

Immersive 3D Worlds for Real-Time Transportation and Land Use Planning

Orbital Technologies Corporation's (ORBITEC) Hypercosm 3D Interactive Systems and Services Group announced today that it has won a subcontract from the Tri-County Regional Planning Commission (TCRPC) of Peoria, Illinois to build a real-time, interactive 3D planning and visualization software tool. Funding for the DVD-based tool is provided by the Federal Highway Administration's Surface Transportation Environment and Planning Cooperative Research Program (STEP).

The objective of this project is to create a 3D planning tool that will help bring visual representation of development and transportation infrastructure into the decision making process. The goal is to use the software to build consensus and enhance public participation to create a shared vision for the future by using a medium that can truly bring the public into the development.

At the start of the simple program a user will be presented with a non-descript one-mile by one half-mile swath of land. ORBITEC's 3D planning configurator will then present two options: user-defined or pre-defined scenarios. Depending on which of the two options is selected, additional questions (such as the desire for bicycle lanes or sidewalks to street types and land use) will be posed. From these choices, over 900 possible scenarios could be created. With so many potential options, ORBITEC is using its specialized Hypercosm 3D simulation software to generate in real-time the visualizations.

Each generated 3D scene will be presented to the user with a variety of options for viewing. A user may select to:

- **view** a pre-scripted tour of the development by following a number of camera views,
- **walk** through the environment at the street level (using the mouse or arrow keys), or
- **fly** over the environment for a birds-eye view.

These 3D environments will not be presented as a pre-scripted video, which allow only a single view of the scene. Instead, the user will be immersed in an interactive 3D world where they can control their view, time of exploration, or look at points of interest.

"We are excited to engage ORBITEC'S Hypercosm 3D visualization experience in this project," said Nick Hayward, land use and environmental planner with TCRPC. "This software will be a valuable tool in enhancing public participation processes for transportation and development projects."

In addition to a 3D visual interpretation, a development report card will be generated for each scenario created. The report card will evaluate many different aspects of the scenario, including air quality, transit feasibility, stormwater runoff and habitat sustainability. Each scenario will receive a thumbs up or thumbs down for each category.

“This project is a great example of how 3D visualization can really make a difference in our communities,” said Marty Gustafson, ORBITEC’s Hypercosm 3D Interactive Systems and Services Manager. “Most public outreach in transportation and land use planning still depends on aerial photography and static display boards. An immersive 3D solution literally brings a whole new way of looking at development into the discussion.”

About ORBITEC’s Hypercosm Software

ORBITEC’s Hypercosm 3D Interactive Systems & Services group is a leader in interactive simulation software for web-based training, education and design visualization. Using their Hypercosm software’s patented approach to encoding object geometry and behaviors, Hypercosm 3D models and simulations are practical for web-based interactive applications. Hypercosm has been used for astronaut training (including assembly simulations for the new NASA COLBERT treadmill), weather effects simulation and microgames for the military, science education tools and 3D architectural visualization.

For 3D modelers and website developers, Hypercosm offers a unique set of tools for Autodesk’s 3ds Max and Google SketchUp. They include:

- The **Hypercosm Teleporter** will make web-based presentation practical for 3D models and animations. A 3ds Max or SketchUp user can now get more value out of their 3D models by creating an on-line portfolio or sharing with customers, colleagues, friends and family through webpages or email just like other electronic documents.
- The **Hypercosm Player** is a free viewer that integrates with standard web browsers for displaying Hypercosm applets.
- The **Hypercosm Studio** development environment for programming unlimited behaviors and interactions into standard 3D models.

For more information and to view solution demonstrations, visit us on-line at www.hypercosm.com.

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