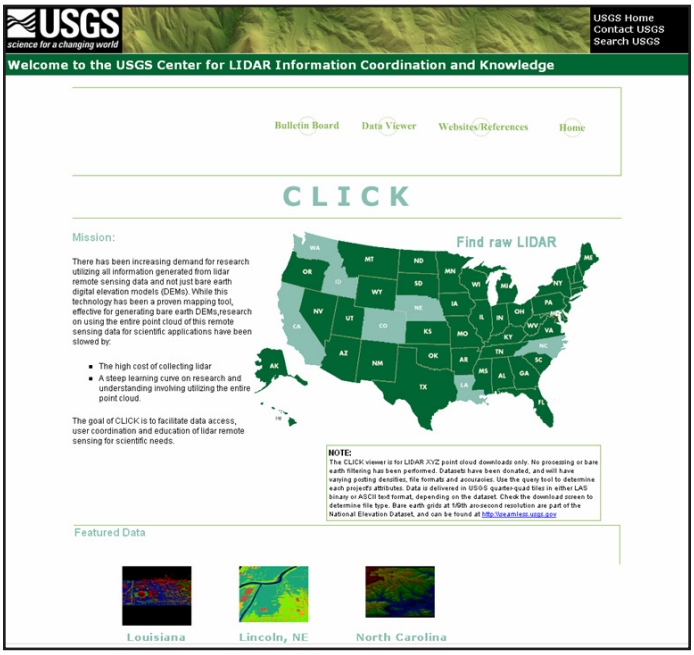
Land Remote Sensing Program

CLICK: The USGS Center for LIDAR Information Coordination & Knowledge

While this technology has proven its use as a mapping tool—effective for generating bare earth DEMs at high resolutions (1–3 m) and with high vertical accuracies (15–18 cm)—obstacles remain for its application as a remote sensing tool:

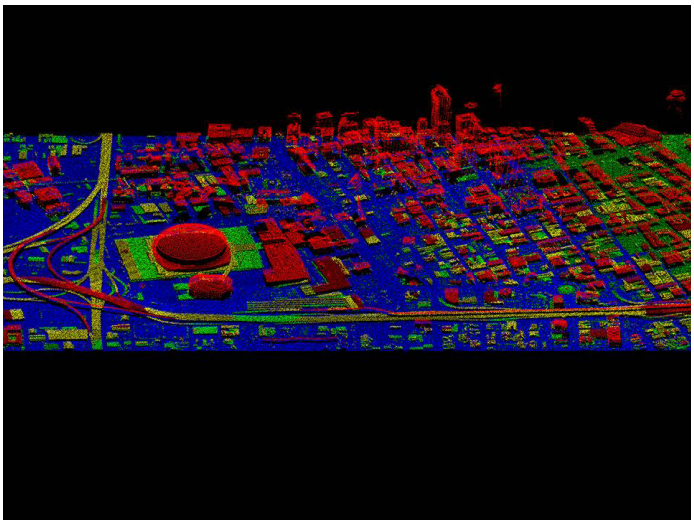
- The high cost of collecting LIDAR
- The steep learning curve on research and application of using the entire point cloud
- The challenges of discovering whether data exist for regions of interest



The Center for LIDAR Information Coordination and Knowledge

The Need for LIDAR Coordination

LIDAR collections are usually project specific. Their corresponding missions are flown over pre-defined areas, with certain specifications (such as point density, accuracy, derived products, etc.) chosen to achieve project objectives. In a typical project, data end up in a forgotten location. The limiting factor for using LIDAR for scientific applications is expense—usually research projects cannot acquire the funds necessary to get LIDAR collected for their specific research applications.



Raw Point Cloud of New Orleans, LA

However, LIDAR data collected for a user's region of interest may have already been collected, which they may not know about because those data are not accessible or known to them.

CLICK Mission

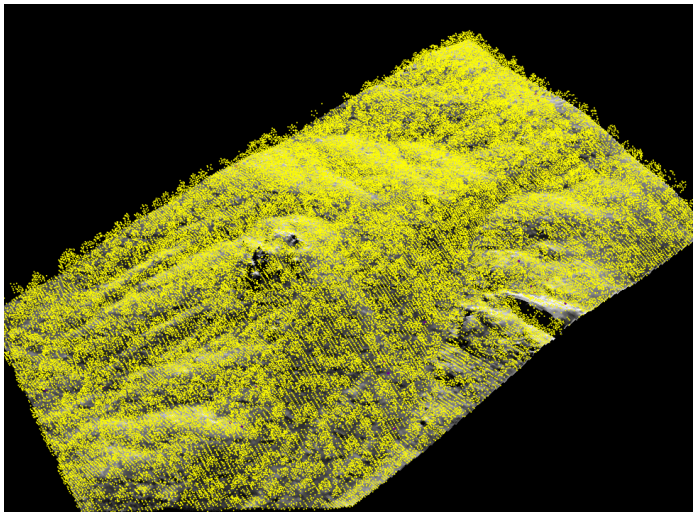
The Center for LIDAR Information Coordination and Knowledge (CLICK) was designed to assist users in accessing LIDAR data and provide information to help facilitate LIDAR innovation in the scientific community. By having access to data and information that was traditionally cost prohibitive, scientists have the opportunity to incorporate LIDAR data into their applications, thus adding the vertical component to their research. CLICK's mission is to facilitate data access, user coordination, and educate the science community about LIDAR's value to their projects.

The CLICK web portal (http://lidar.cr.usgs.gov) is a way for all LIDAR users—inside and outside the USGS—to visit, ask and answer questions, and coordinate with others who are looking for or have data in their study area. The main mission of this virtual center is to invite people in the LIDAR community to come to exchange ideas, information, and even data for scientific (e.g., non-mapping) needs. The importance of this idea came from LIDAR users at the 2002 USGS LIDAR workshop in St. Petersburg, Florida.

CLICK Structure

The CLICK virtual center web portal is broken into three parts:

1) Information - [Data Viewer]: The data viewer provides access to download available raw point cloud data. We employ a tiled delivery scheme for speed and ease of use purposes. Data are currently distributed in ASCII X,Y,Z and LAS binary file formats, depending on the project. In the future, more information, such as point classifications, multiple return information, and intensity may be included. This information is only available if the project makes it available in their data donation.



Bare Earth DEM and Discarded Points in Yellow

2) Coordination - [Bulletin Board]: This is the heart of the virtual center—where users can come from all disciplines and regions of the country to ask and answer LIDAR-related questions. We do ask users to register their e-mail address on the bulletin board in order to ask and answer questions.

3) Knowledge - [Websites/References]: The website/ references page offers a dynamic list of LIDAR-related web pages, along with a list of peer-reviewed journal articles. People may submit their web page or peer-reviewed journal article, if they don't see it on the list.

Feel free to stop by our virtual center any time. We look forward to hearing from you.

For More Information:

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