

webVis & instant3Dhub VISUALIZE MASSIVE MODELS ANYWHERE



Rendering in the browser

hare3d, the Highly Adaptive Rendering Environment, is a JavaScript based visualization solution used by webVis to draw 3D models on the Web browser. It has been designed to run on devices with different capabilities, from mobile phones to workstations. Its flexible architecture makes it easy to adapt it to the individual needs of the end application. hare3d can be coupled with Pixi for a hybrid solution whereby images are created by combining parts generated both on the client and on the server.

Linked 3D Data

A new, distributed, **spatial data-model** is the core of the webVis/instant3Dhub platform. This model links and relates arbitrary object representations, which are key for an adaptive and distributed rendering solution.

Advantages at a glance

- Adaptive 3D model visualisation solution
- Massive and complex data on simple devices
- Minimalistic API hides service infrastructure
- Automatic rendering system selection
- Client, server or hybrid rendering

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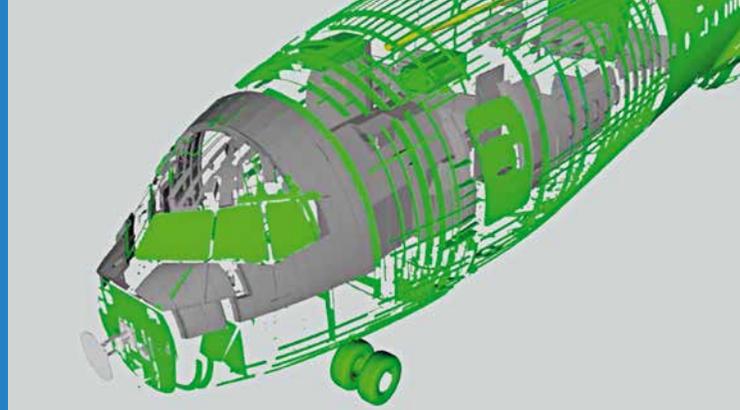
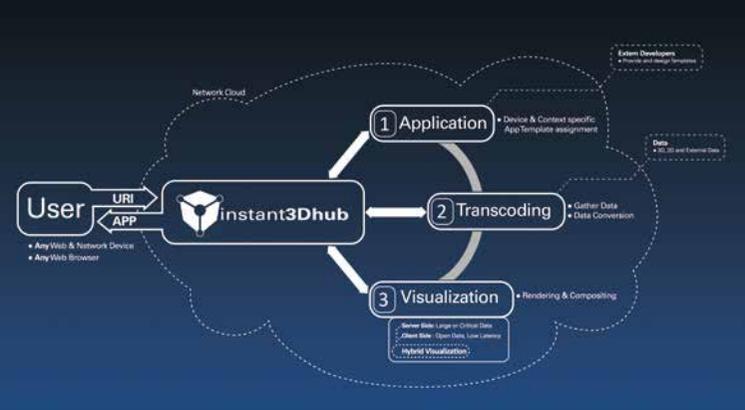
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Further information about the technology:
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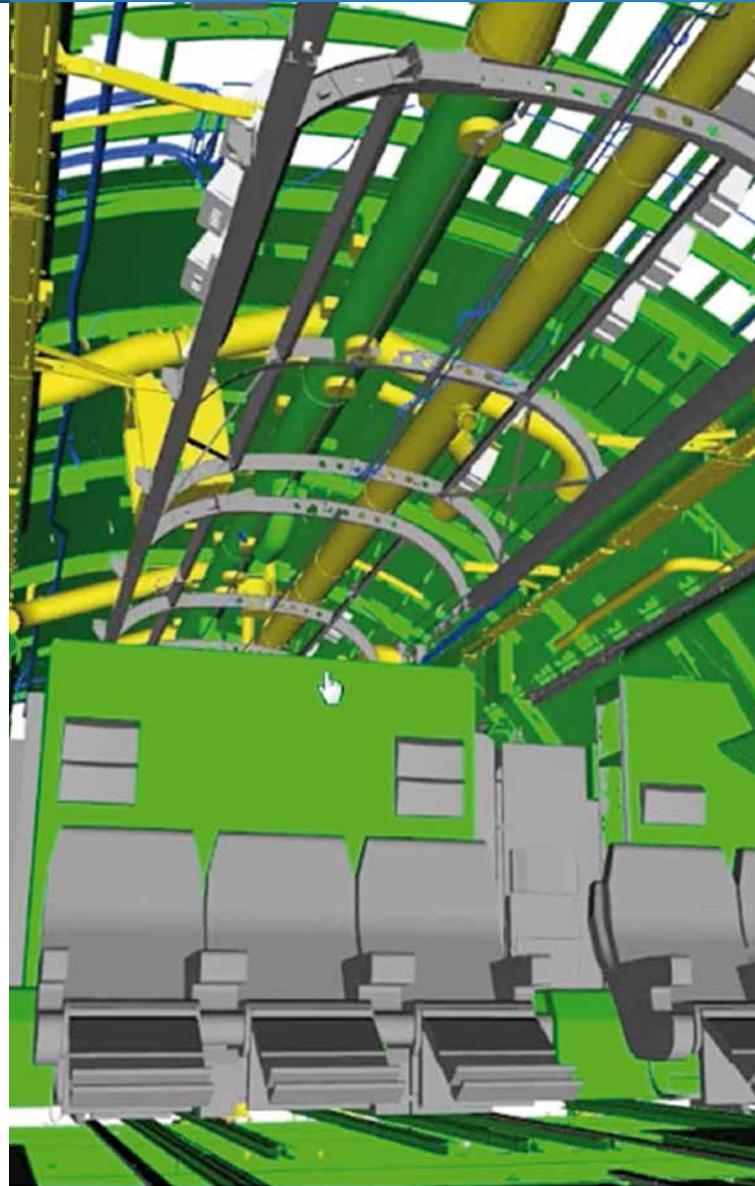
Visualize massive models anywhere

The webVis/instant3Dhub platform combines a novel Web-components based framework with a visual computing as a Service (VCaaS) infrastructure to deliver a powerful and comprehensive solution for interactive 3D data visualization.

The system adapts to a given environment by providing client, server and hybrid visualization techniques and optimizing the delivery of complex data sets, resulting in an improved user experience.

instant3Dhub

The **instant3Dhub service platform** provides the network interfaces used by the webVis layer, creating an abstraction on top of the back-end data warehouses. It is highly flexible and runs on an arbitrary number of computers and/or virtual machines while administering the individual components independently and autonomously. The services provided by this platform include transcoding of the original model data and rendering.



webVis

The **webVis framework** provides a solution for embedding 3D visualization of structured data in Web applications with minimal effort. Based on JavaScript, it runs on modern Web browsers without the need for external plug-ins. The webVis API offers all the functionality needed for accessing, visualizing and manipulating data originating from the instant3Dhub infrastructure.

Efficient and secure transmission

The **instant3Dhub services** guarantee secure access, handling the authentication process. The original model data is transformed to a format which is efficient both for transmission and for displaying on the end device.

Rendering Service

The **rendering service Pixi** exposes a RESTful API providing the basic functionality of a renderer over a network. It takes input from the client, such as camera information, and generates an output, typically pixel data, which is transmitted back to the client. Pixi will find a suitable compression method according to the requested mime-type and data format.