01

Introduction to Handling Complex Media

January 28, Tue 5:30pm – 9:30pm
721 Broadway, Room 652

Topics
- Introductions, syllabus review, course format and goals
- Creating a Preservation Plan
- Video and discussion: Preservation Plan for the The Furbee Organ

Optional Readings
- Oleksik: Janet Cardiff and George Bures Miller’s The Killing Machine

Lab
- Analyze Complex Media Object & create Preservation Plan
- Present Preservation Plan for Complex Media Object

02

Virtualization

February 4, Tue 5:30pm – 9:30pm
721 Broadway, Room 652

Topics
- Introduction to Virtualization and Emulation
- How Computers Work: Hardware

Readings
- Rothenberg: The Emulation Solution. Avoiding Technological Quicksand (1998) [SECTION 7 & 8 ONLY]
McKeehan, Dietrich, Kim, Rhonemus  How to Party Like it’s 1999: Emulation for Everyone  
Tour the Virtual Desktop (online emulator)

**Recommended**

Rothenberg: The Emulation Solution. Avoiding Technological Quicksand (1998) [FULL DOCUMENT]  
Granger: Emulation as a Digital Preservation Strategy (2000)  

**Reference**

Krzyzanowski: Rutgers Department of Computer Science History of Operating Systems

**Lab**

Introduction to VirtualBox  
Mount CD ROM ISO in VirtualBox // Windows 95  
Download Oregon Trail ISO  
Internet Archive CD-ROM Software Library

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**03**

**Microcontrollers**  
February 11, Tue 5:30pm – 9:30pm  
721 Broadway, Room 652

**Topics**

Introduction to the Arduino Microcontroller  
Microcontrollers for Conservation

**Readings**

Banzi: How Arduino is open-sourcing imagination

**Lab**

Introduction to the Raspberry Pi  
Raspberry Pi with DHT11 Temperature/Humidity Sensor

**Exercise files**
DHT11 Wiring Diagram
Download, install, and run Adafruit’s DHT11 sensor software

04
Troubleshooting Theory & Documentation
February 18, Tue 5:30pm - 9:30pm
721 Broadway, Room 652

Topics
Troubleshooting Theory, Systems Mapping & Documentation
Discuss Midterm Assignment

Readings
Dulaney, Certification Magazine: A guide to troubleshooting theory from a CompTIA A+ perspective
Acaroglu: Tools for Systems Thinkers: Systems Mapping

Recommended
Jonnasen & Hung: Learning to Troubleshoot

Lab
Using Markdown for Documentation
Wordpress: Markdown quick reference cheat sheet
Open Lab Time for Assignment One

DUE: PROJECT PROPOSAL, FRIDAY, FEBRUARY 21ST

05
Digital Forensics: BitCurator & Disk Imaging

Guest Lecturer: Eddy Colloton, Project Conservator of Time-Based Media at the Hirshhorn Museum

Topics
Forensics: Basic concepts and usage for investigation and preservation
Forensic disk imaging for archiving and preservation

*NOTE: Nicole is away for conference
February 25, Tue 5 30pm
– 9:30pm
721 Broadway, Room 652

**Readings**
Lee, Woods & Garfinkel Extending Digital Repository Architectures to Support Disk Image Preservation and Access

**Resources**
Disk imaging resources from Eddy Colloton

**Recommended**
Rechert et al Characterization of CD ROMs for Emulation based Access
Valizada et al: Cloudy Emulation – Efficient and Scalable Emulation-based Services
Task Force on Technical Approaches for Email Archives Exploring Email Emulation
Cochrane: Designing a Universal Virtual Interactor (UVI) for digital objects

**Lab**
Explore the BitCurator Environment
Disk Imaging using Guymager software
Add CD ROM drive (physical) or ISO disk image (virtual) to VirtualBox
Access disk image data using BitCurator Disk Image Access (export files from disk image)

**Guest Lecturer: Ethan Gates, Software Preservation Analyst at Yale Libraries**

**Topics**
Class discussion: From Bitstreams to Heritage & the BitCurator Environment
Using emulation in archives and repositories
Computing environments and Virtual Box
Readings
Owens: Emulation as a Service (EaaS) at Yale University Library (2014)
Gates: Classroom Access to Interactive DVDs
Scott: A Second Christmas Morning The Console Living Room

Resources
Gates: emulation resources repository
Internet Archive: Tour the Console Living Room
RHIZOME: The Theresa Duncan CD-ROMs

Lab
Open Lab Time for Midterm Assignment

07

Floppy Disks & Kryoflux
March 10, Tue 5:30pm – 9:30pm
721 Broadway, Room 652

Guest Lecturer: Shira Peltzman, Digital Archivist at UCLA Library

Topics
Archiving and preserving data stored on floppy disks

Readings
The Archivist's Guide to KryoFlux (Read pages 1–6, review/skim remainder of the guide)

Recommended
Waugh: A Dogged Pursuit: Capturing Forensic Images of 3 5" Floppy Disks

Lab
Open Lab Time for Midterm Assignment
SPRING RECESS
March 16 - March 22

08
Midterm Presentations
March 24, Tue 5 30pm
9:30pm
721 Broadway, Room 652

09
HCM in Museums I: The Complex Medium of Sound
March 31, Tue 5 30pm
9:30pm
721 Broadway, Room 652

Topics
Handling Complex Media in Museums
The Complex Medium of Sound

Readings
Pip Laurenson: Authenticity, Change and Loss in the Conservation of Time-based Media Installations
Oleksik: Rewind: A Brief History of Caring for Video Art in the United States

Recommended
Bishop: Evolving Exemplary Pluralism
Fino Radin: The Nuts and Bolts of Handling Digital Art
Phillips: Implementing Time-based Media conservation in Museum Practice
Brost: A Documentation Framework for Sound in Time-based Media Installation Art

DUE: MIDTERM ASSIGNMENT, FRIDAY, MARCH 27TH
Artist's Studio and Archive
April 7, Tue 5 30pm
9:30pm
721 Broadway, Room 652

Guest Speaker: Jon Deringer, Electronic Arts
Intermix (EAI)

Topics
The Artist's Studio and Archive

Readings
Lozano-Hemmer: Best Practices for Conservation of Media Art from an Artist's Perspective or download the audio-only version
Gallery emails - PDF
EAI: Artist Description: Bill Viola
Laurenson: The Management of Display Equipment in Time-based Media Installations

Recommended
EAI resource guide
Matters in Media Art website: www.mattersinmediaart.org
Lozano Hemmer: Level of Confidence

Lab
Open Lab Time for Final Assignment
HCM in Museums II & Discussion of Conservation Ethics

April 14, Tue 5:30pm – 9:30pm
721 Broadway, Room 652

Guest Speaker: Kate

Topics
Handling Complex Media in Museums
Conservation Ethics

Readings
AIC Code of Ethics and Guidelines for Practice
V&A Ethics Checklist
Richmond: The Ethics Checklist - 10 Years On
Ashley-Smith: A Role for Bespoke Codes of Ethics of Ethics
SAA Core Values Statement and Code of Ethics

Recommended
Mellon Conservation Initiative
MoMA-Mellon Media Conservation Initiative
The Acquisition Process - Getting Started
The Acquisition Process - video

Lab
Open Lab Time for Final Assignment

Digital Film

April 21, Tue 5:30pm – 9:30pm
721 Broadway, Room 652

Topics
Digital Film

Readings
FADGI Digitizing Motion Picture Film Exploration of the Issues and Sample SOW
Digital Dilemma No.1 (Sections 5 & 6)
Digital Dilemma No.2 (Progress report, Section 5)

For Review
NETFLIX Specifications and Guides - especially Production/Post production
NETFLIX Technology Resources - especially IMF Tools
& Assisted QC Tools
Digital Cinema Initiatives Current Spec - look over the sections of DSM, DCDM and DCP
Academy Color Encoding System
Embedding Metadata in DPX Files FADGI Report

Lab
Open Lab Time for Final Assignment

13

Software Based Art
April 28, Tue 5:30pm – 9 30pm
721 Broadway, Room 652

Topics
Software-Based Art

Readings
Engel & Wharton: Source code documentation as a conservation strategy for software-based art
Engel & Phillips (2019) - Applying conservation ethics to the examination and treatment of software- and computer-based art
  Part I
  Part II
Phillips, et al: Restoring Brandon, Shu Lea Cheang's Early Web Artwork

Recommended
Lialina & Lurk: Owning Online Art: Selling and Collecting Netbased Artworks
Scott: The Hidden Shifting Lens of Browsers
Fino-Radin: Digital Preservation Practices and the Rhizome Artbase

Case studies
https://walkerart.org/magazine/net-art-conservation-piotr-szyhalski
http://www.vam.ac.uk/shekou/how-we-collected-wechat/
Lab
Open Lab Time for Final Assignment

14

Last Class: Student Presentations
May 5, Tue 5:30pm – 9:30pm
721 Broadway, Room 652

DUE: FINAL PROJECT, FRIDAY, MAY 10TH

Handling Complex Media: CINE-GT 1805
Moving Image Archiving and Preservation
New York University

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