

System Integration

You need a usable production environment? Meaning, you are already using the visualization or have to start with it.

I have set up and configured different visualization environments over the years.

My experience is based on system integration for:

- Render Cluster (Ray Tracing)
- Powerwall (incl. Tracking)
- Cave (incl. Tracking) Setup
- Head Mounted Display (HMD) Setup (incl. Cooperation with several participants)
- Cloud Cluster, AWS Cloud Computing from Amazon

I do professional service and support on this kind of systems.

Naturally, different software tools can also be installed on the different systems.

Costs and expenses for a system integration are very different and are calculated according to effort.

Here you get some examples:

Cluster Setup

Hewlett Packard Centre de Compétences, France



512 x Linux Cluster Render Nodes



HP- Benchmark Tool

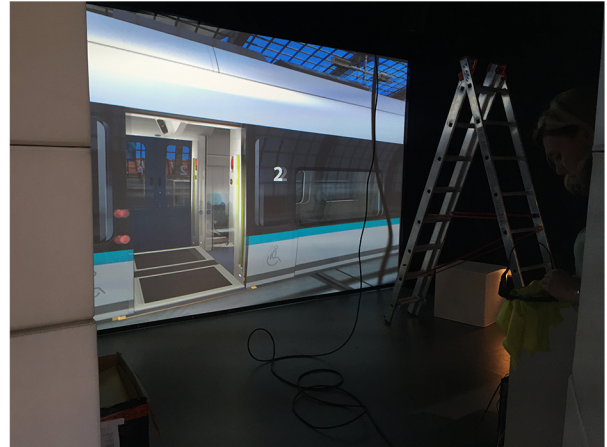
These pictures were taken with an automotive customer at HP in Grenoble.

A cluster benchmark with 512 rendering nodes configured with Autodesk Vred Professional was performed. The goal of the benchmark was to determine rendering times.

Result: 4k image (Interior view of a sports car)
Rendering Technology: Full Global Illumination
Render time: under 3 seconds
Image quality: Noise and artifacts free

Powerwall

Powerwall Installation



Pictures from the InnoTrans 2016 in Berlin, assembling



Stereoscopic Powerwall during fair operation

Today's graphics card performance allows real-time presentations to be played on large powerwalls that even output a stereoscopic image, such as here at the InnoTrans2016 trade fair in Berlin. Vred Professional was in use. The presentation can be played linearly like a movie and you can intervene at any time, to move freely in the scene. In addition, one can switch model variants, so that the visitor can experience all possible configurations of the product.

Cave Setup

Ford VR Center Cologne



Ford 4 sided Cave, played with Autodesk Vred Professional incl. A.R.T Tracking System
These pictures are from the customer.



Ford VR Center Cologne brochure



The system is played with ic.ido ESI Software and Vred Professional Autodesk for engineering and design reviews.

A tracking system allows the virtual camera to always adjust to the viewer's perspective. Through a tracked marker (Flystick) the scene is moved and switched.

Head Mounted Displays

immersive virtual environment



Customers pictures from the Porsche Magazine 5/2017



HTC Vive System

Head Mounted Displays are increasingly used in engineering and design as a review tool to obtain an authentic impression of the virtual object.

With e.g. Vred Professional or Unity3D can be used to create co-operation sessions where the user enters the virtual room with several participants in order to talk about what is shown. These sessions can be operated over the Internet and even allow voice exchange via a headset headset.