Augmented Reality as a User Interface for Mobile Computing

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Motivation

- AR is a compelling display technique for location based spatial information.
- Mobility allows access to AR applications everywhere.
- Mobility leads to less structured and spontaneous collaboration.
Our Vision: 3D Mobile AR

- Wearable 3D workspace
- Direct interaction with virtual objects
- Collaboration
- Framework for rapid application prototyping
User interface system

- Studierstube
- Manages UI elements
  - 3D windows
  - Widgets
  - Multiple applications
- Pen & tablet
- Multiple users
Hardware

- Optical see-through HMD
- Notebook, GeForce graphics
- Camera, orientation tracker
- Two handed pinch glove interface
- Touch pad
Application - ARLibrary

- Augmenting position of books in a library
- For retrieval and returning
Application - SignPost

- Navigating in buildings
- Heads-up display of room geometry
- Direction arrows
- Hand-held world-in-miniature tablet
User interface - Applications

- Tangible markers to manage applications
- to start applications...
- ...or manipulate them
Thanks!

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