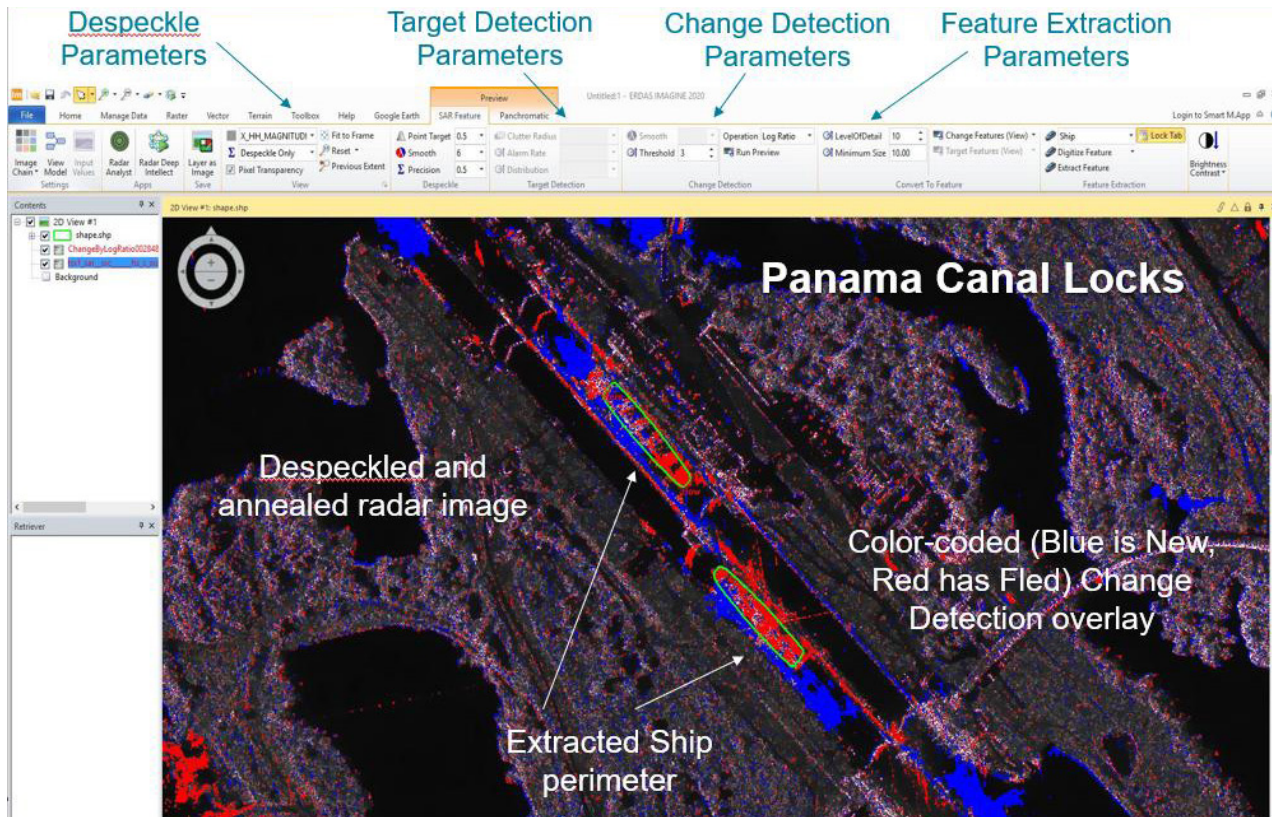


IMAGINE SAR Feature Extraction

Extract Features and Information From Your Radar Images

IMAGINE SAR Feature Extraction helps you produce actionable information that can be passed up the decision-making chain of command. It minimizes and automates the radar analyst workload to create an information product from synthetic aperture radar (SAR) imagery. The product can be a refined/enhanced radar image, Target or Change image-map, or extracted Feature image, along with, if desired, a shapefile and associated attributes.



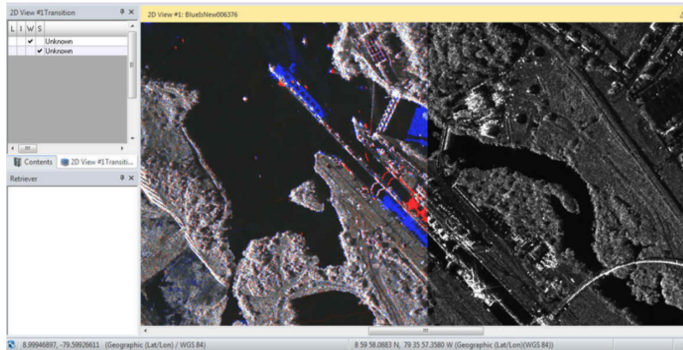
This interactive operational workstation allows you, the analyst, to optimize SAR image processing and viewing in a real-time environment. Advanced SAR algorithms can be easily modified, and the results immediately viewed, to allow rapid enhancement optimization. Once optimized, the full image can be processed into information products. Functionality can be combined into processing regimens to convert radar imagery from any sensor into industry-standard information products. As an add-on module, the workstation is fully integrated within ERDAS IMAGINE.

Key Features

Despeckle – Speckle suppression reduces noise in the SAR imagery to facilitate visual interpretation or the automated feature extraction functionalities.

Target Detection – Converts a despeckled radar image into a binary Target/Not a Target image using Constant False Alarm Rate algorithms.

Change Detection – Map change between two images with different dates over the same geographic area. Multiple algorithms color-code the change using the Blue-is-New, Red-has-Fled paradigm. Features new to the scene (New) are blue and features that have disappeared from the scene (Fled) are red.

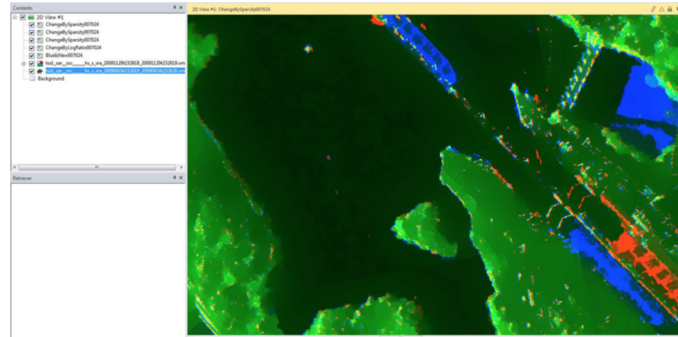


Evaluate the change detection product by using the zoom, swipe, and pan tools in ERDAS IMAGINE. The original radar image is on the right; despeckled change detection image on the left

Raster to Vector – Convert any image product created in the workstation to vector shapefile format for easy information transmission and dissemination.

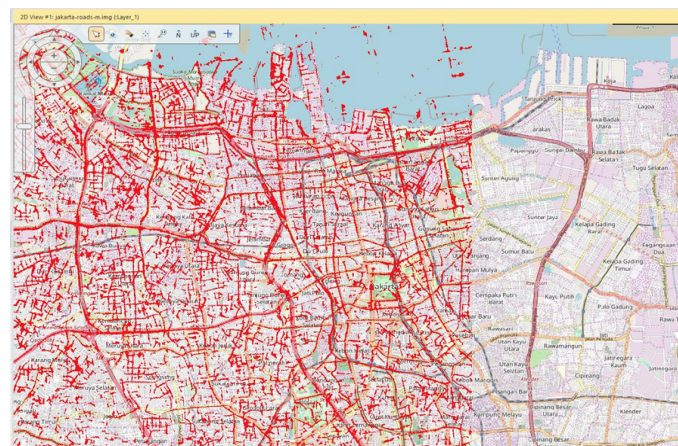
Feature Extraction – Extract Ship profiles using template-matching technology and save as a Shapefile with the desired vector symbology.

You can run progressive iterations of any of the enhancement or detection algorithms until you arrive at an optimum product for your needs. This extremely smoothed adaptive change detection image has no distracting despeckle noise. Recipients with little to no experience analyzing radar imagery can easily understand the information, such as the red (Fled) and blue (New) ships in the canal locks.



Deep Learning

The SAR Feature Extraction module now includes Deep Learning feature extraction technology. Present functionality includes Despeckle and Road Extraction.



Swipe view showing radar-extracted roads (red) on the left, overlaying a cartographic road map of Jakarta, Indonesia.

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About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates solutions that deliver a 5D smart digital reality with insight into what was, what is, what could be, what should be, and ultimately, what will be.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at hexagon.com and follow us @HexagonAB.

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