

Project

FLOSS in Media Art

Lecturer and Proposal written by

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Objective

FLOSS (Free Libre and Open Source Software) in Media Art Workshop Series aims to enhance technical knowledge and insights for local media artists and broadens their innovative insights on the intersections of technology and media art.

While many tools exist for sound, multimedia and VJ purposes, few of them are designed with an open architecture which allows artists to configure the tools they use themselves. Fewer still are free.

The importance of an open source development model may seem academic at first, but in fact there is a strong need for a workshop of this kind. The fees, licenses and restrictions that come with commercial software become more and more restrictive every day, and the knowledge in the new media community of free and open source software is extremely limited.

Coupled with this is the stigma that open source software, such as Linux, is "too difficult" for artists to use. This project aims to provide the tools which can be taken away and put to use immediately and the knowledge of how to use them productively.

The workshop is for beginners. The level will go up while the workshops progress.

The 3 workshops in this series are closely connected to each other and will broaden the technical skills and innovative insights of artists for creating their own artworks. At a result, participants are encouraged to join all 3 workshops.

In the last phase, the basic idea is to create an on-line knowledge base and community about audiovisual development and artistic innovations for artists.

Project Description

The workshop series will be held in the Hong Kong Art Center. There will be 3 stages of workshops in this series. Each workshop will be divided into 6-8 sessions, each session lasts for 3 hours.

The first stage will be **Pure Data and Media Art** (<http://pd.iem.at>), workshops on audio and visual development for media artists. Participants will learn about syntax, externals and data structure of PD, development of self-customized audiovisual and 3D realtime animation tools.

The second stage will be **Processing and Media Art** (<http://processing.org>), workshops on net art development for media artists. Participants will learn about the syntax and essence of Processing, on-line database communication, software prototyping and implementation on Java.

The third stage will be **Introduction to An Artistic Operation System** (<http://dynebolic.org>), workshops on Linux for audio and visual development for media artists. Participants will learn about live bootable distribution of Linux, basic Linux operation, special audio and visual application on Linux.

At the end of each stage, a short presentation of the workshop will take place. This presentation will be open to an audience invited by the participants. The workshop will finish with a "Jam Session" or presentation session, in which the participants can share the creations they have made with each other and with the audience.

Date

Jun-Aug, 2005

Venue

PC Lab, Hong Kong Art Center

Schedule

Month	Stage	Detail
Jun	Pure Data and Media Art	2 sessions in every week
July	Processing and Media Art	2 sessions in every week
Aug	Introduction to an Artistic Operation System	2 sessions in every week

Project Details

1st Stage

Pure Data and Media Art (<http://pd.iem.at>)

Pure Data is a visual, object-oriented data-flow programming language which can be used for a wide variety of multimedia purposes. Pure Data is free to download, use, modify and share, is open source and has a huge international user community who are often quite willing to give pointers. It is commonly used by sound, video and media artists for performances, installations, web projects and custom devices. Besides its modular structure, its main advantage is being able to manipulate data, sound and image all within the same environment.

PD runs on the Linux, OSX, win32 and Irix platforms, allowing it to be used on almost any hardware, from desktops to palmtops. No previous programming experience is necessary to learn PD, although a working knowledge of digital audio and video is recommended.

This course will give the participants enough background in PD to continue their own explorations in the program, and hopefully to create a local users-group to continue to help and support each other.

Session	Topic	Content
1	Introduction to Pure Data	Installation and configuration for various OS Basic Operation and programming structure in PD
2	Pure Data as a Language	Vocabulary and grammar in PD Syntax and common objects in PD
3	Pure Data for Sound I	Signal-processing in PD Syntax and common objects for Audio
4	Pure Data for Sound II	Monophonic synthesizing in PD Audio analysis in PD
5	Pure Data for Video I	Live video and image processing Development of VJ tools
6	Pure Data for Video II	Development of Live Audiovisual Tool Development of Motion Detection and Network performance
7	Pure Data for 3D	Manipulation of 3D graphical objects. Images and videos can then be applied as textures
8	Pure Data and Contemporary Media Art	Discussion on media art using PD Presentation or "Jamming" to Public

2nd Stage

Processing and Media Art (<http://processing.org>)

Processing is a programming language based on Java and environment built for the electronic arts and visual design communities. It is created to teach fundamentals of computer programming within a visual context and to serve as a software sketchbook. It is used by students, artists, designers, architects, and researchers for learning, prototyping, and production.

The software is currently in a prerelease stage, but features and bug fixes are being made as we head toward a more complete "1.0" release. Processing is free to download and available for PC, Mac, and Linux.

Processing is used at many universities and institutions including: MIT (Cambridge), University of California Los Angeles, Interaction Ivrea (Turin), Yale (New Haven), New York University, San Francisco Art Institute, Universität der Künste (Berlin), Royal College of Art (London), Universidad de Los Andes (Bogota), HyperWerk (Basel), Hongik (Seoul), Ateneo de Manila University, and many more.

Processing is an open project initiated by Ben Fry and Casey Reas.

Session	Topic	Content
1	Fundamental Programming	The basic syntax of Processing Basic Operation and programming structure in PD
2	Variables and Control Flow	Data structure and array Conditional and Control Data Flow
3	Image Processing and Interface Design I	Basic functions in Processing Basic image processing in Processing
4	Image Processing and Interface Design II	Motion Graphics in Processing Basic GUI in Processing on Net Art
5	3D graphics and Animations in Processing	Introduction to 3D concept Introduction to Object Oriented Programming I
6	3D graphics and Animations in Processing	Physical Simulation in Processing Introduction to Object Oriented Programming II
7	Audio Processing and Human Computer Interface	Introduction to audio processing in Processing Introduction to HCI and motion detection in Processing
8	Processing and Contemporary Media Art	Discussion on media art using Processing Presentation or "Jamming" to Public

3rd Stage

Introduction to An Artistic Operation System

This workshop will focus on Dyne:bolic GNU/Linux (<http://dynebolic.org/>) which is a live bootable distribution, an operating system which works directly from the CD without the need to install or change anything on the hard disk. It is user-friendly, recognizes your hardware devices (sound, video, firewire, and USB) and offers a vast range of software for multimedia production, specialized on media art software and development. It is shaped on the needs of media activists, artists and creatives as a practical tool for multimedia production. It can be manipulate and broadcast both sound and video with tools to record, edit, encode and stream, having automatically recognized most device and peripherals.

Since it is user-friendly and can be used without installation on harddisk, it is prominent to be an introduction to Linux and open source software for media artists and theorists. It features lots of creative tools for audio/video multimedia production especially on surf, stream, edit, encode and broadcast both sound and video. Hence, it enables the exploration of in-deep the possibilities offered by real-time video manipulation and procedural video scripting, where the use of an object oriented language and basic Linux operations can be introduced to newbies in a simple way.

Session	Topic	Content
1	Introduction to Linux and Dyne:bolic	The basic command of Linux Installation and Introduction of Dyne:bolic
2	Open Source Image Processing and 3D Animation Tools	Introduction to Gimp, image manipulation software Introduction to Blender, for 3d modeling and rendering
3	Open Source Visual Tools on Dyne:bolic	Introduction to FreeJ for Live VJ performance Introduction to Kino, Cinelerra and LIVES for video editing
4	Open Source Audio Tools on Dyne:bolic	Introduction to MuSE for audio streaming and mixing Introduction to Audacity for audio mixing and synthesis
5	Pure Data and Live Audio on Dyne:bolic	Introduction to Pure Data on Dyne:bolic Introduction to SoundTracker for live audio performance
6	File Sharing and Remote Access on Dyne:bolic	Introduction to VNC and RDesktop to remotely access Introduction to SSH and network tools

Biography

Annie On Ni WAN is a young activist in art of interface and an innovator in science of human-computer interaction, Annie has achieved Bachelor of Arts in Creative Media from School of Creative Media, City University of Hong Kong in 2001.

She has achieved Master of Science in Art and Technology at Innovative Design, Chalmers University of Technology, Sweden. Her recent works including locative media and interactive installation have been shown in Mondal Museum, Sweden, Syndicate Potential, Strasbourg, France, an interactive theater performance in Oslo, Norway and locative media project presentation in Berlin, Germany.

She received travel and project grants from various organisations in Sweden, Norway, Nordic Fund and EU Culture Fund. Her latest project GeoLeds has been presented and exhibited in Art+Communication Festival 2004, Riga, Latvia and Pikel 2004, FLOSS in Motion, BEK Bergen, Norway. Her kinetic art interface research paper, as well as part of her master thesis Positive/ Negative Space has been presented in Multimedia Art Asia Pacific Conference 2004, Singapore.

From September, 2005 onwards, she will be a Phd candidate with full tuition waiver scholarship and Top Scholar Award in Center For Digital Arts and Experimental Media (DXARTS), University of Washington, Seattle, US.