

Networked Performances with Ossia Score

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This demo will present the current work-in-progress in the ossia community towards authoring and performing networked artworks. The demo is based on the free and open-source software ossia score which recently reached version 3. Dubbed “interactive sequencer for the intermedia arts”, it combines both the non-linear time-lines and the data-flow paradigms to allow artists to create rich evolving multimedia artworks, musical pieces, museum installations, etc.

1. INTRODUCTION

ossia score is a free and open-source sequencer available for macOS, Windows, desktop and embedded Linux, with an in-development web-based version. The software can be downloaded at ossia.io.

Version 3 introduces support for a real-time GPU-enabled video pipeline seamlessly integrated with the rest of the system, live-coding for C++ (and many other languages), support for tempo, musical metrics, hierarchical polyrhythms, and a generalized looping primitive, among other features.

An experimental branch of the software had been started in 2016 to explore the domain space of networked and distributed artworks, at both the authoring and performance stages: this work had been presented at the JIM [1].

This demo is an update of this work, which tries to explore the capabilities of the networked authoring and execution features in the context of a small experimental artwork showcasing how the feature can be used to share behaviours across multiple computers.

2. DEMO EXPLANATION

The demo implements a scenario which plays distributed sound and video content in a synchronised way: the score defines on which computer which part of the score runs. Multiple computers can join the session and do their part of the performance in sync.

This is done through specific annotations that were implemented in ossia score: the composer can tag a specific part of the score as pertaining to a group and another part to another group. Computers can then connect to the network session and assign themselves to one or multiple groups.

The demo will also showcase how distributed edition works. The source code is available at <https://github.com/ossia/isscore-addon-network>.

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Figure 1: An example score in *ossia score*

[com/ossia/isscore-addon-network](https://github.com/ossia/isscore-addon-network).

3. FURTHER GOALS AND RESEARCH IDEAS

3.1 Exchanging Data

The original distribution work only covered the introduction of distributed semantics for the temporal execution of the system. Current work is ongoing to ensure that all the data types supported by ossia score—basic messages, but also audio and video streams—can be seamlessly exchanged across applications and systems to ease the production of large-scale distributed artworks.

3.2 Towards Distributed Live Performances?

The ossia project is interested in studying not only the technical and semantical features of distributed artwork authoring and performance, but also the artistic and social implications of those artworks: how can such systems allow more people to experience the act of going to a concert or live performance in a social context impacted or disrupted by various factors, such as climate change, pandemics, etc.? Can we qualify and quantify what going to a live performance involving new media entails, and how closer we can get to the original experience in the context of a world which has never come closer to Asimov’s isolated world depicted in *The Naked Sun* than in the last few years, and where arising ecological constraints will keep the pressure high on reducing physical transportation for a long time? How can we create distributed performances happening simultaneously and connectedly in various physical places, and how can the performance’s sense of spontaneous community be transposed in this context?