WorldWind Promotional Presentation

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NASA WorldWind: Open Source Visualization Technology for Earth Observation

WorldWind, open source virtual globe technology for Java, iOS, Android and Web, is provided by NASA and is architected as API-centric modular componentry. This enable it to be continually optimized and feature-enriched in ways that allow applications based on this SDK (Software Development Kit) to benefit Earth Observation, especially Open Science, with minimal or no adjustment for the decade ahead.

The next-generation National Airspace System (NAS) aviation management system for the U.S. Federal Aviation Administration, FAA, uses WorldWind, as do applications currently being developed by the European Space Agency, along with several other US and European government agencies and industry partners. This presentation will demonstrate several NASA open source use cases for WorldWind technology that include advances being made to optimize access to NetCDF and HDF data via WebWorldWind.

NASA WorldWind: Multidimensional Geospatial Web Platform

The ability to see spatial data in its native context is essential for that data to be appreciated whether by the scientific community, policy and decision-makers or the general public. Recently, the accessibility of spatial data has dramatically improved. Without the need to install an application, spatial data can now be experienced via any web browser, mobile devices included.

For developers, by simply updating the app on your server, the latest version of your application is now immediately available to your entire user-community. Unlike other virtual globes such as Google Earth, NASA World Wind offers something very special, full control to customize the interface with any features or functionalities you might need. You decide how the

data is accessed and experienced. This allows you to provide maximum value of the information to your user community.

The web version of NASA WorldWind (WebWorldWind) has made it possible for a whole new suite of applications for managing and sharing spatial data. Apps built with this web version are ideal for immediate social media type activity and also facilitate delivery of sophisticated data exchange scenarios such as weather and climate research, disaster response, personal navigation, and industrial-strength tracking for transportation, supply chain, aviation and satellites.

WebWorldWind is an application component, not an app in itself. It is written in JavaScript and provides the 'real world' geographic context for spatial data and information visualization, using a rich set of shapes and graphic primitives. WebWorldWind also provides platform independence, while accommodating any number of data types.

Web WorldWind runs on any platform via a browser, i.e., Internet Explorer, Firefox, Chrome and Safari. Features include, 3D virtual globe, 2D map with multiple projection choices (Mercator, Polar, UPS, Equirectangular), imagery and elevation import, extensible, data retrieval (via REST, WMS, WCS, WFS, Bing, User-Defined), decluttering, measurement, accurate line-of-sight, subsurface visualization, and more.