RARE SHOP: REAL & AUGMENTED RETAIL BOOKSHOP EXPERIENCE USING PROJECTION MAPPING

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Abstract

Augmented reality (AR) technology has been used to integrate online product information to the physical shopping experience by relying on hardware outputs such as head-mounted displays or mobile devices, which interfaces with the customers natural in-store shopping experience. Different from traditional AR, spatial augmented reality (SAR) could potentially offer an unmediated augmented physical experience.

We envision a real and augmented book shop experience using SAR, which has the following features .

- ◆ An immersive digital and online information overlaid onto physical products, breaking down the boundary between physical space and digital information at retail shops.
- ◆ An unmediated interaction that react to the relative spatial and temporal context of the users, based on user’s natural interactions with the physical products, without the need for learning special interactions/gestures.

Design Goal

The goal of our research is to explore how we could combine AR technology with online services and content in the physical retail stores without disrupting the normative shopping experience. We are proposing the use of SAR in retail context, to maximize hedonic value of the retail shopping experience, i.e. more entertaining, engaging, immersive and enjoyable, while providing a more effective visualization and interaction for users to receive more relevant product information, and promotes user’s purchasing desire.

Implication

By bringing online shopping information to the physical retail experience, it is now possible to combine online and offline user behavior data together into a single system. Users’ previous purchase data from online shops can be used as recommendation at the retail shop and users’ offline behavior (e.g. picking up a book) can be added and combined with the online behavior (e.g. clicking the product page). This concept of equivalence between the online and offline activities can be extended to include a wider array of user behavior, which can be mapped from online to offline and vice versa.

Conclusion

we presented a new in-store shopping experience, demonstrating a new immersive experience aligning digital and physical world, that results in a book-store-based unmediated interaction, creating the hidden interface that brings online features in this context-aware environment.

User Scenario

We conceptualize a new user experience in terms of an immersive book store, which includes two major parts in retail shopping experience, shelf interaction and book interaction.

1. the character is waving to attract customer with the price information mapped to books, and the book that the user is closest to also have points information shown

2. User puts book onto the shelf and the summary content of the book will fly out from the book.

3. User turns to a certain page and a visualization comes out of the book and transit to an immersive snow visualization is presenting the world in the book story

4. User turns to another page and walks to open up the review about the book

5. User closes the book and the coupon information is presented

6. User turns to another page and walks to open up the review about the book