

3D PRO FEATURE COMPARISON

| | REMOTEVIEW 3D | 3D PRO EXTENSION |
|---|------------------|---------------------|
| VISUALIZATION | | |
| Manipulate large elevation data sets draped with hi-resolution imagery or wireframes | ● | ○ |
| Apply a single color or color palette to elevation based on height values | ● | ○ |
| Utilize point cloud data for elevation and as a foundation for draped imagery | ● | ○ |
| Adjust lighting, sun, moon, and stars based on image collection time or user time inputs | ● | ○ |
| Adjust the brightness, haze, contrast, sharpness, and dynamic range of the draped imagery in 3D | ● | ○ |
| Visualize point clouds and adjust level of detail, size, and coloration | | ○ |
| Filter point clouds based on attributes and metadata | | ○ |
| Apply color spectra to view point clouds by height | | ○ |
| Visualize vector overlays and markers as 3D objects floating above the terrain | | ○ |
| Visualize MIL-STD-2525 Symbology as floating billboards and 3D shapes (requires symbology module) | | |

3D MODELING

| | |
|---|---|
| Supports many 3D model formats (including flt, 3Ds, Obj, Skp, Dae, Osg, Lwo, Dxf, Stl, Wrl, etc.) | ○ |
| Extrude polygons into 3D buildings and objects, applying individual textures to the sides and top | ○ |
| Easily add buildings, vehicles, aircraft, trees, etc. from a 3D model library of over 800 models | ○ |
| Access a texture library containing 3000 textures that can be applied to building walls | ○ |
| Directly load any 3D model into Google SketchUp for editing | ○ |
| Rapidly populate user defined areas with 3D models through the Populate Tool | ○ |
| Quickly lay down power pylons and communication poles using the Population Line tools | ○ |

ANALYSIS AND PLANNING

| | |
|---|---|
| Perform measurements in 3D including height, length, multi-line, area, angle, point, and slope | ○ |
| Use ellipses to create 3D threat domes | ○ |
| Interactive 3D Landing Zone Analysis tool identifies and marks possible viable landing zones | ○ |
| Create and display circular, elliptical, and polygonal Buffer Zones for any feature | ○ |
| Provide Point-to-Point Line-of-Sight (P2P LOS) analysis between a feature and a point of interest | ○ |
| Display Radial Line-of-Site (RLOS) of what is visible or occluded from the view of the feature | |

REVIEW AND SIMULATION

| | | |
|---|---|---|
| Quickly create flight paths and travel routes for simulated motion over or along the terrain | ● | ○ |
| Record flight path as AVI video file for playback and inclusion in other applications | | ○ |
| Navigate around the 3D scene in real-time using the 3-Button Fly Motion Model | ● | ○ |
| Heads-Up-Display (HUD) offers a compass, north arrow, bearing indicator, and elevation legend | | ○ |
| Introduce clouds and fog into the sky to simulate environmental conditions | | ○ |
| View the 3D scene as if through night vision goggles | | ○ |
| Walk through the 3D scene at human height and speed | | ○ |
| Teleport immediately to the Left, Right, Front, Back, Center, Top, Down, or Home viewpoints | | ○ |
| Save particular custom viewpoints for future reference in the Viewpoint Manager | | ○ |
| Fly to, teleport directly to, or orbit a viewpoint or selected point of interest | | |

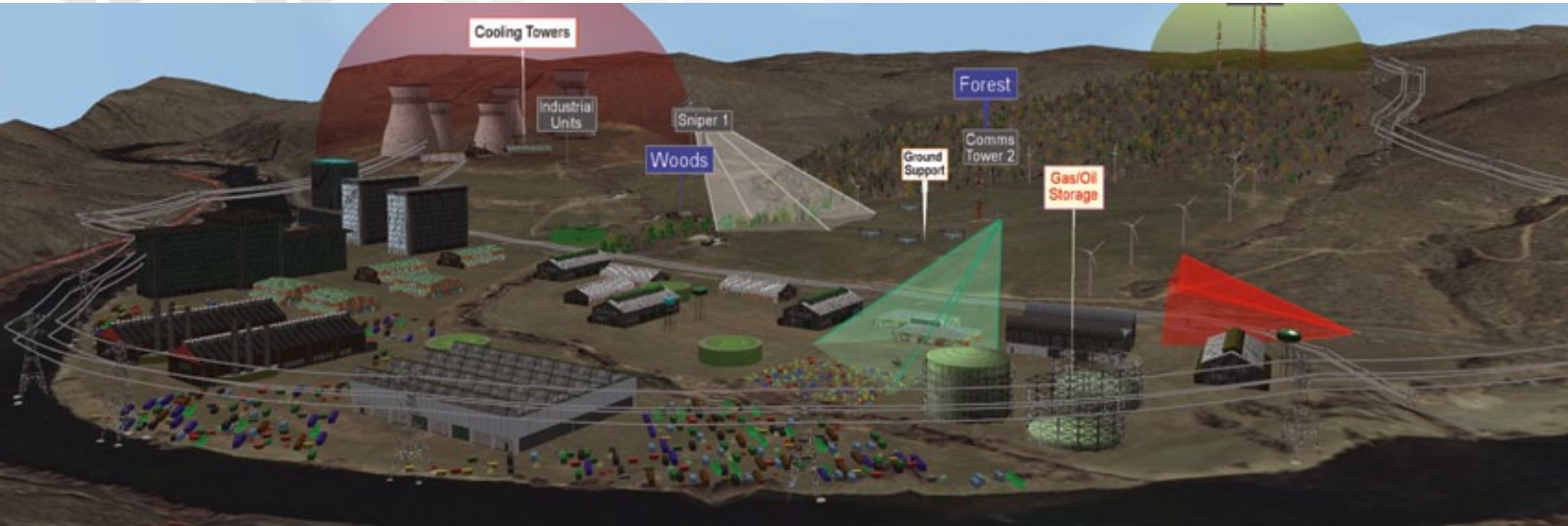
INTEROPERABILITY

| | | |
|--|---|---|
| Export 3D scenes captured as imagery (NITF, JPG, TIFF) | ● | ○ |
| Manage 3D markers/models directly in 3D viewer (auto-synchronized with RemoteView) | | ○ |
| Synchronize Google Earth™ to match the location of a viewpoint | | ○ |
| Export 3D Scene chips to Multigen® Creator™ OpenFlight® (*.flt) and COLLADA 3D (*.dae) | | ○ |
| Export 3D Scene chips to Google Earth™ Sketchup™ 3D (*.skp) and Google Earth™ (*.KML or *.KMZ) | | ○ |
| Export 3D scene chips to create fully interactive 3D PDF documents | | ○ |
| Export viewpoint screen captures to image files or PowerPoint® documents | | ○ |



3D PRO™
RemoteView™4 Extension

ADD THE NEXT DIMENSION AND
INCREASE MISSION SUCCESS



SCENE VISUALIZATION
REAL-TIME 3D ANALYSIS
MISSION PLANNING
TACTICAL OPERATIONS
BRIEFINGS & REHEARSALS



Textron Systems Geospatial Solutions is a business of Textron Systems. © 2015 Overwatch Systems, Ltd. All rights reserved. RemoteView and 3D Pro are trademarks of Overwatch Systems, Ltd., an operating unit of Textron Systems. Google Earth, Multigen, Creator, OpenFlight, COLLADA 3D, Sketchup 3D, PowerPoint, ArcGIS, and Adobe are trademarks of their respective companies. 04145

TEXTRON Systems

f t y in textronsystems.com

TEXTRON Systems



We live in a three-dimensional world, so why sacrifice the value of an entire dimension when planning crucial missions? The 3D Pro extension dramatically expands the RemoteView™ 3D visualization and analytical tools. An analyst can use 3D Pro to quickly generate detailed 3D terrain and urban models that help decision makers and warfighters understand the real-world conditions they face. This powerful software brings new realism to simulations and increases mission success.



DETAILED 3D MODELING



3D Pro enables analysts to efficiently generate complex 3D models that tie together high quality imagery, elevation data, and user created objects:

Extrude polygons representing building footprints and lines representing walls or fences into 3D objects whose surfaces can be textured using the any of the 3500+ textures supplied with 3D Pro.

Incorporate 3D models in a variety of formats and edit models directly using Google Sketchup

Rapidly insert pre-made models from the 3D model library holding over 800 objects such as buildings, vehicles, aircraft, trees, and animals

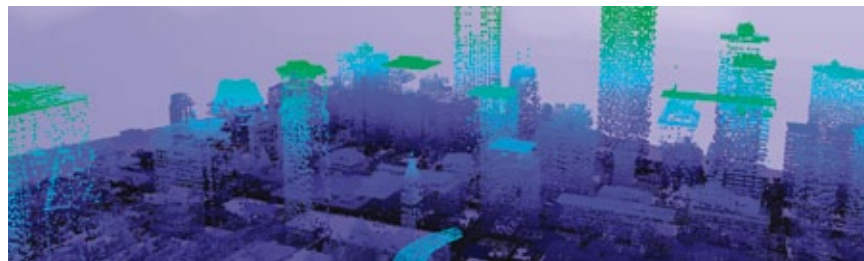
Use the auto populate tool to fill areas with numerous trees or buildings at a time

Report accurate geo-coordinates for any point on the image; add 3D annotations and markers

Set environmental conditions to render displayed environments to match specific times of day, degree of cloud cover or night vision conditions.

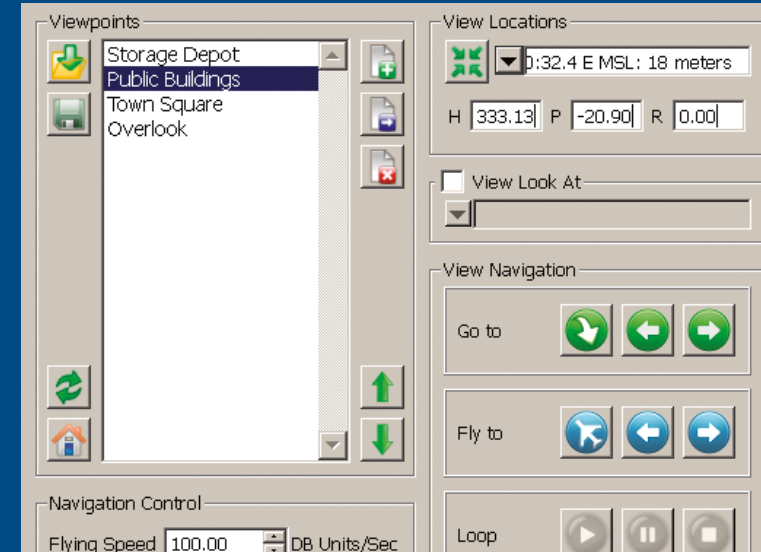
Visualize MIL-STD-2525 Symbology as floating billboards and 3D shapes (requires symbology module)

LIDAR POINT CLOUDS



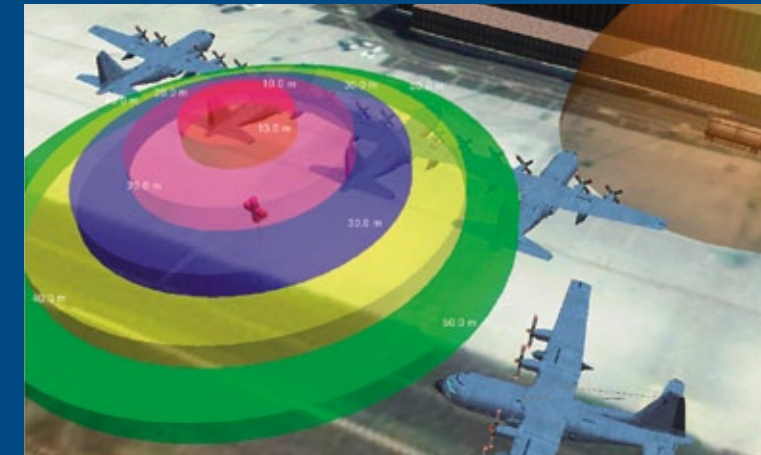
Analysts can use 3D Pro to interactively navigate through point clouds containing hundreds of millions of points and do it all in real-time. Users can enhance the 3D experience by applying filters, adjusting point attributes, and changing color spectra linked to elevation.

VIEWPOINT MANAGER



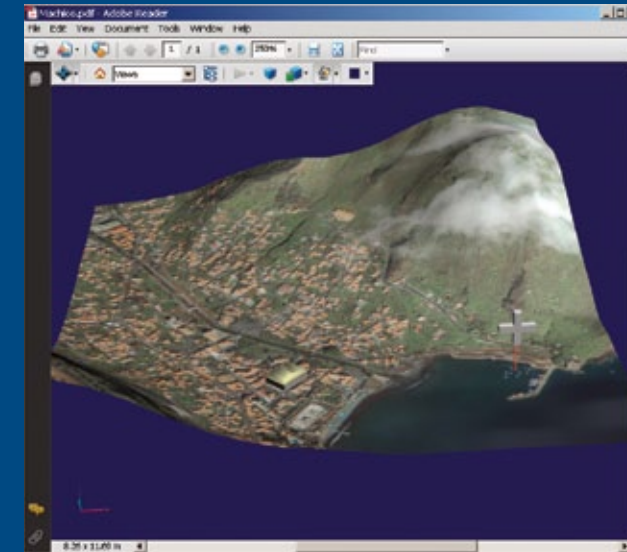
The strength of 3D Pro comes from enabling analysts to visualize locations using real-world imagery and model recreations. The Viewpoint Manager highlights this strength by allowing users to save specific viewpoints for later review or mission planning. Once the viewpoints are established, analysts can quickly jump between the scenes or fly along a path of selected viewpoints.

BUFFER ZONES AND THREAT DOMES



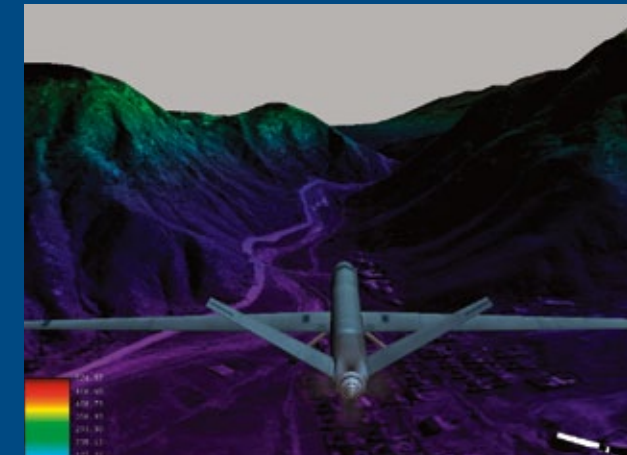
Analysts can create Buffer Zones around any 3D feature, complete with customizable elliptical or polygonal shapes, sizes, and colors. As a quick estimate, analysts can create Threat Domes, which define simple radii around an object of interest. These valuable tools help analysts determine vulnerabilities and threats in order to plan defensive counter-measures.

CHIP TO 3D PDF



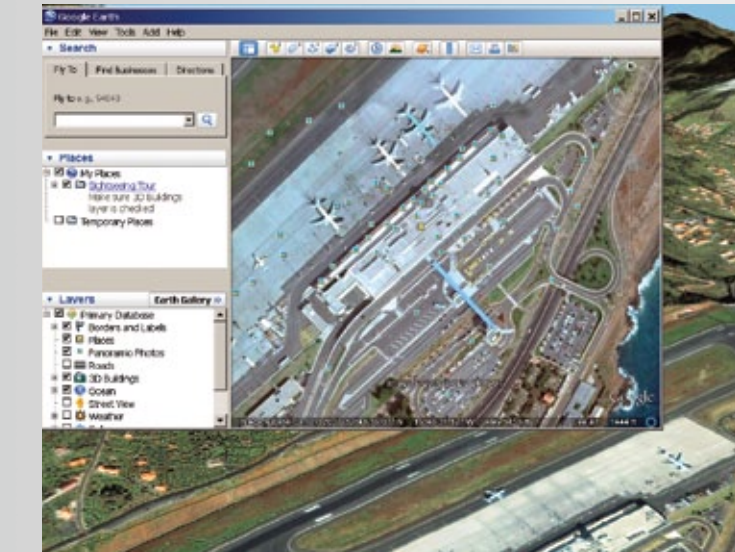
Analysts may now embed a complex 3D scene within an Adobe® PDF document, making it easy to disseminate information through a standard file format and augment intelligence reports with rich 3D information. The analyst simply selects an area of interest to chip and then clicks to publish all the 3D data (terrain, vector data, models, etc.) into a 3D-enabled PDF document. The data appears within the PDF as an interactive image that can be rotated and zoomed.

MISSION SIMULATION WITH HUD



Analysts can program flight sequences within an added heads-up display that includes a compass, north arrow, and bearing tools. Simulating the flight produces better situational understanding of the current heading and bearing relative to a rendezvous point. Alternatively, analysts can configure routes using human or vehicle models to simulate ground-based deployments. Both type of routes can be recorded as an AVI movie file for inclusion in mission briefings.

GOOGLE EARTH SUPPORT



Google Earth™ has become an invaluable tool among warfighters. 3D Pro incorporates two features that make working with Google Earth easier. Analysts can synchronize a viewpoint with the exact location in Google Earth. Analysts can also chip and export a 3D scene with all the 3D data (terrain, vector data, models, etc.) directly into Google Earth KMZ and KML formats.

LINE-OF-SIGHT ANALYSIS



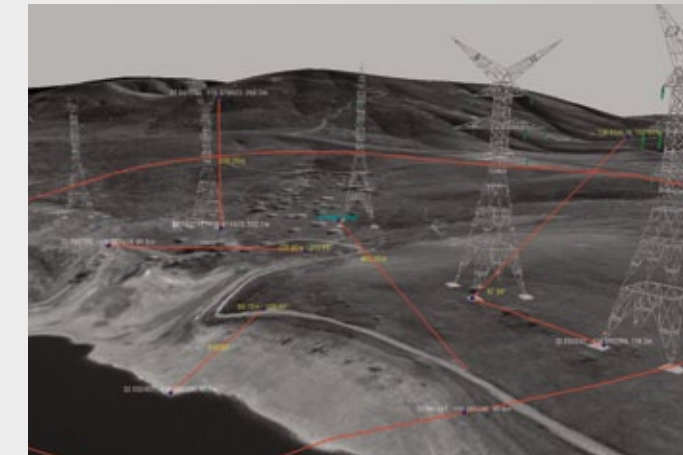
Analysts can utilize the customizable Line-of-Sight tools within 3D Pro to take terrain elevation and 3D model obstructions into account and judge radial or linear visibility from any object, gaining valuable positional insight.

INTERACTIVE LANDING ZONE



Analysts can use the Landing Zone tool to rapidly evaluate potential areas for landing vehicles such as helicopters. The tool combines terrain elevation data with user defined radius and slope. The resulting tool is an interactive marker the analyst moves about the terrain. Green indicates a good site; the analyst leaves a mark. Red indicates a poor landing zone.

MEASURING TOOLS



3D Pro includes a suite of interactive measurement tools that allow analysts to quickly and accurately determine distances between points, heights of objects, angular measurements, slope, area calculations, latitude, longitude, and elevation of objects within the scene. All tools are fully customizable and facilitate gathering critical data useful to soldiers on the ground.