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**
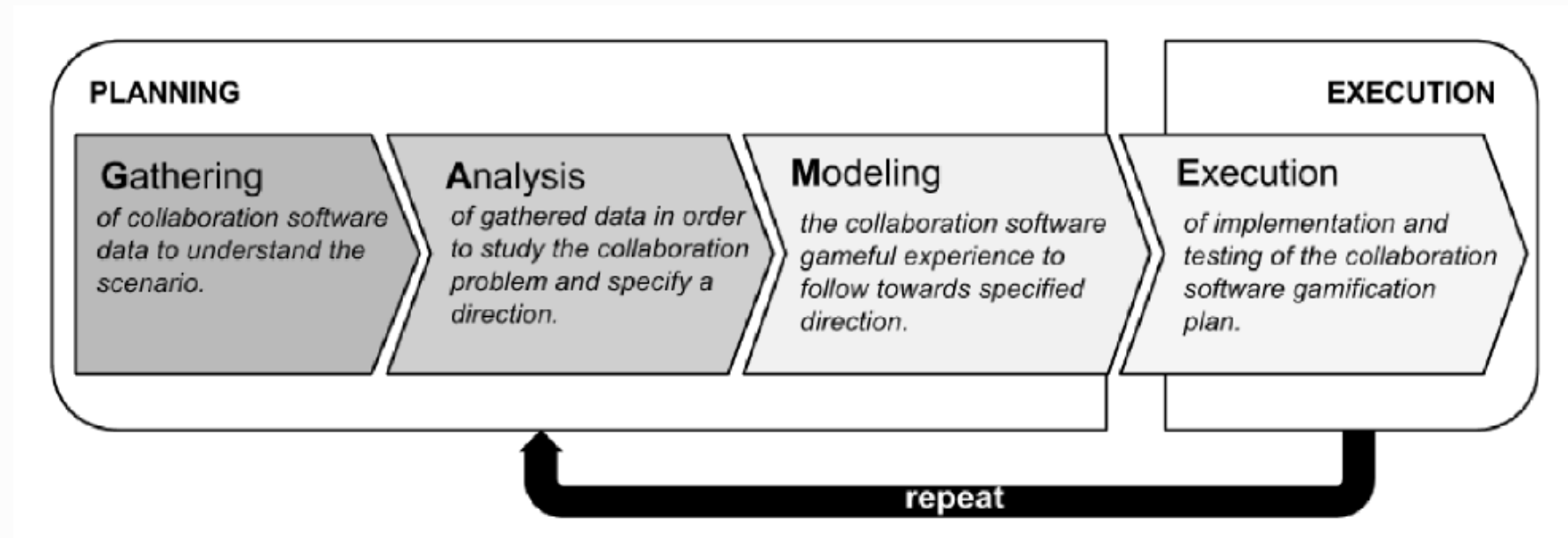
Gathering

- 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**]*
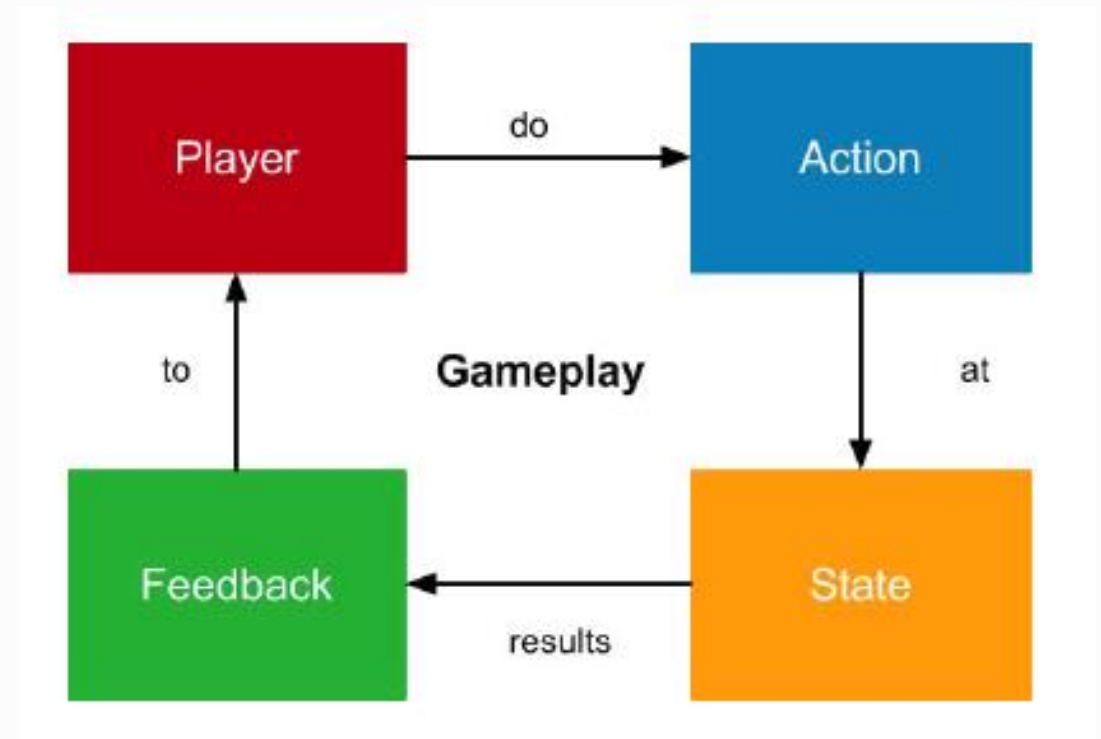
Execution

- 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*

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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***
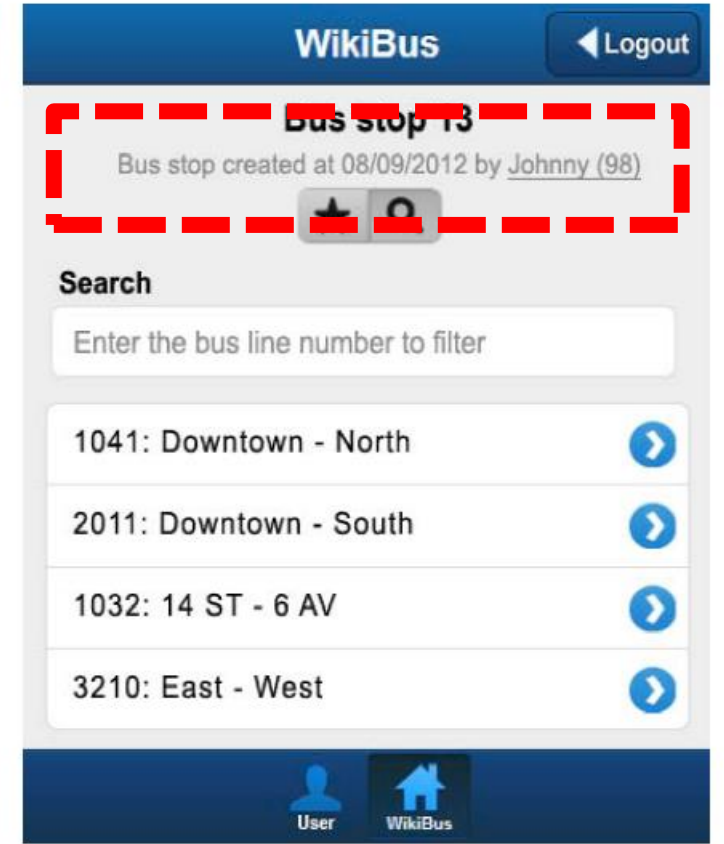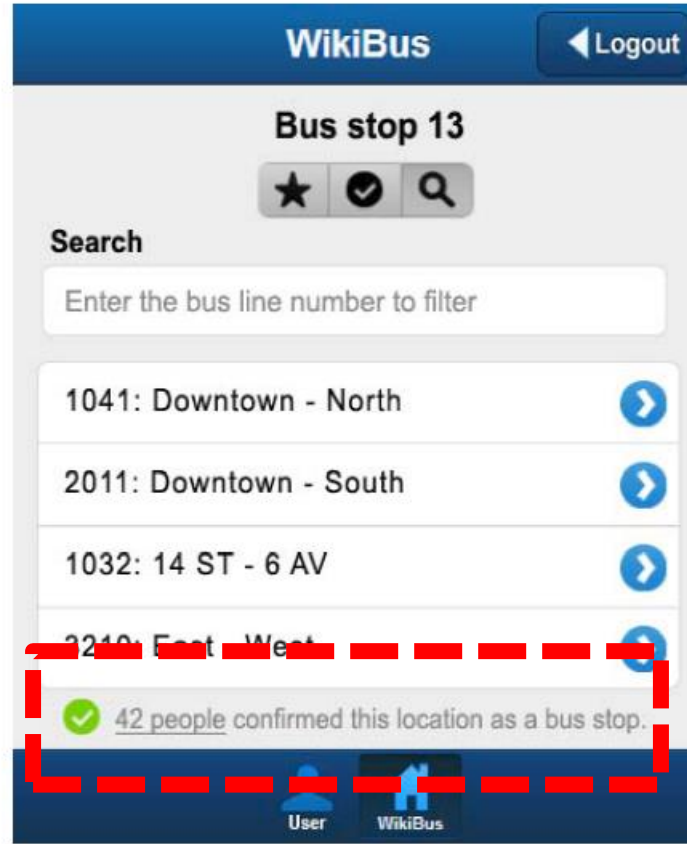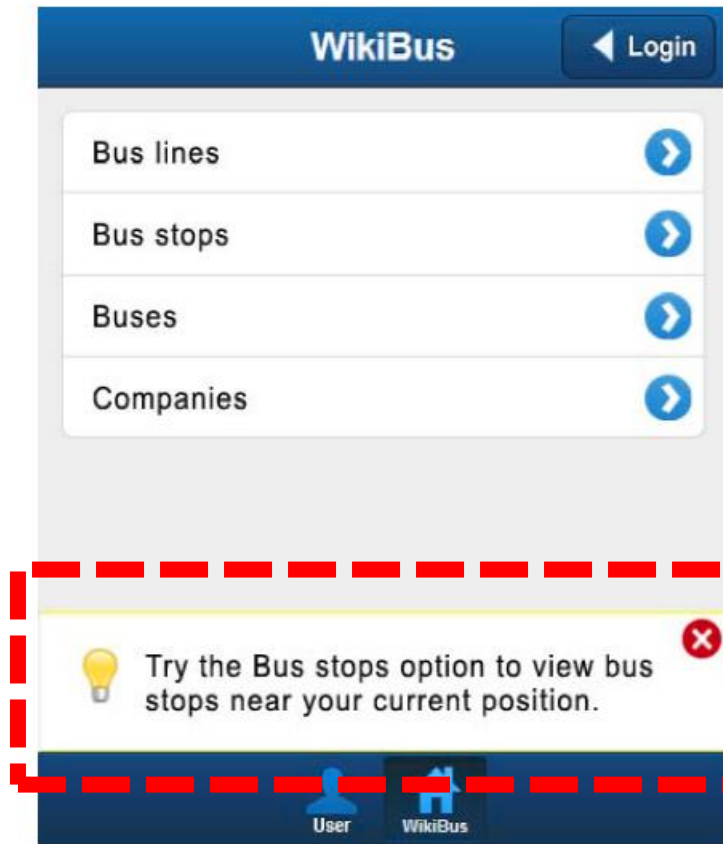 - Helpers: explicit extra-game information

- ***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!

Thx For Listening!

Any Questions?