Web-based Geo-Referenced Image Manager (WebGRIM)

WebGRIM is an advanced software application that allows users and operators to control all aspects of imagery collection and post processing. WebGRIM, combined with a GI-Eye system, collects high resolution imagery (taken from the air or the ground) and precise camera location and orientation information. This data is stored in an Oracle spatial database for quick and reliable access to virtually unlimited amounts of imagery. WebGRIM provides the tools to display, sort, manage and use that imagery for photogrammetry and targeting.

Key features of WebGRIM

∗ Quickly locate and manipulate collected imagery.
- Map-based displays provide context for data, allowing the user to rapidly locate the data of interest.
- User-friendly interface allows the operator to control camera collection parameters on-the-fly, e.g., shutter speed, gain control and data collection rate.
- Near real-time orthorectification and mosaicking of collected imagery makes situational awareness and target identification quick and easy. Users can generate their own maps on-demand from the collected data.
- Point-and-click targeting, using proprietary high-accuracy NAVSYS algorithms, provides target quality coordinates from aerial imagery at the click of a mouse. For aerial and terrestrially collected imagery, triple-shot targeting can provide similar coordinates.

∗ WebGRIM mapping software is compliant with OGC standards, allowing the system to display third-party maps, imagery and live data (such as weather radar) obtained over the Internet. Additionally, WebGRIM could act as a Web Mapping Server (WMS), allowing third-party applications to seamlessly import data from WebGRIM.

∗ Web-based system allows collaboration between multiple, simultaneous users, and requires no software be installed on client computers.

∗ Web-GRIM, when coupled with the GI-Eye InterNav software, could use local-area DGPS data from a customer-run reference station, or wide-area data obtained over a network, to provide ultra-accurate imagery registration.

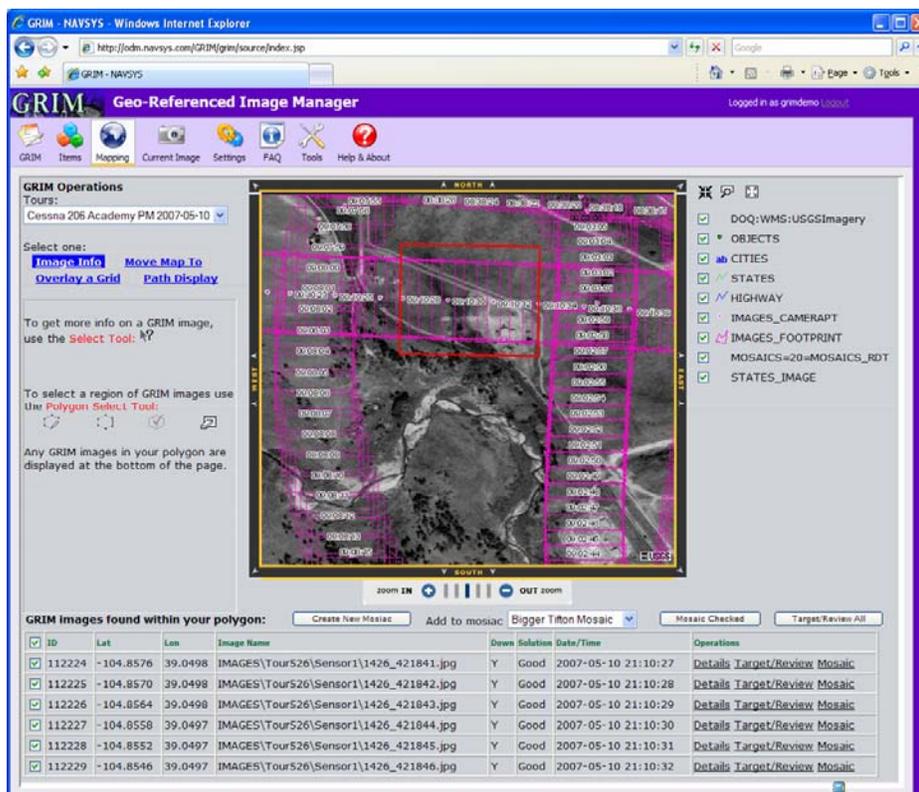In this figure, WebGRIM is displaying the "footprints" (magenta) of images from an aerial collection. The background imagery in this case is being downloaded from the U.S.G.S. over the Internet. The user has further narrowed his area-of-interest by drawing the red box. The raw images within this box are shown at the bottom of the screen.

EXCELLENCE
IN
GPS
PRODUCTS
&
SERVICES

This figure shows the user performing single-shot targeting. After selecting a raw image from the map display, the user clicks on any point on the image. Targeting-level accuracy coordinates are generated for that point.
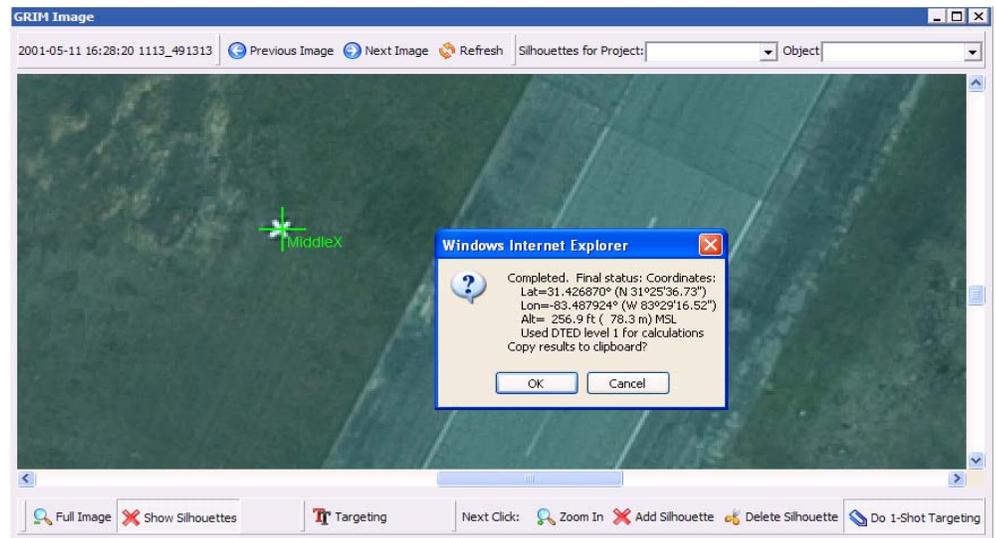
This image shows a small customer-built mosaic of UAV imagery (color), overlaid on historical (black & white) USGS imagery. To build a mosaic, the customer has only to identify the geographic area he is interested in.