



Introduction to Google Earth & GPS

Google Earth

- What is it?
 - A software program that displays satellite imagery from an online server overlaid on a topographic data, creating a digital three-dimensional model of the planet Earth.

Google Earth Versions

- Google Earth 6 is available for the desktop in three different versions:
 - Google Earth
 - Google Earth Pro
 - Google Earth Enterprise

Google Earth Version

- Google Earth – Free, but you cannot measure an area or include topo map images.
- Google Earth Pro - \$399 annually, measures area & offers higher printing resolutions.
- Google Earth Enterprise - \$20,000

Google Earth

- A GPS data import tool was added in 2009.
- The interface supports only Magellan & Garmin brand GPS units.
- You can download it at www.google.earth.com.
- Download Google Earth for Android, iPhone, or iPad.

Google Earth Geographic Web Browser



▼ Search

Fly To Find Businesses Directions

e.g., Tokyo, Japan

logan, ut

☒ [logan, ut](#)

▼ Places

☒ My Places☒ [evap](#)

Exported from evap on 9/3/2006

☒ [Sightseeing](#)Start your Google Earth world tour
here! Click on an underlined☒ [Google Campus](#)

Google's Mountain View, California

▼ Layers

View: Core

☒ Primary Database☒ Terrain☐ roads☒ borders☐ Populated Places☐ Alternative Place Names

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Pointer 41°44'31.26" N 111°48'21.25" W elev 4800 ft

Streaming 100%

Eye alt 6087 ft

???XMZ, KML, GPX??

- File formats -The VERY condensed version....



KMZ

- Stands for KML-Zipped.
 - It is the default format for KML because it is a compressed version of the file.
 - KMZ allows images you to be zipped up in file.
 - That's all you need to know....we are not exporting pictures because our GPS has a map!

KML

- Keyhole Markup Language
 - Is used by Google Earth
 - The KML format can
 - read & write waypoints
 - read and write tracks
 - read and write routes

GPX

- The GPS eXchange Format
- It is an XML data format for the interchange of GPS data (waypoints, routes, and tracks) between applications and Web services on the Internet.
- Designed for transfer of data for GPS devices.
- Contain a description of what's inside them, allowing anyone to create a program that can read the data within.

XML to GPX

- Create a data file on Google Earth
- Save it as a KML file
- Convert it to GPX file
- Export data to GPS device

— How do we do this?

GPSTBabel

- What is it?
- GPSTBabel converts waypoints, tracks, and routes between popular GPS receivers and mapping programs.

GPSTBabel

- There are many different file formats to hold waypoint, track, & route information in programs used by computers & GPS receivers.
 - GPX defines a standard XML to contain all the data, many programs do not understand XML
 - GPSTBabel can convert data between two programs.

GPSTabel

Input

☐ File ☐ Device Format

Device Name:

Options

Translation Options

- ☐ Waypoints - ☐ Routes - ☐ Tracks ☒ Filters More Options

Output

☐ File ☐ Device Format

Device Name:

Options

Close Apply

Additional Resources

- ExpertGPS - <http://www.expertgps.com/default.asp>
- TopoGrafix - <http://www.topografix.com/>
- GPS Visualizer - http://www.gpsvisualizer.com/convert_input
- EasyGPS - <http://www.easygps.com/default.asp>

Let's Get Started!

