**Game Design Studio Two**

**“Mowdown”**

**Team Four**

Report for Sprint Two

24 / AUG / 2015 – 06 / SEP / 2015



**Team Members:**

Matthew Carver –12028130

The most honoured Master of the Scrum,SirDeinyon Davies – 11688025

Robert McClelland –11743693

Dinh Bao Anh (Brendan) Vo – 11437237

Jesse Walker – 11729631

**OVERVIEW**

*Mowdown* is a ‘Demolition Derby’ or ‘Battle Bots’ style videogame, created by (in ascending alphanumeric order) Matthew Carver, Deinyon Davies, Robert McClelland, Dinh Bao Ahn (Brendan) Vo, and Jesse Walker.

Players customize one of several domestic **lawnmowers** by means of attaching defence appliances and weapons that have been unlocked and purchased by the player by means of in-game experience points and currency. Players compete against at least one autonomous opponent – a strategically formed battle-mower – as if both are controlled via Remote Control (R.C.).

Sprint Two sports several new features, bug fixes and enhancements, including (but not limited to): an enhanced menu User Interface, minimap prototype, framebuffer fragment shader effects (Ambient Occlusion, colour correction, etc), game analytics, a new level design, improved damage mechanics, attachments including a shield and a flipper, an obstacle-avoidance camera, attachment socketing system, a new lawnmower design, a “strafe booster” mesh and somewhat improved Artificial Intelligence.

**SPRINT PLAN AND EXECUTION**

Sprint Two of Project Mowdown set out to implement fifteen discrete new features including (but not limited to): bug-fixes, level design, improved Artificial Intelligence, improved User Interface, Game Analytics, vehicle modelling and vehicle attachment modelling and implementation. These fifteen task items were identified in the initial Sprint Meeting.

As of the preliminary Sprint Meeting, the Sprint Log proposed a **total** **estimated** investment of **2,510 minutes** – 1,670 minutes greater than the estimated investment for Sprint One - with an estimated **median** task duration of **130 minutes**. Having completed the sprint backlog, it was discussed that the team had likely neglected several critical tasks, and as such, the backlog would soon be expanded. The sprint would optimistically be completed in 1,550 minutes.

During the execution of the scrum, 9 critical and prerequisite tasks became apparent, which were completed and appended to the Sprint Log when necessary. The auxiliary tasks assumed an additional estimated duration of 1,100 minutes, expanding the **total** **estimated** sprint workload to **3,660** **minutes** (61 hours).

At Sprint finalisation, the Sprint Log totalled 24 expected and unexpected tasks. The team observed a **total** **logged** **workload** of **1,365 minutes** (22.75 hours). 8 tasks stood incomplete or uninitiated at the time of sprint closure.

**PLAYTEST NOTES**

Test 1 - 4 Conducted by Robert McClelland​ 2/09/2015

Commit Version: “Super Boring UI for Color Selection”

**Anthony Dam** (No Controller Available)

Gender: Male

Fav Game: Xcom

Fav Genre: Strategy

Demographic: Pc Gamer

**Observations:**

**Item Store**

* Tried to click below spike to ‘deselect’
* Found it odd to be clicking ‘images’ like the spike

**Battle Scene**

* Went to arrow keys first
* Won first try
* Managed to get stuck on the fridge/crates
* Tried to break the environment
* **BUG:** the lighting was weird and made the map super dark for some reason

**Comments:**

* Controls were too focused on the left hand

Suggested: Movement on arrow keys, Activateables on QWER like MOBAS

Suggested for Controller: A is front socket, Y is back socket (and left/right is normal)

* 2nd map is a bit small
* Hazards should only be ‘activated’ if they do dmg
* Boost/Strafe should require investment of attachment
* If environment is going to hurt make it obvious (Like spiky walls)
* Didn’t really notice the minimap

**Suggestions:**

* Flipping should do continuous hp dmg or have a counter till you lose/win
* Vertical/Horizontal Saws
* Early activateable traps can be a chair with a bucket of acid on it (knock over the chair to activate)
* Map can be upgradeable? Paper Outline -> Radar -> Top down camera
* Time Limit over just traditional timer

**Tiasha Lawson** (Controller available)

Gender: Female

Fav Game: Bioshock

Fav Genre: Indie

Demographic: No preference to platform/ play what’s available

**Observations:**

**Battle Scene**

* Flipped on 2nd try, easier on controller (Flip was mapped to X)
* Figured out controls fine on controller
* Focused on flipping cuz ramming hurts (could just be personal playstyle)
* Preferred bumper acceleration over trigger acceleration
* **BUG:** Bot got caught ‘wandering’ into the fence 50% of the time

**Comments:**

**Store Scene**

* ‘Ok’ button rather than click the mower
* ‘A’ button for controller
* Don’t make too many bits multi-color customizable – limit to just sockets, motor and body
* 4 socket points will provide enough customization

**Battle Scene**

* Battles are a bit short
* Map 2 is a bit small on the corners (no room to manoeuvre to get back behind enemy since both same speed)

**Suggestions:**

* Hazards should be activateable
* Environment hurts as an option
* Attachments result in activateables (boost/strafe tied to the rocket on the right socket)
* If more than one bot shows up then it should be FFA
* Drifting might be cool to solve the problem of the small 2nd map
* Quick-Spin attachment?
* Ranged weapons should be rly hard to aim if available (like green shell in Mario kart)

**Angus Munro (Controller Unavailable Controls Reassigned to movement with arrow keys)**

Gender: Male

Fav Game: Kerbal Space Program

Fav Genre: Simulation

Demographic: PC-casual

**Observations**

**Battle Scene**

* Won first by flipping
* Car controls are good (over direct WASD control)
* Controls are better with right hand on arrows, left hand is less busy
* Cover was too similar in color (changed to black in subsequent tests)
* Cover had too little hp
* The game is too easy (really simple to flip)
* AI wanders a bit too much
* Battles are a bit short

**Comments**

**Map 2**

* Motion blur is a bit much, lens flare is fine
* Map is a bit too small
* Map should be made bigger before making the turning circle smaller
* Preferred the first map mechanically preferred 2nd aesthetically

**Item Store**

* **BUG:** Spike did not fix to player rotation
* Color slider over picker
* Model should not always follow mouse
* Coloring different parts would be cool
* 4 is enough sockets

**Danielle Lyle-Stirling (Conducted with Angus Munro)**

Gender: Female

Fav Game: Fallout 3

Fav Genre: FP RPG

Demographic: PC but prefers controllers

**Comments**

**Battle Scene**

* Steering controls are good
* Controls are more natural with right on arrows left on activateables
* Flipping is more fun than ramming
* AI needs to know how to flip itself back over
* Countdown is good for flipping (over deprecating hp)
* Enemy bot is a bit too simple
* Map is too small/simple to require the mini-map

**Future (Combined with Future Suggestions from Angus)**

* Drifting should be an option not a constant thing (Wheel Attachment?)
* Ranged can exist but should be a high skill thing
* Attachments result in activateables (boost/strafeing not there from start)
* Fully restored attachments after battle (difficulty can increase cost)
* Hazards can be both static and activateable
* Some sort of plough so hitting from front results in enemy rolling over you
* Catapults/Oilslick attachment
* 4 player multiplayer max, FFA/2v2
* Map needs to be bigger than the first if playing multiplayer
* Split screen should be fine, horizontal split first
* Had fun

Test 5 Conducted by Deinyon Davies 05 / 09 / 2015

Commit Version: “Implemented Wheel Model Display”

**Terece Mason** (Controller Unavailable)

Favourite Game: The Sims 2

Favourite Genre: Simulation

Favourite Platform: PC & Wii

Demographic: Casual

**Observations:**

**Shop Scene (Menu)**

* Attempted to navigate mower selection menu using arrow keys.
* Attempted to deselect / detach the spike from the mower once it had been .attached. Detachment was not yet implemented.
* Enjoyed colour customization.
* Perturbed when colour was reset when round ended.
* Unsure of the purpose of the spike item, or the significance of it being attached.
* [BUG]: Spike attachment was misaligned
* [BUG]: Colour reset to black after having selected the desired mower.

**Battle Scene One (Farm)**

* Briefly confused when the battle began.
* Won the round several times with little effort, usually unexpectedly.
* Did not identify strategies for avoiding the opponent’s shield.
* Enjoyed flipping the opponent.

**Battle Scene Two (Garage / Warehouse)**

* Opponent would occasionally become stuck on the ramp.
* Player would occasionally become stuck on the ramp. Attempted to use flipper to encourage contact with wheels to the ground.
* [BUG]: Opponent mower induced several high-velocity forces on the player.

Test 6 Conducted by Deinyon Davies 06 / 09 / 2015

Commit Version: “Fixed disappearing robot bug”

**Gareth Owen** (Controller Unavailable)

Favourite Game: Pac-Man 20th Anniversary

Favourite Genre: Puzzle Platformers

Favourite Platform: PC

Demographic: Casual

**Observations:**

**Shop Scene (Menu)**

* Briefly confused about the purpose of the ‘mower selection’ User Interface. Did not notice the “Select Your Mower” title.
* Did not attempt to customize the mower (neither colour nor attachments).

**Battle Scene One (Farm)**

* Had difficulty operating the vehicle using the WASD controls. Would prefer optional use of Inverted-T arrow (cursor) keys.
* Won several rounds without significant attempt, often resulting in confusion.
* Player regularly opted to restart the battle scene via the IDE instead of navigating the ‘shop’ menu.
* Player became frustrated with collision-style attacks, and suggested that damage was not predictable.
* Enjoyed flipping the opponent.

**SCRUM MEETING LOGS**

**24 / AUG / 2015**

4:30pm – 6:00pm

**Location**: UTS Building 11, Game Design Studio Laboratory

**Members present**: Brendan, Deinyon, Matthew, Robert

The team identified backlog items and discussed time estimates.

**31 / AUG / 2015**

4:30pm – 6:00pm

**Location**: UTS Building 11, Game Design Studio Laboratory

**Members present**: Brendan, Deinyon, Jesse, Matthew, Robert

The team discussed minimap implementation; considering Render Layers to create a ‘radar-like’ blip User Interface.

Discussed the size of the newly implemented Garage level design.

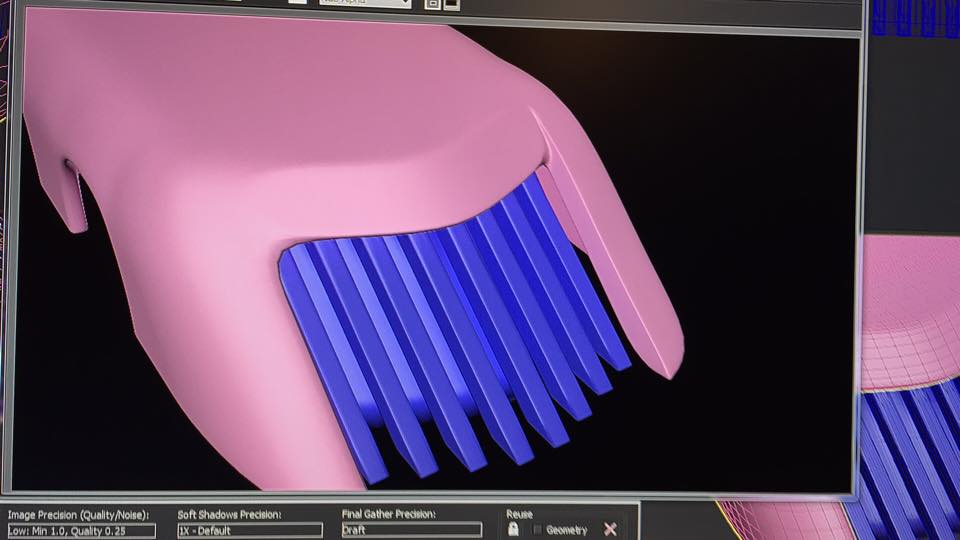
Discussed and proposed design and implementation for shield attachments.

**01 / SEP / 2015**

**Location**: Online Group Discussion

**Members present**: Deinyon, Jesse, Matthew, Robert

Discussed prototype mower design. See the following figure of the design prototype.



**02 / SEP / 2015**

**Location**: Online Group Discussion

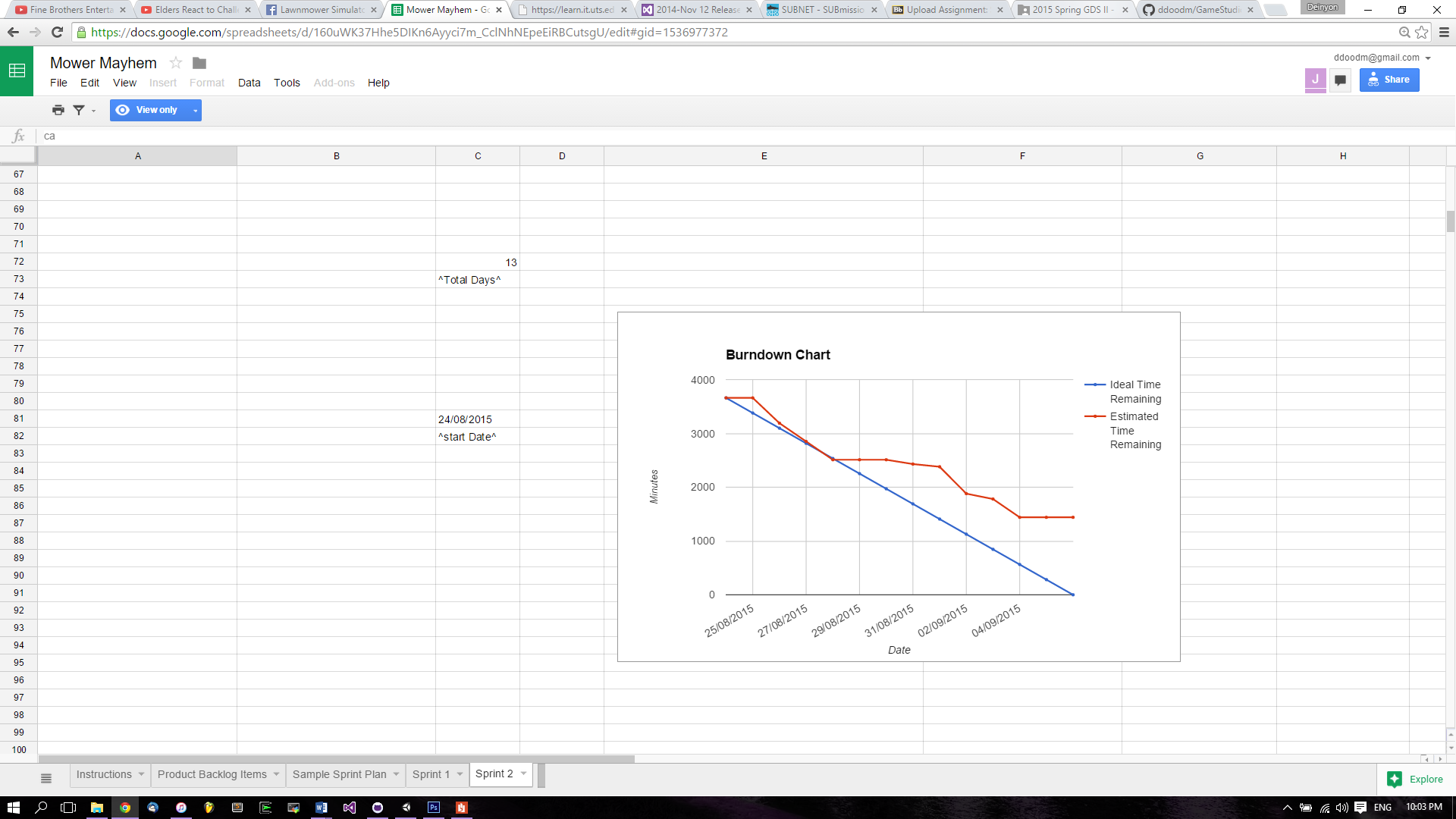
**Members present**: Deinyon, Jesse, Matthew, Robert

Discussed methods of conveying programmatic attributes between scenes and prefabs.

Discussed a bug associated with ray projections to determine wheel model position.

Discussed AI bugs which would cause ‘sticking’ to obstacles and walls.

**BURNDOWN CHART**



**REFLECTION**

Though Sprint Two yielded several important new features, enhancements and fixes, the substantial estimated commitment proposed by the team during the preliminary sprint meeting exceeded the time that the team could invest within the sprint time-box. Additionally, the project exhibited some ‘Scope Creep’ as new prerequisite tasks were found during development.

The Burndown Chart illustrates that the team maintained the necessary workload for three to four days, until such a commitment was no longer possible.

It will be important to realistically delegate tasks during planning for Sprint Three, with careful consideration to the necessary daily workload for each member in order to successfully execute the sprint.

**SPECIAL CIRCUMSTANCES**

N/A

**VERSION CONTROL COMMIT LOG**