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DENVER REGIONAL COUNCIL OF GOVERNMENTS

DENVER REGIONAL DATA CONSORTIUM

The data consortium consists of Denver Regional Council of Governments members and regional partners with an interest in geospatial data and collaboration. The data consortium newsletter improves communication among local geographic information systems professionals and features updates from all levels of government as they relate to data and geospatial initiatives in our region. This newsletter is published quarterly.

CDOT GIS Section strategic plan

Article submitted by Nell Conti, geographic information systems section manager at CDOT. Nell can be reached at nell.conti@state.co.us.

The Colorado Department of Transportation's Geographic Information Systems Section is located within the Division of Transportation Development Information Management Branch and comprises three major units: applications and data services, data management, and GIS support. The section uses a diverse array of geospatial technology to collect and manage data, develop and publish geospatial datasets and applications and complete business analytics that make it possible to model CDOT roadway assets and other supporting information for operations, planning, analysis, and performance monitoring in a location-intelligent environment.

Due to paradigm shifts in GIS technology and exponential growth in GIS services over the past decade, the section embarked on a strategic planning process in July 2020. The purpose of the effort is to define the strategic direction for the GIS Section by establishing goals and objectives along a five-year time horizon. The plan will also serve as a mechanism for communicating section priorities to the broader CDOT GIS community, CDOT leadership and external partners.

At the end of the planning process the planning team identified seven high-level goals and developed a mission and vision. The main themes for each of these goals are: data and online system governance, system architecture and database design, innovation and analytic advancement, communication, and technical support and training. In order to

achieve the high-level goals, detailed objectives were developed under each goal. The objectives form the framework for individual GIS unit work planning and staff performance goals over the next five years. Although the goals will remain static, the objectives will be reviewed, prioritized and refined annually.

The plan also highlighted the need to investigate how GIS is organized both within the section and across the organization, to explore developing a CDOTwide corporate geospatial strategy (example from the City of Toronto) and to develop collaborative pathways for integration with existing CDOT data governance efforts.

For more information or to receive a copy of the plan please contact Nell Conti, CDOT GIS Section Manager at nell.conti@state.co.us.

Mission: In collaboration with our customers we collect, manage, integrate and disseminate geospatial data as the foundation for all location-based operations and decision-making. We transform geospatial data into information through innovative visualization and analytics to help CDOT provide the best multimodal transportation system for Colorado.

Vision: We strive to integrate geospatial intelligence into all aspects of the organization to position CDOT as an innovative leader in location-aware transportation management.

Introduction to the State of Colorado elevation and imagery data-sharing portal

Article submitted by Tony Filipiak, manager of GIS coordination and development at the Governor's Office of Information Technology. Tony can be reached at anthony.filipiak@state.co.us.

The GIS team at the State of Colorado Governor's Office of Information Technology is preparing to launch a new Elevation and Imagery Data Sharing Portal. The purpose of this portal is to streamline public access to a variety of geospatial data products that are made available by the State of Colorado. At launch, most of the data will consist of Digital Elevation Model and lidar data. Lidar is detailed elevation and ground cover data used in a variety of public and private industries. Going forward, more imagery and other geospatial data can be added to the catalog of available information.

Users will be able to search for data by county and year acquired and select data by seeing footprints on a map. Users who provide a valid email address will be able to download a compressed folder of the selected data. The new data portal will replace the current system that required interested parties to email the Office of Information Technology GIS team with a description of the needed area and type of data. Turnaround on the previous process could sometimes take several weeks and required significant employee effort. The new data portal data request process will be completely automated

to speed up the process, allow employees to attend to other priorities and make geospatial data more easily available to the public. Accessible, open data is a proven contributor to economic activity and community decision-making.

When available, the geospatial portal will be accessible at https://gis.colorado.gov/lidar. The team is anticipates the new data tool will be ready for use in March.

Feel free to contact the team at oit_gis@state.co.us with any questions.
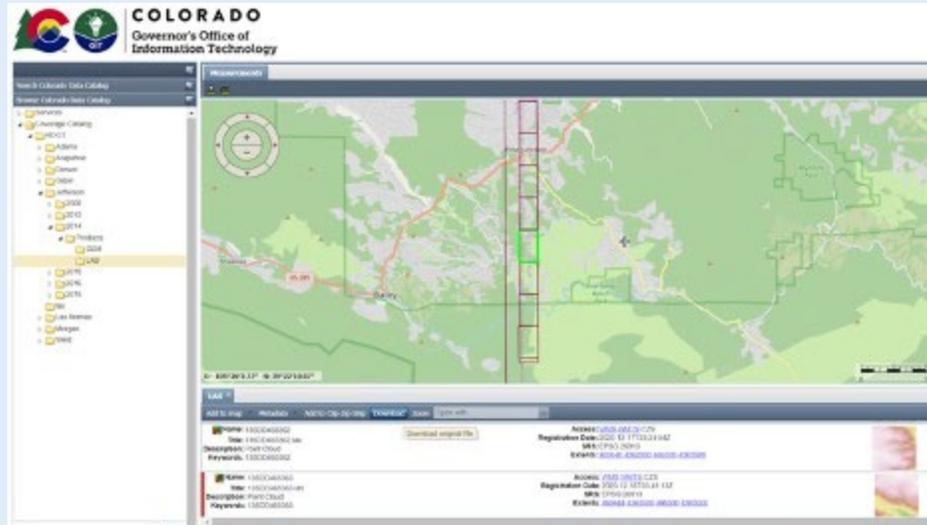
Download imagery tiles from the Regional Data Catalog

Article submitted by Ashley Summers, GISP, PMP, information systems manager at DRCOG. Ashley can be reached at 303-480-6746 or asummers@drcog.org.

DRCOG has been facilitating an imagery project every two years since 2002, for which data becomes public domain as soon as it is superseded by newer imagery. Although historical imagery is available to the public at no charge, it has not been easily accessible. By making tiles downloadable for its Regional Data Catalog, DRCOG is improving the accessibility of historical data. Currently, 2012, 2014 and 2016 tiles are available for download. DRCOG staff expects to make older imagery (2002-2010) and 2018 imagery accessible by the end of the year.

To download imagery, navigate to the tile indices for 2012, 2014 or 2016 Denver Regional Aerial Photography Program imagery in the Regional Data Catalog. Zoom to the tile you want to download and select it to open the pop-up. Use the links in the pop-up to download the files.
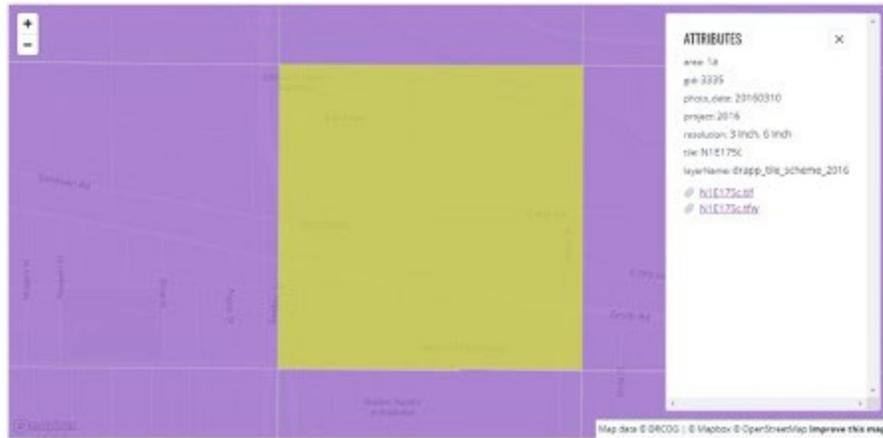
DRCOG's internal Analysis Challenge

Article submitted by Ashley Summers, GISP, PMP, information systems manager at DRCOG. Ashley can be reached at 303-480-6746 or asummers@drcog.org.

At DRCOG, GIS professionals develop dozens of regional datasets every year that support critical processes such as forecasting and performance measurement. These datasets are essential to understanding what the future of transportation and urban development could look like in the Denver region as well as what progress we are making toward regionally shared goals. Additionally, DRCOG procures foundational datasets like imagery, planimetric data, and lidar on behalf of local governments in the region.

We have access to an immense amount of valuable data at DRCOG, but it occurs to us that we are not realizing its full potential. We spend so much time acquiring and developing data, that we have little time for analysis beyond the relatively limited scope of our traditional models and measurements.

To unlock the insights that potentially lay buried in the datasets we already have, the DRCOG GIS team has initiated an internal Analysis Challenge. The goal is to carve out time for our data experts to investigate our datasets in new and creative ways in an effort to exercise their analytical skills and discover hidden value of our existing data assets. After our second attempt, we have learned some lessons to share with any of our peers who are interested in trying something similar.

1. Carve out time for your staff to participate in the challenge by blocking off an entire day or more during which the team is protected from distractions like meetings and other assignments. It may be necessary to let others at your organization know that the team will be unavailable during the challenge.
2. Ask all participants to work simultaneously on the challenge. They may be working independently on different analyses but just having the entire team focused on creativity at the same time can be supportive and motivating.

3. Encourage the use of in-house datasets. The goal is to find new value in your existing data assets.
4. Encourage self-guided research. Often data professionals are busy pursuing answers to other peoples' questions. Allow this opportunity for them to pursue analysis that sparks their own curiosity.
5. Do a small pilot of the analysis first. It is a good use of time to test new methodologies on small areas to determine that the process is promising before applying it to a larger area that takes more time and computational resources.
6. Produce something tangible for show and tell. If possible, try to produce a visual for the team to review at the end of the challenge. These items may be the beginning of a new product or service that your team can offer!

In the future, we are considering inviting staff from other departments to join the challenge, setting up teams instead of just individual participants and offering prizes. Additionally, we plan to offer additional structure so that the Analysis Challenge is not so free-form. For example, a final product should include:

- A problem statement or question.
- A small pilot area for testing the methodology.
- Brief documentation of the methodology.
- A description of the results.
- A visual depiction of the results – maps, graphs or charts.
- Suggestions for next steps.

We are still learning how to best implement this idea at DRCOG but are hopeful that we are headed in the right direction. If you have questions or suggestions for us, please reach out!

DRCOG's new data privacy policy

Article submitted by Ashley Summers, information systems manager at DRCOG. Ashley can be reached at 303-480-6746 or asummers@drcog.org.

To make informed decisions, it is necessary for DRCOG to collect, store, analyze, visualize and report data — some of which may be of a sensitive nature. DRCOG balances the need for information with the needs of the public, vendors and partners to maintain the privacy of their personal or proprietary data.

For over a year, DRCOG staff have been developing a data privacy policy to guide the handling of protected data at DRCOG. In this recently adopted document, DRCOG outlines guiding principles, roles and responsibilities, and safeguards that it employs. While this document sets an intention, it is not a detailed procedural document. DRCOG staff are currently working on complementary documents that will guide internal implementation efforts.

Read the policy.

DRCOG data acquisition updates

Article submitted by Ashley Summers, GISP, PMP, information systems manager at DRCOG. Ashley can be reached at 303-480-6746 or asummers@drcog.org.

Denver Regional Aerial Photography Project 2020

DRCOG collected 6,000 square miles of high-resolution imagery in the spring and summer of 2020 on behalf of 48 partners. All flights are now complete, the imagery has been processed, and we are in the last stages of data acceptance testing (a partner-led effort to confirm quality). Delivery begins soon and goes through mid-March.

If you are not a project partner and would like to be, reach out to me at asummers@drcog.org. Read more about our imagery projects on our website.

Regional Lidar Project 2020

DRCOG received a grant from the U.S. Geological Survey in December 2019 to collect quality level 2 lidar in 5,000 square miles of the region and derive contours in most of the metro area. Flights to the collect the data are complete and quality control is expected to start in March. Many thanks to our 32 local and state partners that committed funding to the project!

For more information, visit our website.

Do you have an interesting use case for lidar data? Tell us about it by emailing me at asummers@drcog.org.

Planimetric Data Project 2020

DRCOG will begin the next planimetric data project in February.

We will be collecting building roofprints, edge of pavement, parking, sidewalks and ramps, trails, driveways, and impervious surface throughout the metro area. Check out the map.

If you are not a project partner and would like to be, reach out to me at asummers@drcog.org. Read more about our planimetric data projects on our website and download datasets from past projects.

Denver Regional Aerial Photography Project 2022

DRCOG recently released a RFP for imagery and related products/services.

To respond, vendors must register on the BidNet Direct site at http://www.bidnetdirect.com. It can take 24 hours to receive a registration password which grants access to view the RFP. If you have questions, please submit them through the website or email bids@drcog.org.

Important dates to note:

- January 20th at 10:00am — DRCOG will hold a virtual pre-bid meeting to provide more detail on this RFP and to take your questions live. The meeting will be recorded and posted for future reference.
  - https://global.gotomeeting.com/join/205701173
  - Call-in: +1 (872) 240-3412
  - Access Code: 205-701-173
- January 29th at 4:00pm — last call for questions emailed to bids@drcog.org.
- February 19th at 12:00pm — submittals are due

Things you might have missed

- View all OpenStreetMap Colorado Meetups.
- View all GIS Colorado events.
- Check out the Go Code Business Solutions Challenge

Engage with us

- This quarterly newsletter reaches more than 300 people, has a higher-than-average open rate, and is written by professionals like you. It is the perfect place to show off your projects, highlight your great work and contribute ideas to the GIS community in the Denver region. Newsletter release dates are the 15th of January, April, July, and October (or the next business day afterward). Please contact Ashley Summers at 303-480-6746 or asummers@drcog.org to contribute.
- Did you miss a newsletter or a meeting? Visit our website for past newsletter issues and Data Consortium meeting materials.

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