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| **VR Project Design Document** | |  | | --- | | 08|02|2022  **Hung Nguyen** | |

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| **1**  **App Info** |  | |  |  | | --- | --- | | Tentative Title: | Enhanced Data Visualization (EDV) | | |
|  | |  |  | | --- | --- | |  | Education & Training | | |  |  | | --- | --- | |  | Mental Health & Fitness | |
| |  |  | | --- | --- | |  | Travel & Discovery | | |  |  | | --- | --- | |  | Media & Entertainment | |
| |  |  | | --- | --- | | **✓** | Productivity & Collaboration | | |  |  | | --- | --- | |  | Gaming | |
| |  |  | | --- | --- | |  | Art & Creativity | | |  |  | | --- | --- | |  | Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

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| **2**  **Pitch** |  | To goal is for users to [experience]:   |  | | --- | | Data visualization that in is 3D and fully interactive and strongly customizable. | |
|  | This will be especially [impactful] in VR b/c:   |  | | --- | | Data visualization have largely been done in 2D and unlocking this new dimension will allow users to understand their data more, discover new relationships in data, and create new models for data visualization. | |
|  | At a high level, during the app, users will:   |  | | --- | | Create 3D models using data loaded from the local file storage, create 2D screens to change settings of the models, and move/rotate/scale the model around. | |
|  | This experience will be targeted at devices with:   |  |  |  |  | | --- | --- | --- | --- | | [6] | degrees of freedom,  giving users control over the | [movement & rotation] | of their head & controllers. | |

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| **3**  **Basics** |  | The app will take place in:   |  | | --- | | A virtual room | | and the user will get around the scene with:   |  |  | | --- | --- | | [teleport] | movement. | |
|  |  | |
|  | The user will be able to grab:   |  | | --- | | * 3D Models * 2D Screens | | There [will not] be sockets:   |  | | --- | |  | |

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| **4**  **Events & Interactions** |  | There will be haptic / audio feedback when:   |  | | --- | |  | | | There will also be 3D sound from:   |  | | --- | |  | |
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|  | If the user is holding:   |  |  |  | | --- | --- | --- | |  | and presses the trigger, |  | |  | and presses the trigger, |  | |  | and presses the trigger, |  | |  | | Suggestions: a UI change, a sound/video plays, a particle plays, an object is spawned or destroyed. | | | |
|  |  | | |
|  | By default, the left hand will have a:   |  |  | | --- | --- | | [Direct | Ray] | interactor. | | and the right hand will have a:   |  |  | | --- | --- | | [Direct | Ray] | interactor. | | |
|  | And you [will | will not] be able to toggle on a [Direct | Ray] interactor using the [thumbstick | button]. | | |
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|  | The main menu will be located:   |  | | --- | |  | | | and from the main menu, the user will be able to:   |  | | --- | |  | |
|  | [Optional] There will be additional UI elements for:   |  | | --- | |  | | | |

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| **5**  **Optimization & Publishing** |  | To make the user experience more accessible / comfortable:   |  | | --- | |  | | | |
|  | Given that this app is targeting the [headset model], target metrics are:   |  |  |  | | --- | --- | --- | | Frames per second: | >= \_\_\_\_\_\_ | FPS | | Milliseconds per frame: | < \_\_\_\_\_\_ | ms (= 1,000 / FPS) | | Triangles per frame: | \_\_\_\_\_\_ - \_\_\_\_\_\_ | tris | | Draw calls per frame: | \_\_\_\_\_\_ - \_\_\_\_\_\_ | batches | | | |
|  |  | Lighting strategy: | | |
|  |  | |  |  | | --- | --- | |  | All baked | | |  |  | | --- | --- | | **✓** | Mostly baked with some mixed | | |  |  | | --- | --- | |  | All real-time | |
|  |  | Light probes [will | will not] also be used for more realistic mixed lighting. | | |

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| **6**  **Other features** |  | |  | | --- | |  | |

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| **7**  **Sketch**  **(Optional)** |  |  |

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| **8**  **Timeline**  **(Optional)** |  | |  |  |  | | --- | --- | --- | |  | Milestone | Date | | 1 |  |  | | 2 |  |  | | 3 |  |  | | 4 |  |  | | 5 |  |  | |