



Virtual and augmented reality solutions in various industries

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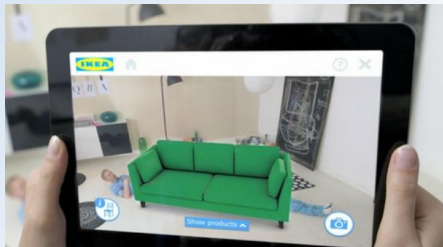


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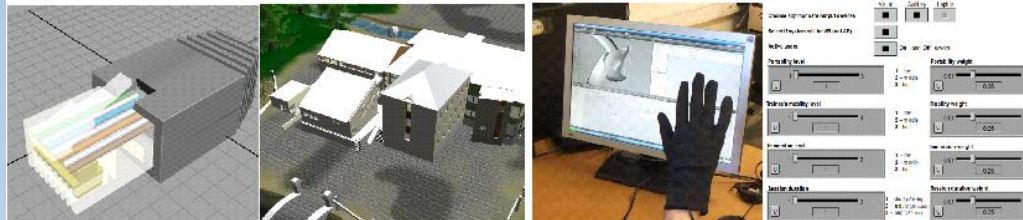
Outlines

- Introduction and key components
- VR/AR usages and disciplines
- The current practice and global tendencies
- Innovative approaches of technologies usage

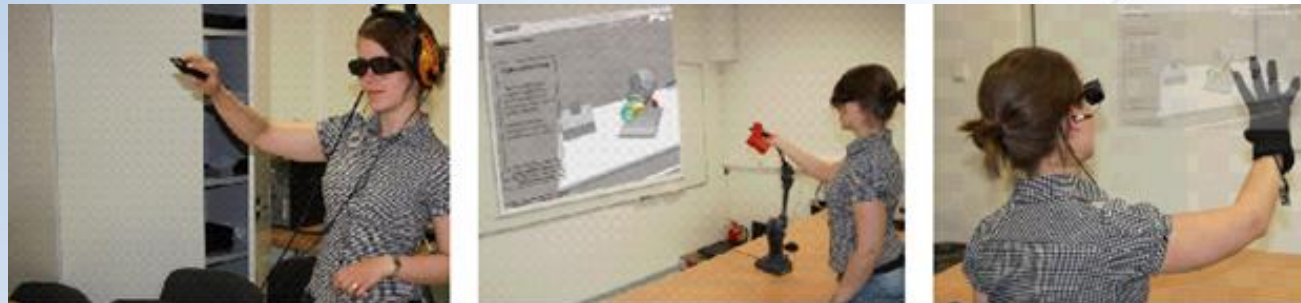


Introduction and key components

- VR/AR laboratory and cooperation



- Interaction, multidirectional communication



- General VR/AR criteria
 - Immersion level and environment
 - Portability and comfort
 - Senses, dimensions and performance

The current practice

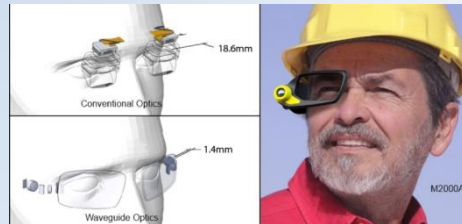
- Training and entertainment
 - Serious gaming, game based learning, gamification
 - Industrial, medicine, car industry, aviation, defense, primary schools etc.
- Marketing and product presentation
- Designing



From traditional devices to more immersive equipment

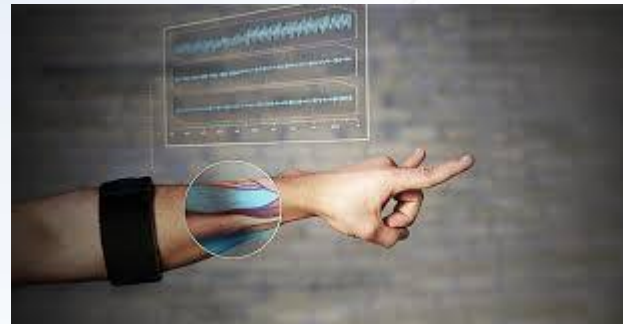
- Head mounted displays

- Vuzix
- Epson
- Google
- Oculus



- New devices for interaction

- Myo gesture
- Leap motion
- Data gloves



- Platforms

- TV, Playstation, Xbox, Wii

Development of new contents

- Lack of contents and «real» ideas
 - plenty of mobile apps
 - «wow» effect for the first time
 - entertainment vs professional
- Complexity of development
 - from static to dynamic environment
 - hw and sw compatability issues
 - universal authoring platforms

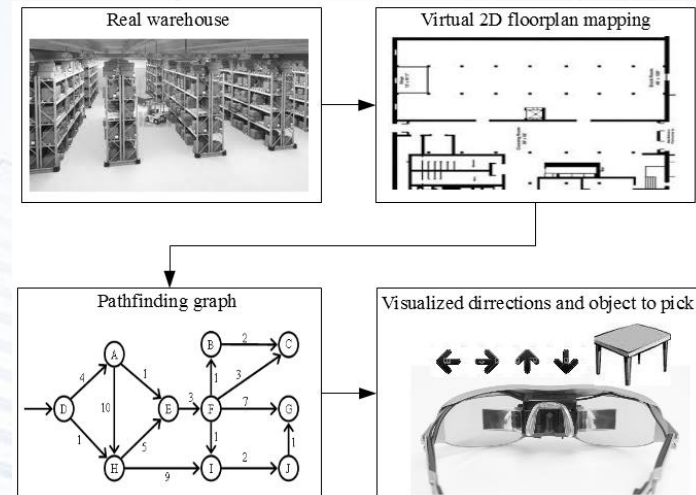
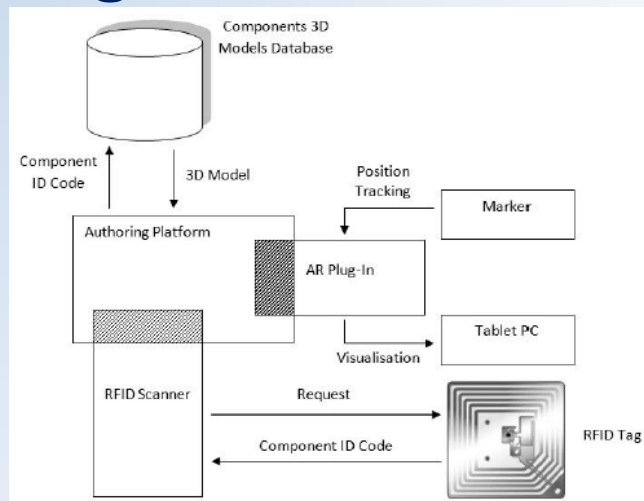


Solutions for new industries

- Environmental planning



- Logistics



Publications

- Cirulis A., Ginters E. Augmented reality in logistics. //In Proceedings of the ICTE in Regional Development, Valmiera, Latvia, December 2013, Volume 26, Pages 14–20 (Published by Elsevier)
- Cirulis A., Brigmanis K. 3D Outdoor Augmented Reality for Architecture and Urban Planning. //In Proceedings of the 2013 International Conference on Virtual and Augmented Reality in Education (VARE 2013), Puerto de la Cruz, Spain, November 7-8, 2013, Volume 25, Pages 71–79 (Published by Elsevier)
- Ginters E., Cirulis A., Blums G. Markerless outdoor AR – RFID solution for logistics. //In Proceedings of the 2013 International Conference on Virtual and Augmented Reality in Education (VARE 2013), Puerto de la Cruz, Spain, November 7-8, 2013, Volume 25, Pages 80–89 (Published by Elsevier)
- Cirulis A., Ginters E. Training Scenario Operations Realization In Virtual Reality. //In Proceedings of the 13th WSEAS International Conference on Automatic Control, Modelling and Simulation (ACMOS 11), Lanzarote, Spain, May 27-29, 2011, ISBN 978-1-61804-004-6, pp.39-44. (Thomson-Reuters Web of Science).
- Cirulis A., Brigmanis K. Software Modules Development For Input Devices In VR/AR Learning Systems. //In Proceedings of the Virtual And Augmented Reality (VR/AR) In Education - VARE 2011, Valmiera, Latvia, March 18, 2011, ISBN 978-9984-633-18-3, pp.35-40.

Thank You!

Questions?



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