Photos: Where your online data get stored

June 7 2013, by The Associated Press

In this undated photo made available by Google, hundreds of fans funnel hot air from the computer servers into a cooling unit to be recirculated at a Google data center in Mayes County. Okla. The green lights are the server status LEDs reflecting from the front of the servers. (AP Photo/Google, Connie Zhou)

Internet companies such as Apple, Facebook and Google have vast amounts of data on you.

These include the photos and video you share, the email you send and receive and the musings you broadcast to friends on what you are

thinking or eating. Internet companies store all this information at data centers they run around the world. When you're ready to read your email, the message gets pulled from a computer at one of these centers. When you're sharing a photo, the image gets transmitted to one of these computers and stored there until someone else views it.

When the government requests information on a customer, with the presentation of a subpoena or court order, the Internet service company taps these same computers to access the data.

This undated photo made available by Google shows colorful pipes sending and receiving water for cooling Google's data center in Douglass County, Ga. On the right is a G-Bike, which the company says is the vehicle of choice for employees to travel around the vast centers. (AP Photo/Google, Connie Zhou)

Now comes a report on a clandestine program code-named "PRISM." As

described by The Washington Post, PRISM gives the U.S. government access to email, documents, audio, video, photographs and other data belonging to foreigners on foreign soil who are under investigation. The newspaper said participating companies and services include AOL Inc., Apple Inc., Facebook Inc., Google Inc., Microsoft Corp., Yahoo Inc., Skype, YouTube and Paltalk. Companies that responded to Associated Press inquiries say they only provide the government with user data required under the law.

In any case, like pieces of a puzzle, the bits and bytes left behind from people's electronic interactions can be cobbled together to draw conclusions about their habits, friendships and preferences using data-mining formulas and increasingly powerful computers.

In this March 20, 2013, file photo, electrical conduits are installed overhead in a server room at Intergate.Manhattan in New York, a 32-story building that was once a Verizon facility. Sabey Corp. is building a 1 million-square-foot data center there. (AP Photo/Mark Lennihan)

It's all part of a phenomenon known as "Big Data," a catchphrase increasingly used to describe the science of analyzing the vast amount of information collected through mobile devices, Web browsers and check-out stands. Analysts use powerful computers to detect trends and create digital dossiers about people.

It all starts with the data you make available to store at these data centers. Each center has clusters of computers and large Internet pipelines to connect the machines to the rest of the world. Each company typically has several of these centers around the world, helping to meet growing demand for its services and guard against service disruptions should one site fail.

Here's a photographic look at some of these data centers.

This photo from Thursday, June 6, 2013, shows an aerial view of the National Security Agency's data center in Bluffdale, Utah. Former NSA employee William Binney told The Associated Press that he estimates the agency collects records on 3 billion phone calls each day. (AP Photo/Rick Bowmer, File)

This undated photo made available by Google shows the Internet wiring at Google's data center in Berkley County, S.C. The fiber optic networks connecting the company's sites can run at speeds that are more than 200,000 times faster than a typical home Internet connection. (AP Photo/Google, Connie Zhou)

In this file photo from April 13, 2010, construction worker Chris Jensen helps build Facebook's first-ever data center in Prineville, Ore. The social networking site chose the high-desert timber town of 10,000 to take advantage of its cool nights and dry air in hopes of making its data center energy efficient. (AP Photo/Don Ryan, File)

In this undated photo made available by Google, the sun sets over Google's data center in Saint Ghislain, Belgium. (AP Photo/Google, Connie Zhou)

This undated photo made available by Google shows colorful pipes sending and receiving water for cooling Google's data center in The Dalles, Ore. The blue pipes supply cold water and the red pipes return the warm water back to be cooled. (AP Photo/Google, Connie Zhou)

This undated photo made available by Google shows pipes with highly pressurized water at Google's data center in Douglass County, Ga. (AP Photo/Google, Connie Zhou)

This undated photo made available by Google shows failed drives that are destroyed at a data center in St. Ghislain, Belgium. Google says it destroys malfunctioning storage drives on site to protect user data. (AP Photo/Google, Connie Zhou)

In this file photo from Nov. 16, 2006, Scott Noteboom, right, director of data center engineering operations, explains how computer servers will be positioned during a tour of Yahoo's new data center at the Confluence Technology Center in Wenatchee, Wash. Yahoo is one of the nine Internet service companies identified by The Washington Post as participating in a clandestine snooping program code-named "PRISM." (AP Photo/The Wenatchee World, Kelly Gillin, File)

This undated photo made available by Google shows backup tapes stored at a data center in Berkeley County, S.C. Each tape has a unique barcode so that the company's robotic system can locate the right one. (AP Photo/Google, Connie Zhou)

In this undated photo made available by Google, Denise Harwood diagnoses an overheated computer processor at Google's data center in The Dalles, Ore. Google uses these data centers to store email, photos, video, calendar entries and other information shared by its users. These centers also process the hundreds of millions of searches that Internet users make on Google each day. (AP Photo/Google, Connie Zhou)

In this April 15, 2011, file photo, Facebook employees, Sam Viles, left, and Josh Crass talk over a crash cart in the server room at Facebook's data center in Prineville, Ore. Facebook and other Internet companies say they provide the government only with user data required under the law. (AP Photo/The Oregonian, Faith Cathcart, File)

This undated photo made available by Google shows the view from the floor in Council Bluffs, Iowa. Huge steel beams both support the structure and help distribute power. (AP Photo/Google, Connie Zhou)

This undated photo made available by Google shows cables that the company organizes by color at a data center in The Dalles, Ore. According to the company, this can make things less technical: "Hand me a blue one." (AP Photo/Google, Connie Zhou)

In this March 20, 2013, file photo, fiber-optic cables are shown at Intergate.Manhattan in New York. The 32-story Intergate.Manhattan, once a Verizon facility, will house a 1 million square foot data center. Sabey Corp., a Seattle-based data storage company, has renovated the building with electrical substations and backup generators above ground level to protect the facility from storm surge damage. (AP Photo/Mark Lennihan, File)

This undated photo made available by Google shows the campus-network room at a data center in Council Bluffs, Iowa. Routers and switches allow Google's data centers to talk to each other. The fiber cables run along the yellow cable trays near the ceiling. (AP Photo/Google, Connie Zhou)

This undated photo provided by Facebook shows the server room at the company's data center in Prineville, Ore. The revelations that the National Security Agency is perusing millions of U.S. customer phone records at Verizon and snooping on the digital communications stored by nine major Internet services illustrate how aggressively personal data is being collected and analyzed. (AP Photo/Facebook, Alan Brandt)

Citation: Photos: Where your online data get stored (2013, June 7) retrieved 4 May 2024 from https://phys.org/news/2013-06-photos-online.html