Final Report

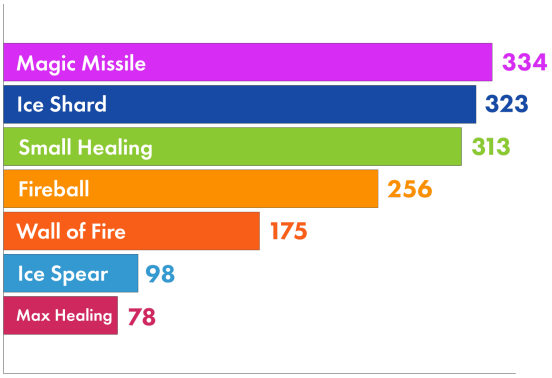
Through the Misty Gate

Playtesting report

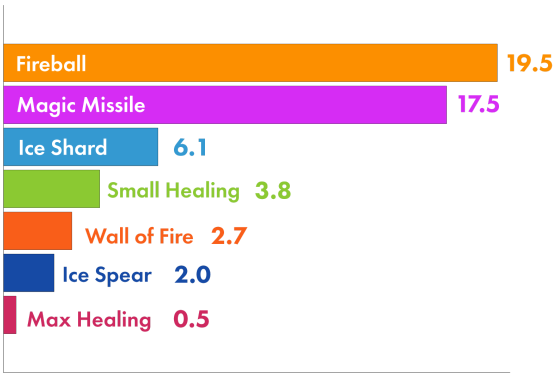
During MOJO, we held a total of 34 playtesting sessions. For each one of the sessions, we recorded information about the player's interaction with the enemies, the environment and the spell system. Furthermore, every player filled a survey at the end of their playtesting session, providing us with information about their previous gaming experience (for instance, whether they have played a similar game before), as well as their experience while playing *Through the Misty Gate* (for instance, their most and least favourite aspects of the game).

Spell Analysis

We've seen many cases where players have opted for completely different play styles when it came to choosing and using spells, but we've also seen some trends that were repeated across most of the sessions.



Average Time In Hotbar (s)



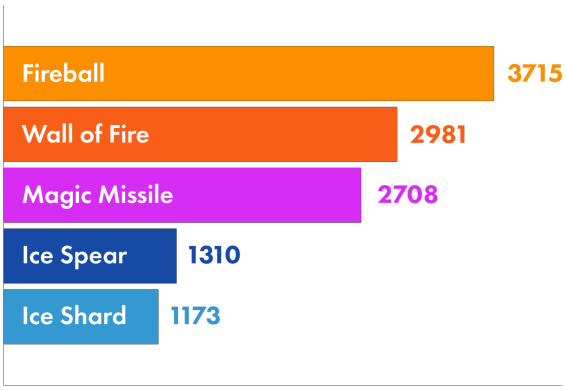
Average Number of Uses

We've observed that choosing which spells to keep in the hotbar and which to use was partially affected by the interaction with UI elements like the Spellbook and the Hotbar which, occasionally, proved to not be intuitive enough. The players would often not realise that they had picked up a spell from the floor and weren't aware that they needed to open the Spellbook and drag their new spell onto the hotbar. We often had to hint to the players that they had to do so. A solution to this would be automatically inserting a newly picked up spell into an empty slot in the Hotbar.

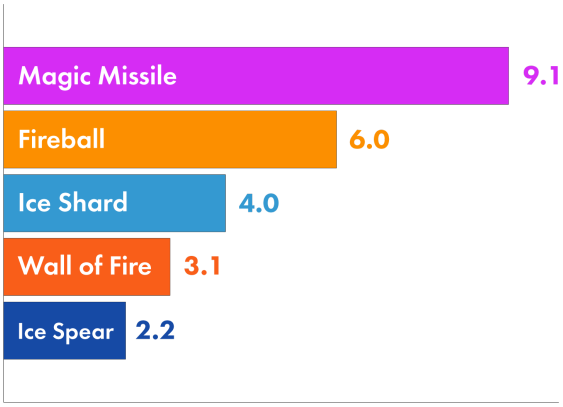
The amount of time for which a spell remained in the player's Hotbar was also dependent on the order in which the spells were picked up, Magic Missile and Small Healing being the first spells that the player would encounter.

Once the player had collected more than five spells, they had to begin to choose which spells to keep in the hotbar. Looking solely at the average time in hotbar of each spell does not reflect how useful each spell was to the player, due to the already mentioned influence of the

order in which the player finds the spells, and also the fact that in some cases, some players never found all of the available spells.
Despite Fireball being in fourth place when it comes to the time in hotbar, it is the most used spell. Many players enjoyed the Fireball spell because of its recoil mechanic, which allowed them to reach high platforms and solve puzzles. We've also received a lot of positive feedback on the Fireball spell through the surveys afterwards.
Another spell that stood out was the Wall of Fire. Although it does not show on the recorded results due to the fact that many players did not find the spell, Wall of Fire was one of the playtesters' favourites, since it was significantly more powerful than the rest of the spells, allowing the players to kill many enemies at once and clear the level. We've concluded that, despite being fun to use, Wall of Fire needed rebalancing in order to bring its power level into step with the other spells'.

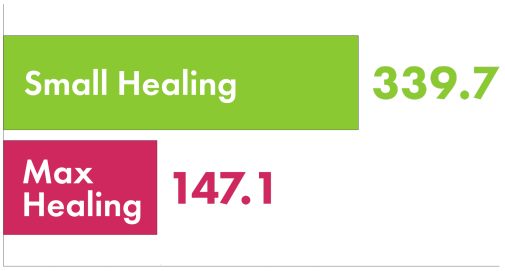


Average Damage Dealt by Spell



Average Number of Enemies Hit

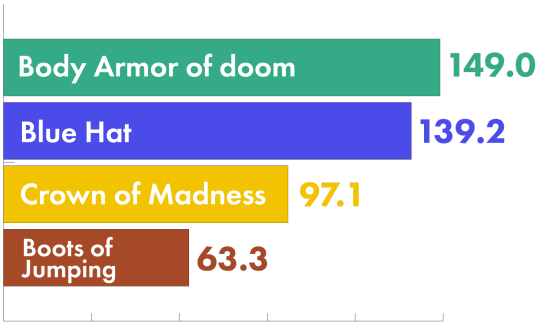
Despite being used, on average, 2.7 times per session, and only being found in the late game, Wall of Fire showed in second place when it came to damage dealt, as seen in the Average Damage Dealt graph, proving once again how unbalanced it was.
The Magic Missile spell seemed to be used a lot at the start, since players were sometimes not understanding that the new spells they collected were more powerful, which once again indicated that improvements to the UI and player feedback system needed to be made.
The piercing effect of the Ice spells was also enjoyed by many players, although it was not always obvious due to some sprite overlapping problems that would sometimes occur. We have looked further into the issue and have since had it fixed.
The MOJO version of the game had two healing spells available. In the beginning, only the Small Healing spell was available. Even upon unlocking the Max Healing spell, players would use it occasionally at best, as it had a long charge time, and most of the time there was not enough feedback for when the player received damage.



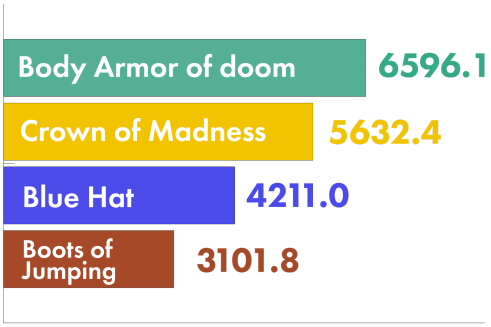
Average Health Points Restored

Items Analysis

We had planned to gather information regarding the time each equipment piece was worn as well as the damage dealt while wearing each of the equipment pieces.
Even though we gathered the data, it proved mainly inconclusive. Firstly, the order the items are received, due to the limited duration of our demo, seems the biggest influencer of all, making the items picked up earlier in the level those worn for the longest time. Similarly, the reduced number of equipment options didn't allow the players to actively test and choose the one they felt was more powerful. Another problem we noticed was that some players would acquire new items, but would not notice it.
As can be seen below, the Boots of Jumping are the least used, as they were by the end of the level, as well as in a location that was not obvious at first. The most unexpected result was the damage dealt while wearing the Crown of Madness. Even though it was worn for much less time than the Blue Hat (both are headgear so the player can only wear one of them at a time), the damage dealt with it equipped was very high.
All in all, we got some good feedback from this analysis, allowing us to plan some changes to the game. The first is that we need to implement more varied equipment. We also need to implement a mechanic, such as flashing or sound effect, that would allow the player to understand that they have picked up an item. Finally, we need to tune some statistics of the equipment so that the player is not too powerful in the easiest areas, or limit the equipment in these areas to weaker items.



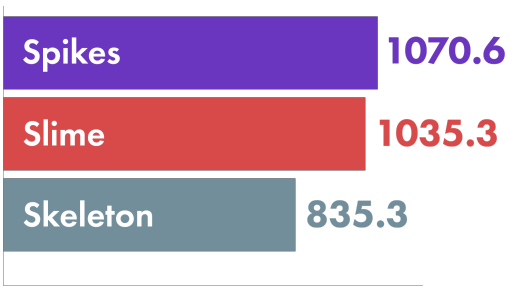
Average Equipped Item Time (s)



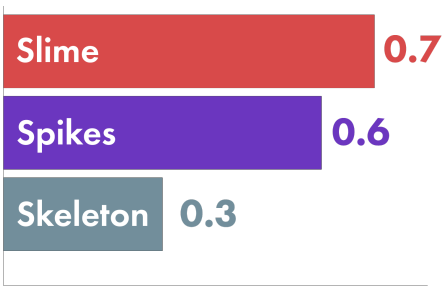
Average Damage Dealt While Worn

Enemy Analysis

The metrics we measured to evaluate the enemies were the damage dealt to the player by enemy type and the number of deaths caused by enemy type. Ignoring the spikes that were used only as the ending point for the game, we are able to garner some conclusions from this data. The bats, not shown in the graph but present in the game, did not deal any damage.



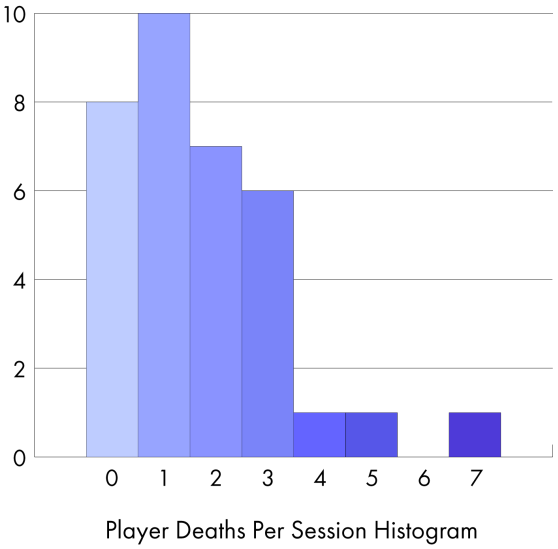
Average Damage Dealt by Enemy



Average Deaths Caused by Enemy

Also, even though they were weaker than skeletons, the slimes' movement patterns and smaller hitbox made them a much harder enemy to beat. All things considered, we feel that the enemies were mostly balanced, and in the future, the use of more diverse types of enemies, with different movement patterns is a must.

Through the Misty Gate is aimed at somewhat experienced, but not hardcore players. With our playtesting version of the game, we were hoping that the number of deaths would stay close to 0, and such was the case for most of the sessions we conducted. Most of the players had previous gaming experience, and were able to pick up the game without much difficulty. An important observation is the one player who had reached 7 deaths - they also had given up in the early game. They were someone who did not have previous gaming experience and, despite our game not being aimed for casual players, we concluded that the controls and in-game feedback need to be more intuitive and not as frustrating, even for someone who's playing for the first time.



Player Deaths Per Session Histogram

Conclusions

Having different people test our game and provide feedback was a healthy experience that allowed us to gain a perspective on where the game currently stands and what needs to be worked on. Observing players interact with the game and seeing their reaction in person brought us closer to the community and has reset our focus.

We've concluded that the next steps in the development of *Through the Misty Gate* would be to improve the UI, both in terms of visual design and user experience, and to implement in-game feedback that would make the experience more intuitive.

Development and exploitation plan

As it stands, *Through the Misty Gate* is in its demo version. For a future full release of the game, a few things will still need to be developed and implemented, namely:

- Different biomes; currently, the game only has the first biome implemented, though in concept it would have several different ones. For the final version of the game, we would need to conceptualise these new biomes, make art and assets for the environment and entities, as well as developing new types of enemies to populate them.
- New bosses. We aim for *TtMG* to be centred around unique boss fights, none of which are currently implemented. This would mean that each of these bosses would need art designed specifically for them, and each boss fight would require new mechanics to make them interesting and unique.
- New spells and items, as well as new attributes for them. This would consequently lead to the need for balancing these new items or spells to maintain an appropriate difficulty curve throughout the game.
- New enemies, to populate each new biome, would also be of interest to make the game feel more dynamic and immersive.
- Puzzles. Our original vision for *TtMG* included solving puzzles to progress through the game, and we would like to further integrate this feature in our level design for the final version of the game.
- Metroidvania game features, namely the "soft progression lock" style of progression. We want *Through the Misty Gate* to be a non-linear adventure, where the player can explore the world at their own pace. Regardless, some parts of the world should be locked until the player is sufficiently equipped to deal with them, and that has to be reflected in the design philosophy.

Taking into consideration the time it took to take the game to its current state, and all the features we still desire to implement, we can expect at least another month of hard work before we have the alpha version of our game ready to be tested. We would most likely keep the current team of three, with Paulina focusing on producing the art and sprites, and Rodrigo and Tiago focused on the gameplay mechanics, so no new hires would need to be made. We would also keep on using royalty-free and in-house assets, so those would not increase the development costs. The writing team might still be involved in the project should they wish to, which would further add to the costs.

After the first version of the game is completed, testing would be required to tune the power of different spells and items, as well as find possible bugs that were missed during development. We would employ our friends and family as testers to help keep down costs, only paying them a token amount.

As for revenue sources, the main thing that comes to mind would be releasing the game on distribution platforms such as Steam or the Epic Store. The game would have a modest price tag, probably around the 7€ mark. We could also use the early access feature of these platforms and publish the game in a functional, yet unfinished, state for a lower price, as a means to fund further development. The price would then be set at the desired price upon full

release. This avenue of monetisation would also increase development costs, as the publishing costs for these platforms cannot be ignored.

An alternative would be to follow the approach of successful games, such as Divinity: Original Sin, FTL: Faster than Light, and Hollow Knight, and run a crowdfunding campaign. Depending on the measure of success of this campaign, the game's scope would then be adjusted, with a very successful campaign allowing for longer development and even new members of the team.

Postmortem report

The project, and this report, can be divided into three distinct phases: two development cycles, the first being the design phase and the second being the implementation phase, and MOJO, which is both the event itself and its aftermath.

During the first development cycle, we mainly worked on creating the first concept of the game, from developing an initial idea to creating a functioning prototype that would in some way represent a specific concept within that idea. We also started work on the design document, which was then updated throughout all of the development phase.

In this first cycle, our lack of experience when it came to actually developing a game was quite telling. We found it quite hard to judge how long each of the development tasks would take to complete; in hindsight, our estimates proved wildly inaccurate, though at the time everything seemed correct. This led to a major misrepresentation of the distribution of manhours necessary to complete each desired task, which caused us several problems later down the line.

It is also worth pointing out the fact that during this development cycle, no work was done towards actually implementing the game, with the exception of the creation of low-fidelity prototypes, which mostly ended up being entirely remade once development began in earnest. In our opinion, the development cycle should have had a reduced time span - say, two weeks - which would allow more time for the implementation of the developed concept, with little impact on the overall quality of the design phase, since the workload for the first cycle was relatively light as it stands.

It was also around the second or third week of the first development cycle that we first came into contact with the writing team. Cooperation with them was smooth, and they proved to have a keen understanding of the concept we wished to implement, often bringing a fresh perspective to the scene, especially as one of our two writers did not have much experience with gaming in general. Overall, having a writing team proved quite beneficial to us.

Unfortunately, although the idea had been basically given as a guarantee, no artists were attributed to our game. Whether this was simple miscommunication, or by lack of artistic talents, or by some other unknown factor, it proved an obstacle that was difficult to overcome, especially as our initial concept relied heavily on the art style to convey theme and immerse the player. We were luckily able to somewhat compensate for this, though it substantially slowed the development of the game.

The final thing to point out for the first development cycle is that our ambitions were too high for the expected scope of the project. Even though we were warned of this, we decided to press on with the concept we were initially envisioning. This meant that we were quite pressed for time throughout the development phase, as we had too many features to implement in too little time - as well as assets and art to make, which we had not accounted for when pitching our idea. This affected the quality of the final product we were able to bring to MOJO, for instance. In hindsight, we should have aimed for a more realistic project, though we are not displeased that we decided to go ahead with *Through the Misty Gate.*

The second development cycle went by more smoothly than the first, if only due to the fact that it was less constrained in terms of objectives. We already had a clearer idea of what

needed to be done, and all that remained was to implement it. However, some things must still be mentioned for the second development cycle.

Firstly, we found that most of the final design decisions were only taken during the implementation phase, which made our initially meticulous design feel redundant in a way. Nearly all of the aspects of gameplay changed, although some more dramatically than others. We found that our concept for *Through the Misty Gate* was too complex to be laid out neatly at the start and expect nothing to change - though this might have been our own fault, it still felt like all of the groundwork we had laid out during the first development cycle went to waste, in a way.

Secondly, and perhaps more importantly to note, are the team conflicts that presented themselves during this phase. Through a series of complicated events, one of our members left the team roughly halfway through the development cycle. This severely hampered our capacity to implement all of the features that we were still lacking, and was quite an unexpected obstacle. Adjusting expectations to bring them into line with the reduced manpower was a challenge, but we feel that we were able to deal with it satisfactorily in the end, though of course the final product suffered in quality slightly.

Lastly, though we have mentioned it before, are the time constraints. Three weeks was simply not enough to fully implement a functioning game, at least not at the scale we had envisioned. It really is a shame that this development phase is not longer, since, as it stands, it becomes quite stressful to try and implement all of the desired features, especially taking into account the changes that have to be made to the design document and the development plan during the course of the development cycle.

After the second development cycle came MOJO. This was perhaps the most enjoyable experience, albeit one of the most nerve-racking ones too. It was truly special to be able to share the fruits of our labour with other people. We consider that the overall response to *Through the Misty Gate* was quite positive, though the start of the day was bumpy at best. Once we ironed out some of the more glaring bugs that had previously gone unnoticed, the rest of the day went by smoothly.

Since MOJO, we have been working on polishing what we consider to be the “demo” of the game, which will be submitted for the final delivery of the project. We have fixed most of the issues that were identified during the playtesting sessions at MOJO. It provided us with a perspective and insight into some aspects of our design that are most definitely welcome additions, and which will be useful when orienting future design choices.

Overall, we are quite satisfied with the work we did for *Through the Misty Gate.* The project was refreshing and rewarding, and it was, all things considered, a very enjoyable experience. We are quite happy with the concept we created and developed, in spite of the issues that sprouted from it being too ambitious. Most of the other issues we encountered mainly boiled down to inexperience and lack of time, neither of which we could have planned around, though we feel that we were able to deal with them in a satisfactory manner.

As for future plans, we do plan on further developing and refining *TtMG*, and we are excited to see where this road leads us. We feel that, even if time did not allow us to fully realise our vision within the scope of the project, we achieved a good base that will allow us to transition into development of a full game, and for that we are thankful.