

## Doomsday Engine - Feature #1657

### Oculus Rift field-of-view angle

2013-11-05 08:35 - skyjake

|  |                               |
|--|-------------------------------|
| <b>Status:</b> Closed  | <b>Start date:</b> 2013-11-05 |
| <b>Priority:</b> Normal  | <b>% Done:</b> 100%           |
| <b>Assignee:</b> cmbruns   |                               |
| <b>Category:</b> 3rd party compatibility   |                               |
| <b>Target version:</b> 1.13  |                               |
| <b>Description</b><br>The correct FOV angle is a crucial part of Oculus Rift rendering: <ul style="list-style-type: none"><li>• Create a mechanism for maintaining or restoring the non-Rift-mode field of view setting</li><li>• Provide a CVAR for whether or not to automatically load parameters from the Rift SDK</li><li>• Settle on sensible default values for interpupillary distance and Rift-FOV</li><li>• Reading and storing the parameters from the Rift SDK</li><li>• Renderer Settings: Disable manual FOV adjustment in Rift mode</li></ul> |                               |
| <b>Related issues:</b><br>Related to Feature #1636: Support for Oculus Rift <span style="float: right;"><b>Closed</b>    <b>2013-10-23</b></span>  |                               |

#### History

##### #1 - 2013-11-05 08:35 - skyjake

- Assignee set to cmbruns

##### #2 - 2013-11-12 03:37 - cmbruns

skyjake wrote:

The correct FOV angle is a crucial part of Oculus Rift rendering:

- Create a mechanism for maintaining or restoring the non-Rift-mode field of view setting

I implemented the FOV CVAR mechanics in revision

<https://github.com/cmbruns/Doomsday-Engine/commit/164ad04bb7b732f1c2905343bee37d02bfc61c83>

- Provide a CVAR for whether or not to automatically load parameters from the Rift SDK

rend-vr-autoload-rift-params, defaults to true.

- Settle on sensible default values for interpupillary distance and Rift-FOV

Defaults to 0.0622 (my personal IPD) and 114.8 degrees (my Rift device geometry)

- Reading and storing the parameters from the Rift SDK

I implemented load/store from Rift SDK in <https://github.com/cmbruns/Doomsday-Engine/commit/7bfd9dd3efc0cb5d27be1f15c4ff95699bd10519>

- Renderer Settings: Disable manual FOV adjustment in Rift mode

Because a current correct value of rend-camera-fov is always required, to get correct clipping, I chose instead to have rend-camera-fov mirror rend-vr-rift-fov while in Rift mode, and to mirror rend-vr-nonrift-fov in other modes. During mode changes, rend-camera-fov is updated from either rend-vr-rift-fov, or from rend-vr-nonrift-fov. This way, rend-camera-fov is always current and accurate; can always be adjusted, if needed; and always remembers the non-rift value.

##### #3 - 2013-11-12 08:05 - skyjake

- Status changed from New to Closed

- Target version set to 1.13

- % Done changed from 0 to 100