Disposable Sleeves

A crossover between Netflix' Altered Carbon and Counter-Strike: Source Deathrun

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1 INTRODUCTION

Deathrun[1] is multiplayer game mode existing within the realm of existing games such as Roblox (2006)[2], Valve's Counter-Strike series (2000, 2004 and 2012)[3] and Facepunch Studios' Garry's Mod (2004)[4]. In general two teams, deaths and runners, compete against each other in courses filled with traps. Runners have to reach the end of a level in order to defeat deaths. Deaths try to prevent the runners from achieving their goal by activating traps along their path. After more than 10 years since the majority of these games have been published deathrun still proves to be popular amongst players all over the world.[5] However, it has not been published as a standalone game yet. This fact motivated the conception of *Disposable Sleeves* a first-person multiplayer game built on the idea of original deathrun maps. Furthermore, the gameplay is wrapped into the dystopian future of *Altered Carbon* as envisioned in Richard K. Morgan's novels (2002)[6] and the television adaption of Netflix (2018)[7]. This paper aims to provide a factual description of the game project, at the time of writing, through the sections Gameplay (section 2), Story (section 3) and Technical Implementation (section 4). Finally, section 5 recaps the motivation behind and value of the game. It also describes the differences between initial goals and current realisation thereby identifying future work items.

2 GAMEPLAY

As previously mentioned gameplay is heavily inspired by deathrun maps, specifically the ones found in the first-person shooter Counter-Strike: Source (CSS). In the case of CSS deathrun maps, the classic shooter game mode is subverted by physically separating the terrorist team from the counter-terrorist team and stripping players from their weapons. The running players, in the counter-terrorist team, have to avoid being taken out by traps along their path in order to reach the end. One player in the terrorist team takes the role of the trap master trying to prevent the competing team from surviving and reaching the end of the course. Whoever reaches the end first becomes the new trap master and is considered the winner of this round. Otherwise, if all runners are killed in the process, the trap master wins and everyone is reset back to their starting position.

Disposable Sleeves adopts this game mode and allows up to 10 concurrent players on a server. The first player connecting to a session, usually the server host, is automatically elected as the trap master and spawns in a separate area of the level. From this area, one-way glass allows spectating the running players without revealing the trap master's current position and attention. On the other side, the runners spawn in a gated area in order to prevent early starts. Once the gate starts to open, after an audible 3-second countdown, runners aim to reach the end of the course as the first player. The course itself alternates between safe-platforms and traps which can be activated by the trap master at free will. Consequently, running players can die by either getting caught in an active trap or by falling off the safe-platforms. If all players become casualties before achieving their objective they are put back into the spawn-area and the gate countdown is restarted. Similarly, should a player manage to reach the end everyone, including the trap master, is reset back to the beginning and the winner becomes the new trap master. This cycle repeats itself in an endless playing mode until players decide to stop playing.

3 STORY

Altered Carbon is a dystopian series produced by Netflix and based on the original novels by Richard K. Morgan. In the fictional future of 2384 humanity wields the power to transfer a person's memory into other bodies at any time. Additionally, the process is not restricted to organic bodies alone since they can be synthetically fabricated as well. Due to this leap in technological progress bodies merely serve the purpose of carrying consciousness. The society in Altered Carbon coined the term "sleeves" as a physical body can virtually be changed in a similar fashion to regular clothes. Disposable Sleeves derives its title and background story from the reality depicted in the series. This allows the creation of a bounding framework for the gameplay which provides an explanation to the question: "Why do players find themselves in a trap-race scenario with one person in full control of trap activation?".

The process of re-sleeving a person's consciousness into a different sleeve incurs a high cost measured in United Nations credits. Depending on the configuration of the sleeve (i.e. physical characteristics) the costs can be even higher. In a true capitalist fashion, the richest 1% of society, called *meths*, is able to afford any sleeve and is virtually immortal. Furthermore, the concept is taken to a dark extreme as *meths* use other people for their entertainment in e.g. duels. Since physical death has no meaningful consequence this is considered legal, provided that *meths* cover the re-sleeving costs.

Therefore, the trap master in Disposable Sleeve represents a wealthy *meth* whereas other players are essentially lab rats who can be re-sleeved in case of their death.. Running players have a common objective of reaching the end but they do not necessarily

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[1]https://www.urbandictionary.com/define.php?term=Deathrun, accessed 29-03-2018
[2]https://www.roblox.com/, accessed 29-03-2018
[3]http://store.steampowered.com/search/?term=counter-strike, accessed 29-03-2018
[4]https://gmod.facepunch.com/, accessed 29-03-2018
[5]https://www.gametracker.com/search/?search_by=map&query=deathrun, accessed 29-03-2018
[6]https://www.richardkmorgan.com/books/altered-carbon/, accessed 29-03-2018
[7]https://www.netflix.com/title/80097140, accessed 29-03-2018

cooperate. The first player to reach the end usurps power from the current *meth* and repeats the cycle.

4 TECHNICAL IMPLEMENTATION

Disposable Sleeves is created using the Unity[8] development platform. It is a 3D real-time multiplayer game aimed at the desktop operating systems Windows and macOS. Primitive shapes provide the basic structure of the environment. A range of free assets from Unity's store are used for: styling the level in a dark dungeon theme, the two player models, lighting models, and traps. The assets can be retrieved from the store using the following keywords: MK Glass, Adam Character Pack, Dungeon Ground, Modular Medieval Lanterns, Outline Effect, Dungeon Traps, Skull Platform, and Standard Assets.

Global illumination is disabled in order to fully rely on the light sources placed within the level. This creates a dark feeling which matches the dystopian style of Altered Carbon. Animations for the spawn gate, trap levers and traps themselves are designed using the Unity animation editor. Additionally, the existing assets are heavily customized to serve their specific purpose in the envisioned gameplay.

Finally, the largest chunk of time was consumed by the implementation of the networking code. Unity provides the UNet high-level scripting API (HLAPI)[9] to cover the basic requirements in multiplayer games. However, implementing smooth player movement and synchronizing game state is a demanding task in any case. In its current form, the game is fully functional to be played by multiple concurrent players. Preferably game sessions should be held in a local area network (LAN) to minimize delays.

5 CONCLUSION & FUTURE WORK

All in all, Disposable Sleeves has been realised according to its initial motivation and design. It extracts the deathrun game mode into a standalone multiplayer game while also providing a surrounding story. While it can be argued that neither the gameplay nor the story is an original element this crossover, to my best knowledge, has not been done before. Furthermore, deathrun continues to be a popular game mode even after 14 years since Counter-Strike: Source has been published. Numerous servers host game sessions in CSS while even disregarding other games featuring the same game mode.

The current implementation provides a strong basis for further exploration. Firstly, stateful servers should be implemented with persistent player names, scores, and credits. Rewarding players with credits or subtracting them for re-sleeving would further mimic the reality of Altered Carbon and provide an interesting, competitive gameplay element for players. Secondly, the story should be integrated into the game which introduces players to the concept. Finally, as only one static level is implemented potential is hidden in randomized or procedural level generation. Traps and safe-platforms are essentially building blocks which could be arranged in a modular fashion.

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[8]https://unity3d.com, accessed 29-03-2018
[9]https://docs.unity3d.com/Manual/UNetReference.html, accessed 29-03-2018