

Talk on “Reality Modeling with Bentley System’s ContextCapture”

Organised by Information and Communications Technology Special Interest Group, IEM and
Highway and Transportation Engineering Technical Division, IEM
BEM Approved CPD/PDP Hours: N/A

Date: 28 September 2017, Thursday
Time: 5.30 pm to 7.30 pm (*Refreshments will be served at 5.00 pm*)
Venue: Wisma IEM, C&S Lecture Room and TUS Lecture Room, 2nd Floor.
Speaker: Mr. Jeremy Cordeiro and Mr. Orven Fajardo

Agenda:

ContextCapture

Introduction – Capturing Reality (1hr)

- What is ContextCapture
- Where in the asset lifecycle is ContextCapture being utilized?
- What industries are adopting this solution
- How does ContextCapture work
- What considerations to make when capturing data
- Examples of ContextCapture model sets

Designing in Context – Reality Modeling Workflow (1hr)

- Integrate reality modeling with BIM
- Case Study Example – Road and Tunnel Design
- Case Study Example – Construction Progress Monitoring

SYNOPSIS

Reality modeling is the process of creating accurate digital models representing the current state of an infrastructure asset. These models may capture the visual, dimensional, or performance aspects of the asset. One powerful tool for reality modeling, Bentley's ContextCapture, makes it possible to quickly create visually and dimensionally accurate 3D digital models based on photographic imagery or LiDAR scans. With modest technical know-how and practice, it is possible to create a model with any type of camera, whether it be a DSLR on ground or from a helicopter, a camera mounted on a UAV, or a multi-camera system mounted on an airplane.

Reality modeling through ContextCapture can provide an opportunity for firms engaged in the design, engineering, and project delivery to provide additional value-added services to their customers. Reality modeling based on Bentley's tools is uniquely positioned to take advantage of this opportunity due to a number of characteristics:

- 3D models can be quickly created of the current, as-is, state of an infrastructure asset which are both visually and dimensionally accurate. These models are referred to as reality meshes.
- The reality meshes created in the way integrate seamlessly with the Bentley modeling tools, such as MicroStation and the many design applications. This integration enables detailed design
- Modeling with standard Bentley design tools directly within the context of the reality meshes without requiring any translation or transformation. Further, the reality meshes can be edited in a variety of ways to suit a specific use case.
- All the standard deliverables can be directly created from these integrated models, e.g., 2D drawings, 3D PDFs, renderings, animations, 3D prints.
- The reality meshes can be exported into many industry standard formats, e.g., .obj, .fbx, etc., to be used by other non-Bentley applications.

This unique characteristic of the Bentley reality modeling toolset makes possible a broad range of opportunities:

- Design in context
- Interactive inspection
- Construction monitoring/status
- Environmental analysis
- Safety and security analysis

Join us for a short introduction on how reality modeling will benefit your projects and increase your design effectiveness and delivery.

BIODATA OF SPEAKER

1. Mr. Jeremy Cordeiro, Product Consultant – Reality Modelling, Bentley Systems

Having spent 20 years, in the field of computer graphics and 3D production, Jeremy has provided technological solutions to the VFX, Games and 3D Animation Industries in Singapore Malaysia and Indonesia. Learning what he has in those fields, he is now working with Bentley Systems in providing valuable insights in reality modeling and how photogrammetry is allowing infrastructure companies gain a better understanding of the actual sites they are developing.

2. Mr. Orven Fajardo, Consultant – Design Modeling, Bentley Systems

Orven Fajardo is a Civil Engineer who focused his career on Building Information Modeling. With more than 8 years in the civil industry, he has been working closely with various regional authorities to pave the way for a unified BIM approach for various projects like MRT stations and its tunnels while leveraging on Bentley BIM solutions.

Ir. Chai Chen Sing

Chairman,
Information and Communications Technology Special Interest Group,
IEM

Ir. Richard Wong Fun Chuen

Chairman,
Highway and Transportation Engineering Technical Division,
IEM

ANNOUNCEMENTS TO NOTE:

- **Non-members** may also attend the talk but will need to pay a registration fee of **RM50** and an administrative fee of **RM15**. GST is inclusive.
- Limited seats are available on a "first come first served" basis (maximum 100 participants). **To secure your seat, kindly register online at www.myiem.org.my.**

ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of **RM15** is payable for talks organized by IEM. GST is inclusive.
- Student Members are however exempted.

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