



Sprint Summaries: 8/27/19 to 11/26/19

Emmett Friedrichs

Designer

Karl Lewis

Designer

Austin Roorda

Producer

Josh Grazda

Programmer

Adam Streeter

Artist

Sprint 1 Plan - 8/27/19

The first sprint of this semester is taking on most of the setup of the various systems that we need in place in order to be productive. The team has established a list of goals that we want to achieve for this sprint, laid out below (Screenshot of task board can be found at the bottom of this Sprint Plan):

Team Tasks for week of 8/27/19 to 9/3/19

- Establish a team name
- Draft 1st pass working agreement
- Set up Repository
- Set up Wiki for Project
- Come up with 50 game ideas (10 each from the 5 different members)
 - Choose 10 from the list of 50 to present to the class
- Make presentation
- Create basic team branding for presentation

Having worked with the members of this team before in the past, I have gotten pretty good at identifying and understanding the work ethic and patterns of these developers. During pre-production, the team is quick to establish a core idea and run with it once it's been deliberated. The only real thing that I have to do as the producer is to make sure that the project stays within the scope of the time constraints that we have. This week should be relatively simple since we are just establishing ourselves and getting things set up for the rest of the semester.

I know that a possible issue that we may face next week, and for the rest of the semester is the working schedule of the team members. Emmett, Josh, Adam, Karl and myself all work jobs that have schedules that differ from week to week. Because of this, we have created a deadline to establish when we schedule our jobs as well as when we schedule work meetings. These times will be different

from week to week, but we are still committed to meet in person at least once per week in order to

Story	New	In Progress	Resolved	Feedback	Complete	Rejected
Sprint Impediments	+ Add Imp.					
Design (0.0 hours) 255542	+ Add Task	255551 Design - 10 Done	255543 Add 10 Game Items			
Programming (0.0 hours) 255541	+ Add Task	255553 Add 10 Game Items	255550 Add 10 Game Items			
		255552				

maintain a healthy communication and work environment.

To the left is what the current task board for this week is looking like. I see no impediments to the team and should be able to complete all tasks.

Sprint 1 Review- 9/2/19

With the first sprint of the semester completed, I am happy to say that all the tasks that we set out to complete were completed within a reasonable amount of time and were done to the standards expected of the team. We tasked ourselves with brainstorming a total of 50 ideas, and from there narrowing that down to 10 - which we presented in today's session. We wanted to create a team identity (team name, working agreement, team logo, etc) and begin work on creating ideas that we may move forward with. As listed in the first

Team Tasks for week of 8/27/19 to 9/3/19

- | | |
|---|------------------------------|
| ● Establish a team name | Complete - Hollow Hexagon |
| ● Draft 1st pass working agreement | Complete - Found in Wiki |
| ● Set up Repository | Complete - On Pineapple |
| ● Set up Wiki for Project | Complete - Wiki on Pineapple |
| ● Come up with 50 game ideas | Complete - On Pineapple |
| ○ Choose 10 from the list of 50 to present to the class | Complete - On Pineapple |
| ● Make presentation presented | Complete - On Pineapple / |
| ● Create basic team branding for presentation | Complete - On slides |

We discussed as a team the things that went right, the things that went wrong and how we can move to improve those things in our Review Meeting. Below are the following takeaways from this sprint - as discussed by the team.

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● The team was quick to get to work on their tasks ● Team collaborated well with each other and communicated efficiently ● Team was able to make decisions quickly and compromise easily with one another 	<ul style="list-style-type: none"> ● Mattermost was a bit difficult to get working with some members of the team, creating some unneeded technical issue(s) and slower situations ● Team sometimes got a little off topic when discussing ideas for game(s) 	<ul style="list-style-type: none"> ● Mattermost help guide (provided by Wiley) will be distributed to the team ● Talking cards (Green for Talk, Red for move on) will be provided for the team to help streamline conversation and keep things moving

Current Status by Discipline:

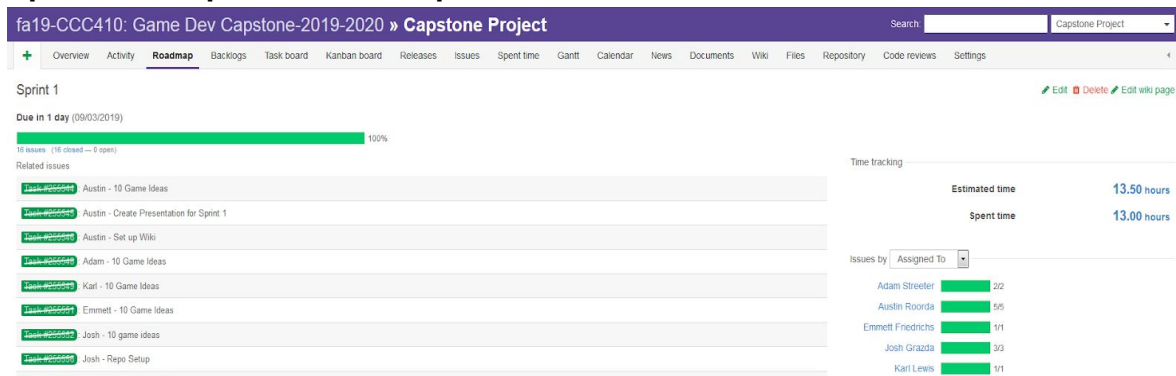
All Disciplines (Design, Art, Programming, Production) are awaiting feedback from the class as to which project they want to pursue. Of the 10 ideas, there are 4 that have been discussed more than the others and seem to have the most promise of being a bigger experience than the others. Once the decision has been made to move forward on a project (or projects) - the team will begin

pre-production and by making the early design and art assets, an early prototype and a project plan laying out how the project will move forward.

Currently, the only art that was made was for team branding (lofi technology aesthetic), but we did discuss how various art styles would look on specific games we designed - and will be looking to make concept art and assets come the next sprint for the 1st project we decide to work on.

Overall, I believe that this sprint went very well and the entire team is happy with how we were able to be so efficient when we worked together. Morale is high and we are all excited to start working on the first real prototype that we begin work on, whatever it may be. Next week is looking like it's going to be laying down the foundation for documentation and having work be put in towards creating the first initial working prototypes.

Sprint 1 Completed Roadmap:



Sprint 2 Plan - 9/3/19

The second week of Production has the team exploring their top three VR concepts. VR is a new frontier for the team, so we have opted to use this sprint to explore multiple VR concepts at the same time, rather than piece it out and do each part at a different time. The three main ideas that we wanted to explore in VR had similar themes, mechanics and gameplay that could be prototyped, so we have split off into 3 groups to cover more ground. Below is the outline that we are following, as well as who is doing what this sprint.

Team Tasks for week of 9/3/19 to 9/10/19:

VR Mechanics Test:

- **Telekinesis / Teleporting Movement (Josh Grazda)**
 - Interaction with the objects in a game scene (using both telekinesis and physical interaction)
 - Teleportation Movement
 - Experimenting with additional Telekinetic Abilities (throwing, etc)
- **VR Gunplay (Karl / Emmett)**
 - Weapon Handling
 - Shooting
 - Gun Feel
 - Interactions (Reloading, Shooting, etc)

- **VR Physical Combat (Karl / Emmett)**

- Melee combat prototype (swinging, weapon weight, etc)
- Ragdoll Prototype
- Reverse Movement / Visuals Prototype (Relevant for idea: Cash Force)

- **Art / Artistic Direction:**

Art team is exploring and establishing the Aesthetic Direction for each of the concepts that we are prototyping around, these ideas are listed below:

- Cash Force
- Sniper Duel
- Telekinesis / Dimension Shift
- Arena VR

- **Production Tasks**

Production is focused on exploring the initial Target Markets - and establishing who we are making the game as well as why. The games that are going to have their Markets defined are listed below:

- Cash Force
- Sniper Duel
- Telekinesis / Dimension Shift
- Arena VR

Overall Expectations / Concerns:

Now that we have an established theme and concept that we want to explore (Virtual Reality), we are feeling more comfortable and anxious to get started. The team has expressed their excitement to get started working in engine and to start building prototypes - which is good news.

However, we have taken on a lot of tasks for this sprint, meaning that everyone has a lot on their plate. We have effectively plotted out a three in one prototype where we explore multiple ideas in one prototype. While this could result in a head start on whatever project we decide to continue developing - it also leaves us a bit vulnerable to overscoping and not being able to complete all the tasks that we have set out for ourselves. It's my job to facilitate good working practices and to keep the team on track.

I know that I want to have a work session (or two) where the whole team is together so we can all work with one another. By working in close proximity with each other, we can easily hop in and out of the prototype and test to make sure everything is working as well as check each other's work.

While I am hesitant to work on three different concepts at the same time, the amount of work that this will be able to save us in the future to me (and the team) outweighs the risks of possibly overscoping this sprint. A worst case scenario has us completing the work that we didn't get to finish this sprint while iterating further on the work that we were able to complete. While this isn't what we want to happen, we have a contingency in place if this sprint doesn't go exactly according to the plan outlined above. In total, we have 59.5 hours total estimated this sprint, which boils down to 11.9 (12) hours each, which is just below the average hour commitment.

Overall, I am confident in the team's abilities and their commitment to creating a functional - multipurpose prototype. The team was willing to opt-in to merging ideas to test and pick what works and what doesn't, and because of that I support their decision. So long as we are able to get a head

start on the work and don't wait until later in the week to get started, I am confident that we can get everything done that we planned to do.

Sprint Plan:

Here is the sprint plan for this upcoming sprint

The screenshot shows a Jira sprint plan for 'First Prototyping Sprint - VR Prototypes'. It includes a progress bar at 0%, a list of 31 tasks, and a time tracking summary. The time tracking summary shows an estimated time of 59.50 hours and a spent time of 0.00 hours. The tasks are assigned to team members: Adam, Karl, Emmett, and Josh.

Task ID	Task Description	Assignee
Task #256642	Adam - Establish Aesthetic Direction for Cash Force	Adam
Task #256643	Adam - Establish Aesthetic Direction for Sniper Duel	Adam
Task #256849	Adam - Establish Aesthetic Direction for Arena VR 2	Adam
Task #256817	Adam - Establish Aesthetic Direction for Telekinesis / Dimension Shift	Adam
Task #256712	Karl - Prototyping Shooting Mechanics(s) / Feel	Karl
Task #256713	Karl - Prototyping Gun feel	Karl
Task #256715	Karl - Prototyping interactions / gun handling	Karl
Task #256717	Karl - Prototyping Melee swinging / weight	Karl
Task #256721	Karl - Prototyping ragdolls	Karl
Task #256726	Emmett - Prototype weapon reloading	Emmett
Task #256728	Emmett - Help prototyping shooting mechanics (with Karl)	Emmett
Task #256734	Emmett - Weapon handling / swapping prototyping	Emmett
Task #256739	Emmett - Explore reverse movement (Cash Force)	Emmett
Task #256744	Emmett - Get acquainted with VR setup	Emmett
Task #256752	Josh - VR Rig / Space Setup	Josh
Task #256759	Josh - Telekinetic Object Movement Prototype	Josh
Task #256760	Josh - Teleportation Movement prototype	Josh
Task #256768	Josh - Telekinetic Objectplay Prototype	Josh

Sprint 2 Review- 9/10/19

The second sprint has been relatively successful in terms of what the team has set out to accomplish. We had initially planned to create a multi-faceted VR demo that tests the viability of several game concepts that we had brainstormed. We set out to do this in Unity initially - and have been met with a lot of issues with how the program handles VR systems.

Team Tasks for week of 9/3/19 to 9/10/19

Production:

Establish target market for each of the concepts:

- *Cash Force*
- *Arena Combat*
- *Sniper Duels*
- *Telekinesis / Dimension Shift*
- Create Presentation showcasing Sprint 2 work
- Retrospective / Review

Design:

- Get acquainted with VR Setup / Development
- Explore reverse movement in VR (*C. Force*)
- Prototype Gunfeel (*C. Force / Arena Combat*)
- Prototype Interactions / Weapon Handling (*C. Force / Arena Combat / Sniper*)
- Prototype Shooting (*C. Force / Arena Combat / Sniper*)
- Prototype Reloading (*C. Force / Arena Combat / Sniper*)
- Prototype Weapon Swapping (*C. Force / Arena Combat / Sniper*)
- Prototype Ragdolls (*Arena Combat*)

- Prototype Melee Swinging / weight (Arena Combat)

Programming:

- Get acquainted with VR Setup / Development
- Object Movement (Telekinesis / D.Shift)
- Teleportation Movement (Telekinesis / D.Shift)
- Telekinetic Objectplay (Telekinesis / D.Shift)
- Experimental Ability Prototyping (Telekinesis / D.Shift)

We discussed as a team the things that went right, the things that went wrong and how we can move to improve those things in our Review Meeting. Below are the following takeaways from this sprint - as discussed by the team. There were a lot of impediments that took the team some time to figure out and rectify - but they kept at it and managed to get back in the saddle and get back to work.

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● The team really persevered through the issues Unity kept throwing at them (build crashing, not working, etc) ● Quick adoption of Unreal ● Communication was great ● ‘Split Team’ worked well with each member prototyping a new mechanic or concept ● Early Jump Start on Art 	<ul style="list-style-type: none"> ● Unity’s VR support isn’t fleshed out, needed to use 3rd party support and still had issues. ● Repo had issues pulling meta files, causing the project ot not load correctly. ● Because of the above mentioned issues, team lost 2.5 days worth of work time / work was done over 4 separate times ● Telekinesis Idea didn’t pan out - not enough substance to be a full game idea that we wanted to explore 	<ul style="list-style-type: none"> ● If we move forward with a VR Project to use Unreal, since it already has built in VR support and tools. ● Go over Source Control again with entire team, and check / test it more frequently ● Talk about a concept or idea more to help solidify a product vision ● Adjust Scope slightly - so there is time to breathe if there is an issue or if something goes wrong ● Learn more Unreal to streamline the development process / speed things up

Current Status by Discipline:

Each discipline has worked extremely hard this sprint in order to deliver upon what we set out to do this sprint. The goal of this sprint was to create a Virtual Reality Technicality Test in order to gauge the viability, feasibility and interest within the team for each concept that we listed above. Below is a quick summary of where each team is at in terms of the tasks that they completed, as well

as any risks and issues that could be an issue for them, both now and in the future.

Design:

Design was extremely busy this sprint due to the late start. Karl was extremely patient teaching Emmett Unreal and working with Josh to refresh his memory. Both Karl and Emmett were extremely hard-working this sprint and were able to soldier on despite the rough start. As it stands now, we have several functioning systems in the build right now, and it's really just up to the team to decide what we want to explore next. The

Design Tasks that were left incomplete were Ragdolls for the Arena concept that we have decided to leave behind due to the concept not being viable for a full game. Telekinetic abilities such as the object play and pickups were left incomplete as well due to attention being needed elsewhere on other tasks, and that concept not being seen as a viable full game.

Programming:

A similar situation to design, Programming was faced with a detrimental start with the Unity / Repo issues we were having. Once we managed to get that rectified by switching to Unreal - Josh was able to make fast work of his tasks. Initially tasked with working on teleportation (no longer needed since Unreal has automatic integration for teleportation movement), as well as the prototyping with Telekinesis. However, due to the Repo issues as well as some other issues (general bugs, support) - a lot of Josh's attention was towards fixing this issue before the team could progress. He worked for several days with the Design team to try and fix the repo - ultimately O.K'ing the choice to switch from Unity to Unreal due to the issues in the repo not being resolved.

Art:

Luckily for Art, the issues with the repo and Unity had no effect on their tasks, and Adam was able to compile images that fit the artistic direction that he's established for each idea. The reference images he's gathered will help him write up his aesthetic intent documentation next sprint where he'll be getting to work on first pass placeholder assets on whatever project we decide to work on.

Production:

Production's main focus this sprint was to rectify the issue the Repo - and find a way to move forward. The choice was made to scrap using Unity and to switch to Unreal after trying to work for nearly 3 days on the build with major repo issues halting any development. An adjustment of the scope of this sprint was needed because of the lost time, with lower priority tasks (prototyping mechanics for ideas that weren't as viable as others - such as telekinesis or ragdolling) getting dropped in favor of more important, widely applicable mechanic integration such as shooting mechanics, etc.

During the next sprint, Production's key focus is keeping the team in scope and maintaining steady momentum towards completing tasks. The schedule for the team is very busy between work study, other classes and homework, making for a sprint that will require more consistent online communication.

Overview / Final Thoughts:

Despite a large scale issue that threatened the sprint, the team was able to overcome it and still come out ahead with out expectations being pretty much met. Only three tasks were left as incomplete - due to the increasing time constraint because of the lost time from the Repo issues, and

because the team decided to take the prototype(s) in a different direction that didn't require those mechanics.

Overall, the team did an awesome job responding to a difficult impediment, and with a slight adjustment in our expectations and scope - I'm confident that the team will be able to complete all their tasks next sprint. The team now has to decide what idea they want to double down on and continue developing. As seen in the sheet below, Karl and Josh weren't able to complete their tasks. As mentioned above, those tasks were chosen to be omitted by the team since the viability of them wasn't something we agreed would work out and benefit our project. I would consider this sprint a good learning experience and a successful first exploration into VR Development

Sprint 2 Completed Roadmap:



Sprint 3 Plan - 9/10/19

The third week of Production has the team focusing in on the first of three prototypes. We decided to continue our exploration of VR by iterating upon Cash Force. This was due to the majority of the mechanics that we tested during our prototyping phase being applicable to this prototype. We are planning on fleshing out a lot of the core functionality this sprint, and getting the basic foundations of a gameplay loop established.

The team has also made it clear and expressed intent on challenging the first stage, and wants to move to the second stage where they focus on developing their project for the duration of the semester. In order to do that, the team has to meet all of the criteria of Step 1 - and present formally to the class. Not only that, but the team has also opted to double down and present one idea that they have prototyped during this sprint within that same presentation - effectively killing two birds with one stone. Below is the outline that the team is following, as well as who is doing what this sprint:

Team Tasks for week of 9/10/19 to 9/17/19:

Cash Force (Iteration 1):

- **VR Gunplay (Karl)**
 - SMG / Automatic Rifle (AR) Shooting
 - Magazine Functionality
 - Grenade Launcher Implementation
 - Research Dual Render Scope
- **AI and Systems (Josh)**

- Enemy Chase AI
- Enemy Spawning
- Player Utility Spawning
- Technical Set Dressing
- **Art / Artistic Direction (Adam):**
 - Basic Car Model (pursuers)
 - Player Van Concepting
 - Aesthetic Direction Document
 - Scale Reference
- **Production Tasks (Austin):**
 - Create Intent Statement Template
 - QA Plan for 9/14
 - Refine Target Market Info
 - Update Wiki (with relevant documentation)
 - Create Sprint 3 Presentation

Overall Expectations / Concerns:

Given that last sprint had a lot of unforeseen issues affect the development process and hinder some of our progress - I'm anticipating an easier sprint due to the technical issues being resolved. This sprint has a total of 57.5 hours estimated, with all members pulling at least 10 hours. Many of these tasks could take a bit longer than expected, but overall concerns are low.

The **Sprint Goals** for this goal follow these main pillars:

- **Implementation of weapon types (SMG, AR, Grenade Launcher)**
Weapons are a huge part of *Cash Force*, so implementing and testing several different weapons is going to help the team focus in on each weapon type. Testing their functionality, feel and ease of use will help us iterate in the future if we choose to do so.
- **Implementation of Early AI / Architecture**
Enemies are another huge part of the experience that we want players to feel while playing *Cash Force*. Making sure the enemies follow the player, spawn correctly as well as the other architecture related to these tasks is imperative to have in this prototype since it lays the groundwork for future sprints.
- **Establishing Artistic Direction**
The Art direction of *Cash Force* is something that the team wants to lay the groundwork early for an aesthetic direction. Concepting and creating some basic models will also help out a lot and speed up the prototyping process a lot. This project is going to require a lot of prop art and smaller 3D assets (something that Adam excels at) - so we can leverage his strengths to create a solid foundation to build off of.

The tasks that could potentially cause issue include any of the AI scripting, as well as the general architecture / support for enemy pathfinding. Weapons are also a possible issue, with the weapon-feel needing some refinement and polish. Unreal's mesh editor is competent, but some issues came up last sprint with the meshes loading incorrectly, as well as having some slight physics

issues. Other than the above mentioned concerns, this sprint looks like be completed easily, although extra attention is going to be put towards the implementation of AI Architecture as well as the weapons, as both of those features are key to nailing the game feel and are a core part of the game loop that we need integrated in order to test.

Sprint Plan:

Here is the sprint plan for this upcoming sprint

The screenshot shows a Jira sprint plan for 'Cash Force Prototype' with a due date of 09/17/2019. It lists 29 issues, 0 closed, and 29 open. The progress bar is at 0%. A list of tasks is provided, including 'Basic Car Model', 'Player Van Concepting', 'Cash Force Aesthetic Direction Document', 'Scale References', 'VR Tower Defense Intent Statement', 'Research Dual Render Scope', 'Technical Set Dressing', 'Player Utility Spawning', and 'Enemy Spawning'. To the right, a 'Time tracking' section shows an estimated time of 57.50 hours and a spent time of 0.00 hours. Below that, an 'Assigned To' dropdown menu lists team members with their assigned counts: Adam Streefer (0/4), Austin Roorda (0/5), Emmett Friedrichs (0/6), Josh Grazda (0/6), Karl Lewis (0/4), and none (0/4).

Sprint 3 Review - 9/17/19

The third sprint had the team delving into the Cash Force prototype and working on establishing functionality in it's three core pillars. Those pillars are VR Gunplay, AI / Systems, and a Dynamic World. Each of these pillars had specific tasks that were tied to them, and were worked on by the team. Here is a breakdown of the task list

Team Tasks for week of 9/10/19 to 9/17/19

Production:

- Sprint Planning / Retrospective
- Create Intent Statement Template for team to use
- Refine Target Market (specifically for Cash Force)
- Sprint 3 Presentation (Stage 1 Challenge + Prototype Update)
- QA Test Plan and Survey for 9/17/19

Design:

- Grabbing Improvements for weapons
- Magazine Functionality (SMG)
- Research Dual Render Scope
- Create and Implement "Endless Road"
- Intent Statement(s) for prototype(s)
- Grenade Launcher Implementation
- Learn more about Unreal
- Turning Test (motion sickness test)

Programming:

- Dual Render Scope Research
- Intent Statement for TD Concept (Josh)
- Enemy Spawning

- Technical Set Dressing
- Chase AI

Art:

- Player Van Concepting
- Scale References
- Basic Chase Car Moels
- Aesthetic Direction Draft

We discussed as a team the things that went right, the things that went wrong and how we can move to improve those things in our Review Meeting. This week was a much better change of pace when compared to last week given all the issues the team faced, but wasn't without it's own issues. Below are the following takeaways from this sprint - as discussed by the team.

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● Implementing the magazine reloading was quick, easy and painless - allowed for Karl to get onto other tasks fast ● Team is getting more comfortable with Unreal ● Artistic Direction has become clear and established ● Product Vision has become clearer as we continued to work and communicate on the project ● Communication between one another has been clear, and helpful 	<ul style="list-style-type: none"> ● Work / Class scheduling conflicts limited time that could be spent on Production (especially earlier in the week) ● Time Management could be improved <ul style="list-style-type: none"> ○ Less backloading tasks, try to complete them before the weekend ● Grabbing Architecture for the guns will be needed in the future - large time commitment that was considered an afterthought is now core functionality 	<ul style="list-style-type: none"> ● Better time management <ul style="list-style-type: none"> ○ Try and frontload other class work as soon as it's assigned so Capstone can take priority ● Invest more time into Unreal and how it works to better understand what is needed ● Quicker Meetings <ul style="list-style-type: none"> ○ Stay on task more ○ 'Riot Cards' to keep meetings and discussions relevant

Current Status by Discipline:

Each discipline has worked extremely hard this sprint in order to deliver upon what we set out to do this sprint. The goal of this sprint was to flesh out the concept of Cash Force by continuing work on it's gunplay - while also working on key and core functionality that will be tested later next week.

Design:

The Design team spent a lot of time working on the loading and reloading, as well as the

reverse movement. The loading and reloading went well, and is functional. The reverse movement testing took a while to get in and tested since Emmett was sick for most of this week, and was also investing time into the classwork from the classes he missed. Despite this, he was still able to deliver on his tasks and the team was able to keep working. The research for the Dual Render scope was quick and easy, and could either be barebones / basic and take no time or be feature complete and extremely detailed and take months. This will be discussed when the team comes together to decide it's final project.

As for the Grabbing and Bolt systems, that is another story. The colliders on one of the weapon models are having a lot of issues, and creating some problems for the weapon handling. While we know how to fix it, there wasn't enough time in the sprint to do so. Overall, Design was able to deliver on their tasks and has laid a solid groundwork if we decide to go forward with this.

Programming:

Our Programmer was focused mostly on the chase aspect of our game, working on making sure the enemy units chased the player's vehicle and were able to be interacted with via shooting them. After some scaling issues that were initially overlooked by the Design team, Josh was able to get the spawning, and 'chase' mechanics to work. He was also responsible for helping Karl research the dual render scope, which went quickly and easily.

Josh was also responsible for setting the scene in terms of setting up the architecture for in game effects, such as distance fog, lighting, and other general effects. Since the road is infinitely spawning and despawning, some effects were added to make it seem a little less abrupt. In all, this was a good sprint for the programming team and they were able to lay themselves a good groundwork for the future as well.

Art:

While the previous sprints have been a lot more passive in terms of what Art was needed, this sprint was Adam's time to shine and really let loose what he had been planning for the aesthetic direction for this game. Responsible for concepting the player's van (where they will spend most of their time) as well as the general art style for the game, Adam was also making a model for the pursuing police. While initially the scale was off on the model, it was communicated and rectified quickly, making for an easy fix. Since the product vision and artistic direction are established and clearly communicated, work done on this project in the future should be smooth sailing for Adam.

Production:

Because of the extra week taken by the team to work on 3 different prototypes at the same time, Step 1 currently remains incomplete. The main focus for Production this week was to create a presentation that met all the criteria for Step 1, while also beginning the process of challenging the second step. This went smoothly since all of the documentation was already created, just not shown off during last weeks presentation. The target market for Cash Force was also narrowed down, with a competitive analysis being more focused on the game rather than the platform.

A QA / Game Testing plan was also drafted based on the amount of work that had been done this sprint. The team wants to test general and basic usability of the guns, and to make sure that players aren't getting motion sick while they play the game. This information will be used to influence

future decisions if the game is chosen to go forward.

Overview:

The team has made significant progress towards establishing this game's overall desired look, feel and functionality. The groundwork has been laid for each discipline to continue working on the project, and all members are more than willing to keep working on this project if that is what is decided. The retrospective was able to alleviate some major concerns that were had in regards to time management and commitment to the project. With a more forward thinking mindset and workflow that prioritizes work being done in digestible chunks rather than crammed in towards the end of the sprint.

The sprint was mostly successful and was able to further expand the potential that was shown in its initial prototype alongside the other mechanics featured last week. There were some setbacks because of work and class schedules conflicting with when the team could actually do their work, as well as with some members of the team being sick. Most of the tasks were completed, the key features that the team wanted to work on and implement were added and have laid a good base for any future development (considering the team goes forward with this concept).

Overall, the team has made a lot of progress on this prototype in terms of fleshing out the concept. If the team decides to go with this concept, there is already a solid base of work to continue off of. If not, the team can still use a lot of what they learned this sprint in any of the other concepts since they are all in Unreal, and many of the mechanics and intractability can be used in some form in other projects that we have planned for our prototyping stage. The only tasks that were left undone were the Player Utility Spawning - since everything needed to be in the scene before it could be done, and that wasn't done until late in the sprint. The Enemy Chase AI task had some extra time on it since we overestimated the amount of time and research needed to complete it. As for Design, there Game Design Document was left undone since the team decided to wait on creating documentation until we have a final concept to move forward with - rather than spend valuable time creating documentation that may not be valuable to us in the future.

Sprint 3 Completed Roadmap:

Sprint 3

Due in 0 days (09/17/2019)

Cash Force Prototype

38 issues (28 closed — 4 open) 92%

Related issues

 Adam - Basic Car Model
 Adam - Player Van Concepting
 Adam - Cash Force Aesthetic Direction Document
 Adam - Scale References
 VR Tower Defense Intent Statement
 Research Dual Render Scope
 Technical Set Dressing
 Task #262992 Player Utility Spawning
 Enemy Spawning

[Edit](#) [Delete](#) [Edit wiki](#)

Time tracking

Estimated time

57.50 ho

Spent time

63.00 ho

Issues by Assigned To

Adam Streeter	44
Austin Roorda	5/5
Emmett Friedrichs	5/6
Josh Grazda	5/6
Kari Lewis	5/5
none	2/4

Sprint 4 Plan- 9/17/19

The fourth week of Production has the team looking into their second designed idea; *Robo Charge*. The intent behind Robo Charge is to create an exciting, modular, single-player experience in which enjoyment is derived from the physical mesh destruction of the robots, and intense combat scenarios. Players will experience robotic part combination systems, along with physics based combat that will challenge players to balance both defensive and offensive parts. The Concept for Robo Charge is fairly simple. It's a 3D, single player, third-person fighting game where you take control of a customizable battlebot raging in physics-based combat against your robotic opponents. Set in a metal, trap, and spark-filled arena, the player fights to the death against enemy battlebots that vary in both size and fighting style.

With a focus on customization and mesh deformation, the player can specialize their battlebot to suit their playstyle while cutting directly into and bashing the opponents armor. Different areas of upgrades include armor for shielding the interior battery core or offensive weapons for destroying your opponents. This creates gameplay that, unlike other combat games, does not rely on health bars, and instead the direct destructibility of the battlebot models.

The goals for the sprint are to implement the basic functionality around the core pillars of the product. These tasks are just to help establish an early, iterative or functional version of these features. As a team, we plan to work on the following:

Team Tasks for week of 9/17/19 to 9/24/19:

Robo Charge(Iteration 1):

- **Player Movement (Josh)**
 - Basic Melee Enemy Movement
 - Basic Enemy Attack Mechanic
 - Basic Enemy State Machine
 - Experimental Enemy Mechanics
- **Player Camera (Karl)**
 - Player Camera Perspective / Camera Control
- **Player Collision (Karl + Josh)**
 - Basic Physics Traps
 - Physical Collisions and Impulse
 - Mesh Deterioration & Damage
 - Research Collision & Destructible Meshes
- **Aesthetic and Art Direction (Adam)**
 - Style and Concept Art
 - UI Concept Art
 - Game Logo

Overall Expectations / Concerns:

This sprint, the team has shifted some of their production practices in order to streamline their processes and to make the development process easier on all parties. First, the team has adopted the use of User Stories to help establish a clearer product vision and to help guide the tasks to create value. The team has also opted to create their own tasks, rather than have the production team

delegate tasks to them. This more hands on, and entrusting attitude in terms of how the task board is handled should ideally make it so there is a greater level of comprehension in regards to what the project is.

As the producer, my main concerns are with how the PvP and or AI is going to function. Networking in that type of functionality takes a lot of time to do, and to do well so I want to make sure that the team is spending a fair amount of time making sure it's done right. Worst case scenario we can always make a dummy for the player to manipulate and damage, and focus on the actual networking / AI components if we choose this project.

So long as the team is able to stay on task and able to get a jump on their tasks, I have no real concerns. We have adjusted our tasks to help us be a bit more flexible in terms of hours - making it so we have some leeway in our time. This was done mostly so that we aren't grinding out close to 20 hours per week each when we are only in the prototyping phase. I believe that so long as the team stays focused and is able to get to work a bit sooner, that the sprint should go fine.

The **Sprint Goals** for this goal follow these main pillars:

- **Movement**

The team has established that Movement is the first key project pillar due to the gameplay impact that movement has within this game concept. Controls, as well as how the camera moves and where it's placed are all massive factors in terms of gamefeel and player experience. Physical collision dependent on movement input is also important - which is also tied into the HP of the player and enemies, as well as the attacking and defending.

- **Customization of Unit(s)**

The Unit Customization is another key pillar, since the game revolves around an interchangeable parts being put onto a baseline frame. UI elements and mock ups will be needed to convey the messages, with the UI enabling players to customize their robots. An Intent to balance each of the weapons, modifications and so on should be established in order to maintain balance between the items in game.

- **AI / PvP**

Making sure there are enemies to fight, whether controlled by another player or by AI. This includes an enemy unit or a dummy that the player can beat on and damage, as well as motion, tracking and following of the player by said dummy or unit. Damage should be indicated and able to be told as well. AI Behavior will play a key role as well since most of the combat will come from AI controlled units.

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 4

Due in 7 days (09/24/2019)

Robo Charge Prototype

33 issues (0 closed — 33 open) 0%

Related issues

Task #26444B	Adam - Style Concept Art
Task #264450	Adam - UI Concept Art
Task #264452	Adam - Logo
Task #264533	Physical Collisions and Impulses
Task #264534	Physics based movement controls
Task #264540	Austin - QA Test Plan
Task #264541	Mesh deterioration and damage
Task #264544	Basic physics "traps"
Task #264546	Austin - Create Robo Charge Update Presentation

[Edit](#) [Delete](#) [Edit wiki page](#)

Time tracking

Estimated time **58.00 hours**

Spent time **0.00 hour**

Issues by

Adam Streefer	0/3
Austin Roorda	0/7
Emmett Friedrichs	0/5
Josh Graza	0/6
Karl Lewis	0/5
none	0/7

Sprint 4 Review - 9/23/19

The fourth sprint had the team delving into their second game concept, *Robo Charge*. The team wanted to focus on getting key elements that were outlined in the product pillars implemented. These pillars were Movement, Unit Customization, and AI / PvP. Here is a breakdown of the task list:

Team Tasks for week of 9/17/19 to 9/23/19

Production:

- Sprint Planning / Retrospective
- Create Buyer Persona for Robo Charge
- Refine Target Market (specifically for Robo Charge)
- Competitive Analysis for Robo Charge
- Sprint 4 Update Presentation
- QA Test Plan and Survey for 9/26/19

Design:

- Draft basic Design Documentation (Game Flow, Design Doc, etc)
- Physics Based Traps
- Camera Perspective / Control
- Robot Model Destruction
- Robot Customization Concept Mock Up
- Mesh Destruction / Deterioration
- Physical Collision
- Physics Based Movement Controls
- Basic Test Level (angles and incline)

Programming:

- Basic Enemy State Machine
- Research Collision and Destructible Meshes
- Basic Enemy Attack Mechanics
- Experimental Enemy Mechanics
- Basic Melee Enemy Movement

Art:

- Style Concept Art
- UI Concept Art
- Logo

We discussed as a team the things that went right, the things that went wrong and how we can move to improve those things in our Review Meeting. This week was a pretty packed with classes, and Parent's Weekend eating up a lot of the weekend for most of the team members, which skewed the workload for the sprint towards the end of the week. On the next page is what was discussed in the Review Meeting, it includes what went well, what could have gone better, as well as a brainstormed list of what could be done in order to improve those issues:

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● Implementation of User Stories helped to define the Product Vision and focus on key action items ● The team is learning more Unreal with each week, which is slowly making development easier over the course of the week(s) ● Prototype was completed 	<ul style="list-style-type: none"> ● Communication suffered, with team members being less frequent with updates on their progress ● Vehicle movement was tedious to get implemented ● Getting AI to work was more complex than initially estimated ● People are still waiting until their tasks are 100% done to log time, which gives an inaccurate estimate of where the team is at in terms of progress ● Concept ended up boring some of the team by the end of the sprint as it's a 'safe' concept (less experimental) 	<ul style="list-style-type: none"> ● Better time management <ul style="list-style-type: none"> ○ Try to frontload other class work as soon as it's assigned so Capstone can take priority ● Invest more time into Unreal and how it works to better understand what is needed <ul style="list-style-type: none"> ○ Group sessions to learn Unreal together ● Discuss each product further to try and engage and encourage positive energy around it, and discourage negative thinking ● Weekly blocked out work sessions for learning unreal + working together in the same space to complete work

Current Status by Discipline:

Each discipline has worked extremely hard this sprint in order to deliver upon what we set out to do this sprint. The goal of this sprint was to flesh out the concept of Robo Charge by working on it's key functionality in order to get an early conceptual prototype that could be used as a proof of concept for possible future development.

Design:

The Design team was once again tasked with getting the core elements that were outline in the product pillars designed and (early versions) implemented and put in game.

Programming:

Programming was investing their time in making sure the Enemies were interactive and able to move around the map & break apart. Research was also done on player collision and destructible meshes, which is a key feature of the game. Making sure that this was functional as intended took some time, but overall it's proof of concept shows promise and leaves enough room for future

iteration.

Art:

Art was focused on concepting once again this week, with a mock up of the UI interface being drafted based on the Design Documentation. There was also concept art for a game scene (complete with player unit, traps) that fit the design inspiration of shows like *Robot Wars*. The logo was also created for this project.

Production:

The Producer was responsible for creating and outlining key business documents and deliverables while also leading team meetings. Most of these deliverables will be useful for helping the team narrow down their intended target market and creating a game that is market viable. One of the key issues that was uncovered in this research was the saturation of the market for games of this genre. Many games already exist with the same basic concept, so it'll be on the Producer to help steer the team into a more creative direction in order to differentiate from the other games on the market. Production was also responsible for creating the QA documentation for *Robo Charge*, with an intended test date of 9/26/19 (Thursday).

Overview:

This week was different from the past few weeks of development for a few reasons. For starters, the communication between the team was a lot less frequent than past weeks, which led to some issues. Since the communication was slower and less frequent than previous weeks, members of the design team were waiting for approval to push and pull from the repo (this was in order to not push or pull an incomplete build). The College hosted a family weekend, with many members being active or busy for some of the weekend doing that. More specifically, Emmett's work load had increased with his other classes, leaving him little to no free time to work on the project along with his other class work. Changes in estimating tasks and his workload are needed to be made unless he alters his schedule, but at the end of the day the choice remains with him and Production will have to work around his planning. Josh's schedule was also in conflict, with the setup for Parent's Weekend taking up more time at his job than usual. Another notable setback was that Adam fell ill this week, which slowed down his progress on his tasks. They were all completed, but just at a slower rate.

All of the above mentioned impediments are key factors for the degradation of communication between the team members. As a contingency, Production implemented a mandatory post in the 'updates chat' on Mattermost, even if nothing has been accomplished. This will at least give the rest of the team transparency as to where the rest of the team is at with their tasks, given they don't update the task board (even though they should be doing that anyway).

Karl had mentioned his boredom while working on this project, stating that the more experimental nature of 'Cash Force' is what he would rather spend his time doing, since 3D arena games are something that we all have experience developing. His push for working in VR to bolster our skillset and diversify our development portfolios sparked a conversation about possibly switching from *Toy Deploy* back to *Cash Force* and choosing that as our final project - to which the team conducted a Cost / Risk Analysis. The team plans to discuss this conversation in the Sprint Planning for Sprint 5, and will come to a conclusion at the end of that meeting.

Overall, this sprint didn't go poorly, but was a change of pace from the other sprints and issues were brought up that needed to be addressed. The team knows what didn't work out so well and how we can rectify them, so a path to better progress and a healthier workflow exists, the team just needs to be led to capitalize on it, which Production intends to do within the coming sprints.

Sprint 4 Completed Roadmap:



Sprint 5 Plan- 9/24/19

The fifth week of Production has the team looking into their third and final designed idea; *Toy Deploy*. The intent behind *Toy Deploy* is to create an immersive experience where players are able to engage in a childhood fantasy, where their toys are able to come to life when you interact with them. The enjoyment is derived from the whimsical interactions with toys and thoughtful planning to defeat enemy forces on a 'battlefield'. Players will experience nostalgic exploration with new toys and abilities, while having Godlike control to assist and reinforce your units in the heat of battle

The Concept for Toy Deploy is to create a single player, VR tower defense game where you discover toys to mount a defense or attack against the enemies forces. Set in a child's room filled with toys and nostalgia, the player is charged with the task of using what is at their disposal to plan, stage, and fight as their toy setup comes to life. With a focus on exploration and strategic planning, players can move at their own pace to prepare each stage for the upcoming battle. Using common objects like books and knickknacks, players can build defenses to protect their units, or wield small projectiles to help your units and launch at the enemies defenses. This creates gameplay that, unlike other tower defense games, is engaging even during automated combat.

The goals for the sprint are to implement the basic functionality around the core pillars of the product. These tasks are just to help establish an early, iterative or functional version of these features. As a team, we plan to work on the following:

Team Tasks for week of 9/24/19 to 10/1/19:

Toy Deploy (Iteration 1 - based off of user stories):

- **Step 2 Documentation (Austin)**
 - Docs related to challenging Step 2 begin to be drafted
- **QA & QA Analysis (Austin, Karl)**
 - QA Survey (Robo Charge / Toy Deploy - **Karl**)

- QA Analysis (Robo Charge / Toy Deploy - **Karl**)
- Game Test Plan(s) (Robo Charge / Toy Deploy - **Austin**)
- **Physical Prototype (Josh, Emmett)**
 - Mock Up
 - Physical Prototype created (**Josh, Emmett**)
- **Research Unreal Functionality related to our concept (Josh)**
 - Pathfinding
 - AI / AI Integration
 - Procedural Generation
- **Basic Art Concepts (Adam)**
 - Prop Concept Art
 - Logo
 - Environment Art Concepts
- **Presentation (Austin)**
 - Create Presentation Template so team members can work on the presentation (**Austin**)
 - Presentation Animations (**Emmett**)
- **Create Comprehensive Documentation (Austin, Karl, Emmett)**
 - Buyer Persona
 - Competitive Analysis
 - Target Market
 - Sprint Plan
 - Sprint Review
 - Game Design Documentation (**Karl, Emmett**)

Overall Expectations / Concerns:

Due to the nebulous nature of the game that we are trying to make, the team has taken a more researched-focused approach to this sprint. Unlike the other three prototypes that have been created so far (VR Tech Test, Cash Force and Robo Charge) - this sprint will focus mostly on high-level concepts and research to be utilized during future development, as a one week sprint is not enough time to implement all of the core functionality in order to test the feasibility and viability of the concept. Some concerns have been already mentioned by the Product Owner prior to development, such as the work required to create a working prototype that includes *all* aspects of the game that would be needed to validate its long term development viability. It's also important to realize the workload required to create such a prototype, especially with all of the high-level design and programming required to get it to work as intended. This game concept has a reasonably large scope, and it's important to make a note of that given the ever-decreasing time that the team has left to complete a rough vertical slice.

The team expects to research and flesh out the design concepts, as well as establish an aesthetic direction for the game. The research will help focus the design team's workflow, and enable them to create content for the game that fits the initial Intent and Concepts that were laid out in earlier

sprint's work.

The **Sprint Goals** for this sprint are as follows:

- Establish a clear product vision for the concept
 - Market Viability / Feasibility
- Research High-Level Unreal Implementation and Integration

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 5

Due in 7 days (10/01/2019)

29 issues (0 closed — 29 open) 0%

Related issues

- Task #266888 - Adam - Prop concept art
- Task #266889 - Adam - Logo
- Task #266891 - Adam - Environment Concept
- Task #266745 - Karl - QA Survey
- Task #266747 - Austin - Buyer Persona for Toy Deploy
- Task #266748 - Austin - Competitive Analysis for Toy Deploy
- Task #266751 - Austin - Target Market for Toy Deploy
- Task #266763 - Austin - Create Presentation Template

Time tracking

Estimated time	47.50 hours
Spent time	0.00 hour

Issues by Assigned To

Adam Streeter	0/3
Austin Roorda	0/8
Emmett Friedrichs	0/3
Josh Grazda	0/5
Karl Lewis	0/3

Sprint 5 Review - 10/1/19

The fourth sprint had the team delving into their second game concept, *Robo Charge*. The team wanted to focus on nailing down the concept for the game, as well as breaking down how the game would be played, rather than focusing on a prototype that could be playable. Here is a breakdown of the task list:

Team Tasks for week of 9/23/19 to 10/1/19

Production:

- Create Step 2 Dossier (documentation)
- Game Test Plan
- Presentation template
- Buyer Persona
- Competitive Analysis
- Target Market
- Sprint Plan / Review
- Update Meeting Logs

Design:

- Assist with QA Survey (Karl)
- Prototype Assistance (Emmett / Josh)
- Game Design Docs(s) (Emmett / Karl)
- Intent / Outcome / QA Results Analysis for Robo Charge

Programming:

- Create Digital Mock up of Physical Proto
- Pathfinding Research
- AI Research

- Create basic Physical prototype to demonstrate concept
- Procedural generation research

Art:

- Prop Concept Art
- Logo
- Environmental Concept Art

We discussed as a team the things that went right, the things that went wrong and how we can move to improve those things in our Review Meeting. This week was a really tough week for all team members in regards to their workload, with many assignments being due or needing work to be done on them before Capstone development could start. This skewed the workload for the sprint towards the end of the week. Here is what was discussed in the Review Meeting:

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● Clarified Product Vision ● Communication was more clear, frequent and focused on development ● QA Testing for Robo Charge went well ● Workflow was sped up, with team members working earlier in the week ● Documentation went well ● Step 2 documentation (start) went well ● Research opened up a lot of new opportunities 	<ul style="list-style-type: none"> ● Robo Charge QA (before the actual test) was hectic with no build made ● Course load was extremely heavy, leading to more tasks than usual being left behind 	<ul style="list-style-type: none"> ● Have build in Repo <i>before</i> QA ● Dedicated meetings and work sessions that the team commits to, so they can work on the project

Current Status by Discipline:

Each discipline has worked extremely hard this sprint in order to deliver upon what we set out to do this sprint. The goal of this sprint was to flesh out the concept of *Toy Deploy* so that players would understand the concept, and to see it's viability for possible future development.

Design:

The design team worked more on cementing the direction and core game design and flow elements this sprint. This included creating both a high and low level game flow document to help assist the team make decisions based on how we would want gameplay. On top of this, a lot of work was put into making sure the concept was easily understandable to players, which is something that the team plans to test come Thursday's QA session.

Programming:

Josh is the Product Owner of this project as the idea was his concept that he pitched. He spent a lot of time outside of his role as a programmer making sure that game was designed in a way that was compelling to the player and being viable in a potential market. On top of this, he researched a lot about procedural generation for the map, which will not only help on this project if we decide to go through with it, but on the others as well.

Art:

Adam was focused on concepting work as he has been for the past several sprints. He worked on environment concept art, a mock-up scene as to what the game could potentially look like while actually being played, as well as the logo for the game. He also helped to organize the aesthetics of the presentation.

Production:

Austin was focused mostly on business related documentation and making sure that the game had a target market and market viability. Buyer Persona, Competitive analysis, as well as target market research was all done in order to make sure that the game was able to be marketed to an actual group of potential players.

Overview:

Overall, this sprint went decently well, but was hit with the recurring issue of team members being burdened with other work. With the last week of prototyping done for this team, it's looking like the team will be able to get into a more consistent workflow with tasks that can be done over a longer period of time rather than just a week. With that being said, the team did commit to just working on each prototype for a week, which makes the 'crunch-time' elements of these past few weeks our own fault than anyone else's. We wanted to get the prototyping done as fast as we could while still exploring several different and diverse concepts.

Class work was a major issue and it's seeming to be a constant theme. It seems that the best course of action would be to cut down on the amount of tasks that people commit to and to populate the product backlog more so that way, if members of the team have time they can pull into the backlog rather than be buried with tasks that they have no real way to accomplish.

Overall, the sprint went well and the core goals were accomplished. The team was able to figure out the core gameplay of *Toy Deploy*, which is planned to be tested come 10/3. The team plans to make a decision on what game they are going to pursue for the rest of the semester and challenge the next step come the next class that we have. This coming sprint will be making our decision on what game we want to pursue, as well as make sure that all of the needed documentation that is due for Step 2 is completed.

Sprint 6 Plan - 10/1/19:

The sixth week of Production follows three sprints of rapid prototyping. Now able to choose what project to move forward, the team has chosen to move forward with the first prototype, *Cash Force*. *Cash Force* met the criteria the team set forth for themselves to meet in regards to their own personal desires for the semester / year, as well as the feasibility and viability of each project. Now that the selection has been made, the team can focus on laying the groundwork for the rest of the

year by planning out user stories that will be implemented into future sprints. This will allow for the team to still plan their sprints while making adjustments based on the higher-level planning that has been done.

For this first sprint after prototyping, the goals are to make sure that all of the documentation regarding the Second Step is completed, and that the team is ready to make the jump into the Third Step. This requires a lot of documentation, and will have the team mostly focusing on that for this sprint, while also starting to rebuild the initial prototype into a more functional and iterable version than the one that currently exists. As a team, we plan to work on the following:

Team Tasks for week of 10/1/19 to 10/8/19:

Cash Force + Step 2 Challenge Documentation:

- **Assessing the priority of tasks moving forward**
 - Research / Procedural level generation discussion (**Emmett, Josh, Adam**)
 - Weekly Plan(s) for Programming Tasks (**Josh**)
 - Repo Setup for Project (**Josh**)
- **Comprehensive Documentation on Project Status**
 - Art intent / risk assessment (**Adam**)
 - Business Documentation (**Austin**)
 - Sprint Plan + Review (**Austin**)
 - Technical Document Start (**Josh**)
 - Game Flow + Design Documents (**Emmett, Karl**)
- **More Cohesive Team Branding**
 - Holo Hexagon Team Logo Concepts (**Adam**)
 - 70's presentation theme for Cash Force (**Adam**)
- **Feedback on game / concepts**
 - QA Plan + Survey (**Karl + Austin**)
 - QA Analysis (**Karl**)
 - Begin work on Modular Intractable Component (**Karl**)
- **Documentation for Step 2**
 - Presentation Creation / Formatting (**Austin**)
 - TRA's for all 3 concepts (**Josh**)
 - Outcome Statement and QA Analysis for Toy Deploy (**Karl**)
 - Signed IP agreement (**Austin**)
 - Compile all prior Sprint Plans + Reviews (**Austin**)
- **Discuss all 3 prototypes in detail and choose 1 final concept (Entire Team)**

Overall Expectations / Concerns:

Now that the team has come to a decision on the project, the development of the game will be a lot easier to manage since the focus is now on one project, rather than several over a short period of time. The expectations for this sprint are that the team completes all of the needed documentation to challenge Step 2 this coming week (10/8/19) and getting through. On top of this, testing some of the new implementations that were planned earlier is a main focus in terms of in-engine development.

Making sure the grabbing and interactions are functional and to our own standards is important as well.

The only real concern that is to be had is to make sure everything is done in a timely manner, rather than back-ended to the last second. New plans for meetings and work schedules (that have already been scheduled and work with all involved team members) that will allow for the team to get work done in more manageable chunks rather than leave them to their own devices. Making sure all members are communicating effectively and encouraging use of Mattermost will also help with this.

Overall, this sprint is looking to be totally within scope and easily accomplishable. So long as the team commits to using the tools that have been laid out for them, this sprint should be steady and easily accomplished within the timebox. No major concerns.

The **Sprint Goals** for this sprint are as follows:

- Create / Finalize Documentation to challenge Step 2
- Begin iterating upon initial prototype (grabbing fixes, research on other key pillars)
- Update Team Branding

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 6 [Edit](#) [Delete](#) [Edit wiki page](#)

Due in 7 days (10/08/2019)

29 issues (0 closed — 29 open) 2%

Related issues

Task #268081	Josh - Research / Discuss procedural level creation
Task #268086	Emmett - Research / Discuss procedural level creation
Task #268090	Adam - Research / Discuss procedural level creation
Task #268093	Josh - General week plan for programming
Task #268124	Adam - Artist intent / risk statements, as well as examples of iteration
Task #268134	Austin - Business Documentation
Task #268142	Austin - Create Presentation / Format Presentation
Task #268158	Josh - TRA's and Slides for all 3 concepts

Time tracking

Estimated time	45.50 hours
Spent time	5.50 hours

Issues by Assigned To

Adam Streeter	0/4
Austin Roorda	0/6
Emmett Friedrichs	0/3
Josh Grazda	0/5
Karl Lewis	0/5

Sprint 6 Retrospective - 10/8/19:

The sixth sprint had the team selecting their concept and working towards challenging Step 2. The team worked mostly on updating the documentation that they have created in relation to the selected project, as well as researching concepts and laying the groundwork for future sprints. Here is a breakdown of the task list:

Team Tasks for week of 10/1/19 to 10/8/19

Production:

- Create Step 2 Dossier (documentation)
- QA Plan + Survey for intended concept
- Create Presentation + Format it
- Compile all Sprint Plan(s)
- Signed IP Agreement
- Update Wiki
- Sprint Planning + Review

- Business Documentation

Design:

- Start GFD and Documentation (**Karl**)
- QA Plan / Analysis (**Karl**)
- Research Procedural Level Gen (**Emmett**)
- Game Design Document (**Emmett**)
- Outcome Statement / QA Analysis for Toy Deploy (**Karl**)
- Interactable Component (**Karl**)

Programming:

- General week plan for programming
- Research / Discuss Procedural Level Gen
- Repo setup for project
- TRA's for each concept
- Technical Document

Art:

- Research / Discuss Procedural Level Generation
- Artist Intent / Risk statement
- Holo Hexagon Logo Redo
- Create 70's presentation theme

We discussed as a team the things that went well, what didn't and how we can move to improve those things in our Review Meeting. This week went really well for the team, with the final decision for what prototype we wanted to pursue coming easily. The workload for the rest of the sprint was to catch up on documentation and to create a presentation with the content needed to challenge Step 2. Here is what was discussed in the Review Meeting:

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● Unreal Research on new concepts went really well ● Updating Documentation to create a more current view of the project ● Presentation Template ● Josh + Emmett's workload has lightened ● Lots of Planning (all disciplines) 	<ul style="list-style-type: none"> ● Wiki was starting to become antiquated, needed a major content update 	<ul style="list-style-type: none"> ● Each discipline will update their own section of the wiki (Production Supervision)

Current Status by Discipline:

Each discipline has worked extremely hard this sprint in order to deliver upon what we set out to do this sprint. With this last sprint focusing on choosing our final concept (Cash Force) that we want to develop while also making sure that we have the needed documentation to challenge and

pass through the Second Step.

Design:

Design this sprint was mostly focused on catching up on the documentation that hadn't been done due to the rapid prototyping not facilitating or requiring it. Now that the team has decided on their concept (Cash Force), the documentation needed in order to facilitate development needed to be drafted. This included the Game Design Document as well as the Game Audio Document, which will both be iterated upon come future sprints. A Game Flow Document is next, as it will help us plan out the future development needed to create the vertical slice of the game. Design worked hard this sprint to create the missing documentation which was needed not only for the integrity of the project's design but also to challenge Step 2. Overall, a good week of work from Design.

Programming:

Programming was busy doing more research, and drafting Technical Risk Assessments for each project. A work session was done with Emmett and Adam to discuss procedural generation and how it would incorporate each of their assets. The repository was also redone in order to coincide with the new project. Overall, this was a good week for Programming and a lot of work was done, especially in terms of setting up the next sprint.

Art:

Art, like the rest of the team was focused on creating the needed documentation now that the team has chosen a concept. Working on team branding as well, the Holo Hexagon team logo as well as the presentation theme that fits that of the selected game. The Intent / Risk assessment for each art style from each prior prototype is also included in this documentation.

Production:

Production was focused on compiling the documentation from all other disciplines and uploading it to the wiki. In regards to the wiki, the sprint pages for each discipline needed to be updated as they hadn't been for two weeks. While not a major issue, it's become a priority to update the documentation each week that it is iterated in order to keep the stakeholders and product owners well informed.

Overview:

Overall, the team has been working hard over the past few sprints in order to work towards this current major milestone (Step 2 → Step 3). With the workload for both Emmett and Josh starting to ease up, they are able to be more readily available to work. The implementation of work meetings that the team attends and work together has also helped with dealing with members of the team not being able to complete all their tasks. In terms of the roadmap, most of the tasks that the team sought out to complete were completed, with the exception of QA-ing the selected concept.

This task was in the sprint as more or less of a buffer, if we had time to QA and had a build ready to go. Since the team opted to rebuild the game and scrap the work done on the prototype since it's not well optimized for iteration, that time that was blocked out for QA was spent on working on the new prototype instead. The sprint went really well for the team, with the next sprint looking to shape up similarly. I'd like to be able to complete more of the tasks, but at the end of the

day that lies with the team and their ability to manage their own time.

Sprint 6 Completed Roadmap:



Sprint 7 Plan - 10/8/19:

The seventh week of work has the team beginning the work and build up to the Third step. We have prototyped as a team, and worked hard to select one and choose to move forward with it in order to challenge the Mid-Mortem process in an attempt to go through for development next semester. In order to achieve this the team is going to need to scope down their sprints and make sure that each sprint is within scope and achievable while also remaining viable and feasible. The team plans to do this by drafting a set of end semester goals and milestones that the team wants to meet, as well as a loosely laid plan as to how to get there (in order to give some flexibility around the dates). As a team, we plan to work on the following:

Team Tasks for week of 10/8/19 to 10/15/19:

Step 3 Start - Documentation / Rebuilding the Build:

Austin	Adam	Josh	Karl	Emmett
<ul style="list-style-type: none"> Facilitate QA Session Sprint 7 Presentation Sprint Planning, Review / Retrospective Define Market Potential Update Wiki 	<ul style="list-style-type: none"> Weapon Research Van Size References Model Weapon 	<ul style="list-style-type: none"> Create Simple AI Variable Base AI Basic AI / Player Interaction Work on TDD 	<ul style="list-style-type: none"> Modular / Interactable components for guns Grabbing Objects Review QA Results Gun Design Document 	<ul style="list-style-type: none"> Iterate Game Design Document Create Planning Level Scene Value Statement

Overall Expectations / Concerns:

This week for the team is going to be really telling on how the rest of the semester is going to go. Basically, the team wants to lay out a plan that allows for us to develop the core pillars of the

game up one by one, and test each piece of functionality before it's implemented. In order to do this we need to make sure we have the pillars of the game identified, as well as have a plan (including milestones) on how we want to create features that embody those pillars.

While I don't see this as being all that difficult, I want to try and avoid excessive documentation where it isn't needed. Not only will this just slow down the development process by having the team grind out documentation, it may not even be relevant or useful. Documents that can be easily iterated as the project grows, or documents that can be used to give context are important since they can be used for later to onboard new developers.

The only major concern has already been mentioned, being that I would have would be to define those core product pillars as early on as possible. If we wait too long to define core design elements of the game or hesitate on what makes this game, we're going to have issues with communication, deliverables and so on. I personally have little worries in relation to production, with more concern for everyone's course load. I know that personally I have 2 exams due over the course of this next week, and even with decent time management skills it's still going to be a lot of work to do.

Overall, this week should run very well given everyone's excitement to create this concept ant to finally get started on a more permanent build of the game. Given that everyone communicates if there is an issue and has scoped effectively, I don't see any major issues coming out of this sprint.

The **Sprint Goals** for this sprint are as follows:

- Implement **grabbing** and **object manipulation**
- **Update Design Documentation**
- Begin concepting and creating **Weapon Assets**
- Start work and early **AI architecture**

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 7

Due in 7 days (10/15/2019) 0%

25 issues (0 closed — 25 open)

Related issues

- Task #271418 Josh - Create Simple AI
- Task #271419 Josh - Variable Based AI
- Task #271423 Josh - Basic AI / Player Interaction
- Task #271427 Adam - Model AR / SMG Starting Weapon
- Task #271435 Adam - Weapon Research
- Task #271436 Josh - Work on TDD
- Task #271438 Karl - Gun Design Document
- Task #271443 Emmett - Iterate Game Design Document

Time tracking

	Estimated time	Spent time
	61.00 hours	0.00 hours

Issues by Assigned To

Adam Streeter	0/3
Austin Roorda	0/5
Emmett Friedrichs	0/3
Josh Grazda	0/4
Karl Lewis	0/4

Sprint 7 Retrospective - 10/15/19

The seventh sprint had the team selecting a concept and moving forward with development on it. We as a team decided to move forward with Cash Force. We decided to go with this project due to several key reasons, mostly pertaining to its scope and interest in the concept. While we started to work on the project this sprint, we began working on guns, grabbing and some backend AI research. Here is a breakdown of the task list:

Team Tasks for week of 10/8/19 to 10/15/19

Production:

- Team Meetings (Planning, Retrospective + Review)
- Update Wiki
- Define Market Potential
- Start Presentation (Sprint 7 + Sprint 8)

Design:

- Create Planning Level (**Emmett**)
- Modular Interactable Component (**Karl**)
- Grabbing Objects (**Karl**)
- Gun Design Doc (**Karl**)
- Iterate GDD (**Emmett**)
- Value Statement (**Emmett**)

Programming:

- Create Simple AI
- Basic AI / Player Interaction
- Technical Document Iteration

Art:

- Van Size References
- Model SMG Starting Weapon
- Weapon Research

We discussed as a team the things that went right, the things that went wrong and how we can move to improve those things in our Review Meeting. This week went pretty well in terms of production, with the only real issues coming up being related to the Fall Break, where some members of the team went home for a few days. This made some of the tasks take more time to be completed or not completed at all. Another key thing to notice is that the QA wasn't done this week since we were spending most of our time re-building our build to be more easily iterable for the future. Here is what was discussed in the Review Meeting:

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none">• Communication was good• Documentation / research has been good and helpful for iteration• Gun Modeling was awesome and worked really well	<ul style="list-style-type: none">• Break slowed down production a bit, with people going home and relaxing	<ul style="list-style-type: none">• Communicate more openly about needing time off and taking breaks - it's okay to relax so long as you are pacing yourself!

Current Status by Discipline:

The team has really gotten into their groove and hit their stride when it comes to content deliveries and making sure content is making into the build on time. The team has been working hard to make sure that the

milestones that we have laid out are able to be hit (with a few more sprints worth of work), and that the team will be able to work and move forward towards their end goal for the semester. Here's the breakdown of each discipline this sprint

Design:

Design has made a lot of progress in terms of re-building the grabbing and physics. The gun design document is laying a good groundwork for what guns we want to choose as well as how they will affect gameplay. The audio asset list will help us figure out what sounds we need, as well as when and how they will play. The prep-phase level has also been worked on by Emmett, with the intent being that players will use the space when they plot their route of the heist. A value statement was also drafted, so the team can now adhere those values into the concepts of the game.

Programming:

This week had a lot of AI Research and Prototyping being made, which is going to be incredibly helpful later in development for the team. This research has been built off of earlier research and foundational knowledge that Josh had, but is important to keep learning and researching based on the information and systems that are needed in order to make the game function as envisioned. The technical document was also revised to include the AI research and intended functionality, as well as the technical risks associated with that.

Art:

Art was busy this week, creating the first weapon model - the SMG. This model took most of the week, with the research and development of the other weapon concepts taking the rest of the time. Although it was planned to research the scale of the van, so the player can fit inside - that was pushed back a sprint since the level that Emmett was working on didn't need a van.

Production:

Production was mostly focused on making sure the team maintained their velocity from previous sprints and keeping everything organized. The market potential was defined to make sure the team continues to develop a game that actually has market potential, as well as an audience. The wiki was retooled to make it easier to see and get all of the needed documentation and information as well, which is a good quality of life improvement.

Overview:

Overall, the team has been working hard on making sure that all of their tasks are getting completed or at least moved to a more relevant time. The team has been getting a lot better at scoping their time and how many hours things are going to take, which is a good change of pace from past sprints. The team has been really motivated to get to work and create content for this game which is awesome to see as the producer. Overall, I would say that this sprint has been successful in terms of content delivery as well as a first real sprint developing the main idea we want to work on for the remainder of the semester.

Sprint 7 Completed Roadmap:

Due in 0 days (10/15/2019)

25 issues (10 closed — 7 open) 79%

Related issues

Task #271419	Josh - Create Simple AI
Task #271419	Josh - Variable Based AI
Task #271420	Josh - Basic AI / Player Interaction
Task #271420	Adam - Model AR / SMG Starting Weapon
Task #271420	Adam - Weapon Research
Task #271420	Josh - Work on TDD
Task #271430	Karl - Gun Design Document
Task #271430	Emmett - Iterate Game Design Document

Time tracking

Estimated time	61.00 hours
Spent time	58.25 hours

Issues by Assigned To

Adam Streeeter	2/3
Austin Roorda	4/5
Emmett Friedrichs	3/3
Josh Grazda	3/4
Karl Lewis	3/4

Sprint 8 Plan - 10/15/19

The eighth week of production has the team moving towards integrating weapons and shooting. The team also wanted to focus on being able to pick up with and interact with items. Game Testing is another key thing that the team wants to do this sprint, testing the new features (gunplay, loading / weapon handling, etc) and analyzing the feedback for them. Modeling more weapons, as well as getting a space for players to test them in important for us to get in since we want players to be able to test these items in game. As a team, we plan to work on the following:

Team Tasks for week of 10/15/19 to 10/22/19:

Weapon Creation and I:

- **Game Testing:**
 - Facilitate Testing Session(s) (**Austin**)
 - Create Test Plan(s) (**Austin**)
 - Analyze Game Testing results (**Karl**)
- **Player Information Collection (Josh)**
 - Developer Dev UI for Gun Data
 - Export Gun Data
 - Gun Data Manager
- **More Guns (Adam)**
 - Assault Rifle
 - Shotgun
 - Snub-nosed Revolver
- **Gun Functionality:**
 - Research Materials for Unreal (**Emmett**)
 - Create Firing Range Map to test guns (**Emmett**)
 - Shooting / Reloading Procedural Animations (**Karl**)
 - Shooting / Reloading Functionality (**Karl**)
 - Shooting / Reloading assistance (**Josh**)
- **Documentation Relating to Step 3:**

- Iterate TDD (**Josh**)
- Systems List + Audio Asset List (**Karl**)
- Update Step 7 + 8 Presentation (**Austin**)
- Target Market Research (**Austin**)
- Sprint Planning / Retrospective (**Austin**)

Overall Expectations / Concerns:

The team has been performing very consistently during the past two sprints, meeting their deliverables fairly consistently and communicating. Emmett is going home on Wednesday, and should be back on Thursday, which takes a day out of his week. I personally am not too concerned about since he has laid out when he plans on working, and it doesn't appear that this is going to affect his productivity too much.

Overall, this sprint is looking to be totally within scope and easily accomplishable. So long as the team commits to using the tools that have been laid out for them, this sprint should be steady and easily accomplished within the timebox. No major concerns.

The **Sprint Goals** for this sprint are as follows:

- Implement gun mechanics (shooting, handling, reloading, etc)
- Create new guns
- Create level to test new guns in
- Refine documentation and prepare to challenge Step 3

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 8 [Edit](#) [Delete](#) [Edit wiki page](#)

Due in 7 days (10/22/2019) 1%

25 issues (0 closed — 25 open)

Related issues

Task #273492	Austin - Create QA Test Plan(s)
Task #273493	Karl - QA Analysis Review
Task #273496	Josh - Gun Data Manager
Task #273497	Josh - Export Gun Data
Task #273499	Josh - Developer User Interface for Gun Data
Task #273502	Josh - Work on Reloading / Shooting
Task #273503	Josh - TDD Iteration
Task #273506	Adam - Snub Revolver

Time tracking

Estimated time	59.75 hours
Spent time	1.50 hour

Issues by Assigned To

Adam Streeter	0/3
Austin Roorda	0/5
Emmett Friedrichs	0/2
Josh Graзда	0/5
Karl Lewis	0/4

Sprint 8 Retrospective - 10/22/19:

The eighth sprint acted more like an extension of the seventh due to Fall Break. Because of this, many of the tasks this sprint were either extensions or slight variations of tasks from the last sprint. This allowed for the team to really focus in on what they were doing and allowed for them to continue working on several high profile tasks. Finalizing the gunplay as well as the interactions / handling was key, as well as starting on the actual level players will be engaging in. Here is a breakdown of the task list:

Team Tasks for week of 10/8/19 to 10/15/19

Production:

- Create QA Plan(s)

- Facilitate QA
- Sprint Planning / Retrospective
- Target Market Research
- Update Presentation
- *Draft Sprint Timeline (ADDED AFTER START)*

Design:

- QA Analysis Review (**Karl**)
- Shooting / Reloading (**Karl**)
- Fix Gun Bugs from QA (**Karl - ADDED AFTER START**)
- Systems List + Audio Asset List (**Karl**)
- Create Firing Range (**Emmett**)
- Research Materials in Unreal (**Emmett**)

Programming:

- Export Gun Data
- Dev Interface for Gun Data
- Gun Data Manager
- Reloading / Shooting (with Karl)
- TDD Iteration

Art:

- Snub Revolver Model
- Shotgun Model
- Assault Rifle Model

This sprint was the last that the team plans on spending with a scene that isn't representative of the final game that we wish to make. The team decided to focus more on implementing all of the assets and functionality needed in order to make the game scene work as intended and iterate on that over a large period of time. This is compared to working for very short periods of time (1 sprint timebox per feature / feature iteration), which the team discussed in the Review Meeting. Here is what was discussed in the Review Meeting:

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● Procedural Animation functioned easily and as intended ● Shooting QA gathered great feedback ● Art Pipeline is very smooth <ul style="list-style-type: none"> ○ Asset Creation was very easy ● Debugging was fast / easy ● Scaling reference went well ● Research went well! (like usual) 	<ul style="list-style-type: none"> ● Oculus Application not working during 10/19/19 QA ● Grabbing was buggy (Vive Controller Issues) ● Issues finding relevant documentation on Unreal ● Materials task wasn't done since the level took more time (and the road tiles were also done) 	<ul style="list-style-type: none"> ● Set up / Repair Oculus application before QA ● Research more ● More work sessions in 194 to help each other more ● Communicate more clearly and frequently

Current Status by Discipline:

The team continues to really work hard, and when it comes to content deliveries and making sure content is making into the build on time they have yet to drop the ball. The team has been working hard to make sure that the milestones that we have laid out are able to be hit (with a few more sprints worth of work), and that the team will be able to work and move forward towards their end goal for the semester. On top of this, the concern was brought up to me that we may be slowing down our pace and that we could fall behind. The team talked it out and developed a new milestone system that will be used to help plan future sprints easier and more clearly, with the content deliveries being laid out explicitly. Here's the breakdown of each discipline this sprint:

Design:

As usual, the shooting and gunplay took center stage alongside the level design tasks. While the team wanted to QA the gunplay and how the plates can interact with the guns, they were also working on the map that players will be driving through. Although there was a lot of tweaking and small changes made the guns, an entire new zone was created for players to use. The Firing Range was created as a weapon testing scene that the development team can use to test new weapons, while also being able to be utilized as the setpiece for the main interface where players will be engaging with their loadouts and the prep-phase. Design really worked hard this sprint and already has made it clear that working on getting the players in the van and shooting bad (good?) guys as a top priority for Sprint 9.

Programming:

The TDD was a key tasks getting taken care of, as it was the last piece of core documentation that was needed for Step 3. After this was taken care of, a lot more research was done on a manager for the Gun Data so that the team can review all shots taken during a play session. This will be extremely useful for debugging later on as QA becomes more frequent. Now that the prep-phase level has been made, Josh will be working with Emmett as he designs the level to attach nodes to it so the van can drive down the path we lay out.

Art:

Adam was hard at work creating the three new weapon models that we wanted to get made. The first was a pump action shotgun, which was changed in design a lot from the concept shown in the first prototype. Next was the snub revolver, which is another iteration from the first prototype. The last (but arguably the coolest) was the assault rifle, which is heavily inspired by the Thompson sub-machine gun (drum magazine and all). This was actually implemented in game and looks amazing. Adam is setting his sights on modeling the player's getaway van, and possibly texturing it if there is time

Production:

Production was responsible for making sure the team kept at maintaining the documentation as well as facilitating the QA session in regards to the grabbing, interactions and shooting. Production was also focused on making sure the team maintained their velocity from previous sprints and keeping everything organized. Since a team member mentioned that the team may be falling behind, a meeting was organized to discuss the possible issue. The needed milestone documentation (presentation, plan and review documents) was also completed.

Overview:

This sprint has helped to keep the team on a good path with good velocity moving forward. Since the team addressed a potential issue and worked towards a solution before it ever became an actual issue - this saved time, effort and energy from being wasted on non-important tasks. Focusing on the Most Viable Products of the project is huge, and to make sure we hit the milestones that we have adopted day estimates, which is another step to help assign priority to a task. This means that when users estimate a task, it's not just

in how many hours it will take, but when those hours will be logged. Critical tasks take priority (anything needed before a QA test, etc), with other tasks being reserved for a later date in the sprint. Overall, the team has really gotten invested in this project and it's really showing. Making sure that tasks are completed and that relevant work is being done is still key, but the team has improved a lot since the beginning of the semester.

Sprint 8 Completed Roadmap:



Sprint 9 Plan - 10/22/19:

The ninth week of production has the team integrating all major features into the game, and making it so the core game loop is completed and able to be played in the game. This includes the shooting and weapon interactions, basic map, and a basic player vehicle (van). All of these mechanics are required for the game to be considered anywhere near a playable state for the Mid-Mortem presentations and game demos. On top of this, all of these new mechanics and features needs to be tested in order to ensure it works properly and to see if anything needs to change. As a team, we plan to work on the following:

Team Tasks for week of 10/22/19 to 10/29/19:

Production:

- Create QA Plan
- Facilitate QA
- Review QA Results
- Step 3 Presentation

Design:

- Gun Bolt Interactions (**Karl**)
- Reloading Sequence Highlights (**Karl**)
- Audio Implementation Start (**Karl**)
- Procedural Recoil Animations (**Karl**)
- Improve enemy hit feedback (**Karl**)
- Timeline Breakdown (**Karl + Emmett**)
- Export Reference Van (**Emmett**)
- Create Level Layout (**Emmett**)
- Create Level Plan Diagram (**Emmett**)
- Vision Statement Update (**Emmett**)
- Item Spreadsheet (**Emmett**)

Programming:

- Create Navigation point actor for levels

- Implement van movement to points
- Implement van movement navigator list selector
- Implement gun class to hold animation for guns
- Create gun types derived from gun class for each weapon
- Create ammo type class and component for ammo list
- Create information call back for interactions with player and AI

Art:

- Van Modeling
- Sculpting Van
- Texture / UV Van
- Art Doc Finalization
- Art Asset List

Overall Expectations / Concerns:

This sprint has a lot of what actually makes the game being implemented. While the team is confident that they can deliver on all of the tasks that have been made, it should be noted that this sprint will be a bit heavier than the other ones in terms of hours required. The team has made a lot of progress in terms of how preemptively they complete tasks, and are now working earlier in the week than later which is a good sign. On top of this, the team has committed to a new system to identify high priority tasks and commit to them earlier, which should help to increase the frequency of content deliveries as well as keep the content pipeline active. A major issue that could occur is if high priority tasks aren't completed on time. If the team begins to miss milestones and content deliveries, then the final product will suffer and wouldn't be the vertical slice needed to move forward.

Overall, I am confident that the team can deliver on the tasks that they have assigned themselves. There are no real issues, as long as the team commits to their timeline and can deliver on what they said they would.

The **Sprint Goals** for this sprint are as follows:

- Complete Gun Interactions (Shooting, Reloading, Grabbing)
- Create 1st pass level
- Create Van
- Merge all assets to create 'complete' game loop with all assets

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 9

Due in 7 days (10/29/2019)

36 issues (1 closed — 35 open) 3%

Related issues

- Task #276361 Emmett - Create Level Layout
- Task #276381 Karl - Gun Bolt Interactions
- Task #276382 Karl - Procedural Recoil Animations
- Task #276383 Karl, Emmett - Timeline breakdown
- Task #276386 Karl - Reloading Sequence Highlights
- Task #276389 Karl - Start Implementing Audio
- Task #276391 Karl - Better enemy hit feedback
- Task #276394 Emmett Export Reference Van

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Time tracking

	Estimated time	Spent time
	65.25 hours	2.00 hours

Issues by Assigned To

Adam Streeter	1/5
Austin Roorda	0/4
Emmett Friedrichs	0/5
Josh Grazda	0/7
Karl Lewis	0/6

Sprint 9 Retrospective - 10/29/19:

The ninth sprint had the team working on getting the player into the back of the moving van, and having that van move with the player inside. During testing, the team wanted to make sure that players were able to look out of the back of the van without getting motion sick, and were able to hit the targets that were on the road.

Here is a breakdown of the task list:

Team Tasks for week of 10/22/19 to 10/29/19

Production:

- Create QA Plan + Survey
- Facilitate QA
- Review QA Feedback
- Finalize Step 3 Documentation
- ~~Step 3 Presentation~~ **Challenging Step Next Week**

Design:

Emmett

- Export Reference Van
- Create Level Layout
- Create Level Plan Diagram
- Item Spreadsheet
- Vision Statement Update

Karl

- Reloading sequence highlights
- Start implementing audio
- Gun Bug Fixing
- Timeline Breakdown
- Gun Bolt Interactions
- Procedural Recoil Animations
- Improve enemy hit feedback

Programming:

- Create navigation point actor for levels
- Implement van movement to points
- Implement navigation list selector
- Implement gun class to hold information for guns
- Create ammo type class and component for guns ammo list
- Create information call back for interactions with player and AI
- Create gun types derived from gun class for each weapon

Art:

- Van Modeling
- Sculpting Van
- Texturing / UVign Van
- Finalize Art Docs

- Art Asset List (1st draft)

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> • Pacing of sprint was consistent • QA Testing + Results were good • Recoil successfully implemented • Van + motion in and working • Sprint Deliverables Document in and working as intended 	<ul style="list-style-type: none"> • Parenting objects gave some issues w / physics and interactability • Other class work ate into development time • Van file was deleted in a computer crash :(<ul style="list-style-type: none"> • Leverage work sessions more (less remote work) • Save files more often

Current Status by Discipline:

Design:

The design team had an awesome push this week, implementing a lot of the core features and functionality that will be needed in order to challenge Mid-Mortems. One of the main features that the development team wanted to include within this sprint was the motion of the van. Being one of the most important elements of gameplay, getting that system in and testing its functionality was a huge benefit for this sprint.

On top of that, the guns reloading and bolting animations were implemented this week. Although Karl faced a lot of issues with this and spent more time than initially thought on bug fixes, the content delivery on his front was still sizable and critical to moving forward. Making sure the grabbing, bolt pulling, loading and unloading of weapons worked as intended is the most critical element to our game. I'm glad that these tasks and those mentioned above are in capable hands.

Programming:

In terms of Programming, lots of back end work was put in to make sure that the van actually moved in the map that Emmett made, and that it wasn't disturbing or distracting to the player. All of the prior research that was done learning about how Unreal used mapping tools and the spline drawing paid off, leading to a seamless integration of the van and it's movement path being easily implemented. A bonus is that all of this architecture is iterable and easily adaptable for other purposes, such as AI cars and ambient vehicles that will help to make the city feel alive.

Art:

Art also had a good push this week, turning out the Van in a pretty decent amount of time. The only issue that arose from this was that Adam's computer crashed, causing the model and all of the work that he made on it to fade away into the ether. Even though this is a major setback, we have contingency plans in

place to account for this, and can attempt to recover lost file. If not, we can re-assign the task to him and prioritize a lower-fidelity version of the model and iterate upon it in the future.

Production:

In terms of production, this sprint went very well. First off, the QA testing of the van motion and player's reactions to that was very promising. The QA Analysis went well as well, with many of the players being able to interact with weapons and look out the back of the moving van no problem. This was initially a major concern with the game, but now that we've accomplished it isn't a concern. The team was initially pushing towards challenging the third step on this coming Tuesday (10/29/19), but decided against it to give a little more polish and attention to some documentation and create a comprehensive presentation. This extra time will give the team a better chance to create a comprehensive presentation while at the same time ensuring the team has all of the intended QA sessions that are needed to challenge the step. The team also decided to continue using the Remaining Production Timeline documentation that was drafted last sprint. This document outlines several key goals for each sprint (laid out in sprint planning) and assigns due dates to them in an easier to read format than what is provided on pineapple. More for use by production as a quick reference guide to what action items and key tasks need to be completed, the document was instrumental in keeping the team accountable for their tasks and on track to complete them.

The team had a session planned on the Monday of Fall Break, which ended up putting the team a week behind in terms of their QA sessions. Rather than just testing the same build twice in one week, the team has opted to testing once per week with a new build that has incorporated new or improved features.

Overview:

Overall, this week was really productive for the team. Not only was the van motion able to be integrated (and fairly easily at that) - the motion itself caused little to no issues with testers, which was one of the largest concerns we had when developing this concept into the project that it is currently. The bolting, grabbing and general weapon interactions also went well, with issues and kinks being ironed out through Karl's incredible work ethic. Josh was able to easily implement the van movement inside Emmett's level, which was an added bonus. Even though Adam's van was lost, the screenshots of the model that were shown were enough for us to assert that he was working in the right direction. This sprint was mostly positive for the team, with a lot of high-priority tasks being completed on time and with minimal issues.

Sprint 9 Completed Roadmap:



Sprint 10 Plan - 10/29/19

The tenth week of production has the team working on many of the core systems that are needed to complete the feel of our game loop. The AI chasing and reactivity is being added this week, with updates to the weapons system (bolt pulling, reloading, etc) and the map being implemented. The team also plans on

challenging the Third Step, which will put us in a good place for the Mid-Mortem presentations. As a team, we plan to work on the following:

Team Tasks for week of 10/22/19 to 10/29/19:

Production:

- Finalize Step 3 Documentation
- Implement all Step 3 docs into the Wiki
- QA Testing Plan + Survey
- QA Testing Analysis
- Step 3 Presentation

Design:

- Finalize Values Statement (**Emmett**)
- Implement basic points system (**Emmett**)
- Design / Implement points bonuses (**Emmett**)
- Greyboxing level outskirts w/ terrain map (**Emmett**)
- Extend time length of level (**Emmett**)
- Create Sounds (**Karl**)
- Implement Sounds (**Karl**)
- Damage Component (**Karl**)

Programming:

- Enemy Car Spawn
- Damage Component w/ Karl
- Enemy Car Movement + Following Player
- Enemy Car Behaviour tree

Art:

- Desert Environment Art
- Texture for Level Terrain
- Sky Dome for Level

Overall Expectations / Concerns:

This sprint has a lot of what actually makes the game being implemented, much like last week. Given the pace at which the team has been working and the successes we have had during this phase of the development cycle, I'm confident in their abilities to deliver on what has been assigned and what we need to have done to challenge the Third Step. Some concerns that have emerged is just the timeline towards the end point of the development for this semester. The team effectively has a month left to work on the project, and while I believe that we are in a good place - there is always more work to be done and we can't get overconfident with the build we have. By making sure we know what we need and want to have in game is key, and developing a timeline has helped us substantially. Overall, I am confident that the team can deliver on the tasks that they have assigned themselves. There are no real issues, as long as the team commits to their timeline and can deliver on what they said they would.

The **Sprint Goals** for this sprint are as follows:

- Enemy AI (baseline) is implemented

- Level is iterated to be more like the final level we want for Mid-Mortems
- Audio Implemented
- Step 3 Docs are complete
 - Challenge Step 3

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 10 Edit Delete Edit wiki

Due in 5 days (11/05/2019)

28 issues (0 closed — 28 open) 3%

Related issues

- Task #277705 Finalize + Implement all Step 3 Documentation into the Wiki
- Task #277713 Finalize Values Statement
- Task #277715 QA Plan + Survey
- Task #277719 QA Testing Analysis (11/2/19)
- Task #277725 Step 3 Presentation
- Task #277735 Greyboxing Level Outskirts w/ Terrain Map
- Task #277738 Extend length of the Level
- Task #277742 Implement basic Points System

Time tracking

	Estimated time	Spent time
	57.75 h	6.00 h

Issues by Assigned To

Adam Streeter	0/3
Austin Roorda	0/5
Emmett Friedrichs	0/5
Josh Grazda	0/5
Karl Lewis	0/3

Sprint 10 Retrospective - 11/5/19

The tenth sprint had the team working on getting everything together for the Step 3 Challenge, as well as working to finally complete the game loop. Getting key features such as the points system, as well as iterating on the level design to be more representative of the final product we want to present were key action items this week. Also making sure the aesthetic direction of the game was aligned with the team's vision. Overall, this sprint had a lot of good work being done to the build.

Here is a breakdown of the task list:

Team Tasks for week of 10/29/19 to 11/5/19

Production:

- Finalize Step 3 Documentation
- Implement all Step 3 docs into the Wiki
- QA Testing Plan + Survey
- QA Testing Analysis
- Step 3 Presentation

Design:

- Finalize Values Statement (**Emmett**)
- Implement basic points system (**Emmett**)
- Design / Implement points bonuses (**Emmett**)
- Greyboxing level outskirts w/ terrain map (**Emmett**)
- Extend time length of level (**Emmett**)
- Create Sounds (**Karl**)
- Implement Sounds (**Karl**)
- Damage Component (**Karl**)

Programming:

- Enemy Car Spawn
- Damage Component w/ Karl

- Enemy Car Movement + Following Player
- Enemy Car Behaviour tree

Art:

- Desert Environment Art
- Texture for Level Terrain
- Sky Dome for Level

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> ● UI Ammo Pop-Ups were easy to create ● QA and the QA Feedback ● Level Updates ● Asset Creation / Implementation 	<ul style="list-style-type: none"> ● Unreal + Nav Mesh + AI + Vehicle ● Unreal Base Lighting Issues ● Grabbing Issues still Persist ● Unreal UI Implementation ● Wheeled Vehicles ● Spline Function 	<ul style="list-style-type: none"> ● UI Visuals can get more attention to make them more functional ● Scoring Iteration for better game feel ● AI "IQ" can be improved ●

Current Status by Discipline:

Design:

The design team had a good run this week, with a lot of smaller, but very important features getting prototyped, tested and implemented into the build. The level's design is starting to come together and represent something close to what the final level may look like, and has Adam's art assets strewn throughout it, helping to fit the level into the scene more. On a more player-facing side, User Feedback was a huge priority for this week with a points system being introduced, damage pop-ups, new sounds to make the weapons feel good to hold, as well as the damage component (which currently pools directly into a players score). In terms of the game loop, the game is almost complete. There is (finally!) a start screen, and screen transitions from scene to scene. Once the map is finished, the game is rebooted and the player starts back at the title screen.

The design team still has a lot to work on though, with some new issues being presented through the implementation of these new features. Grabbing is still an issue, and need to be rectified as soon as possible. The UI is also a bit buggy and needs to be optimized for sight at a distance. In terms of the level, the layout is good but the lighting needs to be built in order to fix the framerate issues that occur about halfway through the level. Not a bad start, and nothing the team can't handle so long as the team manages their time well and sets priority on these fixes + new tasks.

Programming:

Programming also had a good push this week, with a lot of the back-end systems for the car coming into play this sprint. Having the AI vehicles that chase the player (ideally, with goons in them) is a huge aspect of our game loop, so having this in the game makes it feel a lot more completed. Work was also done on the damage component (so enemies could be damaged, and the UI would pop up when an enemy was shot). Outside of this, a lot of the work this sprint was done on the Enemy Car AI Behavior tree(s) as well as making sure their movement was functional.

Although some smaller bugs and glitches occurred with the AI Car, the features that were worked on this sprint are in a good spot currently, outside of some small tweaks that are needed to optimize them for a 'real' gameplay scenario.

Art:

This week, Art was busy creating assets for the level. Working to make sure the environment fit the theme and palate that was laid out in earlier sprints, the assets created worked really well and were exactly what we were looking for. The texture for the ground fits the desert theme, the sky dome helps differentiate the environment from the horizon and the sky, while the environment art (street signs, cacti, lamp posts, lights, etc) all match the aesthetic direction that the team has agreed upon.

There was an issues that arose with scaling, but after a quick conversation it was rectified and shouldn't happen again so long as all parties involved are communicating with each other and able to keep all assets fit to the predetermined scale that has been set by the scaling of the level.

Production:

In terms of Production, this sprint went well. The QA Session on Saturday was met with a lot of return testers who were excited to play our game - and great results on the test proving the strength of the concept as well as its functionality. The QA Analysis went well, with many players giving positive feedback in regards to how the game felt to control and comprehension of it's core systems (grabbing, loading a weapon, shooting and reloading).

This sprint also had the team working towards challenging the Third Step, which requires a lot of documentation. Luckily, the team has been extremely proactive and prepared for this over the last two sprints, ensuring that all needed documentation was completed. It is now implemented within the team's wiki under its own section. No conflicts arose, but some issues with the build towards the end of the sprint frustrated some of the team. Luckily, there was no interpersonal conflict. And the issues were mostly rectified. Next sprint will focus on fixing those bugs, as well as completing a first pass of the game loop.

Overview:

Overall, this sprint was a success for the team - as all of the main features that the team wanted to implement into the game build were done so with (relative) ease. Although there were some issues with certain features that were added into the build (UI Pop-Up Issues, Lighting affecting framerate, etc) the team was able to keep their head on straight and work through the majority of them, with those left having plans made to fix them.

This sprint had helped to establish a basic, core game loop for the game and is easily iterable for future features. The next sprint has plans to complete this game loop, and expand on the features that were implemented this sprint. There are also bugs that were introduced with these features that need to be fixed. This upcoming sprint looks to both fix those bugs while introducing some of the final features to be included before the end of the semester and the Mid-Mortem presentation / demo. While we did go over by nearly 15hrs this week, it's not due to poor planning. Many of the hours logged after the scheduled hours were spontaneous bug fixes, and adding new content. This push from all team members has greatly improved the fidelity of the game and made for a better and more complete sprint than has been done in recent memory. Great job to the team this week!

Sprint 10 Completed Roadmap:



Sprint 11 Plan - 11/5/19:

The eleventh sprint, the team is working to get in the last major piece of the game loop before it's closed and the polish phase begins. The team is working towards several key features, such as sizing up the level to fit the scale of the timeline, as well as get the AI functional in terms of chasing, retaliation and spawning. We are also looking into getting a lot of the Art in this week that was made last sprint.

As a team, we plan to work on the following:

Team Tasks for week of 10/22/19 to 10/29/19:

Production:

- Basic V.O Storyboard Script
- Sprint Planning + Retrospective Meetings
- QA Plan, Facilitate QA + QA Analysis

Design:

- AI Shooting at the Player (**Karl**)
- Results Screen (**Karl**)
- Create / Import Game Sounds (**Karl**)
- Implement Audio (**Karl**)
- Final Level Design (**Emmett**)
- Trailer Storyboard - Final (**Emmett**)
- Level Lighting Fixes / Optimization (**Emmett**)
- Create Larger Level (**Emmett**)

Programming:

- Debug / Bug Fixes
- Van Node Data
- AI Director Iteration
- Collision Component

Art:

- VFX - Cash Particles
- VFX - Muzzle Flash
- Police Car Textures
- Texture Gun(s)
- Furnish Player Van
- Optimize Lighting

Overall Expectations / Concerns:

This sprint has a lot of work that needs to be done before the team can move on and create / implement new content into the game. This is a risk for the team since we are starting to run out of time this semester and still need to complete the game loop as soon as possible. Despite these inherent risks, the team is confident in their abilities to get their work done and has several work sessions scheduled to get this work done. Compared to the last few weeks, the hour count is a bit less due to the work-load for other developer is starting to increase due to their workload in other classes. Despite this, the team is more than willing to put in the extra time (when and where it is needed) in order to get things done on time.

The team has never really dropped the ball during the course of the entire semester - so I am confident in their abilities to deliver the content that is needed in order to make sure that our game is viable for Mid-Mortems and future development.

The **Sprint Goals** for this sprint are as follows:

- Enemy AI (attacking) is implemented
- Level is Iterated to be more like the final level we want for Mid-Mortems
- Audio Implemented

Sprint Plan:

Here is the sprint plan for this upcoming sprint:

Sprint 11

Due in 7 days (11/12/2019) 0%

30 issues (0 closed — 30 open)

Related issues

- Task #279570: Basic V.O Script for Storyboard
- Task #279576: Sprint Planning (Meeting + Documentation)
- Task #279581: Sprint Retrospective (Meeting + Documentation)
- Task #279584: QA Plan (Written / Submitted)
- Task #279586: Facilitate QA Session - 11/9/19
- Task #279587: QA Analysis - 11/9/19
- Task #279589: Create / Import Game Sounds
- Task #279590: Implement Audio

Time tracking

	Estimated time	Spent time
	58.25 hours	1.25 hours

Issues by Assigned To

Adam Streeter	0/6
Austin Roorda	0/6
Emmett Friedrichs	0/4
Josh Grazda	0/4
Karl Lewis	0/4

Sprint 11 Retrospective - 11/12/19:

The eleventh sprint had the team working on finalizing the core elements of the game loop and getting the needed gameplay elements implemented into the build. Most importantly, the AI chasing as well as the (more or less) finalized level design. Making sure that the team has ample time to get the last necessary features into the build before the feature lock (Sprint 13 Start). Overall, the sprint went well and the team made exceptional progress in some key areas despite some issues that will be mentioned below.

Here is a breakdown of the task list:

Team Tasks for week of 11/5/19 to 11/12/19

Production:

- Sprint Planning (Meeting + Documentation)
- Sprint Retrospective (Meeting + Documentation)
- Basic V.O Script for Storyboard + Recording(s)
- 11/11/19 QA Plan (Written / Submitted)
- Facilitate 11/11 QA Session
- 11/11 QA Analysis

Design:

- Create / Import Sounds (**Karl**)
- Implement Audio (**Karl**)
- Game Loop Finalized (**Karl**)
- AI Shooting at Player (**Karl**)
- Trailer Storyboard (Final) (**Emmett**)
- Create Larger Level (**Emmett**)
- Lighting / Level Fixes (**Emmett**)
- Final Level Diagram (**Emmett**)
- Create Firing Range / Base (**Emmett**)

Programming:

- Debug / Bug Fixes
- AI Director Iteration
- Collision Component
- Van Node Data (if extra time)

Art:

- VFX - Cash Particles
- VFX - Muzzle Flash
- Optimize Lighting
- Furnish Player Van
- Texture Gun(s)
- Police Car Texture

Sprint Retrospective:

Positives:	Negatives:	Improvements:
<ul style="list-style-type: none"> • Audio Creating / Implementation was easy <ul style="list-style-type: none"> ◦ Sound Effects ◦ Voice Over • QA went well and a lot of good feedback was gathered • Established remaining sprint priority, had good discussion w/ team in regards to scope 	<ul style="list-style-type: none"> • Not all tasks were completed • AI Issues • Other classes / time commitments • Road Collisions causing issues • Tracer round issues • Communication 	<ul style="list-style-type: none"> • Additional frontloading of course work before other events (MIGS) • Take more frequent breaks to clear our head(s) • Ask for help more / collaborate with each other IRL more (Daily Scrum mandatory, IRL work sessions more frequently)

Current Status by Discipline:**Design:**

This week had a lot of high priority content needing delivery from the Design side of the project. The game loop had yet to be completed, as well as several of our most important features (Level, AI, AI Attacking, etc). In terms of design, the key features that were expanded upon was the level (increasing its size, set dressing, etc), as well as the importing of Adam's assets to start in set-dressing the level. The game loop was finalized as well, and although in an early state has clearly defined and scoped out plans to be finalized and implemented within the remaining timeline of the semester.

Due to a solid push from design, most of the tasks were completed, although there were some outliers. This was mostly due to poor communication and time management - which was mentioned at the Sprint Review. Despite this, the team still did well and got a large portion of the needed content into the game that needed to be there.

Programming:

Programming this week took a major hit on hours due to our programmer running Extra Life this weekend for the duration of the event (48hrs). On top of this, they've been dealing with other class work on top of this course load, causing for many of the tasks to be left until the last minute. This set the team back in some

ways, such as only being able to test with 1 vehicle with enemies inside it, rather than the intended 'swarm' of cars (multiple cars engaging the player, etc).

This is not to say that the programming team hasn't been able to contribute - as they were able to fix our repo after it was broken due to a poorly timed push and pull request. Next sprint should have everything completed from them, so long as the tasks for capstone are given priority.

Art:

The art team had no real issues this week, outside of missing a few meetings due to other obligations. Despite this, all tasks were able to be completed and remote work has worked well in order to collaborate on assets or to turnaround assets that needed a rework. With the end of the semester coming fast, the art team plans on doing a final art pass this week before the final polish sprint the week after.

Production:

Production took a more unconventional route this sprint, spending time writing voice dialogue for the game. These voice lines were then recorded by the design team and implemented into the build to help with player immersion as well as to help call out key events to the player (turns, level progress, etc). Outside of this, QA Testing was the remainder of the sprint, with running testing as well as the analysis taking up the remainder of the time. Some more forward thinking planning was done in order to address the above mentioned issue in regards to time management / priority of the project. The team had a good discussion about the expectation of the project, from each other as well as what the team needs in order to get everything they want in. This also came with a good discussion about priority of tasks and some pre-planning of the sprint (general high level overview) just so we are all on the same page before the new sprint begins.

Although not adhering to scrum traditionally - this pre-planning session helped a lot to get the team thinking about what is left and the direction they need to move.

Overview:

I believe that the team has been hitting a good pace through the past few weeks. However, with the recurring issues with finishing the game loop - the team absolutely has to finish everything else that is needed for the game by this week or else the game won't be in a good state to demo for mid-mortems. This sprint is the final feature implementation sprint of this semester, as the next sprint after that (Sprint 13) is a 'polish' and bug fixing sprint, with no new features making it into the build. So long as the team can put their noses to the grindstone and get everything that is needed for this sprint done (and functional), we should be able to hit out deliverables and not need to leech into Sprint 13 to complete our core functionality.

Another important thing that happened this sprint was the discussion that we had in regards to how we budget and spend our time. I made sure to level with the team and explain to them our deadlines, and that we need to prioritize capstone over other things if we want to make it happen. I'm not a huge fan of these sorts of 'serious talks', but it's something that needed to be done to explain to the team what I'm seeing and it's adverse effects towards our productivity.

I've made sure to also draft up measures to increase our collaboration with each other as well - such as a daily scrum being done through a voice call (previously used text updates since it was faster) - as well as pushing for more longform work sessions. Now is the time to really buckle down and get this game 'done', at least in a state for a vertical slice. I believe the team can do it, so long as they can commit to the project and not other obligations / manage their time in a reasonable way. Overall, I'm not worried so long as the team takes me seriously and believes in the urgency of the situation.

Sprint 11 Completed Roadmap:



Sprint 12 Plan- 11/12/19:

The twelfth sprint, the team is working to finalize the game loop before it's closed and the polish phase begins. The team is looking to integrate a lot of new features and mechanics that will help to close the game loop, and improve the QoL of the game. The team is mostly just integrating new assets and implementing new changes to systems that already exist.

As a team, we plan to work on the following:

Team Tasks for week of 11/12/19 to 11/19/19:

Production:

- Work on Storyboard Trailer w/ Team
- Sprint Meetings (Planning, Retrospective / Review)
- QA Documentation
- Facilitate QA
- QA Analysis
- Start Mid-Mortem Presentation

Design:

- Work on Storyboard Trailer w/ Team **(Karl + Emmett)**
- Upgrades / Purchases Screen **(Karl)**
- Scoreboard System **(Karl)**
- Gaze Teleport System **(Karl)**
- New Range / Player Hideout **(Karl)**
- Tutorial Table **(Karl)**
- Redo Road(s) **(Emmett)**
- Finish Road Placements **(Emmett)**
- New Node Paths for Van **(Emmett)**
- 'New' Cash Systems / Score System **(Emmett)**

Programming:

- Work on Storyboard Trailer w/ Team
- Debugging All AI Systems
- AI Director Adjustments
- Multi-Car Collisions
- Waypoint Adjustments
- Throttle Adjustments
- Steering Adjustments
- Programming Documentation

Art:

- Work on Storyboard Trailer w/ Team
- Materials for Safehouse / Outside
- Set Dressing w/ Created Assets
- Safehouse Textures / Simple Props
- Create Building Meshes

Overall Expectations / Concerns:

This sprint has a lot of content deliveries needed in order to finish out the game loop for *Cash Force*. Although the team has planned out and knows what is needed, there is still a lot of content that is needed in order for the build to be considered 'feature complete' for this vertical slice. The team has committed to each deliverable and realizes that this sprint will be a lot more work than the others in the past, but has made a commitment to the project.

However, this is not to say that this sprint is going to be crunchtime with no management. Production has taken precautions to ensure that there is time for all team members to complete their tasks, and has made sure that the team has estimated their tasks and has established deliverable dates for each task - helping to break down and estimate when content will be completed and integrated into the build. So long as the team can meet the deadlines that they have set for themselves and can manage their time efficiently - all of the tasks should be completed and the game loop should be finalized.

The **Sprint Goals** for this sprint are as follows:

- Finalize Game Loop
 - Hideout Level Functional
 - Main Level Functional w/ Enemy Spawning
- Final AI Implementation
 - Car Collision
 - Car Turning
 - AI Behavior
- All Art Implemented
- Trailer Storyboarded / Started
- Mid-Mortem Presentation Started

Sprint Plan:

Here is the sprint plan for this upcoming sprint

Sprint 12



Sprint 12 Retrospective - 11/19/19:

The twelfth sprint had the team working on finalizing the gameplay loop features that were started last sprint. On top of this, starting the final passes for Level Design / Set Dressing, Systems Design, AI Implementation and Art were key to this sprint. Unfortunately, Emmett and Josh went to MEGA / MIGS over this weekend and were unable to work past Saturday. The lack of completed task has slightly set the team back, but thanks to an incredible push from Karl most of those features were completed. While not ideal, he was willing to volunteer the extra time and put in the hours to get it done. Overall, the sprint was not ideal in

terms of work being completed event - but the majority of the features that *needed* to be done were completed. Here is a breakdown of the task list:

Team Tasks for week of 11/12/19 to 11/19/19

Production:

- Work on Storyboard Trailer w/ Team
- Sprint Meetings (Planning, Retrospective / Review)
- QA Documentation
- Facilitate QA
- QA Analysis
- Start Mid-Mortem Presentation

Design:

- Work on Storyboard Trailer w/ Team (**Karl + Emmett**)
- Upgrades / Purchases Screen (**Karl**)
- Scoreboard System (**Karl**)
- Gaze Teleport System (**Karl**)
- New Range / Player Hideout (**Karl**)
- Tutorial Table (**Karl**)
- Redo Road(s) (**Emmett**)
- Finish Road Placements (**Emmett**)
- New Node Paths for Van (**Emmett**)
- 'New' Cash Systems / Score System (**Emmett**)

Programming:

- Work on Storyboard Trailer w/ Team
- Debugging All AI Systems
- AI Director Adjustments
- Multi-Car Collisions
- Waypoint Adjustments
- Throttle Adjustments
- Steering Adjustments
- Programming Documentation

Art:

- Work on Storyboard Trailer w/ Team
- Materials for Safehouse / Outside
- Set Dressing w/ Created Assets
- Safehouse Textures / Simple Props
- Create Building Meshes

Sprint Retrospective:

Positives:	Negatives:	Improvements:
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<ul style="list-style-type: none"> ● Nearly all features are in ● Art pass with assets ● QA + QA Analysis 	<ul style="list-style-type: none"> ● Other Time Commitments <ul style="list-style-type: none"> ○ MIGS ○ Not being able to remote into PC's while gone ● The Play ● AI / AI Bugs 	<ul style="list-style-type: none"> ● Prioritize time better (Capstone priority?) ● Complete tasks when you commit to them by a specific date
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Current Status by Discipline:

Design:

In terms of the design for *Cash Force*, the actual game loop is finally completed and fully functional. All the core features that are needed for the gameplay are in with the exception of the buying system for the guns, which is complete (just not in the current build). The Design team had a good push this week, with a lot of the most important tasks being completed.

However, due to both Josh and Emmett heading to MIGS and then not being able to remote into their PCs, Karl was flying solo from Saturday onwards with no outside assistance from the other developers. This led him to dropping 35+ hours this week, and implementing nearly all of the major gameplay systems that were needed to complete the gameplay loop by himself. This isn't to say that the other developers were of no help, as they made a lot of progress over the first four days of the sprint (Tuesday to Friday). The timing of MIGS as well as the compounded issue of the lack of Internet at their venue made for a tough week for Karl. Without his push, the game would be in a much more worrisome state - and the team has expressed *extreme* gratitude to his commitment. Emmett is going to have to work harder this week to make up for the lost time. It's more than achievable, so long as he's willing to commit to the project.

Programming:

Much like the above listed situation, Josh was able to start all of his tasks and get a good amount of time invested into them, but was still unable to complete many of his tasks due to MIGS. Ideally, all of these tasks can be completed relatively easily and aren't a massive detriment to the team's progress, but still need to be completed. Since Josh was unable to remote into his PC either, he wasn't able to work while he's been away like he anticipated he would have been able to do. This next week is going to be a lot of work for Josh since he has to make up for lost time, plus work with Karl on the final polish needed for the build. It's achievable, so long as he's willing to commit to the project.

Art:

Despite having his own time commitments with the play and RA work, Adam has been able to deliver on all needed tasks this sprint. His first Art Pass helped to dress the set and make the world more compelling, and also got the majority of the assets that were made into the level(s) - being the safehouse as well as the main game scene. Adam also helped work on the Trailer Storyboard and planning of the presentation format, so this week was a little more varied for Adam than it has been recently. Overall, Adam was able to get everything done that he needed to and then some, so the sprint went well for him and benefitted the overall product greatly.

Production:

For production this week, the sprint comprised of housekeeping before the final sprint. This includes starting the plan for the presentation (basic formatting, style, theme, etc), as well as a trailer storyboard draft, and the usual documentation. This includes the Sprint Plan / Retrospective documents, QA Testing Docs + Facilitating the session. This sprint was different, as I was helping Karl over the weekend test in VR and

making some UI Assets while Adam was doing the play. I also wrote and recorded more voice over lines that were needed to help immerse the player. While some of this sprint was out of my element as a producer, I welcomed the change of pace and being able to help Karl when I could.

Overview:

Overall, this sprint was less than ideal for some reasons, but ended on a positive note. Having two of our developers who are assigned to crucial features leave and then become unable to work on what they needed to complete made for a stressful and crunch sprint for Karl. Although unintentional, it still happened. The positive things that can be taken from the situation is that despite the crunching, all of the core features are in the game now, and the gameplay loop is closed. All that is left is polish and the refinement of systems, which can be done much easier with all hands on deck.

The tasks that were incomplete by Josh and Emmett will roll over into Sprint 13, and should be done before the middle of the week (Wednesday / Thursday). Outside of that, the only other work that needs to be done is final optimizations which is partially involved in the tasks already mentioned.

Sprint 12 Completed Roadmap:

Sprint 12 [Edit](#) [Delete](#) [Edit wiki p](#)

Due in 0 days (11/19/2019) 75%

38 issues (24 closed — 14 open)

Related issues

- [Task #282308](#) Start Mid-Mortem Presentation
- [Task #282309](#) Draft QA Documentation (Plan, Survey)
- [Task #282310](#) QA Analysis
- [Task #282311](#) Work on Trailer Storyboard w/ Team
- [Task #282317](#) Work on Trailer Storyboard w/ Team
- [Task #282309](#) Work on Trailer Storyboard w/ Team
- [Task #282310](#) Work on Trailer Storyboard w/ Team
- [Task #282312](#) Work on Trailer Storyboard w/ Team

Time tracking

	Estimated time	Spent time
	82.75 hours	87.00 hours

Issues by

Adam Streeter	5/5
Austin Roorda	7/7
Emmett Friedrichs	2/6
Josh Grazda	1/8
Karl Lewis	7/7