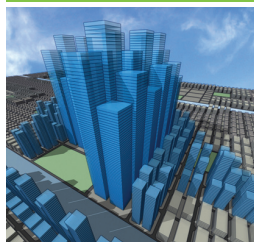




Skape



Key Facts:

Industry: Architecture and Civil Engineering

Problem: Enabling high resolution 2D and 3D data to be streamed, downloaded and uploaded via the internet

Solution: FME Server

Location: United Kingdom

CASE STUDY

"Preparing the data to produce this visually stunning virtual world is a formidable processing task, and FME is the workhorse behind the scenes."

This spring, Safe partner Infoterra Ltd. of Leicester, England, launched Skape – an online 3D visualization and modeling environment designed for architects, planners, local authorities, and surveyors. Imagine interactively flying through a photorealistic 3D online world, deleting existing buildings with a mouse click, replacing them with your own 3D models, and analyzing the shadows that will fall on the building across the street as a result – at any given day and time.

While Google Earth™ and Bing™ immediately come to mind, Skape takes it to a whole new level. And FME® Server is what makes this possible.

Skape facilitates high resolution collaborative work in small areas, and it is certainly detailed. Infoterra used their own fleet of aircraft to capture high res LiDAR and oblique aerial imagery of major cities in the UK, generating roof and façade textures for the resulting 3D building models. The sub-meter LiDAR data has been combined with the five centimeter oblique, using complex optimization algorithms and multiple lines of sight, to generate well over 50,000 detailed buildings to date.

To round out the picture, Skape combines 2D and 3D to enable users to visualize the entire environment in a number of ways. Choices for base mapping include Ordnance Survey® Street View® or Mastermap®, as well as varying resolutions of conventional aerial imagery. This is a LOT of complex data. The challenge of serving it up – over the internet, no less – is handled through intelligent compression and streaming techniques.

Preparing the data to produce this visually stunning virtual world is a formidable processing task, and FME is the workhorse behind the scenes.

To create the highly detailed and accurate building models, Infoterra uses FME to combine textures, photogrammetry data, and 3D building data, and then generate a unique dataset for each structure. The building datasets are combined with the 2D base mapping options to create the final seamless Skape environment.

Skape users are typically interested in a focused area, perhaps a few city blocks, to perform various analyses and detailed work. After refining your area of interest using the online interface and selecting the licensing option appropriate for your project, Skape sends your request off to FME Server, which dynamically manages both data upload and download requests in the background. When it receives a download request, FME Server extracts, formats, and ships your requested data as 3DS, OBJ, or 3D PDF, ready to use in your local applications.

Skape also enables you to upload your own model into its world – for example, replacing an existing building with a new one. FME Server handles the import of your model, while Skape provides the tools to hide the old building, insert the new one, and play with position, atmospheric conditions, date, and time of day to see what effect your structure will have on light and shadow. You can generate precisely planned fly-throughs – including your new 3D objects – with camera placement, rotation, tilt, and speed controls.

Infoterra and Safe have been partners since 2008, and Skape is by far their most ambitious application of FME Server technology to date. "We have been delighted with the support that Safe Software has provided us during the development of Skape," says Phil Cooper, Geospatial Software Products Manager at Infoterra.

Although Skape has only been released for a short time, it is generating some serious buzz and impressive early adopters in the architectural world.

Check out Skape for yourself at: www.skapeworld.com.



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