

7. Earth Survey and GPS

Earth Survey

The **Earth Survey** is a set of methods that collect information about the landscape without direct connection with it

Methods of Earth Survey

- ✓ *Photographic methods* – pictures (photos)
- ✓ *Non-photographic methods* - scanning

Methods of Earth Survey according to carrier

- ✓ *Air (plane) methods* - pictures (photos) have greater focus
- ✓ *Satellite methods* - pictures (photos) have smaller focus but scan a larger area. Landsat and SPOT are satellites that are used for the Earth Survey

The use of the Earth Survey is really wide, e.g. in meteorology to create weather forecasts, to monitor volcanoes, hurricanes, catastrophes, environmental issues etc. Information from the Earth Survey is also used in **Geographical Information Systems – GIS** (creation of the maps).

Global Positioning System

The **Global Positioning System (GPS)** is the functional global navigation satellite system in the world. The GPS uses information from **24 satellites**. Signals from these satellites are transformed by **GPS receivers** to determine their current *location, time, speed and direction*. GPS was created by the United States Department of Defense.

Keywords

Earth survey, photographic/non-photographic methods, air/satellite methods, weather forecasts, volcanoes, GIS, global positioning system, GPS receivers

Figure 1: Structure of the satellite

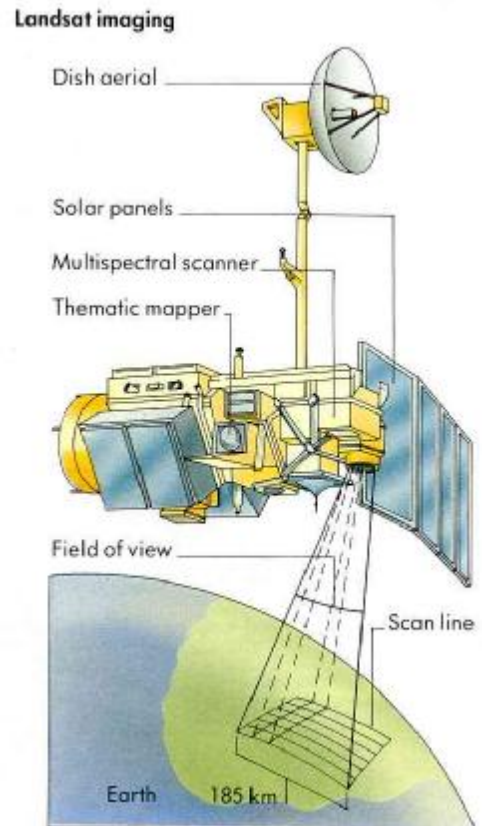


Figure 2: The tourist GPS receiver



Figure 3: Comparison of the air picture and the satellite picture

