



Are you frustrated using multiple or incompatible tools for all your remote sensing and image processing needs?

You have the data, but you don't have the tools?

No longer do you need to use multiple or incompatible tools. Geomatica offers a single, integrated software system that will meet all your remote sensing and image processing needs—turning your imagery into answers.

Geomatica incorporates the conventional divisions in traditional remote sensing, spatial analysis, and photogrammetry, cartography, web and development tools—all in a single, integrated environment. What does this mean for you? Fewer errors, less wasted time, and greater productivity.

Geomatica 10.2 is the latest release of this integrated environment and includes the following:

New and Upgraded Sensor Support

OrthoEngine now includes support for GeoEye-1 and COSMO-SkyMed. These are available through the Geomatica Satellite Ortho Suite and Radar Ortho Suite respectively.

RapidEye is a constellation of five sun-synchronous Earth observation satellites which is unmatched in their ability to provide large area, multi-spectral images with frequent revisit times in high resolution, collecting multi-spectral data at a resolution of 5 meters.

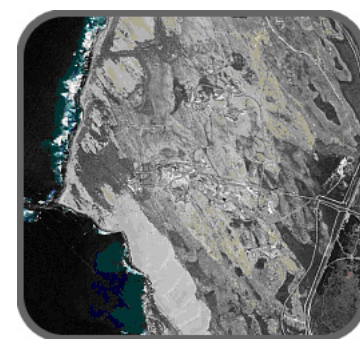
The COSMO-SkyMed satellite consists of a constellation of four satellite equipped with radar sensors that can operate under any weather condition, visibility and with very short revisiting time.

The GeoEye-1 satellite is now fully supported in Geomatica 10.2. This sensor boasts the highest resolution of any commercial imaging system. GeoEye-1 has the ability to collect images with a ground resolution of sixteen inches in its panchromatic mode; in its multispectral mode, GeoEye-1 images at sixty four inches. GeoEye-1 is a polar-orbiting satellite and can revisit any point on the Earth's surface ever three days or sooner.

In 10.2 we offer improved support for RADARSAT-2. This dual polarized satellite outputs imagery ranging in resolutions from three to one hundred meters, and can image areas north of 70 degrees daily. A number of enhancements have been made to correctly and efficiently read RADARSAT-2 data into OrthoEngine. In addition to this, improved support for TerraSAR-X has been implemented. This includes additional support for the high resolution X-band SAR imagery provided by TerraSAR-X. Support has been extended to include TerraSAR-X level 1b SSC data, as well as level 1b Geocoded Products (GEC and EEC).



COSMO-SkyMed image of the Northwest Passage, Baffin Islands.



GeoEye-1 image of its launch site, Vandenberg Air Force Base.

Improved Vector Handling

Geomatica's new vector functions include VECAPPEND, a function that appends one or more vector layers from one database file to a vector layer in another database file. In addition to VECAPPEND, Geomatica 10.2 includes VECAREA, a function that adds an area and perimeter field to one or more vector segments.

Automatic GCP Extraction Enhancements

Improvements to the GCP extraction tools are included with 10.2. Now users can extract GCPs automatically by using the FFTMPOLY and FFTMVEC algorithms.

FFTMPOLY allows users to automatically extract GCPs by matching an optical or SAR image with rasterized polygons. This algorithm automatically collects GCPs by matching patches in the image with corresponding polygons, usually lakes. The matching is performed in the spatial frequency domain using the Fast Fourier Transform.

FFTMVEC allows users to automatically extract GCPs by matching an optical or SAR image with rasterized lines. This algorithm automatically collects GCPs by matching patches in the image with lines, usually roads. The matching in this algorithm, as in FFTMPOLY, uses the Fast Fourier Transform spatial frequency domain. As well, the input image can be in the raw geometry, but it must contain nominal georeferencing.

'Get Data' Function

Do you need new data for your study areas and are not sure where to look?

The 'Get Data' function is available through the File menu in Geomatica Focus. This tool allows users to easily access and download data from a number of data providers. When the Get Data tool is selected from the File menu, a webpage appears, listing a number of different data providers.

Polarimetric SAR

Beginning in Geomatica V10.2.1, all functions from PCI's SPW installation are now integrated into Geomatica. This includes 27 programs, as shown below:

- PSBOXCAR
- PSCC
- PSCLOPOT
- PSCONV
- PSCREATE
- PSDTL
- PSEABA
- PSFREDUR
- PSINANG
- PSINGEST
- PSINQUIRE
- PSINTEN
- PSINTRAT
- PSLTD
- PSPEDHT
- PSPHDIFF
- PSPOLDIS
- PSPOLFIL
- PSPOLSYN
- PSPOLSYNC
- PSPOLSYNR
- PSSSCM
- PSSWIS
- PSTOTPOW
- PSUSWIS
- PSVANZYL
- PSWHITE

Buy Data

DIGITALGLOBE

iunctus
Geomatics Corp.

RapidEye
geo facts
turned into knowledge

INTERMAP
TECHNOLOGIES

The "Get Data" feature is now available with the release of Geomatica version 10.2. For more information please visit: pci.geomatics.terrainondemand.com

NEXTMap® Datasets

High-quality NEXTMap® 3D elevation datasets consist of:

- Digital Terrain Models
- Digital Surface Models
- Orthorectified Radar Imagery
- Color Orthorectified Radar Imagery

Purchase Intermap data through PCI and receive a 10% discount*

All Polarimetric SAR functions will be made available through EASI and Visual Modeler. In addition to this, a new version of SPW (version 2.1) is now available, and is completely compatible with Geomatica V10.2.1. This new SPW version includes the following new functions, which are also available in Geomatica V10.2.1:

TOUZIDIS – The Touzi Discriminators for Polarimetric SAR

The Touzi Anisotropy and other discriminators make it easier to detect a particular target in a polarimetric SAR image (i.e. the anisotropy is extremely effective at discriminating ships from surrounding water-related clutter)

TOUZIDEC – The Touzi Decomposition for Polarimetric SAR

The Touzi Decomposition introduces new parameters to describe the scattering behavior of symmetric, coherent targets (bright point targets), as well as, most importantly, parameters to describe incoherent targets (i.e. can be applied to anything across the entire scene). These new parameters remove certain ambiguities not previously well understood in previous decompositions, and provide vastly superior results in the general case to what conventional algorithms provided.

The SPW now supports the following sensors:

- RADARSAT-2 (improved official support)
- Cosmo-SKYMED
- TerraSAR-X

Generic Database (GDB) Updates

Geomatica 10.2 now supports raw ALOS K&C Mosaic data as well as PNG (Portable Network Graphics) formats.

Improved Functions

Geomatica 10.2 has three major improved functions: GCPREFN2; VBUFFER2; and IMERGE2. These functions will replace the original functions in the next release.

Supported Platforms

PCI Geomatics is pleased to announce official support for Microsoft Vista in the version 10.2 release.

About PCI Geomatics

PCI Geomatics is a world leading developer of hardware/software systems for geo-imaging solutions. Since 1982, we have specialized in remote sensing, digital photogrammetry, spatial analysis, cartographic production, automated production systems, image management and on demand mapping solutions. PCI Geomatics' advanced hardware/software systems address a wide variety of industry applications including the environment, agriculture, security and intelligence, aerospace & defense, and satellite receiving stations. We have the expertise and know-how to turn images into useful information.



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