Winter Haven Airport
Winter Haven, Florida

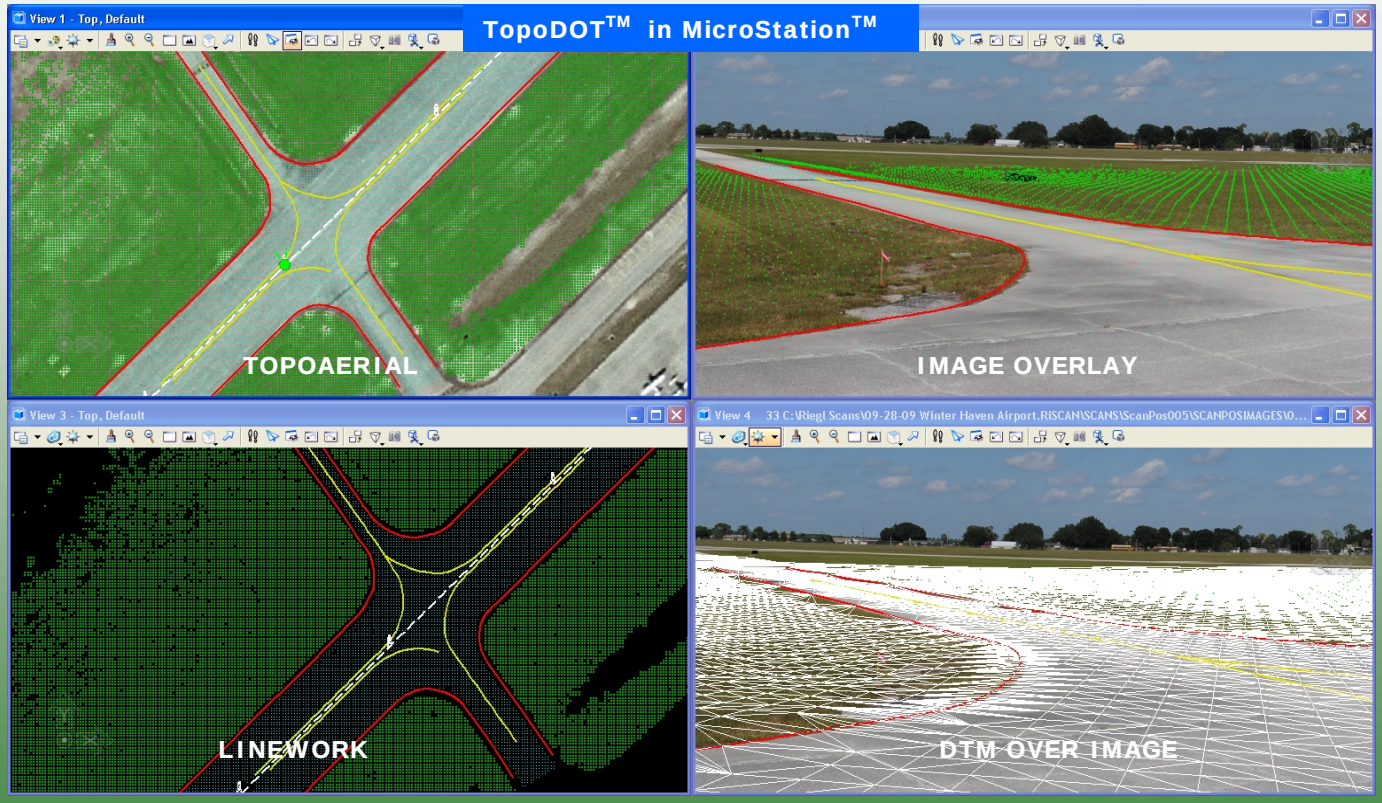
Customer:	Ranger Construction Industries
Surveyor:	Leading Edge Land Surveying
Project:	Winter Haven Municipal Airport Runway Rehabilitation
Dates:	January 2010
Size:	1 Mile
Type:	Survey – Full DTM/TOPO of runway
Project Manager:	Chris Stelly, PLM

PROJECT HIGHLIGHTS

- Very high resolution topography/DTM exceeding project survey requirements
- Field time reduced by 80% over conventional
- Project time reduced by approximately 20%
- Lower cost / higher quality deliverable over conventional survey

Project Summary:

Leading Edge Land Surveying applied 3D imaging technology to produce a full DTM/Topographic survey for Ranger Construction Industries. The scanned section consisted of 1 mile of runway on the Winter Haven Municipal Airport before after resurfacing. A control network was established using conventional surveying methods. 3D image data was acquired efficiently using Leading Edge's TopoLIFT™/RIEGL VZ400 system. A highly detailed topography was extracted from the data including runway paved shoulder edge, runway lighting, traffic lanes, spot shots (5x5 grid size on runway surface) covering the hundreds of specific locations the customer required elevations. The combination of these extracted features gives an extremely detailed DTM. Project collection took 1 day for a crew of two and the processing took 2 days for 1 processor for each data set. Total project time and cost were less than conventional survey and yielded a superior product.



Deliverable Summary

- **Data processed using Certainty 3D's TopoDOT™ application in MicroStation™**
- **All 3D image data is traceable back to control network survey reference**
- **TopoDOT™ generated model delivered in MicroStation™ and LandXML™ formats**
- **Completed Topography including all breaklines and elevations using Florida DOT required formats**

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