**R402**

Ellie Morton, Malachi Locke-Primus, Darien Rogers, Kristen Wedegis, Sabrina Wilson

[elliemorton@gatech.edu](mailto:elliemorton@gatech.edu), [mlockeprimus@gatech.edu](mailto:mlockeprimus@gatech.edu), [drogers68@gatech.edu](mailto:drogers68@gatech.edu), [kwedegis3@gatech.edu](mailto:kwedegis3@gatech.edu), [sawilson@gatech.edu](mailto:sawilson@gatech.edu)

**ABSTRACT**

The experience addressed in this text is an eerie, mystery-style video game called R402. This game involves a dream-like state, an organization of hackers, and an array of clues to help the player navigate and make sense of it all. The playthrough experience created employs a variety of concepts learned from Georgia Tech’s Constructing the Moving Image course. This text intends to describe key gameplay and illustrate how ideas from the aforementioned Tech class influenced the overall composition of R402.

**Keywords**

horror video game, game clues, hackers, mystery video game

# PREMISE

In this first person, horror-mystery game, the main player and three other characters are part of a hacking organization, 8 Bit Bullets (8BB). The player learned the identity of a double agent hacker who attempted to sabotage their work, so another organization, Cryptron, could claim all the credit. The player was on their way to exposing this person when their computer blew up, destroying much of their evidence!

As the game begins, the player wakes up and realizes they are in a coma, classified as a code R40.2 according to the International Classification of Diseases [1]. The player must search their mixed-up mind to recover clues and evidence that determine who the double agent is. The player awakes in a dream-like state inside an abnormal hospital. They must search through the rooms of the hospital to make sense of what happened to them and who the double agent is. In order to do so, they must find clues in each room before advancing to the next area of the hospital.

The suspects include KJ0HN50N, ATUR1NG, and AL0V3L4C3.

KJ0HN50N is a childhood friend who the player has known all of their life. They learned to code together when they were a mere six years old and have been hacking together ever since. They meet weekly to hack together in person at their favorite local coffee shop.

ATUR1NG is the public leader and spokesperson of 8 Bit Bullets. They have caused much tension in the group since some feel like ATUR1NG and the player take all the credit and do not acknowledge other 8BB hackers, while others believe this makes the group more secure and anonymous. They only communicate online and have never met in person.

AL0V3L4C3 is a quiet, soft spoken hacker who has been like a mentor to the main character, until recently. Lately, she’s been off the grid and not responding to any messages. They mostly communicate online and meet in person about once per month.

# PLAYTHROUGH EXPERIENCE

## Initialization

The game begins with the sound of an explosion, as the main character’s computer has just blown up. Text on the screen explains the premise of the story, sharing that a double agent caused this explosion. The player finds that they are in a comatose state and that they must now figure out what happened. Because the perspective and context a player has frames their understanding of and approach to a game, background of the R402 storyline is explained at the start, and a first person camera view is utilized to allow players the freedom to immerse themselves in the exploration of clues [2].

As the player begins the game and navigates through each room, the surroundings emphasize the idea of a comatose, illusory state with uncomfortably sized furniture and floating objects. The first room is gloomy and dark, emphasizing the confusion and intensity of waking up in a coma. The second room is an intermediate of a dream-like state and reality, as things appear to be *almost* normal. . .until the player finds more clues that uncover the truth. The third and final room is in complete disarray, building the suspense of the player almost reaching the end of the game. Throughout the experience, the eerie background music fosters a dark ambiance, following the manner of the introductory sequence and game premise [3].

## Room 1: The Beginning

The first room setting visually features precariously unrealistic furniture, dismal lighting, and objects suspended in the air. The first person perspective of being both larger and smaller than items in the room reminds the player of the beguiling nature of their task [4]. As the player goes through the room, they hear a variety of sounds to indicate their nightmarish state, further accentuating the theme of confusion and mystery that accompanies waking up in a coma [5].

On this level, the player finds a large flash drive containing a calendar that tells the player their last meeting with AL0V3L4C3, the player’s mentor, was cancelled. The player may have planned to discuss the recent troubles or even accuse their mentor of sabotaging them! There is also an intro coding textbook. Is that just a coincidence? Could it mean that their childhood friend, KJ0HN50N who they learned to program with, could be the double agent?

## Room 2: The Patient

Each of the clues presented flashbacks on what happened prior to explosion by foreshadowing the player unearthing the truth about who the double agent is [2]. Through identifying clues and uncovering their meanings, the player gains additional context and clarity of their saboteur. In room number two, the player finds a coffee cup, which reminds them of their frequent coffee meet ups with lifelong friend KJ0HN50N. In addition to the coffee, the player discovers a soccer ball, an item they played with quite a bit as a kid. This reminds the player of their childhood and growing up with KJ0HN50N. Could this mean that their longest friendship has all been fake?

## Room 3: The Waiting

The third and final room is a hospital waiting room. The mysterious theme of an illusive state is maintained through use of large and askew objects. The placement of these items accompanied by the dim hospital lighting work hand-in-hand to illuminate the suspense of almost reaching the end of the game by combining elements from the theme of mystery with realistic components [5].

Within an elevator in this room, the text “trust takes years to build seconds to break and forever to repair” can be seen. Additionally, when the television is turned on, a reminder that the 8BB plan to release an announcement during the following week is displayed. While this announcement could be pretty standard for the hacker collective, it could also mean that ATUR1NG, the spokesperson, is trying to sabotage the collective. After collecting this final clue, the player is reminded of all the evidence they exposed during gameplay and prompted with a choice of who they believe the saboteur is.

# GAME IMPLEMENTATION

Our intention was to immerse the player into an environment that reinforces the theme of an unsettling dreamland one would experience while in a coma, so models are suspended in the air, over and under scaled, and are minimalistically textured. These elements of scale and economy ultimately challenge what the player would recognize to be reality [2].

We utilized Autodesk Maya to create models for the Unity project. The modeling process included a combination of tools such as “Insert Mesh Loop,” “Extrude,” “Scale,” and “Bridge” to create original and semi-realistic models.

After we created the models, they were exported as either a “.fbx” or “.mb” file depending on its structure, as this would later affect our texturing process [6]. To illustrate the structure dependency: if said model had a more mechanical design like that of the wheel cast system found on the hospital beds, then it would be exported as the more efficient and universal “.fbx” file. On the other hand, if said model had a more organic design, like the chairs featured in the scene, then it would be exported as the more editable “.mb” file. The “.fbx” files were textured in Unity because they were structured in a separable manner.

The “.mb” files were textured using Maya directly from the models folder because individual faces had to be selected. We cautiously used UV mapping to avoid creating unintentional dissonance amongst styles since UV textures tend to give models a hyperrealistic edge [7]. However, we were able to provide the user with a semblance to the objects the models represent through changes in the materials’ reflectivity, base maps, transparency, roughness, etc.

We completed the lighting alongside the texturing process since these components are complementary to one another through tonality and color [3]. R402 predominantly features practical lighting throughout each stage and room. Again, we wanted to alter reality but not to the extent of being unrecognizable. Therefore, some rooms take on warmer tones due to the tungsten point light we gave a lamp supported by motivated lights. Others may take on cooler tones as a result of the ceiling fluorescents more commonly found in a hospital space. We also choose to provide functional windows where the player can look out unto an overcast sky.

Each of these steps in the game implementation process addressed a unique aspect of the targeted gameplay, allowing for smooth and efficient development. By sticking with the general theme of mystery and suspense, all elements of mise-en-scene were implemented with this common ideal in mind. From the distinction of exporting Maya models as “.mb” files versus “.fbx” to lighting design, all game implementation choices were made to streamline the creation of R402 and emphasize its intended effects.

# CONCLUSION

Overall, R402 aims to provide players with an eerie, suspenseful game that allows them to uncover the truth about their comatose state. The mise-en-scene of each room emphasizes the idea of this illusory experience through use of uncomfortably sized furniture, floating objects, and gloomy audio and lighting. The clues found throughout the game both flashback and foreshadow the R402 narrative and core components of gameplay reflect this. For example, the first person perspective allows the user to uncover additional context at their own will, affording freedom and engagement. All stages of the game build off the common theme of waking up in a nightmarish condition, and the elements of mise-en-scene employed in game implementation intend to highlight this.

# REFERENCES

1. International Classification of Diseases. ICD-10-CM Code R40.20 Unspecified coma. Retrieved April 29, 2021 from https://icd.codes/icd10cm/R4020.
2. David Bordwell and Kristin Thompson. 1979. “Mise-en-scene” in Film Art: An Introduction. McGraw-Hill Education, 176-228.
3. Alan Stockburger. The Game Space from an Auditive Perspective, 175-191.
4. Mark Meadows. 2002. Pause & Effect: The Art of Interactive Narrative. Ner Riders, 161.
5. Bessell, David, ‘What’s that Funny Noise? An Examination of the Role of Music in Cool Boarders 2, Alien Trilogy and Medievil 2’ in: Screenplay: Cinema/ Videogames/ Interfaces (ed. by King, Geoff and Krzywinska, Tanya) (London: Wallflower Press, 2002) 136-145.
6. Unity Technologies. 2017. Importing Objects From Maya. (2017). Retrieved April 30, 2021 from https://docs.unity3d.com/560/Documentation/Manual/HOWTO-ImportObjectMaya.html.
7. Autodesk. 2021. UVs. (2021). Retrieved April 30, 2021 from https://knowledge.autodesk.com/support/maya/learn-explore/caas/CloudHelp/cloudhelp/2018/ENU/Maya-Modeling/files/GUID-FDCD0C68-2496-4405-A785-3AA93E9A3B25-htm.html.