ISMAR 2023 - 1st Joint Workshop on Cross Reality

# Promises and Design-Challenges of Mobile Transitional Interfaces

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# Transitional Interfaces

- Transitional Interfaces(TIs) were firstly introduced by Mark Billinghurst et al. in 2006

- With TIs, users have the freedom to move seamlessly along the reality-virtuality continuum, enabling them to individually select and switch between

  - displays

  - input/output modalities

  - representations of data

- These different states of a TI are defined as "contexts" by Grasset et al. in 2006

# Mobile Transitional Interfaces

- In the past TIs have predominantly been studied in stationary settings because of Hardware Constraints
- New HMDs such as the Oculus Quest 3 and Apple Vision Pro, enable transitions between AR and VR outside a predefined tracking space
- This development enables Mobile Transitional Interfaces (MobTIs)
- This expansion into everyday environments unlocks new
  - opportunities
  - challenges
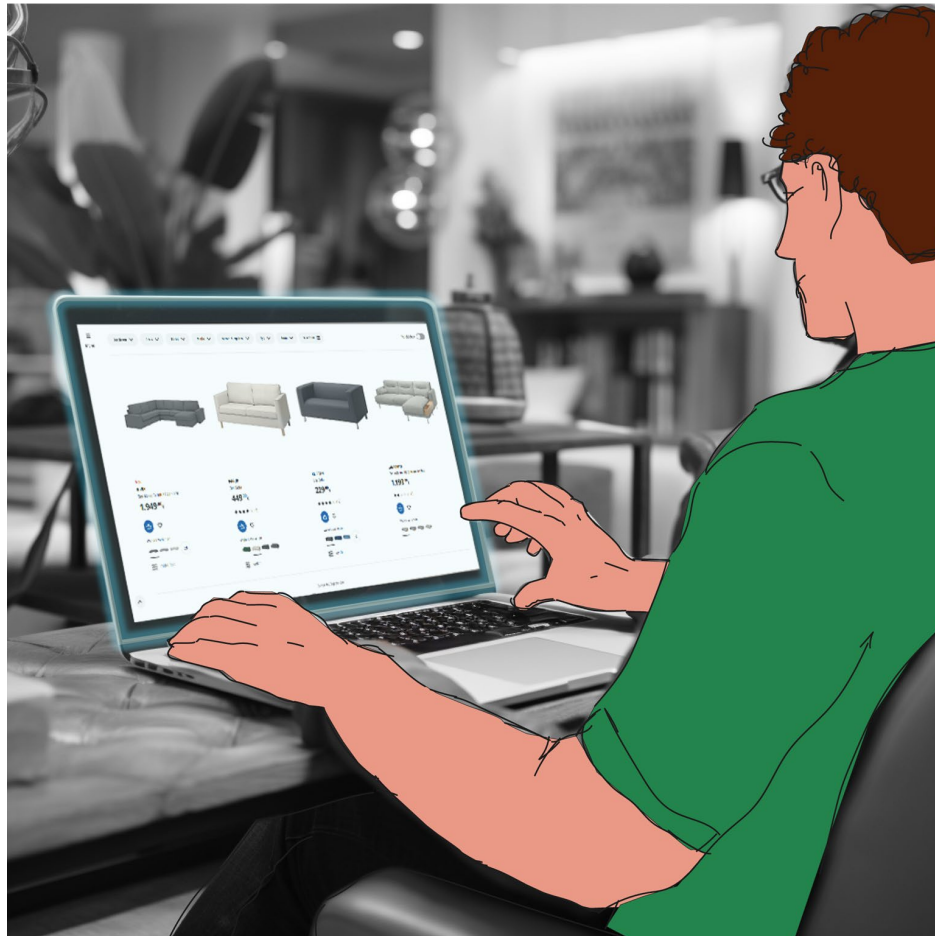
# Challenges of MobTIs

- Cost-Benefit-Ratio of Transitions
  - How to design transitions so that they have low "interaction costs"?

    (Witch variables influence this effort)
  - How to convey the effort needed for a transition?
- Discoverability of MobTI Content
  - How can a MobTI effectively communicate its presence to the user?
  - How can the system inform the user that it's a great time to switch between contexts?
- Input Modalities for MobTI
  - Which form of interaction is best suited for different public environments?

Thank you for your attention!
# Any Questions?