

Search undergoing biggest disruption since the dawn of Google

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Facing criticism over the quality of search results, Google recently tweaked its famously secretive algorithm to weed out spam sites and so-called "content farms." For all the attention this issue got, however, it's only one of many search-related challenges confronting the company.

That's because search is undergoing its most rapid disruption since the dawn of the Google.

From the perspective of Amit Singhal, a Google fellow who oversees search quality, the pace and scope of changes to search have been accelerating for five years now. In that time, Google unveiled what he called three "paradigm shifts" to its search engine by adding instant search, real-time search, and personalized search.

But the scale and pace of those changes is nothing compared to the changes to come.

"Google's innovation cycle is accelerating," Singhal said. "Search has made great leaps and bounds. But we are just getting started on the next generation of search."

Because Google dominates search, with 65.7 percent of the market, we've come to see it as relatively static. And nothing is likely to change that anytime soon. "In the near future, no one is going to substantially challenge Google," said Danny Sullivan, who runs the Search Engine Land blog, and was in San Jose this past week hosting a search conference.

Still, the accelerated pace of these changes to search is a reason that companies like Microsoft are pouring millions into their own search engines, and that venture capitalists are funding dozens of search-related startups, such as Blekko, which has raised \$24 million to build a search engine that filters results based on your Facebook activity. They believe the big changes in search are creating new opportunities.

During a recent conversation, Roger McNamee of Elevation Partners listed search as one of four technologies ripe for disruption in the next decade. "We're seeing the peaking and declining of indexed search," he said.

Indexed search is the way most of us think about search. We sit down at a computer, type some key words into a box, and are presented with a series of links to other websites. Google did a vastly superior job of organizing this information on the Web.

But starting five years ago, according to Singhal, search began a series of radical transformations. Today, it is morphing and splintering in numerous different directions simultaneously.

"I think the search space, such as we know it, will be the fastest-changing technology space in the next decade," said Stefan Weitz, director of Microsoft's Bing.

That's the result of big shifts in how, when and where we use the Web to access information. We have new gadgets like smartphones, and new platforms like social networks. Also, our expectations have changed. We don't just want a set of links when we do a search -- we want an answer or a solution.

That is requiring Google and Bing to build even more machine intelligence into their search engines to not just list the Web's information, but also to process it, refine it, and convert it into information that we can use immediately.

For example, when Sullivan is on the go, he uses an app on his phone called "Urban Spoon" to find a place to eat.

"When I want to find a restaurant, I don't say, 'I'm going to Google it,' " he said, "I'm going to Urban Spoon-it."

Beyond location-based search results, which Google and Bing now offer, mobile has also given us the app-driven experience. Each app is its own little world, containing information that is walled off from search engines. And when it comes to finding mobile apps we want to use, Apple has made iTunes the only place to search for iPhone apps.

Google has recently launched its own app store for Android devices. BlackBerry has its own app store to search for its devices. But no service is a one-stop shop to search all apps. For that, you probably need to try a mobile search startup called GetJar.

Even as search companies must grapple with mobile and apps, they also must deal with social networks. Facebook has made increasing amounts of its users' content public, but most of the site is still not searchable by Google.

Facebook does have a partnership with Bing, but even those results are limited. And one of my biggest complaints in general is that Facebook's own search remains primitive. I still can't do basic things like search for something I posted two years ago, for instance.

Meanwhile, Twitter has created huge volumes of content and Google and Bing have both augmented their search to include such real-time services. But even with special access to Twitter, the companies are able to provide only limited access to things that were tweeted months or years ago.

Another development is the rise of specialized searches in areas, or "verticals," like travel. And how can I search my TV, which has a growing mixture of Internet content, traditional programming and video on demand?

Singhal said the longer term goal is to get search to a point where it contains enough artificial intelligence to know what you want without even asking for it.

"We've pushed the envelope every day," Singhal said. "But clearly our job is not done."

The race to win at search is one that's going to get faster, and it will have no finish line.

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