

TRUEVIZ[®] *for Roads*



To 3D or Not to 3D, That is the Question

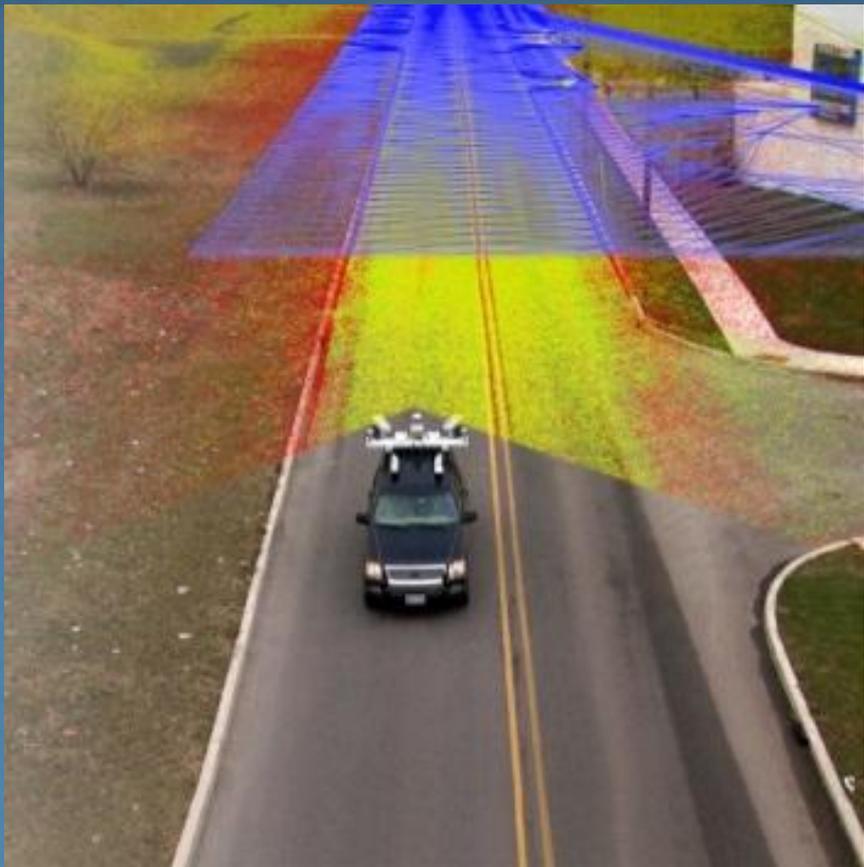
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Deployment Team Director

Sept 15, 2011 IHEEP

To 3D or Not to 3D

- Is the value of 3D limited to:
 - the phase of the project? Data acquisition, design, construct
 - the type of project? DBB, DB/P3
 - Characteristics of a project? Milling, widening, interchange, etc....

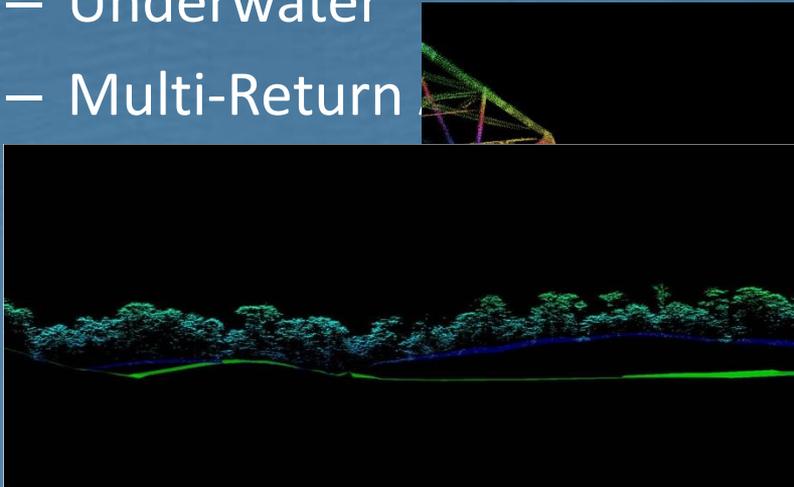
To 3D or Not to 3D – Data Acquisition



To 3D or Not to 3D – Data Acquisition

- Current Technologies

- [Mobile Lidar](#)
- GPR, TDEM (Time Domain Electromagnetic Induction)
- Underwater
- Multi-Return



To 3D or Not to 3D – Data Acquisition

- Benefits
 - Safety
 - Increased
 - Reduction



	TOTAL	
	Cut (CY)	Fill (CY)
Base with OLD Survey	27,856,739	20,927,629
Optimized (Unadjusted)	18,520,561	18,451,307
Earthwork Reduction	9,336,178 (34%)	2,142,021 (12%)

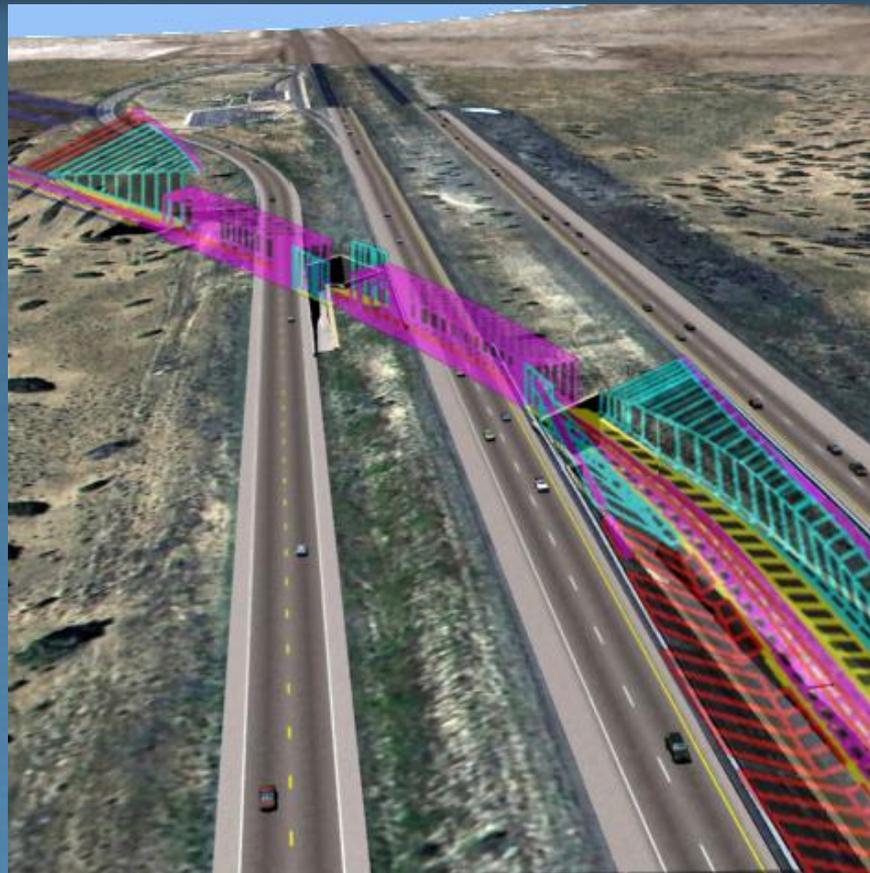


To 3D or Not to 3D – Data Acquisition

- Issues:
 - [Storage](#)
 - Compete
 - Native So



To 3D or Not to 3D – Design



To 3D or Not to 3D – Design

- Benefits:
 - Collaboration
 - Quality
 - Completeness
 - Delivery



To 3D or Not to 3D – Design

- Issues:
 - Software
 - Change!!!
 - Managing pro
 - QA/QC Proced
 - Deliverables ?

The screenshot shows the AutoCAD 2012 interface with the QAassist software window open. The QAassist window has a title bar with 'HNTB' and 'SHARING' buttons. The main window is titled 'QAassist' and contains the following sections:

- Input Parameters:**
 - Method of Placement: **MS - Multi-Station** (selected)
 - Placement: **IF - Input File**
 - Alignment File: [Browse]
 - Horz Alignment: [Dropdown]
 - Vert Alignment: [Dropdown]
 - Label: [Input field]
 - Interval: **0**
 - Begin Station: [Input field]
 - End Station: [Input field]
- Surface List:**
 - Buttons: Add, Remove
 - List:
 - \\dalw00public\for_drew\16TH ST DTM.dtm
 - \\dalw00public\for_drew\Q LINE DTM.dtm
 - \\dalw00public\for_drew\R LINE DTM.dtm
 - \\dalw00public\for_drew\RT215 MAIN.DTM 120809.dtm
 - \\dalw00public\for_drew\S LINE DTM.dtm
- Buttons:** Add, Update, Remove, Create

At the bottom of the QAassist window, there is a data table with the following columns: Label, Method, Horizontal..., Vertical Aliq..., PGL Offset, Station, Offset, Slope, Northing, Easting, Elevation.

Label	Method	Horizontal ...	Vertical Aliq...	PGL Offset	Station	Offset	Slope	Northing	Easting	Elevation
54	IF				569309.990			2064313.190	337.040	
55	IF				569376.330			2064289.820	343.080	
56	IF				569422.720			2064294.390	341.420	
57	IF				569494.290			2064293.750	340.740	
58	IF				569541.160			2064294.210	341.240	
59	IF				569696.100			2064300.660	345.970	
60	IF				569698.280			2064314.830	338.060	
61	IF				570145.970			2064289.730	353.890	
62	IF				569465.420			2064346.420	338.050	
63	IF				569838.860			2064306.690	340.250	
64	IF				570047.430			2064176.740	343.880	
65	IF				569971.840			2064221.380	341.660	

To 3D or Not to 3D – Construct



To 3D or Not to 3D – Construct

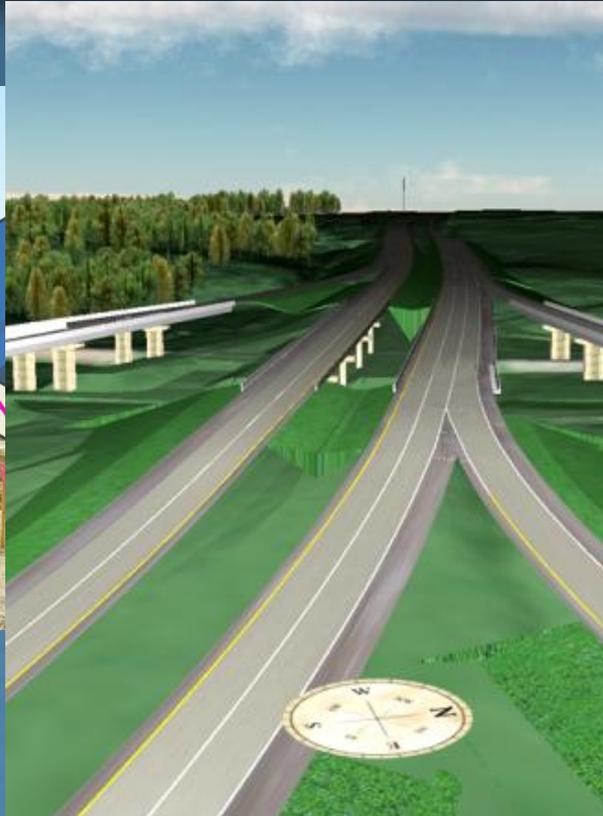
- Benefits:
 - Reduction in:
 - Data Re-Work
 - Schedule
 - Risk
 - Design Interpretation
 - Quantity Growth
 - Complete Design

To 3D or Not to 3D – Construct

- Issues:
 - Software compatibility
 - Design is Final In-Place

To 3D or Not to 3D – Key Drivers

- AMG
- 4 & 5 D
- Visualization



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No