The value of VR for professionals

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MiddleVR.com

- Virtual reality for professionals
  - Team of VR experts
  - Founded in 2012
- **VR Content creation professional services**
  - **We create your applications**
- **MiddleVR for Unity: Unity plugin to create VR apps**
- **Improov3: Virtual meeting room**

VR NOT TO ESCAPE REALITY BUT TO IMPROVE REALITY

Sébastien 'Cb' Kuntz

2001 - SNCF (French railways)

2005 - Virtools™ DASSAULT SYSTEMES VR Tech Lead

2010 - .middleVR IMPROVE REALITY Founder & President

- 220+ clients around the world
  - Industry, academics
  - Engineering, marketing, training, health
- 15+ resellers: US, China, Russia, Japan, England, France, Spain, Italy …

- Unity plugin: Features

  - **Your application works on any VR system:**

    - CAVE, VR-Wall, zSpace

    - HMDs: Oculus Rift, HTC Vive, NVisor, Sensics, …

    - Haptics: Haption

  - **Create your application quickly:**

    - Navigation

    - Manipulation of objects

    - Webpage display

    - Menu

    - Graphical user interface

.middleVR FOR UNITY

- Version 1.6

  - "HMD" edition

  - "Free", "Academic", "Pro" editions

  - Multi-GPU support

  - Oculus Rift CV1, HTC Vive

  - Native drivers: A.R.T., OptiTrack, Vicon

  - Immersive menus / GUI

  - Webpage displays

- **EASY DOWNLOAD:** http://www.middlevr.com/download

- **FREE 30 DAYS TRIAL**

Future: Roadmap

- Multi-user support

  - Simple avatars: NOW (beta)

  - Simple voice chat: 1 month (beta)

  - Share webpages: 3 months

  - See / share your windows desktop: 3 months

  - Manage online contacts: 6 months

  - Advanced avatars: 6 months

  - Roles: (Example: Guide / visitors)

- Perception Neuron

- Haptic: Sensable Phantom (Geomagic 3D Touch)

- More interactions

- You tell us !

Website in Chinese !

VR Market

- New market ?

  - No !

  - Peugeot : 7M€ since 1999

  - Renault : New VR systeme 3M€

    - Saves 2M€ / year & 20% reduction in conception time

  - Jaguar Land Rover : 4M€ saved in 5 weeks

Hardware revolution

Presence in a virtual world

= Be somewhere else

Be somewhere else

WITH somebody else

Software revolution

- Engineering
- Marketing
- Training
- Architecture
- Health
- Education
- **Social / Multi-user**

- Advertisement

- Market studies

  - Evaluate and iterate quickly

    - Store layout

    - Product packaging

- Record/analyse customer

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Marketing
Beyond reality

- Virtual showroom
  - Show all variations
  - Limited real space
  - Infinite virtual space
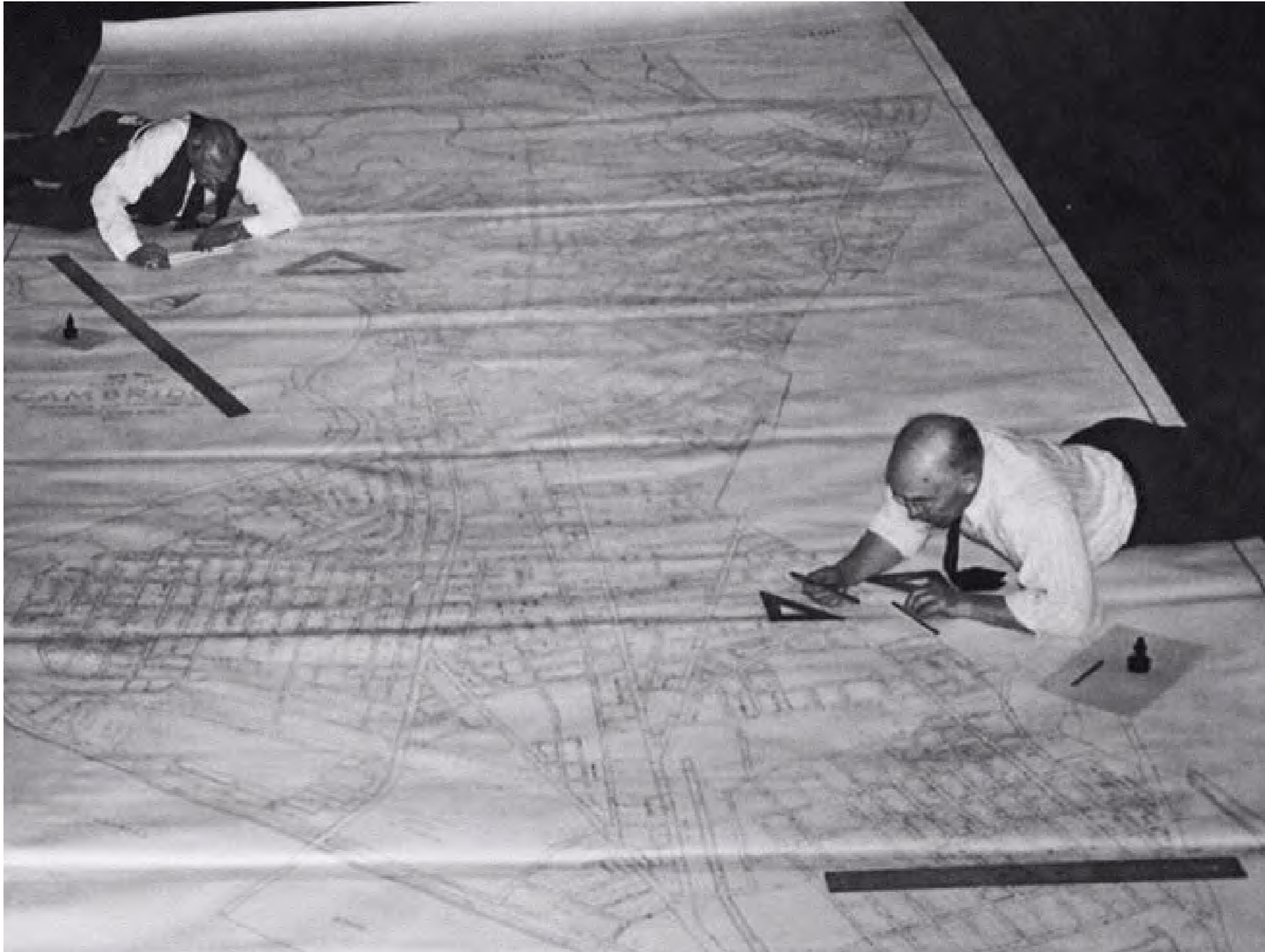
Training / Education before VR

TRAINING

- Military, surgeons, cops, firefighters, mine safety, oil & gas platforms, nurses, building industry …

- Motivation

- Easy to use

- Practice actual gestures

  - Repeat until master

  - Record, analyse, replay

  - Safe environment

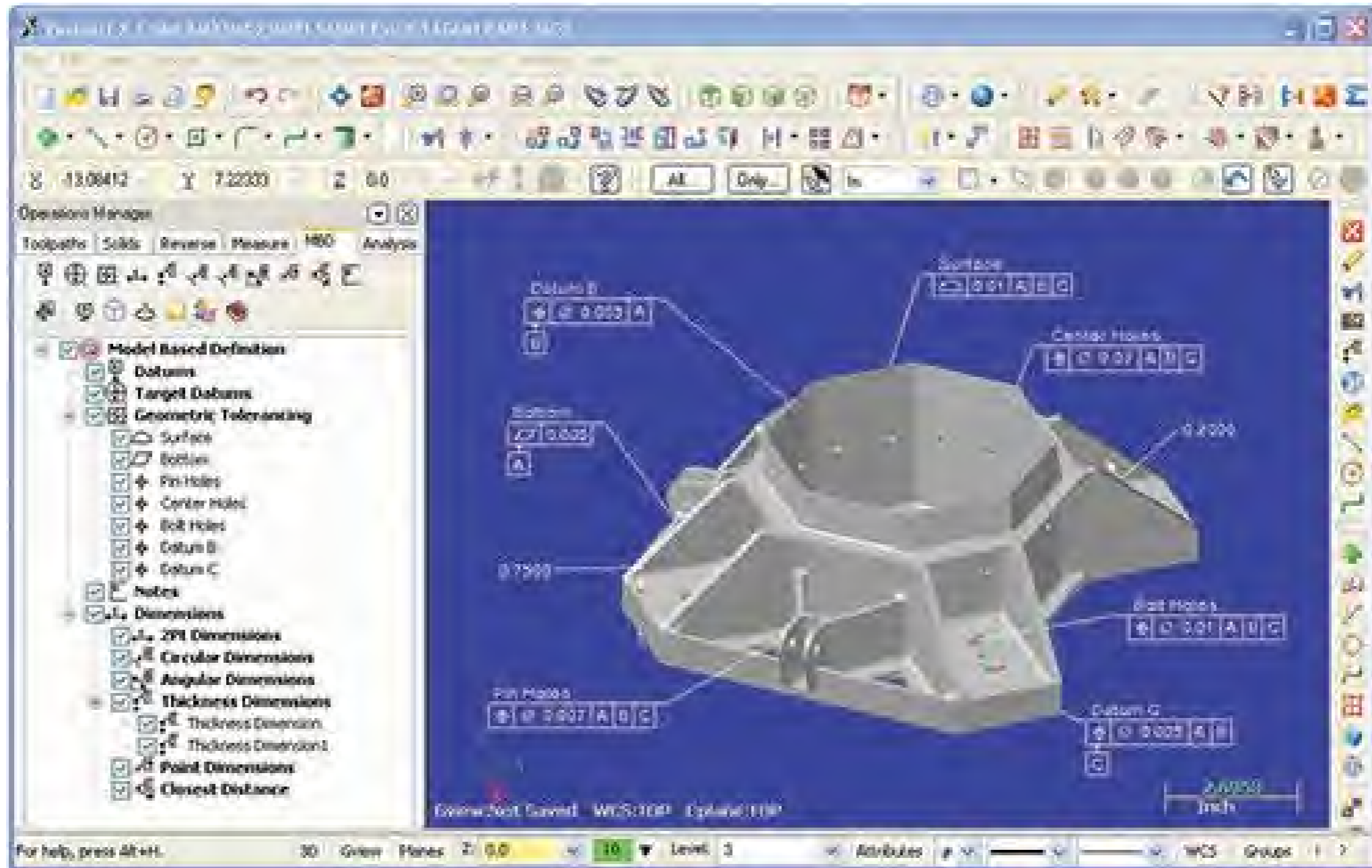 - Controlled scenarios
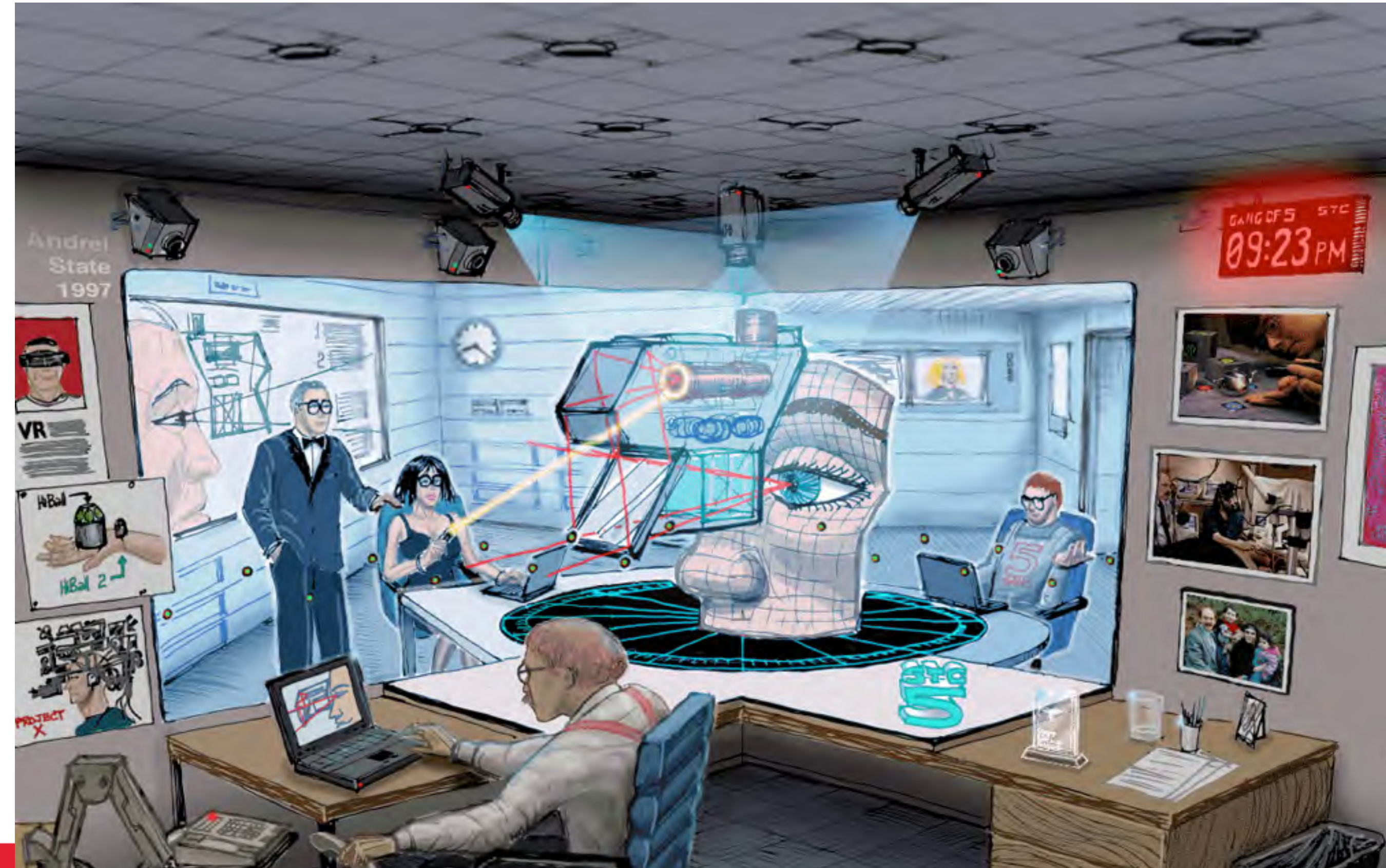
Engineering Before VR

Engineering Before VR

(c) Toyota

Engineering Before VR

Engineering with VR

Engineering with VR

- Break screen barrier

  - Life-size model

- Natural communication tool

Engineering with VR

- Validate **design**
  - Identify conception errors early
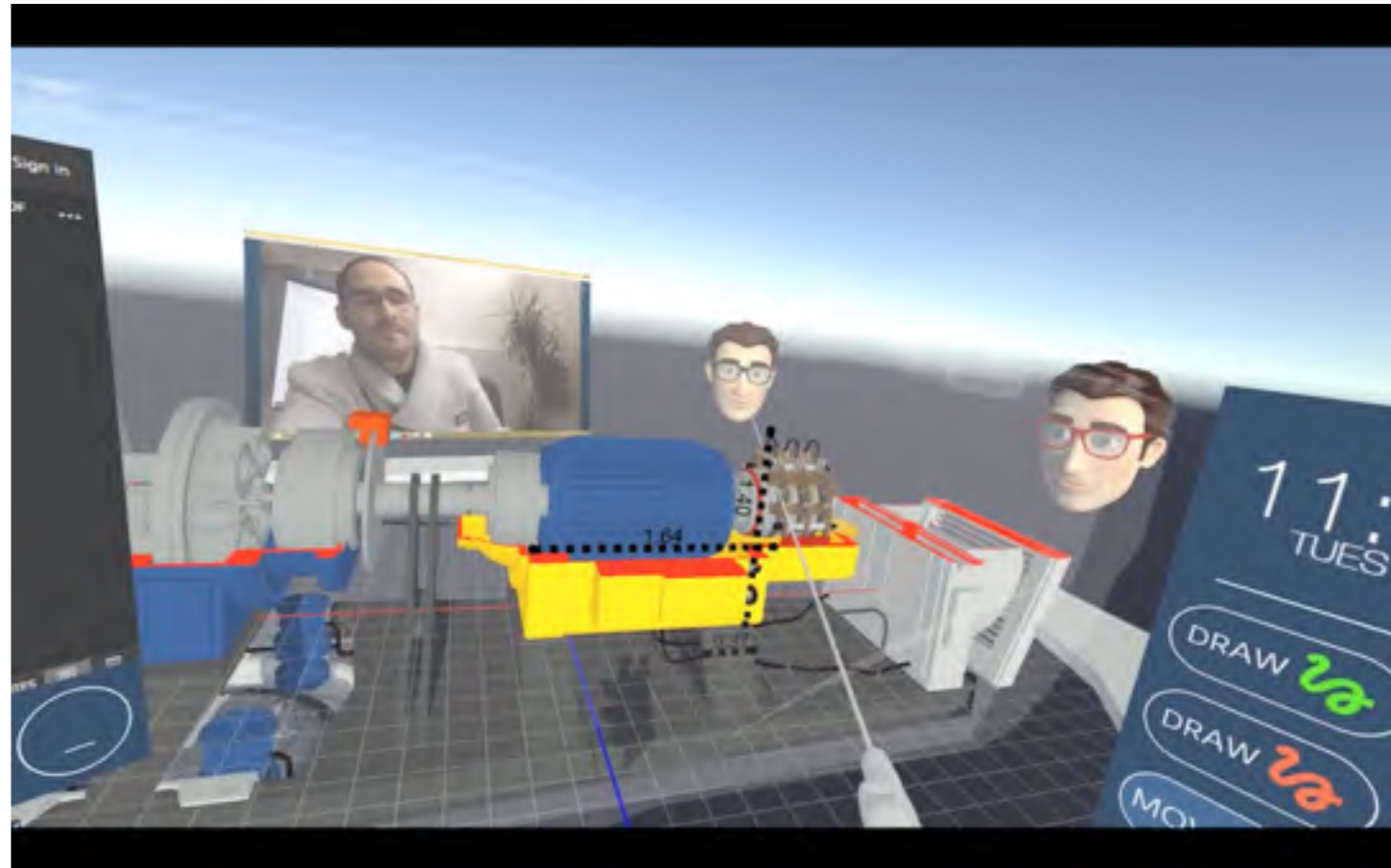 - Faster iterations
  - Ability to risk new crazy ideas

Virtual collaboration

improov³

A platform for professional virtual collaboration

- A virtual office
  - For engineers
    - CAD, CFD, …
    - Ergonomics
  - For architecture
  - For training
- Specifically for HMD
  - And walls / CAVEs
- Natively collaborative
- Easy to setup / use

improov³ for CAD

- Immersive product review
  - Import native CAD data
    - Catia V5 / V6
    - Solid works
    - Siemens NX (JT)
    - STL, Step, Collada, FBX IFC
- Design of products and processes
- Analysis of production tasks
- Operators' training
- Maintenance studies
- Analysis of posture and ergonomic quotation (RULA)

ERGONOMIC STUDIES

FULL BODY ANALYSIS

- https://www.youtube.com/watch?v=TJB0mPVxIgU

Features

- Load 3D models
- Load native CAD data
- Visualize at real scale
- Interact naturally
- Collaborate online
- Cutting planes
- Annotations
- Take pictures
- 3D measuring tools
- Ergonomic assessment
- Desktop application: VR is not required

Supported file formats

- Catia V5 (.CATPart, .CATProduct, .cgr R10 -> R22)
- Catia V6 (3DXML Binary, R2011x)
- 3DXML (V3, V4 Ascii)
- Solidworks (.sldprt, .sldasm, All-> R19)
- Siemens NX (JT: JtOpen 7.0 -> 9.5)
- STEP (.stp, 203/214)
- IGES (.igs, 3&5)
- VRML
- FBX
- Unity Asset Bundle
- 3DS, OBJ
- STL

- And more to come !

Reference users

Companies with in-house VR systems

Companies renting VR systems

Roadmap

- 3.0 Release: June 2016
- 3.1 Fall
  - Ergonomic assessment
- Future
  - "Viewers": Limited but much more affordable
  - Haptics / Collisions
  - Rendering optimisations
  - Export
  - Sketching / Draw
  - MiddleVR Cloud
    - Simplify contacts/connexion management
    - App is in cloud (Desktop & VR)
- Tell us your needs!

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Thank you !
Questions ?

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