Team 2-bit Dev Log

Week 13: 11/12/23 - 15/12/23

Michael Hayes

Reflection:

The past 13 weeks have been an interesting experience for me, we started using a new technology in VR which I had no experience with before this point. There were many blockers due to experience in VR with the added difficulty of using a SDK with multiple limitations. Overall it was a positive experience, working with VR, a limited SDK and working with a publisher who has their own requirements and expectations.

At the start of the project we had to send proposals for our VR game idea to the Liminal publisher to review, then choose to accept or reject. Therefore, in this project we put a greater emphasis on planning our game, through market research, pre-design and prototyping game ideas. This was extremely important to our project as we lost multiple weeks of work due to sickness and blockers from using the Oculus quest with unity and the Liminal SDK. Time we spent working on the project was much more efficient as a result as we knew exactly what we wanted to achieve.

After planning 13 weeks of sprints, trying to leave a week buffer of time was still not enough as we lost around 3 weeks of work due to multiple illnesses and blockers. Perhaps when planning we could prepare a back up plan, however using agile and scrum processes such as daily stand ups and re-organising our backlog of tasks to create new sprints, reduced the overall impact of this.

Working with the SDK's and Oculus quest 2's limitations forced us to be considerate of the code and assets we implemented. This was a helpful exercise, constantly thinking about how our mechanics and visuals will impact performance and will be invaluable for increasing the performance of our future projects.

The UX (users interaction) was a core consideration for Liminal and this project. This required a lot of tweaking of mechanics to reach the current gameplay, and still requires a lot more tweaking to be good. This experience has highlighted how much time and effort it takes to create a fun and good feeling experience in the last 10% of the project. Unfortunately this caused one of the biggest challenges we encountered, as testing on the VR headset took more time than we expected.

During this project I took on the responsibility of marketing, creating the trailer and overall branding of the project. One of my other interests is design so this was a fun experience for me to gain some knowledge of creating a consistent brand design across multiple platforms including the website, press kit and associated media.

In terms of marketing the social media platform that was the most successful was reddit where we received around 2500 views during the few weeks marketing campaign. In the future I will try to incorporate other social media platforms from an earlier stage of development to try and build a fanbase for the project, however due to the limited time frame it was difficult to create meaningful content until late in the project.

We tried hard to create a good working environment and relationships during the project, creating a collaborative work environment using tools such as miro, discord and jira. This allowed us to work effectively and efficiently communicate throughout the development process.

Agile Sprint Update:

Sprint: Marketing

- To introduce new users to our product, for conversion into downloads.

Sprints: Apply Liminal Feedback Sprint Tasks & Apply playtesting feedback

- Applying feedback from Liminal and the playtests to improve the project for the beta build of the game

Links:

Link to Minutes and Agenda: 📄 CS2 - Minutes and Agenda
Link to Team's Jira Scrum board:
https://cs2mr.atlassian.net/jira/software/projects/CS2LVR/boards/2/backlog
Miro board overview: https://miro.com/app/board/uXjVMj-Nye0=/?share_link_id=77318451600
Marketing campaign: 📄 CS2 - Marketing Campaign - Plan

Table of Contents:

This week's completed tasks:

Apply Liminal Feedback Sprint Tasks:

Trying to fix final target bug

Could not resolve the bug, for now made the final object increase in size overtime, until it reaches a certain threshold.

```csharp
13          public void Spawn() => gameObject.SetActive(true);
14
            @ Unity Message | 0 references
15          public void Update()
16          {
17              IncreaseSize();
18              if (transform.localScale.x >= sizeThreshold) Despawn();
19          }
20
            1 reference
21          public void HitTarget()
22          {
23              health--;
24              if (health == 0) DestroyTarget();
25          }
26
            1 reference
27          private void DestroyTarget()
28          {
29              Instantiate(deathParticles, transform.position, Quaternion.identity);
30              Despawn();
31          }
32
            2 references
33          private void Despawn() => gameObject.SetActive(false);
            1 reference
34          private void IncreaseSize() => transform.localScale += new Vector3(sizestep, sizestep, sizestep) * Time.deltaTime;
35
```

Adding Fade to black

On the ray cast script I added a new event to be called when a final target is hit.

```csharp
            @ Unity Script | 12 references
3           public class LaserGunRayCast : MonoBehaviour
4           {
5               // Event for normal targets
6               public delegate void HitAction(RaycastHit hit);
7               public static event HitAction OnLaserHit;
8               // Event for final target
9               public delegate void FinalHitAction();
10              public static event FinalHitAction OnFinalTargetHit;
11
```

```csharp
            1 reference
51          private void FinalTargetHit(RaycastHit hit)
52          {
53              //Debug.Log("We hit the final colour target");
54              FinalTarget.HitTarget();
55              OnFinalTargetHit();
56          }
```
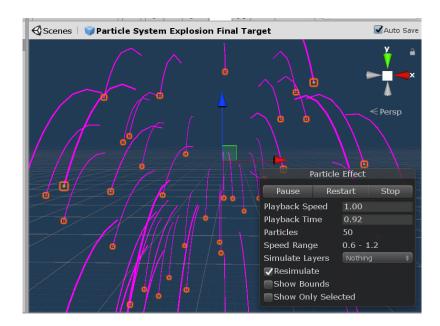
Then I added a separate class that would listen for the event. When the event is called it starts a co-routine which will call the Liminal SDK function Fade to.

```csharp
1   using System.Collections;
2   using UnityEngine;
3   using Liminal.Core.Fader;
4
    ● Unity Script | 0 references
5   public class ScreenFadeToBlack : MonoBehaviour
6   {
7       [Header("Fade to black settings")]
8       [Range(0.1f, 5f)] [SerializeField] private float fadeDuration = 3f;
9       [Range(0.1f, 1f)] [SerializeField] private float fadeTimer = .1f;
10
        ● Unity Message | 0 references
11      void OnEnable() => LaserGunRayCast.OnFinalTargetHit += FadeToBlack;
        ● Unity Message | 0 references
12      void OnDisable() => LaserGunRayCast.OnFinalTargetHit -= FadeToBlack;
        2 references
13      private void FadeToBlack()
14      {
15          StartCoroutine(FadeToBlackTimer(fadeTimer));
16      }
17
        1 reference
18      private IEnumerator FadeToBlackTimer(float timer)
19      {
20          var fader = ScreenFader.Instance;
21          while (true)
22          {
23              yield return new WaitForSeconds(timer);
24              fader.FadeTo(Color.black, fadeDuration);
25          }
26      }
27
28
29  }
```

Adding destroy sound and particle effect to Final target

This event system was also used to call the sound of the destroyed target. For now I used the game object the sound was attached to and placed it in the same position as the final target, as it will not move at any point. In the future this will need to be adjusted to automatically find the position to play the sound within the world space.

```csharp
        ● Unity Script | 0 references
3   public class FinalTargetDestroySound : MonoBehaviour
4   {
5       [SerializeField] private AudioSource destroy;
        ● Unity Message | 0 references
6       void OnEnable() => LaserGunRayCast.OnFinalTargetHit += PlayDestroySound;
        ● Unity Message | 0 references
7       void OnDisable() => LaserGunRayCast.OnFinalTargetHit -= PlayDestroySound;
8
        2 references
9       private void PlayDestroySound()
10      {
11          AudioSource.PlayClipAtPoint(destroy.clip, transform.position);
12      }
13
```

The particle effect was created using trials and particles as the object spawned. For now this has been called in the final target script due to time constraints.

Adding despawn to targets not shot

Myself and Robin worked together to try and quickly add the despawn functionality. To do this we used an event that would be called, and listeners would subscribe to other scripts and wait until the event to run their methods.

Event on spawner script

```
55        [Tooltip("How long until a target dequeues if not shot")]
56        [Range(0f, 3f)][SerializeField] private float notShotDespawnTime = 5f;
57
58        // Event for despawning target after not being hit
59        public delegate void TargetDespawnAction(Vector3 position);
60        public static event TargetDespawnAction TDA;
```

A Coroutine was used to create a timer that would call the event and despawn the target after a set time, if it was still active in the hierarchy.

```
1 reference
IEnumerator despawnAfterTime(GameObject destroyedTarget)
{
    yield return new WaitForSeconds(notShotDespawnTime);
    if (destroyedTarget.activeInHierarchy == true)
    {
        TDA(destroyedTarget.transform.position);
        despawnTarget(destroyedTarget);
    }
}
```

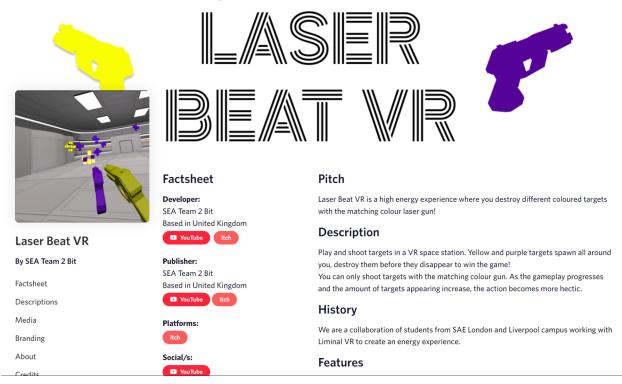For example, we subscribe to the event On the particle effect.

```
 9
            ⓤ Unity Message | 0 references
10          void OnEnable()
11          {
12              LaserGunRayCast.OnLaserHit += AcitvateParticleEffect;
13              Spawner.TDA += ActivateDespawnParticleEffect;
14          }
            ⓤ Unity Message | 0 references
15          void OnDisable()
16          {
17              LaserGunRayCast.OnLaserHit -= AcitvateParticleEffect;
18              Spawner.TDA -= ActivateDespawnParticleEffect;
19          }
```

This event is used to activate the despawn particle effect at the position of the target.

```
            2 references
36          private void ActivateDespawnParticleEffect(Vector3 position)
37          {
38              Instantiate(DespawnParticle, position, Quaternion.identity);
39          }
40      }
41
```

Marketing Sprint Tasks

Press Kit

As I had most of the assets finished, the press kit did not take too much time to create. I tried to keep to the same format as the game page and media to create a professional feeling towards the game.

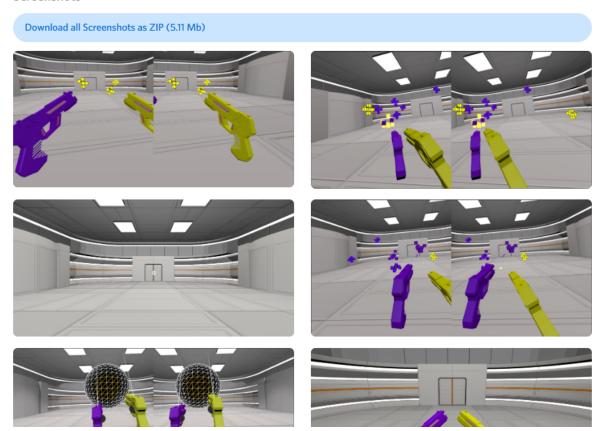https://impress.games/press-kit/sea-team-2-bit/laser-beat-vr

LASER BEAT VR

Laser Beat VR

By SEA Team 2 Bit

Factsheet

Descriptions

Media

Branding

About

Credits

Factsheet

Developer:
SEA Team 2 Bit
Based in United Kingdom

▶ YouTube   Itch

Publisher:
SEA Team 2 Bit
Based in United Kingdom

▶ YouTube   Itch

Platforms:
Itch

Social/s:
▶ YouTube

Pitch

Laser Beat VR is a high energy experience where you destroy different coloured targets with the matching colour laser gun!

Description

Play and shoot targets in a VR space station. Yellow and purple targets spawn all around you, destroy them before they disappear to win the game!
You can only shoot targets with the matching colour gun. As the gameplay progresses and the amount of targets appearing increase, the action becomes more hectic.

History

We are a collaboration of students from SAE London and Liverpool campus working with Liminal VR to create an energy experience.

Features

Media

Trailers

Laser Beat VR Gameplay YouTube

Screenshots

Download all Screenshots as ZIP (5.11 Mb)

Branding

Brand Guidelines

Please do not edit any branding photos or trailers / gameplay videos.

Colors

#FFFF00

#ffffff

#550299

Fonts

* Zen Tokyo Zoo

About Developer

SEA Team 2 Bit

Hello. This is a 1 - 2 sentence pitch of the company.

YouTube Itch

About Publisher

SEA Team 2 Bit

Hello. This is a 1 - 2 sentence pitch of the company.

YouTube Itch

Credits

Michael Hayes
Co-Lead, Programmer, Lead Art Design

Itch

Robin Pound
Co-Lead, Programmer

Itch

David
SFX Audio Engineer
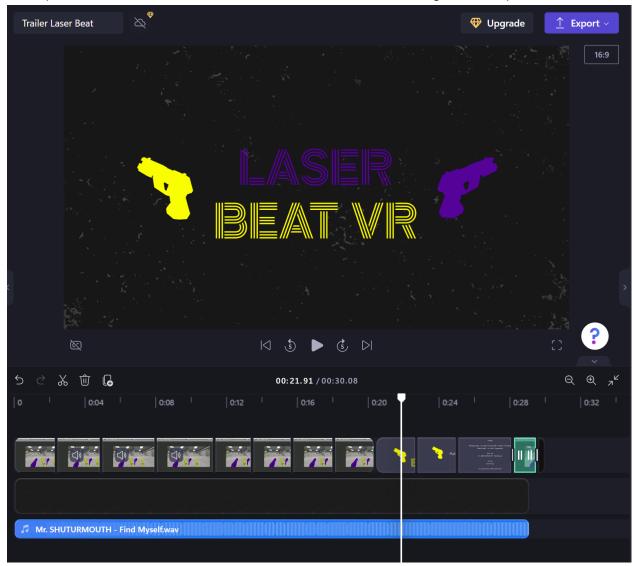
mrshushmth
Music Audio Engineer

Official Website

Trailer

The trailer was a fun task to complete. I was trying to incorporate the feeling of high energy and used quick cuts and transitions on beat to the music. This took longer than expected.
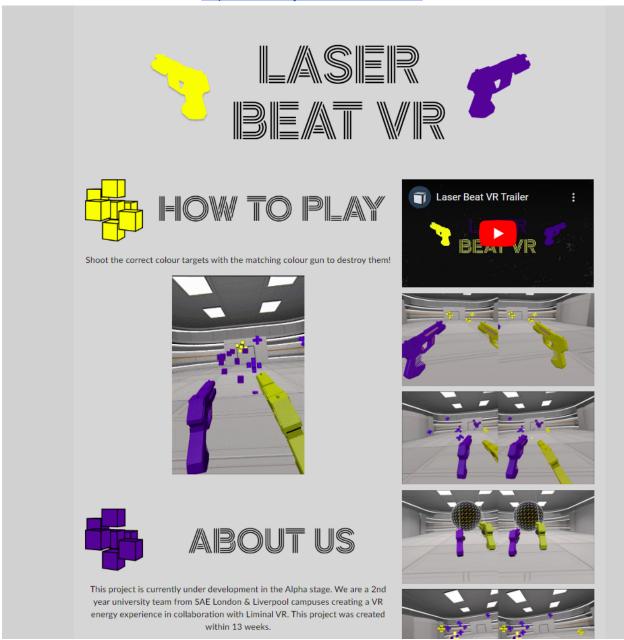

Link to the trailer: https://youtu.be/vuzkZVSXGzM

Updating the game page

To the game page I added a gif for the gameplay, the new trailer and added the new beta build apk file.
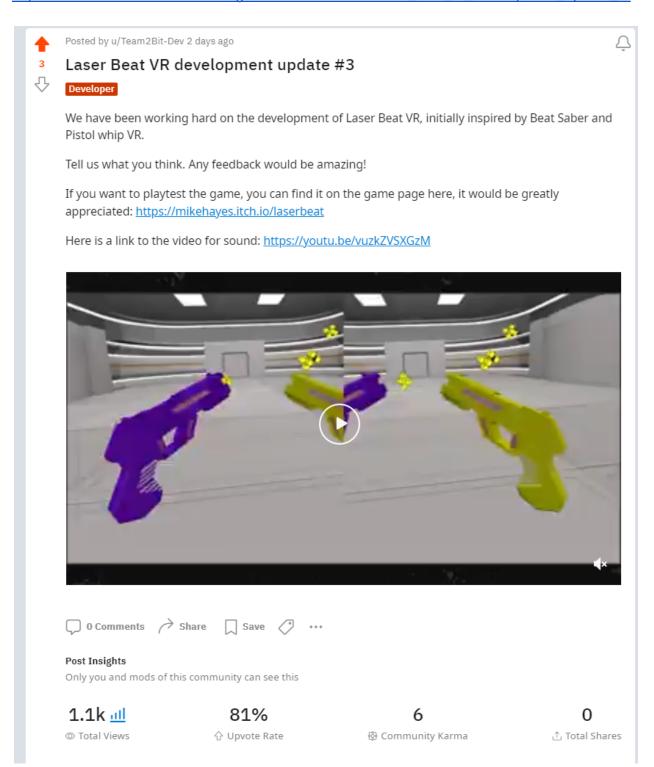
https://mikehayes.itch.io/laserbeat

Uploading the trailer on to reddit

In terms of community feedback, this reddit post received the most upvotes and karma, compared to the previous posts. The post received 1100 views within the first 2 days.

Link to the reddit post:
https://www.reddit.com/r/VRGaming/comments/18hlnee/laser_beat_vr_development_update_3/

Team Members:

Robin Pound - Co-lead
David - SFX
Savio - Music

Feedback and Comments: