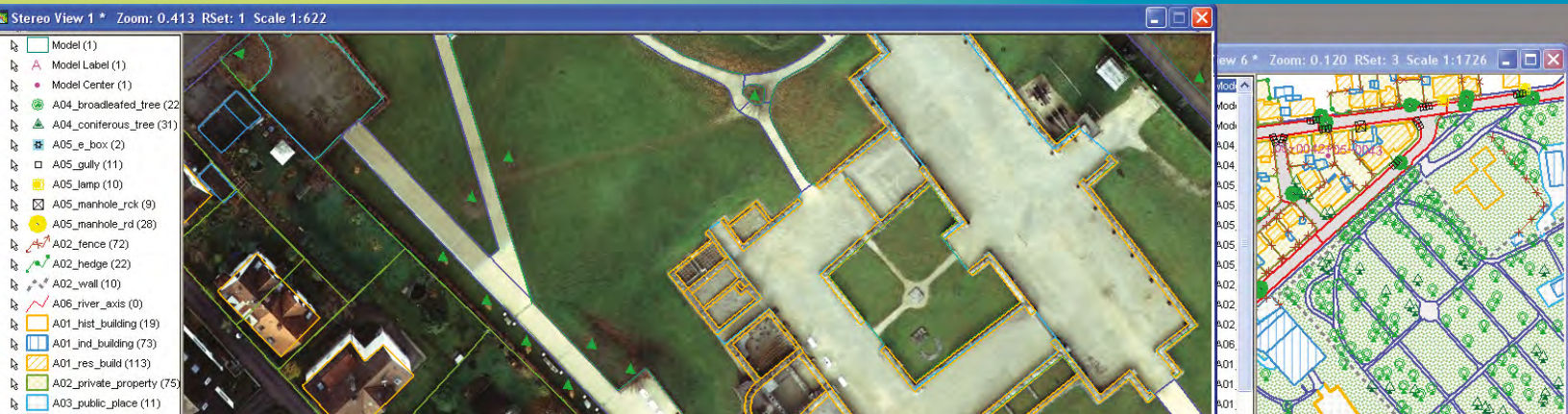**HEXAGON**

ImageStation Stereo for GeoMedia

ImageStation Stereo for GeoMedia (ISSG) from Hexagon is a geographic information system (GIS)-based compilation environment that produces more feature data in less time than ever before. This high-performance software captures photogrammetric 3D data from aerial frame including UAS/UAV, ADS, and satellite mono or stereo imagery in a GIS environment. Utilizing ISSG, you can display and manipulate stereo imagery, use image enhancement tools, and smoothly roam in stereo with photogrammetrically accurate 3D cursor tracking and stereo vector superimposition. Z extraction from mono source imagery is via underlying surface files. Based on the GeoMedia Advantage or Professional tiers, ISSG supplies tools for interactively collecting and updating geometry and attributes of map features, as well as enabling automatic attribution and geometry validation. The generated data is stored in an open database, which enables third-party GIS systems to access it for any geospatial application and map revision.

Stereo capabilities and viewing tools

- Smooth stereo roam and dynamic zoom using ImageStation's exclusive ImagePipe technology, eliminating stop-and-go image roam performance and resulting operator fatigue

- Mono-plotter workflow (ortho source imagery) extracts Z coordinates from loaded surface files

- Dynamic, automatic on-the-fly image enhancement, and includes additional enhancement tools for increased image clarity

- Easy traversing of stereo models by using the mouse or keyboard, or by graphical selection in the map view

- Automatically moves the floating mark to a feature's XYZ location when snapping to it

- Display rotation for additional validation of vector data

- Synchronized panning of stereo and non-stereo map views for controlled feature capturing and verification

- Switch between RGB- and NIR-band display for increased flexibility when working with satellite and aerial imagery

- Supports 8-bit to 16-bit imagery with 1 to 4 bands

Advanced capturing tools

- Monotonic collection mode enforces vertical integrity of hydrologic features

- 2D/3D snap functionality avoids overlap when aligning neighboring objects of different heights

- Stereo cursor tracking of underlying surface files provides more efficient operator movement during high-speed data capture of feature updates.

- 2D GIS data is provided at the stereo cursor position in the 3D environment, enabling accurate update of 2D data

3D data collection on a GIS platform

- GeoMedia data servers directly access (without translation) common databases such as Oracle, SQLServer, PostGIS, GeoPackage, and Esri File Geodatabase

- Compatibility with GeoMedia transaction management for coordinated multi-user access

- Data collection using existing GIS topology – requires no external interfaces for data import/export, preventing loss of topology

- Data collection in stereo eliminates building lean and other effects caused by relief displacement often found in ortho-imagery

- GeoMedia queries and filters control feature display, so you can view only the features you choose at any given time to optimize performance

- Validates feature connectivity and spatial relationships using GeoMedia spatial queries, which ensures the data you collect is accurate from the moment it is compiled

- DTM point editing tools to delete, flatten, and change elevation within a polygon, or dynamically by "painting" while roaming; and to delete points while digitizing linear features

- Provides operator-assisted manual DTM point collection tools to generate a user-defined collection grid and collect the points in the grid

User benefits

- Optimizes workflow by directly performing stereo and mono compilation in a powerful GIS environment

- Results in superior interpretation of image data compared to interpretation of a single image, avoiding costly relief displacement issues and saving time and money

- Displays and reports feature connectivity so you can review the relationship of one feature to another, which improves data integrity

- Reduces the cost of creating accurate and topologically correct 3D data, saving valuable time and resources

- Offers comfortable stereo viewing and measurement for greater productivity

- Allows you to collect data directly into commonly used databases, leveraging your investment in these technologies

Additional options

ImageStation DTM for GeoMedia (ISDG), when used in conjunction with ISSG, provides a set of tools to collect and edit terrain data to generate surface files for photogrammetric, mapping, and engineering workflows. In a DTM workflow, ISSG provides the interactive stereo collection of geomorphic features such as breaklines, obscured areas, and points; digitization or creation from stereo models of collection boundaries; and stereo editing of elevation points. ISDG provides DTM project management, creating surfaces from boundary and geomorphic features, loading DTM data into GeoMedia from surface files for editing, and writing surface files in Triangulated Irregular Network (TIN) format.

GeoMedia GI Toolkit and GeoMedia Advanced Collection, when used in conjunction with ISSG, provide even more flexibility to manipulate features and attributes, perform rule-based validation, control graphical displays, views, windows, and legends, generate reports, manage data exports, populate attributes and metadata, and clip and merge features.

Key components and features of Hexagon's GeoMedia GI Toolkit and GeoMedia Advanced Collection include the following:

- Schema Rules & Symbols (SRS), a database-driven interface for the creation and maintenance of schema definitions, attribute-based rules, and graphical symbology

- GeoMedia view management commands to customize legend entries, provide an overview window, perform map window manipulation, and use feature- and grid-based review tools

- Output tools for ASCII reporting, Microsoft Excel reporting, and legend reporting

- Easy-to-use feature extraction tools centered on the powerful GeoMedia platform

- Advanced feature collection tools that have been engineered into the GeoMedia platform to facilitate feature extraction

- Customizable, descriptive user interfaces that support multiple languages

- Attribute and spatial validation performed while collecting data

- Automatic population of attributes based on other attribute values

- Calculation of horizontal accuracy of imagery based on user-supplied control points

About Hexagon