

## Meeting Notes for 2018-1-17

Members present: Dr. Mike Bailey, Chris Bokkam, Richard Cunard, Braxton Cuneo, Dr. Kirsten Winters

### Action Requirements:

- Begin coordinating a schedule for development - Everyone
- Continue development of the Yggdrasil API -Braxton
- Begin developing a skeleton system for the respective elements of the program - Richard and Chris
- Begin two shared Unity projects on the Git repository - Everyone
- Learn how to handle compute shaders in Unity - Richard
- Learn how to compile shaders in Unity - Richard
- Send an email to Bryan Pawlowski to coordinate meeting times - Richard

1. The conversation began with Mike asking if the group felt that Braxton's expanded documentation of the graphics engine was sufficiently clear and if the group was able to move forward with their respective tasks. Both Richard and Chris stated that they were able to continue from where they were at, with the caveat that to be able to implement his systems, Richard would need Braxton to continue developing the API.
2. The group agreed that the best course of action would be for Richard and Chris to begin working on prototypes of their respective elements of the system, and to begin putting together a Unity project on the repository.
3. Richard pointed out that he should work on finding out how to use compute shaders in Unity.
4. Braxton and Mike began discussing the technical challenges of implementing shader systems and memory fetching as is detailed in the SDD.
5. Despite reiterating the challenges of implementing shaders as is currently planned, Mike encouraged Braxton to continue.
6. Kirsten brought up the challenge involved with having highly interdependent tasks. The group agreed that would be best to begin coordinating schedules more actively.
7. The group asked Kirsten about when Andrew Emmott would contact the team. She responded that she would check in with Andrew about contacting the team.
8. Chris asked if the group was still interested in taking a tour of the Natural Points building. The group affirmed that they would like to do so, and tentatively agreed that a Thursday would be the best time to meet.
9. Richard pointed out that the group needed to appoint a team captain for submitting the official paperwork for the expo as well as the team poster. The group agreed that Richard should be the team captain.
10. Chris then reminded the group that the team needed to contact Bryan Pawlowski about meeting regularly.
11. The group began discussing the technical specifications for the new Vive Pro, specifically relating to its wireless capabilities. The group began discussing the possible

advantages and technical challenges of using a Vive Pro for demoing the project. The group agreed that if the system works as advertised, that it would be nice benefit, but is not necessary.

12. Kirsten then asked if the team needed anything. The group asked about gaining access to the caged area of the senior design lab. Kirsten stated that she would speak with McGrath about giving the group a key for the cage to give them access to the VR systems.
13. The group then agreed that Fridays would work for the bi-monthly meetings with Bryan, and agreed to defer to him whether he wanted to come to Corvallis, meet in Salem, or have the team meet him in Hillsboro.
14. The team agreed to begin working on their own elements of the project, and meet either the 26th or 27th.
15. The group agreed to have two separate Unity projects in the repo. One as the main build, one as a prototyping environment.
16. Chris noted that Visual Studio 2015 has debugging tools for GPU programming. He was unsure if later versions have that compatibility.