3D Photos on Liquid Galaxy

When Liquid Galaxy runs Google Earth, it is possible to load Street View across displays, creating a more immersive experience, for example, in the application Peruse-a-Rue. The user can navigate the environment, moving back and forth easily with viewSync functionality present. Street View is similar to the 3D photos shown on Google Maps and other services. An example of a 3D photo can be seen at https://tools.wmflabs.org/panoviewer/#Inside_a_cornflakes_bag_%E2%80%93_360%C2%B0_photo.jpg.

The task is to

- research 3D photos and how they are stored and displayed
- examine the code in Peruse-a-Rue and explain how it works (https://github.com/EndPointCorp/lg-peruse-a-rue)
- try to implement viewSync similar to the functioning of Peruse-a-Rue for other 3D photos

Task Delivery

- a pdf with the research and explanation, minimum 3 pages
- if the implementation is successful, a .mp4 video of the system functioning, 30 seconds maximum

(Code, Outreach/Research)

Connect Liquid Galaxy to a Drone

Many drones have multiple cameras in order to provide a 360 degree view during flight. If a connection can be maintained between the drone and the Liquid Galaxy setup, the view from the drone may possibly be displayed on the screens, with user control implemented.

The task is to

- come up with an idea for how the system would work
- test it by using phones as a substitute for the drone cameras (or a drone, if available :))
- if successful, document the setup needed

Task Delivery

- a pdf with the documentation, minimum 2 pages
- if the implementation is successful, a .mp4 video of the system functioning, 30 seconds maximum and any code used to achieve it

(Code, Outreach/Research)

Experiments with Google

On Experiments with Google (https://experiments.withgoogle.com/collection/chrome), a large majority of the experiments are made using WebGL, with many also having the source code available online. Since many of the Experiments have educational value, it would be interesting and useful to display them on Liquid Galaxy screens.

The task is to

- research and document any experiments that have the potential to be displayed on Liquid Galaxy (at least 3)
- if possible, implement viewSync for those projects

Task Delivery

- a pdf with the documentation, minimum 1 page
- if the implementation is successful, a .mp4 video of the system functioning, 30 seconds maximum and any code used to achieve it

(Code, Outreach/Research)

Enhancing WebGL Samples

Most of the WebGL samples (https://webglsamples.org/), like Aquarium and Field, can be displayed on Liquid Galaxy through the use of viewSync, with the screens displaying a seamless rendering of the application. However, other samples, for example Blob, do not have this functionality.

The task is to

- download the source code and after examining it explain how the viewSync functionality was added
- try to implement viewSync for Blob or other non-viewSyncing samples

Task Delivery

- a pdf with the explanation
- if the implementation is successful, a .mp4 video of the system functioning, 30 seconds maximum

(Code, Outreach/Research)