

Windows to the Web: Analysis of Usefulness of Website Screenshots

White Paper

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Web Page Screenshots Help Your Prospective Customers Infer Value

Aesthetics matter online. A picture is still worth a thousand words. Two researchers at Microsoft proved this for online search. Their published study showed that thumbnail previews help users make better decisions about the relevance of search results.¹

This hints at something insightful into how people might *choose* among text versus image; something people instinctively do in all things and will do online if given a way is, judge the book by its cover before picking it up.

People don't set aside their predispositions to judge credibility by aesthetics² when they're choosing a website to visit or an app to purchase. They still want a *window* to peek through first; a visual way to decide what they'll click into or what they'll buy. This is not news to brick and mortar merchants.³ They already know their customers infer product and service quality before they even enter a store – if they decide to enter at all.

People successful at marketing mobile apps figured this out quickly. Buyers tap into an app to look at its *screenshots*. That's how they decide to buy or not. They're not reading its descriptions or pondering its reviews. They're looking at its screenshots;⁴ they're *peeking through the window* before they decide.

It's similar for Web designers. Potential clients first want to see the designer's portfolio; they want to visit the designer's website built on *screenshots* of her work.⁵ They want to *shop at the window* before making contact with the designer.

Savvy app marketers and successful designers tune into how people infer value at first glance; they *use web page screenshots to build windows* into their places on the web; windows that give their visitors the glimpses of value they want as a way to invite them in. Their visitors are more predisposed to like where they've entered or what they've bought while there.⁶ Think of the lowly screenshot as a way to build windows of the web – and imagine how placing windows to the web on your site opens up possibilities for more satisfied visitors and conversions. Later in this paper we'll explore a few ideas to put web page screenshots to good use.

¹ Dziadosz, Susan and Chandrasekar, Raman, "Searching The Web Using Screenshots", SIGIR '02 Proceedings of the 25th annual international ACM SIGIR conference on Research and development in information retrieval, online at <http://dl.acm.org/citation.cfm?id=564446&dl=ACM&coll=DL>

² "Myth #25: Aesthetics are not important if you have good usability", uxmyths.com article online at <http://uxmyths.com/post/1161244116/myth-25-aesthetics-are-not-important-if-you-have-good-us>

³ Alessandro De Nisco, University of Sannio, Gary Warnaby, University of Liverpool Management School, "The Influence of Urban Aesthetic Design on Consumers' Inferences of Store Atmosphere, Product Quality, Service Quality, and Willingness to Buy", online at http://www.academia.edu/2701445/The_influence_of_urban_aesthetic_design_on_consumers_inferences_of_store_atmosphere_product_quality_service_quality_and_willingness_to_buy

⁴ Gordon, Jen, "How to Design App Store Screenshots that Sell", Sept 24, 2012, Designboost article online at <http://www.designboost.net/how-to-design-iphone-screenshots-that-sell/>

⁵ Vandelay Design, "30 Beautiful Examples of Screenshots in Web Design", found online at <http://vandelaydesign.com/blog/galleries/screenshots-in-web-design/>

⁶ Gordon, Jen, "How to Sell More Apps With Well Designed Screenshots", Dec 29, 2010, Mobile Tuts+ article online at http://mobile.tutsplus.com/tutorials/mobile-design-tutorials/app-store_screenshot-design_iphone-design/

But first, we must resolve the creative impediments inherent in the typical way people take and manage screenshots of web pages.

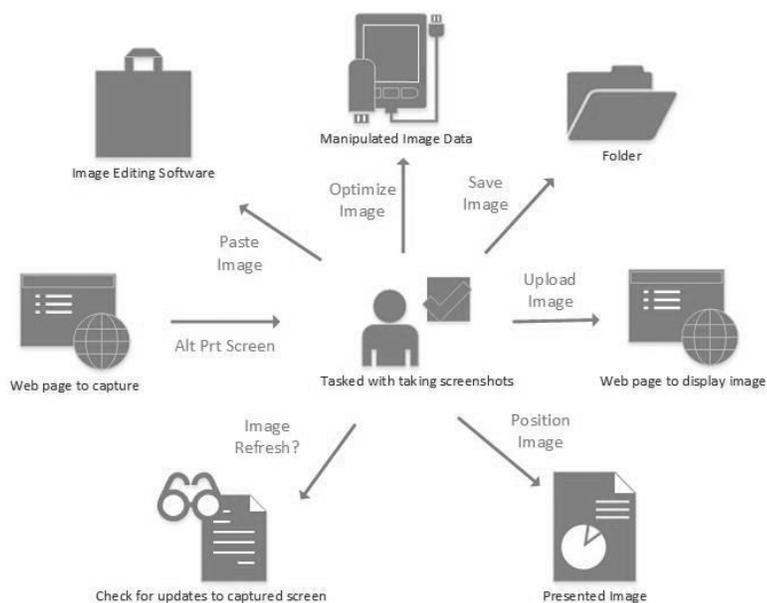
The Tedium Of Taking Web Page Screenshots Impedes Creative Use

Nothing will shut down creative thinking faster than focusing on the tedious, grinding work to follow. Writers, artists, and other creative types know, once one turns on the logical-side to think through the details, the creative-side shuts down and gets out of the way.

Unfortunately, that's how most people think about web page screenshots. It's hard to get creative when one thinks the painful tedium is about to begin.⁷

Just mention the word "screenshot", and memories surface of tedious image productions for manuals, procedures, and web pages; tech support needing to see one at two in the morning; last-minute rushes to "get some shots" for marketing; hours spent optimizing, saving, and positioning images; over and over. And that doesn't include how painful it was to keep all that material updated.

For those that may need a refresher, next is the typical way many people still take and manage screenshots of web pages.



As you can discern from the diagram, the sheer effort and time it takes to manually produce one screenshot precludes any creative discussion for unlocking the potential of using hundreds and thousands of them in website design.

Many of the popular screenshot tools⁸ found online add functions like capturing multiple web page screens, selecting regions of a screen, and sharing what you capture. In short, these simply enhance your manual effort. They still don't unlock one's creative freedom for using them in website design, automatically.

What the designer or developer needs is a solution that frees one to think of screenshots as tiles in a mosaic; automation that liberates one from mundane tasks like "screen capture" and "image optimization" and "positioning on the page" and "updating".

⁷ Pinola, Melanie, "How to Take a Screenshot or Picture of What's On Your Computer Screen", Jul 29, 2011, lifehacker article online at <http://lifehacker.com/5825771/how-to-take-a-screenshot-or-picture-of-whats-on-your-computer-screen>

⁸ Fitzpatrick, Jason, "Five Best Screen Capture Tools", Apr 19, 2009, lifehacker article online at <http://lifehacker.com/5218155/five-best-screen-capture-tools>

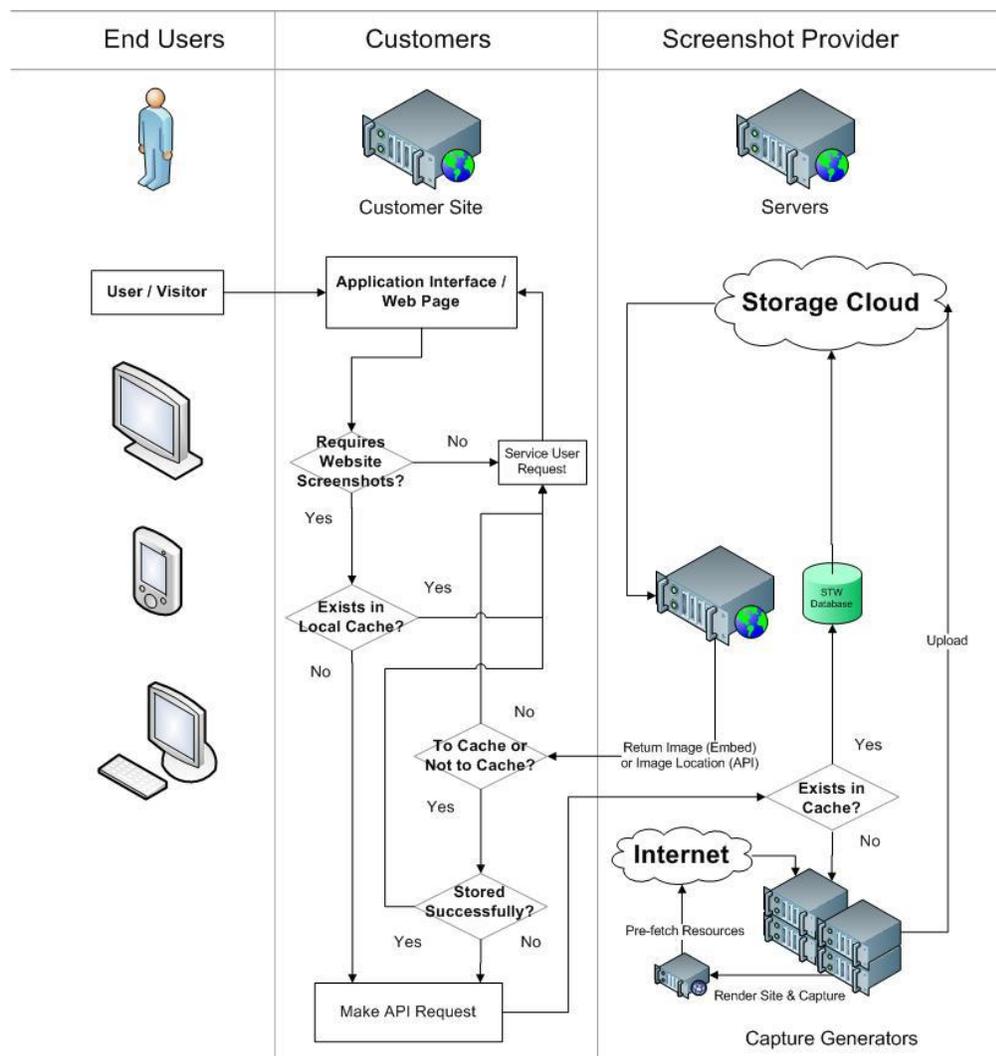
Before imagining how to arrange one's own “windows to the web”, one needs the type of solution we describe in the next section to underpin your creativity for using web page screenshots in design.

Automated Screenshot Management Unleashes Creative Design

To completely unfetter creative thinking in design, automation cannot simply stop at relieving the tedium of taking and managing a screenshot. It must also enable the designer to arrange these easily into web pages, with simple controls for him or her to manage page presentation and the impact to page load times.

This suggests a solution with front and back ends. The back-end is the automation loop that is triggered when a web page is loaded or refreshed. The front-end contains the commands embedded into HTML or invoked by an API that triggers the automated capture of one web page, then displays and positions the resulting image as a thumbnail on another.

The following diagram illustrates this flow.



The above solution frees the designer to focus on the essence of using a screenshot in design:

- What is the screenshot desired to be captured from anywhere on the web?
- Where does one want to show it on one's site or application?

One may find various implementations of the presented solution. Here are some guidelines that distinguish the best ones.

- The effort to insert commands into HTML is minimal. All that should be needed is the URL of the page you want to capture.
- The commands should have very limited and intuitive parameters.
- An API should be available to support web pages that are built programmatically with languages like PHP and to support mobile apps and social media services that need to display previews of web pages.
- It's critical to cache image thumbnails to control the impact to page load times where these are rendered.
- Options to control whether a thumbnail image is rendered from the cache or not.
- The availability of plugins to support widely-used CMS systems like WordPress.
- The availability of CMS themes to easily arrange the thumbnail images rendered on a webpage.

With the tedium out of the way, the possibilities come into view. Next up are a few ideas to show the creativity of using screenshots of web pages in real-world design.

Ideas For Using Web Page Screenshots In Design

A new idea is never completely new. Thomas Edison said, "I readily absorb ideas from every source, frequently starting where the last person left off."⁹ Much the same here, you'll observe how screenshots are used to add a different twist to two familiar ideas.

Most people who use the web have seen an online portfolio or news aggregation website. Could the ability to automatically create and easily manage tens of thousands of web page screenshots result in worthwhile derivative ideas for these? Let's explore how.

Dynamic Online Portfolios For Just-In-Time Creative Teams

The world of work is changing.¹⁰ Close to half the people in the United States earn their living freelancing or otherwise contracting in some way.

Does it all have to be done one solo contract at a time? No.

Think of the possibilities this opens for enterprising freelancers in the creative space. Individuals with different skills, who already trust each other, form a dynamic point-in-time partnership to win a team bid.

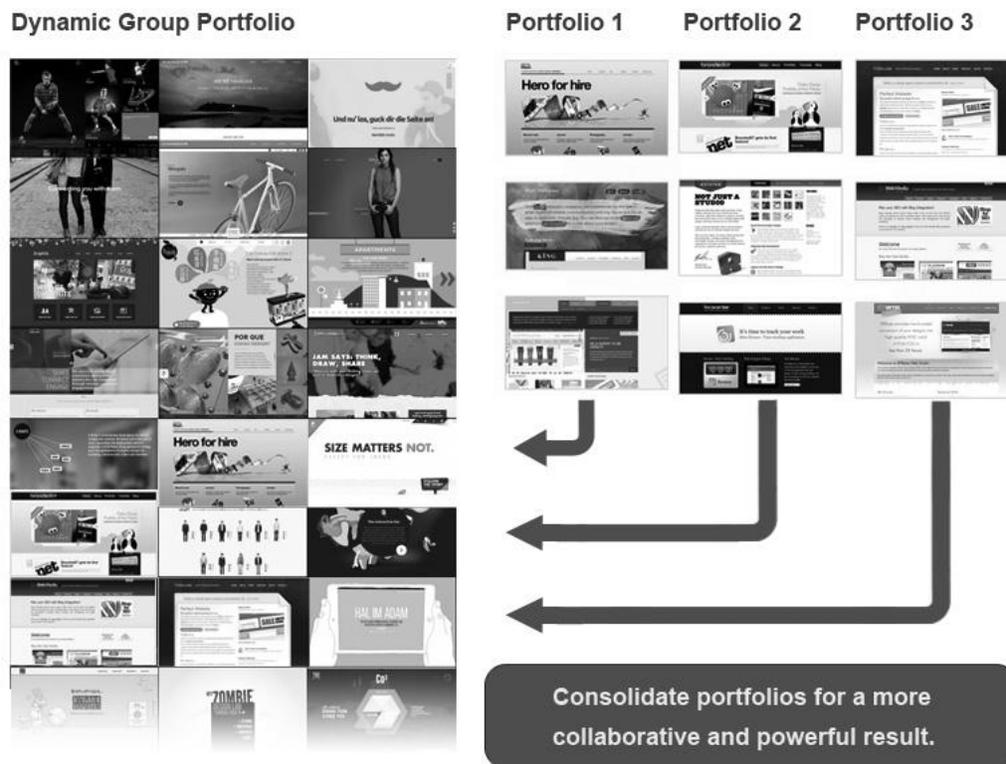
⁹ "Thomas Edison 'Quotes'", found online at <http://www.thomasedison.com/quotes.html>

¹⁰ Lacy, Sarah, "Ask any entrepreneur: The freelance economy is a sucker's game", Dec 9, 2012, pandodaily article online at <http://pandodaily.com/2012/12/09/ask-any-entrepreneur-the-freelance-economy-is-a-suckers-game/>

Is there a better way to show their combined portfolios to a client? Is there a way that quickly presents the image of a cohesive consultancy as opposed to just showing up as a group of individual freelancers?

What if they took the idea of the online portfolio further? What if they used the ability to massively scale screenshots of web pages to *dynamically* build a team portfolio? And what if they collaborated to keep a solution in place that could quickly *add to, delete from, and rearrange the team portfolio* as needed for each team deal, depending upon who came together to bid?

See the illustration next for how this could work.



The above shows independent freelancers with their own portfolio sites. When two or more of them collaborate to win a project, they can quickly and easily layout and build a consolidated portfolio page using screenshots from their individual portfolio pages.

A prospective client is presented a cohesive overview of the bidding team's portfolio while still being able to easily inspect the samples selected from it.

Visual Aggregation Of News

There's something appealing about a morning talk show that has all the major newspapers lying about. There's immediacy about the discussion. "...today's front page of the Journal wrote..." "...did you see the op-ed in the Times today?"

Does this suggest a visually appealing news aggregation site; one that bases its daily links upon refreshed thumbnails of news site headlines and pages?



The above is based on the idea that visual displays of headlines and excerpts would appeal to the readers of a news aggregation site. It's an example of how automation can open ideas for using screenshots on a massive scale in design.

This section would be remiss if it left one with the impression that imaginative uses for screenshots are limited to what designers show on a web page. Automation also enables creative uses to enhance back-end processes, like the change management example described next.

Website Archiving for Point-in-Time Version Tracking

Talk to anyone with a successful commercial website and you'll discover that they can readily describe what their visitors do after landing there – and if their visitors are using it in the way the designer intended. With the capabilities offered in web analytics tools today, there's really no reason a site owner shouldn't know this information about each page of their website.

Site owners that make the most effective use of analytics do so within the context of changes they make or authorize for their websites. Analytics lead designers to make changes to a page and assist them to assess the results afterward.

It would be simple if this were a linear process. Changes don't always result in improvements. For websites that constantly change, the ability to take snapshots of web pages for the purpose of quality control, tracking changes or historical reference would be quite handy.

The capability to automatically capture a web page screen opens the possibility for enhanced methods to track website changes. Imagine a "change archive" that consists of point-in-time screenshots by date or design version – all generated automatically as part of a release update process. Designers could then correlate historical web analytics data with how a page actually

looked during a period in time. Usage trends and design patterns would have a visual historical record. Might this spur new insights for future design?

A Pattern for Design Based On Screenshot Automation Emerges

The derivative ideas above hint at a design pattern based on screenshot automation. One that can be applied anywhere that web page screenshots would enhance a person's ability to visually process the information presented on a web page or an app's screen.

Like the ideas shared in this document, this design pattern opens up possibilities to enhance the value provided by any application or website whose utility is based on links to other web pages. Mobile shopping apps can display current images of recommended shopping pages; browser helper objects can give a peek at websites similar to the one being browsed; and search engines can provide visual cues to help the searcher better predict the relevance of results returned from a query.

Let's look next at two commercial uses of web page screenshots where the above pattern is integral to their design.

Examples Of Web Page Screenshots That Are Integral To Design

The previous section illustrated how screenshot automation frees imaginative uses for them in design. Two commercial examples you can reference outside this paper are Norton™ Online Family from Symantec Corporation, and Technorati's blogosphere.

These examples were chosen to show thumbnail previews that are integral to a design. Without them, the commercial value for these very different services would be greatly diminished.

Symantec Example: A Trust-Based, URL Aggregation Application

The Norton™ Family¹¹ service from Symantec provides parental control of multiple PCs or MACs. Its commercial value is to provide parents a way to control what their children can access online, and for how long.

Because filters are not always accurate, a critical feature for all parents is the service's ability to monitor and report where their kids have been online.¹²

Think how tedious and time-consuming it would be for parents if they had to open every link reported to verify its safety and age-appropriateness. Consider how they might miss a mature video a child viewed based on its description alone. Their vigilance would most likely wane out of exhaustion and lack of time.

In the design of this service, text-only links and descriptions would not do. A key premise of Symantec's service is to enable parents to *efficiently and effectively* monitor their children's Internet use. This demands a "snapshot" of what their children saw "out there online".

¹¹ <https://onlinefamily.norton.com/familysafety/loginStart.fs>

¹² Rubenking, Neil J., online review of Norton Family Premier at <http://www.pcmag.com/article2/0,2817,2372155,00.asp>

Without thumbnail previews to accompany the links and descriptions reported for visited websites and online videos, an important piece of Norton Family's promised benefit to parents would be absent. Symantec knows this. Even if a parent wanted to, they are unable to disable thumbnail previews in reports of visited sites. Thumbnails are *that* integral to the design.

The Symantec example suggests similar ideas for using automatically generated thumbnails in monitoring reports. For example, would a corporation's network operations center be more efficient at monitoring how the company's network is being used by its employees? Could a high school do a better job of keeping tabs on inappropriate websites that slip through its network filters? Or maybe a government agency with sensitive information needs to quickly scan several times a day where its workers are visiting on the Internet.

One starts to see how the capability to render web page screenshots on a massive scale could become integral to the design of any web monitoring application.

Technorati Example: Commodity Enhancement of Links

The dominant blog search engines and directories index millions of blog posts a day. In fact, these companies have morphed into full-fledged media companies, with their own writers and original content added to the daily deluge from the blogosphere.

Their livelihoods depend on massive amounts of readers consuming content from *them*. Advertising dollars – their very lifeblood – demands it. But before people *consume something*, they must *choose it*.

The web aesthetics these companies use for: featuring content, convincing readers of its relevance to them, and highlighting what's important within the limited space of a web page are based on measured insight into what leads visitors to choose a link.

A well-known website that makes effective use of this insight is Technorati¹³. Next time you're looking for something to read there, notice how you're drawn to the thumbnail images that highlight their featured stories. Consider how thumbnails draw attention to a link while giving you a peek into its relevance and importance.

Compare Technorati to what you find at the Drudge Report®.¹⁴ See the difference? Can you see how thumbnails are integral to effective and efficient design for large online media sites?

Automation Unlocks The Design Potential Of Web Page Screenshots

Freelancers have known it for years. App marketers learned it quickly. Screenshots are not just for mundane tech support or procedural documentation. They can be building blocks for a design that invites visitors in and helps buyers decide.

Automation frees you to think of screenshots as “windows to the web”; the tiles for the mosaic you want to show.

¹³ <http://www.technorati.com>

¹⁴ <http://www.drudgereport.com/>

So where does one go from here? Do you think the ability to scale the use of web page screenshots offers possibilities for your design? If so, here are some next steps:

1. Start thinking of screenshots as design elements, knowing that automation frees you from dealing with them as tedious tasks.
2. Consider screenshots in your design as page displays you can easily pull from anywhere on the web, and render as thumbnails anywhere on your site or app. Think how this might enhance, enable, or appeal in whatever you're trying to accomplish.
3. Start searching for automation vendors.
4. Use the criteria in this paper to assess the solutions you find.
5. Demo, test, and choose.

Start building windows to your place on the web.

About ShrinkTheWeb®

ShrinkTheWeb® offers a service to fully automate the capture and delivery of web page screenshots. The company was founded in 2009 and has been a driving force in the emerging automated website screenshot marketplace. ShrinkTheWeb has always held fast to the idea that website screenshots will eventually become a staple of the Internet. They will become a commonplace replacement or enhancement to simply showing a link. They are the natural evolution to linking and referencing on the web.