Block Party VR

Collaborative Block building VR experience
Organized by GDGCentralFlorida.org

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Purpose

Block Party VR provides an open source project based learning experience for developers getting started in VR or gaming. In this proof of concept game, we will build a multiplayer "Minecraft" like experience designed for VR. The current implementation leverages Google Firebase for client collaboration.

To maximize the impact of the project, we will focus on building a Google Cardboard app in the beginning.   Google Cardboard VR has the largest VR market share. The platform can support iOS and Android devices.

https://vr.google.com/cardboard/

Keep in mind, we're trying to create a collaborative, fun, learning project to support the growth of developers. Look forward to seeing you join our Block Party! :)

We are open to seeing Block Party VR ported to other VR and AR platforms.   While the current implementation leverages Google Firebase, it would be cool to learn other multi-play platforms too.

Where is the source code?

All code for block party is released under MIT public license.
https://github.com/michaelprosario/BlockPartyVR

Want to make a contribution of something you've learned? Create a feature branch and share your code!

Who is the audience target the Block Party VR demo?
- This is a project based learning experience for developers
- The project should attempt interest people who typically like Minecraft

Meetups collaborating on Block Party VR

We want to thank all the developer groups contributing to this learning experience.

- GDGCentralFlorida.org

- Unity 3D Developers of Orlando - we especially want to thank the Unity 3D developers of Orlando for collaborating on this concept.

Meetup content suggestions
- Consider exploring other features of Google Firebase
- Consider exploring other plugins for creating multiplayer VR experiences
- Integrate street maps data or Google Earth with Unity
- Explore AR technologies like Vuforia, Google ARCore, Apple ARKit, Wikitude

Product Backlog for Block Party VR
Got other ideas for the backlog? Feel free to leave a comment.

- (<mark>done</mark>)As a player, I should be able to change the types of blocks I construct in the world to add diversity to the scene.
- (<mark>done</mark>)Make sure we can support Google Cardboard with bluetooth keyboard
- (<mark>done</mark>)Make sure delete block works from remote client
- (<mark>high priority</mark>)As a player, I should be able to add different types of shapes to add diversity to the scene.
    - Can we integrate Google Poly? https://poly.google.com/

- Create AFrame.IO implementation of BlockPartyVR.
- Add gamepad support
- Support Google DayDream elements - Teleportation
    - https://developers.google.com/vr/elements/teleportation
- Support Google Daydream Chase Cam
    - https://developers.google.com/vr/elements/chase-cam
- Support Google DayDream menu style
    - https://developers.google.com/vr/elements/swipe-menu
- Given I am exploring the VR scene when I place a block in the scene the system should apply small visual effects to increase interest.
- For the demo session, can we add a time limit for the player to make sure many people can see the VR demo.

- As a player, I should be able to explore a tutorial to introduce features of the app to maximize usability. This probably should load by default the first time I load the app.
- As a player, I should see a title screen when I start the app so that I can join a block party or explore the tutorial for the experience.
- As a player, I should be able walk around a scene in a FPS style. This makes the experience more like "survival mode" in Minecraft.
- As a player, I should be able to step on blocks.
- As a player, I should be able to collect jewels to earn points.
- Port BlockParty to Microsoft Mixed Reality to support HoloLens and other Microsoft headsets.

Tools to Get Started

- Get started with Google VR in Unity on Android
  - https://developers.google.com/vr/develop/unity/get-started

- Not finding android sdk (Unity)
  - https://stackoverflow.com/questions/42538433/not-finding-android-sdk-unity#

- Moving forward in cardboard using first person controller script
  - https://stackoverflow.com/questions/37458861/moving-forward-in-cardboard-using-first-person-controller-script