



**Working Smarter, Together**

# Google and Simulation with MicroStation

John A Frampton  
Product Manager MicroStation, PowerDraft and View

# John Frampton – *Product Manager*

- Located in western Pennsylvania
- Bentley employee for over 12 years
- Over **twenty years** of design/CADD experience using and supporting **Bentley, Intergraph, and Autodesk products.**
- **CADD manager** for a very large engineering firm in Pennsylvania
- Email [john.frampton@bentley.com](mailto:john.frampton@bentley.com)

# MicroStation®

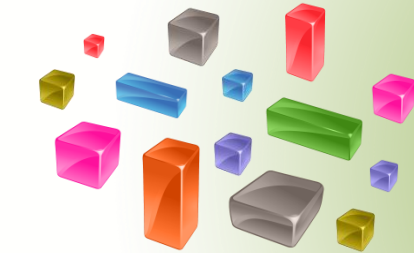
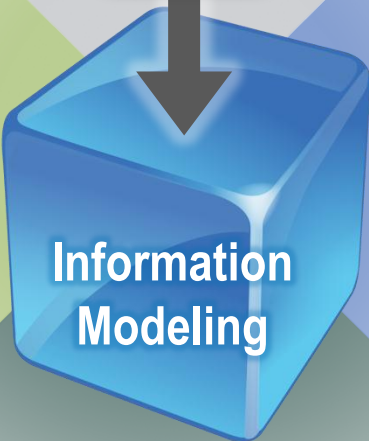
An unrivaled **information modeling environment** for architecture, engineering, construction, and operations for all infrastructure types...



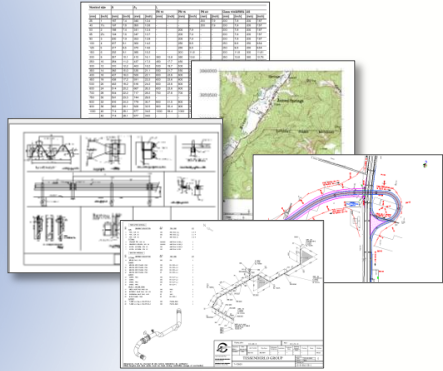
...that can be used as both a **software application** and as a **technology platform** for discipline-specific applications.

# MicroStation

Immersive Interaction

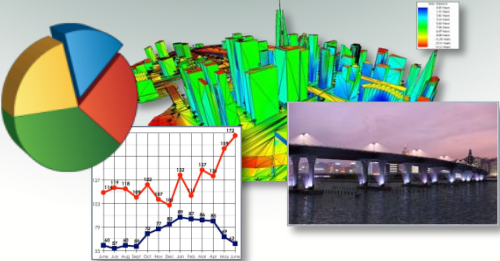


Comprehensive  
Breadth and Depth



Trusted Deliverables

Performance Simulation



# MicroStation V8*i* Generation Enhancements

## Comprehensive Breadth and Depth

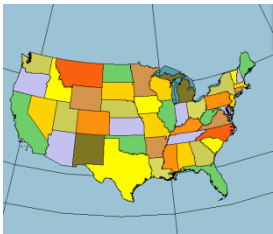
- Google

V8i

## Performance Simulation

- Solar analysis

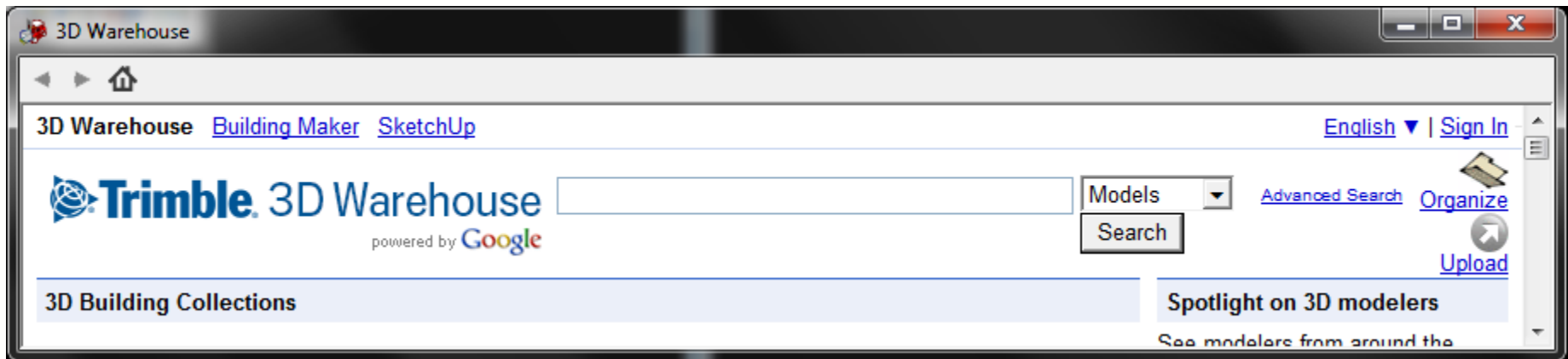
V8i





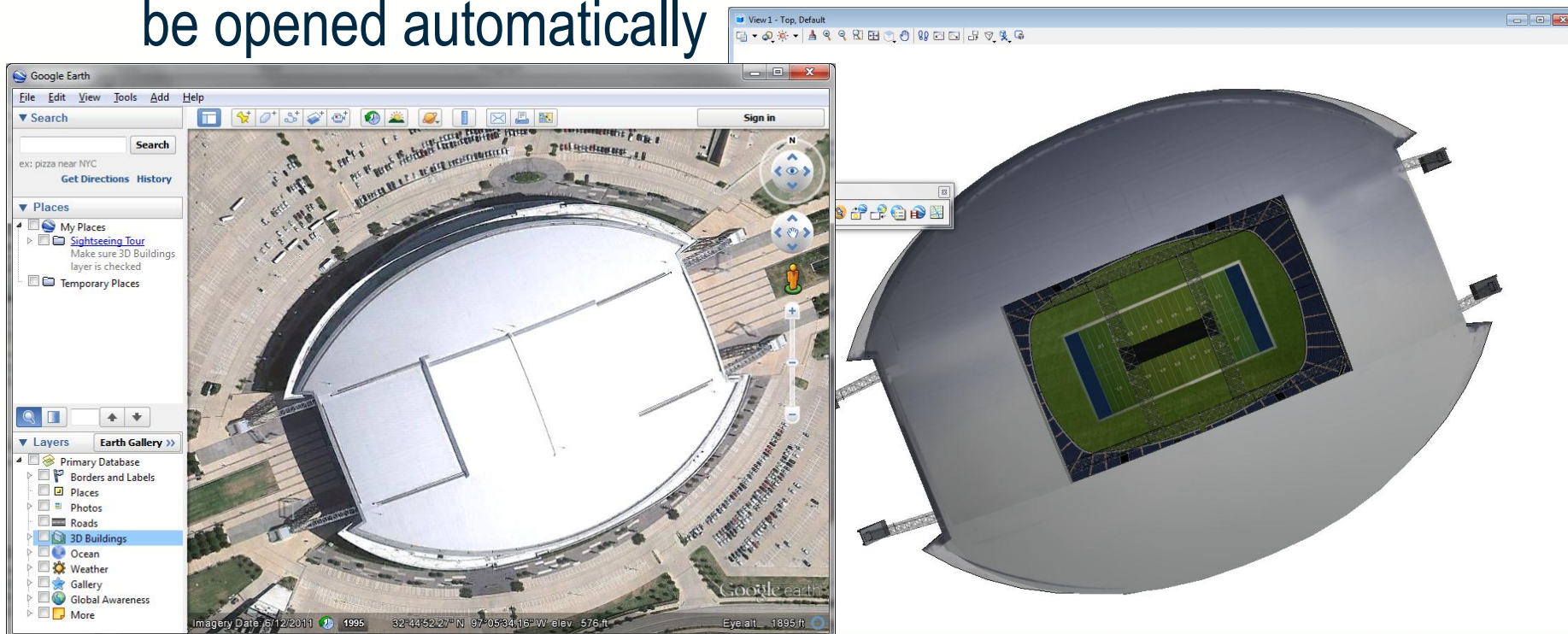
# Trimble (Google) 3D Warehouse

- Lets you open and place SketchUp models
- It gives you direct access to the growing collection of 3D models available from the Google 3D Warehouse
- You also can upload your models to 3D Warehouse
- You can import SketchUp 5, 6, 7, and 8 files; reference SketchUp files; and export them as SketchUp 8 files.



# Matching the views MicroStation to Google Earth

- Used to have Google Earth navigate to the current MicroStation view
- If Google Earth is not open when the tool is used, it will be opened automatically



# Capturing a Google Earth image

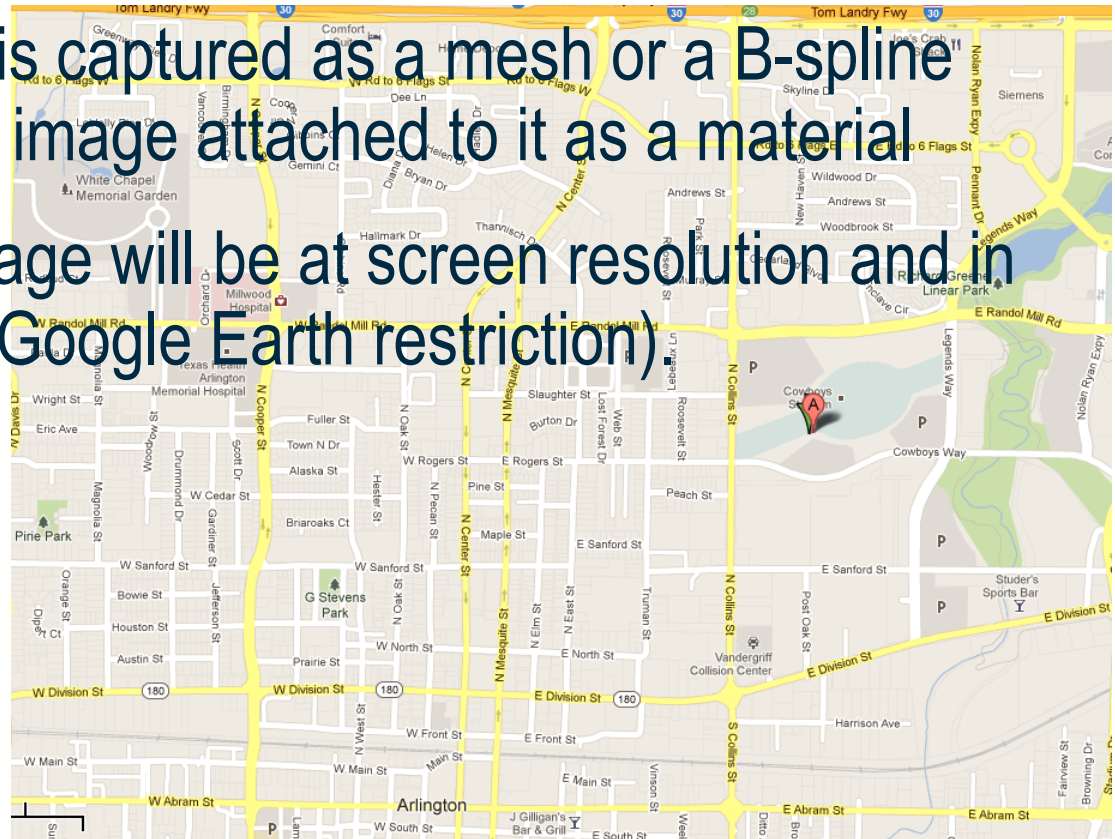
- Used to capture the terrain and imagery of the current Google Earth view
- Terrain imagery is captured as a mesh or a B-spline surface, with the image attached to it as a material
- The captured image will be at screen resolution and in monochrome (a Google Earth restriction).





# Open Google Maps at a location

- Used to capture the terrain and imagery of the current Google Earth view
- Terrain imagery is captured as a mesh or a B-spline surface, with the image attached to it as a material
- The captured image will be at screen resolution and in monochrome (a Google Earth restriction)



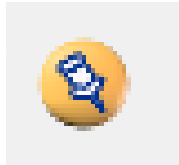
# Placing models in Google Earth

- Used to export design geometry to Google Earth. Location of the geometry in Google Earth can be defined as follows:
  - Created a Placemark in Google Earth.
  - Use the [Define Placemark Monument tool](#) to associate the Placemark to a monument in your model.
  - Geographic location of the model's origin is defined from the latitude and longitude

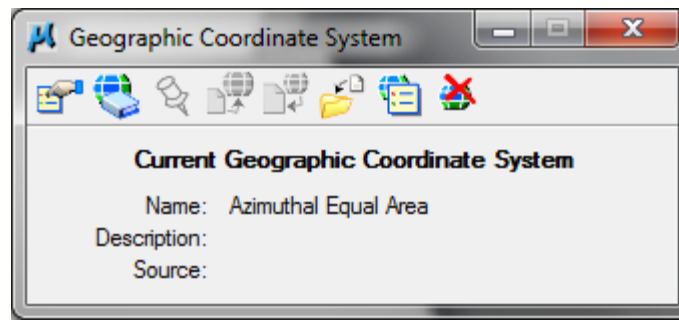


# Google Earth important features

- Place marks
  - Used to associate a geographical location to a Monument point in a model.



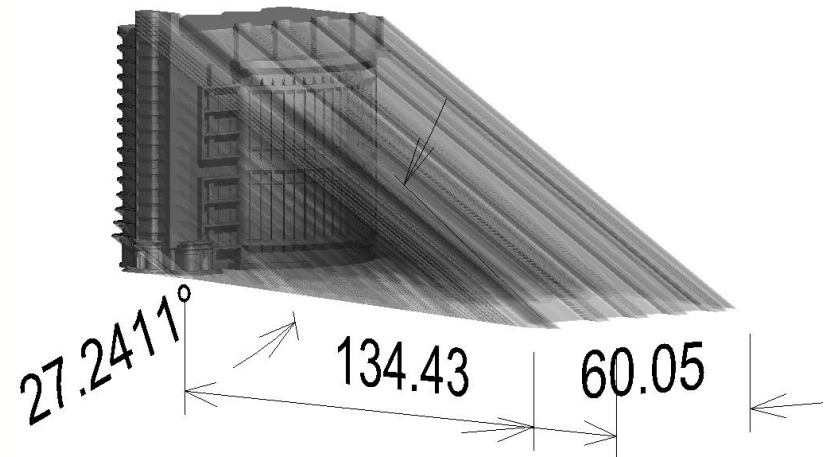
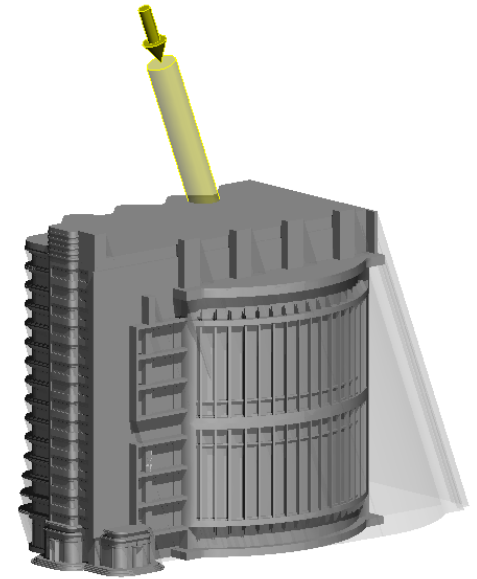
- Geocoordination
  - Used to select a geographic coordinate system (GCS) from the library of predefined geographic coordinate systems.



# Solar Shadow Generator

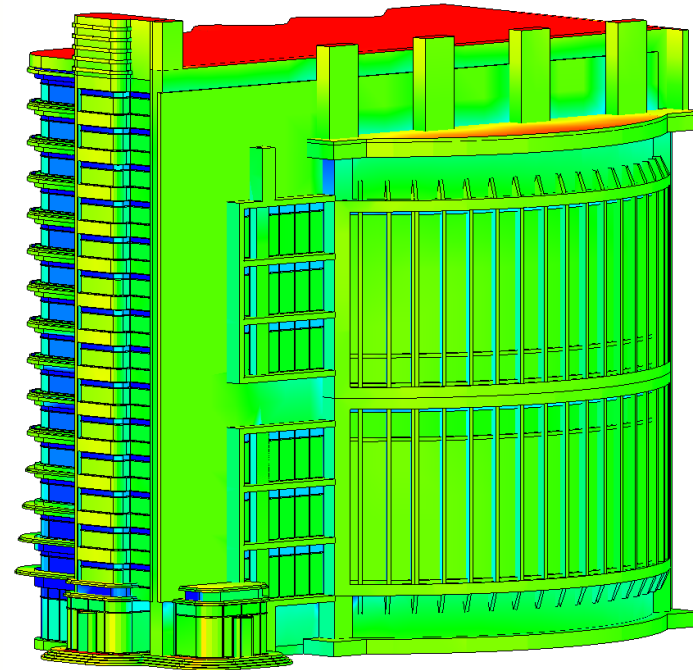
## Shadow Generator

- **produces geometry** that represents:
  - the boundaries of solar shadows **at a given time**
  - used for evaluating design alternatives and presenting conceptual designs.
  - By generating the **shadow geometry** you can determine and accurately present the **impact that new structures will have on other's access to daylight.**





# Solar Exposure Calculator



## Solar Exposure Calculator

- used to evaluate the impact of the sun on a proposed design. Both **energy efficiency** and **right-to-light issues** make it vital to be able to accurately evaluate and present the effect of **sunlight and the shadows** produced when sunlight is obstructed.

Q&A

You have

Questions

We have

Answers

# Bentley V8i (SELECTseries 3) – Autodesk® RealDWG™ 2013 service pack 1.1

- Features include:
  - Supports opening and saving 2013 DWG files
  - Works with many Bentley V8i products \*
  - Works with 2013 Autodesk® Object enablers
  - Support for AutoPlant and ProStructures Object enablers
  - Contains RealDWG™ 2013 service pack 1.1

# Commercial Releases

- MicroStation SELECTseries 3 update 1 (2012/10)
- PowerDraft SELECTseries 3 update 1 (2012/11)
- Bentley View SELECTseries 3 update 1 (2012/11)





Mark Penn

Profile

Blogs

MARK PENN'S POSTS

Sort by: Most Recent | **Most Views** | Most Comments

**MICROSTATION V8I BLOG**  
**(New in SS3) Discipline and Purpose Properties for Saved Views** ★★★★★ 5

Mar 26, 2012 by **Mark Penn**  
MicroStation V8 i (SELECTseries 3) introduces two new properties to classify Dynamic Views and Drawings - Discipline and Purpose. For a large, multi-discipline infrastructure project, it is conceivable for you to have 100's if not 1000's of Dynamic Views and Drawings. In this scenario, Discipline and Purpose properties allow that additional layer of granularity to help you filter the Dynamic Views and Drawings so they are manageable and...

**MICROSTATION V8I BLOG**  
**(New in SS3) Hypermodeling - Annotations in 3D** ★★★★★ 4

Mar 20, 2012 by **Mark Penn**  
Gone are the days when in a design model you could just view a model geometry and had to traverse to the sheet and drawing models each time you want to view the dimensions, annotations and other details. Now with hypermodels, you can place callouts in 3D design model and also view sheet graphics in a 3D design model, in place, automatically. This makes drawings easier to understand and interpret. The general workflow to use callouts in a project is...

**MICROSTATION V8I BLOG**  
**(New in SS3) Drawing Seeds in DGN Libraries** ★★★★★ 3

Mar 20, 2012 by **Mark Penn**  
The process of creating drawings and sheets is a complex operation since it involves several subsystems. The outcome is effectively a chain of objects as follows: Clip Volume > Saved View > Drawing Model > Reference Attachment in Drawing Model > Sheet Model > Reference Attachment in Sheet Model > Drawing Title. The following poster describes these objects and their relationships. In order to comply with your company's CAD standards...

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