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Import OpenNURBS Beta

OpenNURBS Beta for Autodesk Vasari

CASE is excited to announce the Beta release of Import OpenNURBS for Autodesk's Vasari Conceptual Modeling Software. The Beta is available for a limited time through the CASE Apps Add-in manager found at http://www.case-inc.com/apps

The Import OpenNURBS add-in facilitates early-stage interoperability by allowing designers to import conceptual geometry from Rhino into Autodesk Vasari. Unlike importing and linking with other file formats, Import OpenNURBS will translate geometries as native Vasari elements to give designers the flexibility to further develop their designs using Vasari's modeling and analysis features.

The Vasari Add-in reads the OpenNURBS file format (Rhino 4.0 3DM) and uses custom algorithms to reconstruct geometry using Vasari API methods. Currently, the Add-in supports a broad range of OpenNURBS geometry. At this stage, some geometry support has yet to be implemented but we are committed to expanding the functionality as new capabilities become available for OpenNURBS and the Vasari API.

We hope you enjoy testing the new Import OpenNURBS Beta for Autodesk Vasari and we hope you can provide us with valuable feedback about the tool!

CASE Profile

CASE exists where building and technology intersect. We combine our experience as architects, project managers and teachers with a passion for technology to improve the way buildings are designed, realized and operated. CASE is a virtual design and construction (VDC) and integrated-practice consultancy. We provide strategic advising to building design professionals, contractors and owners seeking to supplant traditional project delivery methods through technology-driven process innovation. We help clients identify, implement and manage the technologies and business practices that enable more effective coordination, communication and collaboration throughout all phases of the building lifecycle.

Our approach is as much about change management, as it is about technology. Technology does not exist in a vacuum. Without careful consideration of the people who will be using it, how it will be used, and the problems it has to solve, technology cannot live up to its potential. Our unique value proposition is our ability to work across disciplines and technologies in order to identify core problems and develop comprehensive

Product Information

Features

Import OpenNURBS...

- Allows Autodesk Vasari to read OpenNURBS geometry files (Rhino 4.0 3DM)
- Supports Conceptual Geometry within a Mass Family
- Reconstructs OpenNURBS Geometry as native conceptual modeling elements in Vasari
- Allows users to select specific geometry types to import into Vasari.

Software Requirements

To use the Add-in, you must have...

- CASE's Add-in Manager to installs a valid copy of the Import OpenNURBS Beta.
- Autodesk Vasari Beta 1
- Rhino 4.0 files (*.3DM)

Installation Instructions

To Install the Add-in....

1. Download and Autodesk Vasari Beta 1. http://autodeskvasari.com/VasariBeta1
    - *Note: You should Run Autodesk Vasari at least once before installing Add-ins.*
2. Download and Run the CASE Add-in Manager: http://www.case-inc.com/apps/content/add-manager
3. Within the Add-in Manager, select the BETA Import OpenNURBS for Vasari.
4. Choose to Install the Import OpenNURBS for Vasari Add-in.
5. After successful installation, Start Autodesk Vasari Beta 1.
6. The Add-in will be found under the CASE Design Inc. Ribbon Menu
    - *Note: The Add-in will only run with an internet connection.*

Limitations

Some known limitations of the add-in include...

- Files must be saved as Rhino 4.0 or earlier.
- OpenNURBS and Vasari use different geometry representations.
    - Some geometry will be translated as a close approximation.
- Complex Rhino files take time to reconstruct in Vasari.
- The workflow is not bi-directional.
- The add-in does not support 'live' linking to Rhino files.
- Vasari will sometimes be unable to describe certain surface geometry.
- Solid, Brep, and complex Trimmed geometry is not yet supported due to Revit API limitations.

Frequently Asked Questions

What is OpenNURBS?

- OpenNURBS refers to the file format used by McNeel's Rhinoceros NURBS modeling software. An OpenNURBS file uses the extension *.3DM. Rhino is very popular among designers so we wanted to provide a way for designers to more fluidly use Rhino with Revit and Vasari.

What is the recommended use of Import OpenNURBS Beta?

- There are many uses for this type of tool... many we probably haven't even thought of. We generally see the tool as delivering value for designers looking to leverage Rhino's intuitive modeling interface with Vasari's parametric modeling and analysis tools.
- The tool is probably best thought of as *a means to facilitate a development workflow* where critical Rhino geometry (such as control curves or surfaces) is imported into Vasari for further development.

Does the Add-in support the creation of parametric and/or BIM elements?

- The Import OpenNURBS Add-in currently only focused on a workflow for describing Rhino geometry in Vasari. The OpenNURBS file format provides low-level geometry descriptions which are matched to Vasari's geometry tools. As we develop the tool, we are investigating other possible workflows for Families and Adaptive Components.

Help! Vasari says it was unable to create the geometry!

- Hey, that isn't a question.... Depending on the case, some extreme geometry may have a difficult time being rebuilt in Vasari. Some geometry cannot be represented in Vasari due to API limitations.

Why does Vasari lock up after installing the add-in?

- We have found that this happens in a few test cases. Vasari can sometimes be fussy after installing new Add-ins. A system reboot after installing the tool *should* resolve the problem.

Why is nothing being created when I try to Import?

- Be sure you are within a Vasari Conceptual Massing Family.
- Be sure your Rhino model is saved to version 4.0

When will Solid BRep geometry become supported?

- Some BReps are imported as individual faces. The Revit API does not currently have methods for creating solid BRep geometry or for stitching together individual surfaces. This means that our hands are tied to only using methods for surface creation.

What are the future plans for developing this tool?

- We released the Import OpenNURBS Beta for Vasari to assess user cases related to conceptual modeling and to determine next steps in development. The tool will continue to evolve as the Revit/Vasari API evolves.
- We plan to release a version for Revit 2013 as part of a future Add-in subscription pack.

Your feedback is extremely important and welcome as we continue to make improvements to our tools...!