

An endless appetite – and not just for your data

Google, the Hungry Giant

Google is big; really, *really* big. It's so large and central to our online lives that the very name of the search engine has become a verb. That odd name, "Google", is a misspelling of "**googol**", a child-invented term for a number starting with 1 followed by 100 zeroes – an appropriately large figure indeed.

Google has become involved in so many other enterprises beyond looking for information on the internet, however, that the company as a whole changed its name four years ago to "**Alphabet, Inc.**" – another moniker suggestive of its size and scope.

Yet the search engine is but one subsidiary out of at least eight. Other major divisions are devoted to bio-tech, life sciences, self-driving vehicles, cybersecurity, providing net access to rural communities, secret projects, and several venture capital firms.

Gallery and Graveyard

But that's just the start. Google has so many projects going that it's impossible to find a comprehensive list of all that they do, even at their own site. They have made some 40 hardware products ranging from Chrome laptops to the Nexus smartphone and its successor, **Pixel**, to their smart speaker line, plus Nest thermostat, the **Google Glass** wearable computer interface and their as-yet-unavailable self-driving car.

Wikipedia lists at least 184 current services provided by Google but admits it is incomplete, including:

- 30 **search tools** from the engine we all know with 7 tools of its own, their voice assistant and email



alerts, plus ones for images, books, financial data, government datasets, patents, news, shopping, video, restaurants, and even one for scholars.

- Over 30 communication and publishing services from note-keeping and bookmarks to playing music or publishing **blogs**; a calendar, libraries of 3D models, fonts for web-publishers, various cloud-based document-creation tools plus services for webmasters, as well as **Gmail** and **YouTube**.
- 13 map-related services including **Google Street-View**, and global overviews of the Earth, Mars, the Moon, the Sky, plus public transit, the human body, and of course, tracking Santa on Christmas Eve.
- Google makes 15 desktop apps, 20 mobile versions, and over 30 mobile stand-alone programs. Many of their most popular desktop services like search, their maps and the **translation engines** work equally well on smartphones and tablets.
- 10 each of advertising services, application development tools, and statistics tools and analyzers.
- No less than 8 different **operating systems**.
- And curiously, just 3 security tools.

The number of dead projects, the infamous "**Google Graveyard**" is almost as extensive. Google has abandoned, absorbed, or otherwise killed off around 151 services, many of which had devoted user-bases – almost *two-thirds* of all its products. Most of these came from the 233 **companies** they've bought, apparently not as much for the tech as for the **talent**.

There was **Picasa**, a beloved photo organising and viewing app with its own photo-sharing site, which was replaced by Google Photo. **Orkut** was a social networking site that was extremely popular in India and Brazil until Google shut it down. Both had been around for a decade or more.

The list is long: **Google Video**, replaced by YouTube; Postini, an email archiving service was absorbed in **Google Apps**; even **Google Labs**, a new technology development testbed, died. Gone are desktop search engines, online directories, several kinds of social network clients, a podcast player, various geolocation and other extensions for maps and photos, etc.

Product churn continues, as the purging of the old and the adopting of the new never stop. **Google+**,

Continued on back

their rival to Facebook that never really took off, was just shuttered. Yet at the same time, they announced a new venture, **Stadia**, a cloud-based online video game streaming service designed to work on just about any platform, accessible via YouTube trailers with an integrated instant help feature.

There have been **11 product deletions** so far this year – an average of one every 9 days. The constant change raises serious questions about Google's direction as well as its commitment to support its own products. It damages their brand by eroding confidence in future efforts when good, widely-used products are shut down without explanation.

Not only that, but there is a tremendous amount of **duplication**, which appears deliberate. For instance, at one time, there were 4 different text messaging apps available on Android phones, each with its own approach. Eventually they were all merged into **Google Hangouts** – which is now going away.

How Google does it

Google didn't quite explode onto the scene; but it took off like a rocket and has never come down. Like many internet powerhouses, it **started** as a research project by a couple of grad students, Larry Page and Sergey Brin, at Stanford back in January 1996.

Search engines had been around since the growth of the Worldwide Web in the late 1990's made it obvious that all the information in the world was useless unless it could be located. But the first ones were just directories of links compiled by hand. The web soon vastly outstripped their capabilities.

So they automated the process with **site crawlers** which examined pages to add to Google's massive web index, harvesting links to discover other pages. Their most critical innovation was **PageRank**, a complex, secret algorithm using various criteria – like number and quality of links – to measure importance and assign places in their lists of search results.

Since the top ranks are the most highly coveted as they are far more likely to be clicked, the industry of **Search Engine Optimisation** was born as webmasters tried various tactics and tricks to improve scores.

Countless spammers and crooks have tried to game the system in all sorts of ways, and the algorithm is still changing and evolving. But it was and remains a major factor shaping the web to this day.

All this building new services and then abandoning them is very expensive. Search and the whole constellation of web services must be quite lucrative because they remain *free* for users. However, revenue is not generated directly, but through advertising, which is closely integrated with all of its web

products. In 2017, Google **took in \$110.8 billion**, most of it via the **Google Ads** program, which places small targeted ads in the results.

Too big to manage?

Although Google is as dependent on ads targeted with harvested user data as Facebook, they are much more discreet about just how it is used. Data leaks happen there too, but the search giant is notorious for how little information it willingly releases.

The reason is simple: Google does **not** want to be regulated. Where Mark Zuckerberg recently all but **invited** government guidelines, Facebook's Silicon Valley rival has long fought tooth and nail to avoid *any* official oversight or involvement whatsoever.

Their social media effort, Google+, for instance, was killed off after they quietly discovered a data exposure of **500,000** users – yet the underlying cause seems to be **fear of regulation** and accountability.

They have plenty of reasons – in euros, at least. The European Union just hit the firm with a **third major fine** for antitrust violations. Google now owes them the equivalent of **\$9.3 billion**. More could come with the **draconian copyright laws** just passed there.

Google has faced a lot of **criticism**, even for its **electricity consumption** and their **private bus system** for employees. Its very size and power render it suspect, which is not helped by its secrecy about such matters as what it does with all that data and the possibility of covertly manipulating search results.

Google's long, under the table engagement with the **Chinese** in building a censored search engine was repeatedly denied, but lasted at least until a major Chinese hacking attempt was discovered. They freely cooperated with the NSA **PRISM spy program**, too.

Yet the company once held itself to higher ideals. Before it became Alphabet, Inc., Google's motto was **"Don't be evil."** Since then the best statement that seems to define the megacorporation came from former CEO Eric Schmidt: "Google policy on a lot of these things is to get right up to **the creepy line** and not cross it." But do they still know where that is?



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505-243-SWCP (7927) • **SWCP.com** • **Help@swcp.com**

5021 Indian School NE, Suite 600, Albuquerque, NM 87110

Portal editor/chief writer, Jay Nelson **jnelson@swcp.com**
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