Can Touch Me!
Evaluating NFC and Touchscreen Interactions in Collaborative Mobile Pervasive Games
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We've all felt bored or frustrated while waiting for a bus to come, or for a traffic light to turn green. Mobile devices may have alleviated these long waits, but they also isolate us more than ever. To revive social interactions, we propose the use of Near Field Communication (NFC) technology in pervasive games.

Introduction

Question

Does physical mobile interaction (using NFC technology) positively influence users' perceived social presence in collaborative pervasive games?

Methods

'CountMeIn' sequence game developed on Android
2x1 within-subject design; NFC and Touchscreen
4 participants; 20 min. sessions; home setting
Data collected:
- Game Experience Questionnaires (GEQ)
- NASA-TLX
- Semi-structured interviews
- Video Observations

CountMeIn Interaction

2 players interacting simultaneously on NFC board
Inviting another player to join the game

NFC Version

Inviting another player to join the game

Touchscreen Version

Inviting another player to join the game

Results

"I enjoyed the game more when I was physically interacting with the poster"

"If two strangers would enthusiastically ask me to help them play a sequence, I would do so"

"While playing collaboratively, the touchscreen required much of my attention, and could not pay much attention to the other player"

"I consider touching phones with strangers similar to casually talking to strangers"

"Registration of the tags did not always work perfectly."

Conclusions

Most participants would play in public places to kill waiting time and meet new people
NFC-based interaction felt natural (cf., [2])
Privacy and security issues in public settings
Higher perceived social presence and collaboration for NFC version
Pilot study shows promise of NFC for urban collaborative gaming

Future Work

Improving touchscreen and NFC interfaces
Real-world 'in-the-wild' evaluation
Rewarding collaboration (gamification)

References:


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