

Maptek I-Site™ Studio

Software Features



GENERAL

- Survey station management
- Record scanner settings with the data
- Use repeated acquisition and averaging to improve data accuracy
- Query range and intensity of a single point
- Query distance, bearing and grade between pairs of points
- Report counts, range and intensity statistics for a scan
- Report only on masked data points to report statistics by areas
- Full report on data statistics recorded
- Fully interactive rotation, zoom and pan of the view
- View data from any aspect, including from scanner, birds-eye view
- Fly or walk through the data
- View scans with created CAD geometry or other imported data to see the scan in relation to existing or planned designs
- Adjustable lights and illumination for surface viewing
- Variable point size to aid visualisation
- 'Mouse free' mode to allow easy manipulation in the field
- Export high resolution screen captures not limited to display size
- Full 'hot key' functionality
- Windows™ style explorer for intuitive data management
- Operates in both 32 bit and 64 bit versions of Windows XP and Vista
- German, Japanese, Spanish and Chinese language editions available

IMPORT/EXPORT FACILITIES

- Import of Maptek I-Site™ 3DP, DXF data, DXB data, DWG data, OBJ data, polygons from ASCII files, 3dv data, and 3dd data, Ptx data
- Scan data saved to disk in a proprietary data format immediately after scanning, for data security and integrity
- Export CAD geometry, scan data and surfaces direct to VULCAN data formats
- Export ired, 00t and jpg for texture drape in Maptek Vulcan™
- Export CAD geometry and scan data to jpg, DXF, DXB, DWG, OBJ, ASCII and Maya formats
- Export to VRML 97, for viewing in web browser
- Import / export between dataengines for improved workflow
- Full unit support (metric and imperial)

FILTERING OPTIONS

- Topography filtering
- Filter by polygon volume limiting, single scan points and scan angle
- Minimum separation filtering
- Filter by surface proximity
- Hide points by range, bounding box, plane, polygon and intensity
- Reduce resolution of points by hiding alternate rows and columns
- Randomly hide points to reduce distribution
- Edge detection techniques show only points on edges in the scan, based on a distance threshold and by colour attributes
- Logical (AND, OR) combinations of masking operations
- Smooth the data to reduce the amount of noise

COLOURING

- Full texture render of 37 mega pixel photo from 4400LR scanner
- Simply applied colour schemes automatically analyse data
- Greyscales and colour spectra mapped onto range / intensity values
- Specially created 'perceptually uniform' colour spectra can be used to avoid misinterpretation of data
- Range and intensity colouring can be blended to add extra dimension to the visualisation
- 'Thresholding' reveals bright spots such as reflectors in the data
- Colouring of filtered points allows patchwork colouring to highlight areas of interest
- Advanced options to refine colouring, allows colour scales to be reversed, equalised and applied over percentile ranges to focus on interesting aspects of the data
- Colour surfaces based on distances from other surfaces

REGISTRATION

- Locate scan in correct easting, northing and elevation obtained from conventional surveying instruments (i.e. GPS, total station) including tilt compensator from the I-Site 4400 scanners
- Multi-point registration to locate data to common points
- Arbitrary translation and rotation of data to 'tweak' the location
- Automatic surface feature registration using any type of data
- Locate data that has been acquired using various scanner frames
- Multi-DOF constrained registration

CAD

- Design points, lines and polygons
- Create text, circles, arcs and rectangles
- Delete geometry
- Move, delete and insert points
- Work in the visualisation environment so geometry can be drawn on the scans and views can be changed interactively during the editing process
- Smart line function to create polylines of scan data, both on scan points and surfaces
- Extrude features such as circles, rectangles and squares
- Register data to topography
- Create contours and sections
- SPG - Survey Point Generator

MODELLING

- Create 3D triangulated surfaces from single and multiple scans
- Create 2½D surfaces from multiple scans
- Create solid triangulation from closed polygons
- Surface facets take on true passive colour of scan data
- Remove unwanted triangles on surface by edge length or orientation criteria
- Adjust the shading and transparency of the surface
- Interactively fit geometric, primitive shapes (planes, lines, circles) to scan data points
- Fitted objects are placed to a higher degree of accuracy than the individual scan points
- Edit and combine these objects to construct complex 3D CAD models
- Move, rotate, scale and copy objects
- Create a mirror of original data set
- Find boundaries, check surfaces, add facets and automatically fix holes in triangulations
- Smart facet reduction tools
- Fragmentation of surfaces against each other

VOLUME CALCULATIONS

- Surface volumes calculate volumes between two surfaces
- Solid volumes calculate the volume within a void
- Differential solid volume between 2 solids

SYSTEM REQUIREMENTS

Operating System

- Windows 2000 Service Pack 2 or greater
- Windows XP Professional, Windows XP Professional x64

	Minimum Specs	Recommended
Processor	Pentium III 600 MHz	64 bit compatible
OS	Windows 2000, XP	Windows XP x 64
RAM	512 Mb RAM	2 Gb RAM
Hard Disk	10 Gb	100 Gb
Graphics	OpenGL Accelerated	256 Mb nVIDIA GeForce or ATI Radeon series
Display	1024x768 resolution	1280x1024 resolution
Peripherals	3-button mouse	Scroll-wheel mouse