

3D Scanning

In today's global market, companies are thinking more out-of-the-box than ever. Companies are striving to be more competitive and think of new ways to deliver their products to the marketplace. They have realized that the world is a very wide-open market and getting product to their clients can be difficult and sometimes very costly. They are always looking for the best ways in order to cut delays to the client.

What if you could receive extremely accurate (practically real time) 3D images of your facility?

Apex Engineering uses one of the most up-to-date state of the art 3D color scanners on the market today. The 3D scan data (point cloud) can easily be imported into all commonly used software solutions for architecture, civil engineering, construction, industrial manufacturing and land surveying. Distance dimensions, area and volume calculations, analysis and inspection tasks and documentation can thus be carried out quickly, precisely, and reliably.

There is no restriction on operating the existing plant equipment while the scans are being performed. To be safe, we do usually obtain a hot work permit if it is in a hazardous location.

Typical deliverables are raw FLS files from the scanner, individual RCS files from each scanned location, and a registered point cloud of all scans into a single RCP file on an external hard drive.

You can use free downloadable software SCENE LT (available at <http://www.faro.com/faro-3d-app-center/stand-alone-apps/scene-lt>) to view the raw FLS files that we will provide. Autodesk AutoCAD or other modelling software can be used in conjunction with the RCP file to model steel, equipment, piping, etc. Individual scans or a single RCP file can also be viewed through Navisworks or Simulate.

Features/Advantages:

- Distance accuracy: +/-2mm
- Range = 0.6m up to 130m
- 976,000 points per second
- Point cloud to ACAD interference checks
- Documents difficult to access areas
- Virtual Simulation – Scans are integrated in to ACAD 3D to provide fly thru capabilities of new and existing systems
- Decreased field work

- Reduced process outages and downtime via fast scans
- Better accuracy than level, plumb bob, and other field measurement devices
- Project Construction Tracking – Construction Management Documenting
- Site training aid
- Increase pre-fabrication capability due to better accuracy

The spatial imaging collected during the 3D scan provides facility managers a virtual world that can be utilized during safety reviews, training, maintenance management and as-built updates.

Benefits of 3D scanning to a facility:

1. Complete documentation (including cable trays, light fixtures, HVAC ducting, etc.) of the existing building as-builts.
2. Verification of process lines and equipment
3. Virtual world in which you can walk to the specific equipment/area to be reviewed
4. Increase safety by completing virtual reviews

If you are considering 3D scanning your process, please see us at Apex Engineering. We have years in 3D scanning experience. View our website at <http://www.apex-engineering.com> to see what we can do for you.



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