

SAR

For ArcGIS

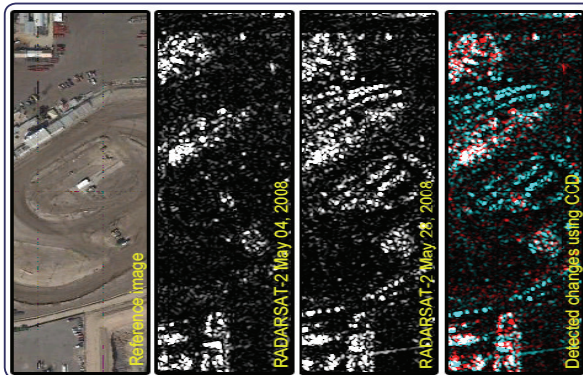
Integrate your Radar data with the ArcGIS workflow

PCI Geomatics is pleased to introduce SAR for ArcGIS. Through our special beta program, GIS users can now painlessly integrate Synthetic Aperture Radar (SAR) data into ArcGIS for processing and analysis. The SAR for ArcGIS module is deeply integrated and installs as an extension in ArcGIS 10.1. Over 40 Radar processing algorithms are available to integrate Radar analysis capability directly into ArcGIS workflows.

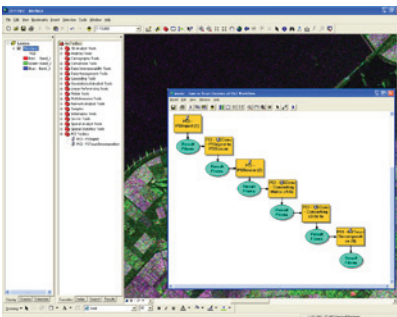
This technology delivers rigorous, automated and accurate SAR satellite image corrections, providing imagery based layers that can be used to derive new information in your GIS environment. Built as an extension to ArcGIS 10.1, PCI's SAR for ArcGIS enables ArcGIS users to integrate accurate SAR imagery into their workflows.

Supported Sensors

- ASAR
- AirSAR (JPLSAR)
- PalSAR (from JAXA)
- RADARSAT-1
- RADARSAT-2
- TerraSAR-X



ArcGIS 10.1 Integration



The SAR for ArcGIS Module is deeply integrated with ArcGIS. The module installs as an ArcGIS extension, allowing GIS users to integrate the powerful Radar analysis capability directly into ArcGIS workflows.

Over 40 Radar processing algorithms are available in the GeoProcessing Toolbox, with sample models for common tasks pre-configured. Capability from the Geomapping Tools Image Correction module can be added on to Radar workflows, thus providing multi-sensor ingest support, and also export to RPDef capability.

THE TOOLS YOU NEED FOR SAR IMAGERY

Rigorous

Perform rigorous corrections to SAR imagery, and seamlessly integrate your data with the ArcGIS workflow

Automated

Ensure data from multiple Radar sensors are properly registered for further analysis within ArcGIS automatically.

Accurate

Accomplish complex tasks, like change detection and feature extraction to improve your efforts in multiple GIS applications.

Features and Benefits

Support for multiple commercial SAR sensors

Access to many currently unsupported sensors and data formats

Comprehensive Polarimetric toolkit

Provide the ability to obtain enhanced earth information by leveraging multiple polarization modes leads to enhanced applications in forestry, agriculture, hydrology, and sea ice

High performance Polarimetric algorithms

Increased processing speed leads to quicker decision making

PCI's connection to the SAR industry

New technical uses of SAR allow users to get the most of their data

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Primary Processing Support

Ingest data

Advanced radar analysis tools

- SAR speckle filters
- Texture analysis
- SAR change detection
- SAR segmentation and classification

SAR Polarimetry processing and analysis

- POLSAR specific filters
- Polarimetric classification



RADARSAT-2 data shows annual flooding of Red River near Winnipeg, MB, Canada

Applications

Proper imagery registration expands the GIS user's ability to efficiently perform tasks, like change detection and feature extraction. PCI's SAR for ArcGIS will improve users' abilities in the following areas:

Application	Status	Users	Derived information	SAR characteristics
Maritime	Operational	Coast Guard	Ship positions, ice floes, wind direction/speed	Medium resolution, large footprint, single/dual channel
		Military - Navy	Ship positions, wind direction/speed	Medium resolution, large footprint, single/dual channel
		Environmental Protection Agencies	Ship positions, oil seep/spill, wind direction/speed	Medium resolution, large footprint, single/dual channel
Surveillance	Operational	Military - Army	Target detection, change detection	High resolution, smaller footprint, single channel
Flood Mapping	Operational	Disaster Response	Flood extents (change detection)	Low/Medium/High resolution, single/dual channel
Agriculture	Development	Crop Insurance, Agriculture	Land use/cover, change detection	Low/Medium/High resolution, all polarimetric channels
Forestry	Development	Conservation Authorities	Biomass estimation	Low/Medium/High resolution, all polarimetric channels
Wetland mapping	Development	Conservation Authorities	Wetland types, changes in vegetation	Low/Medium/High resolution, all polarimetric channels

Exclusive Beta Program

If you are currently evaluating ArcGIS 10.1 and are interested in using PCI's SAR for ArcGIS, contact a PCI Geomatics representative today to learn how you can install the software for evaluation purposes.

Not using ArcGIS 10.1?

While the SAR for ArcGIS module is currently only available for ArcGIS 10.1, you are still welcome to participate in the beta program by letting us know how you are using radar data, and what features are important for you when considering using radar in a GIS environment. Contact PCI Geomatics today for more information