

Do Elements from Location Based Games make Navigation in City Tourist Applications more Engaging?

**Benjamin Nicholas
Overgaard**

Aalborg University
Rendsburggade 14
9000 Aalborg, DK
boverg11@student.aau.dk

**Camilla Gisela Hansen
Schnatterbeck**

Aalborg University
Rendsburggade 14
9000 Aalborg, DK
cschna11@student.aau.dk

Peder Walz Pedersen

Aalborg University
Rendsburggade 14
9000 Aalborg, DK
pwpe08@student.aau.dk

Stephanie Githa Nadarajah

Aalborg University
Rendsburggade 14
9000 Aalborg, DK
snadar11@student.aau.dk

ABSTRACT

..

Author Keywords

city tour; location based games; navigation; pervasive games; engagement;

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

INTRODUCTION

Motivation: "Moving is boring". Time is wasted between A and B, when you "just" walk. Is it possible to incorporate something fun in the navigation to make it more engaging?

How can tourist families navigate a city in a more engaging way than using a map? - Location based games

Contribution: No previous research on how to make navigation more engaging.

BACKGROUND

Engagement

May not be the right thing to test

Location-Based Games

Give some examples of what others have done..

- How do location-based games incorporate navigation?

Paste the appropriate copyright statement here. ACM now supports three different copyright statements:

- ACM copyright: ACM holds the copyright on the work. This is the historical approach.
 - License: The author(s) retain copyright, but ACM receives an exclusive publication license.
 - Open Access: The author(s) wish to pay for the work to be open access. The additional fee must be paid to ACM.
- This text field is large enough to hold the appropriate release statement assuming it is single spaced.

– Technologies used

– Representation (map, arrows, etc.)

- Guidelines

– Avoid too much competition - encourage relaxed gameplay

– Narrative, game, and virtual elements must be in context with the real world

– Avoid information overload

– Consider spatial awareness

- Which engaging elements are incorporated?

– Types of narratives

– Game elements

– Social elements

– Type of expansion (temporal, spatial, social)

REFERENCES

1. Ballagas, R., Kuntze, A., and Walz, S. P. Gaming tourism: Lessons from evaluating reexplorer, a pervasive game for tourists. In *Proceedings of the 6th International Conference on Pervasive Computing*, Pervasive '08, Springer-Verlag (Berlin, Heidelberg, 2008), 244–261.
2. Benford, S. Savannah: Designing a Location Based Game Simulating Lion Behaviour. In *Advances in Computer Entertainment Technology* (2004).
3. Blythe, M., Reid, J., Wright, P., and Geelhoed, E. Interdisciplinary criticism: analysing the experience of riot! a location-sensitive digital narrative. *Behaviour and Information Technology* 25, 2 (2006), 127–139.
4. Burnett, D., Coulton, P., Murphy, E., and Race, N. *Designing Mobile Augmented Reality interfaces for locative games and playful experiences*. Digital Games Research Association - DiGRA, 2014.

5. Carrigy, T., Naliuka, K., Paterson, N., and Haahr, M. Design and evaluation of player experience of a location-based mobile game. In *Proceedings of the 6th Nordic Conference on Human-Computer Interaction: Extending Boundaries*, NordiCHI '10, ACM (New York, NY, USA, 2010), 92–101.
6. Chittaro, L., and Burigat, S. Augmenting audio messages with visual directions in mobile guides: An evaluation of three approaches. In *Proceedings of the 7th International Conference on Human Computer Interaction with Mobile Devices & Services*, MobileHCI '05, ACM (New York, NY, USA, 2005), 107–114.
7. Diamantaki, K., Rizopoulos, C., Charitos, D., and Tsianos, N. Theoretical and methodological implications of designing and implementing multiuser location-based games. *Personal Ubiquitous Comput.* 15, 1 (Jan. 2011), 37–49.
8. Eguma, H., Izumi, T., and Nakatani, Y. A tourist navigation system in which a historical character guides to related spots by hide-and-seek. In *Technologies and Applications of Artificial Intelligence (TAAI), 2013 Conference on* (Dec 2013), 337–342.
9. Huizenga, J., Admiraal, W., Akkerman, S., and Dam, G. t. Mobile game-based learning in secondary education: engagement, motivation and learning in a mobile city game. *Journal of Computer Assisted Learning* 25, 4 (2009), 332–344.
10. Khaled, R., Barr, P., Greenspan, B., Biddle, R., and Vist, E. Storytrek: Experiencing stories in the real world. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, MindTrek '11, ACM (New York, NY, USA, 2011), 125–132.
11. Klemmer, S. R., Thomsen, M., Phelps-Goodman, E., Lee, R., and Landay, J. A. Where do web sites come from?: capturing and interacting with design history. In *Proc. CHI 2002*, ACM Press (2002), 1–8.
12. Kuikkaniemi, K., Lucero, A., Orso, V., Jacucci, G., and Turpeinen, M. Lost lab of professor millennium: Creating a pervasive adventure with augmented reality-based guidance. In *Proceedings of the 11th Conference on Advances in Computer Entertainment Technology*, ACE '14, ACM (New York, NY, USA, 2014), 1:1–1:10.
13. Mather, B. D. Making up titles for conference papers. In *Ext. Abstracts CHI 2000*, ACM Press (2000), 1–2.
14. Schwartz, M. *Guidelines for Bias-Free Writing*. Indiana University Press, 1995.