

Report on assignment 4 for 4024 Portal Course.

## SPATIAL AUDIO

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Assignment 4 was a rollercoaster of ups and downs, but we got it done in the end. Both teams decided on spending Tuesday 16.11 in the portal to do the assignment, and after rock paper scissors it was decided that my Team, Team A, had to set up in the dungeon while Team B was in the Portal.

My main responsibility was spatial audio, so while the others tried to get the connection going I was building a reaper session. Our plan was to jam with each of our pd patches live into Reaper and encode it into third order ambisonics. I got the tracks ready for recording and encoded them, and then I wrote a lot of automation in Reaper to add spatial movement to all the tracks. I mainly used the IEM directivity shaper plug-in, and separated the stereo tracks by frequencies. I had made a Reaper session before we met up on tuesday, but decided to make it from scratch as one of the audio in channels was broken so one of our pd patches had to be encoded as a mono track. In the end it was three stereo channels and one mono channel in, each encoded into third order with 64 tracks going to the ambisonics bus.

We were quickly ready for our jam, but the connectivity issues stopped us from doing much. I spent the rest of Tuesday running up and down to assist in all the troubleshooting. As jacktrip kept failing I suggested we'd use LOLA instead, but it was decided that we should keep trying with jacktrip.

During the day Team A decided to record a jam so we at least felt like we had achieved something. We did a few takes and it was really fun to play with our patches and improvise in the spatial soundscape we had created.

Tuesday evening it was decided that we would call it a day and retry on friday.

Friday 19.11 we met up again, and this time we were only focusing on the connection. At last we managed to get jacktrip up and running, after trying out different routing configurations. As on tuesday we ran our Reaper project on the Mac Mini, which sent eight audio tracks to the Lola computer, which then sent the tracks through jacktrip.

We managed to send our audiofeed, and then afterwards received Team B's transmission. After receiving their contribution I wrote some automation and encoded it using the same IEM Ambisonic plugins as with our tracks. The end result was pretty nice!

I wish we had spent a lot more time on the spatial audio aspects of this assignment, but as usual when working with network feeds most of the time is spent actually making the connection. Spatial audio and the ambisonics plugins are extremely interesting and I look forward to spending more time in the portal playing around with it.