X3D/AR Application

Desktop, X3DOM and Mobile

Fraunhofer IGD // Johannes Behr

X3D: Delivering New Dimensions on the Web!
Web3d Tech Talk
Siggraph 2011

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- **Mission:** Technologies and Applications of Visualization, Interaction and Communication in the field of ICT
- **Director:** Prof. Dr. techn. Dieter W. Fellner
- **4 Locations:** Darmstadt, Rostock (Germany), Singapore and Graz (Austria)
- 180 Researchers (FTE)
- 14,7 Mio. € Turnover
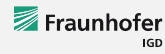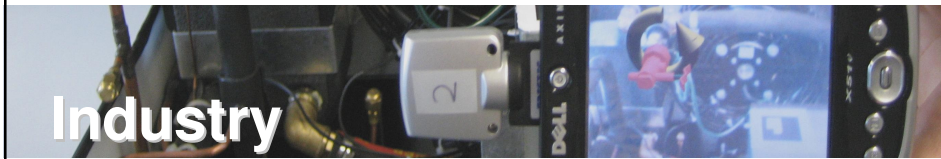 => **Department Virtual and Augmented Reality**

Dep. VR & AR
Research Topics

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Computer Vision

Computer Graphics

Interaction Technologies

Dep. VR & AR
Application Areas

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Industry

Cultural Heritage

Trade Fairs / Museums

IGD and X3D
2005: InstantReality – AR Application

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instant**reality** links today's standards to tomorrow's technologies

- VR/AR-framework which utilizes X3D as application-interface
- Vision-layer for tracking
- New Nodes for Data-Streams (e.g. tracker, video), Backdrop-Backgrounds, Flexible Camera setup, Occlusion-handling
- Input for X3D-AR Interest-group.

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IGD and X3D
2009: x3dom.org – AR Application

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x3dom   Instant 3D the HTML way!

- HTML5/X3D Integration model
- Allows to embed declarative 3D data directly into the HTML-DOM
- Runtime independent – supports native, plugin and WebGL
- Browser has no video-API but Flash

  => **X3DOM/Flash Hybrid** for AR
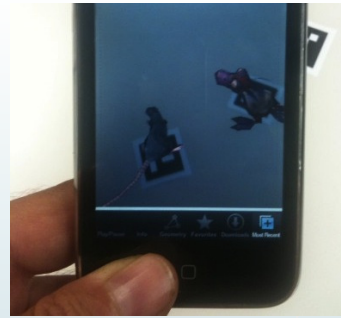   www.x3dom.org

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IGD and X3D
2010: instant Mini – AR Application

x3dom   Instant 3D the HTML way!

- AR browser for mobile apps
- Uses WebKit-layer as application-interface
  - HTML5 and JS for script
  - x3dom used for 3D-data and AR-setup
  - Supports marker- and poster-tracker right now. More soon …

THANKS

Demos are shown at the Web3D booth #814
Questions ?

More information:

www.instantreality.org

www.x3dom.org