SEAMUS

The Newsletter of the Society for Electro-Acoustic Music in the United States, providing news, interviews, and announcements.

David M. Luftig, Research Services Librarian at the University of Dayton, takes up several important questions related to the challenges and benefits of maintaining the University of Illinois Experimental Music Studios' archive. His report, including links to external sources, begins on page 7.

Tapes from the University of Illinois at Urbana-Champaign Experimental Music Studios Archive

"...how do we speak well about electronic music? How do we unroll all of the complex history and semiotic activity into meaningful discourse, without flattening the necessary complexity? Further, if this is primarily a listening act, why not change the assumption that rational terms define the objects of listening for us prior to our encounters with them? Especially if these rational terms carry enormous cultural specificity..."

Dustin Ragland

Academy of Contemporary Music at The University of Central Oklahoma

Ableton Certified Trainer

FROM THE EDITOR

Hello SEAMUS Members,

I hope you enjoy this short-but-sweet issue of the newsletter. And I'm sorry it's a bit late! I plan to be back on track with the next issue, and moving forward.

I'm happy to present two interesting pieces in this issue: a discussion on electronic music taxonomy, curated by Dustin Ragland; and a report on the University of Illinois Experimental Music Studios' Archive by David M. Luftig. Both include some great information and links to outside (re)sources you may find useful.

SEAMUS 2019 submissions have closed and the adjudication process is underway. Best wishes for successful results and a great conference in Boston this coming March.

As usual, there is member news, and then the list of SEAMUS officers is included on the back page. Be in touch with any feedback, suggestions, etc. regarding the newsletter. I'll be happy to hear from you!

Sincerely,

Steve Ricks

SEAMUS Newsletter Editor

SEAMUS 2019

Berklee College of Music and Boston Conservatory at Berklee Boston, Massachusetts

March 21–23, 2019

SEAMUS 2019 will present an eclectic and diverse blend of electro-acoustic music and music-oriented forms, including fixed media electro-acoustic works, works composed for real-time interactive performance, works combining sound and video, and sound installations. This year we are further exploring the inclusion of works involving dance. The College and Conservatory are thrilled to host the SEAMUS 2019 conference, and we look forward to having you visit our vibrant campus and the city of Boston.

We have encouraged applicants to consider submitting works, papers, and workshop proposals that touch upon the theme of virtuosity and crossover. Electronic and computer music have been on the forefront of genre-bending, as well as aesthetic and technical crossover, and with this history in mind, we pose the question of what virtuosity means in this period of technological and stylistic flux, both as it pertains to electro-acoustic music and how it's present in an atmosphere of increased zigzagging between genres and general style practices.

The submission deadline of October 1 recently passed--results are forthcoming!

Conference hosts Derek Hurst and Matthew Nicholl look forward to welcoming SEAMUS to Berklee in March 2019!

Save the dates!

Any Noise At All: A Brief Discussion on a Taxonomy of Electronic and Electroacoustic Music

Edited and expanded by Dustin Ragland
Academy of Contemporary Music at The University of Central Oklahoma

> "Brahms makes object: beginning, middle, end. Art and artists predict what's going to happen, predict and understand change…Then tape arrived. Whole medium opened up. Can record <u>any</u> sound on tape. Idea of piece not limited by orchestral instrumental sounds. Opened up sound world; direct access to sound. Now could use <u>any</u> <u>noise</u> <u>at</u> <u>all</u>."

This brief set of observations comes from then-18 year-old Nicolas Collins, in notebooks published online in 2011 from his studies with Alvin Lucier of Wesleyan University, in a class titled "Introduction to Electronic Music." While Collins is quick to preface his notebooks with his age and idealism, it is a helpful starting place to understand how to communicate the forms, ontologies, "acoustemologies" to one another as we compose, perform, reflect within electronic music. Most importantly, it is a reminder that we face constant accretion of definitions, sub-genres, and negative dialectics that often obscure with the purpose of exclusion. Definitions offer clarity where they provide communities of similar curiosities, and virtue where they help to re-configure the possible with respect to sound and silence. Sub-genres point to a social reactivity to natural and built environments (note how often certain cities are tied to certain timeframes - are tied to certain technologies - are tied to broader movements in visual and sonic arts). Negative dialectics can help us to build Adorno's "constellations," to understand the "…'more' which the concept is equally desirous and incapable of being." Yet each of these can serve to pile on semiotic gravity that creates more sluggishness than inquiry.

This summer, Gil Trythall posed a straightforward question to the SEAMUS mailing list: "can anyone direct me to a taxonomy of e-music?" The responses were thoughtful and quite varied. The format of an email thread provides an external pressure: brevity. To devolve into theses-length email responses would suffocate discussion. However, as Kevin Austin remarked, "that topic is probably three or four doctoral theses long," and one way of playing creatively with brevity (as us professors know) is to recommend longer texts. In addition, there is some presumption at work by all of us who responded, and I readily admit some presumption in this longer reflection. However, this is not intended as redaction criticism, rather, I hope to creatively interrogate my presumptions in response to the question.

Included in Gil's original question is the assertion: "at this time it appears that *musique concrète* and DJ dance music are both 'electronic.' " Embedded in this idea is that there is both some *value* in delimiting various neighborhoods of genre within the larger *oblasti* of cultural-social situations. Also embedded in the sentence is the assertion that there even *is* a delineation to define. Depending upon one's musical context(s), similarity between "high" and "low" electronic music might be a supportive, though subversive claim. In other contexts, it might appear helpful to border off what Chad Clark, in a tweet, calls "USB music," which I take to be music that feels like it has little imaginative cost, and few sonic checks and balances in its production, and is not expected to persevere beyond its immediate moment in the market.

There is little doubt that the question holds fascination and controversy in proximity, and often phase changes one into the other. **What I present below is a collection of SEAMUS community responses to the original question, with the reading resources included, and some slight commentary in-between. I'll close with some thoughts on the potential of the discussion, and some short, personal answers I'd give to the question.** The responses below are edited for clarity.

A brief answer from Dave Gedosh points to the importance of semiotics and music in this discussion:

> Here are a few books I've read personally that have recently (Schaeffer obviously not recent - but seminal rather) approached these questions in their own unique way; Pierre Schaeffer, *In Search of a Concrete Music,* Michel Chion, *Audio-Vision, Sound On Screen*, Brian Kane, *Sound Unseen*, and Curtis Rhoads, *Composing Electronic Music: A New Aesthetic.* These are specific to acousmatique, but connections can be made to encompass other categories of computer music and electronic music. And one I haven't read yet that looks interesting, Tara Rodgers, *Pink Noises: Women on Electronic Music and Sound.*
>
> And then there are numerous journal articles regarding Semiotics and music that deal specifically with electroacoustic music. I compiled a folder of about 35 of these a few years back including some of Dennis Smalley's spectramorphology articles - which is, even at his attempt to say it isn't, semiotics. Semiotics might be an excellent place to start.

What I find fascinating in this response is Smalley's assertion on spectramorphology: "it is not a compositional theory or method, but a descriptive tool based on aural perception. It is intended to aid listening…" Electroacoustic music (the milieu for his commentary – we might expand to electronic music as a whole) needs listening skills that are not only prior to the listening act (top-down, as it were), but indeed listening skills that emerge *from the very listening itself*.

Kevin Austin offered two thoughtful responses to the initial question, the first of which dovetails nicely with electroacoustic music being a kind of listening act, as much as a broad genre or process. His initial response:

> As I have seen it, a long-standing and for some, an evasive question.
> Part of the immediate semantic difficulty — as it is a question of semantics at base, is in the definition / limits of the words "music," and the less problematic, "e" [as in electronic, or electric, or electro-acoustic], and the aesthetic concept[s] within and surrounding "style."
> In the "old days," many an axe got ground on the "stony" definition of "music." Is the ringtone on a phone "music?" EDM, IDM and house styles, start with the Wikipedia entries.
> These are about "DJ dance music." Mostly.
> However, I am not sure that *that* is the question. Please accept my apology if my assumption is presumptuous.
> *Musique concrète* is a somewhat older term of what (in Europe and Québec) is generically called "*acousmatique*." This word has become complicated by some popular use converting its meaning away from being a language-specific notion — read Pierre Schaeffer, et al., on "fixed media."
> A useful read on the subject of "acousmatic music," is the recently published: *Treatise on Writing Acousmatic Music on Fixed Media*, by Annette Vande Gorne, published by *Musiques & Recherches* Volume IX - 2018, now in English translation, http://www.musiques-recherches.be/. In its 70 or so pages is a kind of "proposed formulation" of acousmatic music concepts, processes, aesthetics, limitations and boundaries.
> As from its ancestors, this treatise places the microphone and recording at the start and center of the aesthetic. This is not a "negotiable" condition. The audio files are created from sounds packed up by a microphone, and do not become (in the EDM tradition), objects for presentation and manipulation using traditional music[al] conceptions. This is not music that is to be played via a sampler and plugins, into/onto a metric grid.
> There has been some argument about "why not?" and the answer has been, (more or less), "because" acousmatic music is not EDM. While this may sound like a religious statement…(fill in the rest of the sentence with your own mythology).
> The American tradition from the 1960's and 1970's, as you know, was largely to conceptualize electronic music as being an extension of the Western European instrumental tradition. Wendy Carlos, among others, used "synthesizers" to create extensions of existing (or possible) Western instruments, using electronics.

It was inevitable that the American keyboard synthesizer tradition was going to merge with popular music in the recording studio, presaged by the rapid technical evolution of disco, and the early adoption of keyboard synths as new timbral instruments.

This merger, which began with — among others — the Beatles, Kraftwerk, Pink Floyd, etc., follows in the imprints of pop music. MIDI was introduced to simplify the interconnection of simplified electronic music instruments.

"Electroacoustic" was a term, as you will remember, introduced in the mid-1970's that attempted to describe a different conceptual and perceptual mode of hearing, listening, and sonic creation. The generic term "sound design" is the one I use to explain to people what electroacoustics *is*.

There was a time when the word "music" did not adequately encompass the hearing of sound for its own values. Music was the perception of patterns of musical objects, be these objects in a North or South-Asian raga, a Beethoven symphony, or a Carter string quartet.

Pierre Henri's *Variations for a Door and a Sigh*, for example, did not aim to stimulate the same kinds of perceptual centers that the *Unanswered Question* did.

Kevin's first response here gets to the heart of how I perceive this question as well: how do we speak well about electronic music? How do we unroll all of the complex history and semiotic activity into meaningful discourse, without flattening the necessary complexity? Further, if this is primarily a listening act, why not change the assumption that rational terms define the objects of listening for us prior to our encounters with them? Especially if these rational terms carry enormous cultural specificity: "sound design" in most of my own contexts of musical life refers either to specific focus in a compositional or production stage on the individual design of an instrument's timbre (usually synthesized, though not always) or, a film-centered role that works with sounds ranging from musical score to diegetic and non-diegetic sound placement. However, I quite love the appellation "sound design" to explore what electroacoustics *are.*

Two brief book responses were offered by Konstantinos Karathanasis and Nicholas Cline, each with a unique approach to the initial question: Leigh Landy's *Understanding The Art of Sound Organization*, and Joanna Demers' *Listening Through The Noise*. Landy's book is intertwined with the EARS (ElectroAcoustic Resource Site) project, and is a "study of sound-based music." It is in line with some recent attempts to employ computation and neural networks to analyze genre and organizing communities of sound, but remains less algorithmic or mathematically driven. Demers' work is more firmly in line with other works of musical aesthetics, in the vein of Scruton or Kivy, and it has the advantage of directly addressing the tensions between experimental music that is received in "classical" environments, and that received in "popular" environments, by focusing on various genres' sonic signatures and not merely the reception of them.

My own book suggestions are an attempt to bring iterations of electronic music within contemporary popular contexts to bear in the discussion, while also recognizing (alongside Kevin and Dave) the myriad language games at play in the discussion (in the strong Wittgensteinian sense). Ryan Diduck's *Mad Skills* is a "cultural history of MIDI," narrowing the focus to one technology's impact on electronic music creation. Attack Magazine's *Secrets of Dance Music Production* is a useful read not only because it requires getting past the title a bit, but also because it presents genre borders in the middle of discussion of process and composition, not as sitting "top-down" on them. *Live Wires*, by Daniel Warner, works from the implicit thesis that electronic music is the bridge between musical styles regarded as "experimental," and those relegated to "popular" cultures and contexts. While not an exhaustive or systematic taxonomy, it is the closest work within my own suggestions to answering the question of a timeline for electronic music. Novak and Sakakeeny's *Keywords In Sound* is a collection of essays that digs closer to the beating semiotic heart that Dave and Kevin point to in their responses. A collection of signifiers from sound studies: ("Silence," "Noise," "Acoustemology" among them) are expanded in essays, and are much more for those exploring the definitions themselves (and the very possibility thereof).

The goal of this whole exploration is presenting some of the thoughtful conversation that happened in the wake of our original question, and it's worth bringing this to a close with Kevin's response to a foundational question on how to define a delimiting word like "music" itself. He says:

> But to the more specific point, a framework for the "taxonomy" has to be set before the research continues.
>
> Is soundscape [to be defined], electronic music? Soundscape itself has an extensive, and incomplete taxonomy. There was an international committee set up to try to clarify what the parameters would be. Hmmmm...Not so easy.
>
> And algorithmic composition? Is music composed by computers using Markov chains a genre? Neural nets? Rolling dice?

The above questions are not abstract: Autechre's NTS Sessions is eight hours of highly algorithmic computer music, and it's already sold out of its LP version. That the responses to a simple email question have been so varied, passionate, and widely read remind me of Tara Rodgers reflecting on Moog's early copywriting:

> The evocative phrase of the Moog ad- "world of sound" -is more than marketing rhetoric; it is a useful way to describe an affective realm of music-making and audio-technical practice that integrates imaginary, embodied, and social modes of experience.

Questions of what denotes electronic music, and what denotes music *eo ipso* are not going away, but becoming ever more granular. Those grains of definition can be analyzed: this brings us clarity with respect to history, colonization, process, and tonal/metric assumptions. Those grains of definition can also be synthesized: we form imaginative new ways of speaking about the music we create, and new ways of considering the possibilities therein.
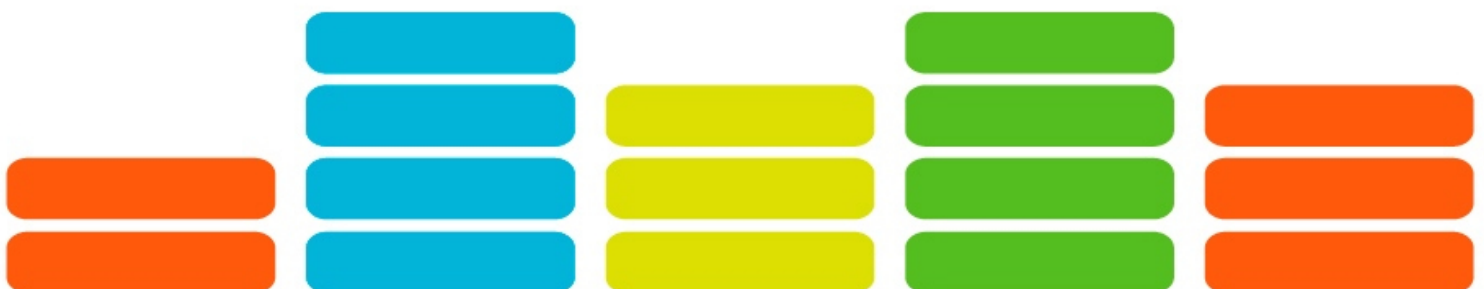
An Evaluation of the University of Illinois Experimental Music Studios' Archive

David M. Luftig

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Introduction

This study seeks to understand the content, organization, and context of the University of Illinois Experimental Music Studios' (EMS) archive. For this project, I spent seventeen weeks documenting the original EMS archive with a particular focus on the magnetic tape collection. The original EMS archive was housed within the School of Music before being moved into the University of Illinois Archives. The EMS was founded in 1958, and its audio collection started soon after. Although once a heavily utilized collection, these tapes sat unused for many years upon me encountering them.

The purpose of this project was to document what a historic institutional tape music archive physically looked like, what sort of materials were located within in it, and how those materials were cataloged and used. I believe that such observations will allow future scholars to more accurately contextualize a historic tape music program, like the EMS. It was also my goal to recognize and document those historic materials that presented an immediate preservation risk.

Background

During the 1950s and throughout much of the 1960s, electroacoustic studios located within the United States were almost exclusively associated with universities. These studios and universities eventually became repositories for magnetic tape recordings. Unfortunately, as time passed, age-induced physical deterioration of these magnetic materials endangered the integrity of those recordings. As the Association for Recorded Sound Collections (2015) notes, magnetic tape is highly susceptible to various deterioration issues even if stored in the most ideal conditions. Haus and Pelegrin Pajuelo (2001) argue, based on their own work in electroacoustic tape archives, that many old electroacoustic recordings are now at risk due to issues of age-based deterioration. Furthermore, these risks are often unrecognized or unaddressed by archivists due to the large volume of recordings that are held in many electroacoustic archives (see also Teruggi 2001; Zattra, Poli and Vidolin 2001; Polferman, Sheppard and Dearden 2006). The risk associated with these materials is due to the deterioration of the chemical composition of the magnetizable coating on the tape and the weakening integrity of the plastic film that the coating is placed upon. These deterioration issues are exacerbated in non-ideal environmental conditions. Unfortunately, in even the most ideal environmental conditions, all magnetic tape based recordings will eventually fail (see Association for Recorded Sound Collections 2015). Therefore, the only real preservation strategy is to try to prolong the life of the master tape through proper care while also creating copies of that recording for future use. Unfortunately, issues of preservation in electroacoustic studios may be compounded when a repository also stores original tape loops or spliced performance tape segments. Splicing tape can lose its ability to bind the tape segments together requiring extra time and specialized labor to repair.

**The University of Illinois Experimental Music Studio**

The University of Illinois Experimental Music Studio (EMS) was created in 1958 by composer Lejaren Hiller who served as its Director until 1968. The period from 1968-1975 saw several different Directors. In 1976, Scott Wyatt was hired and would serve as Director of the EMS for forty years. Scott Wyatt was succeeded by Dr. Eli Fieldsteel in 2016.

In the ensuing decades following the inception of the EMS, many notable composers participated within the program, either as students or faculty. Such composers included: Herbert Brun, Kenneth Gaburo, Ben Johnston, Salvatore Martirano, David Rosenboom, and many more. From its inception, the EMS generated commercial releases both through individuals associated with the department or as a university department as a whole.

Aside from musical compositions, the EMS was also active in creating and utilizing unique electronic instruments and technology, often in association with University of Illinois engineers and computer scientists. For example, Lejaren Hiller's Illiac Suite, written in 1956, utilized a newly developed computer at the University of Illinois, the ILLIAC. The Illiac Suite is often credited as being the first piece of computer music (Chadabe, 1997; pp. 273-274). Additionally, James Beauchamp's Harmonic Tone Generator, developed in 1964, was one of the earliest voltage controlled synthesizers. In 1969, Salvatore Martirano began constructing his own personalized instrument, the Sal-Mar Construction. Built partially from the circuit boards of the ILLIAC II, the Sal-Mar Construction was one of the first musical instruments to use modern transistor– transistor logic (TTL) digital circuitry (see Chadabe, 1997).

The EMS Audio Collection

The EMS' audio collection began to be built shortly after the inception of the program although the large majority of the collection was accumulated during the tenure of Scott Wyatt. According to my conversations with Scott, the collection was meant to be utilized for pedagogical purposes, to be played during specific live performances, as an archive of materials gifted to the EMS, and as a general repository for materials recorded within the EMS. Scott continued to grow the tape collection until digital recording technology began to replace analog tape around the mid-1990s.
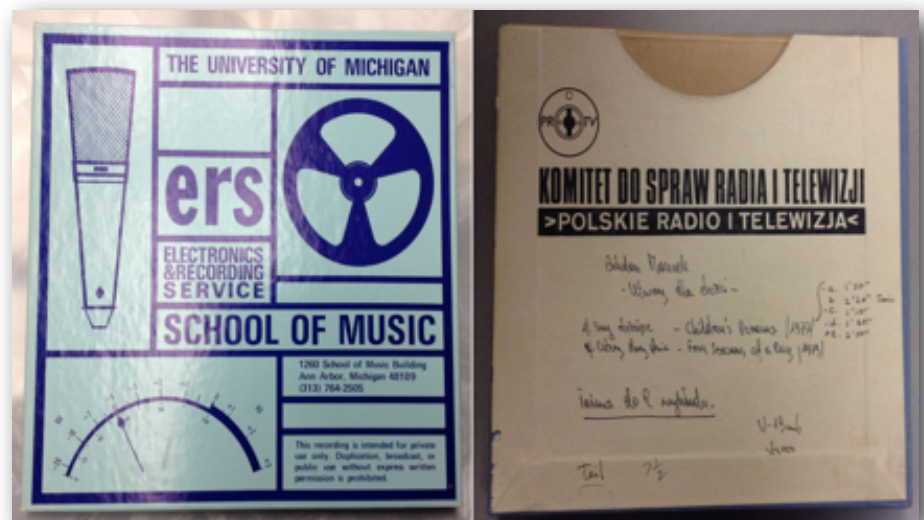
Picture 1. Two uncataloged tape boxes. University of Michigan (left) and Polskie RI Telewizja (right).

Regarding the tapes that were gifted to the EMS collection, they either were given to Scott in person when that composer came to campus, were exchanged at off-campus performances and symposiums, or

arrived via correspondences in the mail. The physical tape cases in the collection reveals many different studio sources (See Picture 1).

Transition in the EMS and a Transition of the EMS Collection

In 2016, Scott Wyatt retired and the new Director of the EMS, Dr. Eli Fieldsteel, came into the program. Although Scott had done an extraordinary job of growing and caring for the collection, the tape collection was no longer being utilized and the tapes were taking up a large amount of the EMS' limited space. Additionally, many tapes were not immediately playable, as the paper tape leader[1] needed to be replaced before playback. This could be especially time consuming as many of the tapes had leader separating all the individual compositions. Of greater concern though, were the issues regarding the deterioration of the actual magnetized tapes. Because all the tapes in this collection were decades old, there was a concern regarding how much longer those tapes would remain playable.

With these factors in mind, a decision was made between the EMS and the University of Illinois Sousa Archives and Center for American Music (SACAM) that the collection would be accessioned into the University Archives. SACAM already had a large collection of EMS materials including the unique instruments of Salvatore Martirano and James Beauchamp and the various other collections involving former EMS faculty. Therefore, accessioning the tape collection to them made sense.

Method

I originally conceived of this project out of happenstance. I was having a conversation with a music student and he told me of the EMS' audio collection that he had heard was stored in a closet in the Music Building. I immediately contacted the School of Music Director, Scott Wyatt, regarding preserving and documenting this collection. It turned out that Scott was retiring but gave me the name of the incoming Director. I contacted and arranged a meeting with the incoming Director, Eli Fieldsteel. After meeting several times, Dr. Fieldsteel granted me full access to the collection and the ability to serve as an advisor to him regarding what to do with the collection moving forward.

For this project, I spent seventeen weeks working with the collection. I also traded emails and met with Scott Wyatt repeatedly. The overall

Picture 2. The three metal shelves which tapes are stored.

[1]Leader tape is nonmagnetic paper which is used at the beginning or end of the tape reel or to delineate between selections on the tape. Leader tape is applied via an adhesive such as splicing tape.

goal of this project was to understand and document the EMS collection. The other goals included the implementation of a long-term preservation plan for these materials while helping to preserve the institutional memory of the EMS.

To assist in processing this collection, I created a Google Form to record all the data from the tape cases as well as data regarding the physical condition of each item. This list was later exported in a Microsoft Excel Spreadsheet (see supplemental materials). I also recorded information regarding the ephemera found in the tape boxes, the location of materials, and my own general notes. After this collection was moved to SACAM, I further assisted in the documentation of materials and the creation of the finding aid for this collection.

Although this study is primarily interested in the tape collection, I also cataloged other materials including ephemera, musical scores, digital audio tapes, LPs, videocassettes, and optical discs. That said, the overwhelming majority of items in the collection were magnetic tape recordings.

Arrangement of Collection

The EMS tape collection was located in a ten foot by six foot temperature controlled storage closet that also shared space with other EMS materials (such as cables, boxes, cleaning supplies, posters and ephemera, and other assorted odd and ends). Within that closet space were four metal shelves that were six feet high by about thirty-four inches long. Each shelve contains six compartments (see Picture 2). Three of those shelves were located along the left side of the closet space (if looking toward the far wall). One shelve was on the far end of the closet. All of the tapes were situated on three of those shelves. The tape collection took up about twenty-four linear feet of space once they were boxed up for the move.

Picture 3. Tapes sitting on shelf with red catalog number and tape name in black.

Written on the spine of about 60% of the 457 overall tapes is a catalog number and a tape name (see Picture 3). For the cataloging classification system, all numbers start with "5" and are followed by three additional numbers (E.g. 5001, 5002, etc.). All of the cataloged materials were in 10" tape boxes (mostly Scotch 206 or Scotch 207 tape boxes). The tape brand listed on the box is not representative of the tape brand that was used, as Scott Wyatt verified.

Written on the back of the tape boxes is information about the recording (see Picture 4). This descriptive content is

Picture 4. The back of a typical 10" tape case that had been cataloged.

often typed out but occasionally it is written by hand. The tapes with catalog numbers were easily accessible on the shelf and were organized from left to right by number (small to large).

An index-card catalog system was created and utilized by Scott Wyatt. Those index cards contain composition, composer, and playback information. These catalog cards were stored in a wooden box which I returned to Scott Wyatt (see Picture 5). Three manila folders within the archive contained a typed list of the recordings in the EMS archive with the corresponding cataloging schema. These lists were made in the late 1970s according to Scott. These records contained both typed and hand written entries for the collection. These folders, as well as the scans of them that I created, were given to the University of Illinois Sousa Archives and Center for American Music upon accession.

Picture 5. The wooden box in the EMS that held the catalog cards.

Although there were a few tapes with no cataloging schema in 10" boxes filed along with the cataloged collection, most of the uncataloged tapes were in 7" boxes and were less physically accessible (due to those tapes often being stacked on top of each other and on the lower shelves) (see Picture 6). Some of these tapes were grouped by author but often, the tapes were unorganized.

The uncataloged collection represented a wide range of materials from different studios and composers. Some of these materials were gifts from other composers while many were created within the EMS (often as a student's class submissions). Additionally, some of these uncataloged materials contained popular compositions that were probably used for pedagogical purposes (such as a popular Stockhausen piece). The majority of these uncataloged tapes have handwritten notes on the back.

It stands to reason that the cataloged tapes were more integral to the EMS collection as they were the recordings that were much more easily accessible and had a cataloging schema assigned to them.

Findings

There were 457 magnetic tapes within the EMS archival collection. Of that collection, 274 tapes were part of the original EMS catalog schema. Within the EMS collection, 133 tapes are acetate, 291 tapes are polyester, and 33 tapes have both polyester and acetate on the same reel. Of these acetate tapes, ten are clearly marked as being master recordings.

Picture 6. Uncataloged tapes.

Many of the tapes were marked as being copies or master recordings on their boxes although the majority of tapes had no provenance information on them. I observed that these tapes without any provenance markings often seemed to be copies of previously recorded compositions. Within this collection, 38 tapes were clearly marked as being master recordings. Of these master recordings, fourteen tapes were composed of acetate, one tape was a mix of acetate and polyester, and the rest were polyester based. From this collection, the provenance of the materials is as follows:

Provenance of Recording	Number of Tapes in Collection
Unknown/Unspecified Recording Source	346
Copies	65
Master Recordings	38
SubMaster, Backup Mater, Dubbing Master, etc. Recordings	8

Upon an item level inspection of each tape, ninety-six tapes were determined to have an immediate preservation concern. These tapes exhibited signs of uneven tape winding, wrinkled or damaged tape, sticky shed, and other possible signs of deterioration. Of these tapes that were deemed to be the most in need of preservation consideration, eleven tapes were marked as being a master recording and one tape indicated that it was a backup master recording.

Picture 7. This example of ephemera was found in a Pierre Schaeffer tape case. The document is written in French and on very fragile paper. It may be a customs form.

The tapes represent various playback speeds, track types, and channel configurations. Within this collection, 443 tapes are ¼" tapes and fourteen are ½" tapes. Eighteen tapes are indicated as being quadraphonic sound recordings. The rest of the tapes are either mono or stereo recordings. The tapes utilize various playback speeds (mostly seven and a half inches per second or fifteen inches per second). Forty-three of the tapes actually change speeds based on the individual song selection on that tape.

Although the vast majority of cataloged tapes are in Scotch 206 or Scotch 207 tape boxes, those labels are not necessarily representative of the actual manufacturer of the tapes inside those boxes. In fact,

most of those tapes, according to Scott Wyatt, are Scotch 201 or 202. Such tapes are made of acetate and therefore a particular preservation concern based on their inability to be baked,[2] which is a common tape preservation strategy.

Forty-seven different international recording studios were mentioned on the tape boxes with many more studios being represented (but not explicitly mentioned on the tape case).

Of the tapes in the collection, sixty-one tapes had some ephemera enclosed within the box. These materials were often information that had been written by the composer or from someone inside the EMS. Ephemera also included customs information for international tapes, live performance notes, or correspondences (see Picture 7). This ephemera presents another preservation challenge as some of these paper materials are very fragile and are also deteriorating.

I was unable to determine the amount of tapes that were meant to accompany live performances but I suspect there are at least four or five recordings (based on the content written on the back of the tape cases). There are no first generation tape spliced materials or original tape loops within the collection. According to Scott Wyatt, it was the policy of the EMS for the individual composer to retain this material.

Although the bulk of the materials found in this space were tape recordings, some other materials were found (and cataloged in the supplemental information). Such materials included a binder of original program guides for both internal and external performances, posters advertising EMS events or recordings, blueprints for possible renovations, a technical report regarding EMS instruments, some printed sheet-music, a catalog of tape recordings in the Dartmouth Electronic Music Center Tape Library from 1970, many various SEAMUS CDs, and a few printed articles from journals and popular magazines. Most of these materials were accessioned by the SACAM.

Conclusions

The EMS tape collection represents decades of accumulating materials and interactions with musicians. I believe that by understanding this collection one can better understand the legacy of the EMS and the history of electroacoustic music as a whole. I also believe that by collecting this information, archivists will be able to make informed preservation decisions about these materials going forward.

As of 2017, this collection resides in the SACAM. Unfortunately, the EMS tape collection is still at risk. Time and staffing limitations at SACAM have inhibited their ability to fully evaluate the content of the EMS archive, pro-actively digitize recordings, and make those recordings conveniently accessible. These archival limitations are common and SACAM also has their hands full with many other projects

Because of the cultural significance of the collection, care must be taken in its preservation. The most likely candidates for immediate action would be the master recordings that were generated within the

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[2]Tape baking is a method in which a magnetic tape is placed in a specialized oven. The baking process addresses issues associated with sticky shed and makes the tapes temporarily playable with little actual deterioration of the sound quality.

EMS, especially those that have already been marked as having suffering from deterioration. It is my hope that this project will provide both a better understanding of how such studios operated and the recognition that these materials need to be preserved.

Supplemental materials:

A list of materials found within the EMS archive can be found in within a Microsoft Excel spreadsheet here: https://www.ideals.illinois.edu/handle/2142/100315

The completed finding aid for this collection, post-move to the University of Illinois archives, can be found here: https://www.library.illinois.edu/sousa/archon/index.php?p=collections/findingaid&id=11278&q=

Thank You:

Lauren Bratslavsky (Illinois State University), Eli Fieldsteel (University of Illinois at Urbana-Champaign), Jason Harvey (University of Rochester), and Scott Wyatt (University of Illinois at Urbana-Champaign).

About:

David Luftig is the Research Services Librarian at the University of Dayton where he helps scholars evaluate and preserve data of all forms. He is a lifetime lover of electroacoustic music even before he realized what such music actually was. As a hobby, he used to build electronic instruments but now finds his living space to be overflowing with new and old circuitry. He welcomes emails and questions.

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Member News

(I accidentally missed this news item from Linda Antas and Jason Bolte for the SECOND time, so I inserted this additional Member News page to put it in. :))

SEAMUS members **Linda Antas** and **Jason Bolte** created the audio for an installation entitled NeuroCAVE. It involves interactive brainwave analysis, interactive and fixed audio, interactive color-changing side emitting fiber optics, and video.

The installation consists of six video projectors (Anderson-video/Mast-images), interactive brainwave sonification (Antas), an outer layer of ambient sound (Bolte), and five "cave forms" made of side emitting fiber optic cable over carbon fiber frames (Jellison/Clinton). Brainwaves are read and analyzed in real time (Millman/Fasy). Each individual cave form changes color based on delta wave activity (Huvaere). The interactive audio and fiber optics were done on a Raspberry Pi.

Antas' interactive audio has two basic states. The first is created by mapping the amplitudes of eight brainwaves onto the amplitude of the first eight partials of the harmonic series. Viewer/participant brainwaves in each fiber optic cave form from are analyzed in real time. When it is detected that an individual's brainwaves are above the threshold of the entire installation's average similarity, the sound pulsates. The pulsation is faster the closer the individual viewer/participant is to the group average.

Bolte's ambient audio places the viewer/participant in a sonic environment which was composed to reflect the activity that may have taken place while prehistoric cave art was being produced. The ambient audio is presented in a quadraphonic environment.

More information at:

http://www.montana.edu/cave/
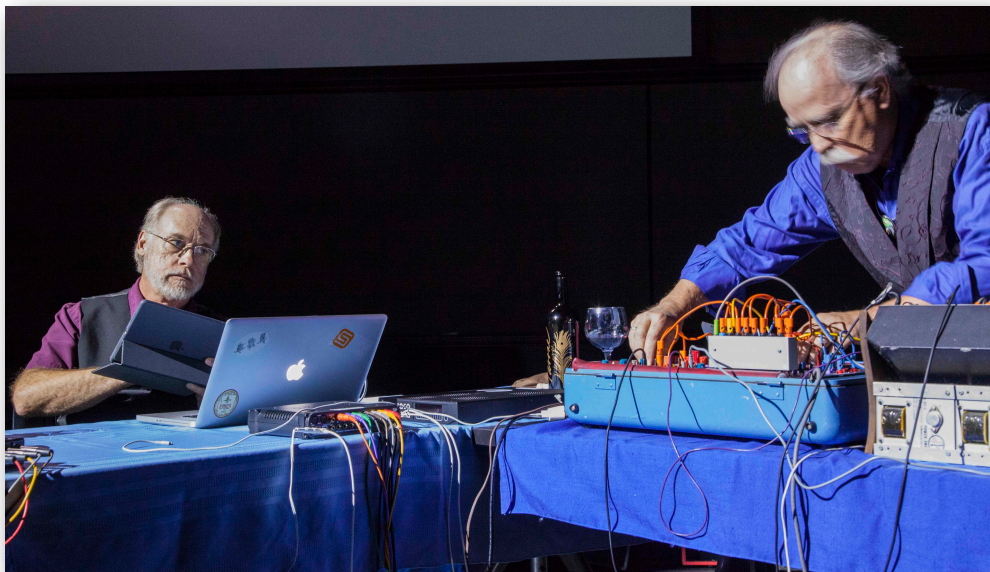
https://www.facebook.com/NeuroCave/

Member News

A Strange Diversion (co-composed by **Stephen Ruppenthal** and **Brian Belet**, 2017), for Buchla analog synthesizer and Kyma digital system (from their 'BuchKyma Sequence'), was performed at the Kyma International Sound Symposium (KISS2018), in Santa Cruz, California on September 9. Also at KISS 2018, Belet and visual artist Marianne Bickett presented a paper/demo " Drawing Sound: Using a Wacom tablet as an independent drawing surface while also controlling Kyma."

Marianne Bicket and Brian Belet at KISS2018

Brian Belet and Stephen Ruppenthal at KISS2018

John Fielder got hired full time at Expression College in Emeryville, CA teaching electronic music, music theory, interactive audio and fundamentals of acoustics.

John Gibson's *In Flight*, for chorus and electronics, appears on an upcoming Innova CD. For a sample track, visit this link. His new fixed-media piece, *Almost an Island*, will be included in a new release by the American Composers Edition, available November 1.

Marco Buongiorno Nardelli's "miniature opera" project *UNKNOWN, a journey*, that you might have seen and experienced at SEAMUS 2018 earlier this year, has been exhibited at the CURRENTS NEW MEDIA festival in Santa Fe, NM, for three weeks in June. You can find some press/blogs entry here: https://www.materialssoundmusic.com/press and videos and description of the project here: https://www.materialssoundmusic.com/miniature-opera-project.

The piece was experienced and performed by ~10000 people, 3000 on opening weekend!

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On August 9, **Charles Nichols** performed his compositions *Anselmo*, for electric violin, interactive computer music, and processed video, a collaboration with video artist Jay Bruns / nojay, and *What Bends*, for interactive computer music and processed video, a collaboration with video artist Zach Duer, and played from

International Conference on Spatial Reproduction, in the 5.1.4-channel immersive audio system of the 100th Anniversary Hall of Tokyo Denki University, in Tokyo, Japan. At the same conference, his *Dense Space* and *Shakespeare's Garden* were played continually in the 22.2-channel immersive audio system in Studio B of Tokyo University of the Arts, August 8-9. His composition *Beyond the Dark* was also played continually from fixed media at the International Computer Music Conference, on the Lotte Facade jumbotron in Daegu, Korea, August 6-10.

A summer of performances for *the Higgs whatever* (**Miller Puckette** and **Kerry Hagan**) included a residency and installation at MISE-EN_PLACE Bushwick. The installation, *remnant* (2018), uses recordings of *ensemble mise-en* filtered through impulse responses recorded in MISE-EN_PLACE as the ensemble members moved through the performance space. The installation opened on July 20, 2018 with a live performance by *ensemble mise-en* accompanying the installation. The patch, score and instructions will be available in the near future on www.kerrylhagan.net for download. A video of the opening is currently available at http://www.kerrylhagan.net/puckette-hagan/media/remnant-mise-en-web.mp4

MISE-EN_PLACE Bushwick is currently soliciting for more residency applications, and *the Higgs whatever* recommends the experience wholeheartedly. https://place.mise-en.org/opportunities.html
Catch *the Higgs whatever* at EABD 2018 in Jacksonville, Florida in November.

Gil Trythall was Guest of Honor at Knobcon, a one-of-a-kind synthesizer convention now in its seventh year in Chicago, Sept. 7-9. He was featured as the after dinner speaker on Saturday evening and with a Q and A on Sunday.

photo by Maxwell Tfirn

Adam Vidiksis with students from Temple University's BEEP as well as students from the Education University of Hong and their director Cheng out of Sullivan by his South Korea after their performance of Vidiksis's Density Function at the Daegu Art Factory.

Tom Williams recently created a video for his piece *Weighed Down by Light*, for contrabass clarinet and fixed media electronics.

Filarmonica Romana in July. His piece *Local Equilibrium Dynamics* was performed at the NYC Electroacoustic Music Festival by his trio SPLICE Ensemble. In August, Vidiksis brought students from his electronic music ensemble, BEEP, to the International Computer Music Conference in Daegu, South Korea, where they performed his work *Density Function* in collaboration with students from the Education University of Hong Kong. The piece was selected for the short list of best performances at the conference, with the final results of the award still forthcoming. Additionally, Vidiksis taught music technology classes at both the SPLICE Institute at Western Michigan University, of which he is faculty and a founding member, as well as at Temple University's newly-formed Young Women Composer Camp.

Museum visitors contribute to Kristina Warren's installation

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