high bounce rate?

# Step 3. A/B or Multivariate Testing?

Once your list of possible reasons for low conversion rate is ready, it is time to crank your brain once again to come up with different ideas for addressing those reasons. What you do in this step, is to come up with multiple different versions for all the factors you came up with in the last step. For the "Sign Up" case, for example, different versions will be:

- **Form variations**: Minimal form with just two fields; form not asking for email address; multi-step form; long form.
- **Submit button variations**: "Submit" or "Sign Up for Free" or "Instant Signup" or even "Sign Up Now!"

If you are skeptical that such minor differences cannot make any significant impact on conversions, read a case study where 37Signals increased sign-ups by 30% <sup>44</sup> by testing a simple headline change. Also read how Dustin Curtis increased his Twitter followers by 173% by simply changing the link text<sup>45</sup> to "You should follow me on Twitter."

# A/B SPLIT TESTING

In A/B testing (also known as split testing), you vary only one element on the page at a time. This element may be any part of the Web page critical to conversions (e.g. button color, size, ad copy headline). Contrast this to multivariate testing, where multiple different elements are tested at a time. However, A/B tests are simpler and easier to implement than multivariate tests.

### MULTIVARIATE TESTING

In multivariate testing, you identify different sections/factors on a page which effect conversion rate. Different variations of those factors are created, which are then combined to give rise to multiple different versions of the website. Multivariate tests take more time than A/B tests to show results, but are more likely to produce better results.

**Key point**: Create variations.

### CONDUCTING TESTS

Coming back to the challenge of increasing downloads for the software page, I used my own tool, <u>Visual Website Optimizer</u><sup>46</sup>, that provides a visual interface for creating variations, but you could use other tools as well. An obvious solution to make visitors notice the download link is to make the download section the most prominent part of the page. In the

**<sup>44.</sup>** http://37signals.com/svn/posts/1525-writing-decisions-headline-tests-on-the-highrise-signup-page

<sup>45.</sup> http://dustincurtis.com/you\_should\_follow\_me\_on\_twitter.html

<sup>46.</sup> http://visualwebsiteoptimizer.com/

page design, the "Download" heading size and color blended well into the rest of the page, which resulted in people missing the download link.

For the multivariate test, I selected two factors on the page for creating variations: the "Download" heading in the sidebar and the "PDFProducer" download link below it. The focus of the test was to observe the effect of the word "free," and the effect of highlighting the download section. Here are the variations I came up with for this test:

For "Download" headline:

- "Download" in red
- "Download for Free" in red
- "Download" in default color, but a larger font size

For "PDFProducer" link:

- "PDFProducer" in default color, but a larger font size
- "PDFProducer" in red

In a multivariate test, different variations are combined to produce multiple versions of the Web page. In this case, combining the above variations, a total of 12 (4×3) different versions were produced (automatically), each with a unique combination of "Download" headings and "PDFProducer" links (variation 1 is the control, or default, variation).

Download  PDFProducer v1.3	Download  PDFProducer v1.3	Download  PDFProducer v1.3	Download  PDFProducer v1.3
5 Download	Download	<sup>7</sup> Download	s Download
PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3
Download	Download For Free	n Download For Free	Download For Free
PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3

Different versions of the download section used in the multivariate test.

For definition's sake, because I have combined variations of two different sections, the test is called a *multivariate* test. If I had just varied a single section, say the "Download" heading, the test would have been called an A/B *splittest*.

**Key point**: Define the goal of the test.

Every test has a goal against which the performance of different versions is measured. In this case, the goal was the number of downloads.

Other types of goals may be sign-ups, purchases, clicks, leads, page views, or bounce rate. It is important to define the goal which is closest to your business objectives. For example, an eCommerce store optimizing for sales shouldn't define clicking on the "Add to Basket" button as a goal. Rather, it should define the goal as a visit to the "Thank you" page after a purchase is completed.

# Step 4. Running the Test and Analyzing Results

What an A/B split or multivariate test does, is simple: whenever a visitor arrives on your Web page, it displays a randomly chosen version of the Web page. In other words, your traffic gets equally distributed amongst different versions. The performance of the different versions is tracked against the conversion goal(s) defined for the test. For example, in my case the goal was increasing the number of downloads; each time a visitor downloaded the software, Visual Website Optimizer tracked which Web page version was shown to the visitor. Setting up a test using this tool helped here as I could select the sections, make variations in a WYSIWYG editor, and immediately preview how it will look live on the page.

After a large number of visitors have been included in the test, different versions are compared to see which one of them performed the best and how much improvement (over the default) it achieved.

Key point: Analyze the results.

After running the test for about 4 weeks, I had results for my software download test. Can you guess which variation resulted in maximum downloads? Any guesses on how much improvement I was able to achieve over the existing 40% download conversion rate?

Hold your breath, here are the results:

#	Details	Conversion rate	% Improve- ment	Confidence*
1	Default combination (control)	39.4%	-	-
10	"Download for Free" in red, default "PDF- Producer" link	63.2%	60%	99%

9	"Download" in big font, "PDF- Producer" link in red	56.5%	43.3%	98%
12	"Download for Free" in red, "PDFProducer" link in red	54.2%	37.7%	95%
2	"Download" as default, "PDF- Producer" in big font	41.3%	4.76%	56%

Note: % improvement over default is calculated as 100\*(Variation%–Control%)/(Control%)

# refers to the combination number as described in the screenshot above

Confidence\*: Statistical confidence in beating the default combination.

You can observe that the headline "Download for Free" in red pushed the download conversion rate from 39% to 63%, a whopping increase of 60%. Having "Download" in large font size (combined with link color as red) also had a positive (43%) improvement over the default. Of all results, the top three are statistically significant at 95% or more confidence level. It means that I can safely implement winning versions on the Web page, to see a permanent increase in downloads. Also note that even the worst performing combination has about a 4% improvement over the control, though it is not statistically significant.

A common concern is that the test results may not be reliable and that the improvement seen may be due to chance. It is, therefore, important to understand different parameters that influence reliability:

- Number of visitors: the higher the number of visitors, the more reliable the results. You can use tools such as a split test duration calculator, to estimate how many visitors will be required for your test.
- Conversion rate: in general, results for pages with a low conversion rate (say 1-2%) take a much longer period to produce statistically significant results, than pages with a higher conversion rate (say 40-50%).

• Difference in performance: testing with a large difference in the performance of variations (say >10%) is always more reliable than one where the difference is extremely small (0.5% or so).

It is important to either use a tool which automatically crunches the reliability of results for you, or to use online calculators to gauge the confidence in results. Taking unreliable results and implementing them can actually cause decreased performance. The exact mathematics of what goes on behind split testing reliability analysis can be read in the 20bits article Statistical Analysis and A/B Testing<sup>47</sup>, or my blog article Mathematics of A/B testing<sup>48</sup>.

# Step 5. Learn From the Test Results

Irrespective of whether improved versions of your page are found or not, every test ends up with a good amount of learning. Here are a couple of key takeaways from my test:

- The word "Free" is a very powerful attention grabber. You are doing a sub-optimal job if you offer something for free, and don't make that super-obvious on the page.
- Best location for advertising your "Free" offer is near (or on) a call-to-action. Like in this case, "Download for Free" is displayed quite close to the download link itself.
- This brings us to next important point: why not make the word "free" clickable? I am sure if I had analyzed the location of clicks on the page, I would have found a lot of visitors clicking on the "Download for Free" headline, only to realize it is not a link. I should have definitely tested a version with a clickable headline.
- The color red, matters, but only if it is combined with other elements such as "Free" (or other effective call to action texts). Red may bring attention to your call to action, but if the text is not persuasive, the visitor will probably not take any action.
- The size of your call to action also matters. A larger size tells the visitor that you consider this particular section (in this case, downloading the application) more important than the other parts of the page.

<sup>47.</sup> http://20bits.com/articles/statistical-analysis-and-ab-testing/

**<sup>48.</sup>** http://visualwebsiteoptimizer.com/split-testing-blog/what-you-really-need-to-know-about-mathematics-of-ab-split-testing/

Even if you don't remember any of the points above, please take home one key point: don't replicate the suggestions above without testing them on your website! Every website is unique, every conversion goal is different. While generic observations about the effect of the word "Free," of the color red, and of the size of your call to action make logical sense, it is always wise to be sure of their effectiveness by setting up a quick test.

A/B split testing holds a lot of potential for positively impacting a company's revenue and profits. In spite of that, surprisingly, adoption of testing is not that high. If you haven't done any A/B split tests yet, why is that so?

# Related posts

You may be interested in the following related articles:

- Ultimate Guide to A/B Testing<sup>49</sup>
- Getting Started With E-Commerce: Your Options When Selling Online<sup>50</sup>
- Improve Your E-Commerce Design With Brilliant Product Photos<sup>51</sup>
- Our 3-part-series "Optimizing Conversion Rates<sup>52</sup>".

<sup>49.</sup> http://www.smashingmagazine.com/2010/06/24/the-ultimate-guide-to-a-b-testing/

<sup>50.</sup> http://www.smashingmagazine.com/2010/06/02/getting-started-with-e-commerce-your-options-when-selling-online/

<sup>51.</sup> http://www.smashingmagazine.com/2010/08/24/improve-your-e-commerce-design-with-brilliant-product-photos/

**<sup>52.</sup>** http://www.smashingmagazine.com/2009/05/23/optimizing-conversion-rates-less-effort-more-customers/

# 15 Essential Checks Before Launching Your Website

# BY LEE MUNROE

Your website is designed, the CMS works, content has been added and the client is happy. It's time to take the website live. Or is it? When launching a website, you can often forget a number of things in your eagerness to make it live, so it's useful to have a checklist to look through as you make your final touches and before you announce your website to the world.

This chapter reviews some important and necessary checks that web-sites should be checked against before the official launch — little details are often forgotten or ignored, but – if done in time – may sum up to an overall greater user experience and avoid unnecessary costs after the official site release.

### **FAVICON**

A favicon brands the tab or window in which your website is open in the user's browser. It is also saved with the bookmark so that users can easily identify pages from your website. Some browsers pick up the favicon if you save it in your root directory as favicon.ico, but to be sure it's picked up all the time, include the following in your head.

```
<link rel="icon" type="image/x-icon" href="/favicon.ico" />
```

And if you have an iPhone favicon:

<link rel="apple-touch-icon" href="/favicon.png" />



### TITLES AND META DATA

Your page title is the most important element for SEO and is also important so that users know what's on the page. Make sure it changes on every page and relates to that page's content.

<title>10 Things To Consider When Choosing The Perfect CMS | How-To | Smashing Magazine</title>

Meta description and keyword tags aren't as important for SEO (at least for the major search engines anyway), but it's still a good idea to include them. Change the description on each page to make it relate to that page's content, because this is often what Google displays in its search result description.

<meta name="description" content="By Paul Boag Choosing a content
management system can be tricky. Without a clearly defined set of
requirements, you will be seduced by fancy functionality that you
will never use. What then should you look" />

10 Things To Consider When Choosing The Perfect CMS | How-To ... | 🖹 🔀 By Paul Boag Choosing a content management system can be tricky. Without a clearly defined set of requirements, you will be seduced by fancy functionality ... www.smashingmagazine.com/2009/03/05/10-things-to-consider-when-choosing-the-perfect-cms/ - 244k - Cached - Similar pages -

# **CROSS-BROWSER CHECKS**

Just when you think your design looks great, pixel perfect, you check it in IE and see that everything is broken. It's important that your website works across browsers. It doesn't have to be pixel perfect, but everything should work, and the user shouldn't see any problems. The most popular browsers to check are Internet Explorer 6, 7 and 8, Firefox 3, Safari 3, Chrome, Opera and the iPhone.







Mozilla Firefox, Apple Safari, and Opera







- Cross-Browser Checks: Services and Test Suites<sup>53</sup>
- 7 fresh and simple ways to test cross-browser compatibility<sup>54</sup>

### **PROOFREAD**

Read everything. Even if you've already read it, read it again. Get someone else to read it. There's always something you'll pick up on and have to change. See if you can reduce the amount of text by keeping it specific. Break up large text blocks into shorter paragraphs. Add clear headings throughout, and use lists so that users can scan easily. Don't forget about dynamic text too, such as alert boxes.

• Writing for the Web<sup>55</sup>

### LINKS

Don't just assume all your links work. Click on them. You may often forget to add "http://" to links to external websites. Make sure your logo links to the home page, a common convention.

Also, think about how your links work. Is it obvious to new users that they are links? They should stand out from the other text on the page. Don't underline text that isn't a link because it will confuse users. And what happens to visited links?



• W3C Link Checker<sup>56</sup>

### **FUNCTIONALITY CHECK**

Test everything thoroughly. If you have a contact form, test it and copy yourself so that you can see what comes through. Get others to test

<sup>53.</sup> http://www.smashingmagazine.com/2007/10/02/browser-tests-services-and-compatibility-test-suites/

<sup>54.</sup> http://freelancefolder.com/7-fresh-and-simple-ways-to-test-cross-browser-compatibility/

<sup>55.</sup> http://www.useit.com/alertbox/9703b.html

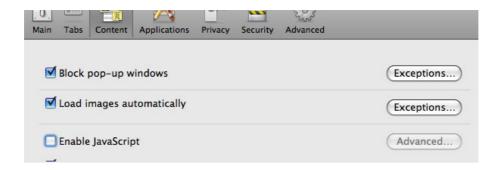
<sup>56.</sup> http://validator.w3.org/checklink

your website, and not just family and friends but the website's target market. Sit back and watch how a user uses the website. It's amazing what you'll pick up on when others use your website differently than how you assume they'd use it. Common things to check for are contact forms, search functions, shopping baskets and log-in areas.

• Silverback – guerrilla usability testing<sup>57</sup>

### **GRACEFUL DEGRADATION**

Your website should work with JavaScript turned off. Users often have JavaScript turned off for security, so you should be prepared for this. You can easily turn off JavaScript in Firefox. Test your forms to make sure they still perform server-side validation checks, and test any cool AJAX stuff you have going on.



### **VALIDATION**

You should aim for a 100% valid website. That said, it isn't the end of the world if your website doesn't validate<sup>58</sup>, but it's important to know the reasons why it doesn't so that you can fix any nasty errors. Common gotchas include no "alt" tags, no closing tags and using "&" instead of "&amp;" for ampersands.

	This document was successfully checked as XHTML
Passed	
http://w	ww.webstandardistas.com/
(undefined)	
Apache/1.3.	34 (Debian) mod_gzip/1.3.26.1a AuthMySQL/4.3.9-2 PHP/5.2.0-8+etch
(undefined)	
_	

10 reasons your code won't validate (and how to fix it)<sup>59</sup>

<sup>57.</sup> http://silverbackapp.com/

<sup>58.</sup> http://www.leemunroe.com/how-important-is-valid-html-web-standards/

# • W3C validator<sup>60</sup>

# RSS LINK

If your website has a blog or newsreel, you should have an RSS feed that users can subscribe to. Users should be able to easily find your RSS feed: the common convention is to put a small RSS icon in the browser's address bar.

Put this code between your <head> tags.

```
<link rel="alternate" type="application/rss+xml" title="Site or
RSS title" href="link-to-feed" />
```



# **ANALYTICS**

Installing some sort of analytics tool is important for measuring statistics to see how your website performs and how successful your conversion rates are. Track daily unique hits, monthly page views and browser statistics, all useful data to start tracking from day 1. Google Analytics 61 is a free favorite among website owners. Others to consider are Clicky 62, Kissmetrics 63, Mint 64 and Stat Counter 65.

**<sup>59.</sup>** http://net.tutsplus.com/articles/web-roundups/10-reasons-why-your-code-wont-validate-and-how-to-fix-it/

<sup>60.</sup> http://validator.w3.org/

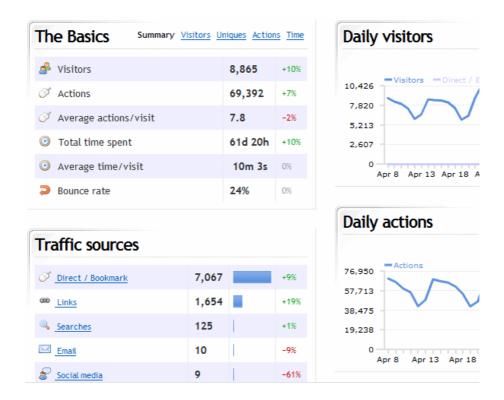
<sup>61.</sup> http://www.google.com/analytics/

<sup>62.</sup> http://getclicky.com/

<sup>63.</sup> http://kissmetrics.com/

<sup>64.</sup> http://haveamint.com/

<sup>65.</sup> http://statcounter.com/



### **SITEMAP**

Adding a sitemap.xml file to your root directory allows the major search engines to easily index your website. The file points crawlers to all the pages on your website. XML-Sitemaps<sup>66</sup> automatically creates a sitemap.xml file for you. After creating the file, upload it to your root directory so that its location is www.mydomain.com/sitemap.xml.

If you use WordPress, install the Google XML Sitemaps plug-in<sup>67</sup>, which automatically updates the sitemap when you write new posts. Also, add your website and sitemap to Google Webmaster Tools<sup>68</sup>. This tells Google that you have a sitemap, and the service provides useful statistics on how and when your website was last indexed.



- 66. http://www.xml-sitemaps.com/
- **67.** http://www.arnebrachhold.de/projects/wordpress-plugins/google-xml-sitemaps-generator/
- 68. https://www.google.com/webmasters/tools

### **DEFENSIVE DESIGN**

The most commonly overlooked defensive design element is the 404 page. If a user requests a page that doesn't exist, your 404 page is displayed. This may happen for a variety of reasons, including another website linking to a page that doesn't exist. Get your users back on track by providing a useful 404 page that directs them to the home page or suggests other pages they may be interested in.

Another defensive design technique is checking your forms for validation. Try submitting unusual information in your form fields (e.g. lots of characters, letters in number fields, etc.) and make sure that if there is an error, the user is provided with enough feedback to be able to fix it.

# The page you requested is no longer here.

It seems that the page you were trying to reach doesn't exist anymore, or maybe it has just moved. Please feel free to contact us if the problem persists or if you think it is a problem with Product Planner, please contact us.

It might help to start from the home page

404 error pages reloaded<sup>69</sup>

### **OPTIMIZE**

You'll want to configure your website for optimal performance. You should do this on an ongoing basis after launch, but you can take a few simple steps before launch, too. Reducing HTTP requests, using CSS sprites wherever possible, optimizing images for the Web, compressing JavaScript and CSS files and so on can all help load your pages more quickly and use less server resources.

Besides, depending on the publishing engine that you are using, you may need to consider taking more specific measures – for instance, if you are using WordPress, you may need to consider useful caching techniques to speed up the performance<sup>70</sup>.

<sup>69.</sup> http://www.smashingmagazine.com/2007/08/17/404-error-pages-reloaded/

**<sup>70.</sup>** http://www.arnebrachhold.de/2007/02/16/four-plus-one-ways-to-speed-up-the-performance-of-wordpress-with-caching/



- Best practices for speeding up your website<sup>71</sup>
- Web page analyzer<sup>72</sup>

### **BACK UP**

If your website runs off a database, you need a back-up strategy. Or else, the day will come when you regret not having one. If you use WordPress, install WordPress Database Backup<sup>73</sup>, which you can set up to automatically email you backups.

# PRINT STYLE SHEET

If a user wants to print a page from your website, chances are she or he wants only the main content and not the navigation or extra design elements. That's why it is a good idea to create a print-specific style sheet. Also, certain CSS elements, such as floats, don't come out well when printed.

To point to a special CSS style sheet that computers automatically use when users print a page, simply include the following code between your <head> tags.

<sup>71.</sup> http://developer.yahoo.com/performance/rules.html

<sup>72.</sup> http://www.websiteoptimization.com/services/analyze/

<sup>73.</sup> http://wordpress.org/extend/plugins/wp-db-backup/

```
<link rel="stylesheet" type="text/css" href="print.css"
media="print" />
```

- Printing The Web: Solutions and Techniques<sup>74</sup>
- A List Apart: Going to print<sup>75</sup>

# Download the Ultimate Website Launch Checklist!

Just recently Dan Zambonini has published a very detailed checklist that covers both the pre-launch and the post-launch phase of the website life cycle. Among other things his Ultimate Website Launch Checklist<sup>76</sup> contains checks related to content and style, standards and validation, search engine visibility, functional testing, security/risk, performance and marketing.



### Posted by Dan Zambonini on 17th Feb 2009

We're developing a checklist that all websites should be checked against before launch. Let us kno missed something out, or if something needs further clarification. Some well-known and well-docu (such as validation and accessibility testing) are not explained in detail. Add your suggestions in the

Updated 17 Feb '09, 15:21 Added notifications (@keeran), Hidden copy (@jennybee) and Test sea

Updated 18 Feb '09, 17:18 Added testing of backup (<u>Edinburger</u>), Google Webmaster Console (<u>jo</u>: Mark Alves), External monitoring and internal logging (<u>Fernando</u> and <u>Karan Bhanqui</u>), and Consiste UK/US spelling (<u>Pierre Far</u>).

The pdf-version<sup>77</sup> is available as well. The checklist is a very useful reference that may help you in your daily projects and will help you to prevent errors and mistake once the site is released.

You may also want to consider the Quick Usability Check List<sup>78</sup> by David Leggett that highlight some of the more common problems designers should address on their own sites in a Usability checklist of sorts. Not all of these items will apply to every website, these are just suggested things to look for in your own site design.

**<sup>74.</sup>** http://www.smashingmagazine.com/2007/02/21/printing-the-web-solutions-and-techniques/

<sup>75.</sup> http://www.alistapart.com/articles/goingtoprint/

<sup>76.</sup> http://www.boxuk.com/blog/the-ultimate-website-launch-checklist

<sup>77.</sup> http://www.boxuk.com/upload/website\_launch\_checklist\_v1.pdf

<sup>78.</sup> http://www.uxbooth.com/blog/quick-usability-checklist/

# **Quick Usability Checklist**

After <u>reviewing websites</u> for a few months, I've begun to see general patterns emerge that make a site more or less usable. In this post, I'd like to highlight some of the more common problems designers should address on their own sites in a Usability checklist of sorts.

Not all of these items will apply to every website, these are just suggested things to look for



# What other checks would you list?

Make yourself a to-do list and keep it handy to check over before making any website live. Are there any other points you would add?

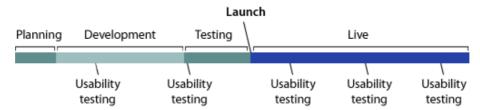
# Test Usability By Embracing Other Viewpoints

### BY BEN GREMILLION 20

As Web technology improves, users expect Web-based widgets to be useful, content to be relevant and interfaces to be snappy. They want to feel confident navigating a website and using its functionality. They crave being able to get things done with little friction and on demand. And demand they do.

People are picky. When a website gives them problems, they are less inclined to use it. From a design perspective, testing for a good user experience entails making improvements based as much on critical feedback as on design expertise. As long as your website is around, offering a good user experience is critical. And like the website itself, improving the user experience doesn't end when the website launches.

A good user experience leaves people with a sense of accomplishment.



Unlike certain other phases of production, testing for user experience is an ongoing process.

Developing a website or app often takes up several phases. These include discovery, design, implementation, internal testing, soft launch and delivery. But unlike the development phases, user testing is ongoing. Certain questions will arise at any time:

- Does this solve a problem or serve a purpose?
- Is it easy to use?
- Is it meaningful?
- Is it useful?

### • Is it clear?

These questions are relevant when the concept is being refined, halfway through development and six months after launch... in fact, they never stop being relevant.

# Regular Upkeep And Rigorous Pruning

If a website is to serve its visitors well, then the people who maintain it must address the problem of relevance. Relevant content answers questions that people have right now. But technology advances, events come and go and people's needs change over time. The information that a website launches with may not be as useful to users six months later.

Regular content audits — asking how well each piece of the website's information benefits the users — ensures that when visitors come, their trip is worth the effort. To do this, a website manager should ensure that every piece of content addresses these questions:

- How does it benefit or persuade the end user?
- How does it support the website's purpose or agenda?
- Is it easy to find?

If content *might* be useful, then it also *might* be unnecessary. Here are other questions to ask about whether a piece of content deserves a place on the website at all:

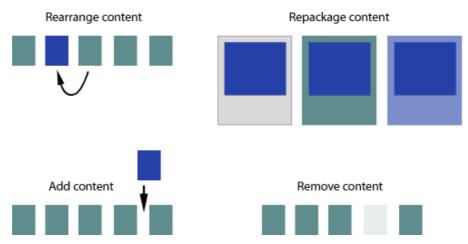
- Who would miss it if we removed it?
- Could it be combined with something similar?
- How often do people who don't visit the website ask about this?

For example, if a website's "About us" page is only a paragraph long, it might be better served on the home page — unless it could be expanded with meaningful information about company history, staff biographies or contact details. Likewise, a website about, say, soy milk products may not require information about the inhumane treatment of cows — unless the website's goal was more to promote a viewpoint than to sell soy milk.

Whether content belongs on a website is determined by the website's purpose. If something doesn't quite fit, then the website won't quite work.

# Ask "What If" Of Unlikely Scenarios

Sometimes the hardest part about questioning one's assumptions is determining what those assumptions are. Learning to consider the pros and cons of silly, risky or impractical changes is a creative way to shake up established methods and discover potentially better ideas.



Traditional methods of updating content include adding, removing, rearranging and recasting information.

While conventional thinking leads a designer to experiment with, say, the background color, an unlikely "What if" question considers the nature of the background itself. What if the website had more than one background? Would one act as a mid-ground, floating above the very back? Would the background change as visitors wandered through the website?

When you've finished asking the obvious, try the unlikely:

- What if the website's "About" page became its home page?
- What if we turned the website's sidebar into a footer?
- What if we organized all content with tags instead of in a hierarchy?
- What if we swapped the colors of the heading and background?
- What if the contact form was a puzzle that visitors had to solve?
- What if products were arranged with the least popular at the top?
- What if we disabled the CSS and images one day per week?

Impractical? Perhaps not. Enlightening? Perhaps. Playing "What if" is about questioning the rules that govern a website's design. Is there a better way to arrange the information? How else could the content be presented? Is this design really clear enough?

Undertaking to improve the user experience is an admission that the current design has problems. If the problems are unclear or user complaints are vague, then exploring radical changes may force designers to question their initial assumptions. If nothing else, then it's an exercise in creativity. If it ain't broke, break a copy.

Case in point: when one business owner in particular wanted to sell products online, the initial website design filled the center of the home page with clickable product categories. This didn't suit the owner, whose business name was well known in the field. The proposed solution moved categories to a thin left-hand column and put business information, customer registration and contract details in the center.

A week after launch, a long-time customer asked when the website would have products. The categories seemed to have gone unnoticed by an indefinite number of visitors. Fortunately, one decided to speak up.







Categories in the center

Categories on the left

The proposed solution

The original design put product categories (the white bars) in the center. The client wanted more emphasis on information about their company (black bars). When customers complained, the client requested an arrow pointing to categories on the left.

This problem could have been prevented if the people involved had put higher priority on the user experience. No further user testing was done. To date, it is unknown how many customers, if any, are still having trouble with the website.

## Keep Content In (Other People's) Perspective

Clever designers don't attempt to answer these questions themselves. Rather, they ask two types of people: those who use the website often and those who use it casually.

Website designers often begin with certain goals about how a website's interface and content should be used. Interfaces are designed around particular problems: how do I make it easy for people to navigate or manipulate data? This is natural because many design processes are intended to solve problems in communication.

But visitors will approach the same design from another angle. Given an interface, they ask: how do I use this to get what I want?

To learn how visitors use a website, designers must observe without interference. The designer's goal isn't to teach someone how to use a website, but rather to learn how people might interpret its interface.

Once visitors start teaching the designer (pointing out how they accomplish a task, or clicking from page to page), insights emerge about what's easy and what's relevant to the people whom the website serves.

## Other Points Of View Benefit Everyone

Designers must understand that the refrain "You're doing it wrong" isn't always true. Even if someone uses a website the hard way, they're doing so for a reason. Maybe the easier path isn't clear to them. Maybe they're less comfortable with the easier way than what they're accustomed to. Maybe the hard way has an advantage that the designer hasn't thought of.

Wrong or right, a user's view deserves respect for two reasons. First, designs that serve the designer's ego at the expense of user needs have failed both. Secondly, a great interface today will be average next year. Striving for a good user experience helps designers not just to stay current but to continually improve their work.

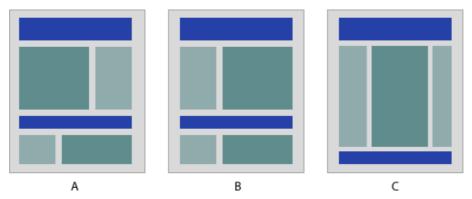
A good user experience is reliable, useful, responsive and unambiguous — to the people who use the website. Although users may not follow the anticipated method of accomplishing a defined task, their solution is based on what makes sense to them.

Designers who seek other points of view may find ways to make a website easier for visitors to find the information they want. The better the user experience, the more willingly users will return.

## Not Every Perspective Leads To Improvement

Of course, not every viewpoint is *always* relevant. Sometimes crazy ideas lead to improvements, and sometimes they're just crazy. Most design conventions exist because they're genuinely useful, convenient or familiar to designers and users alike.

Seeking to understanding other points of view doesn't mean trying to keep everyone happy. It means asking if there's a better way to meet user needs. Catering to every possible view is a recipe for failure. In the end, the website's owner is responsible for deciding how best to serve their audience.



Which layout is best? It's the designer's call, not the audience's.

## Tips For Testing

#### • Ask specific questions.

"What would you improve?" is helpful only if the user already has gripes. "How would you find (certain information)?" gives users something to focus on.

#### Encourage feedback.

Incentives for completing a survey, for example, compensate visitors for their input.

#### • Ask the "wrong" people.

If one assumes that only a certain type of person will use a website, then they might only get the feedback they expect. But if one gets feedback from someone with no experience in the website's subject matter, they might get a fresh point of view.

#### · Keep testing.

Websites and people change over time. If possible, seek new input and review the website's content every other month.

#### · Track visitors.

Software that records who visits what, such as Google Analytics and Mint, tells you what people are after and what's easy (and hard) to find.

#### Allow time for changes.

Feedback may show oversights in the website's design or structure. Deadline pressure is bad enough without the realization that your initial assumptions have led to problems at the last minute.

## Tools For Testing

Do you really know your project? See it from other points of view with these online resources.

- Color can prevent people from viewing a layout objectively. Check your websites with Graybit<sup>79</sup>.
- Do you need to check your websites in different versions of Internet Explorer? Regardless of your browser, review your websites in IE 6, 7 and 8 with IE NetRenderer<sup>80</sup>.
- What exactly are your users looking at? Collect live observations of their experience with Morae<sup>81</sup> and Silverback<sup>82</sup>.
- How does your website sound to screen readers? Try the University of Washington's WebAnywhere<sup>83</sup> non-visual interface.
- Which elements do people see in their first five seconds on your website? Learn more at Five Second Test<sup>84</sup>.
- Does your website load quickly for people with slow connections? Use the LinkVendor Speed Check<sup>85</sup> or the Aptivate Low Bandwidth Simulator<sup>86</sup> to find out.

## Further Reading

- Practical Usability Testing<sup>87</sup> by Joshua Kaufman
- Usability Testing Demystified<sup>88</sup> by Dana Chisnell
- Prioritizing Web Usability<sup>89</sup> by Jakob Nielson and Hoa Loranger
- WAI Site Usability Testing Questions 90 at WAI
- Checklist of US Section 508 Federal website requirements<sup>91</sup>
  - 79. http://graybit.com/
  - 80. http://ipinfo.info/netrenderer
  - 81. http://www.techsmith.com/morae.asp
  - 82. http://silverbackapp.com/
  - 83. http://webanywhere.cs.washington.edu/wa.php
  - 84. http://www.fivesecondtest.com/
  - 85. http://www.linkvendor.com/seo-tools/speedtester.html
  - 86. http://www.loband.org/loband/simulator.jsp
  - 87. http://www.digital-web.com/articles/practical\_usability\_testing/
  - 88. http://www.alistapart.com/articles/usability-testing-demystified/
  - 89. http://www.useit.com/prioritizing/
  - 90. http://www.w3.org/WAI/EO/Drafts/UCD/questions.html
  - 91. http://www.section508.gov/index.cfm?FuseAction=Content&ID=12#Web

- The Usability Kit<sup>92</sup> by SitePoint
- Don't Make Me Think: A Common Sense Approach to Web Usability<sup>93</sup> by Steve Krug
- Understanding Your Users: A Practical Guide to User Requirements Methods, Tools, and Techniques<sup>94</sup> by Catherine Courage and Kathy Baxter

<sup>92.</sup> http://www.sitepoint.com/kits/usability1/

<sup>93.</sup> http://www.amazon.com/Dont-Make-Me-Think-Usability/dp/0321344758/

<sup>94.</sup> http://www.amazon.com/Dont-Make-Me-Think-Usability/dp/0321344758/

# Multivariate Testing 101: A Scientific Method Of Optimizing Design

#### BY PARAS CHOPRA

In a previous article on Smashing Magazine, I described A/B testing<sup>95</sup> and various resources related to it. I have also covered the basics of multivariate testing<sup>96</sup> in the past (*Editor's note: See chapters one and two of this eBook.*), yet in this chapter I'll go deeper in the technical details of multivariate testing which is similar to A/B testing but with crucial differences.

In a multivariate test, a Web page is treated as a combination of elements (including headlines, images, buttons and text) that affect the conversion rate. Essentially, you decompose a Web page into distinct units and create variations of those units. For example, if your page is composed of a headline, an image and accompanying text, then you would create variations for each of them. To illustrate the example, let's assume you make the following variations:

- Headline: headline 1 and headline 2
- Text: text 1 and text 2
- Image: image 1 and image 2

The scenario above has three variables (headline, text and image), each with two versions. In a multivariate test, your objective is to see which combination of these versions achieves the highest conversion rate. By combinations, I mean one of the eight  $(2 \times 2 \times 2)$  versions of the Web page that we'll come up with when we combine variations of the sections:

- Headline 1 + Text 1 + Image 1
- Headline 1 + Text 1 + Image 2
- Headline 1 + Text 2 + Image 1

<sup>95.</sup> http://www.smashingmagazine.com/2010/06/24/the-ultimate-guide-to-a-b-testing/

**<sup>96</sup>**. http://www.smashingmagazine.com/2010/11/24/multivariate-testing-in-action-five-simple-steps-to-increase-conversion-rates/

- Headline 1 + Text 2 + Image 2
- Headline 2 + Text 1 + Image 1
- Headline 2 + Text 1 + Image 2
- Headline 2 + Text 2 + Image 1
- Headline 2 + Text 2 + Image 2

In multivariate testing, you split traffic between these eight different versions of the page and see which combination produces the highest conversion rate — just like in A/B testing, where you split traffic between two versions of a page.

## Getting Started With Multivariate Testing

To create your first multivariate test, first choose a tool or framework that supports multivariate testing. You can use one of the tools listed in the section "Tools" in the end of this chapter. Please note that not all A/B testing tools support multivariate testing, so make sure your tool of choice allows it.

Once you've decided which tool to use, choose which sections to include in the test. As you know, a Web page can contain tens or hundreds of different sections (footer, headline, sidebar, log-in form, navigation buttons, etc.). You cannot include all of these sections in the test; creating variations for all of them would be an enormous task (and, as you'll read below, the traffic requirements for the test will grow exponentially with each new section). Narrow it down to the few sections of the page that you think are most important to the conversion goal.

The following parts of a page (listed in order of importance) are typically included in a multivariate test:

- Headline and heading,
- Call-to-action buttons (color, text, size, placement),
- Text copy (content, length, size),
- Image (type, placement, size),
- Form length.

# The Difference Between A/B Testing And Multivariate Testing

Conceptually, the two techniques are similar, but there are crucial differences. First and foremost, the traffic requirements are different. As I said, the number of combinations that need to be tested grows exponentially in a multivariate test. You can test three or four versions in an A/B test and tens or hundreds of versions in a multivariate test. Clearly, then, a lot of traffic — and time — is required to arrive at meaningful results.

For example, if you have three sections with three variations each, the number of combinations is 27. Add another section with three variations, and the total number of combinations jumps to 81. If you want meaningful results, you can't keep adding sections to the test. Be selective. A good rule is to limit the total number of combinations to 25 or fewer.



Use A/B testing for large scale changes, not to refine or optimize existing designs. Image by Meet the Chumbeques<sup>97</sup>

Another difference is in how these techniques are used. A/B testing is usually reserved for large radical changes (such as completely changing a landing page or displaying two different offers). Multivariate testing is used to refine and optimize an existing design. For the mathematically inclined, A/B testing is used to optimize for a global optimum, while multivariate testing is used to optimize for a local optimum.

One advantage of multivariate testing over A/B split testing is that it can tell you which part of the page is most influential on conversion goals. Say you're testing the headline, text and image on your landing page. How do you know which part has the most impact? Most multi-

<sup>97.</sup> http://www.flickr.com/photos/thechorompys/2683414975/in/photostream/

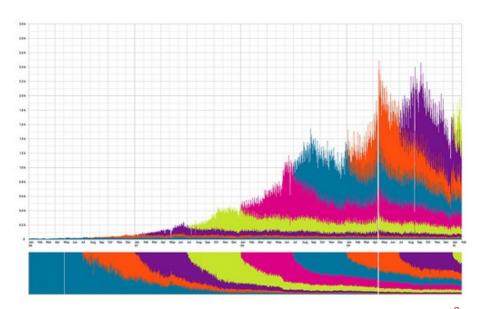
variate testing tools will give you a metric, called the "impact factor," in their reports that tells you which sections influence the conversion rate and which don't. You don't get this information from A/B testing because all sections are lumped into one variation.

## Types Of Multivariate Tests

Based on how you distribute traffic to your combinations, there are several types of multivariate tests (MVT):

#### **FULL FACTORIAL TESTING**

This is the kind people generally refer to when they talk about multivariate testing. By this method, one distributes website traffic equally among all combinations. If there are 16 combinations, each one will receive one-sixteenth of all the website traffic. Because each combination gets the same amount of traffic, this method provides all of the data needed to determine which particular combination and section performed best. You might discover that a certain image had no effect on the conversion rate, while the headline was most influential. Because the full factorial method makes no assumptions with regard to statistics or the mathematics of testing, I recommend it for multivariate testing.



Record and compare the resulting traffic for each tested version. Image by ItoWorld<sup>98</sup>

#### PARTIAL OR FRACTIONAL FACTORIAL TESTING

As the name suggests, in this method only a fraction of all combinations are exposed to website traffic. The conversion rate for unexposed combinations is inferred from the ones that were included in the test. For example, if there are 16 combinations, then traffic is split among only eight of those. For the remaining eight, we get no conversion data, and hence we need to resort to fancy mathematics (with a few assumptions) for insight. For obvious reasons, I don't recommend this method: even though there are fewer traffic requirements for partial factorial testing, the method forces too many assumptions. No matter how advanced the mathematics are, hard data is always better than inference.

#### TAGUCHI TESTING

This is the most esoteric method of all. A quick Google search reveals a lot of tools claiming to cut your testing time and traffic requirements drastically with Taguchi testing. Some might disagree, but I believe the Taguchi method is bit of a sham; it's a set of heuristics, not a theoretically sound method. It was originally used in the manufacturing industry, where specific assumptions were made in order to decrease the number of combinations needing to be tested for QA and other experiments. These assumptions are not applicable to online testing, so you shouldn't need to do any Taguchi testing. Stick to the other methods.

#### Do's And Don'ts

I have observed hundreds of multivariate tests, and I have seen many people make the same mistakes. Here is some practical advice, direct from my experience.

#### DON'TS

#### • Don't include a lot of sections in the test.

Every section you add effectively doubles the number of combinations to test. For example, if you're testing a headline and image, then there are a total of four combinations (2  $\times$  2). If you add a button to the test, there are suddenly eight combinations to test (2  $\times$  2  $\times$  2). The more combinations, the more traffic you'll need to get significant results.

#### DO'S

#### Do preview all combinations.

In multivariate testing, variations of a section (image, headline, button, etc.) are combined to create page variations. One of the combinations might be odd-looking or, worse, illogical or incompatible. For example, one combination might put together a headline that says "\$15 off" and a button that says "Free subscription." Those two messages are incompatible. Detect and remove incompatibilities at the preview stage.

#### · Do decide which sections are most worthy of inclusion in the test.

In a multivariate test, not all sections will have an equal impact on the conversion rate. For example, if you include a headline, a call-to-action button and a footer, you might come to realize that footer variations have little impact, and that headline and call-to-action variations produce winning combinations. You get a powerful section-specific report. Below is a sample report from Visual Website Optimizer. Notice how the button has more impact (91%) than the headline (65%):



Larger version.

#### • Do estimate the traffic needed for significant results.

Before testing, get a clear idea of how much traffic you'll need in order to get statistically significant results. I've seen people add tens of sections to a page that gets just 100 visitors per day. Significant results from such a test would take months to accumulate. I suggest using a calculator, such as this A/B split and multivariate testing duration calculator 99, to estimate how much traffic your test will require. If it's more than what's acceptable, reduce some sections.

#### Case Studies

A lot of A/B testing case studies are on the Web, but unfortunately, finding multivariate test case studies is still difficult. So, I scoured the Internet and compiled relevant ones.

#### Software Download Case Study: downloads increased by 60% 100

This is one multivariate test I did to compare different versions of headlines and links. In the end, one of the variations resulted in a more than 60% increase in downloads.

<sup>1</sup> Download	Download	3 Download	Download
PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3
5 Download	6 Download	<sup>7</sup> Download	® Download
PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3
Download	Download For Free	n Download For Free	Download For Free
PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3	PDFProducer v1.3

#### Microsoft Multivariate Testing Case Study<sup>101</sup>

This presentation details the variations that were tested for this website and the ultimate winner.

#### SiteSpect Case Studies<sup>102</sup>

This page presents a dozen of multivariate testing case studies of large companies using multivariate testing and behavioral targeting to optimize their sites.

#### Maxymiser Case Studies<sup>103</sup>

Another set of multivariate testing case studies.

#### Look Inside a 1,024-Recipe Multivariate Experiment<sup>104</sup>

YouTube did a gigantic multivariate test in 2009. It can afford to do tests with a thousand-plus combinations because it has sufficient traffic.

<sup>100.</sup> http://www.smashingmagazine.com/2010/11/24/multivariate-testing-in-action-five-simple-steps-to-increase-conversion-rates/

<sup>101.</sup> http://www.slideshare.net/Widemile/widemile-and-microsoft-multivariate-testing-case-study

<sup>102.</sup> http://www.sitespect.com/case-studies.shtml

<sup>103.</sup> http://www.maxymiser.com/client-showcase/client-success-stories

<sup>104.</sup> http://youtube-global.blogspot.com/2009/08/look-inside-1024-recipe-multivariate.html

#### Multivariate testing of an email newsletter<sup>105</sup>

An agency tested color and text on the call-to-action button of its email newsletter. The best button had the highest CTR: 60%.

## Multivariate Testing Tools And Resources

#### **TOOLS**

#### Google Website Optimizer<sup>106</sup>

A free basic multivariate testing tool by Google. It's great if you want to test the waters before investing money in multivariate testing. The downside? You'll need to tag different sections of the Web page with JavaScript, which can be cumbersome. It's also prone to error and forces you to rely on others (like the technology department) for implementation.

**Visual Website Optimizer**<sup>107</sup> (*Disclaimer*: I am the developer of this tool)

The main advantage of this paid tool is that you can create a multivariate test visually in a WYSIWYG editor by choosing different sections of the page. You can then run the test without having to tag sections individually (although a snippet of code is required in the header). The tool includes heat map and click map reports.

#### WhichMVT<sup>108</sup>

A website that publishes user reviews of all of the multivariate testing tools available on the market. If you are planning to adopt a multivariate testing tool for your organization, do your research on this website.

#### **Enterprise testing tools**

Omniture's Test&Target<sup>109</sup>, Autonomy's Optimost<sup>110</sup>, Vertster<sup>111</sup>, Webtrends' Optimize<sup>112</sup>, and SiteSpect<sup>113</sup>.

<sup>105.</sup> http://www.8seconds.net/blog/p/detail/upc-gets-emma-award-using-multivariate-testing-in-email-campaign

<sup>106.</sup> http://www.google.com/analytics/

<sup>107.</sup> http://visualwebsiteoptimizer.com/

<sup>108.</sup> http://www.whichmvt.com

<sup>109.</sup> http://www.omniture.com/en/products/conversion/testandtarget

<sup>110.</sup> http://www.optimost.com/

<sup>111.</sup> http://www.vertster.com/

<sup>112.</sup> http://www.webtrends.com/Products/Optimize.aspx

<sup>113.</sup> http://www.sitespect.com/

#### **RESOURCES**

- Expert Guide to Multivariate Testing Success<sup>114</sup>, by Jonathan Mendez
   A series of blog posts detailing different aspects of multivariate testing.
- Fail Faster With Multivariate Testing<sup>115</sup> (PDF)
   An excellent free mini-guide to multivariate testing.
- Online Testing Vendor Landscape<sup>116</sup>
   A commercial report by Forrester that compares the various testing vendors out there.
- Lessons Learned from 21 Case Studies in Conversion Rate Optimization<sup>117</sup>

This article discusses ideas for conversion rate optimization detailed through different case studies.

## Related posts

You may be interested in the following related articles:

- Ultimate Guide to A/B Testing<sup>118</sup>
- Getting Started With E-Commerce: Your Options When Selling Online<sup>119</sup>
- Improve Your E-Commerce Design With Brilliant Product Photos<sup>120</sup>
- Our 3-part-series "Optimizing Conversion Rates<sup>121</sup>".

<sup>114.</sup> http://www.optimizeandprophesize.com/jonathan\_mendezs\_blog/2008/05/expert-guide-to.html

<sup>115.</sup> http://go.ektron.com/fail-faster-with-multivariate-testing

<sup>116.</sup> http://www.forrester.com/rb/Research/online\_testing\_vendor\_landscape/q/id/53637/t/2

<sup>117.</sup> http://www.seomoz.org/blog/lessons-learned-from-21-case-studies-in-conversion-rate-optimization-10585

<sup>118.</sup> http://www.smashingmagazine.com/2010/06/24/the-ultimate-guide-to-a-b-testing/

<sup>119.</sup> http://www.smashingmagazine.com/2010/06/02/getting-started-with-e-commerce-your-options-when-selling-online/

<sup>120.</sup> http://www.smashingmagazine.com/2010/08/24/improve-your-e-commerce-design-with-brilliant-product-photos/

<sup>121.</sup> http://www.smashingmagazine.com/2009/05/23/optimizing-conversion-rates-less-effort-more-customers/

# Comprehensive Review Of Usability And User Experience Testing Tools

#### BY CAMERON CHAPMAN 20

Usability and user experience testing is vital to creating a successful website, and only more so if it's an e-commerce website, a complex app or another website for which there's a definite ROI. And running your own user tests to find out how users are interacting with your website and where problems might arise is completely possible.

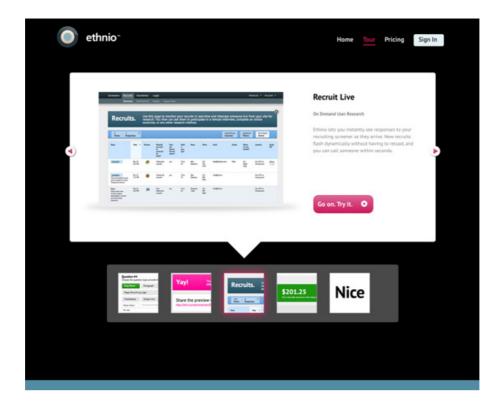
But using one of the many existing tools and services for user testing is a lot easier than creating your own. Free, freemium and premium tools are out there, with options for most budgets. The important thing is to find a tool or service that works for your website and then use it to gather real-world data on what works and what doesn't, rather than relying purely on instinct or abstract theories.

#### Free And Freemium Tools

A ton of free and freemium tools are out there to test your website's usability and user experience. Many of them get you to use your existing visitors as a testing base, which can give you a very accurate picture of what users are experiencing when they use you website.

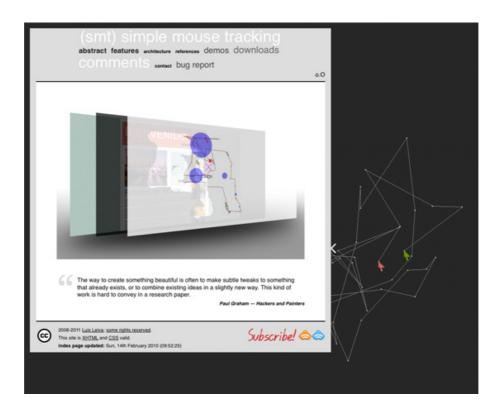
#### Ethnio<sup>122</sup>

Ethnio enables you to intercept visitors on your website and recruit them to help you with research (you can offer incentives to make participation more enticing). Ethnio acts as a hub for your various UX tools, including Usabilla, Optimal Workshop and UserTesting.com. It even works with GoToMeeting for screen-sharing. You'll get detailed reports on the people who respond to your recruitment efforts. Ethnio has a free plan that allows for up to 10,000 page views per month and up to 250 responses. Paid packages start at \$49 per month (for up to 100,000 page views and 500 responses) and go up to \$299 per month (for over 1 million page views per month and unlimited responses plus other features).



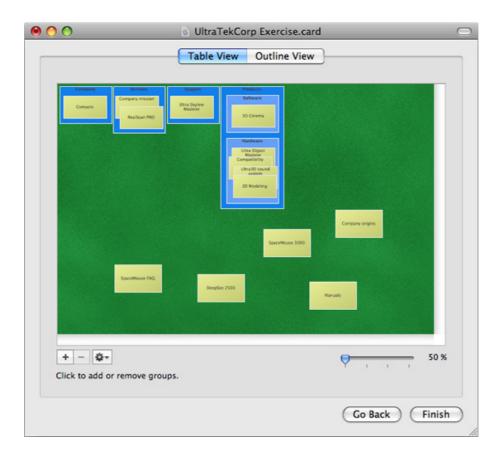
#### Simple Mouse Tracking<sup>123</sup>

Mouse tracking is a great way to see how visitors are actually interacting with your website. This plugin lets you record mouse activity on your Web pages and then replay that activity in real time. It works in virtually all modern and not-so-modern browsers, it works with static and liquid layouts, and it is customizable by the end user.



#### $xSort^{124}$

xSort is a card-sorting application for Mac OS X. It gives you full control over the exercise, supports sub-groups, gives statistical results in real time, and lets you create, read, print and export reports easily. The visual environment of the app resembles a table with cards (and you also get an outline view).



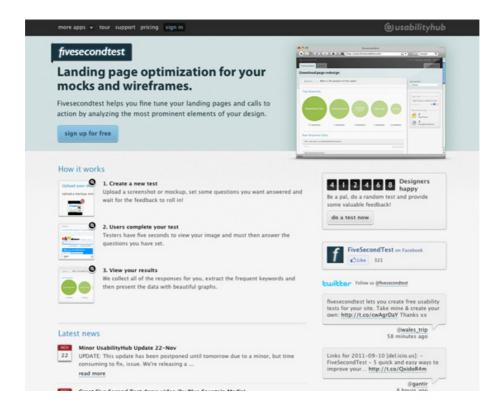
#### KISSinsights<sup>125</sup>

KISSinsights lets you embed surveys directly on your website. The free plan offers an unlimited number of surveys, with up to 30 responses for each one. The premium plan, at \$29 per month, allows you to customize the surveys and thank-you messages, removes KISSinsights' branding, and allows for unlimited responses.



#### FiveSecondTest<sup>126</sup>

FiveSecondTest helps you better design your landing pages and calls to action by analyzing which elements of your design are most prominent. Just upload a screenshot or mockup, set the questions that you want answered, and then wait for users to complete the test. FiveSecondTest collects the responses for you and analyzes them for common keywords, which it then represents visually. The free community plan lets you earn tests by participating in tests run by others. Paid plans start at \$20 per month with more features, including private tests.



#### AddUse<sup>127</sup>

AddUse enables you to conduct user surveys and user tests. You get one of each for free, and then can purchase additional surveys and tests from there. Signing up is quick and easy and doesn't require a credit card. AddUse offers real-time results and analysis, and also includes ready-to-use usability questions that you can incorporate in your surveys for faster set-up.



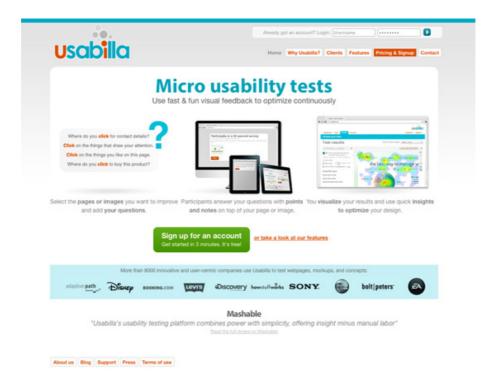
#### UserEcho<sup>128</sup>

UserEcho is a simple widget for collecting customer responses and ideas. Just copy and paste a few lines of code onto your website and then wait for visitors to respond. The free plan offers one forum and one official representative, as well as simple moderation, admin control, rich-content editing and YouTube embedding. Paid plans start at \$15 per month and include more forums, more representatives and more features.



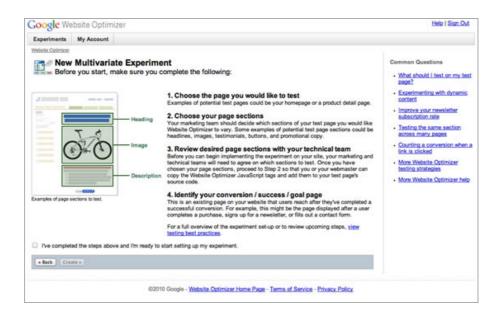
#### Usabilla<sup>129</sup>

Usabilla lets you run micro-usability tests to get a better picture of how well your website performs with visitors. You can collect feedback, discover usability issues, measure how various tasks perform, and then get visual results. The free plan lets you run one public, active test at a time with up to 10 participants. Paid plans start at \$49 per month, allowing you to create private tests with up to 50 participants, and go up to \$199 a month (allowing up to 10 active tests at a time and up to 250 participants).



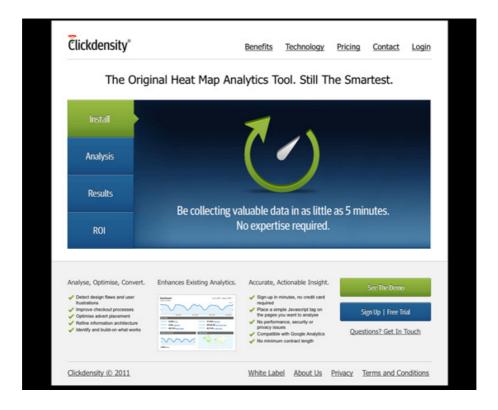
#### Google Website Optimizer<sup>130</sup>

Google's free Website Optimizer lets you run A/B and multivariate tests on your website. Just sign up with your Google account and create an experiment. You can specify which page you'd like to test and which sections of the page, and then identify your conversion and success targets. Setting up experiments is a straightforward process.



#### Clickdensity<sup>131</sup>

Clickdensity is a heat-map analytics tool that installs in under five minutes. It provides heat maps, click maps and hover maps and gives you real-time results. The trial version can be installed on a single page and stores up to 5,000 clicks. Premium plans start at £2.50 per month, and all include an unlimited number of pages.

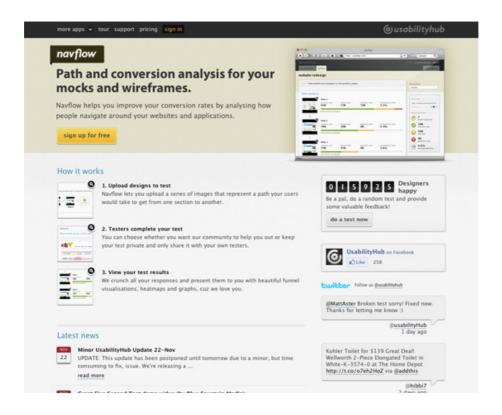


#### Navflow<sup>132</sup>

Navflow is a tool for analyzing the conversion paths for your mockups and wireframes. Just upload the designs that you would like to test, run a private or public test, and then view the results. The free plan allows you to earn public tests by participating in tests run by others. Paid plans start at \$20 a month and allow you to run unlimited private and public tests.

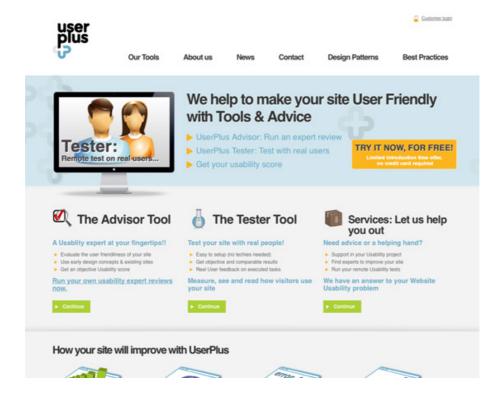
<sup>131.</sup> http://www.clickdensity.com/

<sup>132.</sup> http://navflow.com/



#### User Plus<sup>133</sup>

User Plus offers two tools for testing your website's usability: Tester and Advisor. Tester lets you test the important tasks on your website with real people. Just create a test, invite users and then measure and see what they do. Advisor evaluates your website's usability based on ISO standards and gives you a usability score. Tester is currently in private beta, and for a limited time you can try it for free. Advisor offers both free and paid plans.



#### Chalkmark<sup>134</sup>

Chalkmark is for first-click testing, to see what visitors click on first on your website. It's a simple concept, but vital to ensuring that your website is converting well. A free plan is available for running short surveys on a trial basis before you buy. The free plan lets you survey 10 people, with 3 tasks each. Paid plans include unlimited studies, unlimited tasks, unlimited questionnaires and unlimited participant responses.



#### $4Q^{135}$

4Q is an online survey tool for evaluating user experience and customer satisfaction. Setting it up takes less than five minutes, and the intuitive suite of online tools gives you valuable insight into how visitors are interacting with your website with only a few mouse clicks. A free plan is available that lets you collect responses from up to 100 participants. Paid plans start at \$19 per month and include more features and more responses.



#### WebSort.net<sup>136</sup>

WebSort.net is a remote card-sorting application. Just create a study, send the link to participants, and wait for the results. You can create a free study with up to 10 participants. Then upgrade whenever you want to include 100 participants or more (starting at \$149 per test). You can also buy a three-pack of studies for \$299; or buy an enterprise license, with unlimited tests in a 12-month period for \$2,499.



#### Concept Feedback<sup>137</sup>

Concept Feedback lets you get feedback on your website so that you can increase conversion rates. Just post your website, get expert feedback from experienced design, usability and strategy pros, and then share the evaluation with your team or client. You can pay to have experts review your website (\$99 per expert), or just get feedback from the community for free.



#### Premium Tools

Vendors of premium testing tools generally recruit users specifically to offer feedback on your website. Many of the tools come with videos of users interacting with your website, and some offer both remote and local testing.

#### WhatUsersDo<sup>138</sup>

WhatUsersDo lets you test the user experience of virtually any part of your website. Just set tasks for users to carry out on your website, and then watch and listen to recordings of everything they do and say. Setting up a test takes less than five minutes, and results are available within 48 hours. Pricing is a flat fee of £30 per user, and five users are recommended for each test.

#### Online Usability Testing & User Experience Research.

See how real people use your website. In their own homes. On their own computers

#### Find out what they like and what they don't



## Increase sales, attract more customers and build brand loyalty...



#### TryMyUI<sup>139</sup>

TryMyUI lets you test your website with real users and watch videos of them using your website. You get to see all of their mouse movements and keystrokes and hear everything they say about your website. Users also provide written answers to your questions. A free trial is available, and the regular price is \$35 per test.



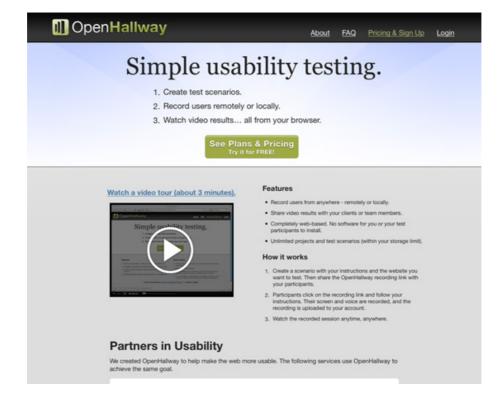
#### Userlytics<sup>140</sup>

Userlytics is a full-featured testing service that guides you through the entire testing process, from designing the study to scheduling tests, managing logistics and incentivizing participation. Pricing starts as low as \$59 per participant but goes lower with volume discounts. You'll also get videos of participants interacting with your website for accurate results.



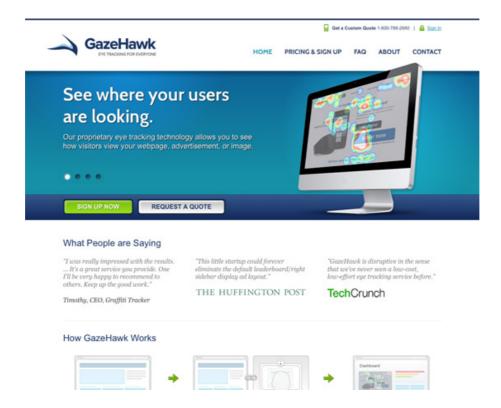
#### OpenHallway<sup>141</sup>

With OpenHallway, you create test scenarios, record users either remotely or locally, and then watch video results from your browser. You can share videos with clients or team members, and an unlimited number of projects and test scenarios are allowed within your storage limit. You can try OpenHallway for free, with a test scenario and up to three 10-minute user videos. Regular plans start at \$49 per month, which allows for up to 1 GB of storage (3 hours of video), and go up to \$199 per month for 9 GB of storage (30 hours of video) and downloadable test results.



#### GazeHawk<sup>142</sup>

GazeHawk runs eye-tracking studies on any image or website. It offers targeted or general user studies, depending on your needs. The starter plan, which includes a 10-participant study with heat maps and gaze replays, is \$495. GazeHawk also offers A/B testing packages (\$995 for two 10-participant studies), a professional package with 20 participants for \$995, and enterprise solutions for bigger tests.



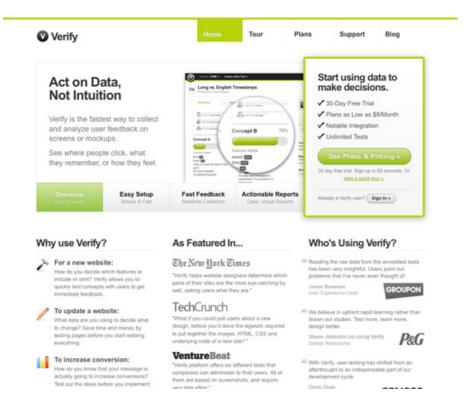
#### Silverback<sup>143</sup>

Silverback is downloadable software for your Mac for running user tests. You can capture screen activity, record video of testers' faces, record their voices, and control recording with the built-in remote. And it's all exportable to Quicktime. The app is free for the first 30 days, and the full license is \$69.95.



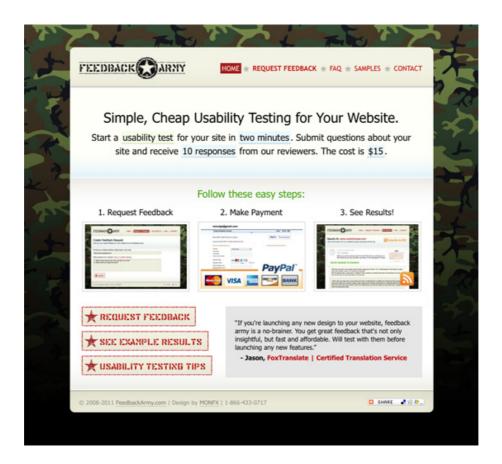
#### Verify<sup>144</sup>

Verify, from Zurb, includes nine different test types: click, memory, mood, preference, annotate, label, multi-page click, and linked. New user tests can be set up in less than three minutes. You can share tests with team members or make them public, and visual reports are included to make decision-making easier. The "Plus" plan is \$9 per month and includes unlimited tests, while the "Premium" plan includes demographics reports, linked tests and PDF export. A 30-day free trial is available on all accounts.



#### Feedback Army<sup>145</sup>

Feedback Army offers cheap and simple usability testing for your website. You can set up a new test in two minutes, submit a question about your website, and get 10 responses from Feedback Army reviewers. And it all costs only \$15.



#### UserTesting.com<sup>146</sup>

For \$39, UserTesting.com provides you with video of a visitor as they use your website, speaking their thoughts about their experience. You also get a written summary of the problems they encountered while on the website. Videos are generally about 15 minutes long and can be downloaded for archiving and editing (even embedded on a Web page).



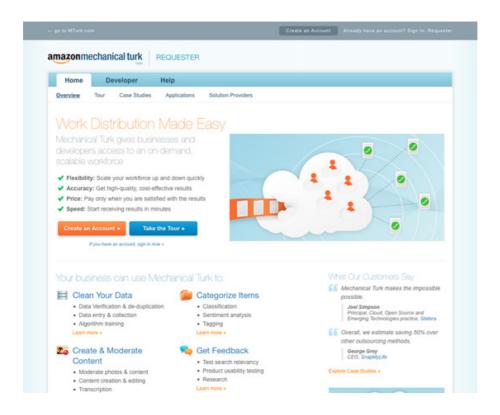
#### IntuitionHQ<sup>147</sup>

IntuitionHQ lets you sign up and start creating tests for free. Pay only once you start actually running tests (and then it's only \$9 per test). Creating a test simply requires that you upload screenshots and then write tasks for users to complete. Once the test is created and published, you get a URL to share with whoever you want to perform the tests.



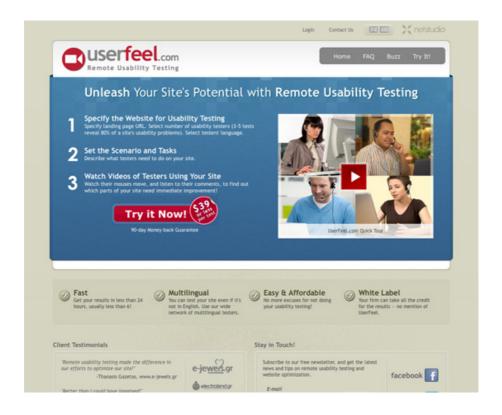
#### Mechanical Turk<sup>148</sup>

While not strictly a usability testing app, Amazon's Mechanical Turk service can be used to gather usability data or feedback from real users. Just set up a "HIT" (human-intelligence task), and then set how much you're willing to pay people to perform it. You pay only when you're satisfied with the results.



#### UserFeel.com<sup>149</sup>

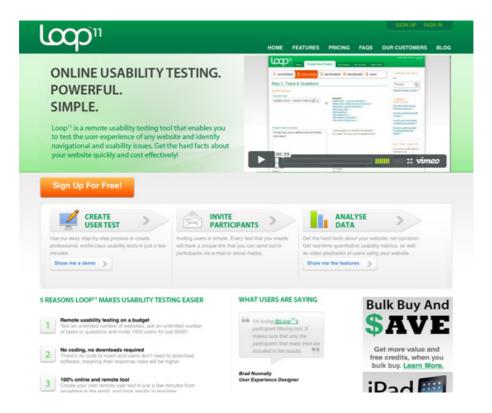
UserFeel.com performs remote usability tests for you, providing videos of users testing your website. Just specify the website that you want to test, set the scenario and tasks, and then watch the videos. Pricing is \$39 or less per test, with a 90-day money-back guarantee.



149. http://www.userfeel.com/

### Loop11150

Loop11 offers user testing for up to 1000 participants at a time, with an unlimited number of tasks and questions. There's no time limit and no limit on the number of websites or wireframes you can test. Try Loop11 for free (with a maximum of five tasks and two questions, with data stored for only seven days); after that, tests are \$350 each. Tests don't require any code to be added to the website being tested, which means you can even test competitors' websites.



#### ClickTale<sup>151</sup>

ClickTale offers a number of usability testing services, including visitor recordings, click heat maps, mouse movement heat maps, and conversion funnel visualizations. Premium plans start at \$99 per month, with full playback and a choice of three out of the four heat maps offered, while other plans (at \$290 and \$990 per month) include more features. A limited free plan is available to try out the service, as well as enterprise options.

<sup>150.</sup> http://www.loop11.com/

<sup>151.</sup> http://www.clicktale.com/



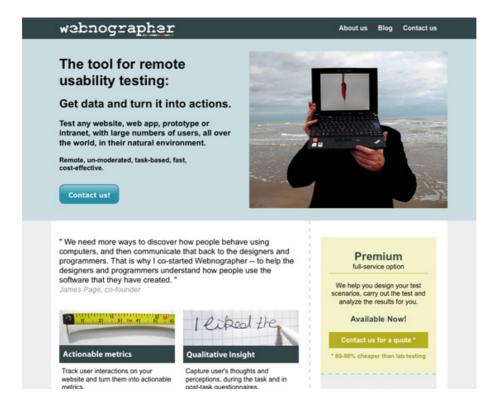
#### CrazyEgg<sup>152</sup>

CrazyEgg offers heat maps so that you can see exactly how users interact with your website and so increase your sales or leads. In addition to standard heat maps, CrazyEgg also offers scroll maps, confetti (which allows you to distinguish between all of the clicks your website gets, broken down by referral source, search term and other variables), and overlay reports. The basic plan is only \$9 a month and includes 10,000 visits per month, up to 10 active pages, and daily reporting. Starting with the "Plus" plan, which is \$49 a month, you get hourly reporting.



#### Webnographer<sup>153</sup>

Webnographer provides remote usability testing services. You can test websites, Web apps, prototypes and intranets with a large number of users anywhere in the world. The tests are unmoderated, so you get honest feedback. And no downloads or website modifications are required to run tests. Pricing is available on request.



Regardless of which tool you choose, the important thing is to recognize the value of user testing. Getting real feedback is an invaluable way to determine which parts of your design work and which don't. With that information, creating a more user-friendly website that converts better is possible. Usability and user experience testing should be a part of any website redesign project, to ensure that the changes being made will actually have a positive effect.

To streamline the selection process, below is a chart with the key features of each tool, as well as pricing information.

Service	Cost	Tests existing or new users?	Type of testing	Visual report- ing?
Ethnio	\$0 - \$299 per month	Existing	Surveys (a hub for other test- ing services)	Detailed reports
Simple Mouse Tracking	Free	Existing	Mouse track-	Yes
xSort	Free	Both	Card-sorting	Yes
KISSinsights	\$0 - \$29 per month	Existing	Surveys	No
FiveSecondTest	\$0 - \$200 per month	New	Visual ques- tionnaires	No

AddUse	\$0 - \$99, depending on number of tests	Existing	Surveys and user tests	Somewhat
UserEcho	\$0 - \$256 per month	Existing	Surveys	Somewhat
Usabilla	\$0 - \$199 per month	Existing	Micro-usabili-	Yes
Google Website Optimizer	Free	Existing	A/B and multivariate tests	No
Clickdensity	\$0 - \$400 per month	Existing	Heat maps	Yes
Navflow	\$0 - \$200 per month	New	User paths	Yes
User Plus	\$0 - \$35+ per month	Both	User testing and usability scoring	Yes
Chalkmark	\$0 - \$109 per month	Existing	First clicks	Yes
4Q	\$0 - \$399 per month	Existing	Surveys	Yes
WebSort.net	\$0 - \$2,499 per year	Both	Card-sorting	Yes
Concept Feed- back	Free for community feedback, \$99 per ex- pert	New	Expert and community feedback	Yes
WhatUsersDo	£30 per user	New	General us- ability	Yes
TryMyUI	\$35 per test	New	General us- ability	Yes

Userlytics	\$59 per par- ticipant	New	General us- ability	Yes
OpenHallway	\$49 - \$199 per month	Both	General us- ability	Yes
GazeHawk	\$495 - \$995+ per test	New	General us- ability, includ- ing heat maps	Yes
Silverback	\$69.95	Both	General us- ability	Yes
Verify	\$9 - \$29 per month	Existing	Nine types of usability tests	Yes
Feedback Army	\$20 per test	New	Surveys	No
UserTesting.com	\$39 per user	<del>New</del> Both	General us- ability	Yes
IntuitionHQ	\$9 per test	Both	Screenshot surveys, in- cluding A/B tests	Yes
Mechanical Turk	Varies	New	Surveys	No
UserFeel.com	\$39 per test	New	General us- ability	Yes
Loop11	\$350 per project	Both	General us- ability	Yes
ClickTale	\$99 - \$990 per month	Existing	Heat maps	Yes
Crazy Egg	\$9 - \$99 per month	Existing	Heat maps	Yes
Webnographer	Unknown	New	General us- ability	Unknown

# **About The Authors**

#### Ben Gremillion

Ben Gremillion is a Web designer who solves communication problems with better design. Visit his Website BenThinkin' 154 or follow Ben on Twitter 155.

### Cameron Chapman

Cameron Chapman is a professional Web and graphic designer with over 6 years of experience. She writes for a number of blogs, including her own, Cameron Chapman On Writing<sup>156</sup>. She's also the author of Internet Famous: A Practical Guide to Becoming an Online Celebrity<sup>157</sup>. Twitter: @cameron\_chapman<sup>158</sup>.

#### Lee Munroe

Lee Munroe is a freelance Web designer from Belfast. You can see his other writings on Web design on his blog<sup>159</sup>. Twitter: @leemunroe<sup>160</sup>.

### Paras Chopra

Paras Chopra is founder of Visual Website Optimizer<sup>161</sup>, a simple A/B split and multivariate testing tool. Used by 5000+ companies worldwide, it allows marketers and designers to create A/B tests and make them live on website in less than 10 minutes. Twitter: @wingify<sup>162</sup>.

- 154. http://benthinkin.net/
- 155. https://twitter.com/benthinkin
- 156. http://cameronchapman.com/
- 157. http://www.internetfamousbook.com/
- 158. https://twitter.com/cameron\_chapman
- 159. http://www.leemunroe.com/blog/
- 160. https://twitter.com/leemunroe
- 161. http://visualwebsiteoptimizer.com/
- 162. https://twitter.com/wingify

### About Smashing Magazine

Smashing Magazine<sup>163</sup> is an online magazine dedicated to Web designers and developers worldwide. Its rigorous quality control and thorough editorial work has gathered a devoted community exceeding half a million subscribers, followers and fans. Each and every published article is carefully prepared, edited, reviewed and curated according to the high quality standards set in Smashing Magazine's own publishing policy<sup>164</sup>.

Smashing Magazine publishes articles on a daily basis with topics ranging from business, visual design, typography, front-end as well as back-end development, all the way to usability and user experience design. The magazine is — and always has been — a professional and independent online publication neither controlled nor influenced by any third parties, delivering content in the best interest of its readers. These guidelines are continually revised and updated to assure that the quality of the published content is never compromised.

## About Smashing Media GmbH

Smashing Media GmbH<sup>165</sup> is one of the world's leading online publishing companies in the field of Web design. Founded in 2009 by Sven Lennartz and Vitaly Friedman, the company's headquarters is situated in southern Germany, in the sunny city of Freiburg im Breisgau. Smashing Media's lead publication, Smashing Magazine, has gained worldwide attention since its emergence back in 2006, and is supported by the vast, global Smashing community and readership. Smashing Magazine had proven to be a trustworthy online source containing high quality articles on progressive design and coding techniques as well as recent developments in the Web design industry.

<sup>163.</sup> http://www.smashingmagazine.com

<sup>164.</sup> http://www.smashingmagazine.com/publishing-policy/

<sup>165.</sup> http://www.smashing-media.com