



UTAHVIEW REMOTE SENSING ACTIVITIES 2014 - 2015



UTAHVIEW GEOSPATIAL CURRICULA DEVELOPMENT

UtahView is dedicated to improving the use of geospatial curricula in K-12 schools throughout Utah. UtahView, in cooperation with the Utah State University Remote Sensing/GIS Laboratory and the Edith Bowen Laboratory School, continued to develop introductory geospatial curriculum that supports newly adopted Common Core teaching standards. Building on work completed in previous years, UtahView was able to complete basic grade 3 and grade 4 teaching modules.

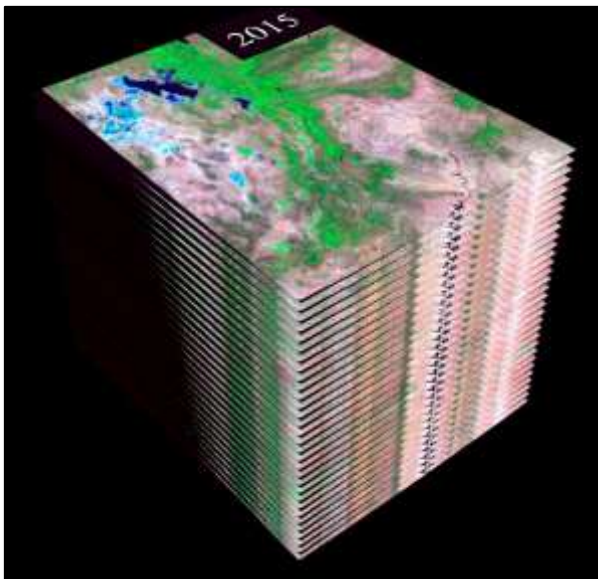
Educators throughout the state of Utah have an abundance of geospatial teaching tools and resources available for use in the classroom. One problem, however, is the lack of overall teacher or instructor knowledge regarding the best practices and use of the available tools and resources. Partnering with the Utah Geographic Information Council (UGIC), UtahView helped set up and hold a *Teach the Teacher* Educator Workshop at the 2015 UGIC Annual Meeting held in Snowbird, Utah. More than 15 educators from around the state attended, listening to lectures from Utah State University, Environmental Systems Research Institute (Esri), and UGIC staff. Teachers also had the opportunity to participate in hands-on learning modules that included the use of Google Earth and Esri StoryMaps, and ArcGIS Online. For additional information regarding the upcoming 2016 UGIC Educators Workshop, see <http://www.ugic.org>.



Educators participate in the 2015 UGIC Educator's Workshop at Snowbird, Utah. Photos: C. McGinty.



LANDSAT 8, LANDSAT 7, AND LANDSAT 5, VALUE ADDED DATA DEVELOPMENT : FIRE MAPPING



Processed USGS Landsat imagery stack. Part of the fire mapping process. Image: Dr. R. Douglas Ramsey, Utah State University.

A key goal of the UtahView consortium is the development of satellite imagery-based products for free download and use by any interested individual. The Remote Sensing/GIS Laboratory at Utah State University, under the direction of Dr. R. Douglas Ramsey, has developed a methodology to detect and create multiple-year image composites to assess wildfire distribution and frequency using the United States Geological Survey (USGS) historic Landsat record. The goal is to support local ranchers and land managers by developing a wildfire history for more than 30 years and identifying size and other fire occurrence information that is critical to the protection and enhancement of the arid and semi-arid ecosystems of the Great Basin and Colorado Plateau.

Using more than 2,240 freely available USGS Landsat 8, Landsat 7, and Landsat 5 images spanning the last 31 years (1984 – 2015), the Remote Sensing/GIS Laboratory evaluated yearly multi-temporal imagery and generated seamless mosaics for the state of Utah. Using widely accepted remote sensing techniques including Normalized Difference Vegetation Index (NDVI) and the Normalized Difference Fire Index (NDFI) a series of data products were developed and relevant fire information was extracted. This information is being made freely available for download through the UtahView website, www.utahview.usu.edu.

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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www.AmericaView.org

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BENEFITS TO UTAH

UtahView, through the efforts of consortium members, has capitalized on opportunities to promote and support the understanding and use of geospatial data and products throughout the state of Utah. Some of these educational, outreach, and research activities include:

- Hosting events for primary education students to learn about local geography through mapping events,
- Developing unique and beneficial undergraduate research opportunities,
- Engaging undergraduate students in volunteer mapping events,
- Conducting state-wide outreach to local ranchers, land managers, and community members explaining the benefits of remote sensing and geospatial data products and how that information is useful,
- Creating value-added data products for land managers throughout the state of Utah, and
- Instructing teachers on best practices and uses of geospatial education tools for the classroom.



UtahView Director and Professor at Utah State University, Dr. R. Doug Ramsey, discusses the importance of geospatial data with ranchers and land managers in southern Utah. Spring, 2015.



UTAHVIEW CONSORTIUM MEMBERSHIP & GOALS

Dr. R. Douglas Ramsey, Professor and Director of the Utah State University Remote Sensing/GIS Laboratory; Dr. Phoebe McNeally, Research Associate Professor and Director of the University of Utah DIGIT Laboratory; Dr. Sowmya Selvarajan, Assistant Professor of Geomatics and ASPRS Intermountain Region President; and Mr. Christopher McGinty, UtahView State Coordinator and Education Committee chair for the Utah Geographic Information Council, represent the primary UtahView consortium membership. The missions of all four organizations are unique and bring a wealth of scientific, outreach, and technical experience to urban, rural, and wildland regions of the diverse state of Utah.

UtahView Goals:

1. To foster a growing and dynamic consortium of state-wide partners that include educational institutions, state and local governments, and the general public in order to support and promote the UtahView mission and goals.
2. To establish remote sensing and geospatial curricula that are available for use by K-12 schools throughout Utah.
3. To facilitate the distribution, use, and understanding of geospatial data in Utah.
4. To provide opportunities for undergraduate students to conduct research using geospatial tools.
5. To continue to enable free, useful, value-added access to remotely sensed data and information.



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