

CASE STUDY: Miami DDA



How do you keep tabs on all of the development

in one of the world's fastest growing areas, Downtown Miami, and visualize it in an engaging way? This constantly evolving skyline posed some unique challenges to the Miami Downtown Development Authority (DDA), focused on not only communicating the current development surge, but also looking toward future construction and economic growth.

BACKGROUND

The DDA, an independent public agency of the City of Miami, had some hurdles to overcome. First, Google Earth's "retirement" of its web plug-in left a lack of "real world" building content to access on the internet. Second, the DDA evaluated and tested a host of other so-called solutions, but found them too time-consuming to operate, too costly, and ineffectual in delivering a usable solution at the end of the project.

CyberCity 3D, Inc. (CC3D), a Southern-California based, leading geospatial modeling and mapping company which streams 3D buildings for GIS, appeared on the DDA's radar. The DDA tasked CC3D to help stakeholders visually track downtown building momentum by starting with an accurate 3D GIS city model.



Mapping Downtown
Miami's Growth...
in 2D (before)

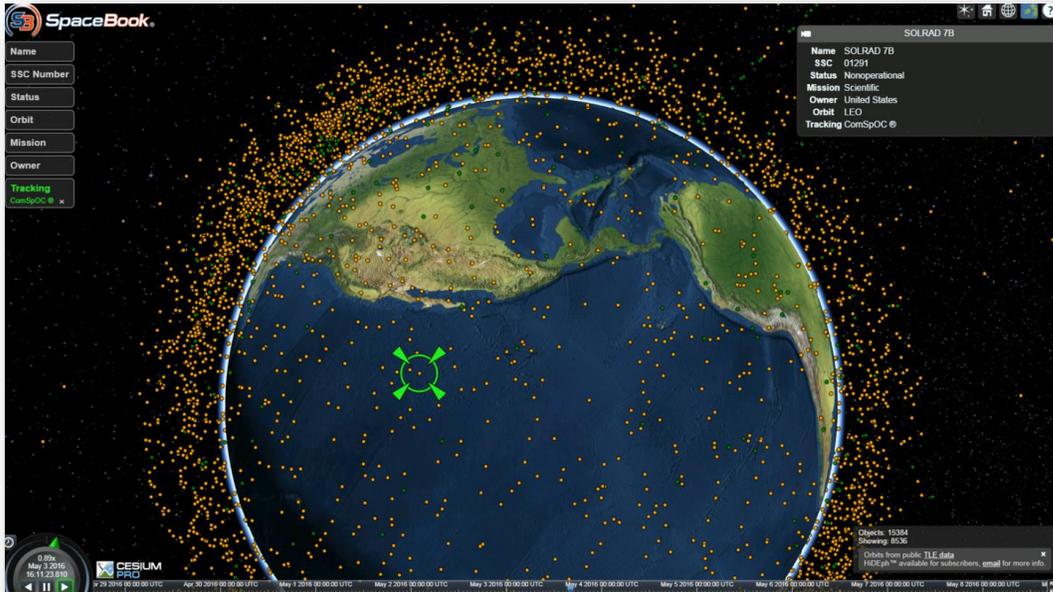


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SOLUTION

CyberCity 3D was up to the challenge. It first acquired the necessary aerial stereo imagery to generate its high resolution, information-packed building models. CC3D then extracted the building features and created point clouds to provide source data for its automatically generated CC-Modeler® software process. With the building point clouds, the models were generated utilizing CC3D's patent-pending process, the core of this ground-breaking technology. After generating the models, they were reviewed, edited, and then cut by terrain. The Company's native software format can be converted to most commercial formats, making it a smooth transition for clients such as Miami DDA in every application from Esri to Autodesk.

Miami DDA had a stunning, accurate 3D map—but it wanted more. "More" came in the form of an open architecture 3D globe called [Cesium](#), developed by CC3D partner Analytical Graphics, Inc. (AGI).



The Open Architecture 3D globe from Cesium-- here tracking all of Earth's satellites in real-time

Integrating with the amazing—and free-- Cesium 3D Globe, CyberCity 3D streamed the Downtown Miami "smart" 3D buildings from a newly developed "3D building server". The result: a blazing fast, interactive 3D mapping experience that works in all environments including desktops, tablets, and mobile devices.

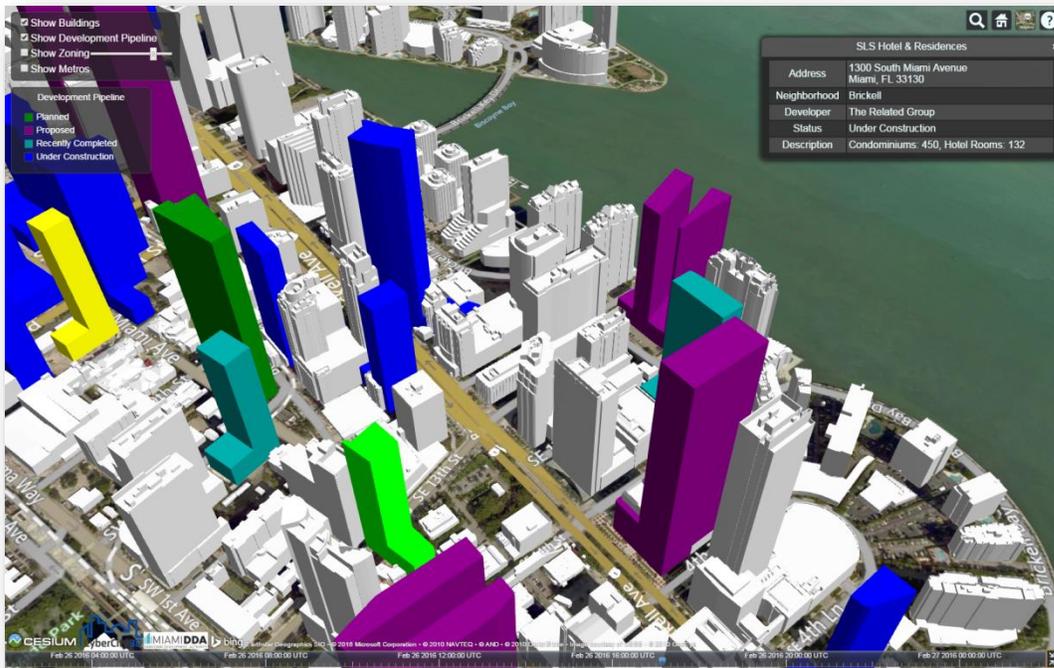
Miami DDA's streaming 3D map includes 5,759 accurate, three-dimensional buildings and 120 3D building locations that are proposed, planned, under construction, or recently completed. This visually stunning map allows city executives, stakeholders, and the community at large to gain cognitive awareness of the downtown area: they can virtually see what exists and what structures await in the pipeline for this vital, tropical, waterfront metropolitan center.



CyberCity 3D uses advanced photogrammetry to digitize 3D models from source imagery



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Streaming 3D Map of the Evolving Miami Skyline - 100% Web Architecture

Miami DDA worked with CyberCity 3D to develop this 3D streaming map to track and communicate program development and execution as well as visualize urban transportation and sustainability planning. Both teams worked to integrate detailed capital improvement information, accessed by clicking color-coded building models on the map, for a robust "smart 3D" experience. The open architecture software allows for scalability and flexibility of this dynamic downtown.

A TRUE SUCCESS STORY

When Miami DDA launched its streaming 3D map website this spring to spotlight its towering showcase, it unleashed a flood of activity from citizens and stakeholders-- the site nearly crashed, getting more than one million hits since then.

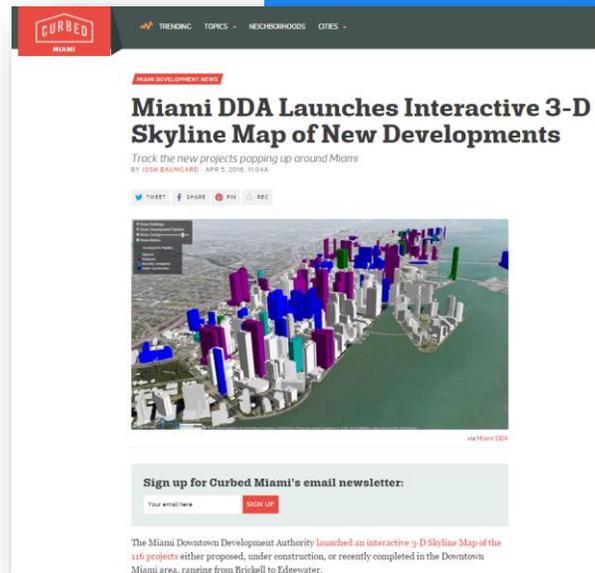
Looking ahead, Miami DDA and CyberCity 3D will be working together to install quarterly updates to keep its streaming 3D map as fresh as possible. Building updates, architectural information, and a detailed 3D model of the downtown Metromover are all in the works for future versions of the map. CyberCity 3D is proud to provide Miami DDA with a powerful tool for growing and promoting downtown Miami.



More than anything, this puts critical information into the hands of those making real-time investment decisions and paints a powerful picture of how Miami's skyline is being re-imagined before our eyes.

-Alyce Robertson, Executive Director, Miami DDA

The public launch of Miami DDA's Streaming 3D Map caught the attention of several national publications



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