Game Ideation and Development Processes in the Global Game Jam

ABSTRACT

update to results

My proposed research will investigate the knowledge and creative processes involved in conceiving of a game and grounding an initial set of ideas in game mechanics. Particular details of this knowledge and process will be investigated using semi-structured interviews with completed games. Broader characterizations will be explored using a questionnaire distributed to the Global Game Jam participants. Combining in-depth interview information and large-scale survey information will provide insights into the creative practices involved in the game design process of value to researchers in many areas relating to the practices of game design, creativity in game jams, and the goals and tools of game jam participants.

decide category, terms, etc.

Categories and Subject Descriptors

H.4 [**Information Systems Applications**]: Miscellaneous; D.2.8 [**Software Engineering**]: Metrics—*complexity measures, performance measures*

General Terms

Theory

Keywords

ACM proceedings, LaTeX, text tagging

1. INTRODUCTION

1. Design goals—Characterizing the goals GGJ participants set for their games. Anecdotally the game design literature involves debates around the merit of different design goals (e.g. consider the breadth of approaches presented in game design reference sources [4][11] [12] [13]). Design goals range from making a game fun for players [7] to creating immersion and a sense of flow [3] to conveying a meaningful message [1]. I aim to characterize this range of goals and understand how design goals are brought to bear on the design process.

2. Game ideation—Identifying the sources of creative inspiration designers draw from. Existing models of game ideation suggest there are many entry points for starting a design but tend to be based on theoretical analyses rather than existing practices [6]. Example sources for game ideas include everyday activities a game is inspired by [14], metaphors a game is meant to convey [10], or models of systems [2]. My goal is to characterize the kinds of knowledge GGJ game designers employ when defining the game they will create.

3. Game prototyping—Examining how designers ground inspirational ideas in particular game mechanics or systems. Initial inspirational ideas must be grounded in particular game systems and many designers report testing out a variety of potential ideas before settling on a system to employ [5] [8] [9]. My goal is to characterize the process of mapping between ideas and mechanics designers employ.

4. Game refinement/balancing—Uncovering game balancing and refinement processes involved in terms of the features balanced and reasoning for balancing choices. Regardless of level of final "polish", game designs typically go through phases of some refinement of game systems to achieve the goals designers have set out [13]. While the GGJ puts tight time constraints on designers that limits the effort spent on this phase of design there are still many insights to be gained from what elements designers choose to refine, why and when.

By studying participants at the GGJ I hope to gain detailed information on how game design processes occur, particularly focusing on creativity in realizing abstract game ideas in final designs. I hope to contribute to the body of knowledge of how game design occurs and use this knowledge to inform my subsequent development of AI tools to support game design creativity.

2. METHOD

To broaden the generality of my results and better understand the breadth of design approaches involved I will also distribute a questionnaire highlighting the primary questions involved in the interview process. While not providing

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the same level of detail, this broader survey will enable me to empirically examine the range of design approaches involved. Questions included (see below) cover the same topics as the interview process, emphasizing the four areas of design goals, game ideation, game prototyping, and game balance/refinement above.

Questions listed in Appendix A

3. RESULTS

General note: game jam theme has strong influence on participant results. Many used to ground ideation process. Jam constraints focused on development problems, with playtesting and prototyping often being cut. Team management is not frequently mentioned.

3.1 Game Ideation

Often draw from existing games or games played as genres or genre exemplars. typically simple genres with single player games. heavily skewed towards things amenable to theme.

Themes to convey.

Life experience.

Analogies to systems.

3.2 Design Goals

a few large categories of goals seem to drive participants:

- system/expression = conveying themes, trying out mechanics, recreating classic games

- personal = learning things, networking, portfolio, idea testing, win competition

- player = player enjoys, learns, thinks critically, becomes aware, changes world

player-centered design de-emphasized, likely due to jam constraints. suggests GGJ currently emphasizes a process for game development rather than game design.

3.3 Game Prototyping

list out aspects mentioned in prototyping

Main approaches:

1. Paper prototype. Draw out or use parts if available.

2. Engine prototype. Code basic version with assets stripped out. Often evolved into the final product. Two versions: (1) parallel development with integration into core; (2) iterative expansion of core.

3. Iterative prototype. Intentionally layering in content.

3.4 Ideas to Game

list main kinds of changes

Three approaches to managing ideas/features: (1) start from many ideas and iteratively downscope based on dependencies/feasibility (2) start from vague/generic ideas and build out both mechanics and ideas during implementation (3) start from small baseline and build up

primarily forced to cut out mechanics or features. visualization and controls are occasionally mentioned (along with balance), but less central aspects. GGJ focuses on integrating many parts over learning how each task works. heavy programming challenges suggest biggest issue and focus on learning is around how to get code up more than exercising other skills.

idea changes most frequently driven by development needs rather than playtest results. testing primarily seems to have been based on personal reactions to product rather than player feedback. GGJ seems to encourage "personal" games that meet one's own standards more than play-centric designs.

cite other study of professional designer types?

1. results aligning w/theories

2. results diverging

3. details of areas

4. CONCLUSIONS

More research into differences in outcomes based on processes for approaching: pruning vs expanding. In-depth protocol analysis to get detailed evolution. Comparison of design methods by levels of experience.

Alternate formats of jam for skill sets: playtest-focused, full game development, etc.

need better ways to understand how constraints impact results, particularly when aspects like time limits vary. need better ways to automatically record many aspects: participant outcomes and experiences, products, practices employed over development process.

clearly provides useful guidance on priorities and perspectives. open question responses helped address a breadth of issues without guiding participants to only answer key points.

5. ACKNOWLEDGMENTS

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APPENDIX

possibly use for questions given

A. SURVEY QUESTIONS

- What was your initial goal for the game you made during the global game jam?
- What inspirations or initial ideas did you have for your game? What was the starting inspirational source or goal for the game?
- Why did you pick this particular idea for the game?
- What problems did you encounter in developing your game?
- What changes did you make to your initial idea as you worked on it during the game jam? Please describe the changes as small pieces of changes as possible.
- What game mechanics and/or gameplay systems did you use in your game?
- How did the mechanics or systems you made relate to the initial design ideas you had?
- How did these mechanics change as you worked on the game during the game jam?
- Did you prototype your game? If so, what kind of prototyping did you do and what did you learn from doing it?
- What tools did you use to make your game? Please include software tools (e.g. programming languages or game engines) and any physical/analog materials (e.g. paper prototyping methods or storyboarding).