

GPS Applications Explained

Talk about a more exciting and more challenging Easter egg hunt - or a variation of it!

Wouldn't it be a rip-snorting exercise to engage some people's geographical and navigation skills so they can find a cache or two? We're talking about one GPS application - a recreational one - that has quite a large following of Internet fans.

Geo-caching is only one of the leisurely applications of the global positioning system which can be added to the list of GPS uses. And the list keeps getting longer.

With the GPS capabilities for air, land, and sea navigation, inventive GPS techno-buffs are churning out ways to turn GPS fans into obsessive treasure hunters.

Geo-caching involves a hand-held GPS device that owners can use to travel to a specific longitude and latitude to find objects (treasures) deliberately hidden there by geo-cachers.

Don't start thinking of geo-caching in terms of the California gold rush. Given its recreational nature, these cache objects are truly valueless - they may contain inexpensive trinkets, two-dollar bills, coins, memento or "antique" jewelry that doesn't work. Sorry, folks, no economic opportunities to be harnessed here. It's all for the sake of sheer, wholesome fun. As one poet so very well articulated, it isn't the destination that counts, it's the journey!

That is the geo-caching principle. People go into the Internet and get these treasures' coordinates and set out to find them. Then they go back to their computers and relate their experiences. One variation of geo-caching is actually not to lay claim to the object, but to leave something else or move it to another location, so that there is "fodder" for the next hunter.

That's the light side of GPS. Moving now into a more serious discussion, these applications can be classified into four or five categories:

- Military
- General aviation and commercial aircraft
- General navigation
- Precision-time reference
- Visually impaired individuals

With respect to the military application, this was the original intention of the \$12 billion investment of the United States government. The military objectives relating to cruise missiles and smart bombs were at the core of GPS technology (if you want to sound even smarter than a smart bomb, you can say "precision-guided munitions" to impress your listeners). Military strategists also rely on it for monitoring the U.S. Nuclear Detonation Detection System.

Precision-time reference applications refer to the use of a GPS reference clock for time-sensitive generators or network time protocol (NTP) clock. An example would be the seismologic endeavors of both the public and private sectors. GPS can also be used for the synchronization of clocks in computer systems.

As for general navigation applications, GPS is used by people here and abroad as an aid in cars, airplanes, and ships.

The application for visually impaired individuals is an interesting field of study because people have recognized the capabilities of GPS to help the blind. Collective efforts to devise tools for the visually impaired are continuing, and GPS technology will fuel those efforts further.

One little detail that we want to mention is "tracking logs." Hypothetically, if we had a compulsive and obsessive adventurer who likes to wander off to remote islands, thickly wooded forests and unheard of safari jungles in places whose names you can't even pronounce, that adventurer would never have to panic if he felt disoriented or lost. Before setting out into uncharted territories, he simply has to activate his GPS tracking log capability, and it will record every detail of a turn, a detour, or a reverse motion. This information is stored in his GPS computer, and if he wants to take the same route on the return voyage, the data will be there for him.

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About the Author

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