(Approx. 1,219 words)

Tour the World with World Wind
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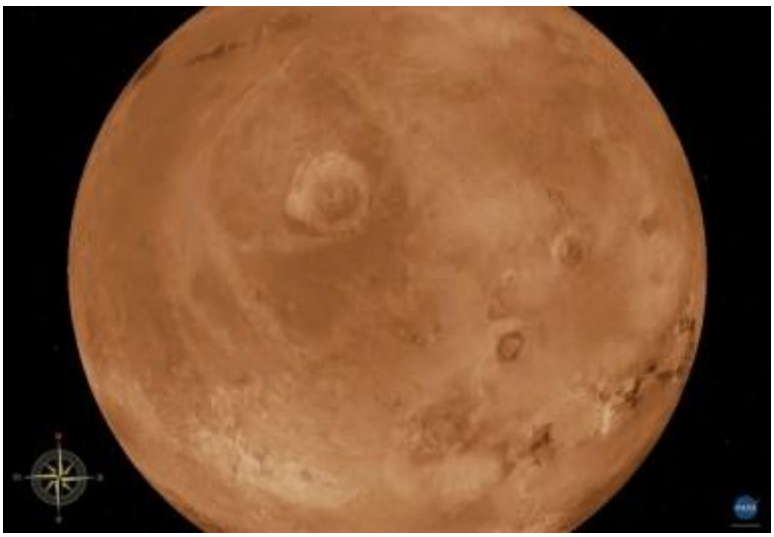
Lots of folks are familiar with Google Earth the free downloadable virtual globe program. Yet, I am finding that many have never heard of NASA'S World Wind. World Wind is developed at the NASA Ames Research Center and is an open-source competitor to Google Earth. While it has been around for several years, it is a fascinating piece of software that can keep you glued to your monitor for hours on end.

Like Google Earth, this free program maps the earth by superimposing images obtained from satellite imagery and United States Geological Survey aerial photography over a 3D globe. Once the 60 megabyte program has been downloaded and installed, you are treated to a true-color image of the entire Earth from space upon opening the program. The globe can be manipulated with your mouse. Use the mouse wheel to zoom from satellite altitude down to any place on earth. Hold the left button and move the mouse to rotate the globe and the right button to tilt it.



The Landsat satellite imagery and Shuttle Radar Topography Mission data allows one to experience Earth terrain in 3D, just as if you were flying low over the landscape. Visit any place in the world.

But as they say on TV, "Wait! There's more!" World Wind also comes with virtual globes of the Moon, Venus, Jupiter, Mars and the Sloan Digital Sky Server, which allows you to explore outer space.

A variety of views are available. Below is a summary from the World Wind website:

Blue Marble

World Wind has a full copy of the Blue Marble, a spectacular true-color image of the entire Earth as seen on NASA's Earth Observatory: the Blue Marble.

Put together from data of a variety of satellites such as MODIS and Terra, the Blue Marble can be seen in all its glory at 1 km per pixel resolution.

Land Sat 7 –

Using World Wind, you can continue to zoom past Blue Marble and reveal the extremely detailed seamless mosaic of LandSat 7 data.

LandSat 7 is a collection of images from 1999-2003 at an impressive 15 m per pixel resolution. It includes other color bands such as the infrared spectrum. Users will be able browse these different sets as they become available. Any changes and updates are automatically inherited by World Wind.

LandSat 7's resolution makes it possible to see your own city, neighborhood, or landmarks in your vicinity. Seeing the whole globe like this puts the world in context with scientifically accurate data.

The complete LandSat 7 data set is too large to fit on a single machine so World Wind only downloads what you see and stores a compressed copy on your computer for later viewing.

SRTM

Combining LandS at 7 imagery with Shuttle Radar Topography Mission (SRTM) Data, World Wind can display a dramatic view of the Earth at eye level. Users will literally be able to fly across the world in any direction.

In addition, World Wind can exaggerate these views so a user can easily pick out the details.

NASA SVS

Goddard Space Flight Center (GSFC) has produced a set of visually intense animations that demonstrate a variety of subjects such as hurricane dynamics and seasonal changes across the globe.

World Wind can take these animations and play them directly on the world. Anyone can immediately grasp where the event is taking place as World Wind rotates automatically into view.

MODIS

Moderate Resolution Imaging Spectroradiometer or MODIS produces a set of time relevant data that's updated every day. MODIS catalogs fires, floods, dust, smoke, storms and even volcanic activity.

World Wind produces an easily customized view of this information and marks them directly on the globe. When one of these color coded markers are clicked, it downloads the full image and displays them.

MODIS images can download publication quality material at a resolution of 250 m per pixel. Anew fresh set of images can be downloaded every day.

World Wind also has a "tour mode" to automatically skim through any number of samples.

GLOBE

World Wind is capable of browsing through and displaying GLOBE data based on any time the user wants. For example, a user can download today's (or any previous day's) temperature across the world.

You can view rainfall, barometric pressure, cloud cover, or even the student GLOBE samples themselves. Each sample comes with a temperature scale

Country & (USA) State Borders

World Wind has a complete set of borders that traces every country and state. As you zoom into the world, the boundaries become more precise

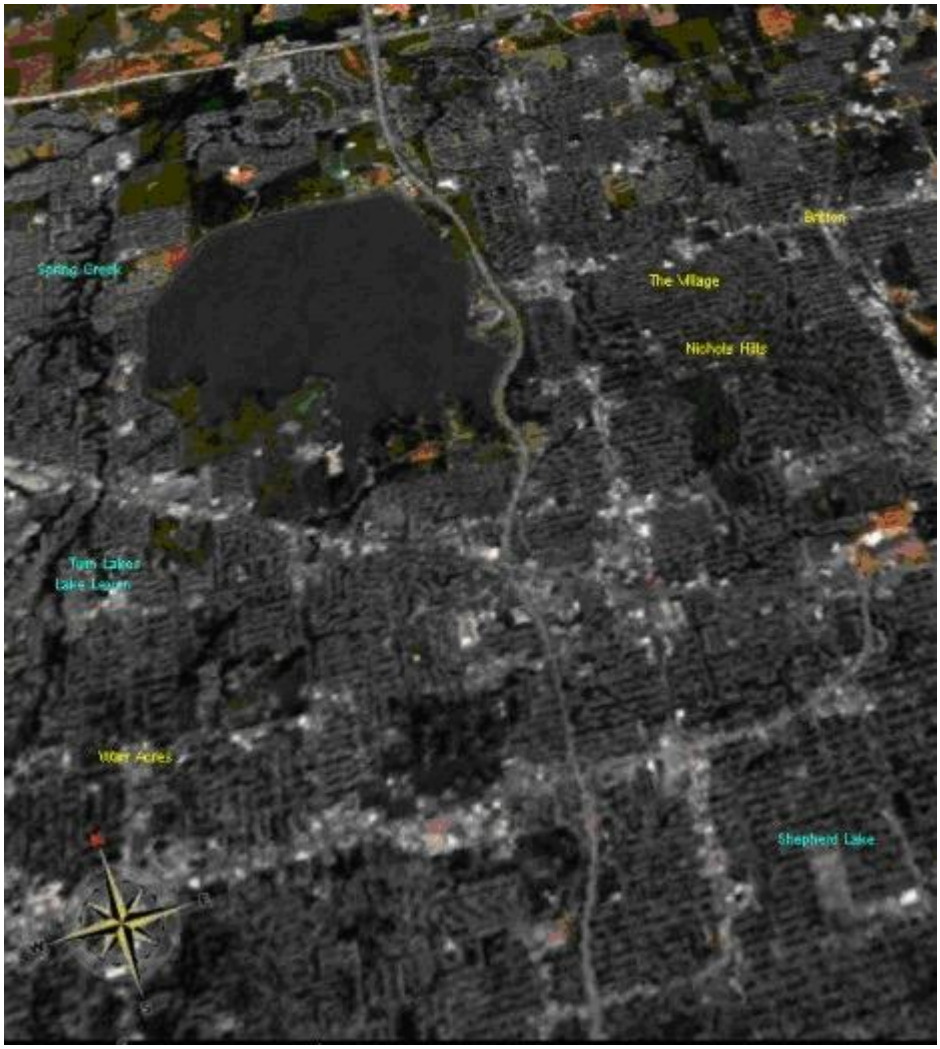
You can observe where mountain ridges and rivers have formed the political boundaries of today.

Place names

World Wind has a full catalog of countries, capitals, counties, cities, towns, and even historical references. The names update dynamically, by increasing in number as the user zooms in. This prevents too many names from cluttering up the screen.

It's likely that you'll find your own town no matter how big or small it is in World Wind.

Oklahoma City



Visual Tools

World Wind comes with a variety of visual guides that help the user's experience such as latitude and longitude lines, as well as extremely precise coordinate data.

These helpers can be toggled on or off any time and are viewable with any of World Wind's other features turned on.

Landmark Set

World Wind has the capability to display actual 3d models of landmarks on the
Earth. This helps to see the world in context to places a user may have been to. Those landmarks that do not have 3D models for it yet have place markers similar to how MODIS displays places of interest.

Las Cruces, NM –

World Wind is an incredible and highly addictive program that anyone with a high speed Internet connection should not be without. Give NASA'S World Wind a try and you won't be sorry you did!

Minimum system requirements:

System Requirements
Windows 2000, XP, or 2003
3D graphics card
Internet connection
Sorry, no support for Linux or Macintosh yet
Microsoft .NET 1.1
Microsoft DirectX 9.0c

With the minimum configuration, performance and functionality may be less than expected.
700 MHz or higher CPU
128 MB RAM
1 GB disk space (World Wind's cache size is 2 GB by default; you must reduce the size of your cache)

Recommended configuration
1.4 GHz or higher CPU
256 MB of RAM
DSL/cable connection or faster
3 GB of disk space

World Wind Home Page
http://worldwind.arc.nasa.gov/index.html

World Wind Wiki, "A knowledge base about NASA's World Wind that anyone can edit". http://www.worldwindcentral.com/wiki/Main_Page

World Wind Forums
http://forum.worldwindcentral.com/

Video Card Compatibility List http://www.worldwindcentral.com/wiki/Video_Card_Compatibility