



THE WOODS HOLE RESEARCH CENTER

149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax 508.540-9700 · www.wbrc.org

Woods Hole Research Center Using Latest Technology in New Carbon and Biomass Dataset Initiative

September 16, 2005

Scientists at the Woods Hole Research Center are producing a high-resolution "National Biomass and Carbon Dataset" for the year 2000 (NBCD2000), the first ever inventory of its kind. Through a combination of NASA satellite datasets, topographic survey data, land use/land cover data, and extensive forest inventory data collected by the U.S. Forest Service, this dataset will serve as an invaluable resource for carbon stock assessment and flux modeling in the United States. To facilitate the successful development of this project, **PCI Geomatics** recently donated software to the Woods Hole Research Center. The products -- Geomatica's Orthoengine, and advanced Image Analysis software -- will be instrumental in supporting the process flow in the project.

PCI software will be used for the integration and visualization of raster data sets in various formats through PCI's Generic Database (GDB) technology in Geomatica Focus. Orthoengine will streamline the processes of data mosaicking and reprojection. The advanced PCI image analysis and modeling tools are at the core of building the raster data processing models to generate the final data sets. Given the national scope of the project, PCI technology is well suited to handle batch processing requirements through the EASI programming environment.

"PCI Geomatics is pleased to donate Geomatica to the NBCD2000 Project as it proves to be the foundation for future studies. Carbon stock data sets are vital to determining the impact on climate change from both natural and man-made occurring events," says Cary Lichtman, an account executive at PCI Geomatics. "Geomatica's ability to handle large quantities of high resolution, multi-formatted data efficiently and accurately is ideal for this ground-breaking research."

The NBCD2000 Project combines vegetation canopy height derived from digital elevation data collected during the 2000 Shuttle Radar Topography Mission, which mapped 80 percent of the Earth's land mass with a radar instrument, producing the most complete digital surface map of Earth. In combination with the National Land Cover Database (NLCD) and National Elevation Datasets (NED), a high-resolution database of circa-2000 vegetation canopy height, aboveground biomass, and carbon stocks for the continental United States is generated, providing an unprecedented baseline against which to compare data products from the next generation of advanced Earth observing remote sensing platforms. Dr. Josef Kellndorfer, an associate scientist with the Woods Hole Research Center, is leading the project. He says, "The generation of this first-of-its-kind, high-resolution data set for the United States for the year 2000 will enable unprecedented quantification of the national biomass and carbon stocks, and will present a baseline for many more related studies ranging from carbon-climate interaction, forest fire mitigation, wildlife habitat characterization, to national energy policies with respect to bio-fuel and renewable resources."

About PCI Geomatics

PCI Geomatics is a world leading developer of image-centric geomatics software solutions. PCI Geomatics' flagship software, Geomatica, meets the growing demands of the remote sensing, GIS, cartography, and photogrammetry worlds. PCI Geomatics is celebrating the beginning of its third decade as an industry-leading geomatics solution provider, and has long been recognized for offering high-value geomatics software solutions, advanced algorithms, excellent customer assistance, and product support for the widest range of spatial data formats in the industry.