



UTAHVIEW REMOTE SENSING ACTIVITIES 2015 - 2016



K-12 CURRICULUM DEVELOPMENT AND EDUCATIONAL OUTREACH

During the past year, UtahView has continued to promote educational training and host educational presentations and workshops. UtahView has developed a three tier approach to understanding how geospatial sciences and technologies support and enhance the science and practice of natural resources management. This three tier approach includes (1) an introduction to remote sensing and geographic information systems, (2) the use of global positioning systems, and (3) the use of unmanned aerial systems for collecting data and assessing the condition of natural resources in Utah.

On November 3, 2015, UtahView presented to roughly 60 local ranchers, land managers, agency personnel, and university extension agents at the Beaver River Watershed Tour and Pesticide Training near Beaver, Utah. The training included a presentation on the use of remotely sensed imagery in rangeland management and monitoring and an explanation and demonstration of unmanned aerial systems.

On May 10, 2016, the Utah Geographic Information Council (UGIC), a UtahView consortium member, sponsored the first-ever GIS Day at Escalante High School in Escalante, Utah. The Escalante High School GIS Day was held during the week of the 25th Annual UGIC Conference that was being held near Bryce Canyon National Park. UtahView coordinated with Ms. Rebecca Harris, science teacher and geography advocate at Escalante High School, to develop a series of courses that introduced students to remote sensing, geographic information systems, global positioning systems, unmanned aerial systems, and online mapping using ArcGIS Online and Story Maps. The half day event included more than 50 students from grades 7 through 12.

On June 29, 2016, UtahView presented to a group of senior citizens for the Summer Citizen Program in Logan, Utah. The event included a presentation on the use of remote sensing via unmanned aerial systems in natural resource management and science. The audience included approximately 50 individuals from a range of backgrounds, including retired military personnel, teachers, engineers, and natural resource professionals.



Beaver River Watershed Tour and Pesticide Training



GIS Day at Escalante High School



Presentation for Logan Summer Citizens

REMOTELY SENSED IMAGERY ASSESSMENT AND ACCESS PORTAL



Point cloud image from Hardware Ranch



Imagery from Millville Research Facility

UtahView supported the development of a 31-year record of Landsat composites for the state of Utah. This comprehensive dataset, which supports annual resource monitoring and management, has been and will continue to be a vital component of generating land cover data, land cover change data, and landscape disturbance data for land managers in Utah. The dataset has previously been distributed on an as-needed basis; however, in order to provide greater accessibility, UtahView has initiated the development of a stable web-driven data delivery system using Amazon Web Services, an affordable suite of cloud-computing services that allows the rapid development of server platforms. UtahView has also supported the acquisition of imagery acquired via unmanned aerial systems. This imagery will be hosted and served online using an open-source software suite that enables 3D point clouds to be dynamically presented through a web server. PoTree, a candidate software suite, allows for interactive point-cloud exploration and provides for basic measurements. With a software suite, such as PoTree, UtahView will be able to develop interactive experiences and data delivery systems for land managers, scientists, researchers, and the general public.

UtahView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state.



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BENEFITS TO UTAH

UtahView has capitalized on opportunities to promote and support the understanding and use of geospatial data and products throughout the state of Utah. During the past year, educational, outreach, and research activities have included:

- Events for primary, secondary, and higher education students:
 - On July 10, 2015, students from the Dolores Doré Eccles Center for Early Childcare and Education came to the Remote Sensing/GIS Laboratory for a presentation and interactive geospatial activity.
 - On September 3, 2015, UtahView participated in the Utah State University Quinney College of Natural Resources Opening Social and presented research and conducted demonstrations for undergraduate and graduate students.
 - On March 30-31, 2016, UtahView participated in the Stokes Nature Center Spring Break Mapmakers Camp by creating a series of educational modules and geography-related activities.
 - On May 10, 2016, UtahView and UGIC sponsored the first-ever GIS Day at Escalante High School in Escalante, Utah.
- State-wide outreach events for local ranchers, land managers, and community members explaining the benefits of remote sensing and geospatial technology:
 - On November 3, 2015, UtahView presented at the Beaver River Watershed Tour and Pesticide Training.
 - On June 29, 2016, UtahView presented to a vibrant group of senior citizens for the Logan Summer Citizens Program.

Throughout these events, UtahView has assisted educators and teachers by providing instructions on how to best incorporate geospatial tools in the classroom. Additionally, UtahView has assessed the needs of state and local land managers and determined which data products will provide value to management practices.



Presentation for students from the Dolores Doré Eccles Center for Early Childcare and Education



Utah State University Quinney College of Natural Resources Opening Social



2016 UGIC Conference attendees near Bryce Canyon National Park

UTAHVIEW CONSORTIUM MEMBERSHIP

Dr. R. Douglas Ramsey, Professor in the Quinney College of Natural Resources and Director of the Remote Sensing/GIS Laboratory at Utah State University, Dr. Phoebe McNeally, Research Associate Professor and Director of the DIGIT Laboratory at the University of Utah, Dr. Sowmya Selvarajan, Assistant Professor of Geomatics and ASPRS Intermountain Region President, Ms. Ellie Leydsman McGinty, Researcher II in the Remote Sensing/GIS Laboratory and UtahView State Coordinator, and the Utah Geographic Information Council (UGIC) represent the UtahView consortium membership. The goals of UtahView are:

- To foster a growing dynamic consortium of state-wide partners that include educational institutions, state and local governments, and the general public.
- To establish remote sensing and geospatial curricula that are available for use by K-12 schools throughout Utah.
- To facilitate the distribution, use, and understanding of geospatial data.
- To provide opportunities for undergraduate and graduate students to conduct research using geospatial tools.
- To support the distribution and access of free and valuable remotely sensed data and information.



Federal consortium members identified above do not receive funding from AmericaView.

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