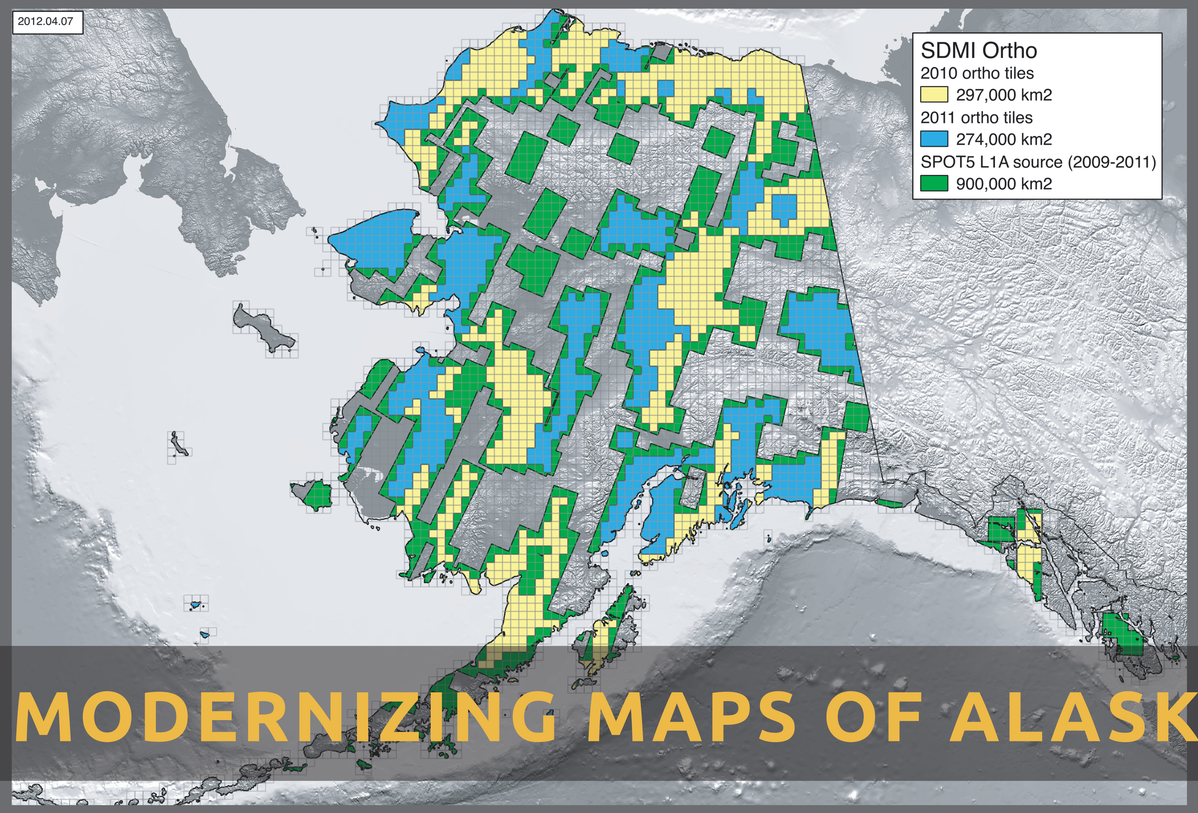
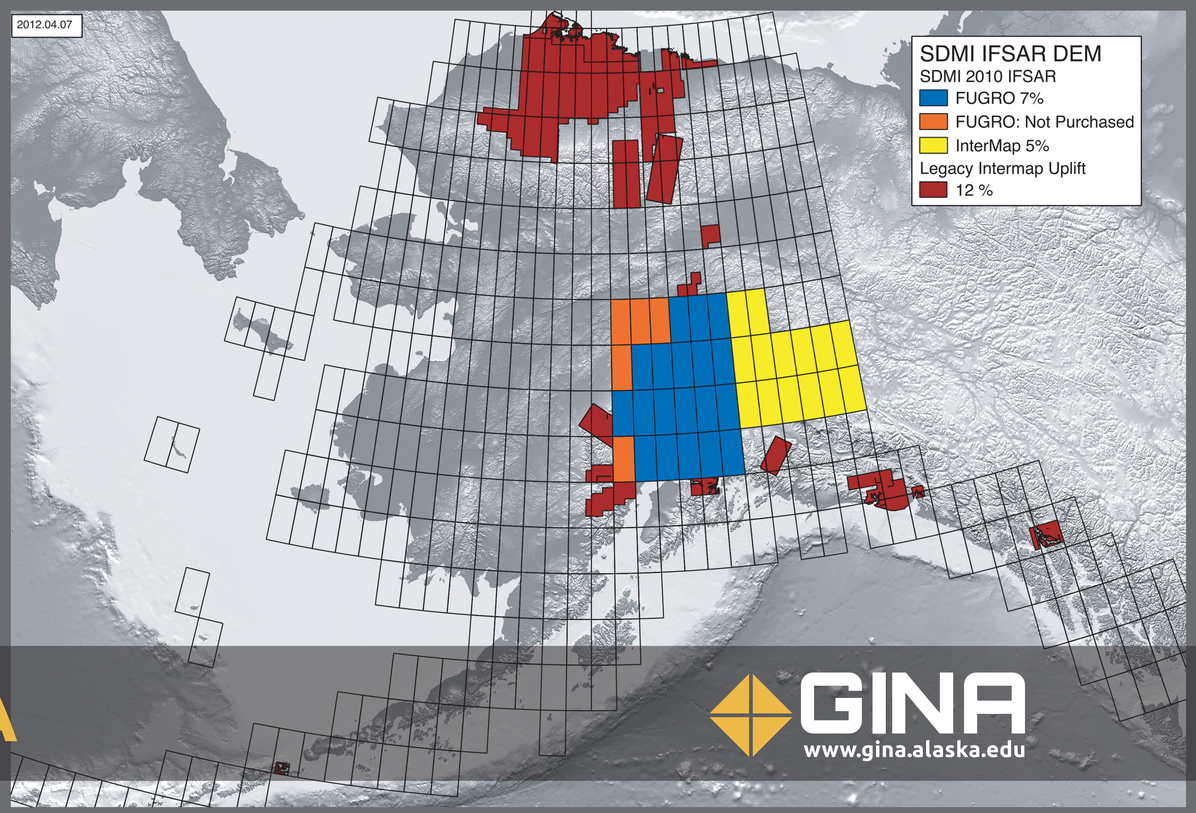


MODERNIZING MAPS OF ALASKA



GINA
www.gina.alaska.edu

www.alaskamapped.org/ortho

www.alaskamapped.org/dem

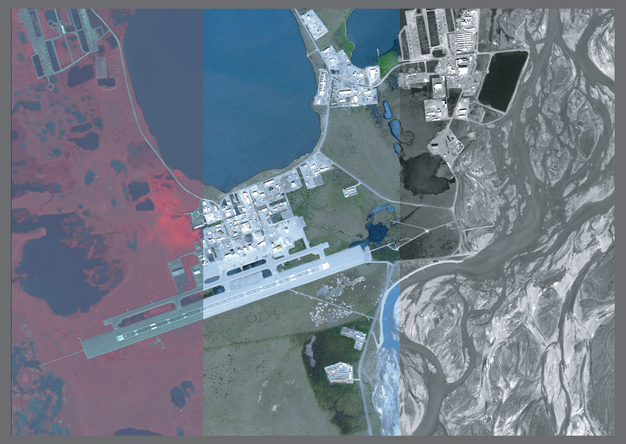
Introducing Orthoimagery

Alaska's last statewide imagery collection, the Alaska High Altitude Photography (AHAP) program was acquired 30 years ago and did not provide complete coverage of the state. In addition, the AHAP imagery does not reflect the current Alaska landscape both man-made development and natural changes such as coastal shoreline erosion, melting permafrost, or shrub-line migration and needs to be refreshed. Technical limitations of that imagery also prevent it from being used in a geographic information system (GIS). The new 2.5-meter resolution statewide orthoimage will provide current data and will be processed such that it will be immediately usable in GIS mapping systems.

The Alaska Statewide Digital Mapping Initiative (SDMI) is a State initiative that aims at providing up-to-date and complete coverage and to strengthen the alignment between state and federal mapping interests. The new imagery will show current conditions and trends over the Alaska landscape, and will become an essential tool for Alaska's economic development, livability, and public safety.

Aero-Metric, Inc. is the prime contractor for the $3,450,000 project contract being administered by the State of Alaska. Aero-Metric will perform all project management functions under the contract, is responsible for obtaining digital elevation models and ground control of sufficient quality to ortho-rectify the satellite imagery to meet 1:24,000-scale National Map Accuracy Standards. Fugro EarthData will process, ortho-rectify, and mosaic the SPOT imagery into final deliverables for the state.

Funding for the project is being shared by the State of Alaska and the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) Coastal Impact Assistance Program. Additional funds are being sought for ongoing refresh of the imagery baselayer.

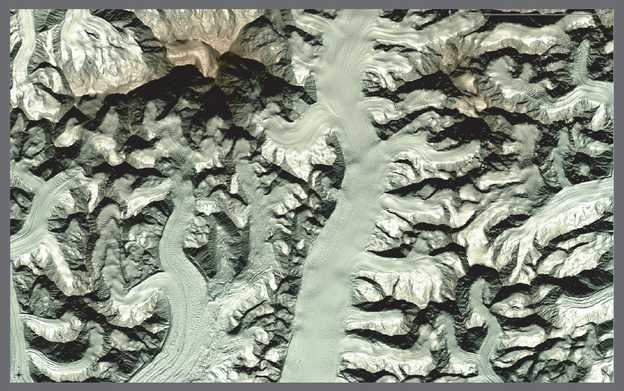


Color-infrared, natural color, greyscale imagery samples near the Dead Horse airport on the North Slope of Alaska.

Updating Digital Elevation Models

Alaska's existing Digital Elevation Models (DEM) are of uneven quality. Many areas have significant accuracy problems, not meeting even DTED-2 standards (LE90 < 18-meters). The National Elevation Database (NED) for Alaska is mostly a 1-arcsecond product (~30 x 60-m post spacing product) created by digitizing contour maps generated from often poorly controlled 1950's air photography. 157,000 square-kilometers of airborne IfSAR data were flown the summer of 2010 and will be delivered with 22-foot contour equivalent accuracy (3-meter LE90) and five meter post spacings. An additional ~200,000 square-kilometers of restrictively licensed IfSAR-derived DEM data will be uplifted into the public domain through this contract.

Dewberry is the prime contractor for the $6 million project being administered by the USGS through their GPSE contract vehicle. Fugro Earthdata and Intermap are each flying and processing half of the new acquisitions. Major funding contributors include the National Geospatial-Intelligence Agency (NGA), State of Alaska, and USGS. Supporting contributors include the Natural Resources Conservation Service (NRCS), Bureau of Land Management (BLM), and National Park Service. Funds are being sought to complete DEM mapping of the entire state to an accuracy that supports user requirements.



Mount Foraker (top left) with the Kahiltna Glacier (center) in Denali National Park are seen in this digital elevation model from Fugro EarthData.

ALASKA MAPPED
SDMI Statewide Digital Mapping Initiative

UAF UNIVERSITY OF ALASKA FAIRBANKS