Applications of Liquid Galaxy in deforested areas

The Liquid Galaxy is an Open Source project that is able to sync a cluster of screens that will create a panoramic experience. Some people may think that the applications of this project are only for self-entertrainment, but the truth is it has lots of applications in other fields like industry and even the last thing you'd think about: deforested areas.

First Idea: 'PostFire' monitoring center

The applications I've thought about link drones with the Liquid Galaxy project, being the first one a monitoring center of deforested areas because of a fire. After a fire is extinguished in a forest tracking the area to prevent the fire from relighting is essential. One solution to this problem would be to set a cluster of drones with a camera linked to a cluster of screens, being each screen the camera from one of the drones. This drones should be coordinated so that the image that appears on the screen is consistent and they should be covering the same surface and at equal distances. To this system there could be also implemented a program that provides the user the opportunity to move the drones coordinately.

This would create a sort of live street view that would make the work of monitoring the area easier for firefighters to make sure that the fire doesn't relight.

Second Idea: DRONECORIA and Liquid Galaxy

The second application of also involves drones within the Liquid Galaxy project. In this case there's an already existing project called DRONECORIA that consists in a series of drones that carry seeds and will be able to recognise deforested areas via a Tensorflow and automatically replant them if it is considered by the IA that that area needs new trees. Linking a cluster of DRONECORIA drones with a cluster of Liquid Galaxy screens could be a really powerfull tool, as it would give a panoramic live feed of the area the drones are flying over. Just as in the idea of the monitoring center, this drones should be coordinated in order to provide a clear cluster image considering each drone camera is associated to one screen. The user could have the option of navigation through the area to search manually some spots the drones may have missed while introducing a new mechanic: the user would be able to choose a zone which would be scanned by the drones later. The world is huge and sometimes the drones would miss some zones as I supose there wouldn't be a huge 'army' of them because it would be really expensive to create one. Instead of introducing lots of drones the solution would be to use the few drones operative in a smarter way:

users could report potential deforested areas and moderators with a Liquid Galaxy cluster would send the potential locations to the drones. Furthermore, once the drones have scanned the area the moderator could look over the area to search for some spare spots the drones may have missed and mark them so that they can be replanted.

Third Idea: Satellite tracking

Until now my ideas have been based in controlling little deforested areas and not in huge ones or even in localizing the little ones. One idea to search for the little deforested areas would be to integrate Liquid Galaxy with some kind of satellite feed that could be used to search for those deforested gray spots working as some kind of Google Earth system. Maybe this could be used worlwide to create a network of people contributing to make the DRONECORIA drones more efficient. The main appication of this idea would be in huge deforested areas like in the recent disastrous fires of California where lots of areas will need to be replanted. This would offer DRONECORIA moderators the ability to create complex replanting plans for huge areas by selecting the most harmed zones and even dividing those in subzones that could be scanned by the drones and filled with seeds later. Another great way to create an even more efficient plan would be to create scanning routes that would fly over the most damaged areas. Later the moderators

would scan manually the area for some spots that the drones could have missed just as explained in the second idea. Unfortunately one of the major inconvenients of this method would be the need of an almost daily update of the image feed of earth's sufrace so that the regeneration plans would stay also updated.

Fourth Idea: Anti-Human-Deforestation system

Unfortunately deforestation isn't only caused by forest fires, as one of the principal causes of deforestation is the human being. Lots of industries depend on producing a great quantity of wood, so they just go to places like the Amazon Rainforest and deforest them at a really quick pace. Against this artificial deforestation the industries have arrived at some treaties with the ecologist orgranitztions limiting the area they can deforest, but sometimes the industries don't obey this treaties as it is really difficult to determine if they have really deforested a bigger area they were supposed to; they always chose zones that are really hard to access to and the areas are really large. This problem clould end by the use of satellite feed, some algorithms and a Liquid Galaxy system. First of all, a satellite would take images of the zones under deforestation and would send them to a ground server running a series of algorithms on them: the first one would determine which area is from which industry, the second one would check for the change of colours (between green and brown) to determine later with the last alorithm

the percentatge of deforestation in that area. If the sytem found a possible breach of contract it would send a warning to a control center equiped with drones and a Liquid Galaxy system. The management center will check manually the data recieved from the ground servers to later send the drones to that area and scan it to make sure the colour difference wasn't caused by other factors. This would probably make it a lot more difficult for wood industries to destroy the rainforests of the world.

Fifth idea: Main Drone Managemnet Center

This idea links drones with Liquid Galaxy again. Since now all my ideas were about fighting deforestation, but a plan of this magnitudes would need a good coordination as the resources used would be limited. The Main Drone Management Center (MDMC) would serve the porpouse of assigning drones to the fourth ideas explained above depending on the available number of them and also the matter of emergency. For example, the management center would reinforce the team of the PostFire monitoring center before the Anti-Humam-Desforestation one as it would be prioritary to make sure that a fire lit off completely. A cool way of achieveing this difficult task of management could be the use of a Liquid Galaxy Installation running Google Earth plus a drone Geolocalitzation sofware. The managers at this MDMC could see the position of all drones in real time as a point on the screens

while also viewing their respective trajectories. By clicking on one of the drones they would be able to reassign their destination or even force them to return to the base if they wouldn't be needed anymore. The Liquid Galaxy system running Google Earth would create a panoramic experience that would make the work of moving through the globe easier for the manager while incerasing their field of view.

Brief conclusion

From my point of view, this ideas that involve Liquid Galaxy with deforested areas would be great for fighting against natural and artificial deforestation that will be, in a long period of time, one of the biggest problems the planet earth will have to face. One of the most difficult aspects of this ideas is the satellite imagery as nowadays this systems would need their own satellite network or the collaboration of some already existing ones.