IFLA WLIC 2013
SINGAPORE

Submitted on: February 6, 2013

Learning from the SCI-Arc Media Archive

Kevin McMahon
The Kappe Library, Southern California Institute of Architecture (SCI-Arc), Los Angeles, U.S.A.
kevin@sciarc.edu

Abstract:

The expertise and resources required to create accurate and useful textual guides for a large collection of moving image documents exceed the means of most institutions. However, during 2011-2012, when the Southern California Institute of Architecture created an online Media Archive of lecture videos (http://sma.sciarc.edu), it devised a process for harnessing the subject expertise of non-professional cataloguers to generate searchable descriptive texts for 1000+ hours of video in three months. The paper outlines the creation of an efficient online work interface, plus a simple step-by-step procedure that would minimize the need for video or cataloguing expertise. The creation of three kinds of searchable texts are discussed: controlled vocabulary names and verified dates, narrative descriptions, and brief subject tags known as "Themes." The narrative descriptions were intended to capture the idiosyncratic vocabulary of each speaker in its specificity, while the keywords were more generic, collocating diverse expressions of a similar idea. The paper also discusses the drawbacks of this approach, including the protracted training period at the beginning, and the intensive copy editing and fact checking required at the end. Hopefully, a concise outline of our strategy and process will encourage others to re-examine their own video resources—and act to save them before it is too late.

Keywords: Video, Cataloguing, Website, Architecture, Time-saving, Non-professionals

I'm going to outline the Media Project up to now, stressing aspects that I hope will be interesting to this audience. Our team consisted of over two dozen people working full- or part-time over 12 months; the key personnel being myself and Reza Monahan as project managers, and Aaron Bocanegra as web designer. I'm not going to claim that we did anything technologically or conceptually ground-breaking. But we devised an efficient, economical and time-saving way of making media accessible. I will present our process in detail because I believe that it can be copied and adapted by anyone.

SCI-Arc is not a media business or a media archive; we do not have vast quantities of time, equipment or money. But we have been able to rescue our videos from neglect and make

them into a resource useful to the public, and a source of credit to the institution. You can do it, too!

A bit of background information:

SCI-Arc began in 1972, originally housed in an industrial neighbourhood of Santa Monica, California. In addition providing an architectural education for undergraduate and graduate students, SCI-Arc provided a venue for free, public lectures by architects, planners, and artists from Southern California and from other parts of the world. These public events have always been an important part of SCI-Arc, and we see the Media Archive as an extension of this mission to engage the general public.

It's important to note that public lectures occupy a role in architectural discourse unlike other disciplines. In the 15th century Leon Battista Alberti insisted in *On the Art of Building in Ten Books* that one of the skills required by an architect is the ability to debate scholars and orators. In the 21st century the American Institute of Architect's *Code of Ethics* requires all architects to "strive to improve public appreciation and understanding of architecture and the functions and responsibilities of architects." Unlike academic presentations, the modern architecture lecture is usually presented in the context of a mixed audience of professionals, students and the general public. Unlike academic papers, the presentations usually don't make it into print. Schools of architecture take public lectures seriously: in the U.S.A., maintenance of a regular program of guest lecturers is considered by the National Architectural Accreditation Board as a necessary part of architectural education.

Since 1974, SCI-Arc staff, faculty and students have been videotaping the public lectures. It's important to stress is that these videos were not created with the intention of being documentation for future generations, but to facilitate access to events by current students and faculty. But after three decades, the collection has *become* historic, documenting not only international architectural celebrities, but the Southern California architecture scene. As is often the case with video, an archive was created unintentionally.

This material became the responsibility of the SCI-Arc library in 2005, and discussion began about what to do with about 4000 video elements—with no inventory, let alone a catalogue. On one hand it was an archive of unique and significant content, but on the other hand it was an archive of nearly every defunct video format ever produced. The hardware necessary to view much of it—Sony reel-to-reel tapes, U-matic 3/4–inch tape, etc—was already obsolete and unobtainable.

Fortunately, a decade earlier, SCI-Arc had completed a transfer of the oldest material to the more modern VHS format. I will explain later how this step expedited our project. However, by 2005, having VHS transfers of our material wasn't useful to patrons, who no longer had VCRs.

Also we were becoming increasingly aware of the chemical instability of older videotape stock. Our tapes were in good condition, but the usable lifespan of videotape—even with the best care—is brief. The videotape produced in the 1970s was never intended to be used 30 years, let alone 40. With video, *Preserving means Reformatting*—transferring content to another format—and waiting almost 40 years to do it is risky. After 40 years there is a high probability that most of the binder layer has already detached from the substrate layer, and will only tolerate a single playback—and maybe not even that!

We studied existing online video archives. None of them was relevant enough to provide a good model. On the other hand, there were sites that had specific qualities we wanted to emulate. The most sophisticated web archive circa 2010 was a commercial clip licensing site created by the Deluxe corporation (http://www.johnnycarson.com)—the most interesting aspects of which are unfortunately not accessible to the general public. Behind the paywall, customers can search full-text transcripts, credits and subject tags for 30 years' of the Johnny Carson television talk show, linked to viewable low-resolution versions of each episode. At a more modest, non-commercial scale, the Tate Modern's digital video channel (http://www.tate.org.uk/context-comment/audio-video) had an interface that was efficient and attractive, but appealingly unobtrusive. MIT Video (http://video.mit.edu/) also managed to present a wide variety of content in a clear, user-friendly matter. We liked the way UbuWeb (http://www.ubuweb.com) provided updates, mini-exhibits and other promotional efforts to entice visitors to explore its collection of often bewildering avant-garde productions. But we were less pleased with its rather cavalier attitude towards image quality, document completeness, and copyright.

By 2011 we had a plan, and secured funding. The plan was based on two principles that guided the whole process—especially decisions relating to cataloguing.

One was that the Media Archive was to be an *archive*—not a selection or a curated exhibition. There would be no editing on the basis of content. It would include everything available, and it would present the video "as is," unedited, with audio and image imperfections un-corrected. The presentation would strive to be a neutral background: the most colourful and interesting thing about the site should be the videos, not the interface.

Another principle was that we were going to keep true to the spirit of public programs at SCI-Arc, and try to make something that would be appealing and interesting to non-specialists. We wanted to accommodate scholarly visitors, but we also wanted to accommodate local teenagers researching their neighbourhood's history.

And with regard to implementation, we were operating under two time constraints. First, a condition of our funding was that major expenses had to be completed within 12 months. Second, there was a sense of urgency caused by the inherent fragility of videotape. Our material had been well cared-for, but we didn't know how much was already disintegrating.

So this is how we did it.

We began by digitizing about 800 videos all at once. In this first effort we used the VHS transfers from the 1990s, even when more original video elements were available. I realize that this is a violation of the ideal moving image archiving practice, in which the elements closer to the source are always preferred for preservation and transfer. However this was a financial decision. Our cost for digitizing VHS was approximately $50 per tape, whereas digitizing more antique formats—such as Reel-to-Reel videotape—would range from $500 to $1000 per tape. By sacrificing a theoretical margin of audio and image quality, we were able to digitize everything. Because this was our first attempt to digitize the material, we felt this was the right decision.

The first challenge was assembling the video elements, inventorying them, and organizing them for the vendor to digitize. This took a month. However, I must immediately qualify that

and confess that, even now, two years later, we are still organizing and inventorying our physical media elements. Every time we retrieve a box of video elements from off-site media storage, we discover material we didn't know about. And so, whenever we have some money available, we digitize a few more items. Instead of being one step, retrospective digitization has become an on-going process. I stress this complication because I feel it is a very typical situation—especially for institutions which accumulated material as a by-product of their activities, not according to an archival collection development plan. Eileen Bowser, former film curator at the Museum of Modern Art, told an interviewer recently, "The lost films aren't in the attics or in the basements anymore. They are on the shelves in the archives, but nobody knows they're there."

At the end of June 2011, we sent 792 videos to World of Video & Audio for digitization. WOVA was a small post-production shop that specializes in digitization and video transfer. They not only were the low bidder, but also had done projects for UC Santa Barbara and other schools—which was unusual in Los Angeles.

Mention of Los Angeles reminds me that I must stress that, even though we were fortunate to have an abundance of media archive institutions and related business in our hometown, the expertise and technology necessary for a project like ours are available in every major city. The Association of Moving Image Archivists has members everywhere. The media preservation community is outstandingly international, cooperative and supportive. I'm regularly amazed by preservation and restoration projects in which the lines separating academic, commercial, and cultural institutions are irrelevant, and competition is replaced by cooperation. Video preservation, in particular, seems to attract personalities who view it as a profession, craft and calling. Contact AMIA. Contact your local video centre. Contact me.

Back to Los Angeles.

After four months of digitizing, WOVA delivered five hard-drives with MPEG-4 and Quicktime versions of our videos. Uploading the files to our server—along with the more recent born digital videos—took 50 days.

So now the real work could begin! Perhaps the biggest challenge of the Media Archive was making the videos searchable. The elements required to create an accurate and useful textual guide for a large collection of moving image documents exceed the capabilities of most institutions: cataloguers with expertise in the subject matter and expertise in cataloguing, plus generous quantities of time. We had none of those things. Hiring a team of media cataloguers to produce a MARC-style catalogue was not possible without our budget or our 12-month schedule.

We investigated verbatim transcripts of each video, but quickly discovered that transcribing—in-house or through vendors—would cost more than our total budget, and would probably take years to complete. And, in retrospect, this was fortunate: verbatim transcripts would have required such extensive editing that they would have probably lost their effectiveness as time-keyed markers to the video content.

Our solution was based on the fact that we were not creating a catalogue to find the location of videos, but creating the actual showcase for viewing them. Our archive was going to exist entirely online—encompassing both searching and accessing. Moreover, since we weren't

going to be making our physical elements available, it was desirable to avoid the appearance of a conventional library OPAC.

As an exclusively online resource, we looked to emulate Google more than library OPACs. Instead of fine-grained, faceted cataloguing, we would offer varied and intentionally redundant texts, which would all be searchable—within the site and via Web search tools.

At the same time, we were committed to IFLA's *Functional Requirements for Bibliographic Records* outlining the tasks metadata should facilitate:

• To find a document (or set of documents),
• To identify the specific qualities of a document,
• To select, clarify the difference between options,
• To obtain access.

Typical architectural research questions suggested general categories of subject headings:

• Name of lecturer, or firm name
• Name of host institution
• Title of lecture, symposium, event or series
• Date of event

Which could be supplemented with additional access points relating to the lecturer's content, including:

• Building types
• Clients
• Design philosophy, or approach, articulated in the lecture
• Illustration type (models, plans, sections, details, etc.)
• Sites (town, neighbourhood, and also topographic conditions)
• Techniques of design, rendering and presentation
• Technologies employed in construction, or in the completed building

Fine: but how to actually generate texts for about 1000 hours of video, in three months?

We struggled over the right way to do this, and concluded that analysing the content of these videos was less a technical task than an interpretive one. The crucial skill was not familiarity with cataloguing, video or web design, but familiarity with architectural discourse. Our job advertisement provides the most concise description of the task we devised:

Each Video Reviewer will be assigned approximately 100 digital files to review. For each file they will complete an Analysis Worksheet, which will require them to

1. Compile and verify descriptive data on a spread-sheet.
2. Flag audio and image problems for evaluation, and exceptionally cinematic moments (if any)
3. Parse the content of each lecture into 15- to 20-minute subclips (chapters) about a specific topic
4. Write a narrative description and assign descriptive tags for each subclip
5. Title each subclip (1 to 15 words)

Each video will require approximately 3 hours of work—2 hours to review and 1 hour to complete tasks.

The videos and viewing tools will be accessible online. At first, Reviewers will need to work in the library. Off-site work is possible, with increased familiarity with the interface and the tasks.

The end of September, we hired a crew of 10 graduates of SCI-Arc, recent undergraduate and graduate students.

Our web designer had prepared a Word Press online interface where we could view and work with the videos. For the first weeks we worked together in the SCI-Arc library at a big circular conference table, each at a laptop connected to an Ethernet cable router we named *The Octopus*.

We all had access to each other's work—though there were checks that prevented anyone interfering with work in process. Each Reviewer also submitted an Excel data spread-sheet to the Editors—me and the co-project manager—after completing work on a video. This alerted me and Reza to review the work of the Reviewer. It also provided a way of keeping track of the crew's progress.

The Review Crew had to determine whether or not a video was watchable—not in terms of content—we weren't going to make those kinds of judgments—but in terms of the intelligibility of the audio and image. While we were committed to presenting the videos "as is," without any improvement or editing, at the same time, we didn't want to populate the site with material that would discourage viewers.

But none of our video, even the best, was broadcast quality. What are the criteria? What defines acceptable production values? It was only after watching and discussing lots of videos that we developed a consistent approach. We defined five categories:

• *Unusable*: No image or audio throughout
• *Bad*: Bad image or audio throughout
• *Potentially fixable*: intermittently poor image or audio
• *OK*: A few bad spots
• *Good*: Clear image and audio throughout

We only published *OK* and *Good* videos. We kept the others, of course, but didn't make them public.

An important discovery we made was that audio had priority over image: videos with clear audio that were easy to follow, were acceptable even if the image was murky. This was a surprise to me; I thought visuals were *always* the most important thing. But there was 100% consensus on this. One of the Reviewers put it best: "Who cares if Zaha Hadid's images aren't crisp? You can find those images anywhere. What's important is hearing Zaha speak, in her own voice, at a specific time and place."

In the end, 28% of our digitized videos turned out to have audio and image problems severe enough to keep unpublished. But this is not necessarily the end of the story: better quality

elements may turn up. And, given sufficient resources, technical remedies might be found for some of the problems. I stress the fact that even though we had sampled and tested a range of videos, we began the project without knowing exactly what percentage would be un-usable. Reviewing was essential.

I mentioned the different kinds of texts the Review Crew generated.

The first was the most basic kind of information: *Names* and *Dates*. Both the Review Crew and we Editors spent a lot of time doing researching and verifying these facts. Our digitizer had named each MPEG-4 file with the information on the videotape box. This information was full of every kind of error—from misspelling, to mis-identification, to mis-dating. Often the labels referred to content that had been taped over decades ago.

One aspect of our project that we had originally conceived as a non-essential extra proved helpful with verifying facts. The archive of SCI-Arc posters often provided independent documentary evidence of names and dates.

The names required extensive authority control work. I used the *Avery Index to Architectural Periodicals* to regularize personal names, but it was especially helpful with the names of firms—which change often and can be a source of confusion for researchers.

The second type of text was the *Narrative Descriptions*. We asked Reviewers to write short, clear, declarative sentences in the present text. "Focus on the content," we asked, "Emphasize people, places and things. Be specific!" I can demonstrate what we were after by comparing a Reviewer's draft text and its editorial revision. One Reviewer submitted the text

"*Odile Decq presents a museum in progress in France, showing the overall scheme and initial construction phases,*"

which the Editors revised to

"*Odile Decq presents a French Regional Contemporary Art Funds (FRAC) museum in Rennes, featuring a monumental artwork by Aurélie Nemours*"

We urged the Reviewers to "Write lots of nouns!" and you see the editorial revision inserted the building's name, the site's name, and identified the artist responsible for a major part of the project. This was providing the kind of subject access most relevant to our users. Phrases like "showing the overall scheme," were dispensable, being the sort of thing that could be taken for granted given the context.

Let's look at a complete narrative description. The lecture by Heather Townsend and Casey Jones, entitled "Building Diplomacy" receives a general narrative description, for the complete video, known as the "parent":

Heather Townsend reviews the scope and history of America's embassies, from the 1797 consulate in Barcelona to the 275 missions currently operating in 190 countries, and presents a video, Another Language of Diplomacy, on the Design Excellence Program of the Bureau of Overseas Buildings Operations (OBO) and General Service Administration (GSA). Casey Jones discusses the Design Excellence Program as a revitalization of the GSA's original 1962 Guiding Principles for Federal Architecture after a period where security

dominated all other issues. Christine Foushee engages Townsend and Jones in a discussion of how the OBO tries to encourage younger designers, embassies as public spaces, and how embassies can participate in local revitalization efforts.

Plus each subclip of the "parent" video has its own narrative description. These are intended to provide more detail, and employ slightly different language. For example, the second subclip for this lecture:

Heather Townsend reviews the scope and history of America's embassies, from the 1797 consulate in Barcelona to the 275 missions currently operating in 190 countries. In terms of design, she identifies three distinct eras. During the initial Adaptive Phase, up to World War II, the U.S. re-purposed existing buildings for embassies. During the Modern Phase, from the end of WWII to the 1980s, Cold War politics encouraged purpose-built embassies, often with bold designs by designers like Saarinen and Gropius. The 1983 Beiruit barracks bombing and the 1998 embassy bombings in Kenya, Tanzania, and Dar es Salaam inaugurated the Security Phase, in which embassy personnel around the world were moved from historic buildings in cities to suburban compounds, designed according to a Standard Embassy Design guidelines.

The "parent" general narrative description reduced all this detail to half a sentence. Some redundancy is inevitable, but our goal was to provide different levels of detail with different language—all of which would be searchable online.

The narrative descriptions were composed in conjunction with an editorial intervention: dividing each video into chapters. This *subclipping* would permit a more precise correlation between the description and the relevant moment of the video. There is no escape from the fact that moving image research is time-consuming, but we divided our videos into chapters in the belief that even this mall help would be appreciated.

The third kind of text generated were *Themes*. Reviewers created three to five descriptive tags for each parent video and subclip. The keywords were more generic, collocating diverse expressions of a similar idea. E.g. the narrative would describe Patrik Schumacher talking about "parametric design," while the keyword themes would note the discussion of "Generative systems"—a term which was also applied to lectures by Manuel de Landa, Karl Chu, and software designers in 1985. Other examples are not so exotic: the Odile Decq video was accompanied by the theme, "Art museums," even though that phrase doesn't occur in the accompanying narrative description.

While our work interface prompted Reviewers to use themes already in the system, it didn't restrict the creation of new terms. Hence the Reviewers created a lot of duplication. The task of regularizing names and subject tags took three months. In this work, I referred to the *Library of Congress Name Authority File*, and *Subject Headings*, and the *Avery Index*, and the *Thesaurus of Geographic Names*, especially for ancient sites. The resulting 3000+ terms are still rather idiosyncratic: I was trying to square the circle between the lecturer's neologisms, the Reviewer's lapses into architectural jargon, systematic controlled vocabularies, and natural language tags that non-specialist researchers would understand.

So, to refer back to the lecture on embassies, the themes for the "parent" clip—the video as a whole:

Bureau of Overseas Buildings Operations,
Design Excellence Program,
Embassies,
General Services Administration,
Government buildings,
Representation,
Security,
United States

And the tags for the second subclip, are similar, but provide a few more details:

Beirut,
Eero Saarinen,
Embassies,
Government buildings,
Security,
United States,
Walter Gropius

When we completed our initial cataloguing work at the end of January 2012, we felt our experiment in moving image cataloguing had been successful. In 14 weeks the Reviewers described and published 588 videos, generating approximately 200,000 words of searchable descriptive text. Their texts accurately summarized often abstruse discourses, and succeeded in capturing the idiosyncratic voice of the lecturers.

We also felt there some drawbacks to our approach.

First: the training period took longer than expected. One week of intensive training followed by one week of hands-on collaborative work was only the beginning. It took an additional two weeks for the Reviewers to become totally self-sufficient.

The second lesson was that the texts the Reviewers generated required extensive copy editing and fact checking. Despite reviewing texts as soon as they were produced, initial copy editing wasn't completed until two months after the crew stopped working.

In conclusion, I want to challenge our small, independent educational and cultural colleagues to take another look at their own video resources. If, like SCI-Arc, they were active in the 1970s, they probably have boxes of videos stored someplace, inaccessible, unused, and probably starting to decay. Those videos are probably unique, and once they've disintegrated, they're gone. You don't have to accept this; we did it, and you can too.