

GPS Is A Satellite Based Navigation System That Answers The Age Old Question: Where Am I?

Satellites

The satellites orbit earth and send radio signals to GPS receivers, which use the signals to figure out time and position.



Fun Facts

- There are roughly 30 satellites in orbit.
- GPS satellites complete an orbit in approximately 12 hours.
- Originally developed by US military, now open for civilian use.
- Satellites have highly accurate atomic clocks.

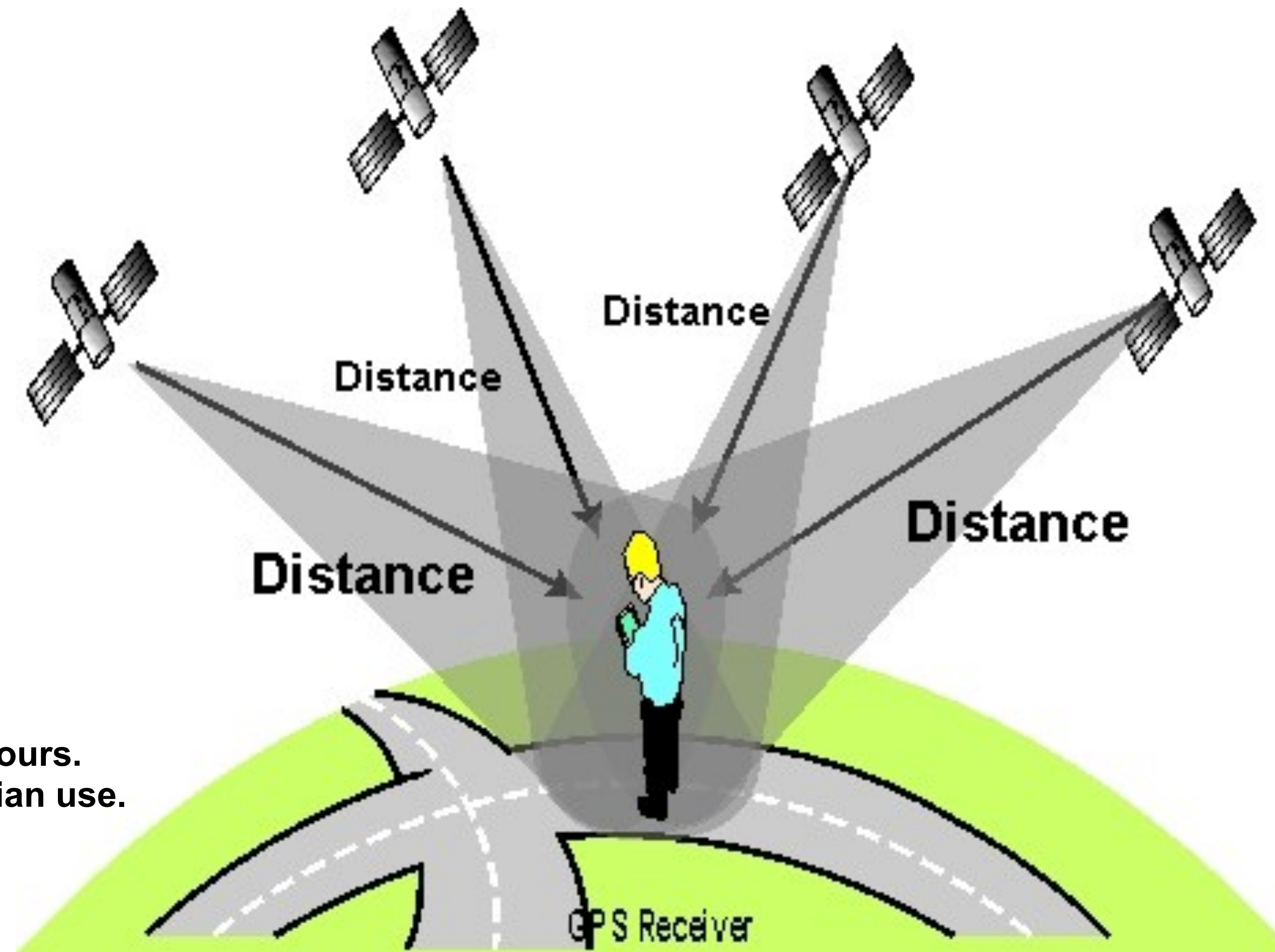
Ground Stations



Ground stations are the control segment of GPS. Five unmanned ground stations around the Earth monitor the satellites. Information from the stations is sent to a master control station where the data is used to keep the satellites in their proper orbit.

Receivers

Anyone who has a GPS receiver can use the satellite signals to determine their location. Receivers can be as inexpensive as a hundred dollars or as expensive as several thousand. They are often built into modern mobile phones.



GPS

Global Positioning System
How Does It Know Where I Am?

Personal Uses

Geocaching

Geocaching is a free real-world outdoor treasure hunt. Players try to locate hidden containers, called geocaches, using a smartphone or GPS and can then share their experiences online. There are 1,932,403 active geocaches and over 5 million geocachers worldwide.



Advertising

Many companies are now able to show applicable advertisements based on your current location.

Business Uses

Navigation: Land, Sea and Air



On Land: GPS is used for emergency response (fire, ambulance, police), search and rescue and fleet management.



In the Air & on the Sea: GPS is being used for fleet management, Assisted steering, risk assessment and hazard warning systems for navigation.



Mapping and Surveying

With a GPS surveying instrument, a surveyor can take precise measurements without the requirement of line of sight. These devices work under any weather conditions.



Tractor Guidance

A tractor is programmed to follow a GPS guided route for cultivating, fertilizing, and harvesting.

Tracking Wildlife

A GPS receiver is attached to an animal allowing researchers to observe animal movement and migration patterns.



Smart Phones

Smart Phones are an easy and popular way to allow people to use GPS. Examples would include "Check-In" on Facebook which posts your current location or the findFriends app on the iPhone which lets you track a friends location.

