

Technology

The Ongoing Evolution of Search Engines

There's More to Web Searches than Google

BY DAN GIANCATERINO

Last autumn I wrote an article for a local newspaper discussing a crop of a dozen next-generation Web search engines. Given that Google handles about two-thirds of search queries in the U.S., I'm always amazed that people even bother trying to compete with them. More new search tools have launched in the intervening nine months. I want to cover four of them in this article: Twitter Search, Wolfram|Alpha, Microsoft's Bing, and Hunch.

Twitter Search

Traditional search engines' indices are a snapshot in time; they index some web sites on an hourly basis. Others are crawled daily, weekly or monthly based on how important the site is and how often its content is updated. But until recently you couldn't do real-time searching. Twitter Search (search.twitter.com) has changed all that.

Twitter is a micro-blogging service that lets you send 140-character updates ("tweets") from your mobile phone or computer. You can follow other people's tweets – there are 37 million "Twitterers" worldwide – and they can follow you. Twitter Search lets you find tweets on any topic, by any person (even if you don't follow them), seconds after they are posted to the service. You'll even get a notification on your results page informing you how many additional tweets

on the subject have been posted since you submitted your original query.

Twitter Search has a raw, unfiltered feeling about it. It's a great service to use if you want to get information quickly on a developing story. Twitter engineers tell how one day they saw a large uptick in tweets about an earthquake seconds before their office started shaking. For them, Twitter became an early-warning service. Recently I used Twitter Search to confirm a rumor I heard via e-mail that local sportscaster Gary Papa had died. There were quite a few tweets within seconds.

Be advised, Twitter can overwhelm you. *The Los Angeles Times* reported that during the afternoon of Thursday, June 25, 2009, up to 5,000 tweets were sent each minute concerning the death of Michael Jackson. Talk about drinking from a firehose!

Having said that, you can still use Twitter Search the same way you use a traditional search engine. When I searched for "new housing starts," I got a tweet from the *Financial Times*, a reputable source. The tweet contained a link (shortened, using TinyURL, so as to save precious characters) to an article on their web site.

Wolfram|Alpha

Everything about Wolfram|Alpha (www.wolframalpha.com) is different, from the spelling of its name – in computer-speak, that line in the middle is called a "pipe" – to the syntax it uses and the data it searches. It isn't even a search engine; it calls itself a "Computational Knowledge Engine." You can't use the site to find pictures of adorable puppies, or the latest news on your favorite celebrity, or even cheap flights. Wolfram|Alpha's all about crunching the numbers.

In 1988, Stephen Wolfram began compiling a data/software package for scientists, engineers and mathematicians called Mathematica. This past spring, Wolfram morphed the service onto the web. The database is a mix of public information from government sources, licensed data, and content acquired from the open web. All of it is checked and massaged into a standardized, searchable format by human editors, called "curators."

I've been playing with Wolfram|Alpha for a couple of months now. The query language allows you to perform computations on the data. I can enter "distance from earth to sun/ length of a football field" to find the distance from the earth to the sun, in football fields. (In case you're curious, the answer is 1.663x109.).



Its real value to me, however, is for business research. For example, if I enter the query “u.s. gdp/china gdp,” I learn that, as of 2007, the U.S. economy was about 4 times larger than that of China. (Actually 4.051 times, to be exact.) Typing “closing price GE in Euros” tells me that yesterday GE closed at €8.43 (or \$11.86). Entering “market cap Apple | market cap Google” allows me to compare the market capitalization of Apple and Google.

WolframAlpha manages to be quite smart and yet somewhat dumb at the same time. Here’s an example: I wanted to know the percentage of females in Philadelphia. I entered the query “population of females philadelphia/population of Philadelphia.” WolframAlpha corrected my typo and figured out on its own that I was interested in Philadelphia, Pa. Very smart. Yet when I entered the query “number of females in philadelphia/population of Philadelphia,” I got the equivalent of a blank stare.

All of this has gotten Google’s attention. Shortly after WolframAlpha launched, Google released a prototype new service, Google Squared (www.google.com/squared), which creates a matrix of information for any web query you enter.

I created a square for the query “countries.” The table Google returned included columns for the country name, a map image, a description about the country, its language(s) and religion(s), and the size of its landmass. I modified the matrix by deleting the language, religion and area columns and adding additional columns for GDP and the number of Internet users.

WolframAlpha looks and feels much more developed than Google Squared at this point. Its data appears to be of better quality, too. Perhaps in the next 6-9 months, Google will catch up with them. We’ll see.

Bing

Ah, Microsoft. They’ve been trying to get a handle on web search for about 15 years now. They’ve never gotten it right. And they’ve even had a lot of trouble branding their search engine. First they called it MSN. Then Live Search. Early this year they threw the name Kumo around. Eventually they settled on Bing (www.bing.com), which was released in late May 2009.

Is Bing any good, or is it just Live Search with a different layout and color scheme?

That’s a good question. Some have commented that Bing often produces superior results than Google for certain queries, such as those for breaking news. Others feel that Bing’s design and layout is easier to scan than Google’s. I honestly see no reason to change my primary Web search engine from Google to Bing at this point. I know Google’s search algorithm is quirky with regard to capitalization, word order, and Boolean operators (see my blog post at www.jenkinslaw.org/blog/2008/10/29/google-syntax-squishiness/ for details), but after using it for 10 years now, I feel like I know how to navigate its idiosyncrasies. Bing? It’s a black box to me. And as I write this, Microsoft has just announced a merger of sorts with Yahoo. They now have exclusive rights to Yahoo’s search technology. Presumably some of this will be integrated into Bing sometime in 2010. So for the next year or so I’ll have to pick Bing apart to learn how it works.

There is, however, one feature of Bing that I like: Bing Travel, which uses the Farecast flight price predictor tool.

Google squared countries

Item Name	Image	Description	gdp	Internet Users
China		For the modern political state comprising Mainland China, Hong Kong and Macau, see People's Republic of China. For the modern political state comprising ...	\$3,251 billion	253 million
Cyprus		The website of the press and information service of the www.eyepost.gov.cy gives a general overview of the country and its institutional system. ...	21.3 Billion	300,000
Moldova		Remittances from Moldovans abroad account for almost 30% of Moldova's GDP. ... The PCSM majority makes Moldova one of only three countries with ...	4,227 Billion	700,000
Belize		Read the Department of State Background Notes on Belize for additional ... This replaces the Country Specific Information for Belize dated 23 June 2000. ...	4.5 Billion	40,000
Bahamas		The Bahamas , officially the Commonwealth of The Bahamas , is an independent, English-speaking ... The Bahamas is a member of the Commonwealth of Nations. ...	8,993 Billion	120,000

I've been a big fan of Farecast ever since it launched a few years back. It's good to get confirmation that I'm buying my plane ticket at the right time.

Hunch

Hunch (www.hunch.com) is the brainchild of Caterina Fake, the co-developer of photo-sharing site Flickr (www.flickr.com), which is now owned by Yahoo. Hunch claims that it will return the answer you're looking for after you answer no more than 10 questions. According to the "How Hunch Works" page (www.hunch.com/info/how-hunch-works/):

"As you answer questions, Hunch can narrow down your possible decision outcomes because each outcome can be 'trained' to correspond with each question's answers."

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price	airline	airports	take-off - land	stops	duration
\$180	AirTran	PHL>PBI	5:40p-10:47p	1	4h 50m econ
		PBI>PHL	7:50a-2:21p	1	6h 31m econ

I have a problem with this. I don't want to teach a machine. I just want an answer.

Hunch helps you make decisions and gets smarter the more you use it.

Teach Hunch About You

Do you consider yourself particularly handy around the house?

- ▶ Yes
- ▶ No

Skip this question

In one of the information industry jobs I've had over the past quarter-century, we had a spam filter. When it was implemented, it was a mess. It flagged e-mails I was looking for from people I knew. Randomly. Time-sensitive e-mails. Stuff I needed. When I asked the tech folks why this was happening, I was told that I had to teach the filter which were the good emails and which were the spam. After about 200 messages or so, it would be a lot smarter. I had a better solution: I turned the spam filter off. It was easier and quicker for me to wade through my own inbox.

Are They Google Killers?

I'll still use Google for the majority of my Web searches. But I really like Twitter Search's ability to give me information on events as they are happening. And I'm going to continue testing Wolfram|Alpha to see what other hidden gems I can tease out of it. ■

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Size Matters – for Monitors

New computers routinely come with 17- and 19-inch flat screen monitors, which are nice, but with an even larger monitor, you can suddenly see everything on the screen. The Internet is easier to see, you can read documents and look at pictures and movies with more clarity. In addition, when you are reviewing documents, such as pleadings, you can place them side-by-side on your screen and compare them, line by line, and you can even read them without squinting.

There is a strong correlation between the size of a computer screen and a worker's productivity. According to Andreas Pfeiffer, who performed a study for Apple Computer, "If you're used to a having a 15-inch or 17-inch laptop and then go to a smaller resolution laptop, you can realize [the difference]. There are certain things that can really slow you down." With a larger screen, the productivity gains occur because workers using larger monitors can avoid repetitive tasks such as switching between overlapping application windows. Instead, they can open more windows and display them side-by-side on a larger monitor.

Pfeiffer's testing – comparing worker productivity on 17- and 30-inch screens – demonstrated time savings of 13.63 seconds moving files between folders using the larger screen, and a 65.09 percent productivity gain dragging and dropping between images. Nowadays, the best bang for your buck is to buy a 22- or 23-inch flat screen monitor. They are very lightweight, take up almost no desk space, and are very inexpensive, with many selling for about \$200. And that's not even the best part.

Using a larger monitor really makes using your computer so much better. And while we all know that studies can be biased, this is one example where studies prove the obvious. Just use a larger monitor and see how much easier it is to view things and how much more quickly you get things done. Or buy a larger monitor for someone in your office and watch his or her reaction.

If you decide to buy a larger monitor, there is a caveat. In terms of quality, most of the basic models are more than sufficient in an office. However, once you consider larger monitors (such as 30-inches), you will quickly discover that the cost increases dramatically, and there is more buck than bang. For my money, every computer should have a 23-inch monitor. I have not discovered a downside to it yet. ■

Foxmarks

If you are like me, you have a computer at work and one at home – and you want your "Favorites" to be identical on each computer. Favorites are the lists of web sites you visit that you can access just by clicking on your toolbar in Internet Explorer, Mozilla Firefox and Safari. Although it has generally been a tedious proposition trying to synchronize those favorites, that hassle is over, thanks to www.foxmarks.com.

This free add-on for your browser does just what it says. With Foxmarks (soon to be renamed "Xmarks,"),

you can sync and back up your bookmarks across multiple computers and more with just a click of the mouse. Plus, it's easy.

Not only does Foxmarks seamlessly sync your bookmarks, it will automatically synchronize any changes you make, guaranteeing that your bookmarks are the same everywhere. In addition, with Foxmarks' "Web Access" feature, you can view, add, edit and delete your bookmarks on the Foxmarks website from any other computer, not just your personal computer, and your changes will be saved automatically to your other computers. You can even access your bookmarks from an iPhone, Blackberry, or any other web-enabled device. Finally, because you have control of your bookmarks, you can import them from other websites, or export them to a file on your hard drive. As a result, your "Favorites" are right where they should be, just a click or two away. ■

SwiMP3

An MP3 player to use while swimming? You're kidding! That's what I thought when I first heard about the SwiMP3 player, a lightweight MP3 player that attaches to your swim goggles. Why would anyone need that extravagance? Then I thought about it and the distracting noise claiming to be music that emanates from my gym's speakers. I thought about all the things I thought about while swimming, all of which prevented me from relaxing fully. So I decided to spend the money and try this absurd gimmick. It turns out that the SwiMP3 is not a gimmick, it is perhaps the most favorite of all my new toys.

Unlike conventional MP3 players, the SwiMP3 does not fit into your ears. Instead, you place it by your cheekbone and somehow, while underwater, you hear the sound as clearly as if you were using earphones. For me, the music allows me to focus on my swimming and not all of the other things that used to constantly flow into and out of my head when in the pool. The player stores more songs than I can listen to during a swim session (no, I'm not an Olympic swimmer) and is easy to set up. The controls are well-designed and the player is easy to use, even when it's strapped to my head.

Most interestingly, I swim longer with the SwiMP3 because I don't like to stop in mid-song. So I force myself to take another lap or two. But then the next song isn't over, so I just swim some more. Before I know it, I have swum many more laps than I would have without the player.

At less than \$150, the SwiMP3 is a great addition to my work-out gear. If only it could make me a better swimmer. ■

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Kodak Zi8



Flip Ultra HD



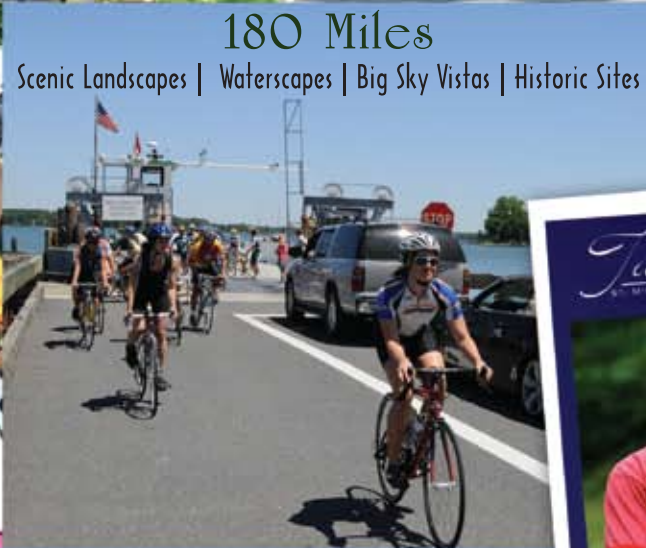
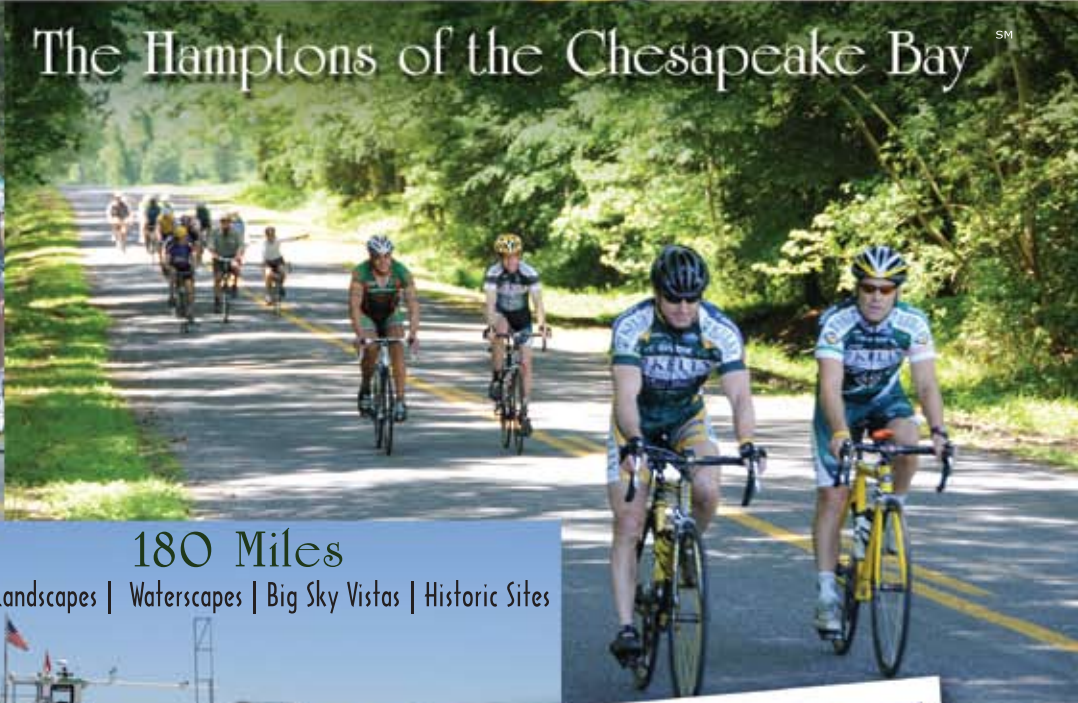
You don't need a cameraman from Action News or even an Action News van full of cash to record your own high-definition video. Cameras from Kodak (Zi8) and Flip Video (Flip Ultra HD) get the job done for less than \$200. And both fit in the palm of your hand, so there's no bulky camera bag to lug around. Both feature pop-out USB connectors so you can easily download video to your computer. ■

FEATURES	KODAK ZI8	FLIP ULTRA HD
RECORDING TIME	20 MIN PER 1 GB AT 720P HD AT 30 FPS	120 MINUTES
INTERNAL MEMORY	128 MEGABYTES, SD/SDHC CARD EXPANSION SLOT	8 GIGABYTES
LCD SCREEN	2.5" INCHES LCD	2.0" INCHES DIAGONAL, 960 X 240 RESOLUTION, TRANSFLECTED TFT
RESOLUTION	1080P (1920 x 1080, 30 FPS) 720P/60 FPS (1280 x 720, 60 FPS) 720P (1280 x 720, 30 FPS) WVGA (848 x 480, 30 FPS) STILL (5.3 MP, 16:9 WIDESCREEN, INTERPOLATED)	1280 X 720
SENSOR	1 / 2.5-TYPE 5 MP CMOS	1/4.5" HD CMOS
VIDEO FORMAT	H.264 VIDEO COMPRESSION	H.265 VIDEO COMPRESSION
OPTICS	6.3 MM, F/2.8, FIXED FOCUS LENS	FIXED FOCUS, F/2.4, 2X DIGITAL ZOOM
BATTERY	KODAK LI-ION RECHARGEABLE DIGITAL CAMERA BATTERY	FLIP VIDEO AA RECHARGEABLE BATTERY PACK, UP TO 2.5 HOURS OF USE BETWEEN CHARGES
STILL IMAGE FORMAT	JPEG	NONE
DIMENSIONS	2.4" X 4.5" X 0.9"	4.25" X 2.19" X 1.17"
WEIGHT	3.9 OUNCES	6 OUNCES
CONNECTION	BUILT-IN SWING-OUT USB ARM	BUILT-IN FLIP-OUT USB ARM
MICROPHONE	MONAURAL	BUILT-IN WIDE-RANGE STEREO MICROPHONE
PRICE	\$179.95	\$199.99

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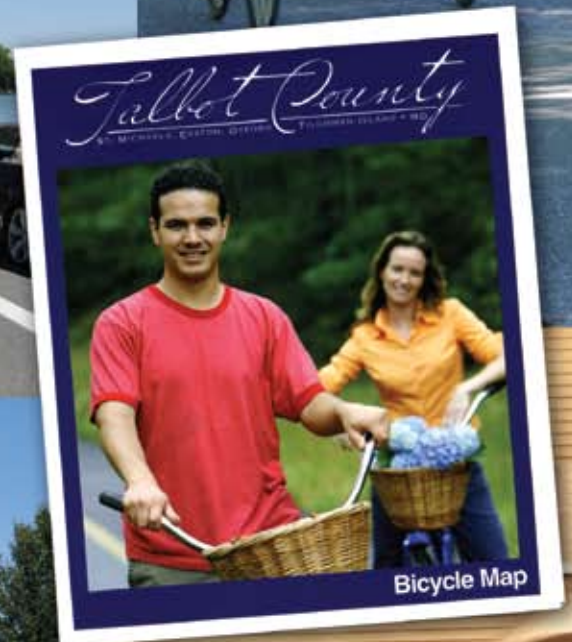


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