DigiPres Opening Plenary and Keynote
October 16, 2019

Speakers and Description:
-Bradley Daigle
-Sibyl Schaefer
-Alison Langmead

Please join us for our opening plenary. A brief introduction to the event will be followed by updates to NDSA's Strategic Plans and then the 2019 Innovation Awards.

We will kick off the conference with a keynote from Alison Langmead entitled, "Sustainability Is Not Preservation."

The ongoing sustainability of digital projects is of critical concern to both project creators and stewards alike, and while much of the conversation in and around digital sustainability practices takes place in arenas adjacent to, or connected with, digital preservation, it is increasingly important to be purposeful about identifying the appropriate use cases for each of these approaches. In this talk, Alison Langmead will discuss her experiences co-creating and working with the Socio-Technical Sustainability Roadmap (STSR). Having now presented a two-day version of this sustainability workshop with over 100 people in six locations across the United States, the STSR team has become even firmer in their conviction that, for sustainability practices to be successful, project leaders must keep the changing, socially-contingent nature of both their project and their working environment(s) consistently in mind as they initiate, maintain, and support their own work. We feel that this approach constitutes a break from traditional preservation practices and standards that assume, and in some cases require, unchanging fixity from preserved digital products for an indefinite period into the future. Sustainability planning, by contrast, flourishes best when the fluid, changing nature of contemporary digital practices and products are accepted, and the possibility of a project retirement date is assumed. This rupture can mean that, for users to take up digital preservation practices, they must significantly modify workflows and (even) goals, but it can also mean that these users do not take up preservation practices at all, finding them impractical for their purposes.

| Sybil Schaefer: | 00:00:01 | Hello. Hi. Hi everyone. Welcome to digital preservation 2019. My name is Sybil Schaefer. I am the Chronopolis Program Manager and Digital Preservation Analyst at the University of California San Diego. I'd like to thank you all for joining us at this conference in lovely Tampa, Florida. So I'd like to start the conference by recognizing that we have all just either finished up DLF and have our minds bursting with inspiration and ideas and perhaps a bit of exhaustion at this point in the week, or alternatively, we finished traveling and dealing with the stresses of getting from there to here. So, I'd like to provide everyone with a chance to collectively relax our minds, oxygenate our blood, and focus on being present. If you'll indulge me, please |

		close your eyes softly. We'll take a few collective breasts as we focus on being where we are.
Sybil Schaefer:	00:01:09	So take a deep breath in through the nose. (inhaling) Exhale through the mouth.
Sybil Schaefer:	00:01:19	Relax. Quiet your thoughts. Quiet your mind again. Deep breath through the nose.
Sybil Schaefer:	00:01:32	Out through the mouth.
Sybil Schaefer:	00:01:36	Quiet your mind.
Sybil Schaefer:	00:01:39	One last time. Deep breath in through the nose,
Sybil Schaefer:	00:01:45	Out through the mouth.
Sybil Schaefer:	00:01:49	Be present. Go ahead and open your eyes
Sybil Schaefer:	00:01:53	And I'd like to acknowledge last year's keynote speaker, Snowden Becker for inspiring a repeat of a similar breathing exercise she did last year. I thought it was really excellent at kind of grounding people and focusing in on where we are right now.
Sybil Schaefer:	00:02:12	As we begin, I'd like to recognize that we are on native lands and honor the ancestors that have stewarded this land for generations before us. We would be remiss if we did not acknowledge the histories of colonization that have shaped these lands and that have shaped the lives of indigenous peoples on whose lands, we now engage at the DLF and DSA. We hope that our efforts and goodwill serve the just cause of indigenous people in these lands. A few housekeeping items to start off with. The Wi-Fi and password are listed on this slide. You can also find this information at the registration desk and rotating on slides in individual conference rooms. The Code of Conduct is a key part of this conference and to the DLF, and by extension and DSA communities, I recommend you take a look at it if you haven't already. DLF staff are wearing white lanyards should you need them.
Sybil Schaefer:	00:03:21	The all gender restrooms are available near the grand ballroom on the second floor of the hotel. So, this is the grand ballroom, so they're near here. Anyone is welcome to use them. A note about lanyard colors. They do indicate attendees' photography preferences. Black means that someone is okay with being photographed, although it is always nice to ask them first. And

yellow means no photos, please. The photographer is aware of the meaning of the lanyards as well. Community notes are available at bit.ly/2019DLF. You'll notice that all of the DLF related events can be found here. If you look in the Digital Preservation folder, you'll see that it's divided into Wednesday and Thursday. And if you dig deeper into those days, you'll find individual Google docs for each of the sessions, including this opening in plenary.

| Sybil Schaefer: | 00:04:27 | Please use the mic in all of your sessions. We are a big about accessibility at this conference and it helps everybody be able to hear what's going on. Also, this opening plenary as being live stream and if you have questions, it's necessary to go to the mic to ask them that said if you feel uncomfortable going to the mic for any reason you can type your question into the shared doc and a committee member will ask it for you. Please remember to leave a tip for your housekeeping service. Best practices regarding tipping housekeeping include tipping daily, leaving the tip and a noticeable place and making it obvious that it's a tip and not just some cash that you left lying around. If you're staying in this lovely hotel, look for a tip envelope on your desk. Save your shampoos at the end of our events. We'll be collecting toiletries donations that will benefit Homeless Helping Homeless, a local emergency shelter provider. And you can drop those off at the registration desk. The online schedule is on Sched at DLFforum2019.sched.com. We also have an OSF site for presentation slides. So, if you are presenting, please share your slides in OSF. |

| Sybil Schaefer: | 00:05:58 | And then lastly the Twitter is really the best way to get up-to-date conference news and find out what other attendees are thinking and doing. Follow @NDSA2 for NDSA news or the DigiPres19 hashtag for conference specific tweets. So, we would simply not be here about to spend a day and a half talking about digital preservation if it were not for CLIR and DLF. On behalf of the NDSA, I would like to extend a huge thank you for once again providing us with the administration and support that we need to put this gig on. I would especially like to recognize the work of Aliya Reich DLF's Program Assistant for conferences and events. Aliya is one of the most courteous, capable, knowledgeable, accommodating and accommodating people I've ever had the pleasure of working with. There is very little going on at this conference that she has not assisted with in some way. Even when I email her approximately 50 times a day like I have over the last week. She is always incredibly patient and responsive, and we've been able to do so much more with this conference thanks to her help. Please join me in thanking CLIR and DLF and Aliya. |

Sybil Schaefer:	00:07:33	There is often a lot of invisible and unrecognized work that goes into organizing a conference. These folks have been volunteering their time over the last 10 months to help make this conference as amazing as it can be, and I'd like to spend a little time highlighting their accomplishments. They have all contributed by suggesting conference themes and potential keynote speakers reviewing and rating proposals and will be serving as moderators for upcoming sessions. In particular, I'd like to recognize Heather Barnes and Dan Noonan for writing the call for proposals, Courtney Mumma for organizing the closing remarks and delivering them with Stefan Elnabli, Krista Oldham and Joe Carrano, Seth Anderson, Kristen Schuster, Alex Kinnaman, Courtney Mumma and Aliya Reich all helped schedule and arrange the individual conference sessions. Stefan Elnabli served as our liaison to the DLF Sponsorship Committee and helped drum up support for the conferences. The group in charge of welcoming newcomers, which includes organizing today's welcoming breakfast and mentoring program did a particularly fantastic job there. Krista Oldham, Joe Carrano, David Cirella and Suzanne Chase. And lastly thank you to Heather Barnes who organized and will be chairing the Minute Madness session right before the reception tonight. If you are on the conference committee, please stand up so we can recognize your hard work.
Sybil Schaefer:	00:09:14	Thank you all.
Sybil Schaefer:	00:09:17	And before we move on, I'd like to note that we do an open call for conference committee members each year. Please keep an eye out if you are interested in volunteering next year. I'd now like to recognize our sponsors that not only help keep our registration costs low, but also many of whom provide valuable services that we need to have a thriving digital preservation community of practice. Please visit them when you have a chance. The live stream and recording was provided by Carnegie Mellon University Libraries. The lanyards were provided by Quartex.
Sybil Schaefer:	00:09:59	Our gold sponsors include Aviary, East View Information Services, DCE, Libnova, OCLC, Web of Science Group, Samvera and Zontal. Our bronze sponsor is the Meta Archive Cooperative and the DigiPres coffee break is sponsored by Digital Bedrock. Please join me in thanking our sponsors
Sybil Schaefer:	00:10:43	So we made a few changes to the conference this year. We overlapped with DLF for the first time today. Our hope is that this overlap will make it a shorter week for the folks that are attending both DLF and Digital Preservation, and just to note

that there was no reduction in the number of Digital Preservation sessions. But those attendees were welcome to join the DLF sessions this morning. This morning we offered a welcome to NDSA and Digital Preservation breakfast where newcomers were encouraged to join and learn about how to become involved in our organization.

Sybil Schaefer:	00:11:25	We're also changing up the closing a bit this year. Instead of gathering folks back into this room for our closing session that's often skipped by people who need to head to the airport. We're going to offer brief closing remarks and a Plus/Delta exercise to gather some feedback. Speaking of feedback, if you love or hate any of these changes, please let us know. We want to repeat the things you love and not the things that you hate. The last change this year that we have is that we have a vice chair for the first time, Courtney Mumma. Courtney had a chance to learn the ropes this year and will be using that knowledge as she takes the reins and chairs Digital Preservation 2020.
Sybil Schaefer:	00:12:17	Critical junctures among people, organizations and technology are fostered to ensure digital objects persist over time. Junctures can be defined as particular points in time or as the places where things join. This year, the Digital Preservation 2019 Conference Committee invited presentations and workshops that seek to explore these critical junctures.
Sybil Schaefer:	00:12:45	I think it's safe to say that the practice of digital preservation, especially in the United States is at a critical juncture. In the early winter of this year, we witnessed the sunsetting of what was once a shining star in the digital preservation realm and was notably a consistent sponsor of this conference. DPN's final report cited the rise in use and popularity of cloud services as one of the challenging factors the network had to contend with and it's true. The use of the commercial cloud infrastructure has become not only more acceptable but in certain organizations mandated by IT executives who've used system administrators as janitors and see no need to maintain storage infrastructure
Sybil Schaefer:	00:13:29	In contrast, during the same time frame within which DPN sunsetted, Amazon Web Services was valued at $400 billion and is estimated to have about 50% of the commercial cloud storage market.
Sybil Schaefer:	00:13:45	DPN's failure causes us to ask, "is it possible for us to leverage our collaborative resources to sustain community based services?" Thankfully, there are efforts underway to help ensure that there remains an alternative to commercial services like Thinvest and Open Infrastructure Initiative. As a statement and

support of invest in open infrastructure states by investing in integrating, building on and or expanding current and emerging open infrastructure initiatives, we can ensure that the services and software that the scholarly community relies upon to share its work with all who need access is high quality, reliable, persistently available and operated in a manner consistent with our community's values. In a recent blog post, Katherine Skinner asks, "why are so many scholarly communication infrastructure providers running a Red Queen's Race?" In other words, why are we running faster and faster only to find where we've arrived in the same place we've begun. The success or failure of such ventures like the Open Infrastructure Initiative will determine if we move forward in providing sustainable community-based alternatives for digital preservation or if we keep running a Red Queen's Race, succumbing eventually to the cheap buy in pricing only a monopoly can offer.

| Sybil Schaefer: | 00:15:17 | Now more than ever, we need to be selective about what we preserve. There's an environmental cost to digital preservation, whether it is the mining of precious metals used in electronic components or the energy needed to. cool rack space, this environmental cost can no longer be ignored. In addition, while we've been relatively fortunate to experience the cost of storage declining as the size of our stewarded materials has increased, advances in storage technology have slowed. The amount of data being produced is increasing, but storage costs are not decreasing. To meet these constraints, we need to focus on appraisal and selection of materials and do so in a way that balances the cost of preserving with the cost of losing the history of those who can't afford to pay. Carol Mendel's recently released chapter asking, "can we do more?" |

| Sybil Schaefer: | 00:16:17 | She states that prior to the establishment of special collections and archives as we know them today, quote, "the survival of archival records depended upon the level of care and attention given to them by their parent organization and as such, they were typically no less ephemeral than the organizations that created them." End quote. I posit that this is largely where we stand today. In addition to selecting carefully, we need to encourage digital preservation practices to sprout outside of our individual institutions and within communities and families whose heirlooms and treasures now take digital form so that the historical record does not remain dominated by the few who hold the most resources. |

| Sybil Schaefer: | 00:17:05 | Another sign that we are at a critical juncture for digital preservation is one occurring in my own institution. Libraries are becoming more service oriented and less about the |

collections that they own. I am in no way bemoaning the fact that supporting student success is a high priority for my library. It definitely should be, but I am cognizant of the fact that digital preservation lies adjacent to services for students in the financial pie chart. As Carol Mendel states from the aforementioned chapter, this is a welcome and well-deserved golden age for libraries and their users, but it is not an age where acquisition and preservation define the library. Digital preservation is already notoriously underfunded. How will we fare as we face additional competition for scarce resources?

Sybil Schaefer:	00:17:59	There's always talk about sharing failures as a means to underscore the importance of the work we do. This idea that a list of terrible failures will help illustrate the importance of digital preservation and secure buy-in and additional resource allocation from our respective organizations. I'd like us to reflect on what it means to define our field by what can go wrong versus what can go right. While a list of serious fails illustrates what can go wrong. We also need to start defining what success looks like. This is a really difficult thing to do when success may only be determinable years into the future, not only beyond our career spans but beyond our lifespans. I would gather that success looks less like an OAIS diagram and more like an educated, motivated and diverse community of practice. Meredith Farkas wrote a series of blog posts recently exploring what mid-career feels like for her and how her work perspective has changed. One line that struck me from her writing was her statement, "I want to be a good ancestor." I think that's ultimately why we're all here. We want to be good ancestors, not only for our descendants but for all the people who are born into this world. Years after we've departed and who are curious about what humanity was like during our time and how we navigated this critical juncture.
Sybil Schaefer:	00:19:27	My partner and I share a curiosity about language and the definitions of words and through his querying of my use of certain words, I discovered that I apparently have a tendency to use the second listed definition of a word. My hunch is that this is related to building a vocabulary through reading rather than through conversation because I also have a tendency to be unsure of the pronunciations of words as if I were hearing or saying them for the first time. So it should have been no surprise to me when, in discussing the theme with my conference committee, there was some confusion on my articulation of the term juncture, which is not just a particular point in events or time, but according to the second definition, a place where things join. And it's here in the luxury of the second definition that I invite you to enjoy this conference as a place

where you are joined with your community of fellow preservationists forming a critical juncture of your own as you face what's on the horizon and tackle the work of being a good ancestor. We are fortunate to have many talks that touch on the aspects of the critical junctures I just mentioned, and I've highlighted a few of them here. Thank you.

Sybil Schaefer:	00:20:51	So one of my favorite things about the NDSA community is that we've always been excellent at recognizing and awarding those in the field who are doing fantastic work. This year is no different. Here to present the 2019 NDSA Innovation Awards are the co-chairs of the Innovation Awards Committee, Steven Abrams from Harvard University and Krista Oldham from Clemson University.
Steven Abrams:	00:21:34	Thank you. Sybil. Good afternoon everyone. As you will probably recall, the NDSA established its Innovation Awards back in 2011 to recognize and to encourage innovation in the field of digital stewardship. Since that time, we have honored 34 exemplary individuals, institutions, projects, educators, and future stewards for their fantastic efforts in ensuring the ongoing validity and accessibility of our collective, indeed, the world's valuable digital heritage. Today we add to that honor roll with four new awardees. However, before introducing them, I'd like to briefly acknowledge my colleagues on the awards working group. Co-chair, Krista Oldham, Samantha Abrams, no relation, no nepotism from Ivy Plus, Lauren Goodley from Texas State, Grete Graf from Yale and Carrie Mae from University of Pittsburgh. I'm sure you could all appreciate how difficult it is to try to choose between the many, many worthy nominations that we received. And while I won't say that it was an easy task, it turned out to be a very enjoyable one. The group just did a fantastic job. And also echoing Sybil, we would also very much like to recognize the just enormous help that Aliya has given us, the whole group throughout the awards process. So please join me in thanking everyone for making all this happen.
Steven Abrams:	00:23:27	And now we can move on to our honorees who will be presented to you by Krista.
Krista Oldham:	00:23:36	Good afternoon. The NDSA Individual Innovation Award honors individuals making significant innovative contributions to the digital preservation community. Today we recognize two individuals. Our first is Dinesh Katre. Dr. Dinesh Katre has established a distinguished record leading the development of innovative technological solutions for digital preservation, trustworthy digital repository certification, data repurposing,

and intelligent archiving. Katre currently serves as Senior Director and Head of the Department of Human Centered Design and Computing Group at the Center for Development of Advanced Computing in India. Over the last several years, he has worked to advocate for, developed and deployed the Indian National Digital Preservation Program and its constituent systems and services. The program provides a very robust and comprehensive platform for the effective long-term preservation of digital materials, so critical to contemporary and future commerce, cultural science, entertainment and education. As chief investigator of the program's flagship project to establish a center for excellence for digital preservation. Dr Katre led the process to develop a digital preservation standard for India as well as domain specific archival systems and automation tools for digital preservation. He also conceptualized, designed, and led the development of DIGITALAYA, a software framework which comprehensively implements the OAIS reference model. DIGITALAYA has been customized for preservation of electronic office records, audiovisual and document archives as well as e-government records. Katre's efforts also facilitated the introduction of the ISO 16363 standard to India, culminating in the first repository in the world to achieve ISO 16363 certification. His achievements exemplified the growing international reach of our concerns and practice in the areas of digital stewardship and preservation.

| Krista Oldham: | 00:26:11 | Our second individual awardee was unfortunately not able to make it due to some last minute travel issues, but we are honoring him here today anyway, and that person is Tim Walsh. Tim Walsh is a digital archivist and preservation librarian with varied experiences at Harvard, Tufts, the University of Wyoming, and currently Concordia University. He is also a prolific software developer and this capacity has created and made freely available through his BitArchivist website and GitHub an evolving suite of robust open source tools and meeting many core needs of the stewardship community in appraising, processing and reporting upon born digital collections. His projects include the Brunhilde characterization tool, BulkReviewer for identifying PII and other sensitive information, the METSFlask viewer for Archivematica METS files, SCOPE, an access interface for Archivematica dissemination information packages, and the CCA tool for creating submissions packages from a variety of folder and disk image sources taken together. |

| Krista Oldham: | 00:27:25 | These tools support a wide gamut of both technical and curatorial activities. The open availability, documentation, |

support and community engagement for the growing ecosystem of mature preservation tools is critical to the success and sustainable stewardship of digital materials. So critical to the contemporary and future commerce again, cultural, science, entertainment and education. Tim's work also provides an excellent example of how a lone individual can nevertheless make a substantial positive impact on the complex domain of stewardship practices through dedication, skill, enthusiasm and community. And again, he apologizes for not being able to make it, but life happens. So, let's thank him for his work.

Krista Oldham:	00:28:21	The NDSA Organization Innovation Award honors organizations taking an innovative approach to providing support and guidance to the digital preservation community. Today we are recognizing two organizations. The first one is the Asociacion Iberoamericana de Preservacion Digital, or I'm going to now refer to it as APREDIG 'cause I cannot probably pronounce all that again in a succinct way. APREDIG is a nonprofit Ibero-American foundation founded at the end of 2017 in Barcelona, Spain with the intention of promoting the importance of digital preservation in Latin America and Spain. Its activities have culminated in projects and activities to disseminate the importance of levels in digital preservation and bring Spanish translations of their original NDSA levels matrix to Spanish speaking institutions led by Dr. Miguel Termens and Dr. Laija. This group of volunteers, researchers and disseminators of best practices for digital preservation have created an online self-assessment tool to help institutions of Spain and Mexico understand recommendations, key concepts, and simple diagnosis of digital preservation practices using the NDSA level matrix as guidelines.
Krista Oldham:	00:29:41	The awards panel eagerly recognizes the work of APREDIG in translating the NDSA levels of preservation into Spanish, opening up significant new opportunities for expanding digital stewards, best practices and subsequent outcomes by practitioners in Spain and Latin America. The critical importance of effective and sustainable solutions for preserving digital materials transcends institutional and national boundaries. APREDIG's efforts are a vital example of the growing international reach and stewardship of preservation concerns and applications. Furthermore, they evidence the positive contributions to local and global understanding resulting from the expansion of the community of theory and practice to all interested and engaged participants. Also, unfortunately, due to travel considerations, neither Dr. Termens or Leija were able to join us. Please let's recognize them in their absence.

Krista Oldham:	00:30:46	Oh, I, oh. Thank you.
Krista Oldham:	00:30:51	I forgot to press the button. Our second organization that we'd like to recognize is SPN or Software Preservation Network. The idea for a Software Preservation Network first arose in 2014. Since then, it has developed into a vibrant grassroots organization of digital preservation practitioners invested in the future of software preservation through multiple federal grants and startups and seed funding. SPN has solidified alliances among international stakeholders, both individuals and organizations with diverse perspectives including libraries, archives and museums. Two separate but complimentary aspects of SPN's work are particularly noteworthy. First, its innovative efforts to develop effective techniques and programs for long-term stewardship of the intermediating software upon which preserved digital resources are inextricably dependent, exemplified by an investigation into applicability of fair use doctrine, the code of best practices for fair use in software preservation as well as the EaaSI project research into scalable emulation as a service infrastructure, the critical emphasis placed on issues of community engagement, and organizational sustainability. This work provides an extremely useful case study to the stewardship community of the importance of thoughtful and iterative self-reflection and refinement of organizational strategies, goals and processes and innovatives to ensure the continued relevance, value and persistence of programmatic efforts. SPN offers a model for digital stewardship that combines steadfast vision with flexibility and an emphasis on the evolving needs of an organization's constituents. The award is accepted today on behalf of the entire SPN organization and its members by Jessica Meyerson of Educopia Institute and Zack Vowell of California Polytechnic State University who have played key leadership roles in its success.
Krista Oldham:	00:33:26	This time I remembered. The NDSA Project Innovation Award honors projects whose goals or outcomes represent an inventive, meaningful addition to the understanding or processes required for successful, sustainable digital preservation stewardship. And today we are honoring the Great Migration Home Movie project which is part of the Smithsonian National Museum of African American History and Culture. Since its inception in 2016, the Great Migration Home Movie Project has digitized hundreds of hours of African American home movies and thousands of photographs for families who have visited the Smithsonian's National Museum of African American History and Culture, and for those who live across the country in Baltimore, Denver and Chicago. In its current

iteration, families visiting the museum are invited to drop off their home movies and films, videotapes and audiotapes when they arrive for the day and then pick up their originals and digital copies preserved by a team of professionals at the end of the day with the added invitation to donate digital copies to the Museum, enriching its growing collection of vernacular home movies. As explained by Walter Forsburg, founding director of the National Museum of African American History and Culture's media conservation and digitalization department, the Great Migration Home Movie Project lowers the technological barrier to entry of audiovisual digitalization and directly and proactively addresses the historic exclusion of people of color from traditional archives. It is thanks to the work of the Great Migration Home Movie Project that not only these memories can be gifted back to families and their future descendants, but also that that history is being rewritten in a very real and immediate way. This award is being accepted on behalf of the entire Great Migration Home Movie project by Candace Ming.

Krista Oldham:	00:36:02	We did not receive any nominations this year in the Educator or Future Steward categories, so that brings us to the end of the awards. Please take the opportunity to meet with our awardees later on to offer your personal congratulations. But in the meantime, let's join one last time in thanking all of our winners.
Steven Abrams:	00:36:38	Okay.
Sybil Schaefer:	00:36:39	You may or may not be aware that over the last year or so, the NDSA coordinating committee has been undergoing strategic planning initiatives. Here to discuss these initiatives in greater detail is the chair of the NDSA coordinating committee, Bradley Daigle from the University of Virginia and AP Trust.
Bradley Daigle:	00:37:09	Thanks, Sybil. I would like to extend my welcome to everyone as well and I'm looking forward to the next day and a half with you all. So just a quick note, some of you who were at the breakfast this morning heard some of this, but I want to talk a little bit about the work that the NDSA has been doing. In particular the NDSA leadership. And the NDSA leadership is comprised of the top part of the pyramid on which the NDSA membership itself, which is you all, sits. So, the leadership is comprised of the co-chairs of the working groups and interest groups as well as the nominated and elected coordinating committee members. So, over the past year, I just have to initially say thank you to the leadership group because we have been nose to the grindstone, however you want to, whatever metaphor you want to insert. But we've been doing strategic planning like almost ad

nauseum, just trying to get coordination among all these groups.

Bradley Daigle:	00:38:06	And so I'm going to talk about three particular elements in which the strategic planning has been manifested and you see them on the screen behind me. The first is membership. You. So, our membership continues to grow. We are now hovering at around 250 members, which I think is fantastic. Let me just repeat, we're at around 250 members, so that is an absolute amazing number and it continues to grow. We've had more members join us in 2019. I'll give you names at the end of the slide to build the suspense, but the memberships keep coming in. So that is a sign of organizational health and the work that each of these members bring and the new voices is a critical part for us moving forward. As far as governance goes, there's the perennially quotable, Cliff Lynch, said this in a meeting recently is governance is expensive and he's absolutely right.
Bradley Daigle:	00:39:01	So we're trying to make our governance a little more lightweight to provide a bit more transparency, durability and consistency. So those are the key elements in what we're doing from a governance perspective. So hopefully most of you have seen the documents that were shared early in the fall in September related to our principles, our new principles, our new coordinating committee expectations and various other documents. They are linked in the shared minutes. I'm not going to give you quick Bitly links that make you scramble to look them up. If you go into the shared minutes, they're all there. So, this updated documentation has helped us also to realize where we need to change and what we need to adapt as we grow. And part of that is thinking about our growing global perspective and how that's being manifested in the work we're doing. We had a nice semantic discussion about the word national in National Digital Stewardship Alliance and what does that mean for a growing global community. These conversations are ongoing, and we would certainly love to have your individual voices contribute to them. So, at any point, if you have opinions, please share them.
Bradley Daigle:	00:40:09	We have also released the initial version of the NDSA agenda, the long awaited agenda, and it is now open for public comment. So, the link again is in the shared minutes, have a look and we certainly would love to hear your feedback before it's officially published later in the calendar year. But that's one of the critical publications that the NDSA provides for our profession. Finally, the final part is engagement. That's you. So, I like to repeat this, I like to repeat it often. You are the NDSA. The coordinating committee is a bunch of people. The working

groups are a bunch of people, but collaboratively speaking in toto, it is you. That is the NDSA. So, I will amplify what Sybil has said. We need your feedback both on this conference, what you want this conference to be, how it can best meet your needs, how you think the NDSA should work globally, as a global partner with other entities.

Bradley Daigle:	00:41:08	Thinking about how we manifest our professional development, whether it's through other conferences like iPRES, PASIG, whether it's through collaborations, what should those be? Hearing from you is a key part of that work. So, the other part would be our actual work, the working groups and interest groups rely on engaged members like yourselves. We're in the process of revising some of those groups and we would really love to benefit from new voices, continued voices, and each of you, if you see that there's interest, please join the working groups. You will be hearing this clarion call going out repeatedly as we would love to have your voice in those groups to help shape how we're thinking about the profession moving forward.
Bradley Daigle:	00:41:57	Finally, I just want to repeat, when we're thinking about what the NDSA means, we're changing all the time. Digital preservation is an iterative and a mutative mutable profession. Having you involved in it, having you come to this conference, having you think about our strategic planning and providing feedback so that we're adapting to your needs is the most critical piece. So, in that, I will show you now the new members for this year. I want to thank you all so I can read them off to you because it's awesome. University of Miami Libraries, we have the University of Cincinnati Libraries, LibNova, University of Connecticut Library, University of Washington Libraries, Louisville Libraries, Balearic Islands and Colorado Boulder. So, as you can see from that, we're starting to get more international members, more people interested in what we're doing. What does that mean for us as an entity, as a growing body? So, thank you to the new members. If you are not a new member, who here is not a member, well who here is a member of NDSA? I'll do it positively. I'm learning.
Bradley Daigle:	00:43:04	Awesome. So, for those of you who aren't sure or didn't put your hands up, think about what membership means. It's very easy form. We only ask a few questions, a pint of blood and maybe a social security number or two. But otherwise it's very easy process. But bringing you into these conversations I think is a much more critical piece. Second question. Who attended iPRES this year? Not as many hands. Okay. So again, thinking about what the conferences mean, both here in the States, North America, Europe, global South, other areas where we

should be reaching into preservation communities. Please help us think about that going forward. Otherwise I will get out of the way for our keynote.

Sybil Schaefer:	00:43:58	Thank you Bradley. I am very excited to introduce our keynote speaker next. Alison Langmead holds a joint faculty appointment at the University of Pittsburgh between the Dietrich School of Arts and Sciences and the School of Computing and Information at the Dietrich School of Arts and Sciences. Langmead serves as the Director of the Visual Media Workshop, a digital humanities lab focused on the investigation of material and visual culture, historical or contemporary. At the School of Computing and Information, she teaches courses on digital preservation and the digital humanities. In her research, she designs and produces digital humanities, humanities projects that investigate visual reality and materiality as multivalent interactive processes. She also studies the practice of digital sustainability as a complex transformative ecosystem that informs our understanding of the role of historical information and our contemporary digiality. Langmead is the principal contact for the DHRX Digital Humanities at Pitt Faculty Research Initiative, which represents a transdisciplinary network of scholars who use the digital methods to study the ways in which humans interact with their environments. She holds a PhD in Medieval Architectural History from Columbia University as well as an MLIS from the University of California, Los Angeles. Please join me in welcoming Alison.
Alison Langmead:	00:45:58	Looks like me. Huh.
Alison Langmead:	00:46:02	Thank you Sybil very much for that kind introduction. And thank you all for coming out to hear the plenary today. I am indeed going to speak about sustainability and preservation in relationship to the Socio-Technical Sustainability Roadmap that we run out of the VMW, the Visual Media Workshop and also just some things that I've noticed along the way. Perhaps to many of you, this sentence seems tautological or obvious, but I'm going to try in my little less than an hour here to present my particular take, which centers on the role of the centralization of institutional resources and the increasing technical professionalization within what has become an interdependent network fueled environment of dramatically increasing diversity of both stakeholders and record types. I was able to go to a number of talks this morning and there was a lot of discussion around these issues and Sybil brought some up in her opening remarks to this plenary.

Alison Langmead:	00:47:03	So I hope we can have a wide ranging conversation about what it means to be institutionally based and yet desiring to reach out into communities. So, if I can, I would like to just start with some principles of preservation. We all know what they are maybe, but I feel like I should bring some up in terms of that I would like to use just so that we can be on the same page. And I'm going to use Trevor Owens' digital preservation axioms as a bit of a framing device. I picked out three and the first one is, Trevor asserts quite rightly that institutions make preservation possible. He has 15 total axioms and I'm sure many of you know what they are and they're all, they're all fantastic. So, I'm just pulling out three today.
Alison Langmead:	00:47:53	This is echoed by any number of people in our community. This is the Ithaka report that came out last year that says historically, archives, national libraries and research libraries have assumed a leadership role in stewardship. It's about long-term access to cultural heritage materials. All, all good. But Chris Rusbridge back in 2006, and I've also noted today that there's a lot of people quoting the late nineties and the mid-2000s like they're eons ago, but they do feel like that don't they, where he noted this. "In practice, the largest risk to digital preservation is indeed money who has the resources to make a hundred-year digital preservation promise and who can make an investment case with a hundred-year return?" And the answer to that, historically, also rightly, is institutions.
Alison Langmead:	00:48:49	For digital creators. However, this institution-focused approach often means that digital preservation is quote unquote "somebody else's job", namely y'alls job in part my job, somebody else's job foisted out into the distance. It looks like this. I love this image from Ben Fino-Radin's article about it takes a village. There used to be a Vine associated with this. I can no longer play the Vine. Irony. But to many, this is what digital preservation looks like. Large old computers with restoration in progress and frankly sometimes, as you well know, it does.
Alison Langmead:	00:49:30	So perhaps that might be, however, this is an article that I just recently read that just came out in Digital Humanities Quarterly and they note the following, which I find to be quite poignant. So, forgive me if I'll read this quote as well. "The spirit of 1990s, cyber-utopianism, which assumed electronic media would be cheap and technically straightforward to maintain," that may or may not be true, "and that libraries would develop subscription models to be able to support bespoke, non-commercial projects, held back proactive funding of archive and sustainability initiatives." And, in part, as Sybil brought up,

DPN's sunsetting earlier, and this is a good example of the ways that, for a variety of reasons, from not enough subscriptions to not enough deposits to any sort of socio technical reason that you can come up with. The actual force behind subscription services has had a rocky start. It is proven difficult to address. The wicked problems, as Carol Mendel called them this morning, from the longstanding social scientific discussion of wicked problems, it has proven difficult to address the wicked problems of digital preservation institutionally.

Alison Langmead:	00:50:49	Indeed, the sorts of institutions that sometimes folks on the outside see to be more successful include things like archive team, the sort of pseudo institution that's going out, pall-mall and doing things. It is focused on some of the same principles, perhaps, as the folks in this room, but few of the same practices.
Alison Langmead:	00:51:12	So here is the second of Trevor's axioms I'd like to bring to your attention. "12. Highly technical definitions of digital preservation are complicit in silencing the past." And the way that digital preservation is indeed discussed is highly technical and technical language as it is and should be. And for good reason, especially in institutional settings where the pressure is high, but I'm with Trevor, it has negative ramifications as well. We use terms like authenticity, integrity, reliability, fixity, accuracy, and if any of my students from Pitt are up here, yes, I did grab this from my digital preservation class lecture slides. I teach these things one after another as terms of art.
Alison Langmead:	00:52:00	We talk about adequate adequacy of performance, authenticity of data, significant properties all the way down through technical concerns like operating performance as befits our professional training. We use professional models such as this process-based model, which shows preparing for a migration test.
Alison Langmead:	00:52:21	We have preservation metadata, ontologies and standards that look like this from the premise. Documentation. We have preservation reference models like this from the OAIS documentation. We have even more detailed looks into the reference models for OAIS. This is just the AIP, right? This is just the archival information package all the way down to my favorite square on this whole diagram. It says bit. It won't surprise you to hear that sometimes if you ask even myself, where is the thing in this model, it's almost impossible to answer. How do you point to the thing? What is it that we are doing? We all know what we're doing. This isn't an OAIS bashing session at all. It is just incredibly technical and complicated and

getting into understanding this world is an incredibly high, has an incredibly high barrier to entry. Indeed. It's worth noting. This is another quote from some colleagues you may know it is worth noting that in the absence of a demanding clientele or stakeholder community, the trusted digital repository standard does not seem to be widely adopted.

Alison Langmead:	00:53:38	Forgive me. I guess for saying this bluntly and I just sort of mean it this way. We create standards that we find hard to implement. So why are we so demanding in our practices if we ourselves don't do them unless demanding stakeholders require it, or we have strong support to do so. And I'd like to put it to you. I'm making good on my abstract. I brought a lot of the sentences from the abstract in here so I can make the connection. Traditional preservation practices and standards assume in some cases require unchanging fixity for preserved digital products for an indefinite period into the future.
Alison Langmead:	00:54:20	I would like us all to consider having sympathy for this group about how huge a job that is. That is an amazing, unbelievable burden to take on a community. And it is difficult to do. It is important to do, but sometimes, and I, and I felt this way this morning, there was a lot of discussion about, treated about this, about caring and worrying. This, this group does a lot of worrying and I think it's worth in the spirit of breathing deeply, recognizing the pressure that we place on ourselves to do what it is that we do.
Alison Langmead:	00:54:55	What that implies is that there's a number of tacit and explicit professional assumptions that the digital preservation community has on itself. And again, I'm, except for the last one, these are common archival principles that carry over quite easily. There's valuation and an appraisal, and by that, I mean we have to decide as a group what an institutionally based digital preservation techniques, we need to decide what deserves preservation. Is it cultural, historical and scientific heritage? It will of course depend on the institution and their collections policy. It will depend on any number of things. There is that infrastructural projects. Is it the ones that somehow seem more fundamental to the structure of network, digital of the network, digital infrastructure than others?
Alison Langmead:	00:55:45	Whose heritage? Whose infrastructure? I've heard this over and over all day and in and in talks this year. This is a stressful job. These are distressful choices. They lead to the second group of tacit and explicit assumptions, which is who takes care of things and whose responsibility is for it to take care of things? This is a easily enough, longstanding issue in the digital realm as well as

the paper based realm. Our networked digital infrastructure makes ownership or custody, at best, complicated. As Trevor said this morning, and I thought this was fantastic, who's looking after the Kickstarter papers? What even are the Kickstarter papers? It can be very difficult to even describe the relationship between the paper-based world and the real world. In fact, going off script, I would go ahead and put out there that we talk a lot about the ways we bring our old the ways we transform and change our old ways of doing things in the paper based world into the digital world as if that is something that can be stretched. I put it to you now that in 2019, it seems ever more clear that the digital change didn't just transform our information ecosystem. It broke it and it broke it deeply and essentially, and we feel it as a pain.

Alison Langmead: 00:57:13   Responsibility has, then, ethical and economic burdens. It is a difficult, difficult thing to do. And our technological and administrative structures are there to help us navigate this minefield.

Alison Langmead: 00:57:27   To bring it back to Chris Rusbridge. In practice, it's about money. It's about making a hundred-year promise. It's about making a hundred-year return. Well, we should all be so lucky to live a hundred years, much less a hundred years of our working life. This is an amazing thing to do and it is almost relentless. Here's the third one in the last one of the assumptions, and this is the one I sort of want to emphasize a little bit more because it isn't one that I teach in Archives 101 either. Diversity actually pushes back on the utility of infrastructures held in common. That is to say communal infrastructures necessarily involve compromise and the assumption that we're talking about one type of thing and I don't literally mean one type of thing when I'm talking here. Anytime you need to have something held in common, you are making a model of the world that will exclude something and the diversity of the network ecosystem pushes back on that and I mean that actively. I mean, diversity pushes back on institutions. Diversity actively pushes back on standardization, and that is also then to say diversity effectively, accurately, and thankfully is pushing back on the role that standards actually play in our practice. What is it that standards have been doing to us throughout our time as stewards and as digital preservationists? Diversity tests our assumptions about what standards are for.

Alison Langmead: 00:59:01   If digital preservation is the best approach to the level of institution, therefore, must it produce something, I can't find a better phrase for this right now. I really apologize to the people who invited me here, but a compromise in the commons, a

compromise of the commons. I'm mixing my metaphors, but institutions and standards are a form of compromise, a form of effective compromise. Life is compromise and yet, generalized formalisms are never universally, successfully normative. They simply aren't. They can't be. And in fact, it might be worth saying that they only ever work in the precise conditions that they were actually produced. So maybe even in time. OAIS is a good example as people keep changing it and moving it throughout time. It moves and shifts and change. It's one of the most successful models, but it's also one of the most abstract models, right? I'm teaching OAIS to a bunch of young LIS students is a bit like telling them there's no reality. It is a way of thinking more than a way of doing.

Alison Langmead:	01:00:07	So in the land of the creator, responsibilities of working with digital things can look a little bit different than this burdensome scenario that I'm placing as a possible affective way to view the responsibility of digital preservation right now down at the level of the individual actor or team, the people who are producing the documents, the texts, the files, the programs, the objects, the bits that we are also concerned with, rightfully, what is it like for them to work with the machines?
Alison Langmead:	01:00:41	Why would they need to take preservation actions? They ask questions like, what is a computer for? What does it do? What purposes does it serve? Who's in charge here? And to a certain extent, it's at this intersection between what creators ask about what they're doing with computers and what digital preservation professionals would like to have done with their work over a hundred year return over a hundred year lifespan is that we say, this is a truism that I say all the time and it's just, I'm sure there's somebody I could cite for it, but personal computers have made us our own typists, our own typesetters, our own record keepers. And in that way, we might consider that they have made each and every single one of us, each and every single digital record creator, they have made them their own digital preservation professional. The question is, do you know what you're doing? Is your preservation, is your notion of the future rowing in the same direction as your notion of the present?
Alison Langmead:	01:01:46	To this end, the Visual Media Workshop team started to think about sustainability as a way to discuss the fact that not every project creator will have the same hundred year return approach that a digital preservation professional might, but they will have some need to sustain their work because that is the way human beings create meaning. So, what is the way that we could actually talk to them about it with, not as teaching

them how to do digital preservation, but working with them to sort of figure out how they could maintain their work more successfully in the short term. And maybe even perhaps on the time scales that the professionals in this room need to do this.

Alison Langmead: 01:02:35   The creators really know what they're doing and we need to figure out a way to respect them critically, essentially and deeply. Leads me to Trevor's third digital preservation axiom for today, "nothing has been preserved. There are only things being preserved." Another oldie but goodie from Brian Lavoie here.

Alison Langmead: 01:03:10   This is something that we have known forever and ever successful. Digital preservation is not just about technical solutions. Rather it is a confluence of preservation strategies, user expectations, organizational commitments and economic solutions that will ensure digital materials persist through the next technology cycle and beyond. And we wanted to bring this approach out to digital humanities practitioners, but we worried that bringing things like this out to them along the same lines of someone else's job would be, this is my job, but not when I signed up for please, please, please be gone with these added needs. Please don't trouble me with these added concerns about longevity. But we sort of went on. Whose job is it to preserve blogs and online discussion forums? Whose job is it? Is it the people in this room or is it the people who made it? I think this is a complicated conversation.

Alison Langmead: 01:04:14   Are infrastructural and important projects the only ones worthy of sustaining or sustenance? I actually go back and forth about what the, the larger scale noun is for sustainability. Sustenance like food? Sustaining like a note, I guess. The answer here is, of course, no, but the types of decisions that institutions much must make hinge on questions like this. Institutions cannot preserve everything. Institutions cannot preserve everything. Is it our mandate to preserve everything? No. So therefore, the valuation and appraisal assumption abides. How do we make these decisions? It's stressful. This is all then therefore to say sustainability is hard work and we're all in this together. To this end, the, we produce the Socio-Technical Sustainability Roadmap. I'm sure there are graduates in this room. We took it around the country this last year to six, seven locations around the United States. And my colleagues, Ashley Quigley and Chelsea Gunn, you can see their Twitter handles there on the screen, and I were the team that did the majority of the writing and the presenting throughout the year. Please visit.

Alison Langmead: 01:05:39   I want to take you through it briefly. This isn't a lecture on the STSR, that's the abbreviation. We call it the STSR. This isn't a

lecture on the STSR, but I can give you a quick overview of what it is and then, for the people who participated in it, and for people who wish to participate in it. At the end, I'm going to be giving you the findings that we will be turning into the NEH in just a month. So, the findings of this of this experiment of taking sustainability practices out into the field. Well, we think we're done for now.

Alison Langmead: 01:06:18   Section A, oh, I should back up and say one thing. So, the STSR, for people not familiar with it, it was designed to be a self-led workshop. If you go to sustainingdh.net, I can go back. If you go to sustainingdh.net, you'll see a delightful WordPress website that we wrote and designed in a color we call digital preservation teal. And it is designed to be a self-led workshop that creators can pick up and run on their own that takes them through the steps of sustaining their work. The Section A is secret project management. It has a number of modules that proactively we found there was a big gap in out in the field of people knowing how to simply manage large scale or even medium scale digital projects. And so in Section A, we take we take the participants through a number of exercises from defining their user communities to learning how they manage their records to figuring out their significant properties, which is a word that might make the ears of the audience perk up a bit. There are two, I'll get into this a little bit later, but there are two, at least two highly technical digital preservation terms from OAIS and Cedars, for people who remember all these things, they get worked in here. We took it on ourselves to integrate. I'll get into this more in a bit, a lot more professional digital preservation terminology into these, into these modules. But the work of Section A is secret project management.

Alison Langmead: 01:08:07   Again, I don't lie, this is from the abstract. Sustainability planning flourishes best when the fluid changing nature of contemporary digital practices and the products are accepted and the possibility of a project retirement date is assumed. This is a change that we made. I did, I mean clearly, I did a lot of rhetorical setting up to get to this point here today. But if institutional practices are designed for a hundred-year investment in a hundred-year return, it's harder to turn that ship of state to the left or the right. Sustainability, instead, when you, sustainability planning for creators does a better job when you're able to turn and wheel quickly based on the changing infrastructure that people see around them. Contemporary digital practices are fluid to say the least. And our approach to project management emphasizes that Section B is about really seeing how many people it takes to run a project. The work of Section B, you are asked to list every single person that is on

your team and what they do for the project. That is module B1 and module B2 you're asked to list every single technology that you use on your project and its role on your project and how long you have it funded for. This includes things like GitHub and, to say the least, it is a shocking thing to ask a group of 40 or 50 digital humanists or digital stewards or information professionals to physically write down. My project relies on a technology that is funded at the pleasure of Microsoft. If Microsoft decides to take it away, there goes my project. So, we map them, the people on the project and the technologies on the project and we see how long each of them are funded. If you have people who are not funded for as long as the technologies that you need them, you see that you have a sustainability red flag. Not a problem, but a sustainability red flag. Again, from the abstract for sustainability practices to be successful, project leaders must keep the changing socially contingent nature of both their project and their working environments consistently in mind as they initiate, maintain and support your own work.

Alison Langmead:	01:10:30	And I can draw your attention here, not only to the fact that I'm just talking about constant turnover, which is the actual lived experience of the vast majority of the digital creators we interacted with when taking this out into the field. It's actually here I can also emphasize the notion of initiation maintaining and supporting their own work because that is what the work of sustainability, that is what the work of preservation quote unquote often looks like to the creator. It is meshed into their need to actually say something real and out loud for people to integrate their forward thinking process about preservation into their work-a-day efforts to say something important, I think is the critical means by which we will be able to push preservation practices forward. It has to mean something to the creators as they're doing the thing that they're doing. Not an add on. I wouldn't even say integrative, which is I think something else that Trevor brought up this morning. I would say it needs to match. It needs to literally match and support them. It needs to support what it is that they're doing now.
Alison Langmead:	01:11:45	Section C Is to introduce the very basics of digital preservation to them. Actual proactive professional level digital preservation practices, which I will go into specifically here because they use the NDSA levels for that.
Alison Langmead:	01:12:02	Again, this is the mismatch that this is trying to sort of entail, that we posited and then found was true. For users to take up digital preservation practices, and here I put in parentheses these institution-centric digital preservation practices. They

must significantly modify workflows and goals, which means that they also need to be able to abstract from our practices and see how it works for them. Which is it's not that they can't do that clearly. They're incredibly intelligent people. It's that we're asking, we're placing the burden of understanding us on them rather than offering what we have to say in a way that they can understand it proactively.

Alison Langmead: 01:12:39   And the results of this are either they don't do it or they find it impractical or they find that it isn't for them and then it doesn't get embedded in their practice. We wanted to find a way to embed it in their practice and we adapted the NDSA levels of preservation for this. If you go to sustainingDH.net and go to Section C, you can see it yourself. But I will present it also to you now. So why the NDSA levels? While this is clear enough, we insisted on basing our work on professional grade approaches. How were we going to make these approaches seem functionally useful in the ongoing work of producing digital projects? And the NDSA levels are by far the most legible of them. There is frankly nothing like seeing your own professionalization just slap you straight in the face when you say, "Oh, well we're going to be able to explain, pick a term, designated communities is one that I'm going to use in a second. We're going to be able to explain designated communities, no problem." And then you start to try.

Alison Langmead: 01:13:42   It's the depth of the amount of technical knowledge that is represented by the people in this room is amazing. So, it was real work adapting what it is that I teach in the classroom and perform by the wayside and what it is we thought creators could actually bonafidedly take into their process. So just for this group, here is slide of one of the things that we had to do, which is change almost every single name of the levels. Whereas the NDSA has a level, the 2016 ad level access, when we read through what access was asking of the preservation community it seemed a lot easier to treat that as in usability, the way that creators could take their need to make a usable product and work access into that.

Alison Langmead: 01:14:42   And I'll go into specifically how we did access in a moment. Seemed to work for us. I'm an archivist, I'm a trained archivist. We don't talk about backing things up per se because the, the slippage between archiving and backing up is a painful one. Indeed, professionally, however, out there in the field, people need to back their workup. And the NDSA level about storage and geographic location is in it' own way about backing up your work. And so that transition was relatively straightforward for us. Security became permissions, metadata became metadata.

Metadata is another one of those words that is easy to think you can explain and then much more difficult to do in practice. And then fixity simply became data integrity, which is what fixity means.

Alison Langmead:	01:15:31	So here is how we adapted access. I could go through them all if you like. And I'm happy to take questions about the way we adapted the other ones. But access to me brings up a lot of the major concerns that we found in the field and will lead a little bit closer into the findings. I'm sorry this is so small, but I will, I will attempt to use the pointer. Excellent, to make my point. So, this is the new 2016 edition of access, right? It was posted on the Signal at the Library of Congress and up here you see Determine Designated Community, yeah? And then over here, however, there's a discussion of submission information packages, SIPs and archival information packages, AIPs, all those OAIS terms, yeah? It is, even though it's a chart with a whole bunch of very brief phrases, there is a universe of technical digital preservation knowledge embedded, rightly so in the NDSA levels of preservation. And then there's these great definitions down here, what a designated community is, what a SIP is. Representation information even farther down into the OAIS reference model. So what I'm Aisling, Chelsea and I did is we decided which of these large standing concepts we wanted to focus on because we weren't going to be able to focus on them all and which did we want to embed into the STSR as a way of building both linguistic meaning we were going to teach them these very words and disciplinary bridges between the, the digital project creators and those who might then take them on later as custodial stewards or post custodial stewards as it were.
Alison Langmead:	01:17:24	And this came in part out of our own heads, but it also came in part out of my teaching of digital preservation, Preserving Digital Culture is the name of the course at Pitt. And I taught it over a number of years and noted as you all will have noted either actively or passively in your own work, that there are a certain number of buzzwords that truly, truly have caught on and that there are a number of digital preservation buzzwords which are more functionally useful on a daily basis than others. Unfortunately for us, one of them, I mean for me, for Aisling, Chelsea and me, one of them, is in fact, designated community, which is also a very controversial term especially on the library side of our fence because to identify designated communities, to proactively preserve brings us back to the issues I was bringing up at the beginning of this talk which is if you are identifying digital designated communities that means you are also identifying non designated communities. You are keeping

people out proactively by choosing who is in and in a profession that brings on itself the burden of trying to be everything to everybody which I say is impossible.

Alison Langmead:	01:18:37	Designated communities is fraught. It is actually a decisively less fraught out in the world of people who are trying to reach particular audiences. Designated communities to a creator is a necessary thing. You have people you are trying to contact. You have people you are trying to address. And we bring into Section A and then also into C this proactive notion of designated community. We teach very carefully about how to identify designated communities. And you, well would you? I was surprised by how quickly people adopt, the people who participated in the STSR, adopted designated community. It was like, it was like breathing. They were able to pick this up and run with it. Moreover, this is stuff just so you know, they didn't actually have audiences in mind in the main, the people that run through the STSR, this is the first time they'd ever heard, I mean that they'd ever been asked to proactively, as a group, decide who they are talking to preferably and who they aren't talking to. The internet is a great, I guess, magician in its own way. You think you're putting it up on the internet for everyone and that can't possibly be the case. We highly encourage people during the STSR to not consider the general public as their audience as there is no thing.
Alison Langmead:	01:20:10	So I've made this slide a little bit more complicated because I want to demonstrate that we are practicing what we are preaching and we are changing our own. We are even changing our own adaptation as we learn more at the top. You'll see, this is what we started with a year ago. This is the way we talked about our levels of access in the original Socio-Technical Sustainability Roadmap. And you'll see that the first thing there in level one is determined designated communities and then create and make available descriptive metadata. One of those is common to the NDSA, I believe. Well, actually they may both be, but they make a whole lot more sense once you've actually asked somebody to sit down and figure out what their designated communities are. We realized though, about May, about the Brigham Young time of our trip that we didn't actually ask them to do the other thing. The other phrase that we picked up from the literature that we found to be particularly useful in the context of digital creation was significant properties. Significant properties is a phrase well known to the folks in this room and you'll see in our on our adaptation later, we ended up needing to add determined designated communities and significant properties and let me tell you, the creators are pretty excited to hear, and maybe, I mean I'm hoping to feel a small

wave of excitement from the people in this room. I say to them, if you walk up to a professional digital steward and you say, here is my project, these were its designated communities and these are what I consider to be its significant properties. I say the information professional on the other side of the conversation might cry. They might cry and they would say, give me your stuff.

Alison Langmead: 01:21:58   I know it's more complicated than that, but this is the sort of scaffold that we were trying, that we were attempting in one small way to allow what's the base minimum to allow for. This is what I meant by interdisciplinary linguistic conversation. If I can teach significant properties and designated communities as key phrases for them to know and know actually what they mean, it can help make the transition should they be. And in this case, what do I say, so lucky as to have their project fall in the hands of the people in this room with hundred-year investments and hundred-year returns. I could, I could go on. How much time do I have? I'm actually gonna have a lot of time, but I probably won't. So, you'll see here though that we focus on publicly available documentation and access and use policies.

Alison Langmead: 01:22:49   And then you'll see that our level two has something that gets buried, I think in the professional digital preservation models, which is that to have project that is useful to a project creator, you need to ensure that the designated communities can access the significant properties all the time. And this changes all the time. And this makes, by the end of the, we'd run it over two days. This makes complete sense to them. And I think it builds a great foundation for sustainability that can be turned into preservation should we wish it to be the case. Also, for those who don't know this project as well as I do, sometimes it's so hard to get out of your own head. There is a case in Section A where we talk about the fact that not every project lives forever and that we, we assert that the best way for project creators to think about longevity is to think of it in three-year increments.

Alison Langmead: 01:23:53   Every three years, you have to decide again if you're going to give it another three years and every three years after that, you're going to decide if you give it another three years. And I've said this a number of times, but we thought we were going to get eggs and tomatoes and rotten things thrown at us when we suggested that and all we get as a sigh of relief. All we get as a sigh of relief. Oh, I only have to plan for the next three years? I can do that. I can do that.

Alison Langmead: 01:24:15   If you still have pretensions to a hundred year lifespan, we call that book time, book time TM. The same time that books last

which is a very difficult thing to do. And on the STSR, you'll see if your pretensions are in fact book time, we suggest going to talking to the preservation professionals straightaway as part of your initial process to really start building in the resources that it would take to make something last for something as long as a book. We will never, as digital preservation experts, have the same 2,000-year long history of patronage that book librarians have. So, we can't really, again, it broke it. We can't use that pattern that we'd had for the paper infrastructure for what we do now. We have to find our own new way. All right, findings.

Alison Langmead:	01:25:11	We knew it when we started, but we're academics. So sometimes we think things and then it turns out not to be true, but the socio and socio-technical is perhaps even more critical than the technical when it comes to sustainability practices. When people are making and creating and putting forth their life's blood, their desire to communicate with these communities that they care for so deeply. And to a first approximation, we found that the people who took the time to apply to come do these workshops, to show up and do these workshops. We did give bursaries, so that was good. But they cared so deeply in the communities that they were talking to. That was the real sort of grounded theory code that linked through every single group that came through. This wasn't a group of people just trying to get more grants. It wasn't a group of, these are all stereotypes. It wasn't a group of people just trying to get more grants or just, say, grandstand about their own opportunities. They were in it to communicate and it mattered to them deeply that their information wasn't just going to dissipate. This is something we have in this community, something to actually bond over.
Alison Langmead:	01:26:29	We have different tools than they do, but they're just as burdened by it. There's a connection between most things and trust, class, but there is absolutely a connection between sustainability and trust. People take actions that will promote long term sustainability when they feel like they can trust that there will be a future. Right? We can't really promise them that, but we can promise the way that we step through things. We can step through things in three-year increments that matches up for better or for worse. With the grant cycle, it matches up for better or for worse. With the amount of time undergraduates tend to spend on a project, it matches up against a whole bunch of different other types of cycles. And we just need to trust. We need to trust each other. We need to trust the technologies. We often need to trust large corporations like Microsoft or Google to do our work.

Alison Langmead:	01:27:19	And so acknowledging this deep, deep connection between sustainability and trust is important to figuring out how to move forward. And I would like to note now that I say this out loud in front of this group of august professionals, I don't mean they don't trust digital preservation professionals. That's not what I'm saying here. I think by and large, most of them worry that their work wasn't important enough to get your attention. Much less, you know, it has not a question of trust. I mean, trust in the technologies themselves, trust in their deans, trust in their administrators, that sort of trust.
Alison Langmead:	01:27:58	All right, this one makes me upset and sad, and also sort of happy because if we could all consider doing this in some of our outreach projects, I think it could make our communities, all of them that we reach and of all the people in this room, we reach out to any number of diverse fantastic small scale and large scale communities, which is of all the comments we got back about in our exit interviews from running the Socio-Technical Sustainability Roadmap. It almost, I mean frankly it almost brought me to tears the number of times project teams said, I am not given enough time to actually talk to my team members and do my job. I don't actually get to do the work that I do because I am so torn doing other administrative tasks or doing other things. Thank you for giving me two days to look at other human beings for an extended period of time.
Alison Langmead:	01:29:04	It almost was enough just to run it and you better believe I'm telling the NEH how important it is to actually bring people together face-to-face in local communities. We went all around. I should say. We went to Providence, we went to Provo, we went to Stillwater, Oklahoma. We did one in Pittsburgh. We did one in Atlanta. We were invited by Ben Daigle out to Ohio to do one and we'll be in Texas in December. Going all around the country to places so people don't need to all assemble in Tampa, as great as this is, but we can go out to them and figure out how to distribute these resources. This, in and of itself, makes me want to get up and do this workshop over and over again.
Alison Langmead:	01:29:47	But you can do it too. Don't need me. It's all on the internet. In fact, I should say, one of our final deliverables is to create a facilitator's manual that will have every single detailed finding that Chelsea and Aisling and I had as a team available as a PDF and all of our PowerPoints. We thought the STSR was enough and it is not. It's another sort of finding that we learned. So, there'll be additional materials up for other facilitators. And we're also open to doing train the trainer sessions.

Alison Langmead:	01:30:20	There's absolutely more room for discussing how projects and this notion of book time that I brought up before is important. Especially digital humanists, which is sort of my background as Sybil noted in the introduction. They consider their work often very golden and worthy of endless preservation. And while that is undoubtedly true, the actual resources that it takes to do that are difficult. And so, there is room for discussing ending projects. Okay. I'll just give everybody a minute who can read that and then I'll read it. There is, I am not joking, more space in our infrastructure for teaching records management. Who knew? I taught records management and in our MLIS program at Pitt and I found it endlessly fascinating and I'm sure so did my students, but you know, it doesn't have the best reputation. Module A5 is a records management module.
Alison Langmead:	01:31:18	If you check it out, you'll see. I get it. It's not even rapt attention. I get silence, I get notetaking, I get so much attention for my records management lecture and it's not me because I've given it to students, and they fall asleep. So, there is an absolute craving for records management, and I associate this back with my truism that as computers made us do so much more of our own work that used to be the province of professionals, people just, they feel they're doing it wrong. I run these within the Department of History of Art and Architecture for our students. There's a, there's a moral implication to records management that I think it's important for management professionals to dispel. You aren't a bad person if your records are a mess. Right? Right?
Alison Langmead:	01:32:09	Thank you. It only matters if you can find your stuff. The problem is when you're doing it as a collective and module A5 walks through what it takes to go from being an individual record creator to one that has to work in a group and the very, in very basic terms, and it's all heuristic. We base it mostly on how we do it in the BMW. There is more space in our infrastructure for records management and people will appreciate it. I mean come on. Who knew? Thinking of services, free or otherwise, as part of your team has proven to be a useful strategy. This can also help you guys when things come your way to know what part was related, what depended on AWS, what part wasn't, how that actually worked over time.
Alison Langmead:	01:32:56	People also don't like to admit how much they depend on the quote unquote free infrastructure of the internet. But I promise them, and you know, they tell me it's true, but this might be wishful thinking. I promise them that admitting that it's true is less painful than pretending that it's not. And part of the reason is that we talk about things like, "Oh all of my project

infrastructure relies on GitHub and if GitHub went away," now mind you, if GitHub went away, we're having bigger issues than just GitHub went away, yeah? It's a little bit more infrastructural than that but talking about them as red flags rather than problems is critical. Every single project, every single project of every single person in this room, every single digital project of every single person in this room has a sustainability red flag. Every single professional digital preservation initiative has a sustainability red flag and you know what they are and you're watching them. That's what makes them preservation systems, that you know what they are and you're doing something about it.

| Alison Langmead: | 01:33:58 | Calling out student labor as a sustainability red flag is also impactful. In the academic market that I tend to talk to, the way that students flow in and out of projects is seen as necessary. That is in fact in many digital humanities cases, what the projects are there for, they are there to train students. Students aren't incidental to the project. Students are necessary for the project, but they come and they go and we want them to go because we want them to move on to their next thing, yeah? We want them to grow and live and change. That changes the way we think about sustainability practice and it reemphasizes the three-year cycle and it reemphasizes the ongoing change. This is the point at which I often say thank how far we are from OAIS. When I'm talking about constant iterative change, it is difficult to get all the way down to the bit and to produce representation information when we are talking about something that always changes. So, the notion of custody and responsibility rears its ugly head. Not saying it's a bad thing, I'm just trying, this is, this is the way in which I'm trying to deliver on the promise of my talk. Sustainability is not preservation. They're actually two separate mindsets, both important. |

| Alison Langmead: | 01:35:13 | Calling out grant funding as a sustainability red flag is also impactful. The grantors know it too and they're starting of course to, to have conversations about it. Every three years, writing a new grant takes time away from doing whatever it is that you want to do. It's the way of the world in many ways. It isn't a quote unquote problem. Or you can decide if it's a problem or not. But it is a sustainability red flag. |

| Alison Langmead: | 01:35:41 | All right. To conclude, let's forgive a little bit the DH forward quote here, but the TEI, the Text Encoding Initiative, giant XML standard used by a lot of digital humanists who focus on written texts and all languages in their digital humanities work. There's a true, there's a truism that says that every TEI project is a TEI customization project. Every giant XML schema to actually |

implement it requires that you basically customize that XML schema almost all the way from the beginning. The digital preservation community should know this as well as anything else. Do you use all of PREMIS or do you use what is necessary from PREMIS? This is a similar pattern or METS or MODS. Pick whatever sustainability initiatives do things like bake it in that not everybody meets every component of the standard. Digital preservation can do this too, but as a hallmark, I put it to you today, as sustainability initiatives. We bake in the fact that things change, and things are always customized. Things are always unique.

Alison Langmead:	01:36:55	So when it comes to sustainability, why not make the work of this constant iteration and customization visible and supported by the infrastructure? We cannot as professionals be everything to everybody. We cannot. It is too burdensome. And then the question of choice and options and who picks what goes in and who pick what gets discarded needs to be a responsibility shared. It needs to be distributed as widely as we can to those who feel they have responsibility.
Alison Langmead:	01:37:31	Thus to conclude, to conclude, conclude, it isn't just sustainability that we're all in it together for. Sustainability and preservation are both incredibly hard work and they should be aligned with our current responsibilities and roles. We don't do preservation work because we care. Although we care, we do preservation work because it is our responsibility and it moves in the same direction as our major work and, I don't know, meaning making responsibilities. So, they're both hard work and we are, in fact, all in it together. Thank you.
Sybil Schaefer:	01:38:22	Thank you so much, Alison. We have about 15, 15 to 17 minutes for questions. So please make your way up to the mics.
Alison Langmead:	01:38:42	I can lead you through Section A of the STSR if you like. Somebody quick, ask a question.
Courtney Mumma:	01:38:56	Like I'm wearing a cape kind of. That's not my voice though. Hi, I'm Courtney Mumma, Texas Digital Library Consortium. I am really excited that you brought up records management. I'm pretty much excited whenever anyone brings up records management. But in particular in this context my mindset and my education very much aligns records management and archival theory. And I'm not exactly sure how to put this. It's probably going to annoy someone. And I apologize, but, OAIS, the way that you presented it, one of the things you said is that the concept of it can be difficult to grasp because it's kind of saying nothing and everything. Coming from the archival

perspective, having been educated in archives, when I saw OAIS, it made sense because it's so based in theory. It was like, "Oh yeah, yeah, yeah, yeah. Check, check, check." Same with records management. So, I think you're hitting on something really interesting there. When you're finding that kind of feedback about records management and that kind of thirst for it 'cause it does kind of help that understanding or understanding of digital preservation. All that to ask what specifically were people excited about when you were talking about records management? What, what essentially, what pieces of that stood out?

| Alison Langmead: | 01:40:27 | Thank you for your question. And yes, that's another good example of seeing your own professionalization training in archives is a training in abstraction. Many trainings are, I don't want to call out archives, especially that way, but they are that way. So, two things that I'll choose to, to bring forward. One was an easy one. You can see it yourself just so that I don't have to necessarily go through it. But we actually give our file folder structure that we use in the VMW for our digital projects on, on the STSR website, and so a lot of the questions are literally at the level of what files do you put in these folders. I mean, down there, which leads me to part one of what I have to say, which is that I feel endlessly disappointed in having to tell them, I don't know. |

| Alison Langmead: | 01:41:22 | What do you do? Right? I don't know. What is your project about? Like what is it that it is that you're trying to do? I have a way to work and I think it's relatively generalizable. I've seen people actually pick it up. I have seen other people able to use it, but I bet you dollars to donuts the big buckets look the same. But what they're actually putting in it looks different, as it has to, because the second thing that I did want to say about what they're interested to hear is that, well, interested might be the wrong word. They understand it, is that the only record keeping system that works in a team is the record keeping system that the team wants to keep up. There is no way to impose a structure on, on a team. You have to work with what they have. |

| Alison Langmead: | 01:42:10 | That means that if you have a team that really likes working with Drive, then Drive should become your reliable site of project documentation. This is a term of art that we put in the STSR that it doesn't really matter what your reliable sites of project documentation are. So long as your team all agrees that that's what they are. And this is another thing that I feel has gotten picked up. People are people in my experience, participants assume that records management is a problem that can be solved with technical tools. Which website should I use |

to manage my records? Should I use Drive or should I use Box or should I use Dropbox? And as an information professional I bring to them the sometimes unhappy answer, which is, that's actually second to which, which of these tools does your team, is your team willing to use?

Dennis:	01:43:08	Hi, I'm Dennis. I'm with Zontal here and the first time went up for one of these conferences so I was pretty excited to hear your elaborations. About three years ago, I started to study the (mic cuts out) that came from organizations or group meetings like this, like the OAIS or the TRAC or however you pronounce that. So, what my question is within this framasphere where somehow the available funds are different than within the libraries it was quite feasible to actually implement a system based on these standards. And now we're in a position that we want to bring this back to this community and we also want to establish this type of trust that you mentioned at the end. So, the question is, what are the procedures that should be taken in order to make sure that this solution that we think adheres to these standards is actually also perceived by you to be compliant with all of these ISO standards?
Alison Langmead:	01:44:01	Okay. So, who is me in that scenario now? Just so I answer the question.
Dennis:	01:44:05	So you're the voice of the group right now.
Alison Langmead:	01:44:06	Okay. Okay. So, let me mirror back the question to make sure that I, you can feel free to sit but, but to make sure I have it right. So you have been lucky to be in a situation where a lot of the highly technical and incredibly detailed and very professional and useful technical standards have been successfully implemented and you want to know how to best demonstrate the way you did that to a community where that's been less the case in the hopes that you could make it more the case.
Dennis:	01:44:39	Probably.
Alison Langmead:	01:44:41	Okay.
Dennis:	01:44:41	What I think the real use case would be, you have this chart where you talk about different levels of adhesion to the models. Who classifies the system to fall into one of these categories? Is it a self-assessment? Is that something the community does? Is there a certification agency? What's the procedure there?

Alison Langmead:		Right. The answer is, well, I think if I'm, if I'm understanding correctly, the answer is each individual institution picks up which standards they feel well promote their needs the best. So, the answer, the main answer to that question in most American contexts is no one. But I think that that, that report done by the NDSA about TRAC for example that that that was just a survey. They surveyed the membership of this organization asking how many had taken up the trusted digital repository standards. And they found that only the ones that did either had a really strong, I didn't emphasize this enough. And so, I can do it now. Thank you. They either had a really demanding stakeholder community, which isn't actually common in my knowledge, although actually you guys tell me, to have a group of depositors who were absolutely demanding of trusted digital repository status 'cause it's a lot of work and it's a lot of money for good cause when the, when the information under consideration needs that sort of attention.
Alison Langmead:		I think in the main, there's a notion in the States anyway that not everything needs that amount of attention. And so, then you're in the haves and haves nots situation. Who gets to go into a trusted digital repository and who doesn't. Anyway, they just simply found that outside of having a very demanding user community or, and I thought this was essential, you know, the support of each other to do it, it just simply wasn't happening. So I guess I would say outside of looking for somebody to sort of decide to do things, helping people know why they need these standards at the level that you're suggesting and supporting them and implementing them in the way that suits them best is the critical thing. Supporting the contextualization of when you need to go deep and when you can stay broad would be the most essential thing you could bring to bear from your experience. When do you really need to get down to the brass tacks, the real, real small-scale things and when can you let it go is something that I think more advice from people who've actually done it could really help. I hope that answers.
Audience Member:		Hi. So, thank you for your presentation. I kind of wanted to follow up on like the demanding communities who, you know, want the TRAC. Like we've never had that, but we've had people come to us and say like, well, your repository doesn't support reuse or interoperability. So, I'm wondering if in your trekking around the STSR, if that emerged as a concern or anything related to that. T.
Alison Langmead:		Yeah, thank you. We had, I should say, that sometimes when we took the STSR around, I had only project creators and they wouldn't have known to ask that question, you know in the

main, but when we went out to Ohio for Ben Daigle and the Ohio Five, I had a lot more information professionals in the room and frankly running the STSR, like if we all did really do Section A in here on projects that you held, it would be a very different conversation than project creators because I would get questions directly like this. So, in the small number of cases where I had questions like that, the, the actual issue at hand was one of service. I've heard a bunch of times today about libraries changing from a collections model to a service model. And I would say that in the main, I think that's why that committee brought it up.

Alison Langmead:	01:48:38	The answer your question is no because the stakeholders didn't know to demand it or don't know that that's something in the offing or don't know that it's necessary. And in that way I wonder, I'm just thinking this out loud, if that might not be such a great conversation to have because it can check you talking back about when you would go ahead and do the, the expense of doing something like trusted digital repository, not just talking about what they need but how, you know, the cost benefits analysis of doing it. So, I would say the information professionals that I spoke to are a lot more concerned. We're also happy about the three-year cycle and we're a lot more concerned about maintaining active usability and much less in cold storage, which is how I may be wrong. That's how I consider these, these, these standards because they aren't geared towards access because they aren't geared towards making things more available. They're geared more towards more storage. So, the answer to your question is not much, but when they do, they're more worried about user communities that have much more smaller scale aspirations. Smaller time scale.
Alison Langmead:	01:49:49	Like projects themselves think of themselves as very important because they are.
Audience Member:	01:49:56	Speaking of access and standards for access, the timing's perfect, because that draft of access, that share of (mic cuts out) or the NDSA levels, a group of us from DLF had been working on revising that for the past couple of years and expanding it and we just put it out for publication and edits yesterday. Several of us are in the room and we'd really value your feedback on it, particularly like the language and things like that. It's great to see that there's interest.
Alison Langmead:	01:50:29	Great. No problem. Thanks. I'll check it out. Right.
Sybil Schaefer:	01:50:32	Thank you very much, Alison. That was a fantastic keynote.