Assignment 4
Guidelines for designing for a gameplay style

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1 Introduction

For this assignment a gameplay style is defined, described and analysed. Furthermore this document provides guidelines for designing for this specific gameplay style.

While discussing the gameplay style in this document, Gameplay Design Patterns as defined by Staffan Björk, Sus Lundgren and Jussi Holopainen [1] will be used and highlighted as **Pattern**.

2 Definition of the gameplay style

The gameplay style discussed in this document is titled Time Limited Power-Ups. This gameplay style affects gameplay by giving the player of a game more or enhanced **Abilities** [2] within a certain **Time Limit** [3]. These power-ups can however have different effects depending on the game. While in platform games a typical power-up would be being immune to **Damage** [4] or having increased mobility to make traversing the world easier, power-ups in hack and slash games may allow the player to deal more **Damage** [4] to **Enemies** [5]. The **Time-Limit** [3] can also differ between game types, as in **Real-Time Games** [6] the limit is usually a set amount of seconds, while in **Turn-Based Games** [7] the limit is usually a set amount of turns.

This gameplay style can be used in different ways depending on the game and what the designer wants to achieve. In single player or cooperative multiplayer games it is often used to give players the option of making difficult sections easier to pass through or to reward players with e.g. spatial rewards as discussed by Alison Gazzard [8], enabling or at least easing access to these rewards. In multiplayer games, in which players compete with one another, Time Limited Power-Ups can be utilize for positive or negative feedback loops, by either granting the player behind a possibility to catch up or by giving the player in front a way of solidifying their position.

Considering the MDA Model defined by Robin Hunicke, Marc LeBlanc and

Robert Zubek [9] the Aesthetics of Discovery is well supported by Time Limited Power-Ups, as a feeling of Discovery can be achieved by the means of spatial rewards. While Time Limited Power-Ups can be used to decrease the feeling of Challenge, as it enhances the **Abilities** [2] of a player therefore making the gameplay easier, this gameplay style can also be used to increase the sense of Challenge, by propelling a negative feedback loop in multiplayer games. This increase in the Aesthetic Challenge in multiplayer games can also increase a feeling of Fellowship, as this can increase the feeling of the player actually playing a game together.

3 Examples of games

Time Limited Power-Ups as defined in section 2 is a gameplay style, that can be found in a variation of games of different genres. Games making use of this gameplay style include games of various mediums, single player as well as multiplayer.

3.1 Shovel Knight: Shovel of Hope

Shovel Knight: Shovel of Hope [10] is a 2D platforming game, that was first released in 2014. In the duration of the game the player collects multiple items, some of which allow an immediate action on activation, which is not possible without the item, while others activate a Time Limited Power-Up. One example of a Time Limited Power-Up activating item is a potion, which on activation makes the **Character** [11] immune to **Damage** [4] by **Enemies** [5] and hazards. This effect lasts for a couple of seconds after being activated.

3.2 Super Mario 64

Super Mario 64 [12] was originally released in 1996 for the Nintendo 64. In this 3D platforming game there are a variety of Time Limited Power-Ups available to the **Character** [11]. These power-ups are activated by using specific items. Different to the ones in Shovel Knight these items are not in the **Character's** [11] possession and can be activated at any time, but are activated in the moment of collecting them, so the power-ups can only be used in specific locations. One of these Time Limited Power-Ups in Super Mario 64 is a winged cap, which grants the **Character** [11] the ability of flight, allowing the **Character** [11] to reach locations in the game world, which were previously not accessible.

3.3 Mario Kart 8 Deluxe

Mario Kart 8 Deluxe [13] was released in 2017 for Nintendo Switch and is an enhanced port of the 2014 released Mario Kart 8. This game is a racing game, playable for 1 to up to 4 players in local multiplayer mode or up to 12 players for online play. In a race it is possible for players to collect items for use during the

race. Some of them grand the player access to time limited power-ups. One of these items is the "Super Star". Activating this item makes the **Character** [11] immune to **Damage** [4], increases the driving speed and gives the player the ability to damage other actors by colliding with them, while staying unharmed themselves.

3.4 Darksiders

Darksiders [14] is a single player 3D action adventure game with hack and slash elements, released in 2010. In Darksiders the player unlocks the ability to have the **Character** [11] transform for a limited time. For the duration of that time, the **Character** [11] is immune to all **Damage** [4]. Other effects of this power-up involve the **Character's** [11] attack covering a wider area, due to the larger size of the new form, and the attacks generally dealing greater **Damage** [4].

3.5 Dungeons & Dragons

Dungeons & Dragons [15] is a pen and paper role playing game, which was first released in 1974. In Dungeons & Dragons players play as **Characters** [11] with different classes. One of these classes is a wizard. Wizards can use spells, some of which can give other players Time Limited Power-Ups. The effects of these power-ups can involve increasing that player's next die role, to increase the chance of success in that action. Different to most examples from digital games the **Time Limit** [3] is not a set amount of seconds, forcing the players to act within a certain time frame, but is limited to a certain amount of turns in the game.

4 Dos and Don'ts

If not designed carefully Time Limited Power-Ups can break a gameplay. One purpose of this document is to provide guidelines, which can be followed to avoid designing a gameplay breaking Time Limited Power-Up.

4.1 Balancing Time Limit & Power-Up

An important part of designing Time Limited Power-Ups is finding a balance between the effect of the power-up and the duration of the time limit. This is especially important if there are multiple Time Limited Power-Ups at the player's disposal, which should feel equally valuable. While the player should feel at an advantage during the activity of the Time Limited Power-Up, a certain sense of Challenge [9] is usually wanted to be preserved. Depending on what the player is intended to do with the power-up, a power-up, which grants extra mobility like the winged hat in Super Mario 64 described in section 3.2, can often make good use of a longer **Time-Limit** [3], as the player may need this time to use these kind of power-ups and reach an Aesthetic of Discovery [9]. Power-ups,

which ease the gameplay massively by e.g. granting invincibility like the power-ups described in sections 3.3 or 3.4, should usually be kept to have a shorter duration to be able to help the player through difficult sections without removing all challenge from the game. Another way of trying to preserve some challenge with these kinds of power-ups is to keep some vulnerability for the player. One example for this is the power-up described in section 3.1, as this power-up grants the player immunity to **Damage** [4] from hazards or **Enemies** [5], but does not prevent the **Damage** [4] from falling into pits.

4.2   Time & Place

Another thing that has to be considered when designing Time Limited Power-Ups is the where and when it can be used by the player. Is the power-up only available at certain points in the game? Can the player choose when to use it? What are the limitations on using the power-up? These questions are to be thought about and answered, as every option opens different possibilities for what the player can do with the **Ability** [2], therefore commanding how to design the Time Limited Power-Up. The power-up discussed in section 3.2 is accessible by collecting an item, which can only be found at specific locations, and is activated immediately on collecting it. This limits the player on where he can use the power-up, therefore it is easier to design the power-up and the locations in a way that abusing the power-up is harder to do for the player. On the other hand a Time Limited Power-Up, which can be used whenever and wherever the player decides to activate it. These power-ups can easily be used by players, to attempt to break the game, which should be kept in mind when designing Time Limited Power-Ups like that. Usually these power-ups should be limited in some other capacity, by keeping the duration short, limiting the effect of the power-up and how frequently it can be used. For example the potion in Shovel Knight described in section 3.1 has a strong effect, but the duration is rather short and the power-up has to be restored at specific locations after each use to be available. The Chaos-Form power-up in Darksiders described in section 3.4 handles limiting the frequency of use by having the player fill a meter before being able to use the power-up. This meter is filled by successfully attacking **Enemies** [5] and is emptied after the effect of the power-up wears off.

4.3   Risk-Reward

As having access to a Time Limited Power-Up can serve as a reward, it should be considered if the player should have to take a certain risk to gain this access. This can be done by placing the item needed at a hard to reach spot, which bears the risk of losing **Health** [16], or making the process of gaining the access to the power-up long or costly, which bears the risk of missing **Resources** [17] on later occasions. This is also applicable on power-ups, which can not only be activated at specific locations, by having a cooldown time on activating the power-up again or having the player go through efforts to restore the access to the Time Limited Power-Up. This way the player has to carefully evaluate

when to use the power-up as they may run the risk of not having it available at a later time, in which they may require access to the power-up more than in the previous situation. Having this risk-reward **Trade-Off** [18] can also serve as another way parameter in balancing multiple Time Limited Power-Ups. A seemingly more powerful Time Limited Power-Up can have a higher risk to gain access to or make use of by e.g. being more costly regarding **Resources** [17], having a longer cooldown time or only being accessible at a harder to reach place than a seemingly less powerful Time Limited Power-Up.

4.4 Keep it optional

While players should be able to use Time Limited Power-Ups to be able to pass difficult sections more easily or to be able to discover the world in a different way, the player should usually not be forced to use Time Limited Power-Ups to be able to beat the game. Some players are looking for **Challenging Gameplay** [19] and may feel cheated if they are forced to use a power-up and therefore playing the game on "easy mode". Exceptions to this can be e.g. complete levels in a platformer, which are designed to be played completely using a Time Limited Power-Up. Here some other challenge should be provided, e.g. making it difficult to be able to complete the level before the Time Limited Power-Up wears off. One example for this can be found in Super Mario 64, where there is a complete level in the sky, which has to be played while wearing the winged cap power-up described in section 3.2. However, depending on the target audience, sections like these should be kept exceptions or as optional bonus sections.

4.5 Audiovisual indication

Time Limited Power-Ups should always be paired with an audiovisual indication of what is happening while it is active. The audiovisual effects should be indicative of the effects of the power-up, so that the player can have an idea of the changes to the gameplay from the moment of activating the power-up for the first time. This can be done by using elements in the **HUD Interface** [20], that clearly show what the effect is, but should be accompanied by some visual change in the actual game world, as this is where the focus usually is. This can be done in many ways by e.g. changing the complete character model like the chaos-form power-up in Darksiders (see section 3.4) or adding a glow effect to the character model, which is especially popular with invincibility power-ups, as seen e.g. in the power-up from Mario Kart described in section 3.3. Here the colors can also be used to indicate the effect of the power-up, e.g. as the color red for example is widely recognised as symbolising aggressiveness and can therefore be used to indicate an offensive power-up, while blue is often associated with more passive, defensive abilities or magic. Additionally an audible indication should always go along with the visual indication. Here a minimum should be a sound which indicates the start and a sound which indicates the end of the Time Limited Power-Up. A better option is to have sounds or a change in music through out the whole duration of the power-up, as this can also be

used to indicate how much of the **Time Limit** [3] has passed by e.g. speeding up the music when nearing the end of the duration of the **Time Limit** [3]. This should however also be visible by e.g. a blinking effect with increasing frequency when nearing the end of the power-up or some sort of indication in the **HUD Interface** [20].

4.6 Avoid Randomness

One thing, that should be avoided with Time Limited Power-Ups, is **Randomness** [21]. The player should be able to know what to expect, when activating the power-up. Even slight random variations in either length or effect of the Time Limited Power-Up can be conceived as being disturbing. Especially in non-cooperative multiplayer games this can lead to moments, in which **Luck** [22] with the power-up is a deciding factor, which can result in players perceiving the game as being unfair. Usually a Time Limited Power-Up should be a tool, which can be used deliberately and calculating of the effect, so that the player is able to learn to use it to it's maximum potential. Any sort of **Randomness** [21] in the Time Limited Power-Up would hinder the player from doing so.

5 Modifying methods

The book Game Design Workshop: A Playcentric Approach to Creating Innovative Games [23] states a multitude of methods for designing games. Some of these methods can be adjusted to be more fitting for designing for the Time Limited Power-Up gameplay style.

5.1 List Creation

When conceptualizing a game one method a game designer can use is List Creation [23, p. 170]. This method is a variation of brainstorming and suggests taking a topic and just writing down everything you can think of regarding that topic and follow that up by creating further lists with variations of that topic. One way of applying this to Time Limited Power-Ups could be just choosing Time Limited Power-Ups as the topic to write the list about. This can be a good advise for a first step. For the variations it is useful to think of different kinds of Time Limited Power-Ups. These variations could be divided into power-ups with different purposes, for example offensive power-ups, defensive power-ups, mobility increasing power-ups, etc., into power-ups with different functionality, e.g. stat increasing power-ups, ability granting power-ups, etc. Other topics for further lists can be found by asking questions regarding Time Limited Power-Ups, e.g. How to get access to the power-up? How is the power-up activated? Does the power-up have any draw-backs?

5.2   Physical Prototyping

After conceptualization phase prototypes should be designed for playtesting. For this purpose a common practise is creating physical prototypes [23, p. 197–198], often in the form of a low-fidelity board or card game. This is obviously practical when designing a board or card game, but can also be utilized when designing a digital game. For board or card games the power-up can be implemented into the prototype like it is thought to be used in the final game, for digital games the game designer has to think of how to simulate the power-up. This is depending on how the gameplay is translated from the idea for a digital game to a board or card game. One way of doing it, which is applicable on games from a variety of genres, is having die roles for the chance of having success in the action the player wants to do, which is similar to a lot of pen and paper role playing games like Dungeons & Dragons. In that case a power-up could be simulated similarly to the power-up described in section 3.5. Another way of implementing power-ups in a board or card game could be by just increasing the stats that should be influenced by the power-up, provided the game has stats to begin with. However this can vary greatly from game to game. One thing that can always happen is, that a digital game, which is thought to be played in **Real-Time** [6] is translated to a **Turn-Based Game** [7] when testing it as a physical prototype. In that case the Time Limited Power-Up's duration has to be translated from a certain amount of time to a certain amount of turns as it is done with the power-up in Dungeons & Dragons described in section 3.5.

5.3   Digital Prototyping

When creating a digital prototype [23, p. 235–238] it can be good advise to create small encapsulated sections or levels specifically for testing the power-ups. This can be done by either activating the power-up by default in that level or creating levels, which pressures the player into using the power-up. While the first option can be very useful to make sure that the power-up is actually being used, to see how creative players get with utilizing the power-up while it is active and where strength and weaknesses of it are, the second option can be useful to analyze how far players can get without using the power-up, in what situations they are using it and if they can adapt fast to the change in gameplay on activating the power-up as well as when the power-up is wearing off.

5.4   Taking Notes

Conducting playtests is an important part of designing a game. One method supporting the designer during playtests is Taking Notes [23, p. 294–296]. This suggests to the game designer to take notes while playtesters are playing, with a sheet of paper prepared with questions and room for free notes for every playtester. This should prevent data from being lost. This method can also be combined with other methods like Thinking Aloud Tests and Post-Game Interviews. It is to be advised that the game designer thinks of questions on

what he wants to know about the power-up, e.g. Is the duration perceived as too short? Is the game perceived as too easy, while the power-up is active? Does the player know how to activate the power-up? Take notes to these questions from what you can observe and what the player tells you. However it is still important to also be able to recognise other problems the player may have and not be too focused on the questions prepared before hand.

5.5 Purity of Purpose

The Purity of Purpose method says, that every component in a game should be designed with a specific and only one purpose in mind [23, p. 333–334]. This method can be applied on designing Time Limited Power-Ups, especially when it is planned to have multiple power-ups. Every power-up designed should serve a specific purpose in the game. This does not mean that a power-up can e.g. not increase multiple stats at the same time, but these stat increases should all serve the same utility. For example one power up could increase a **Character's** [11] movement speed and jump height, serving the purpose of easing traversing tough platforming passages, while another power-up could increase offensive stats, serving the purpose of overcoming hordes of **Enemies** [5] more easily. This can also be a way of balancing multiple power-ups more easily, as every power-up serves a different purpose, making them not compete with each other, making it harder to say that one is more powerful or valuable than another. Even if multiple power-ups are not initially planned it can be good advise to split the power-up into multiple ones.

5.6 Think Modular

This method suggests that especially in large scale game design the gameplay should be divided into subsystems, that are to be kept independent [23, p. 333]. This can be used as advise when designing a game with Time Limited Power-Ups. The power-ups should be kept as a subsystem with the rest of the game and the power-ups being as independent from each other as possible. This can help developing a game, which is playable without using the power-ups, which can be desired as argued for in section 4.4. Another way to apply the Think Modular method to designing Time Limited Power-Ups in the case of having multiple power-ups is keeping those as separate independent modules from one another. This allows being able to adjust and balance a power-up without having to worry about influencing other power-ups or the balance between the power-ups. Utilizing the Think Modular method like this is complementary with the way of working described in the section 5.5.

5.7 One Change at a Time

When using the One Change at a Time method the designer is supposed test the system after every change made [23, p. 334]. This can be applied, when balancing Time Limited Power-Ups. The One Change at a Time method is

especially useful when looking to balance the duration of the **Time Limit** [3] and the effect of the power-up as described in section 4.4. One way of doing this would be adjusting the effect of the power-up, testing it with the set duration, adjusting the duration to the adjusted effect and testing again. This process is then repeated, alternating every step between adjusting the effect and adjusting the duration of the **Time Limit** [3]. When wanting to achieve a specific feel for the power-up effect, another way of doing this is could be adjusting the effect over and over again until this feeling is achieved and then starting to adjust the duration until it feels adequate for the effect, eventually adjusting balance to other power-ups.

6 Conclusion

While there are surely better and worse ways to approach game design and to design Time Limited Power-Ups, I personally think that there is no wrong or right way to do it. The guidelines described and discussed in this document are motivated and derived from widely taught gameplay design methods, but they are by no means to be viewed as an ultimate, infallible guide to designing Time Limited Power-Ups, as work methods and a gameplay that feels right often comes down to personal preferences. Furthermore there are also a lot of other methods applicable to designing Time Limited Power-Ups, the ones discussed in this document are just a select view from a set of methods I had at my disposal at the moment of writing this document. However I would welcome every aspiring game designer looking to design Time Limited Power-Ups to experiment with the guidelines suggested in this document.

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