PCI Geomatics Announces Release of Geomatica 2014

GATINEAU, Quebec, Canada—June 19, 2014: PCI Geomatics, a world leading developer of geo-imaging software and systems, today announces the release of Geomatica 2014; the latest version of the company's complete and integrated desktop image processing software featuring tools for remote sensing, digital photogrammetry, geospatial analysis, map production, mosaicking and more. The release was announced at an exclusive meet and greet that featured presentations and demonstrations of the latest features of the software.

"This release of Geomatica shows PCI's continued commitment to tools that further simplify a user's workflow," said David Piekny, Product Marketing Manager at PCI Geomatics. "It is not uncommon in this industry for users to rely on multiple software packages to complete everyday tasks. New features in Geomatica are designed to allow operators to complete these tasks without leaving the software and interface they are comfortable with, saving time and frustration"

New features in Geomatica 2014 include: Live DEM Editing, which lets users to see and edit DTM errors on an automatically updated live ortho preview; Smart Geo-fill, which facilitates the retouching of ortho-mosaics while maintaining full geo-referencing, channel combinations and bit-depth; and Python Scripting, which allows for customizable scripting to combine image processing with other tasks to streamline data management applications, generate intelligent business products, or customize output for a variety of GIS applications.

"Geomatica 2014 is an ambitious release, and I expect customers to be very happy with the updates we've made," said Peter Hazlett, Technical Product Manager at PCI Geomatics. "In addition to new tools and functions, we've made improvements to key algorithms, added new wizards, and expanded our industry-leading sensor support."

Geomatica 2014 is available for 64-bit versions of Microsoft Windows (Windows XP/Windows 7/Windows 8/Server 2003/Server 2008/Server 2012) starting today. A Linux version will follow shortly thereafter. For more information on Geomatica 2014, please visit www.pcigeomatics.com/geomatica.

About PCI Geomatics

PCI Geomatics is a world-leading developer of software and systems for remote sensing, imagery processing, and photogrammetry. With more than 30 years of experience in the geospatial industry, PCI is recognized globally for its excellence in providing software for accurately and rapidly processing satellite and aerial imagery. There are more than 30,000 PCI licenses, in over 150 countries worldwide. Find out more about PCI Geomatics at www.pcigeomatics.com.

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Highlights in Geomatica 2014

GEOMATICA FOCUS
For Geomatica 2014 there have been many updates made to the technology inside Geomatica Focus. These include:

NEW & INNOVATIVE live DEM Editing technology:
The new tool is simple and less expensive/more efficient way to produce terrain models for ortho-mosaics.

- Simple operations to solve many terrain editing issues
- Flat and rough terrain filters
- Pit removal
- Specific filters for linear feature editing
- Quick Ortho update process

NEW & INNOVATIVE Smart GeoFill tool:
This tool provides users with and advanced copy/paste like tool for imagery

- Geographically smart
- Reproject on-the-fly
- Multi-channel, full bit-depth
- Blending and colour balancing
- Enhancement options
- There are many applications for this tool:
- Editing elevation data
- Eliminating cloud cover areas
- Covering up sensitive areas

NEW Python Scripting Panel
Users can modify and execute PYTHON command files in the Geomatica Focus PYTHON scripting panel.

- Tools include: open, new, save, save as, execute, cut, copy, paste, and clear.
- Improved performance
- PCI is always looking to improve performance and quality of Geomatica tools. For 2014, we have worked on improving the following in Focus:
- Visualization – Focus Pan/Zoom
- Smoother appearance
- Improved performance

Atmospheric Correction
The Atmospheric correction capabilities in Geomatica Focus were improved in Geomatica 2014 with the following changes:

- Automatic DEM Clipping
- Improved Top-of-the-Atmosphere algorithm
- Improve progress monitoring
- Improve Haze and Cloud masking GUI

NEW: Change Detection

- New wizard to simplify and add valuable output
- Filter out change based on spatial size and shape
- Automatically vectorize change areas

ORTHOENGINE

2013 focus was on improving productivity, this work continued in Geomatica 2014, adding more capabilities to ensure smooth user workflow

DSM Extraction improvements

PCI has always known for excellent low-mid resolution results, but has spent time in the 2014 release improving the following:

- Smoother workflow for extracting a DSM from each stereo pair in large projects
  - Elevation calculated from intersection of viewing rays between the stereo pairs for a given point
  - Dense points (45cm)
  - Mosaics the individual DSMs together producing a single DSM of the entire project area
- Improved DEM extraction results from:
  - High resolution Satellite data
  - Aerial data
- Improved DSM to DTM filtering capabilities
- Linkage to NEW DEM Editing capabilities in Geomatica Focus

Project overview window (added in G2013)

- Upgraded user control
  - Treelist control for images in project
- Greater connectivity to point-collection tools

Mosaicking

Continual need to improve the mosaic process as more data is used there are always better methods needed. PCI continues to stay at the forefront of the technology with additional methodologies in Geomatica 2014.

- Cutline selection
  - Minimum square difference algorithm
- Color balancing
  - Local Adaptive Enhancement functions
    - Method maintains local colour and contrast variations, or can enhance them…

Other Improvements

- Geomatica 2014 now includes support for Import and Export of projects from/to BINGO and PatB
- Menu clean-up, including:
  - NEW - Options panel
  - Rename/Remove panel redesign
- True Orthorectifcation
  - Removal of building lean and shadow utilizing overlapping imagery
- Improved Rigorous Satellite Modeling
  - Better accuracy
  - Improved performance (up to 10x faster)

DATA INTERCHANGE

GDB Improvements

QuickBird/WV1/WV2 format (CDQB)
Ikonos/GeoEye format (CDIKONOS)
Landsat format (CDLAND7)
SPOT-5 (CDSPOT5)
Old Landsat data in new style (4236-38)
CBERS 2B

Sensor support updates: (since Geomatica 2013 release)

- Spot 6 (2013 SP2)
- RASAT (2013 SP1)
- Kompsat 3

- TH-1 (China)
- Landsat 8
- Gokturk2
- HJ-A/B/C
- ZY-3
- GF1
- GF2
- YG2
- YG8
- YG14
- SJ9

Metadata handling
Improved metadata reading when importing satellite date
NEW FUNCTIONS
LAEPREP
LAEFILT
LAERUN
PSCONF
PSFARA
PSG4U2
PSQINTERP
PSKROG
PSPHDW
PSS2C
PSYAMA
PYRINT
TRUEORTHO

UPGRADED FUNCTIONS
DN2TOA – replaces DN2REF
DSM2DTM
MODEL2RPC
BIT2POLY
LINE2POLY
LINE2PNT
POLY2LINE
RAS2LINE
RAS2POLY
LINE2RAS

GEOMATICA INTERFACE
- Effort was made to “modernize” the look of Focus
- Allow users customizable control – more flexible environment

SCRIPTING
The Geomatica product offers support for scripting of processing algorithms in the PYTHON language. PYTHON scripting is offered as an alternative to the Geomatica EASI scripting environment. All of the processing algorithms in EASI are available in PYTHON. The processing algorithms can be accessed from the PYTHON command line interface or from the Geomatica Focus PYTHON scripting panel accessed from the Tools/PYTHON Scripting menu bar.
- Integrates with other standard PYTHON packages and third party PYTHON tools.

- Support for PYTHON Unicode string parameters for use on non-English operating systems.
- No limitation on the length of parameter strings.
- Uses standard PYTHON exception handling.
- Offered on both Windows and LINUX operating systems.
- Support for PYTHON 2.7.

SAR POLARIMETRY WORKSTATION

- Extended Complex Data Support
- Visualization in Geomatica Focus
- Complex data types
- Improved metadata ingest and a full review of all metadata tags
- New PPFs (SAR decomposition and analysis)