

BrainGenix Game Mechanic Design Initial Report

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Goal: Use the outline story of Eternal Souls (Working Title) to develop a list of proposed mechanics and tools for cinematography.

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Intro

Due to the core importance of the game mechanics to the project I have compiled a mechanic research here to launch the conversation of what core mechanics this game has. The mechanics suggested will be informed by the story. While the story is important, a game's mechanics should be able to stand on their own. They should be fun and somewhat easy to understand even without a story to back them up. As we flesh out mechanics we will want to consider what is happening play-by-play. The goal is to maintain the plausibility of the story while providing interactive elements that drive the player to their goal.

Many games have core mechanics that are the hook. This document is to present core items that may act as our hook while also providing some variety in gameplay to support each situation. This includes scenes that can be broken into smaller parts that may support gameplay components. Basic features are not part of this document. Menus and very minor stuff which

has already an established commonality among games will not be covered here.

I have gone through the story on Miro as well as its associated documents to brainstorm possible mechanics we can include in this title. Due to not currently being able to prototype the mechanics in the engine, I will provide a page of URLs that will link to videos of other games that have similar mechanics and features to what I am proposing. Part of this document will also have questions for the team to consider for us to see what works and what does not. The story is subject to change and may require changes to mechanics.

The best approach will be to discuss this further through our google spaces and design meetings. We can then create a Miro board that will allow the team to solidify and discuss ideas further as well as associate mechanics with the flow of the game's story. From there we can then create a short design doc that will maintain features and prevent feature creep.

List of Mechanics

A list of proposed game mechanics.

The following column of mechanics is broken into categories. They can be referenced here when reading the suggestions in the document. Rather than using a single mechanic once it is better to build on it. This helps the player retain an understanding of how it works and how it adapts to a new situation without having to provide more tutorials.

Some of these mechanics also aim to gamify certain elements and actions that would be in the cut scene to provide more interactivity for the player. Being there is a lot of stories to unpack I went with a focus on conversational mechanics. This can vary from speaking in person, to email, social media, or text. It gives the player a way to interact while also gaining more info on the story.

New abilities will build onto the core mechanics as we have new situations that present themselves. I refrained from making a lot of notes on stories other than in ways that they could be changed to being interactive if possible. There are also some mechanics in the list that currently do not have a place in the story. Later scenes may need to expand some possible sets of mechanics and some specific actions like combat and Virtual World abilities are intentionally left vague as we should discuss it further as a team.

Note: Scenes are in red,
interactive moments are in green.

Core Controls

- Movement
- Object Interacting
- Conversation

Tech

- Phone
- Email
- Wearable Tech

Action Controls

- Running
- Jumping
- Stealth
- Dodge

Combat Controls

Attack - Varies depending on what machine is hacked.

Hacking Controls

- Doors
- Camera
- Social Media
- Machines/ Robots

Novel

- Server setup
- Terminal Interfaces
- Train Spotting

Virtual Controls

- World Editing
- Teleportation
- Invisibility
- Flying
- Telepathy

Mechanics Examples

A list of compiled links to explain mechanics.

The following links collected are to illustrate how other games implemented various mechanics. These are only showing some possibilities while we develop the engine where we can implement the actual mechanics. The video links will take you to the time right before the demonstrated mechanic.

Nier - Hacking

<https://youtu.be/LgRIzMbgv38?t=20024>

Shows how a hacking mechanic can be imagined in a different way other than the realistic ways.

Remember Me - Personal Tech - Hacking - Stealth

<https://youtu.be/cPrUsT4hQU8?t=6965>

Interacting with hacked elements

<https://youtu.be/cPrUsT4hQU8?t=5102>

The huds, hacking, and integration of digital and real worlds could inspire how we juxtapose our combined realities in game. We can also consider how tech can be used to act in a stealthy manner.

Life is strange - Dialogue, navigating campus

<https://www.youtube.com/watch?v=qYnhpWf-20So>

This demonstrates how we can have NPCs around the campus and allow for chosen interaction by the player and dialogue trees.

Mass Effect - Dialogue

<https://youtu.be/Hjw29QMkyoA?t=3786>

Demonstrates dialogue as a means to handle conversational cut scenes.

Talos Principle - Dialogue - Code interface

<https://youtu.be/y2qrccEW1hE?t=292>

This also explores a way of text communication and use of a terminal in a game.

Prey - Room and object interaction

<https://youtu.be/m1xjexCtAFc?t=18>

This was to see a demo of a player exploring their own apartment.

Catherine - Phone interaction

<https://youtu.be/ftBtXz3mfRg?t=1521>

This explores emails and phone usage.

Firewatch - Dialogue while doing tasks

https://youtu.be/O_r6t6_bN3c?t=1563

This game is a walking simulator but the way they handle traversing the environment and engaging dialogue makes the experience interesting.

Enslaved - Camera angles to make non action scenes more interesting.

<https://youtu.be/abwiBt46CI0?t=448>

This single scene demonstrates the use of changing camera angles in a scene that is playable. Allows for environmental storytelling.

Story to Mechanics

Act 1

A list of compiled game mechanics than can result from situations in the story.

Quest 0

This quest shows the player the basic controls. Explore A's apartment.

Quest 0 notes:

Controls to introduce:

- Core Controls: Movement, object interacting,

Questions:

- Should we allow the player to move items or have a controlled interaction with them?
- Can the player collect items into an inventory?

Suggestion:

- Phone, email, tech, or conversation mechanic can be introduced here and act as a means to cause the player to go to the grocery store.
- Reveal other mechanics at a later time to prevent breaking of immersion.

Show tension in city

While getting groceries, A narrowly avoids getting caught up in the middle of a street fight, which further progresses his fear of death (and interest in mind uploading).

Tension in city notes:

Controls to introduce:

- Action control: Running, jumping

Questions:

- What other mechanics can we introduce here that can be used later in the game?
- Since the player is brains over brawn should we focus on strategy and evasion?
- If the hacking concept is used, can the player be introduced to the mechanic here as a means to escape. For example going into a locked back door of a restaurant to flee.

Suggestion:

Introduce some action mechanics. Consider running, jumping, and/or stealth mechanic.

Story to Mechanics

Act 1

A list of compiled game mechanics than can result from situations in the story.

Scene 1

Show Carbon City - futuristic, high tech but realistic, not overly dystopian or utopian.

Introduce MC, Ambrosius Lallemand, nicknamed "A" - university student in apartment.

A receives reminder for university lecture. Additional update that professor wants to speak with him afterwards.

Show university campus

Quest 1

A has to navigate to campus and to computational neuroscience lecture.

Topic of lecture is WBE and recent developments in field.

Meet and chat with other students before and after lecture.

Discuss religious groups (Naturalists) who are protesting WBE.

Scene 2

Antoine Lucas asks A to help set up computer servers for BrainGenix - introduce company/system.

Antoine tells A he was chosen due to his interest in WBE research and his computing expertise.

Scene 1 notes:

Questions:

- Does the player get notification on phone, computer or other? Can we use this to show tech use as a mechanic?

Suggestion:

Scene can be broken up with cut scenes showing B-roll of the city and campus. The character can be simply animated walking from apartment to campus and different angles can focus on environmental story telling.

Quest 1 notes:

Controls to introduce:

- Core Controls: conversational.

Questions: Can we have protesters standing around in one spot that give the player something to avoid or a means to speak to them to get more on their perspective? This can also be a source of social conflict.

Suggestion:

If the player is late for the lecture he can use the hacking ability to open up a shortcut to get there on time. This would continue the use of the mechanic and give them more to do on this journey. This could also inform the player of the character skills and one reason they are chosen.

Scene 1 notes:

NA

Story to Mechanics

Act 1

A list of compiled game mechanics than can result from situations in the story.

Scene 3

A leaves campus, uses high speed train to travel across city to research center. Journey shows off city landscape.

Scene 3 notes:

Questions: Should character be playable in this scene? Can we use this as a means to flesh out the story other later characters by allowing player to use mobile device.

Suggestion:

- We can maybe add a camera feature to their device allowing them to focus on the scene
- Use device for communication.
- Use device for checking social media.
- Use the train spotting mechanic here?

Scene 4

A arrives at research center - high tech, semi-industrial concrete appearance.

Scene 4 notes:

Questions: Can we implement the conversational mechanic here?

A is given tour by Antoine and meets research team: Lucifer Toussaint, Marie Descoteaux, and Sophie Asefi.

A already knows Lucifer - shown as close friends.

Quick explanation of WBE given.

A is taken to data center, briefed on task - setting up servers.

Quest 2

Set up servers.

Quest 2 notes:

Controls to introduce:

- Novel: Server

Questions: We can gamify setting up the servers. Suggestion: We can provide options for snippets of code that can chosen like a conversation and results will be wrong or write based on code chosen. We can also discuss making the process of setting up the physical portions.

When done with the server we can use the phone for conversation.

Call researcher to confirm.

Story to Mechanics

Act 1

A list of compiled game mechanics than can result from situations in the story.

Scene 5

Terrorists hack into fire suppression system and release carbon dioxide into data center. They also hack door access controls, preventing door from being opened.

A tries escaping, makes it to door and screams to open door because he can't breathe.

Terrorists have sabotaged the oxygen masks and door, making them inoperable.

Cut to third person, show researchers on other side (including Lucifer) screaming and pounding to try and open the door.

A starts to feel effects of CO2 poisoning, puts hand on glass window of door, says "help me" inaudibly then sits down to accept fate.

A slowly comes to the realization that he is going to die and closes his eyes.

Scene 5 notes:

Questions: Can we make this partially interactive?

Suggestions:

- If player thinks they have a chance to escape the room, they will experience more tension as they try and find a solution.
- While researchers try and open the door, they also tell the player things to try.
- When player begins to fade it turns to a cut scene.

Story to Mechanics

Act 1

A list of compiled game mechanics than can result from situations in the story.

Scene 6

Textures start loading in environment and avatar of A forms.

Antoine tells A about the terrorist attack and how A died trying to escape.

Antoine explains that although A's physical body died in attack, A's brain was preserved.

Antoine tells A that they have been uploaded to a virtual world and explains preservation, scanning, emulating, and uploading. Shows short video log of process.

Tutorial introduction to virtual world - how to alter it and such. Explain domains - virtual environments that are independent of each other but interconnected, like websites.

How to interact with virtual environment (and other emulations when they appear), how to use enhanced abilities like teleportation, invisibility, flying, telepathy, etc.

Tutorial to show editing mode.

Quest 3

Choose and customize avatar to reflect new emulated identity.

Scene 6 notes:

Controls to introduce:

- Virtual: world editing

Questions:

- How much power should the world building be? Should it have limitations?
- Can it affect the external physical world?
- How does the player access the editing feature? Can it be done at any time or only when the scene allows for it?
- Is this feature to be used more later after the game's story rather than during?
- Can their new found abilities help them cope with losing physical life?

Suggestions:

- Tutorial is playable to allow player to get actual experience in the mechanics.

Quest 3 notes:

Questions:

Is this system something that will be used post game in the open virtual world?

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Scene 7

Sophie introduces the new HUD interface to A.

There's a social media system which Marie guides the player to check.

A discovers posts on social media about how Antoine is actually the bad guy, and A is a victim.

Quest 4

A thinks that Antoine is the bad guy and decides to do some research on Antoine's background.

This is the first hacking mission where A hacks into Antoine's server. A discovers that Antoine is not actually bad and is on A's side. Only publications and credentials on server.

A goes through the logs in fire suppression system, finds IP address of computer that connected to system.

A hacks into computer and follows short chain to computer in a cafe. A hacks into security camera system there and finds footage of when computer was used at time of attack.

A finds out that a high ranking member of the Naturalists performed the attack (this will be Lucius Orlov).

Scene 7 notes:

Suggestion:

- Allow player to do actions that will show feedback by changing the hud.
- Introduce a new version of social media that was accessed through phone. We can use similar controls but have different visuals and more features.
- Introduce control interface that will allow new mechanics and combat to easily be added later in the game.

Quest 4 notes:

Controls to introduce:

- Hacking Social media

Questions:

- Can we expand the social media to have hacking?
- Should hacking different devices require traveling the network to different areas?

Suggestions:

Add layers to social media hacking. A player can see who posted something and click on their user name to access that user's account or even device? Maybe even a cut scene where we see through their device's camera.

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Scene 8

Naturalists claim (via social media image/video) that Antoine killed one of his own researchers to use as a test subject in his experiments.

They also talk about A as if he weren't alive as an emulation (using phrases like: "He was" or "He will be remembered as").

They have some deep fakes of Antoine pulling the fire alarm and locking the door to trap A inside.

A is angry at Antoine and demands an explanation. Antoine calls A to explain. Midway through their conversation, Sophie runs into room where Antoine is having his call and tells them to turn on the TV.

On TV, the Naturalist leader, Ophelia Magdalene makes an announcement telling the public to demand that emulation research cease and to oppose Antoine's research organization.

This announcement will incite anti-emulation protests around the research center where they have signs saying that Antoine murdered A, and that sort of thing. This should also make the player angry at the Naturalists and confirm what Antoine was saying.

Lucifer runs in and shows via cameras that armed terrorist scouts in combat gear are approaching BrainGenix's research site.

Lucifer calls up A and tells him about the Combat System which was created after the last terrorist attack.

Scene 8 notes:

Questions:

- If A exists in an emulated world what means in he calling in or out? What new items available can we use to communicate this visually to the player?
- Should calls be changed to texts since that is more easily sent into the Virtual World?

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Quest 5

A is given tutorial on how to use the Combat System.

Shown special system of AI guns/turrets designed to protect research center in event of threat/attack (installed after the attack that killed A).

Designed by the security team in response to escalating protests and violence.

Show prior evidence of attack on facility, perhaps crowbar laying around, or something like that).

Quest 6

A identifies terrorist scouts before they enter building.

Terrorists are spotted in back alleyway searching for something (access card to data center that one of the researchers would have dropped, plan to shoot up research center to get card if they can't find one) but this is not known to A.

Terrorists then break into building via back door where A's servers are as well as all the researchers.

A has to keep the terrorists from reaching the data center and also help the researchers escape. Will be the first major event in the game and will have a lot of player input.

During this event, the player and researchers will overhear a snippet of conversation that will have Ophelia's voice in it.

Quest 5 notes:

Controls to introduce:

- Hacking: combat system

Questions:

- Rather than turrets can we just have security robots on site that are hacked?

Suggestions:

The robots could be on post to assist the police who were doing an investigation. This would also allow us to use this to train the player for when they take over a robot body later.

Quest 6 notes:

Questions:

- Will enemies come in waves or be scripted moments?

Suggestions:

- A radio dropped on the floor from a disbanded enemy or communication device can be done as a cut scene after the attack is over.

Story to Mechanics

Act 2

A list of compiled game mechanics than can result from situations in the story.

Scene 9

Police show up, Lucifer brings up the voice that they overheard and links it to the Naturalist leader (Ophelia). The leader was referred to with some codename (Vedma). Police don't believe him.

A then calls Lucifer and pretends to be a building security contractor who was monitoring the cameras and saw and overheard the conversation with the Naturalist leader. Police still don't believe that the Naturalists are involved.

Marie receives phone call at this exact moment and walks out (this is where Marie is forced into being a terrorist operative).

Scene 9 notes:

NA

Scene 10

A and Antoine arrange a televised interview with Rolande Sauvageot, a reporter from a well-known TV show - Carbon City TV (CCTV). A's aim is to educate the public on the opportunities that an emulated life enables, as well as clear the name of the research organization and prove that he's alive and well.

A gives a talk show style interview about life as an emulation (mainly positive, talks about enhanced capabilities but also acknowledges the need to adjust to living in a virtual world long term).

Scene 10 notes:

Questions:

- Should we use the conversation system here?

Story to Mechanics

Act 2

A list of compiled game mechanics than can result from situations in the story.

Scene 11

A onboards second and third emulation.

This is a short cutscene showing the introductory process as well as the benefits of being an emulation.

Second emulation, Louie Thayer, was formerly a 90-year old born in the early 1990s.

Third emulation, Alex Morrison, was formerly a kid with terminal disease. Had ALS and used uploading to free himself from his disability.

This scene will serve as a moment of levity where these somewhat outlandish characters bump into each other and their eyes are opened to the possibilities of emulated life.

Scene 11 notes:

NA

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Scene 12

More emulations appear in the virtual environment (months after the interview) and it has the size and appearance of a city e.g. Cyberpunk. Explorable via interconnected doors.

More protests against the research organization. More content from Naturalists on social media calling it wrong and those from the organization supporting it. Heated arguments in comment sections.

A interacts with emulations (e.g. getting to know one another, interacting as a community, communicating by thought, emulation backstories) (overhear some outrage at the Naturalists, talking about current events).

Antoine calls A, tells him about the skill transfer system, explains leveling system - see Features document.

Emulations make their own domains/extensions of the main area.

Antoine and researchers agree that they'd like to be uploaded if something happens.

Scene 13

A's extended domain suddenly vanishes, some other emulations in other domains vanish as well.

Antoine calls and informs A that they have lost contact with the main data center and asks A to hack the security system for the data center.

Scene 12 notes:

Questions:

- Should these scene use the world editing mechanic?
- Can we allow the player to chose who they interact and go through a dialogue tree?

Scene 13 notes:

NA

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Quest 7

Hack the security cameras to see what's going on. Reports back to Antoine and notify police that the data center is occupied by the terrorists.

Enter combat mode.

Use control of lights, doors, locks, and turrets to manipulate the terrorists into a specific room in the data center.

Use the AI turrets to either incapacitate or kill the terrorists (based on where A shoots).

Scene 14

Police arrive, A lets them into building whilst simultaneously preventing terrorists from escaping by controlling the doors. Police capture terrorists.

A watches in on police interrogation (hacks in to interrogation room camera), realizes that terrorists are communicating cryptic message about next target through lawyer intended for the other members of their terror cell.

A has to decipher the clues and figure out what the next target is.

Scene 15

A gets a robotic body, and is introduced to usage and other stuff.

Robotic body is designed by emulation community for emulation community Open source and modular.

Quest 7 notes:

Controls to introduce:

- Cameras and Doors

Questions:

- Should we direct the enemies to the police drones and let them capture them, or hack the drones and finish the job?
- What is the moral high ground? Can we let decisions like that affect the ending or other conversations?
- Should they be scanned for emulation?

Scene 14 notes:

Questions:

- Should we allow the hacking and research used in quest 4? It would be remixed to work with a clue based puzzle.

Scene 15 notes:

Questions:

- Should robotic body have the same capabilities as the police drones/bots?
- If not, should it be melee based attacks since it was not meant for combat?

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Scene 16

A follows terrorist's handover points to get clues.

Everyone on research team is stumped about clues and worried they won't be able to stop attack in time.

Lucius Orlov hacks researchers' computer and displays message saying he can help them figure out what the terrorists are planning in exchange for amnesty.

Reluctant, the team keeps trying to decipher the clues but no success, so they agree to Lucius's terms and promise him amnesty. He then assists them in deciphering the clues.

Lucius explains that he was initially with the terrorists and after a while realized what they were doing was crazy and therefore wanted out.

Lucius reveals that he was the one who hacked the fire suppression system but wasn't told that it would kill A, rather that it would just cause a distraction.

Lucius gives convincing evidence to the police that Ophelia is the terrorist leader. He joins the researcher team initially as a low level researcher, eventually proving himself to the rest of the team.

First point tells A that threat will involve bombs, A follows clue to next handover point, discovers that target is a building. The last clue is how many meters tall the building is which enables A to identify the target: BrainGenix HQ.

Scene 16 notes:

Questions:

- Can this scene be broken up to allow for exploring the facility and hunting for the terrorists?
- If so, should we have terminals the robot can hack into to open doors, and view cameras? This can add a puzzle layer to navigation.

Story to Mechanics

Act 2

A list of compiled game mechanics than can result from situations in the story.

Scene 17

A informs police of threat and target.

Police give A access to security cameras/footage/turrets from target building.

A accesses cameras for target building, rewinds footage to identify exact location of bombs within building.

A tells special SWAT team where bombs are planted.

Carbon City Police send unarmed bomb squad to 4 locations (in BrainGenix HQ). SWAT team is also dispatched but terrorists block the routes so SWAT team can't reach the bomb squad.

Police contact A and ask what resources A has access to. A says turrets installed around the city to prevent crime and protect against terrorists.

Quest 8

Kill terrorists before they kill the bomb disposal experts.

Protect bomb squad, take them to other locations so they can disarm 3 of the 4 bombs.

Scene 17 notes:

Questions:

- Can part of these scene utilize hacking mechanics and be followed with the cut scene?

Quest 8 notes:

Suggestions:

I think fleshing out the combat mechanics might influence how this scene plays out.

Story to Mechanics

Act 3

A list of compiled game mechanics than can result from situations in the story.

Scene 18

Last remaining bomb is on top floor of BrainGenix HQ where terrorists have taken hostages. Floor houses scanning equipment. Hostages can't be rescued as terrorists have cut power to floor.

Bomb explodes - massive loss of life - mainly college students (from A's class) who came to tour the scanning facilities.

Rolande Sauvageot is also assassinated for hosting an emulation on his show.
Act 2 low point.

Scene 19

A is devastated, so Lucifer investigates how the terrorists got access to the scanning floor, discovers that Marie's access card was used.

Lucifer investigates further and notices that Marie is working as if everything is normal. Lucifer informs the police.

Lucifer confronts Marie about why she gave the terrorists access, but Marie is already distressed and takes Lucifer hostage as the police enter the building.

Police reach Marie and Lucifer and there's a standoff.

Short but violent struggle ensues, resulting in Lucifer being fatally wounded. Bullet hits the window so just glass fragments left.

Marie, in shock at her own actions, confesses and provides information about terrorist leader (Ophelia) - show leader backstory.

Marie then tries to kill herself but has no bullets left as she used the only one on Lucifer. Marie runs at broken window, police can't stop her, she jumps and falls to her death.

Scene 18 notes:

NA

Scene 19 notes:

NA

Story to Mechanics

A list of compiled game mechanics than can result from situations in the story.

Scene 20

Lucifer is uploaded and convinces A to return to the investigation.

Police find phone on Marie containing a contact that matches terrorist leader's codename.

A triangulates the phone to find last known location of terrorist leader.

Quest 9

A and Lucifer go to location using robot bodies and hacking where needed. Police follow. Fight scene with terrorist henchmen ensues.

A locates Ophelia who is on the move via a high speed train (3 connected carriages).

Ophelia threatens to blow up train if police try to prevent her from escaping.

A sends secret message to all passengers alerting them of Ophelia's plan. Asks them to quietly vacate the carriage where Ophelia is and move along the train. Ophelia is watching and speaking to the police, not passengers.

Everyone vacates the front carriage (where Ophelia is) and A de-couples front carriage from rest, taking passengers to safety.

However, Ophelia hacks the passenger carriages to try and regain control. A and Lucifer battle Ophelia and lose control for a while.

A and Lucifer de-energize track so Ophelia's carriage can't move. To avoid capture, Ophelia blows up her carriage, killing herself.

Scene 20 notes:

Questions:

- Should hacking/research mechanic be used here?

Quest 9 notes:

Questions:

- What kind of combat should take place here? Should it be a combination of hacking and physical fighting?
- Should part of this be broken up into a cut scene?

Story to Mechanics

Act 3

A list of compiled game mechanics than can result from situations in the story.

Scene 21

A is lauded as a hero. WBE is vindicated since it was A's enhancements as an emulation that saved the passengers. Tons of news coverage.

BrainGenix HQ is rebuilt. Antoine receives Nobel Prize.

A and Lucifer share a heartfelt interaction before confronting Ophelia, who has been uploaded and put in a virtual prison.

Ophelia explains how her perspective has changed. A reassures her that she will be released when her sentence is up - in 300 years. Ophelia doesn't mind now that she's immortal.

End on sweeping view of a bustling virtual world with millions of emulations - camera moves further away to reveal the scale of the virtual world - starts on city, then out to continent, to planet, to galaxy, to universe and finally out of the virtual world to a massive, heavily guarded server farm housing the emulations.

Scene 21 notes:

NA