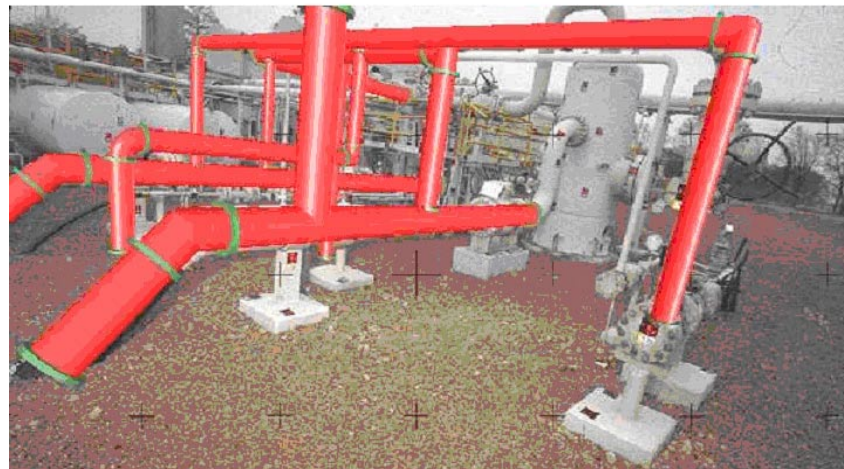


STAR

Services and Training Through Augmented Reality



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Introduction

- Create Realistic **Interactive** Synthetic Worlds
- Superimpose graphics, audio and other sense enhancements over a real-world environment in real-time
- Enhancing the quality of communications

Example of an Augmented Scene

- Real-time Camera tracking
- Autonomous behaviour of virtual humans



STAR Objectives

To Augment image and video footage with Virtual Objects and Humans for Industrial applications as training, planning and maintenance

Project Data

- Duration 01-07-2001 - 30-06-2004
(36 months)
- Total Budget: ~1.350 MEuro
- Total MMs: 356mm

Partners Involved (1)

- Siemens AG (ZT)
 - Project coordination and system specifications
 - System Validation
- Swiss Federal Institute of Technology (EPFL)
 - Mixing real and virtual objects
 - Virtual humans manipulating real objects

Partners Involved (2)

- Delft University of Technology (TUD)
 - Automated reconstruction of industrial installations
 - Integration into WPs that will use these models
- University of Geneva (UNIGE)
 - System integration
 - Interaction between virtual humans and deformable objects

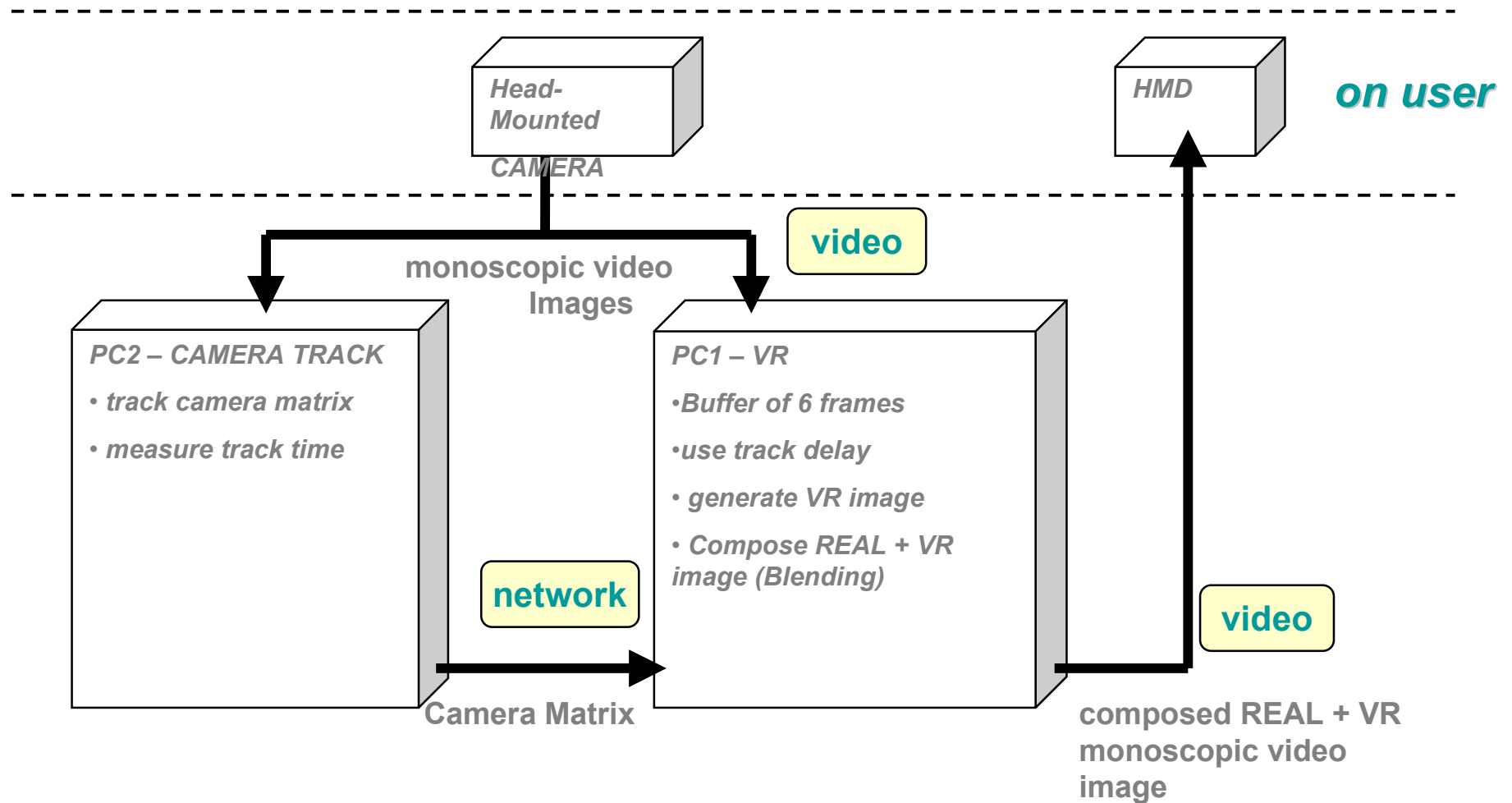
Partners Involved (3)

- Katholieke Universiteit Leuven (KUL)
 - Automatic selection of best camera viewpoints
- Realviz SA (REAL), France
 - Dissemination and exploitation
 - Introducing panoramic imaging in image-CAD-based modeling
- Siemens Corporate Research, Princeton
 - System specifications
 - Mixing real and virtual objects

Technical Requirements

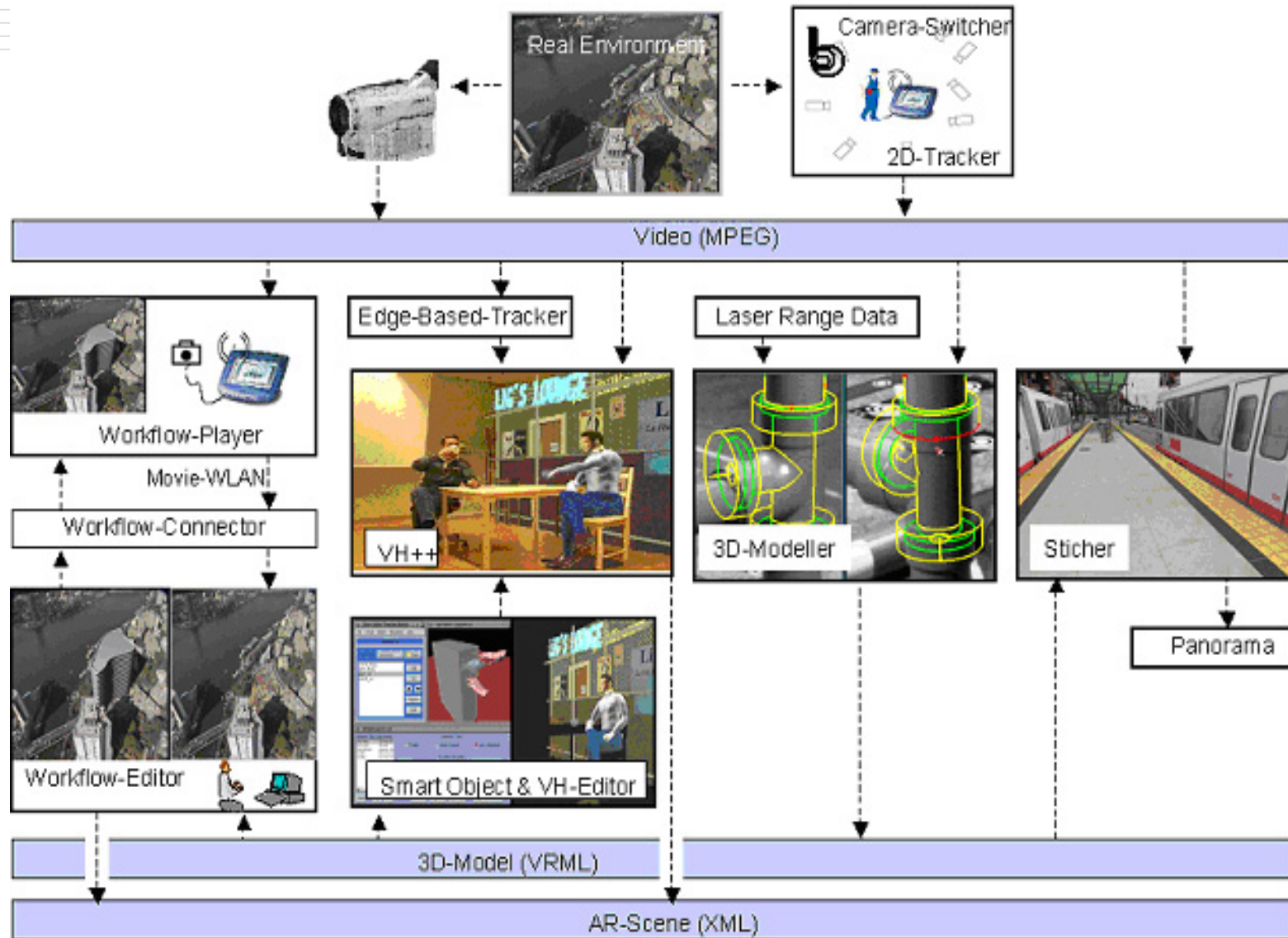
- Accurate registration of Real and Virtual Worlds
- Interaction between Human Operators and Mixed Environment
- Real Time Interactions

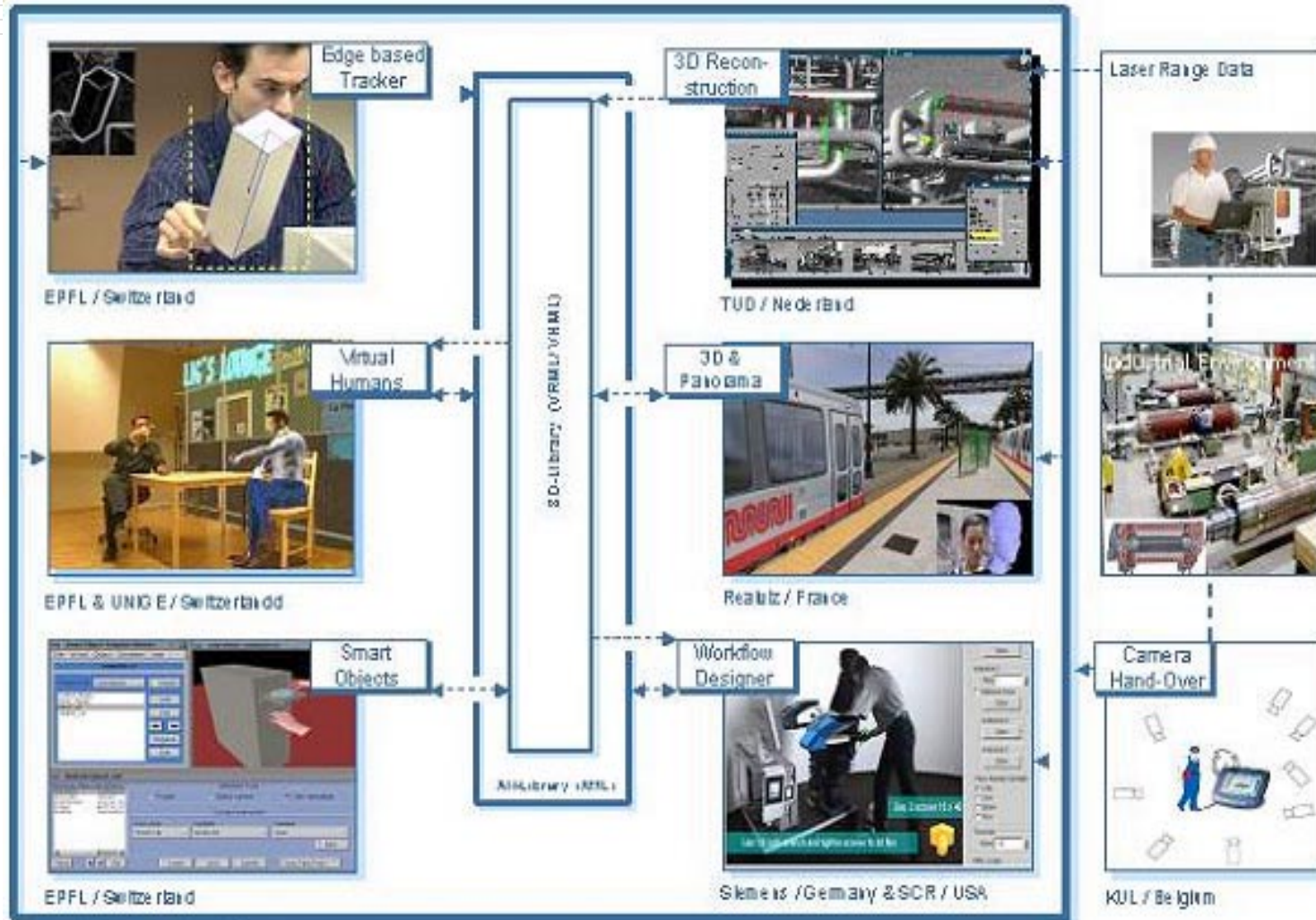
STAR Platform



Applications

- Generate a “Visual Documentation” for Maintenance Work
- Effectively training people to perform complex tasks
- Simulations to plan procedures and minimize delays due to bad planning

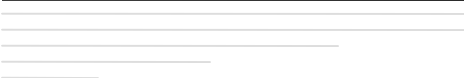




Online & Offline Video (MPEG)

Reusability

- The resulting STAR technologies would have much broader applications
- The STAR Platform will be developed as a modular and expandable tool



Thank you!