Mixed Reality Games

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Abstract

Collaborative technologies increasingly permeate our everyday lives. Mixed reality games use these technologies to entertain, motivate, educate, and inspire. We understand mixed reality games as goal-directed, structured play experiences that are not fully contained by virtual or physical worlds. They transform existing technologies, relationships, and places into platforms for gameplay. While the design of mixed reality games has received increasing attention across multiple disciplines, a focus on the collaborative potential of mixed reality formats, such as augmented and alternate reality games, has been lacking. We believe the CSCW community can play an essential and unique role in examining and designing the next generation of mixed reality games and technologies that support them. To this end, we seek to bring together researchers, designers, and players to advance an integrated mixed reality games' research canon and outline key opportunities and challenges for future research and development.

Author Keywords

Games, mixed reality, augmented reality, alternate reality, social games, gamification, CSCW

ACM Classification Keywords

K.8.0 [Personal Computing]: Games; J.4 [Social and Behavioral Sciences].

Game Genres	Collaborative Elements
Context-Aware	Automates some elements of mixed reality gameplay, not input explicitly by players (e.g., recognizing the co-locatedness of players).
Alternate Reality	Multiple players interdependently synthesize narrative elements to form a coherent story. Peer-rated performance and feedback.
Social Network	Game mechanics invoke existing social ties between players for collaborative accomplishments
Augmented Reality	Can incorporate shared experiences of the layered virtual world; opportunities for exchange of resources

Table 1. Primary genres of mixed reality games and their collaborative elements. Complete table at: http://mixedrealitygames.selfloud.net/ aboutmixedreality/.

General Terms
Design; Theory.

Workshop Context and Goals
During the past decade, we have seen an explosion of interest in technology-mediated games that build on everyday experiences. Collaborative mixed reality games manifest in multiple forms, with game-world interfaces that can be placed along a continuum from "augmented reality" to "real environment" [2]. Though definitions of these emerging game genres are yet to be formalized, we view mixed reality games as goal-directed, structured play experiences that are not fully contained by virtual or physical worlds. They transform existing technologies, relationships, and places into a platform for gameplay. Because they play with the boundaries of more traditional game spaces, they hold unique potential to extend or blend game mechanics into our everyday experiences [1,3].

Examining mixed reality games as a group allows us to better understand the game mechanics, technologies, and social engagement strategies that work well across the mixed reality game genres. Game mechanics are the underlying rule-based systems of games that define patterns of player behavior, for example, when a player makes a goal-oriented choice and the game provides a meaningful outcome [3]. How do core game mechanics like capturing territory, collecting, or even talking change in mixed reality contexts? Likewise, how can existing relationships be leveraged to attract new players and support new types of gameplay? What new CSCW tools are needed to support mixed reality games and how can existing systems incorporate game elements? This workshop will address such questions and explore how these game mechanics, technologies, and social engagement strategies can be blended to produce novel game experiences. Interdisciplinary participants will also help establish a mixed reality games' research canon and agenda, which will be disseminated and curated by the organizers at: http://mixedrealitygames.selfloud.net/.

Acknowledgements

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