

Title: The 3D Elevation Program and New Elevation Products and Services from the U.S. Geological Survey

Abstract:

The U.S. Geological Survey's (USGS') National Geospatial Program is developing the 3D Elevation Program (3DEP) initiative to respond to growing needs for high-quality topographic data and for a wide range of other three-dimensional representations of the Nation's natural and constructed features. The primary goal of 3DEP is to systematically collect 3D elevation data in the form of light detection and ranging (lidar) data over the conterminous United States, Hawaii, and the U.S. territories, with data acquired over an 8-year period. Interferometric synthetic aperture radar (ifsar) data will be acquired for Alaska, where cloud cover and remote locations preclude the use of lidar in much of the State. The 3DEP initiative is based on the results of the National Enhanced Elevation Assessment (NEEA, see <http://nationalmap.gov/3DEP/nea.html>) that documented more than 600 business uses across 34 Federal agencies, all 50 States, selected local government and Tribal offices, and private and not-for profit organizations. A fully funded and implemented 3DEP would provide more than \$690 million annually in new benefits to the government, private sector and citizens. In January, 2015 the USGS will release several new 3DEP-related products and services, including source resolution bare earth elevation models; digital surface models; point cloud data; and point query and other visualization services.

Key Words: 3DEP, lidar, ifsar, elevation models, point cloud