>> So I we could have all the speakers here. Yes. So if we could have the speakers please come and sit at the table. Take a seat the table. One, two. Caroline. Oh, right. Yeah.

>> I could be creepy and hang out over here.

>> Perfect [laughing]. We're still- who are we missing? Okay. So our panel moderator is Julia Kim. She graduated from NYU's Moving Image, Archiving, and Preservation program in 2014 with a thesis on the applications of digital forensics for born-digital materials and cultural archives. She became the 2015 and DSR resident with NYU libraries where she focused on the issue of researcher access. In 2013, she interned as a technician at the new museum's NDSA Innovation Award-Winning Exhibition Transfer Station and has since cofounded the ensuing media preservation, non-profit, XFR collective. She now serves at the folk-life specialist, digital asset manager at The Library of Congress and we are very happy, we really want to hopefully continue a tradition of having an NDSR alum who's achieved a lot come back and participate in the symposium in some way. So with that, we're really happy to have you. And we'll begin the panel. So the way it's going to work is-I didn't explain this- some of you submitted questions, so some of it will be Julia asking questions that have been submitted, some of them ones that she's created, and then we're going to leave time at the end for you to ask questions to the speakers who you weren't able to previously.

[Inaudible Comment]

>> Julia Kim: So we have about 40 minutes, so I have some questions that were submitted, but I want everybody to feel free to jump in if they have questions and to tweet them at me, if they feel like they want to jump in to hopefully the conversation that ensues, you know, you'll have our mic so we can all have a larger conversation about some of these issues. First off, and this is taken from the questions, I wanted to talk about the title, Digital Frenemies. That seems to imply sort of an uneasy rivalry between born-digital and digitized content and their workflows at different organizations and these can just be outgrowth of how organizations have come to deal with these materials, but I think the title raises, you know, questions whether that's relevant now or where we can go with that, so if you all want to take a stab at that.

>> I'll just say that I was not aware that there was any relation between the two, the [inaudible] but maybe depending on what area of research you come from that doesn't become as relevant. With the work that we're doing, [inaudible] was the date of birth, actually , I will tell you that we have tried to reconcile both because, ooh, is that– [high-pitched ringing]

>> That's me.

>> Oh. Because in addition to the type of work that I showed for some of the datasets that born-digital research data, we use date of birth also to make more easily accessible data from the Henry Murray archive and from other archives

that had nondigital data that we've digitized and made it more accessible in a similar way. You were saying that helps not only with access but also with preservation. And even though the cost is high to put-there's a lot of, well, materials that come from Harry Moret who was a psychologist at Harvard and did a lot of, well, interviews and studies that now would be questionable a little bit during, but they are very interesting from the historical psychology point of view and those have been digitized. Has been a cost but at the same time they have been available to so many more researches that they were ever before because they had to come there to access it. So that caused in some way the cost of maintaining the archives is less because of this, the digitization. So-[inaudible].

>> Any of the fellows wanted to step in? Since-

>> [inaudible], okay. I don't think it was-it wasn't [inaudible] [laughing].

>> The best that I could do.

>> We'll have to do this anyway if people have questions for us. I think we talked about it wasn't a adversary relationship, it was more that we saw kind of combing through the job market and the way that jobs were described, there seemed to be this kind of weird, these weird buckets where someone was looking for someone to manage a digitization project, which I think we got a really clear view from Caroline, even how physical that process is. There's a lot of different characteristics to it than managing born-digital material and it seemed to be that a lot of jobs fell into these 2 buckets and we agreed that it's not possible. Like, more and more, you know what I mean. They're symbiotic with each other. So we wanted to have people, you know, from both sides speak. So that was kind of the thought behind it. Does everybody agree?

>> Yes.

>> Because we talked about that coming it.

[Inaudible Audience Comment]

>> You go first [inaudible].

[Laughing]

>> I'm trying to pace myself.

[Laughing]

My mic's-how's this? Is this good? Yes? Okay. So my experience is, so when I get stuff where people get very concerned about resources and stuff, there's a big problem where people sometimes treat some things like a 0 to some game. So for instance, if some institution does work utilizing digital materials, they say that is money that could've gone to nondigital materials and you're just chasing rainbows off some dot com silliness and similarly this is the problem I have when I get volunteers to do some archiving work and people say, you're taking money from professionals. And I'm like, there is so much work to do that it's

hard for to buy into it. I understand it and if I'm philosophical I'll say because people who have a lot of stuff from government grants and a lot of things from a governmental institution. We are a government of war and the functionalities of war. And military prefers competition for resources because it's believed, going back 100 years, that that produces better soldiers, better resources if you have multiple companies fighting for something. And so an institution can have that go all the way down to their academic institutions that every year everybody has to fight again for the money and justify the money. And so when they see anything that upsets that cart, they feel threatened and deal with it. And unfortunately, that makes me a chaos agent because I don't care about any of those attributes. But I think time has gone on and technology has flattened out, which is what you're experiencing with your stuff, you know 15,000 dollar scanners are now 300 dollar scanners and, you know, a ghastly black budget level of disk space is available new egg for 159 dollars. You know, we're in great shape that way. But yea I think, we're still frenemies.

>> Julia Kim? So you do both borne-you do both work with born-digital emulating a lot of work as you presented, but you also digitize a lot in terms of like just brining more prosaically, is there like any difference really in terms of how you have to do that and handle that? I know it-

>> The perception of time.

>> Julia Kim: The perception of time?

>> Absolutely the perception of time.

>> Right, how much time you have to work with?

>> Well, more than that. Digital materials, born-digital materials have the capability to be destroyed utterly and comprehensively instantly. And as a result, like you can put some things off when you do other not quite digital things. Like the paper will keep. And I'll talk to somebody. I had something where I acquired some materials from a museum. They were discarding but I'm grabbing them. And she was like, we're going to-we don't' have much time left. So I drove down that day and she was amazed I came down thay, because I was like, you got no time left. And what she meant was, these things got to be out in 5 months.

[Laughing]

And I was like, okay. We'll bake that happen. And it's just that different in perception of like the archives are like, I mean, the time spans are amazing but with digital, you know, we're now talking the boom of the dot com era of the first dot com error is now 20 years in the past and might as well be Paleolithic. Like people can't run that stuff of or get involved withit it. And I think that's attention because somebody along that old-time skill says what are you doing? You're constant hyper. And the other person is like what's wrong you, you're so slow. That's about the big time. Time.

\>\> Yeah, I think from my perspective, I guess having been a traditional archivist for many years, you know, born-digital is the paper 50 years ago. You know, when I worked at the Natural History Museum and a staff member would retire, typically they would bring us 10 boxes of their entire life's career at the museum and just be like, I'm retiring. Whereas now, they'll bring 5 boxes and 5 hard drives maybe. And like Jason said, paper will keep. You know, if you think about it. If you're going to say it's one or the other, then I think it has to be born-digital, digital preservation because that's the record's management, you know, of today. In 100 years, if we don't put funding and, you know, work out ways to get this material, there's going to be nothing for anyone to research and I get that, you know, it's important to have this material for, you know, legal and regulatory requirements, but you know, I was talking today about a scientist in the 1850s. Is someone 150-160 years' time be able to talk about a scientist because, you know, if we don't do something with the born-digital material we have, then it's going to be pointless. I think digitization can be-it has its place, it's really important. It's really important for education and for access and, you know, but I think it can sometimes be seen as like, the sexy side of archives, like you know, the coolest, like amazing, pretty material from like 200 years ago. And like I said in my talk, like paper isn't indestructible but it will keep a lot longer than, you know, a bunch of floppy disks, if you know, even now like 10 years later, some things are, you know, unreadable. What's going to happen like in 100 years, I think, you know, if we don't address this, the [inaudible] issues.

\>\> Julia Kim: Did you guys have anything? Okay. I'll move on to the next question. This is, again, another audience question that I'm sort of going to twist a little bit based on some of the presentations. The audience question was about how do we balance education and practice with these new NDSR projects out there in terms of your backgrounds and trainings and their applicability and sort of the need to change the educational model sometimes through-and that's what the residency in some ways tries to do really. But also off of some of what you were talking about in terms of your background and how sometimes there's attention as a non-trained archivist, yet you're doing a lot of this work in terms of refreshing, pulling things off of decaying media, and making this happen. So I'm just curious because I don't really know that much about everybody's backgrounds in terms of where they come from in their trading and then what they're doing now in terms of what they've had to learn on the job in terms of the flexibility that often is needed with these sort of positions and then what they think needs to happen in terms of education maybe.

\>\> Well, in the academia world, or not that it's that spread out yet or that it's done at the level that it should, but there is more and more efforts and the library has a role in that. In training researches, they are bringing a lot of this digital materials right into place by just collecting data so different forms of data collections through instruments and while experiment, observations and so that they do with new technologies. To do it already in a way that from the beginning you're already, you're training the grad student, the early researcher

4

to choose, while the closest to standard format or the most common format that you're finding within the domain, also to capture enough information on meta data about the digital objects that you're collecting. So in a way, the work is up front and you don't need to [inaudible] so much more time in the-I mean, it is, still it's a challenge. Nobody wants to, I mean unless you're an archivist or [inaudible] researcher is going to spend a lot of time, or you're a curator or somebody that [inaudible], they don't want to spend a lot of time on that. But there is a benefit in the way we talk about it that is of benefit to themselves even if they want to reuse their own research materials. If they don't put that effort even after a few years, some work that their students have done, they're not going to be able to interpret. So it just works, even if they think about it for their own reuse and obviously it is important for others to reuse it.

>> So, I trained to be an archivist in 2009. And the course that I took, there was nothing on digitization or digital preservation. Like nothing. I just learned everything on the job and I think my issue with my studies is that I think education is so far removed from what happens in the workplace. Like, you know, we're hearing theories of people, you know, who lived 100 years ago on the practice of record keeping which is great, like you know, today, it's just-

[Multiple Speakers]

>> That would be my followup question. A lot of these basic principles are sort of under fire a lot with more digital and digitized, how relevant [inaudible]-

[Multiple Speakers]

>> Can you turn on your mic, please?

>> How can we even try to make these things work with the existing structures like finding aid, so I know that most of us, maybe not most of us but a lot of us, had those theories drilled into your head-

>> Yeah.

>> but how do they actually come out, especially with these initiatives to try to be more democratized where you're like selection is really up to the community, right? So it's just, we will take what you think is important.

>> Yeah. Yeah. And I think that's been the most challenging thing for me and I've done a lot of, you know, continuum professional education just to get myself out there and just to learn stuff that I didn't learn in school and just, I think, you basically just have to do the best you can with what you have at the end of the day. And I think you can lean on other professional colleagues and stuff out there just to, you know, bridge the gap between-I think it's really interesting because you go to school, was like you know fresh-faced and eager, like without-and it's different in the UK. You have to have worked in an archive before you can be accepted onto an archive or a library school course, and I know that in the US you can just go straight into the MA from your undergraduate degree. So I think at least I had some, you know, relevance in context within

which to like base my education on, but it just paled in comparison, I think, to you know, when I was actually like in the work place proper and having to make these decisions when it doesn't fit into your neat little module of like, you know, what you learned at school.

>> Definitely.

>> So there's a couple of things that I've been doing from my end, so if it's not obvious I kind of spurt projects out like the Easter bunny so I'm pretty involved in various things and at some point-so Brewster has this belief which I agree with which you've heard versions of today which is that access drives preservation. He believes that if you can reach something, it justifies it to people. If you have a museum and you say, we have 10,000 paintings, that is a meaningless term and nobody will give you any money. But if you have someone go through and curate 100 every month and then make a big deal about it, people will understand why they are doing that. And if you have tours of your storage facility to explain to people how these paintings are stored, that level of transparency and showmanship, which is actually anathema to some personality types, does in fact help people understand it. So the fact that people are able to get to old materials on the archive helps drive people interested in what we're doing on that, on that level. So one of the things, of course, we do is scan books and we've been scanning books since early 2000s. We scan about 1000 books a day. So right now that's 200,000 books roughly a year. We're about to-don't entirely quote me on the number-I believe the number that Brewster wants to do very shortly is 10 million. And so, he wants to get all the books, one way or another. That's his interest. And so everything is kind of ancillary to it, so he's be surprised that I have been doing software like I've been doing it, but he's been like, okay, fine. And one of the things that comes out when you start working on these scales is that you quickly realize that, so the most expensive thing is meta data and then the second most expensive thing is scanning them, which means we often choose to scan and just put it up which is not the way it's done. Like, we'll scan something and throw it up there and it will be with no metadata and people hate that, but we're like something will work it out, maybe. And in that similar vein, I've worked on 2 projects with people over the last 2 or 3 years that start to nibble at the edges of professional archivists and people have either been really happy or not happy. One of them is file formats.archive.team.org. It's just solved the file format problem and it's meant to be a comprehensive public domain equivalent listing of all file formats period along with a link to every known online resource for every format which is then crawled by the internet archive way back machine to ensure its permanence. And it's being worked on every single day. It turns out, if anyone knows about this, I used to wonder why there's such a thing as creative common zero, which is public domain, and it seemed like the stupidest thing in the world. It's because there's no public domain in Germany, so you have to explicitly make a public domain using contract law. Okay, so there you go. That's the one good fact for you today. But the other thing that we have is digitize the planet and digitize the planet is essentially me trying to bootstrap [inaudible] from the ground, how

to digitize everything school. And the reason why is just because I'm trying to get people in their homes to digitize materials that they don't want to leave their homes. I don't think this overlaps or takes away from other projects like sending stuff around or funding or anything else. I think there's so much to digitize and so much of it has no advocate that we might as well try to do it. So I mean, you know, one thing that always struck me is I attended-I went to 1 or 2 archivists meetings and then stoped going. But one of the things in it was that one of the organizers told me, because we were talking about, kind of like the move of a place like the archive, and she said when she was teaching archiving to students she would have students who would come to her and said that they had become an archivist because they didn't want to work with computers. And it was the only way they could do it because the librarians were all using computers. And they were surprised. They bought a Blockbuster franchise in 2007. But you know, that kind of approach where a person says I want to go into a room and catalogue skulls until I die is like, that's rapidly disappearing, you know. And if schools don't teach them, I don't, I mean, look, my film school, I can replace 16-mm film inside of a burlap bag and I know otherwise to string anagram [phonetic]. That's what they taught me at film school and all of that information is useless, but I had one great teacher who, he taught me about what people feel when they see the image and what cutting things together will mean and the signals that we teach. I still use his lessons today in my writing much less my filming. And I think that if we see more and more teachers in some way in archiving that teach the ethics and the drive and the meaning and the reasoning behind it as opposed to here's how this particular device works, you'll produce better archivists going forward, whatever field they end up in. You know, like, from the other end, joining things and saying like, well even though you guys don't understand this, can we just put one little tag on this thing when it goes into the box? You know, we'll be dead but someone will thank us. I think that'd be great. That was probably not the best answer, but I'm sticking with it.

>> Yep.

>> I'd also just like to add, especially in reference to being a resident right now, when I got through grad school I knew I was going to have to hustle in order to actually get a job in this field. I understood that it was going to be easy. So throughout grad school, I was working full-time and doing internships and like volunteering and trying to do everything I possibly could to make myself look good. And what that meant is regardless of what classes I was taking, I had no time to let that information settle and figure out really how to relate to it and how it could be implemented and like how I felt about it. It was just me sort of trying to barrel through 2 years and not accumulate too much debt. So with this residency, I think, actually the most valuable thing, and like these projects are great, the people are great, but having time to let that information and let these practices sort of settle in your brain, and I know, I think basically all the residents had really similar experiences with grad school just like, no time to sleep, no time to eat, maybe you're not even eating good food, just to have a

7

second, a whole year to really spend the time to let this information settle was like so, so valuable to me. So I just wanted to add. Thanks.

[Inaudible Comments]

>> games for it like video games or manuals of electronics. I mean, don't you think there might be some overlap, or do you just think the archivists, I mean there's a lot, you know, question of what you do, what archivists do. There's some tension, maybe some conflict, but-

>> Well, I mean I probably cause some conflict. I'm being selective in telling you what I'm archiving.

[Inaudible Comment]

I mean, I'm collecting open-access journals, image libraries, magazines both new and old that are out there, hip-hop mix tapes are a big thing I've been working on for the last week and a half. Recordings of independent origin which we usually think of as bootlegs. The entire back, we discovered that KPFA in San Francisco keeps the last 2 weeks of its recordings, its air checks, available through links. And then it just removes the links. And so we discovered that if you knew the format you could keep going. And we discovered they had air checks going back to 2003. So we took all of them. People have been sending me hard drives of material that get ingested into the archive. So I've actually, I mean, I'm happy when I see some video game stuff and I'm happy when I see some computer stuff, but that's just because I like it, right? I also like 17th century coffee house history, too. So I mean, I got my own thing-I think everybody who does this has this thing where there like, whoo.

>> The special stuff.

[squealing]

[clapping]

>> More stuff about the tea company. I love the tea company stuff. And I mean, I think video games have an interesting problem because there's such a weird industry. They're both really vicious about their work, but they're really brutal about not keeping their history. Like, they now wipe, traditionally now they wipe the computers between each job and 90% of what I get is because somebody took something home. I spoke at the game developer's conference and it made headlines because I said the future of video game history was stealing from work. But it's true. Almost everything that anybody has is because they took a copy home. That's it. That interests me because that's a whole weird problem. Anyway.

>> I see a question in the back.

[tapping on mic]

>> Yeah, so I have a followup to that thought. In doing the software preservation project here in LM [phonetic], we discovered a lot of the same notion that

the original product developers, they weren't thinking about where this product was going to be or where it was going to live beyond it's useful life. Do you see in software development or other digital project development this theory being baked into the product creation cycle? Where do you see that going?

>> Oh, it's going to get worse. It's going to get worse. 1300 people worked on Grand Theft Auto 5. And they were in 9 different countries. So there was one group that didn't nothing but, you know, the buildings. And there was another group that did nothing but record people saying things that you might hear on the street for weeks on end, you know. I mean, and the thing is that none of them will cohesively talk to each other and none of them are interested in saving things, and in fact, sometimes they will fire an entire division and then never mark them as being involved in the original product and so it's really kind of ugly. Independence, which people seem to like a lot, they tend to be a little bit better about it. If I'm lucky and somebody asks me or cares, I've been involved with Bree Pettus [phonetic] of MakerBot. And I have been on him exceedingly so about could you please take all the work product that you have from your years at MakerBot because I think that, you know, some people are going to debate whether or not he was a Steve Jobs of 3D printing or if he was something else, right? They're going to debate this. Like, what was he? And so I said, you should take all your papers, try to get your original prototypes, wrap them in plastic, stick them somewhere and he did it so there are one off MakerBots all the way through the process that he's kept in his attic of one of his houses and he's got a new business and he told that they had 12 prototypes that went to China and he made extra special effort to have one mailed back to him so he could wrap it in plastic and store it away. And so somebody's going to thank me, I guess, that I influenced him enough to get him to take this prototype and wrap it in plastic and shove it away. And I said, don't worry too hard, archivists will have a field day trying to piece together your junk as long as it's relatively complete, but I don't think I can get the year of, like an EA or, I mean, the triple A titles are going to be just devastated. They have the same problem with the movies too. I mean movies will now produce several hundred terabytes of data of which we'll only see a flickering amount. I've learned to deal with that reality. Like, I don't-people are like, it must bother you. And I'm like, no, because you know, how many photos do I have of my grandmother? How many photos do I have of my great grandmother? You know, you say okay I got my 9 photos, okay that's what I got. And in the same way, it's a shame that, you know, on this side people are getting really well-documented, like I said, like Mario. And then over here, some really brilliant piece of work, we have a few scraps and we're going to have that problem going forward all the way.

>> We're running out of time already. We have about 5 minutes left. Did you guys want to respond or should we just try to go through a couple of other-

[Inaudible Comment]

Any other-oh!

>> Hello. So one thing occurred to me as we're talking about paper archives and the paper will keep so go back to that theme and then some of the things that have come out just recently in the last few minutes is that there's this concept in paper archives of benign neglect, right? So if you tuck something away in a vault or a closet or an attic, old photographs, then they might be there 50 years hence. So how does that translate into digital, given these issues? So Jason just mentioned [inaudible] distributed work teams, right? That build a product. And they're distributed. Plus the brevity of the lifecycle of digital information, so we're talking about time is working against us with digital, we have to grab digital now because it doesn't keep from that benign neglect like paper does. So what does benign neglect mean for us with digital content?

[Inaudible Comment]

>> I'm not sure it means anything. I can't imagine, having gone through NLM's archives and finding and not finding things, I'm not sure benign neglect is something that can legitimately exist for digital materials. Yeah.

>> I'll stand.

>> Okay. Sorry.

>> For anybody who is here from DCPL, I talk about benign neglect a lot for when I talk about personal archiving with the public because for those of you who read Catherine Marshall who did a lot of research for personal digital arching habits, she saw benign neglect being the number 1 kind of fall back for people who are used to dealing with physical things. And so what that means in her definition is that you just kind of think that everything's going to be okay and then you wait for a massive data loss and then that's supposed to teach to start saving things in the future. My work with the public has shown me that benign neglect is horrible for a couple of reasons. The first one is, so benign neglect could make it that you find your teenage diaries on Live Journal when you're 35 and they're really embarrassing and someone else found them before you because you forgot about your password, right, and harvested them? I think that there was a slate article or something that came out about this where a reporter basically went through and found all this old, embarrassing stuff that was still online that other people were accessing. So that was one thing, although you probably maybe love that. And a lot of people in the public are concerned about this, right, because they want to have control over their things and what remains and what doesn't remain. And then on the other end of benign neglect you have, yeah, basically not being able to steward things for a long period of time. So all around, yeah [laughing].

>> All right, so 2 things. Number 1, I find when I talk and things go, people try to point out where there are missing things. And 1 of the-I didn't use this in the speech because I decided it was too hostile-but medium which I call the easy half bake oven of ideas will have a lot of essays about people saying that we shouldn't digitize certain things. And it's too far beyond the expanse of today to really go into that, but I deal with that, where someone's like, you are saving

things and these people should be able to get rid of it. There was an essay that I read where a person said that we should not digitize feminist magazines of the 1980s. Was that yours?

>> No, no. I just remember reading that.

>> Yeah.

>> I was wondering if that's what you were talking about.

>> Yeah, if you can-

>> They were not meant for-

>> Right. I don't agree. But it's way beyond the expanse for that-it's a good debate. Hooray, hooray. Bring it down to the school, don't bring it down the school, but-

>> It could lead into a PPI question if you wanted to go there and talk about, I mean-

[Multiple Speakers]

>> I'm noting, mostly what I'm doing there is I'm just noting for the purpose of whatever that, yes I'm not functioning in a vacuum, I'm full aware of that debate. I just choose today not to really go into it deep. But the other thing that was being discussed was, what are we going to do about, like you know, saving versus not saving. And with the archive team, we had a very specific case. Justin TV went down and I was lucky in that case, or we were lucky, we had inroads to an employee at Just TV, who I won't reveal. And so they were able to give me all the data information I wanted. Where as before, normally with the archive team, we have to like run around the outside of house taking photos. And they had 1.1 petabyte of video from there. That's too much for Brewster. So I was like, well we can't take it all. And I had archive team members who said, why not? And I said because there's no space. And soe of them are like, you are betraying the ideals of our group. And I was like, shut up, and it was a good day. It was a good day. It was a great day. But then it was a matter of we had to say, okay, well what do we keep? Now we're already in weird territory because almost nobody else is doing this, right? Nobody else is actually archiving it. So we're the only ones up on the mood figuring out which moon rocks to take. Or we're the only ones in the burning house trying to figure out do we take the silverware or do we take the family photos, do we take the furniture. So first I asked him, could you tell me how much of the 1.1 pedabytes is more than 100 views, more than 50 views, and more than 5 views or more than 10 views? And when he gave me all the numbers, the amount of 1100 terabytes that had more than 10 views was 9 terabytes. And in fact, 50% of it had never been viewed. It had just been recorded. Now what do you do? This is a real situation, right? Maybe there's something important in that recording that you don't know. But I ended up saying, look we're just going to take everything that's 10 or more, which is all we can do in our group. So we

11

did. So we have everything on Justin TV that had more than 10 views in the theory, which may or may not be agreed with later down the line, that anything that got some number of views had cultural relevance. Just like the archive, the internet archive will archive every You Tube video that's linked from Twitter in the theory that therefore it has some sort of meaning as human beings talked about it. But that means we literally set up a situation where if you don't talk about it, we don't keep it. So you've pros and cons there, but that's a very hard deal, and there could be some, there might've been some amazing stuff in that other 500 terabytes, and when the pedabyte hard drives are here in 10 years it's going to seem like a pathetic thing. But at the moment, we made this terrible decision and I think that unfortunately with the nature, back to what you said, if you need the pithy Jason Scott line, physical archiving is a series of poor decisions and digital archiving is a series of terrible decisions because you're going to continue to make poor decisions.

>> Or gambles.

>> Or gambles.

>> Gambles. Terrible deci-you know.

>> And you're going to end up with these, you know, thin-well, because if you make a poor decision you've wrecked some paper. But if you make a decision in digital, you've literally doomed it to oblivion with no hope of recall. So that's a very different-that's annoying. But if, I mean, don't, don't-

>> It's just part of our world.

>> Right, don't be a vet if you don't want to see pets die and don't be an archivist if you don't want to see stuff destroyed. That's pretty much that. Fluffy's not in the farm. I don't know what to tell you.

[Inaudible Comments]

>> It's actually, it's short, and it's actually going back a little bit earlier in this discussion, from this question. So I'm curious whether any of you have comments on ideas. One of you mentioned about, I think the resident mentioned about racing through grad school and not having any time to ingest and really process that information. I don't know if-I think that I'm fairly rare in that being an archivist is my second career. I was a technologist in my first career and I have this sneaking theory that if we could find all the sort of disillusioned tech people who are 15-20 years into programming who want some bigger challenges, we should be luring them over to our side of the world, right. We have lots of fun, hard problems. Come over here. So, you know, I guess that that's an interesting question of how do we go-do other think that's a good idea and how would we, how would we go about that, how do we recruit from people who already have a knowledge of technology and who feel really comfortable in that world and can also bring their own experience over to our side so that we can add more knowledge without having to [inaudible].

>> I'm going to respond to that by being a little bit of a bummer. Depending on where in the technology field someone is, convincing them to take that kind of pay cut might not be easy and like the problems are cool. Like, I'm here for a reason because I think this is important and I find it challenging and I find it really enriching, but you know, people have families. And I'd love to see more tech-focused people addressing these issues, but I think there are larger systematic concerns we'd have to address before we could even get close to that sort of situation.

>> So just in response, so I will say that the way I got my graduate degree, my master's, was I worked full-time and I went to school part-time. It took me 4 years. So I took 1 or 2 classes at a time. The semester I took 3 almost killed me. But, you know, I will say that there's many paths and there's lots of different kinds of institutions that hire at all different levels of pay and that it's possible. I'm here as a, you know, I am the sole wage earner of my family and I managed to find a path and I'm not saying it was easy. There was a long time where I thought I may never be able to find a position to let me sort of sideways step into this new role. But I do think that there are, across the country and around the world, there are institutions that need people at, you know, it's one of these games where you see listing a job where they want someone with 10 years' experience in something that hasn't existed for 10 years. So I think that maybe the solution to some of that, where they need someone who they want someone with more experience in the work world of all kinds but also want someone who is an archivist who has this background, this philosophy and understanding of the bigger picture, that there are paths for folks in that way. But I know. None of it's easy. But-

>> For what it's worth, I'm actually rather bullish on that because he only hitch to me or okay, so again in terms of getting people to contribute because I've had some amazing people contribute. For instance, because we were, we were told by the internet archive that the web pages we were saving should be saved WARC format as opposed to gzipped. So we discovered that Wget didn't have any function for that so we rewrote part of Wget to have the WARC format support which it does have now. And there have been many cases where we have said, okay we can download 40 sites at once, let's make it 4000. If developers even in other fields are told that their expertise is needed to make life better, they'll do it. They'll contribute that time. They'll work on it. But they need the problems provided to them. Like if someone said, we're not saving enough. That's very hard for a developer to figure what c library to start with. But if you say something along the lines of like, you know, we read these disks and here are like 9 different known problems. Could you maybe make something that would make it easier? That's how we end up with programs like paper and so that go through and do all sorts of repair and work because they're told what their problems are. I agree that technologists often will burn out and they'll feel like they've sued their ability, like if you like at Ward Cunningham who created the Wiki, which is arguably one of the most of powerful ways of communicating out there. He spent 13 years doing highly, highly proprietary

13

financial trading software for an investment house, from like 1985 until into the 90s and then he was like, well, bored, don't want to do that anymore. And then he turned around and invented the Wiki. So that was, you know, he saw a way he wanted to communicate and he did it. And then others picked it up and it became other more robust Wiki software. They will do it, but I mean, like said, I'm a little more bullish on that particular piece. Having technological people become archivists-you're much more rarer that way, like actual like, well it was sure fun to do that, I can wait to learn about books, is a little less likely, but man I want to help people.

[Inaudible Comment]

And if it's not obvious, part of my schtick [phonetic] is portraying to people problems in ways that they feel they can help. Like if every [inaudible] 1000 dollars or if everyone gave 100 dollars towards this goal, this will happen immediately in the aggregate. And someone might say, well why couldn't I go to this or this? I go no, but right now people will do it. Like buy this thing because nobody's around. If we just put this money together, we can rent a truck. You know, people care, but they need to have it portrayed and they need to understand, you know, that's a typical thing. If you say, I need a generalized grant for a year and a half to make this a little incrementally better. That's less likely to get crowd funding. And I'm not saying crowd funding is the solution. I'm just saying that's an example. Or people sending stuff. Or I'll take it. I think some of it's just communication, believe it or not. I think that's-

[Inaudible Comment]

Yeah, specificity, beginnings, middles, ends, prototypes that say if I finish this protype that will-and I'll give away because you've all given me money, I will give away all the plans that I did ont his product so that you can elaborate to your hearts content. People like that. People understand that even if it's not their area.

>> Just to add also because I need to run soon to take a plan and [inaudible]. So I'm talking more from the point of view of the technologies and the scientists much less of an archivist, I there soon be also afraid of collaborate with the rest of the world with [inaudible] . Don't look at it, I mean maybe just a followup of what Jason was saying, but just don't look at it as that all the skills need to be within that field. That's no realistic now in almost any field anyway. So there are tremendous opportunities to work with data scientists [inaudible] so finding ways in which data, people that do visualizations, for people that build software, to [inaudible] some of the curation or preservation processes and establish those collaborations will become more important than trying to become everything.

[Multiple Speakers]

>> On that note. I know you have to catch a plane and we have to get out of this room, so I first want to just thank all of the speakers. We have some gift bags for you. Jamie and Jessica went wild in DCPL's maker labs and made

you some 3D printed things and some bags with some help from the librarians at DCPL, so thank you. I also want to thank everybody for coming. It's great to have such like a lively community and we're really glad you took the time and energy to come here. And we have a couple of other people to thank. We need to thank NLM for this location for the AV support, the DCPL Foundation for providing us with all of that food and coffee which was deeply appreciated. We also, of course, need to thank the Library of Congress and the Institute of Museum and Library Services for their continued support of MDSR, both in DC and all the other cohorts. And we'd also like to send thank you to the AIA, the GPO, and the Senate Historical Society as the other host institutions. As a person note, I want to thank the other residents. It's been lovely working with them for the past year, so thank you for that. And now, I'm just going to give you quick directions to the Metro because it's easy to get lost. You're going to walk back towards Natcher. If you go on the right side of Natcher and then continue and follow the signs and sidewalk up, you should run right into the subway. So thank you so much for coming again, and we hope you have a very nice evening.

[Applause]