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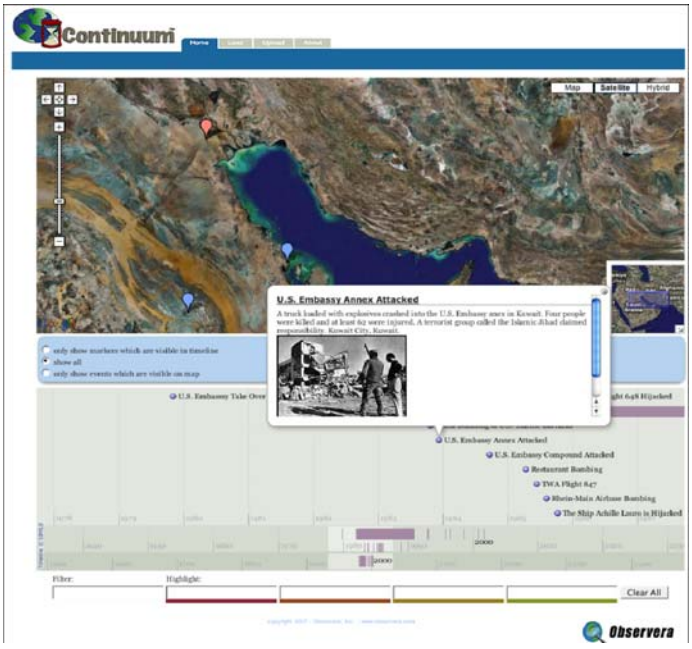
to see the truth

Services

Workflow Optimization

Efficiency gains for imagery and geospatial production and analysis tasks can be achieved in several ways - including, but certainly not limited to, automation. Observera delivers broad-based analysis of workflow efficiency using our scientific, analytical and technical understanding of geospatial processes. We believe that workflow optimization must start with an understanding of the desired concept of operations and then work forward to identify how skills, technology and innovation can be applied to greatest effect. Our knowledge and experience with data sources; procedures and collaboration; technology, tools and processing techniques; automation; and training allows us to spot opportunities for improvement and help our customers streamline and integrate their workflows. Some examples of workflow optimization activities from Observera:

Temporal and Spatial-Temporal Analysis



During work with imagery analysts, Observera noted that tools available for temporal analysis were insufficient for many tasks. A search of available tools revealed the Simile Timeline widget from MIT, an open source timeline tool that is tied into a SOA web presentation interface. Our staff introduced the timeline tool to analysts performing temporal analysis and found a high-level of interest, although several shortcomings were noted: the ability to add and manage data was limited, and there was no connection to spatial information. In response, Observera developed a concept prototype called Continuum™, which allows spatial-temporal analysis and reporting to be easily performed by analysts with no background in web applications. Continuum™ utilizes the Google Maps API for 2D image rendering and map overlays, and the Simile Timeline widget. The tool allows analysts to easily add and update spatial-temporal data from spreadsheets - their preferred data source - and use the data for analyzing event chronologies, imagery coverage gap analysis, production monitoring, construction, and detection of cross-event correlations.

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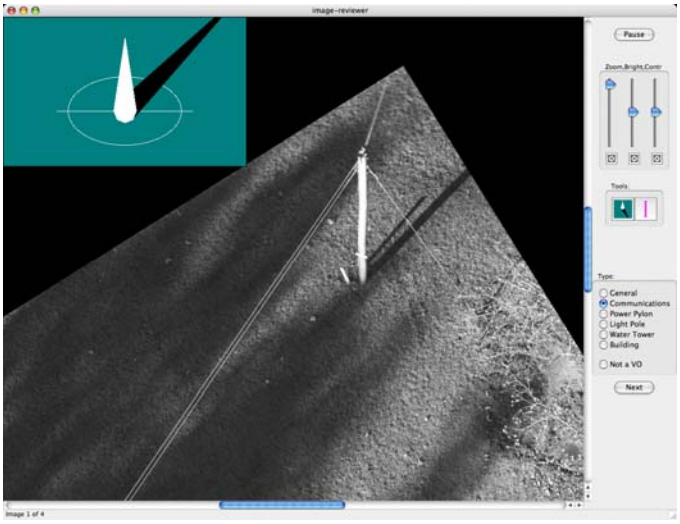
Vertical Obstruction Review and Analysis Tool

Vertical Obstruction (VO) information is used for safety of navigation for low-flying aircraft. VO data comes from a variety of sources, including spot reports, databases and, more recently, automated algorithms. All of these sources have errors that can result in contamination of VO databases used by pilots. Observera developed a concept for an Analyst-In-The-Loop (AITL) workflow, and then prototyped and tested the concept with working VO and imagery analysts. Results showed that reported VOs can be reviewed by an analyst and, in an average of 17 seconds, determine if the VO is real and, if so, be classified by type. The resulting errors in data were reduced by 97 percent.



Airborne Image Change Detection

Change detection is a critical part of many problems, including intelligence analysis, right-of-way monitoring, and environmental applications. In response to a need by the US Army to perform rapid change detection analysis of airborne imagery, Observera developed the Change Detection Server (CDS), which incorporates an optimized imagery workflow that automates all of the tedious preparation of data for change detection analysis and allows the analysts to focus on exploitation. With the touch of a button, the CDS automatically captures, mosaics, georeferences, projects, compresses, and stores the imagery then presents it for change detection analysis over a SOA web-enabled application called the Change Detection Application (CDA). The CDS also automatically generates a change detection cueing layer that allows analysts to focus on areas of potential interest. Built upon Observera's SMART (Sensor Model-based Autonomous Registration Tool), open source image libraries, and Lecia's image compression and image serving software (Image Web Server™) the CDS:

- Applies analyst skills and time toward visual analysis of changes
- Is built specifically for web-based exploitation
- Allows simultaneous exploitation by any number of analysts
- Makes maximum use of Open Source and COTS components
- Is based on photogrammetric processing methods
- Can support multiple collectors with one system

Observera is a small business in the Washington DC area with a 12 year track-record helping the defense and intelligence community perform their missions. We specialize in imagery and geospatial information. We deploy ideas and exploit systems that allow our customers to achieve their demanding goals. To discover your vision with "Intelligent GEOINT", contact Observera today.

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