

**GPS:** A system of satellites that allows anybody with a special receiver device to know their exact global position. <sup>[1]</sup>

**Audience #1 (Non-technical):**

- 1) Basics of radio communication.

Particles of light (photons) have different wavelengths. Our eyes can only perceive a small band on the vast spectrum of these wavelengths which appear to us as all the colors of the rainbow. Radio waves have longer wavelengths than the colors that make up visible light. <sup>[2]</sup> They are used for long distance communication (e.g. satellite receiver communication) by encoding 'messages' (think Morse Code) using different radio wave frequencies.

- 2) Triangulation introduction.
- 3) Different uses of GPS

**Audience #2 (Technical/Engineer):**

- 1) History/Necessity of the GPS system (United States Army).
- 2) GPS communication protocol
- 3) Geometric 'Derivation' of GPS triangulation mechanism

**Sources:**

[1] *What is GPS?*. Available: <http://www.loc.gov/rr/scitech/mysteries/global.html>

[2] *Radio Waves*. Available: <http://www.loc.gov/rr/scitech/mysteries/global.html>