VIRTALIS

VISIONARY**RENDER**
ACTIVEWORKS

PTC LIVEWORX PRESENTATION

Virtalis Presentation Overview
Michael Ewing
m.ewing@Virtalis.com
(937) 725 -7061

Who is Virtalis?

A Wealth of Experience

- A world-leading VR and Advanced Visualization solutions provider
- Main Offices:
  - **USA**
  - **UK**
  - **Germany**
  - **Malaysia**
- Prestigious global customer base
- Originally formed in 1989
- Over 300 man years of experience

The Virtalis Advantage – One Stop Shop

- Turnkey VR Solution Provider
  - **Immersive <u>hardware</u> for stereoscopic 3D systems**
  - **Easy to use <u>Software</u> solutions for your VR environments**
  - **<u>Set-up</u>, <u>installation</u> and <u>support</u> and <u>maintenance</u>**
  - **<u>Special project</u> service and support**
    - Maintenance trainers, 3D Simulators, 3D corporate movies

PTC/Virtalis Relationship

Partnership w/PTC

- **Virtalis/PTC Relationship goes back 25 yrs**

- **PTC PartnerAdvantage partner for 7 Years and counting**

- **Integral with PTC Creo, Creo View and Windchill**

- **We support all other CAD Data and file formats (i.e. Catia. Solidworks, UG, and JT)**

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ACTIVEWORKS

PORTFOLIO

Virtalis Systems and Software Solutions

ActiveCube

ActiveWall

ActiveMove

ActiveSpace

ActiveDesk

Visionary Render

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Raytheon – Daniel Gale

Dan Gale is the **manager of the immersive Design Center** (IDC) a Raytheon Integrated Defense Systems in Andover, MA. As the IDC manager, Dan is responsible for developing a strategy that drives product excellence and accelerated time to market through the use of immersive and interactive visualization and enhanced collaboration. Prior to becoming the IDC manager in 2014, Dan served as a Modeling & Design Section Manager where he was responsible for program execution on multiple contracts and led cross-business transformation projects in both Model Based Definition and Engineering. Dan earned his bachelor's degree in Mechanical Engineering from Rensselaer Polytechnic Institute in Troy, New York.

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Collaboration

All of our Systems support Virtual Collaboration:

Collaboration Uses Cases:

- Design Review from Anywhere
- Practice Safety Reviews with remote trainers
- Serviceability Trainers
- Team based Simulator/Trainers
- Manufacturing Trainers

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Visionary Render from Virtalis

- **<u>Visionary Render</u>** software allows users to access and experience a real-time, interactive and immersive Virtual Reality (VR) environment created from huge 3D datasets. Users can work alone, in small groups, or collaborate with distant colleagues in a common virtual environment to perform detailed design reviews, rehearse in-depth training tasks, validate maintenance procedures or verify assembly and manufacturing processes.

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Why Develop Visionary Render ?

- Several Respected VR Packages are 'End of Life'
- Customers Expecting:
  - Greater Flexibility
  - Handles Larger Files
  - Fully Immersive
  - Collaborative
  - Open to Customization
  - Shorter Learning Curve

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What Does it Do?

- Renders 3D Data in Real-time Stereo

- Dynamic Interactive VR Environments

- Truly Immersive

- Compatible all Major Tracking Systems

- Develop and Publish Environments

- Globally Collaborative VR systems

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Typical Applications

- Detailed Design Reviews
- In Depth Training
  - Servicing
  - Maintenance
- Factory Planning
- Manufacturing
  - Process Simulation
  - Work Cell Design

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Who Will Use It?

Multiple Departments
- Engineering
- Design
- Training
- Manufacturing
- Service/Maintenance
- Factory planners
- Marketing

- **All Industries**

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Aston University (UK)

- **Aston University 150 Seat Virtual Reality Lab & VR CAVE**
  - **Collaboration on:**
    - Lectures
    - Projects
- **Proven to enhance:**
  - **Student Satisfaction**
  - **Critical Thinking Skills**
  - **Experiences through application**

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Case Study: BAE Submarine Prototyping

- Use Cases:
  - **Virtual Prototyping**
  - **Training Simulations**
  - **Submarine Walkthroughs**
  - **Design Reviews**
- BAE VR Replaces Physical Prototypes
- Fosters Communication & creates a better understanding of actual installation
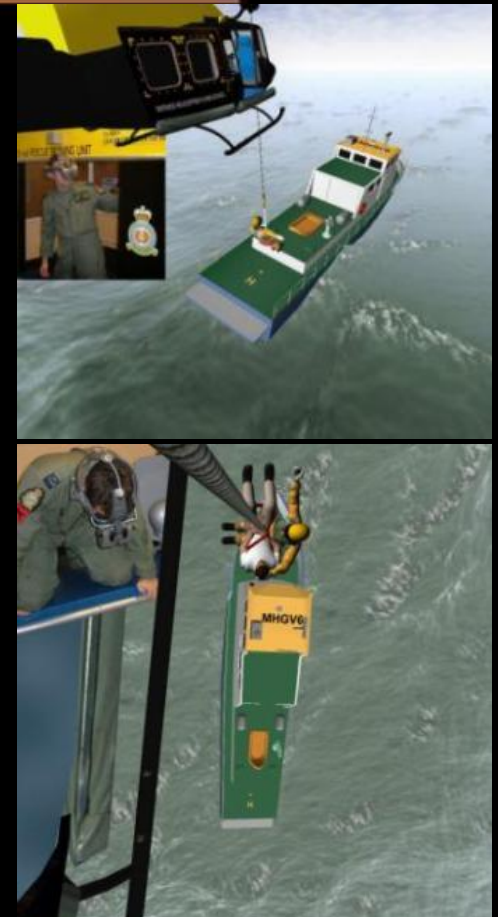

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Case Study: Schneider Electric

- Use Case:
  - **Training Simulation**
  - **Design Reviews**
  - **Marketing (BDM)**

- Solution Benefits Include:
  - **Improves communication**
  - **Collaboration between departments**
  - **Attract Trainees to your innovative organization**

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Royal Air Force: HCR

- **Hands on Training enables**
  - **Virtual Prototyping**
  - **Trainees to learn to use right word**
  - **Do the correct checks in real-time.**
- Benefits of HCR:
  - $1.5M R&D already spent by RAF
  - Efficient use of flying hours
  - Quality remedial training
  - Flexible use
  - Ready to use in months
  - Cost from $375k

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Human Interaction

- Virtalis delivers on all of the market's major tracking solutions.
  - **ART (Infrared)**
  - **Vicon (Infrared)**
  - **Intersense (Ultrasonic)**
  - **Polhemus (Magnetic)**
- Motion Capture Supported by:
  - **ART (More accurate)**
  - **Vicon**

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What is Virtual Reality (VR)?

- A suite of technologies supporting real-time human interaction with computer-generated datasets & environments

- VR stimulates collaboration, fostering communication and understanding

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3D Stereoscopic Design Collaboration

Customer

Location #1

Location #2

Location #3

Supplier #1

Supplier #2

Secure Video Server
Send a Stereo Video
Feed to Clients
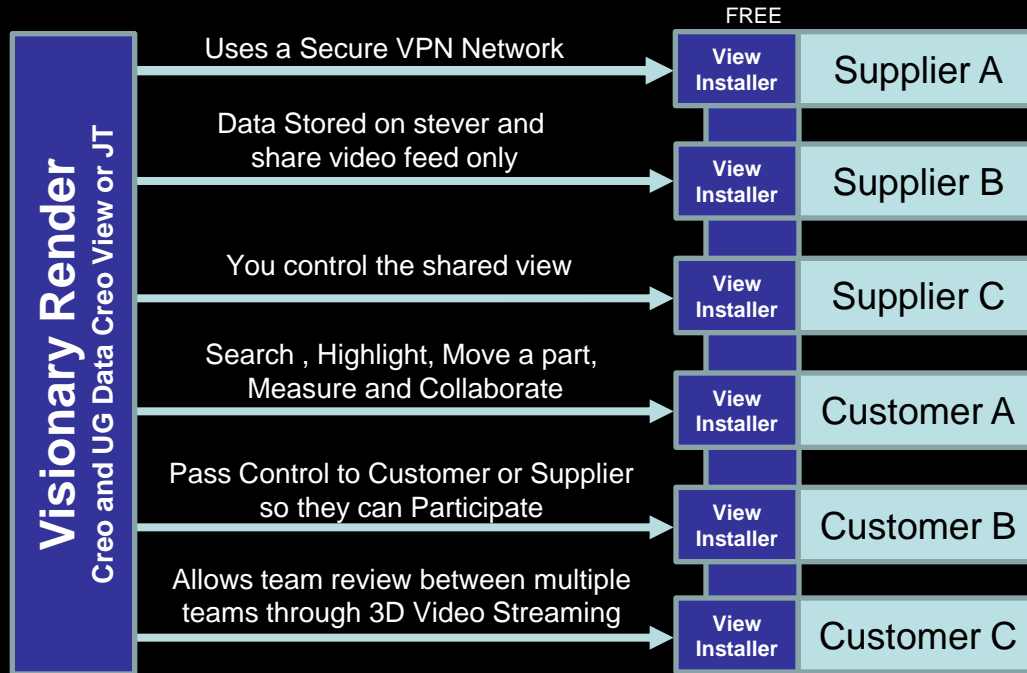
- Fly Through, Search, Highlight,
- Move a Part, Measure, Review
- Verify form, fit and function
- Communicate and Collaborate
- Secure because you are sharing a video feed

Secure, Advanced Visualization and Collaboration System Solution

FREE

Visionary Render
Creo and UG Data Creo View or JT

Uses a Secure VPN Network → **View Installer** | Supplier A

Data Stored on stever and share video feed only → **View Installer** | Supplier B

You control the shared view → **View Installer** | Supplier C

Search , Highlight, Move a part, Measure and Collaborate → **View Installer** | Customer A

Pass Control to Customer or Supplier so they can Participate → **View Installer** | Customer B

Allows team review between multiple teams through 3D Video Streaming → **View Installer** | Customer C

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Royal Air Force: HCR

- Originally for remedial training, now used for full crew co-operation for SAR and SH
- Marketed as a COTS system for civilian, military and para-public ops
- World's only winching simulator
- Strong physics engine with ever improving flight dynamics

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The Benefits of HCR

- £1m R&D already spent by RAF
- Efficient use of flying hours
- Quality remedial training
- Flexible use
- Ready to use in months
- Cost from £250k
- Buy into a relationship

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Fiat Group

Seating Buck

- Driver is fully immersed via HMD but is touching controls of an actual car

- VR used to develop new vehicles & support product innovation

- Aids early proof of design configurations

- Saving time & costly physical models

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VERT

- Collaboration with Vertual

- Revolutionary new way to train radiotherapists

- Immersive & Seminar systems offer fully immersive & meeting room options

- Britain's first large scale roll-out of VR technology funded by DoH

- Now going worldwide

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VERT - The Benefits

- Provides safe, realistic training
- Does not tie up useful equipment
- Boosts career fulfilment within the radiography profession
- Helps professionals and patients understand and communicate the treatment plan and method.

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Raytheon IDS – Side by Side remote collaboration