

Magic Book: Exploring Transitions in Collaborative AR Interfaces

Mark Billingham
Susan Campbell
Human Interface Technology Laboratory
University of Washington
grof@hitl.washington.edu

Magic Book explores transitions between physical reality, augmented reality, and immersive virtual reality in a collaborative setting. A Magic Book looks like a regular storybook with colorful pictures and clear text. When readers look at the pages wearing lightweight head-mounted displays, the pictures pop off the page and come to life as animated objects in virtual scenes. Readers can also fly into the immersive VR world and freely explore the scene. Several readers can gather around

a Magic Book and experience it together. They can view AR scenes from their own perspectives or fly into the immersive world and see each other represented as avatars in the same world. Those who remain in the AR setting have a God's-eye view of their collaborators, who appear as miniature avatars in the virtual scene. Together, readers experience storybook scenes and gain unique perspectives through a variety of navigation styles.



Collaboration within physical space.



Collaboration within AR spaces.



Collaboration within immersive VR spaces.

Ivan Poupyrev
Kazuhiko Takahashi
ATR Media Integration and
Communications
Research Laboratories

Winyu Chinthammit
Duff Hendrickson
Human Interface
Technology Laboratory
University of Washington

Hirokazu Kato
Hiroshima City University