

Chpt 05

## Geospatial Technologies!

= 2016

1. Write a Note on Global Positioning System.

### Global Positioning System: (GPS)

"GPS is a satellite-based navigation system that allows users to determine their precise location, velocity and time anywhere on Earth. It operates by receiving signals from multiple satellites to triangulate a user's position."

- Usage:

It is used in various applications such as navigation, mapping and timing. It is U.S. owned utility.

- Segments:

The System Consists of three segments.

- Space Segment
- Control Segment
- User Segment

### - Space Segment:

It consist of Constellation of at least 24 Satellites orbiting the earth, transmitting signals that allows GPS receivers to calculate their positions.

For Example:

GPS Satellite Sending signals to a receiver on a ship for Navigation.

- GPS triangulation works by figuring out location using signals from satellites in space. GPS device like phone listens to signals from atleast three satellites.

To figure out where you are. It's like drawing circles around each satellite and where those circles overlap is our location.

## - Control Segment:

Ground-based Stations that monitor the Satellites, maintain their precise orbits and update Systems to ensure accuracy.  
For Examples:

The master control Station.

## - User Segment:

This includes GPS receivers which use signals from the Satellites to determine the user's location.

For Examples:

A Smartphone Using GPS to give directions on a map.

