Interviews towards designing support tools for TTRPG game masters

Devi Acharya[0000−0001−9546−493X], Michael Mateas[0000−0002−1897−6293], and Noah Wardrip-Fruin[0000−0003−1964−7624]

University of California, Santa Cruz
dacharya@ucsc.edu, {michaelm, nwf}@soe.ucsc.edu

Abstract. In running tabletop roleplaying games (TTRPGs), game masters (GMs) are tasked with helping create and facilitate the building of a shared story between players based on player choices. In this paper, we look at how we can inform the design of computational tools for GMs through the use of qualitative interviews. We present GMs with a prototype of a computational tool built based on a beginner TTRPG module that has some of the features we believe would be useful in a GMing assistant, such as consolidating information for easier reference and helping GMs keep track of what has happened in the game world. From these interviews, we found which features GMs liked and what could be improved with our digital prototype.

Keywords: role-playing games · game masters · requirements analysis.

1 Introduction

In running tabletop roleplaying games, game masters (GMs) lead the game and take on a variety of roles, including providing challenges to players and improvising new content based on the player's character backstories, choices, and actions in the game world. In order to do this, GMs must be able to adapt the game on the fly, improvising from both prepared materials and the GM's imagination to build new elements of the game world. This can be a difficult task, and one that is especially daunting to new GMs. In this paper, we use qualitative interviews with GMs in order to assess a digital prototype for helping GMs. This requirements analysis helps us understand how computational tools can help to support GMs and inform next directions for the design of such tools.

2 Related work

Currently there exist many different digital commercial and research tools for helping run TTRPGs. While there are many tools to help GMs facilitate their games such as virtual tabletop platforms or rulebook references for lookup, we focus here on the most relevant work related to facilitating GMing. One example is *Undercurrents*, a tool that helps to facilitate hidden information communication within tabletop roleplaying games by helping the game master share

information with only a single or a few players [3]. This helps maintain hidden information in what is traditionally an open space of information, and provides a way of keeping track of what has happened in the game so far. Another example is *Imaginarium*, which uses procedural text generation to provide descriptions that are constrained by the author but still have variations to them, using an authoring language similar to natural language [6]. Horswill poses this as a casual authoring tool for game masters to develop semi-randomized content on the fly, for instance descriptions of monsters.

There has also been previous work theorizing how one might build digital tools based on these techniques. Bergström uses interviews with TTRPG players and their own experience with TTRPGs to create categories of "frames" of storytelling, such as diegetic and non-diegetic communication, using this to inform the design of digital tools for TTRPG communication [3]. Peinado discusses how GMing techniques could be applied in a digital domain, such as for modeling improvisation in a text adventure game. Our work builds on these and other studies on TTRPGs and using qualitative interviews, such as [8] and [11].

Finally, we use techniques informed by requirements analysis, in which interview insights can help to inform the design and iterative development of digital tools. Nelson & Mateas [7] provide game design assistive tools to several groups of game designers with various needs, perform interviews with them about their needs and how they can use the tools provided to help with those needs, and iterate on the tool's design based on the results of these interviews. Grow's [4] approach to evaluating AI architecture authoring tools is similar, using three different case studies to evaluate three different architectures, and looking at how different architectures require different methods of authoring. Gustafsson, Holme, and Mackay analyze the play experiences and players' stories of important objects from their play using interviews and questionnaires, using these to inform the design of new game architectures that provide a greater support for player narratives [5].

3 Methods

In order to give GMs a baseline from which we could discuss the design and functionality of a TTRPG digital assistant, we created a digital prototype of a tool for GMs that had some of the features that we were interested in assessing. We based this prototype on beginner *Dungeons & Dragons* 5th edition module *Lost Mine of Phandelver*, because it is a scenario meant for new GMs using a popular TTRPG system, and thus could be the introduction to GMing for many new GMs. For modeling out the scenario, we focused on Chapters 2 and 3 of *Lost Mine* because these offered some interesting variance in play style (social, hub-based quests and combat) and player options. The static version of the visualization laid out story and character information and connections between them in a flowchart-style interface, providing information on the various paths that the players could take through the story and a list of characters. The

interactive version was the same flowchart representation in which nodes and the connections between them could be edited, added, or removed by the user.

We used similar methods to our previous study [2], interviewing six of the GMs interviewed for that study as well as two more contacted based on convenience sampling [9] from a pool of students and faculty members in the area. Before the interview, we asked GMs to review the module *Lost Mine of Phandelver*. We then conducted hour-long interviews with each GM individually to get insights into their GMing process and how a digital assistant could help with this. We both asked questions related to how the GM would run the module and questions related to the digital prototype–the information being displayed, how it might be helpful, and what the GMs would want to see changed about it. For the interview, GMs were given a PDF version of the *Lost Mine of Phandever* module, as well as links to both the static and interactive versions of the digital prototype. As with our previous study [2], we then performed qualitative coding as informed by [10] on the interview notes and video interviews in order to pull out both general categories and specific examples that arose throughout the interviews.

4 Requirements Analysis

Overall, GMs commented that they liked the tool and were interested in the potential for computational tools to help with GMing. Many of the GMs liked that the tool condenses the many pages of information found in the module into a more accessible form that can be referenced in either planning for a next session or during play. GMs also talked about how the tool could be used to keep track of information, such as information the players know, or things that they have done, which could be used to help map out the rest of the story and determine effects from previous player actions.

That said, GMs had many recommendations for improvements and features that they would like to see. One area that GMs wanted to see improved was in information visualization. The current prototype has some limited information on NPCs–names, occupations, and a few relationship indicators such as whether characters are family members–but GMs discussed more features that they would like to see, and different desired functions, such as being able to sort, filter, and tag information (1, 2, 5). GMs also wanted more visualizations of information for storytelling, such as showing relationships between characters or factions (5). GM #2 added that they would also like to keep track of faction goals–what members of the factions want, and the next steps that they will take to accomplish this. This helps to drive the story based around the characters and their motivations.

GMs also talked about other uses for computation in supporting GMing. One of the main areas that GMs wanted support for was in being able to swap around existing content or add their own content, which was partially supported by the current prototype. Some of this was based on tailoring content to players. For example, GMs #2, 4, and 6 talked about cutting down on the content that was

provided in the module and swapping elements to help create player investment such as providing encounters with monsters that the player characters dislike (2), or using encounters to convey different narrative themes (4). Swapping content can also be helpful changing content around if needed to help advance the story. GM #6 gives an example of this from *Lost Mine*–if Hamun the necromancer has information that you want the players to know but they decide they don't want to pursue that route, you can provide that information on another NPC, for example having the players find this information after defeating Iarno, the leader of the Redbrands (6). It would be interesting to further explore how computational tools could facilitate this content swapping, either manually or automatically through an AI suggesting changes to tailor scenarios to the players' backstory, theme, or interests. As GM #1 points out, swapping things around arbitrarily could lead to more complications down the line as the GM changes information or key characters for story progression. This could also be a potential area for computational intervention.

Another area in which GM #1 talked about creating new content for the game was in helping realize character and faction beliefs in the game. For example, if the general of a faction has the belief that the best defense is a good offense, how is this behavior contextualized and seen during play? GM #1 discusses how it might be nice to have some provided framing questions in order to help them better establish the kinds of actions that groups would take in the world to convey their beliefs. They offer the example of having the tool prompt the GM with questions–for example, how the given faction might take a fort (by force, by coercion, by stealth, etc.) or if the town was taken over by a tyrannical leader, how a member of the faction might deal with that.

Finally, GMs (5, 6) also talk about having improvisational prompts for things that can happen next. GM #6 discussed how this would be good for beginners, especially for modules that are large, expansive worlds (the GM gives the example of *Storm King's Thunder* [1]). In such games, there is a lot of content, but at any one time players (and the GM) might be at a loss for what to do next, and there may be large distances (either physically or narratively) between each chapter of the story, with player potentially missing the plot hooks connecting them (6). Potentially, a computational system with some knowledge of what has already happened and story threads could provide prompts for potential events that could happen next, or stepping stones to help guide players to the next part of the story.

5 Conclusions and future work

While there are some limitations to the data collected here, such as the number of participants interviewed, we believe that this is a strong starting point for understanding how we can better design computational assistive tools for GMs. Next steps for this work likely include building out some of these speculative designs as actual functioning tools that GMs can use, and evaluating these tools through user studies, particularly with a target demographic such as novice GMs.

References

1. Storm King's Thunder. Wizards Of The Coast (2016)
2. Acharya, D., Mateas, M., Wardrip-Fruin, N.: Story improvisation in tabletop role-playing games: Towards a computational assistant for game masters. Conference on Games (2021)
3. Bergström, K.: Framing storytelling with games. In: International Conference on Interactive Digital Storytelling. pp. 170–181. Springer (2011)
4. Grow, A., Gaudl, S., Gomes, P., Mateas, M., Wardrip-Fruin, N.: A Methodology for Requirements Analysis of AI Architecture Authoring Tools. Proceedings of the 9th International Conference on the Foundations of Digital Games (2014), https://games.soe.ucsc.edu/methodology-requirements-analysis-ai-architecture-authoring-tools
5. Gustafsson, V., Holme, B., Mackay, W.E.: Narrative substrates: Reifying and managing emergent narratives in persistent game worlds. In: International Conference on the Foundations of Digital Games. pp. 1–12 (2020)
6. Horswill, I.: Imaginarium: A tool for casual constraint-based pcg (2019)
7. Nelson, M.J., Mateas, M.: A requirements analysis for videogame design support tools. In: Proceedings of the 4th International Conference on Foundations of Digital Games - FDG '09. ACM Press, New York, New York, USA (2009)
8. Reyes, M.C.: Measuring user experience on interactive fiction in cinematic virtual reality. In: Rouse, R., Koenitz, H., Haahr, M. (eds.) Interactive Storytelling. pp. 295–307. Springer International Publishing, Cham (2018)
9. Robinson, O.C.: Sampling in interview-based qualitative research: A theoretical and practical guide. Qualitative research in psychology **11**(1), 25–41 (2014)
10. Saldaña, J.: The coding manual for qualitative researchers. Sage (2015)
11. Strugnell, J., Berry, M., Zambetta, F., Greuter, S.: Narrative improvisation: Simulating game master choices. In: International Conference on Interactive Digital Storytelling. pp. 428–441. Springer (2018)