

## Follow Up Questions and Answers for June 10, 2010 CE News and Rebuilding America's Infrastructure Webcast, "Visualizing Civil Designs with the Power of BIM"

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**Q: Is Dynamite only available through subscription?**

A: Yes, the extension is free to Civil 3D and 3ds Max Design subscription customers.

**Q: What software do we need for the traffic simulations?**

A: The software used for the traffic simulation shown was VISSIM.

**Q: Could you speak about visualization in change management.**

A: 3ds Max: The buildings and surroundings showed a lot of detail, other than the road design and blocks which seem to be imported using styles. This type of content is added using content libraries and the process is made easier by the Civil Visualization Extension that runs with 3ds Max Design. Also helps with change management because the content has a link to the civil geometry and if it moves, then the content also moves.

**Q: Can this be used to assess the effects of lighting on roads?**

A: Absolutely. 3ds Max Design has several different lighting effects that can be used in the analysis.

**Q: What's the best source for knowing what technology to use, and when and what operating system is needed?**

A: A vendor's website is the best place to start. For the software that were demonstrated during this webcast, including LandXplorer, 3ds Max Design, and Navisworks Manage, the product pages provide more detail on uses and operating systems supported.

**Q: Are most of the 4D visualizations based on integrated CPM or 3rd party software (e.g. Primavera, MS Project)?**

A: Most contactors are using Primavera or MS Project, but it is not exclusive.

**Q: Is there a 2011 version of LandXplorer to collaborate with 2011 Civil 3D?**

A: There is a 2011 version of LandXplorer that allows you to aggregate data from AutoCAD Civil 3D.

**Q: Is there a large learning curve to the BIM implementation?**

A: Because BIM is a process, the learning curve depends on an organization's willingness to embrace change. It is dependent on using consistent, reliable information throughout the

lifecycle of a project. Changing the old ways of working -- where different parts of the organization rarely spoke to each other, much less shared information -- are needed. Embracing technology that fosters this change is also required. Having someone champion the effort in an organization will speed up the implementation immensely.

**Q: How would you rate the level of integration/data sharing with GIS platforms: high, medium, or low?**

A: For something like LandXplorer -- very high. Civil 3D also is able to integrate data from many different GIS platforms because it is built on Map 3D and takes advantage of FDO, which allows in-situ data access, versus the import/export types of processes. Since you can take info from Civil 3D into 3ds Max Design using the Civil Visualization Extension, I think the level of sharing with GIS platforms here is also high.

**Q: Identify which DOTs are furthest along using BIM?**

A: DOTs are just starting to embrace the idea of BIM and are beginning to build standards and workflows that will support its full implementation. It is difficult to judge any that might be furthest along.

**Q: As a municipality, we still use the design-bid-build model. What is the level of support from the design community in the face of liability issues?**

A: BIM works with design-bid-build. BIM is about being able to explore a project's key physical and functional characteristics digitally, before going to construction where many problems are uncovered and cost the most to correct. Many government agencies that are moving to sharing models with construction are including language in their contracts that define whose is responsible in light of model inaccuracies. In the end, more problems are found than encountered and BIM enables a more collaborative approach when using a design-bid-build model.

**Q: Perhaps it was mentioned during the presentation, but can you link a scheduling program such as Primavera to the visualization software and see what you think will be the work activities?**

A: Yes, in Navisworks you can link to a schedule from Primavera to do the 4D modeling.

**Q: How do I start to learn this process of BIM and visualization?**

A good place to start is on the Autodesk website. Several white papers and links to articles can be found that will get you started.