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## Large Scale Forest Canopy Mapping Using RADARSAT's New Beam Mode

Environmental and regulatory agencies in countries with large forested areas have a significant interest in detecting illegal logging activity. They require frequent, consistent, auditable independent forest change validation, which is often difficult to acquire due to cloud cover or the remote locations being monitored. Using satellite-based synthetic aperture radar (SAR) to image such areas provides a means to quickly, consistently and reliably detect and identify areas of deforestation and degradation according to national, international or custom specifications. Alternative services based on optical data are affected by cloud cover and often lack the resolution or consistency required to routinely detect clear cuts and selective logging. MDA has developed a reliable monitoring service for large forested areas to help government agencies combat illegal logging and natural deforestation, with no up-front investment and low operational costs. Using a new, recently commissioned imaging mode for RADARSAT-2 called Extra Fine, this sensor leverages a combination of a very wide image swath (nominally 150 km) with a nominal resolution of 5 m. This combination of a very wide swath and resolution allows both clear cuts and selective logging to be detected across very large areas. This presentation will show how, using advanced image exploitation techniques, information can be easily exported as a set of GIS shape files and attributes ready to be ingested by the responsible agency, to conduct a reliable and effective monitoring program.