

An Essay about merging game worlds

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In my small project, I decided to extract models from various computer games in order to create a small experimental scene. Initially, the project aimed to bring a more cohesive experience, but later I decided to bring something small from each game world and combine them in a more abstract way, while also addressing the topic of cohesion.

Extracting the meshes and textures is not a difficult task, though bringing back textures and materials to models requires substantial knowledge in 3D suits and could be very daunting. Extraction of a whole scene from a game could allow not only artists but gamers to see game worlds in a different way. For example, a planet turns out to be a flat texture in Halo, and a seemingly flat road in "Death Stranding" may have a massive amount of non-visible black dripping stalactites associated only with the levitating roads. As for 3D artists, ripping assets could explain general approaches and even some in-depth techniques in building cohesive 3D game worlds. For instance, in the game Death Stranding, there is a more procedural approach with many small texture atlases referenced here and there. Many meshes are constructed from a dozen small overlapping rectangle objects filled with textures with transparent backgrounds. On the other hand, the game Control has a more traditional approach in managing 3D objects and space. Solid objects were used and UV unwrapped. Each 3D game exists in many universes. We can name one universe the more trivial one, the main gameplay or end product, but the game exists, in my opinion, inside other parallel dimensions. We can call one another dimension of existence in the game engine. Inside the game engine, the game looks and feels very different. We can imagine a scenario where the game engine itself is considered a universe. In this universe, different games are created and played by players. Each game within this universe has its own set of physical laws, characters, and narratives. We can go even further if we decide to nest a game inside another game. The act of nesting a game inside another game can serve as a metaphor for considering the coexistence of multiple realities within one game universe. Another level of existence is written code and binary code, which, seen from a developer's perspective, could draw pictures in his imagination about gameplay. Each game has its own language of 3D space. To bring together games in the real sense of the word, you need to somehow translate them. Combining elements from diverse game worlds demands creative problem-solving. Developers and designers need to find innovative solutions to technical challenges. Ripping directly from GPU memory, in my experience, could be a more effective solution in some cases than moving models and textures in the traditional way because it provides a real and genuine screenshot of the game scene, therefore retaining the signature of the original artist.

While it's relatively rare to see official crossovers between distinct game worlds, they do occasionally happen on a small scale. For instance, in the game *Cyberpunk*, there is a famous Easter egg from *Death Stranding*: the BB (Bridge Baby), a baby living inside a transparent bottle, imitating a womb. It's a significant character and item that accompanies players throughout their journey. This raises intriguing questions within the gaming community: Do these two games indeed share the same universe, or is it just a clever nod to another game's world? Each game operates on different APIs (Application Programming Interfaces), which dictate how the software interacts with hardware. They also use distinct local space coordinates, manage the distribution of textures, and employ various rendering techniques. However, at their core, they all adhere to the same fundamental principles of 3D graphics. This shared foundation means that, in theory, the languages of these virtual spaces can be translated, just like spoken languages can be interpreted and understood.

The idea of merging different game universes has the potential to create entirely new gaming experiences, where players can explore seamlessly interconnected realms. It could also build a small museum in *Spatial* explaining interesting facts about items and characters. It should be mentioned that ethical concerns exist. Some authors and companies may distance themselves from exposing their work. Each of the games I ripped contained, to some degree, unique approaches in creating illusions and solving various performance issues. Game developers and publishers often retain full ownership of the technology and techniques used in their games. I myself learned a lot about how textures are projected onto meshes or some probably in-house methods of managing 3D worlds. Ripping game content exposes part of the technology behind the game. Reverse engineering itself isn't illegal, but the use of a company's assets can be, and these projects are a mix of both. There are also aspects of breaking the illusion of the game worlds. The more convincingly these elements within a computer game come together, the stronger the illusion of being in another world becomes. Therefore, it is important to mention that bringing various game worlds and assets together could break the illusion, though most AAA titles revolve around some variation of realism, therefore a way to bring them together in separate immersion could be easily found. Narrative and the story of the characters could also be potentially incompatible or hard to create a cohesive or meaningful interaction. For instance, a realistic game taking place in medieval times and a sci-fi game. While my experiment was more chaotic in nature in order to create meaningful gameplay, addressing these narrative issues is essential for a successful merged experience.

In summary, ripping games provides an interesting playground for gamers and even more for developers, but it comes with technical, ethical, and narrative challenges. Successfully navigating these challenges can result in innovative and exciting new experiences that expand the boundaries of gaming. However, it's important to approach such endeavors with an understanding of the games involved and a respect for the intellectual property of game creators.