Workshop: Introduction to PureData (abstract)

Mathieu Bouchard
e-mail: matju@artengine.ca

An introduction to PureData, its software development and its community, through a survey of l'Œuvre ouverte (the PureData Convention in 2007), a presentation of GridFlow (a multidimensional dataflow processing library) and a sampling of the artworks created with it.

PureData is a graphical programming language developed by Miller Puckette in the 1990s for the creation of interactive computer music and multimedia works. Though Puckette is the primary author of the software, PureData is an open source project and has a large developer base working on new extensions to the program enabling projects in the following fields: OpenGL, Physical Modelling, motion recognition, physical computing and image analysis and manipulation.

The PureData community is an international one, it consists of academic and independent researchers that interact through mailing lists, forums, wikis, irc chat, conferences, and the PureData conventions. l'Œuvre ouverte, the latest convention occurred in Montreal in 2007 and consisted in a series of conferences, demonstrations, round table discussions, performances and exhibitions. It brought together artists, developers and theoreticians who develop, use and reflect on PureData. It acknowledged the broad range of artistic disciplines that make use of the software and addressed questions of openness and accessibility. It attempted to provide a theoretical context for the understanding of media art practices that engage in the aesthetics and politics of Free Open Source Software Culture.

GridFlow introduced a new matricial data type to PureData. It provides a unifying view of multimedia information. Several kinds of data raster graphics in any number of channels, coordinate transforms, matrices, vectors may all be represented by Grids (also known as multidimensional arrays). Grids exist in several ways: they are usually streamed from object to object, but they can also be stored in memory or stored into a file. GridFlow allows users to work on FFT image transformations and multiple blobs position detection. An example of each will be provided and basic object classes will be introduced.

In conclusion, we will address some of the meaningful exchanges between software programmer and artist through the evolution of our work. Over the years, multiple projects have been realized with the help of PureData and GridFlow and in turn have spurred further software development. Research on GridFlow and artworks have been possible through the support of the Visual Arts Department of the University of Ottawa and grants from the Canadian Social Sciences and Humanities Research Council.