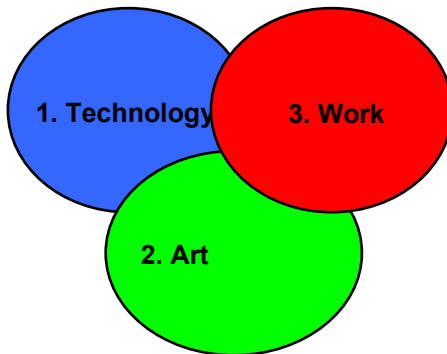


Research Center ArtecLab: Research Fields



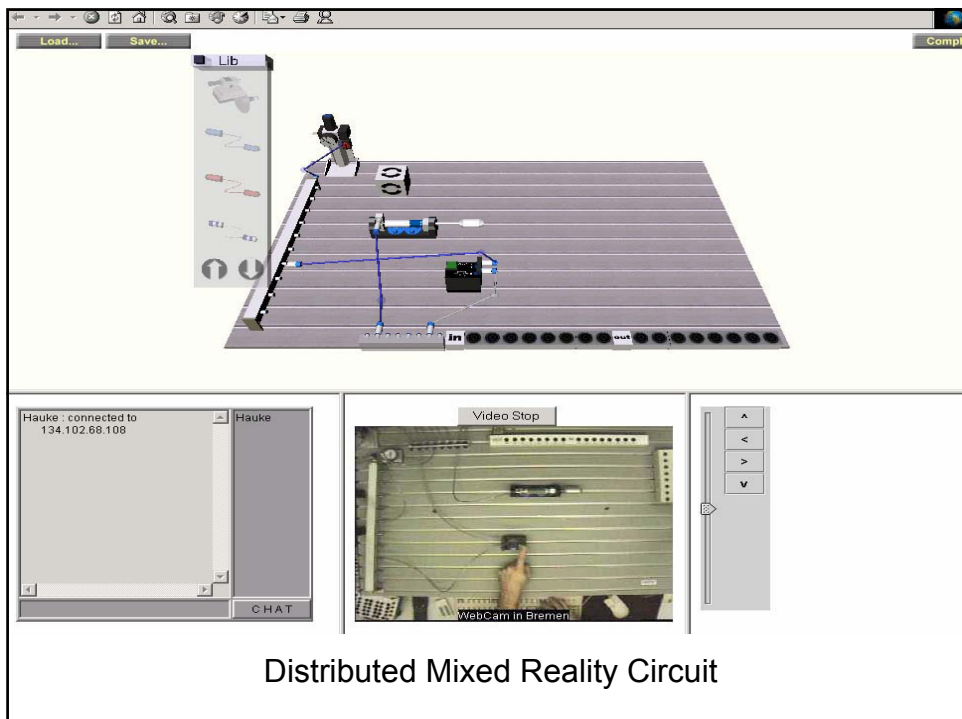
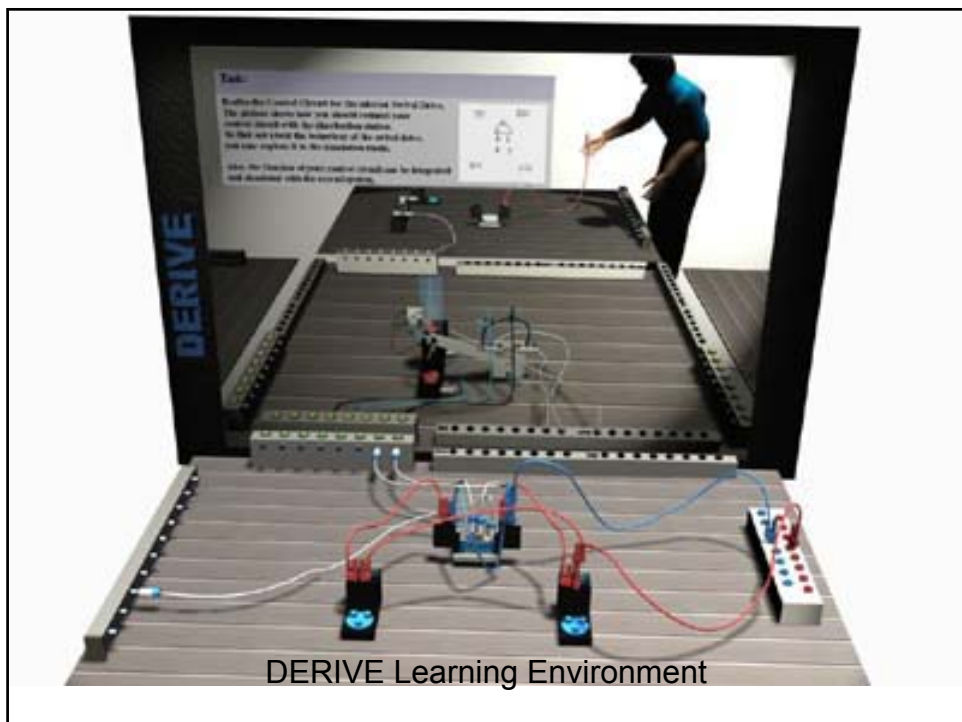
1. Technology
Methods and Tools for human-machine interaction and clearance
2. Art
Aesthetics and Performances in real and virtual Worlds
3. Work
New concepts of production, work and pleasure

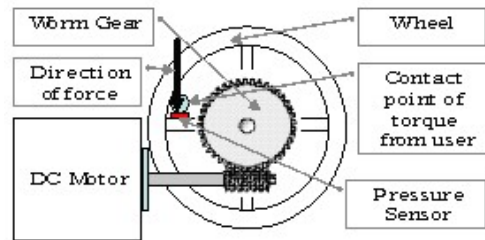
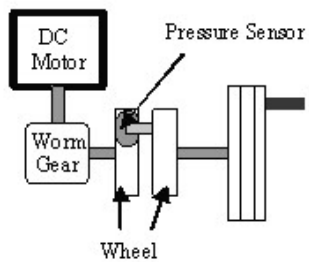
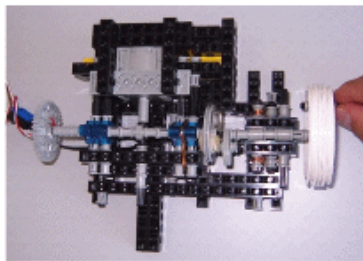


Technology

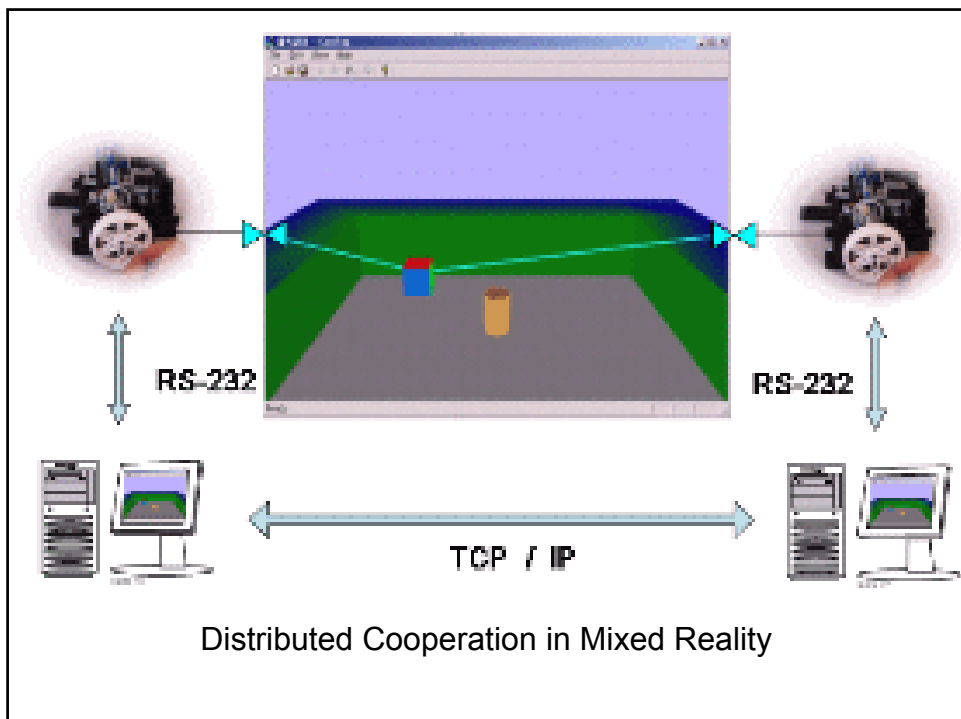
New Forms of Human-Computer Interaction:

Mixed Reality with Hyper-Bonds





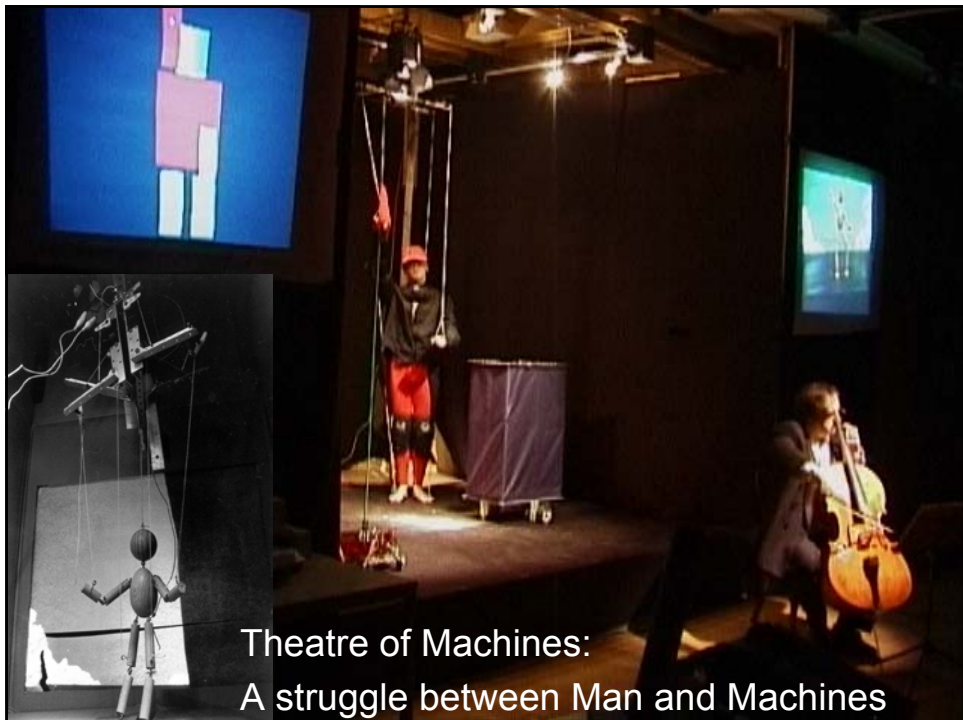
Low Cost Momentum Handle



Art

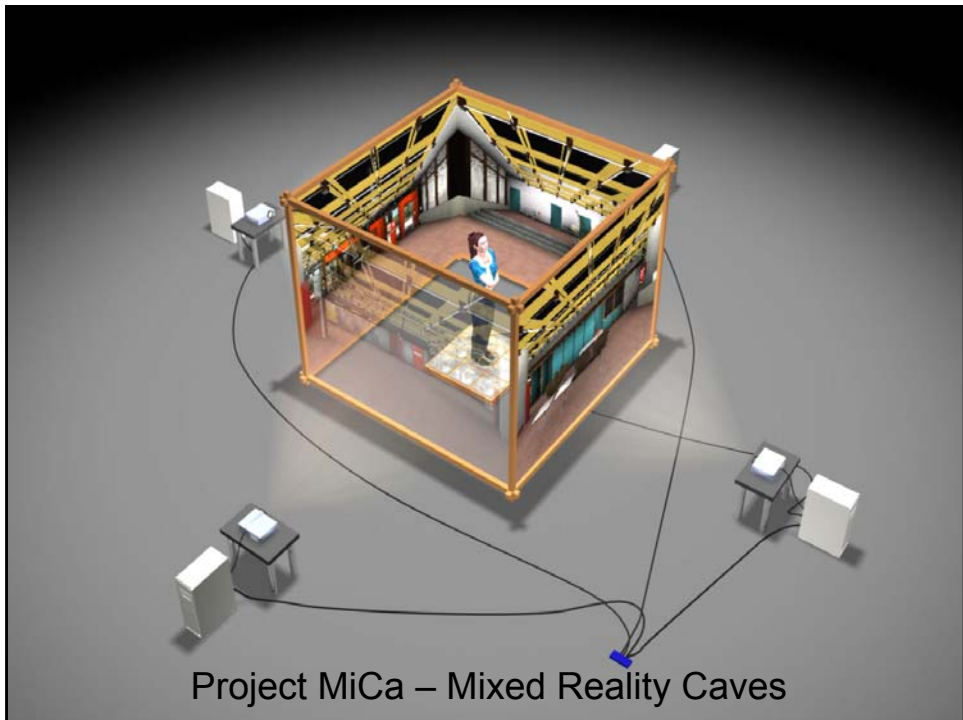
Performances in Mixed Reality

Aesthetic Computing Manifesto

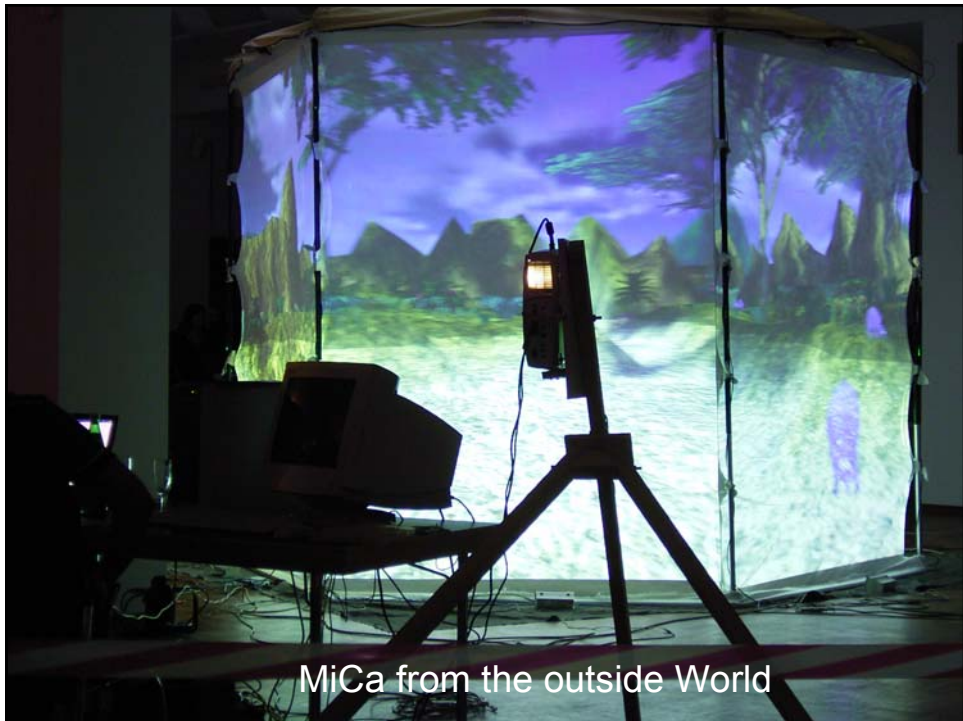




Sensoric Garden: Aegina and her Avatar



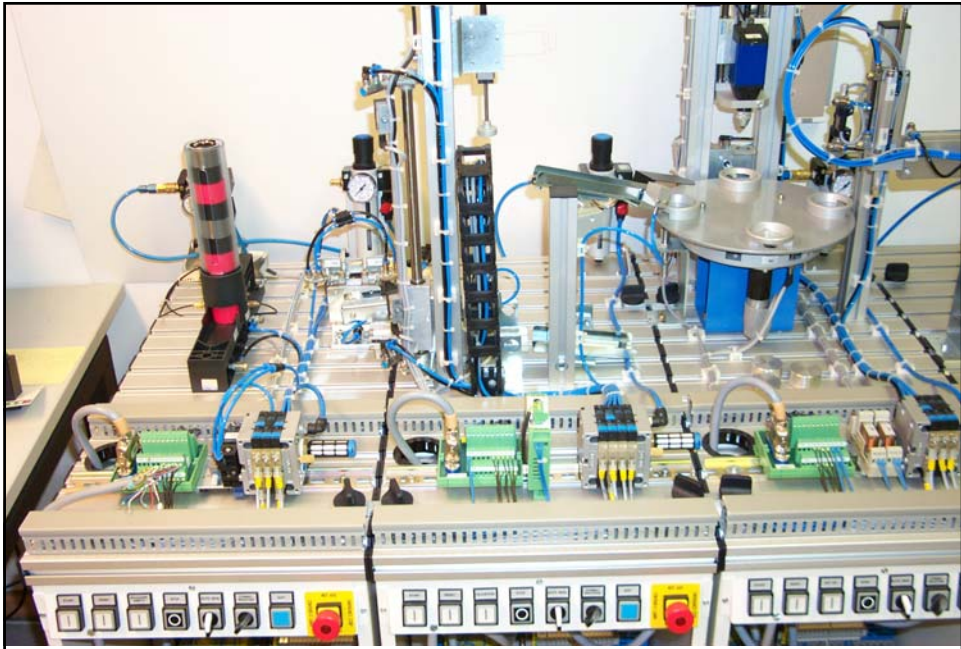
Project MiCa – Mixed Reality Caves



Work

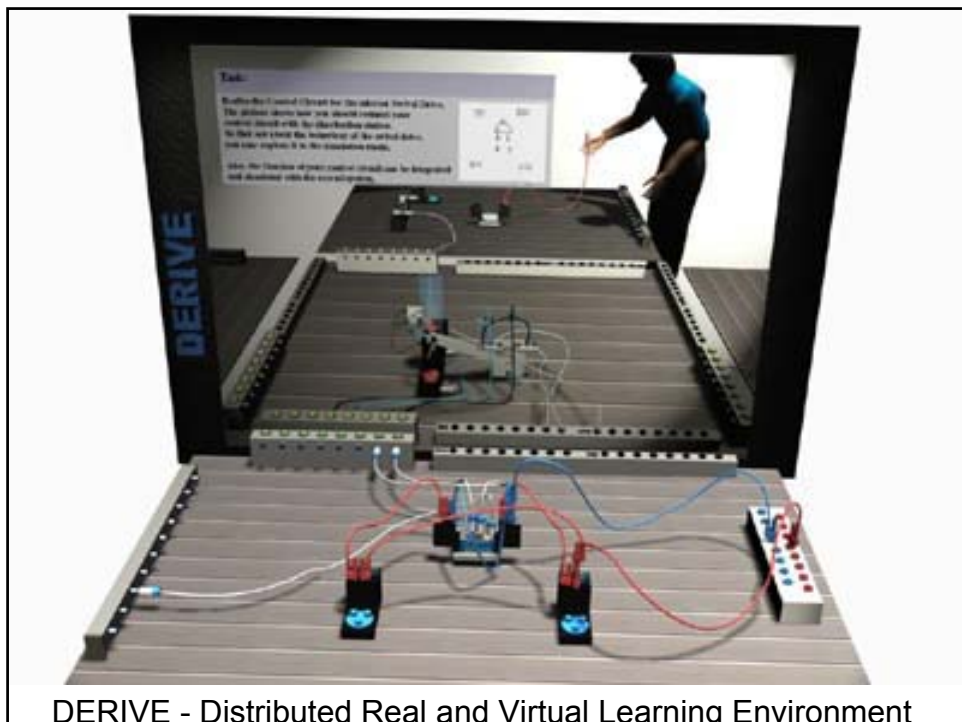
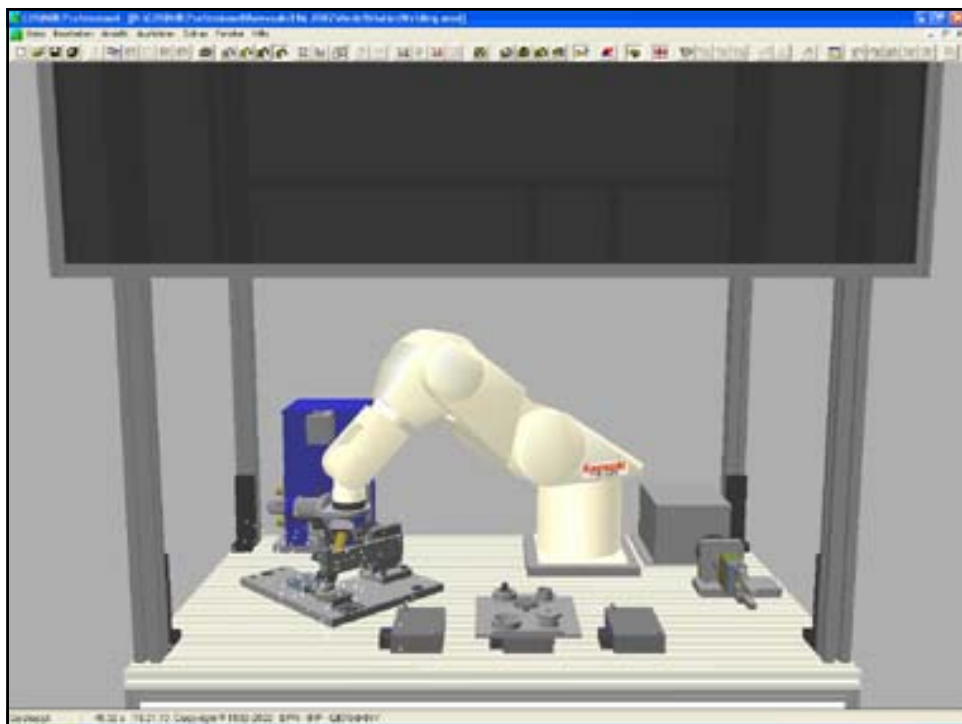
Simulation and Reality

From Performance to Play and back

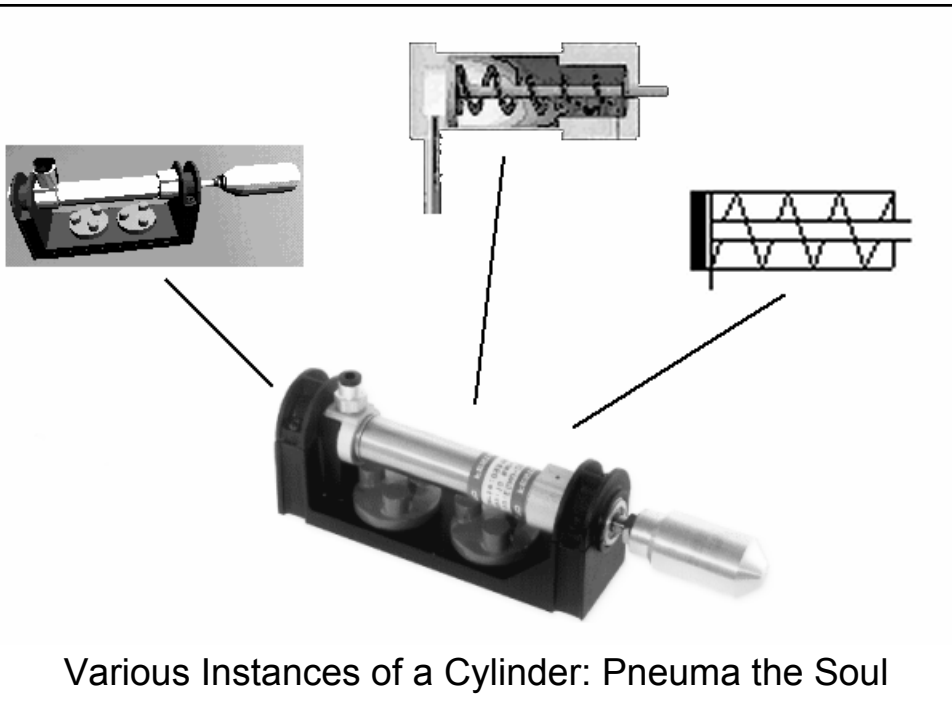


Complex Mechatronic System



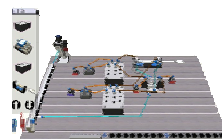
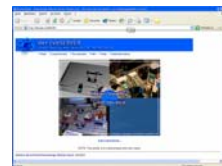


DERIVE - Distributed Real and Virtual Learning Environment



Fluid Dynamics

- artecLab, Germany
- Remote Laboratory for Fluid Dynamics
 - Explore the world of Mechatronics
 - Virtual Reality and/or Mixed Reality setting
 - Simulation over real and virtual components
 - Accessible from the Internet 24h a day
- Experiments are integrated into social and working context
 - e.g. Industrial Safety Circuit for a press
 - Can be reduced to the Double Acting Cylinder
 - Solution must take work context into account
- Mixed Reality Web Service
 - Try it yourself at <http://lab.artec.uni-bremen.de>



MARVEL - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

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Summary

The aim of the pilot project MARVEL is to implement and evaluate learning environments for Mechatronics in Vocational Training, that allow students ubiquitous access to physical workshops and laboratory facilities from remote places. The project will cover concepts that merge real and virtual as well as local and remote worlds in real time. This will support teleactions and remote laboratory experiments in mixed reality work environments.

MARVEL will produce evaluated working examples of remotely accessible practical environments together with supporting e-learning and student assessment material for the following application fields: robotics, modular production systems and process control. This includes the creation of actual demonstration models (learning scenarios and environments) in partner institutions and industry for evaluation purposes.




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MARVEL - Virtual Laboratory in Mechatronics: Access to Remote and Virtual e-Learning Internet