Toward a Framework for Gamification Design on Crowdsourcing Systems: The G.A.M.E Approach

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Introduction

- One of the main crowdsourcing challenges is how to design user interfaces that can attract and sustain numerous people to collaborate.
- Most gamification methods concern about introducing rewarding elements to the application design instead of collaboration aspect.
- G.A.M.E. aims to support developers on redesigning crowdsourcing applications interfaces by integrating game design elements.
Gamification

- *The use of game design elements in non-game contexts*
- Instead of turning applications into games, it make the collaborative software more appealing
G.A.M.E

- A conceptual framework to support the design of gamification in crowdsourcing applications
- Gathering, Analysis, Modeling and Execution
Gathering

- Scenario understanding
- To retrieve information regarding its goals, technology, functionalities, and issues
Analysis

- Identify the proper target for gamifying: either to enhance a strength or to fix a weakness

- 3C collaboration model:
  - Communication, Cooperation, Coordination, Awareness

- Refine the requirements through user stories:
  - *As a [user], I want [function] so that [value]*
Modeling

- Combine user stories with a **Gameplay Interaction Model**
- Tuple \((P, A, u)\)
  - \(P\): players, \(A\): actions, \(u\): outcomes
- Loop of interaction
  - *As a [player], I want [action] at [state] so that [feedback]*
Execution

- Start with user interfaces
- Rebuild the evaluation as needed until desired results are found
Instantiation - Wikibus

- A collaborative system that’s all about bus
- Users can share information regarding
  - Public transportation
  - Real-time occurrences
  - Bus vehicles, stops and routes

- In this paper, we detail how G.A.M.E. was instantiated to design gamification in Wikibus
Gathering

- Two preliminary evaluations were held to get the application issues from users’ perspective
  1) To generate a testing database and to observe the application functionalities, efficiency and usability
  2) To collect information from all the actions performed by Wikibus visitors and asked them to answer a survey

- Two main issues were gathered:
  1) *It is hard to understand how to find and how to contribute with new content*
  2) *It is hard to trust on information that anyone can change*
Analysis

- From the two issues gathered in previous phase, we can do the following analysis:

1) Closely related to users’ awareness
   - If users won’t learn quickly how they are expected to contribute, they won’t feel attracted to use the application

2) Need to guarantee trust on contents provided by Wikibus
   - It’s necessary to introduce mechanisms that foster trust between users and the content
Modeling

- **Smooth Learning Curves**
  - Helpers: explicit extra-game information

- **Communication Channels**
  - User could trust a content confirmed by many users more than an unconfirmed one

- **Ownership**
  - The user develop a sense of belonging and also care about that content by owning some
  - Others could trust on a certain content because it was created by a high-qualified user
Execution
Feedback

- **Usability Hub**
- 10 people, chosen randomly, performed the test for original and gamified Wikibus
- Gamified versions had **16%** more usability and were in **80%** of the cases more trustworthy than originals
Conclusion

- G.A.M.E works!
Any Questions?

Thx For Listening!