Parks Canada researchers located across the country need to view what imagery is available across the department. Darrel Zell, who is located on Pender Island, BC (in the Gulf Islands) uses Geomatica Discover to index multi-source imagery to create an enterprise wide catalog of Parks Canada imagery.

Five workstations, 20TB of storage, 40 years of data, and 6,000 geospatial images; it all adds up to one giant haystack, and finding the needles was proving to be very challenging.

Geomatics experts across Parks Canada support efforts in remote sensing analysis by developing information products such as burn severity maps, forest canopy analysis, moisture studies and more. Imagery has been collected and stored in a variety of locations and on many different media over the years. Remote Sensing specialists in this group, including Darrel Zell, play a key role in managing and distributing imagery across the agency.

Efficient Searching
Multi-source imagery is collected over large areas within Canada’s parklands on a routine basis to support many different research projects. Parks Canada’s image repository consists of primarily Landsat imagery, but his group is also working with RADARSAT imagery and has recently started a project using UltraCam aerial images. The addition of new imagery from multiple sensors has introduced challenges in cataloging, indexing, and sharing imagery across the organization - searching for suitable imagery is a time consuming process, which is taking away from valuable time conducting research.

“Given the volume and variety of new and archive imagery, we face real challenges when it comes to locating existing imagery in our repository,” said Zell. “Discover allows us to do this by acting like a virtual librarian for the whole group.”

What Zell is referring to is Geomatica Discover, a new standalone software tool that crawls local, system, external or cloud based drives to automatically create geospatial data catalogs. Discover uses a browser-based interface that allows for map based or advanced text based querying, so users can quickly and efficiently organize data holdings and speed up production work.
Prior to working with Geomatica Discover, the Banff National Park Group had been using a Path/Row folder organizational scheme for Landsat imagery. This system works well for Landsat, since the WRS-2 tiling scheme does not change and the number of bands collected is always the same for each acquisition. By cross referencing with the WRS-2 schema, identifying path/rows for required images is relatively straightforward. The same cannot be said for more complex systems such as RADARSAT, which has up to 250 possible configurations (beam, beam mode, polarization, processing level, etc).

Benefits of Geomatica Discover
One benefit that jumped out immediately to Parks Canada was the ability to see the footprints of the group’s data holdings. Prior to this, there was no way to see this information quickly and easily. Now, the group can identify and locate data based on geographic location, sensor type, acquisition date, resolution, or any combination of the associated metadata.

Further simplifying the process is the ability to organize data in sets based on its metadata. Sets can be organized based on project needs, or saved and exported as ZIP files for delivery to other project collaborator. Imagery that meets specific criteria such as seasonality, or stereo overlap can be identified through the use of the software’s advanced boolean search capabilities.

“Part of our mandate here at Parks Canada is to preserve this imagery long term to monitor the health of Canada’s valuable parklands over time,” said Zell. “Add to this the challenge of acquiring and organizing new data, and I can see Discover serving us well for years to come.”

Geomatica Discover is a data discovery tool that crawls your local or system drives to automatically create footprints for geospatial raster and vector data. The software uses a simple, browser-based GUI interface that streamlines the way you work with data. You can save sessions, searches, and customize the layout to suit your workflows.

Visit www.pcigeomatics.com/discover to learn more about how Geomatica Discover will dramatically improve the way you organize your data.