

# THE WEB THAT BECAME A CLOUD

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Revolutionary. It's one of those words that gets overused, especially with regard to technology. Since I was a Computer Science undergrad and member of Beta Mu, it seems like there have been at least four points where you could safely say that widespread adoption of new technology or technologies has changed how we all use and rely on computing. What's exciting now is that we're in the middle of one of those "revolutions" and just on the brink of seeing another.

The first revolution, starting in the late 80s might be thought of as the switch to PCs and graphical operating systems. The ubiquitous high resolution screen, the mouse, the multimedia sound and video that you expect as standard features in a PC (or phone for that matter) combined with an operating system like Windows, the MacOS or Linux not only enhanced ease of use, but they enabled us to see for the first time that computers could be tools of creativity and entertainment, not just for productivity.

The second revolution came in the late 90s with the rise of the Internet as

a common communication pipeline linking (almost) all devices through common standards. When before you couldn't e-mail a friend unless you were both part of the same service, now you could not only e-mail but chat, share files and later stream audio and video. The Web browser became the starting point for billions of searches for friends, information, and commerce. Unfortunately, it also became the point around which silly startups pumped up with too much easy venture capital tried to buy their way past the basic laws of economics.

Now we're seeing the results of the latest revolution, what some folks have taken to calling Web 2.0. What is it? Out of the remains of the 2001 bubble, entrepreneurs and programmers have created a new set of business paradigms, programming rules and exciting new applications.

If the Web 1.0 was built on hierarchy and directories of sites, Web 2.0 is built on distribution, syndication and user generated content. Instead of trying to force users to their "portal" or limit their choices of browser, web

site, or search engine, this new paradigm is built on the idea that users should be able access content wherever they are, even if it's not on your company's web page. In the Web 1.0 world everything was designed to keep users coming back, to lock them in to using your tools on your page. Web 2.0 shatters that idea as companies publish programming interfaces to unlock their applications to other developers, syndicate data feeds so that you can get news, images or video in bite sized chunks, and now are creating mini-applications or widgets to post onto the users' own pages. In the Web 1.0 world there were lawsuits when companies tried to "deep link" to content on other sites. Now it's encouraged by Web 2.0 companies who know it's better to distribute content to where users are instead of spending millions to try and bring consumers to them.

This new Web world has seen the rise of user generated content as a key part of what you experience now on the web. User video on YouTube is one example, but so is blogging, tagging content on del.icio.us and creating

search results for Mahalo. This influx of user activity has had such an impact that this year we saw the first YouTube presidential debate and bloggers have become both friend and foe to political candidates at all levels.

Finally social networking sites like Facebook and LinkedIn have transformed how we connect and reconnect with colleagues, acquaintances, family and friends. By leveraging the connections on these sites, I don't have to worry about keeping track of thousands of e-mail addresses. I can log in and message folks directly as well as see, if I choose, as much information as they'd like to share from pictures of their pet to their favorite sports teams.

That's three revolutions, but to start I mentioned four. The fourth is just beginning and we're seeing it with both web based applications and new hardware devices. The concept is often called "cloud computing" and the idea is this – instead of big applications on complex PCs why not create simple web based applications that can be used not only on PCs but also on mobile devices like Blackberries and the iPhone. Instead of trying to store data locally, make everything available online or "in the cloud" where it's always available to you no matter where you are.

As the availability of online storage increases (Google gives all users of its mail service 6 GB for free and 10 GB for only \$20 per year) and faster wireless Internet connections come online, the move to having everything online and always available will only increase. Companies like Zoho and Google are taking advantage of these trends to offer competitors to Microsoft Office tools that are simpler to use, always available and up to date and compatible with Office so all you need to be productive is a browser and an Internet connection, both of which might just be in the palm of your hand.

## What's cool on the Web today?

▶ If you don't know, jump on these sites right now.

Facebook	The most popular social networking site, and still growing thanks to being open to widget developers. Your kids, your friends and everybody else are on Facebook, so why aren't you?
Tumblr	A "micro-blogging" site which allows users to post all kinds of content and cross link or "reblog" posts. Where all the cool kids have gone to play.
Twitter	How much can you say within Twitter's 140 character limit? A lot apparently from your PC or your phone. Even the Los Angeles Fire Department has a Twitter account where they post real time alerts of fires and accidents.
Del.icio.us and StumbleUpon	Social networking around web bookmarks where users find interesting sites and tag them with keywords. Great places to find the new, interesting or obscure.
Friendfeed	Aggregates all the activity from your friends (blog posts, uploaded images, bookmarks) into a single site or web feed.
Spock	Search for people and manage what information others can find out about you.
Zoho	Forget big, expensive and complicated Microsoft Office. Zoho provides all the same applications delivered in your browser with files that are compatible with Office.
Shelfari	A network for sharing information about books you read, as well as getting book recommendations from friends and others.
Firefox	To access all these great new Web 2.0 apps you need a great browser. Ditch the browsers that come with the operating system and customize Firefox with toolbars, plug-ins and themes.