Speaker	Comment	Start
Jan	We were discussing things that happened during the nineties, and one of the things that you undertook was the first digitization, or conversion to electronic format of the collection. Could you talk a little bit about how that happened and what...?	01:55:46;07
Barry	Yeah, the long and painful history of archiving is the topic. Tedious, maybe, more than painful. It actually, well I don't have the exact dates in my head, but, [it really starts in] the late eighties, because the first digital recorders, these totally impractical ones called the F1 unit that worked on beta video tape, they became available in the eighties, okay. And so, that for, longer recordings, I don't have the exact date, but it was the first digital audio format, you know, that slightly predates the DAT. I have some tapes that I could go back and look at, but it's probably mid-eighties, okay, that we were happening. So these beta tapes which were totally impractical to use, because if you've ever tried to rewind or fast forward or cue, they have no facility for cueing, or that, you know. But, laboriously, we did take the analog tapes from the analog collection of the seventies, and that was the first digitization, and those are on the upper shelf over there, and we were tempted, I think Dave was tempted to either throw them out or to see whether we could still play them, and I think when we moved to this studio he discovered almost to our chagrin that the machine actually sort of worked [laughs], so we couldn't ethically or logically bring ourselves to throw them out. So anyway, that was the first digitization, and it did actually have the possibility of four channel digital recording, two analog and two digital, or some weird combination right, so, you know, there was that, you know, I'm not even sure how to call that but it is digital audio on video tape and units like the F1 for instance, you know, did the conversion. Okay, so the DAT machine was much, much easier to use and had the possibility of recording cues on it, like a CD, like that kind of encoding, you know you could go to such and such a time, you could put an ID it was called, an ID on the tape, and it had a running counter, and because of the slow speed of it, it was incredibly thin and incredibly slow moving but had a rotary head on it that got the bandwidth. So the digital tape, and you could get two hours on this very fragile tape, with coding, IDs, and have a convenient timeline, which of course you don't have on the analog tapes. So that was then the first major recording - and you can see all the DATs over there on the shelf - and I think it was largely Brian Garbet who got hired, cause we didn't have a whole lot of money for it, but, you know, as a kind of background job, as a kind of background job over several years, right, he eventually got through at least the Canada and the European collection. I don't think we did the Vancouver one cause it was just too, too, too difficult.	01:56:06;25
Jan	And was he a music student at the time?	01:59:26;29

Barry	Well he was one of my students, yes, he was a music student, right, and he was working in the studio, and you know, he was just kind of, and he then stuck around even afterwards and sort of did this in his spare time. So that was basically the digitization, and that for many years made it relatively easy for students and others to use. I mean, we did in the early days allow people who were properly trained to handle the analog tapes, right. The digital one then being a dub, then and you know, you knew that you could also replace it if it got chewed up or whatever, right. So that did help and with the cues, and then the converting the catalogue to have all the time cues on it. So that lasted us for about a good ten years or so, in terms of -	01:59:28;26
Jan	And you began the DAT...when did get the DAT?	02:00:12;26
Barry	Well I'm not very good at the dates on any of the equipment, right, so, in the studio, because the portable ones were later as I've already indicated. I remember, actually doing, I hope I'm not wrong about that, that actually we had one as early as '87, for, as I said, my first CD, I think was mastered on DAT, right. So anyway, it was a period, I'd have to try to look it up as to what the years were. But, anyway, through late eighties, early nineties, you know, during that period. I mentioned the field recording that started in the nineties with the portables, but the actual archiving. So that was a relief that, you know, cause we didn't know whether the, how the analog tapes would survive. As it turned out, we were the lucky ones, that the Scotch 206/207 were, unlike Ampex and some other brands, were made not with the material that broke down, something about, I don't know, whale oil or I forget exactly what the details were, but at that point, panic about the longevity of analog tapes, some of which were - not ours - were disintegrating, or had to be baked, or, you know, there were all these horror stories starting to emerge, you know, just as digital archiving became possible for smaller studios like us. I mean, digital tape recorders, I mean I remember when they were professionally first introduced in the seventies, right, what was it, Soundstreams in Utah, you know they demonstrated digital audio at the International Computer Music Conference in let's say, '77, '78 or something like that, right. And they were doing digital mastering, most famously redigitizing Caruso cause that was the guy's pet project, you know, and I remember when - just as a sidenote - you know, when they played us the first, these first digital recordings, right, at a professional level, right, they were trying to illustrate this huge dynamic range and all they did was play us back big loud music, like big symphonic music, right, and of course dynamic range it's the quiet end of the spectrum, that should be noise free, that's actually the range that you're talking about is from loud to quiet, right, and I just remember the, you know, them trying to impress us, cause you know, at the periphery of all the computer music stuff of course is an industry that's growing up in parallel to all this, which we're not going to touch on cause it's way too complicated, but you know, you have the research people, the artistic people, and then you have the commercial people, right. So the commercialization of digital audio, you know, you can find that in the seventies, you know, at a professional studio, you know, multi-track and so on and so forth.	02:00:16;12

Barry	So it's really, you know, just the introduction of the CD in the early eighties that then starts bringing that into the public awareness. We have, actually, collections of ads from that transition, you know, of that, that one of the students did. So anyway, there's this gradual digitization, but it had a parallel professional level that of course came first obviously, and then the commercially available of which these F1 beta tapes, obviously that was not for home users, you know, that was kind of for amateur users, right, and then the DAT tape was then the first way that a CD, which was well established, could be related to the recording. And of course, it was wonderful to think that, you know, your analog tape piece mastered on analog tape, would be reproduced absolutely you know, identically, as far as any ear, because I remember, you know, when we were, you know, mastering here the old LPs, and they were done locally at Imperial Records, right, with this fellow, and you'd be standing there watching the grooves being cut and feared you were overmodulating on the loud portions, right, everything was a compromise to squeeze stereo sound of any dynamic range into the grooves of the LP, right. So that was a huge relief, you know, the CDs and DATs in the 1980s, you know. Also easier to send other places, right, and they were, once you got away from the video standard, then they were international, right, just as analog tapes, there were only slight differences between equalization between North American and European equalization, but they're pretty close, and some machines, like the ones we had, could play either. But the CD and the DAT player were universal, you could send them anywhere, right, there were no proprietary things, they finally, the industry kind of got it together. Okay, so anyway, back to archiving.	02:02:54;18
Barry	So that was the first – once we got into DAT, which took several years, and Brian did most of that work. And then, as you know, Nathan here, started doing the digitization onto mass media, and of course that was the reason why we had to use DATs was because discs in those days, you know, you couldn’t get hours and hours, like 200 hours, you know - they started happening in some computer centres, you know, I don’t know the years, but let’s say the nineties, but we didn’t really have access to them, and so digitization that we just take for granted now, and large disc space, that’s definitely in the 2000s, right. And then the anecdote that Nathan can tell you about, since he also laboriously and tediously went through all of the tapes, the entire collection, including Vancouver, so what’s now the current database took many years, as well, of his dedicated work. And we did A-B tests at that point because you see we had the DAT tapes, right, that probably had been played back on those professional Otari machines that are behind me there, and we wondered, well, if you’re going to digitize, would you – our DAT player still worked, it was declared obsolete, but in fact it still functioned, you know, only the industry declared it obsolete, we were still using them, you know.	02:04:50;07

Barry	But anyway, the question was do we use the already digitized version, or do we go back to the stereo Nagra? And lo and behold, A-B comparison, the original analog tapes from the seventies played back on the original machine they were recorded on. Of course I tell audio people this and they're not surprised at all, of course if your machine that you recorded it on is still functioning, right. So that's a tribute to the Nagra, Swiss built, hand-made, right, probably cost around $15,000 in 1972, which would be a fortune today, right. The famous, you know, industry standard for film recording and Swiss-made, and literally, you know, forty years later, it's still playing absolutely fantastic, just clean the heads and away you go, right. One little screw thing is broken on the hinge, one hinge thing is broken, but everything else is totally solid, of course it weighs a ton, as well. So, you know, that has to do with obsolescence. So anyway, then now we're to where we are now, is the ease of digitizing, and then of course the only problem then is, you know, the formats, you know, do you have the standard CD quality 16 bit 44.1 kilohertz, or the professional sampling rate 48 which is not really that different in terms of quality, that's more a question of standardization. Or do you go then to the newer ones, 24-bit, you know, 96 kilohertz, you know, well there again, you know, the size, and so on and so forth. Again, we feel that digitizing the analog recordings the way we have is pretty good and yeah.	
Jan	What decision did you make about...?	02:07:45;12
Barry	The standard CD quality. Partly cause when we first started, we didn't have the 24-bit, or the 96, that has come later, and once you start one format, you don't want to switch formats, right. So then we started those kinds of file transfers, and everything else, you know, that had been produced was in that format, so we just decided for better or worse just to stick with it, and also the sizes of the discs and things we had available, you know, was compatible. Nowadays, you know, I mean, as you know from archiving, you know, best practices as well, you know, what's the highest quality, do you really need it, and what are the implications. Well, we didn't have the resources to do it on an even higher quality, and certainly not when we started this last round.	02:07:47;15
Jan	And when was that?	02:08:31;04
Barry	When did we start? Well, ask Nathan when we started. [Laughs]. You see, I don't have these years on the top of my head. Anyway - we just finished the database -	02:08:32;15
Nathan	'08 or '09?	02:08:40;09

Barry	Yeah, we just finished the database about the last, you know, two years, so it was the three years prior to that so, you know, late 2000s, you know, but it took several summers and times and hundreds of hours. I think we're up to...I know it's at least 200 hours of tapes. Now, of course, we're also of course adding, and this is where, you know, Vincent Andrisani is going to tell you about then the third round of recordings that are done straight to, you know, memory devices, so that they're already digitized in files. So I'm, even though I can't quite imagine being without tape, cause I've had tape ever since I was a kid, one form or another, right, but in fact, you know, we are now in the tapeless, you know, universe, with digital files and digital transfers, and things like that. So we just hope that then we can migrate, and our hard drives don't crash, and all the other pitfalls that we have. So archiving is, of course it's, you know, put into perspective, video tapes that were in this School, most of them got thrown out because, you know, during the move from the storage, because there's no machines to play them on. So here you have the fundamental problem of archiving, or technological mediation, you have to have the machines, or you have to migrate, right, machines to play them, so you are definitely, you know, constrained by that, and there are many formats that have come and gone. But video is far worse, a lot of, you know, the early videotapes, portapack units, I don't even know, 1/2 inch, 3/4 inch, like all the different formats, most of them disappeared, right, from the early days. So I would not want to be a professional archivist, you know, it's a nightmare, right, and you must lay awake at nights, and Dave says well we're buying twenty years with what we have now [laughs], sobering thought, right. But hopefully digital files will migrate more easily than things that were tape-based.	02:08:42;11
Jan	But you've done a lot of - I'm gonna just pause for a moment on, before going onto the next, this last little time period - but	02:10:49;13
Barry	Yes.	02:10:59;16
Jan	You were, you've been a caretaker and curator of the collection -	02:11:00;10
Barry	Yes.	02:11:05;09
Jan	For a long time.	02:11:06;08
Barry	Yeah.	02:11:07;14
Jan	Because I think without your work, my sense is that it would have been a risk.	02:11:08;17
Barry	Well Schafer left in '75, right, so that was it. And Hildegard has been associated with us and did some teaching, but she decided to pursue a freelance career, right, as well, and she's the most active other person here.	02:11:16;01
Jan	But, so you - when did you decide to actually, when did you start with the, for example, website, and the kind of -	02:11:30;19
Barry	HTML universe, I call it.	02:11:44;04
Jan	You, you've saved more than just the recordings, you've saved a lot of documentation and organized it and, can you talk a little bit about that?	02:11:46;11
Barry	Oh yes.	02:11:51;17

Barry	Well, I think the key element there was the Handbook. Remember that all of the publications from the traditional period, you know, up to 1978, were all print and pre-digital, right, and even the first version of my book, Acoustic Communication, which came out in '84, was on a mainframe computer, right, and basically, you know, with Textform as the formatting. So even there, you know, at that point, you know, even with the start of it, digital was not really for larger projects, like that was not really possible. So anyway, the Handbook of course was in constant use with the students, cause it's a teaching reference tool, so of course in the very earliest it was sort of mimeographed and typed, and then we got it properly type set, and that was the '78 publication, the book, soft and hard cover, and that lasted us up [to the 90s], and I had wanted to have a digital version of this for a long, long time as well as, other, um, for a variety of reasons. But on the technical side of it, being able to scan, first of all you need an optical character recognition unless you want to retype the whole thing, right. So, the easiest thing, the first stage of this was in the nineties when optical character recognition, generally on a Computer Science machine, right, cause it was so specialized, right, that then you went through the process of what we've now called scanning, but it was optical character recognition, OCR software. So that facilitated the Handbook and the Sound References in Literature Library, in other words the primary print publications. We didn't try to do the books, cause that's more complicated, but the Handbook was all just graphics and text, and the literature is of course just text. So we started those kinds of databases in the late nineties and I finally, after many years of doing that, published the CD-ROM version of the Handbook in 1999 with Cambridge Street Publishing, right. So all of those, then of course the OCR had lots of mistakes, right, you had to correct it, you had to proofread it, you had to reformat it, and so at the same time then I was learning HTML just with a graphic editor, right, and it was the Handbook that, that, really got that going because there's, I dunno, 500, over 500 [web]pages, and then the graphics, which had to be tediously edited, right, those line graphics, they're often one pixel wide [laughs]. Anyway, so many of those got redrawn, I won't go into the gory details.	02:11:56;08

Barry	And then, the payoff, though, was two things were obvious besides just digitization, was finally audio files could be linked to those, so we had lots of those, right, and the links in the Handbook. And I just want to mention that because the whole idea of hypermedia was actually the idea of that was already there in the 1970s in a research environment. And Ted Nelson, you know, of the famous Xanadu Project, right, had come and given a lecture in the 1970s in Computing Science here, about this sort of hypermedia. I know now that there were even theoretical versions of it even back as far as the 40s, Vannevar Bush for instance, evidently did something, proposed something like that. But anyway, it became possible on mini computers, you know, this idea that you would link things, the non-linear aspect of it, right, and his, Ted Nelson's, little buzzword was, you know, "all knowledge is deeply intertwingled" [laughs], it was very inspiring, as you can see. So, I was putting the Handbook together, you know, in print form at that time when that lecture happened, I thought, this is perfect for interdisciplinary terminology, you just say, well, it's like a glorified cross-reference system, "see", "see also", but "compare", right, "see" and "see also" are pretty standard, but "compare" was interesting because then what would be the basis of the comparison? Cross-disciplinary usually or something that had something in similar, something different, right. So that idea was already implicit in print form in the Handbook when it was published in '78, right, it was, and the links, what we would now call links, were capitalized, they were other entries in the document and that you would just look it up manually, right, go to "soundscape", you know, go to "amplitude", right, and they would be embedded into the prose as well as the "see", "see also", and "compare", plus other things, tables and things like that.	02:14:38;01

Barry	So anyway, the, to make a long story short cause it was - took - a long time to edit all that and re-edit cause you don't just transcribe, a book and HTML are different, you need shorter paragraphs, you gotta check that all the links going one way go the other way as well, right, it took quite a long time, but it basically made me pretty fluent with linking and editing with, well it was a commercial software called Claris Homepage that eventually got bought out and we've had to replace it with Sea Monkey's "Composer". But it's still this kind of graphic, this is not like writing code, this is just straight, you know, like word processing, but links and tables and graphics and getting used to, you know, proportional pages and things like that. So, by the time then you've gone through the entire Handbook, right, with hundreds of pages all linked and cross-linked and so on and so forth, you know, at the same time, then, you know, well that's like a website, so I was starting to produce a website. And then I started, well all these sort of sound examples that I use in my teaching, why not start to have pages for those, right, instead of carrying around tapes and discs and trying to cue things up, right. So then I started documenting my pieces, I think maybe Sequence of Earlier Heaven might've been the first. Now I'm up to twelve pieces that are completely documented in terms of all the data associated with the composition and then of course all the teaching material, so all the topics and then lecture materials, and now I'm happy as a clam because I can take my little laptop anywhere in the world and I could teach for three weeks just on my, on my, all these different topics, and with the non-linearity of HTML you don't have to - as opposed to PowerPoint, right - you can go any direction, so okay, this class, this group, this audience wants to hear about soundscape composition so we'll start here and we'll go there and because I'm playing that piece at the concert, you know, I'll talk about that piece cause I can go over there, I don't have to rejig it every time. So the Handbook, the website, and now my, whatever you wanna call my HTML universe, you know, of those. So that's kind of documentation, as you can see, I think hypermedia is...	02:16:42;15
Barry	But also I stress just on a longevity archiving factor, there were a lot of other similar projects that are no longer readable, right, I won't name any names on it but there's a lot of work that some people put into those things but they depended too much on specialized things, you had to have a Flash player for this or you had to have something else for that. I just always stuck with the least common denominator that any browser would recognize and even then they quibble over special characters, some of them [laughs], you know, so that then they could be distributed. The first Handbook, also just, since we're talking details, half of the CD-ROM had to be devoted to the IBM format and WAV files and the other half to the Mac, and so in '99 the two weren't talking, Mac and PC were not talking to each other and accepting common formats, so now that's disappeared as well, right, and of course now we have DVD-ROMs, and we have flash drives and hard discs and now we can put the entire World Soundscape Project Database, you know, 200 gigabytes, you know, onto a nice portable flash drive and take it anywhere in the world as well, or send copies anywhere in the world, as well as being online.	02:18:56;07
Barry	So, documentation, yes.	02:20:10;24
Jan	So I think, Megan did you have anything else from that?	02:20:12;18

Megan	Maybe building on that idea of access and allowing people to use it, you said that using the analog tapes, if people knew how to use the machines, they were trained, that would allow them to access the collection. Could you talk a bit about how these new formats have changed the way people access or maybe change the way -	02:20:17;19
Barry	Yeah, I think actually that is an interesting history, in fact I often wonder whether your generation will see as much change as from analog to digital that my generation has, right, it's been a very exciting transition, because the whole...you know, and of course problematic how to maintain continuity and documentation that we've already talked about. But from the user point of view, yes, um, let me just go back to then the analog era of the 70s. We had a whole series, a non-stop series of visiting composers, students and professionals, from all over the world during the 70s, 80s, and up to the early 90s. That they would come to the Sonic Research Studio, partly because they didn't have private studios, right, you had to go to a studio, right, and our studio had soundscape work in it, it had quad, although that wasn't a big draw, and it had my, it was associated with my computer music, the PODX, so-called PODX system. So, there was a tradition, then, that you would, if you did not have your own institutional studio, or private studio, which really only, well it depends on how you define it, there were a few people that tried to set up analog studios, with, you know, home tape recorders and then of course synthesizers helped, but it was, it was not that common and not that easy, right, to set up a home studio in those days.	02:20:37;12
Barry	So there was kind of almost a tradition of the traveling sound artist composer who would be invited to studios, right, because that was where the equipment was. And so we enjoyed and encouraged, you know, people, sometimes one-off, others like John Rimmer and John Elmsly from New Zealand, for instance. The New Zealanders have this kind of tradition that they, to go anywhere it's like around the world [laughs], so they, every so many years, they would show up like spring flowers, right, you know, and come, and we'd pick up where we left off. So that was almost a regular type of thing. On, now, I was just referencing, on my personal website there's a page to do with pieces done with the POD, PODX system. And I just consulted it to refresh my memory and from the 70s up to the early 90s - now this is computer music as well as maybe some soundscape elements, right, more the computer music first and then little more towards soundscape towards the 90s. I have a list of 25 composers there that did pieces either in our studio or using materials from our studio, that was the other thing, was when you came and visited, you might not be able to finish a piece in a week or two, right, so you'd take lots of materials, you know, back home with you, or to the next studio, or wherever it was, right, and do it, so I can't say they were all done here but we contributed to those. So, yes, those were professionals or student composers, and after a little bit of orientation in the studio or on the computer, they would largely do their own thing, right. And remember those were separate, the computer music was over in Contemporary Arts in the basement of the theatre and the studio was in the Classroom Complex. So there is a long history of that and it was quite wonderful cause again when people visit you get a lot of social interaction and so on.	

Barry	In a way, then, when, two things obviously happened in the 90s, travel became a lot more expensive, and more and more people started having their own studios, and they had access to the same equipment, i.e. software, computers and software, right. So why would you go, you know, the ticket's expensive, and so on and so forth. I mean, it occasionally happened, but generally it was students and professionals or semi-professionals that would come and visit. Now, for people who wanted some material and weren't able to come and just simply wanted some raw material from the collection, you know, then we would just, "tell us what you want and we will send it to you". Although I have to name drop here at one point, I actually got a request from John Cage when he was assembling material for Roaratorio, his huge, big Joyce inspired, Finnegans Wake inspired West German Radio Commission, and he was, he started by, I had actually met him before in New York on other occasions, I don't remember exactly how this came about, but I think, what I remember is that, he already knew us and we knew him a little bit, because he's based in New York, and he was trying to get all the sounds referenced in Finnegans Wake [laughs], right, mega project, most of which of course we didn't have, we didn't have any Irish recordings, and, but, you know, there were some things. And so there's perhaps the most famous thing where I made some tapes and personally delivered them to him cause I was coming to New York and later he sent me a thank you thing about Roaratorio, and it's signed and I treasure it forever, right. So that's maybe the most high profile borrowing or use of it but I just want to name drop that in there.	02:24:01;26
Barry	Others were, you know, people I met on the circuits of the conferences and festivals that then, you know, we'd invite or they would say they're coming, or you know, have a guest composer. Some students, there was also some, we had students that had won awards in the student competition at Bourges, one of which was you got then invited to a studio, right, you had to pay your travel expenses, but some of them did, right. So there was a long tradition and wonderful social reaction. So if you look at the PODX site, page, not the octophonic one, cause there's also a list of octophonic compositions, but the PODX site you'll see a hundred pieces that were done mainly with the computer music thing, but some, and I'll just mention a couple of interesting pieces. Peter Manning from Durham in the UK came, and one of the only, cause he was Dean and so involved over there, he never really, he wrote a book and was very, you know, well known in the academic field, but hardly ever as a composer, and he came almost as a retreat from England [laughs] and loved sort of, you know, hanging out in the residence here in, like, student quarters, and just, you know, being almost like a student again and composing pieces. And one of the interesting ones was the In Memoriam CPR that he did, [about the] Canadian Pacific Railway, which was obviously done heavily transformed, but using soundscape materials, but from a completely, you know, non-Canadian, non-North American perspective, right, and also just for him.	

Barry	And also another piece that wasn't as widely distributed, The Ghost of Ereboll, which is sort of about the Scottish Highlands and the bagpipes off in the distance and things like that, maybe inspired by hearing our pipe band, here in the background during his two I think different stays. So that was, you know, very interesting to have other people come and use our collection, not just the ones we invited to do that. John Elmsly and John Rimmer, John Rimmer in particular from New Zealand did quite a few pieces and some of them have soundscape elements, or he would come and bring his material from New Zealand, right, to do, there's a whole list of names. I guess one of the other fairly famous pieces is Denis Smalley, the famous British acousmatic composer, collected some material for Valley Flow that was related to his residency at Banff, for instance, right, and, so there's, anyway, there's that tradition. That tended to fall off in the 90s and the last decade, because for the reasons that I've been saying, cost of travel and the fact that everybody had their own, you know, desktop and laptop computers anyway, right.	
Barry	So, now, what is becoming easier is then access more broadly. So we started the 90s with a studio website and we can digitize, you know, as much as possible, mainly the sound references in literature and the Handbook, although because it was published I couldn't make it too public, the original publisher didn't want it too public, but it in fact was there, all the WSP information, all the website information, and the tape catalogue. So that was originally on card files that are still upstairs, right, was the subject index, and the catalogues were in those binders over there, all hand typed and so on. So those went through optical character recognition and the catalogue was put online. So, because there was no facility for large audio and we're talking, you know, mid to late 90s, the catalogue and the print material was the best we could do. So then at least it gave access to people, and in fact with one's, you know, even the general public started doing Google searches, right, they would discover, oh, they'd do a Google search and find we had recorded their grandfather, I'm thinking in particular the family in Nova Scotia, right, and that's just one of many, and so I'd get e-mails, you know, saying, you know, "oh, we saw that you have these recordings, could we get copies?", well of course, we just run them off and send them off to them on a CD or something like that.	02:28:41;03

Barry	So that started becoming more, but then, again that was not the audio because of the bandwidth issues and the fact that I was not going to compress the files or, you know, I mean it would be way, it would be contrary to the nature of the high fidelity recordings for one thing, also mp3's and environmental sound don't go together very well, it was really designed for pop music, right, and some of the even earlier compressed forms were really bad, there's some examples of, you know, high frequency wave sounds in my piece and the real time audio plug-in, it was, oh, it just massacred the sound, right, definitely not designed [for that]. So it's really only the last few years that we could start to think about, okay if we need 200 gigabytes to digitize a collection, and everything else, you know, where are we gonna get it? Well now, you can get it, and we've always made the collection freely available, the only times there's been ever any money involved was leasing programs, like if the radio in Stockholm, as they did, leased Soundscapes of Canada, well then they'd pay us some royalties, you know, back to us, or a British group did the same. So, but raw material - and those [the pieces] were always with performing rights anyway, right, there'd be performing rights registrations. So that's the, you know, the documents, but the raw material we've always made freely available, in the early days it almost had to be, you had to come and get it here, right, although we could send out a tape or so if you were John Cage or somebody else who asked really nicely [laughs], right, and then of course eventually then, you know, DAT tapes and CDs made that exchange easier.	
Barry	And now, anyway, to come right to the present, we have everything on our website. We still worry about download times and we have a guest password to make, we've debated about, you know, ah, access, but the tradition has been anybody who had a legitimate reason and there was really no commercial potential for any of this stuff anyway, so it was basically anybody who for academic, artistic, documentary purposes or personal purposes. You know, if they had a legitimate interest we always tried to provide them, you know, here or sending to them, and so we just have a guest access, we have about 14 people, I think now around the world. If they have continuous need, like a studio or class situation we just say, send us a hard drive and we'll just dump the whole thing on and then you don't have to worry about download times at all. So for very specialized people like other studios, and there's about half a dozen of those either done or in the making, they just get a hard drive, like a course at Guelph that, you know, that was going to be in soundscape composition, and I said, well, James Harley's course there, ns a studio course, you know, you don't want to be downloading you know every little thing, so you just send them a hard drive, right.	02:31:42;18
Jan	It'd be really good to have the list of names.	02:32:58;29
Barry	I'm keeping a list of the guest access and I've got to do it with the hard drives, because then we're going to face later this year [laughs], the next problem, the update, the adding the new material to it, right, and how do we service the existing copies, right. So anyway, that's the current -	02:33:02;11
Jan	Before we go to the new material, I was wondering if there were recordings that you felt, for one reason or another, should not be kept in the collection.	02:33:21;21

Barry	There's only one obvious case of that. Bruce Davis, the original World Soundscape recordist, he did his own field trip to Australia. This was a contact that we had with Kath Ellis who was an ethnomusicologist at Adelaide, and she'd worked with the Aborigines, right. I'm just giving this as an example of one that is clearly, clearly that way. So he, at her invitation, he went down there, visited her institute, which was for promoting Aboriginal music, unfortunately that didn't come up in the interview with Bruce, cause of course it was all about World, WSP recordings. And then he went to the Outback, I don't know the exact place, and did more recordings, you know, of working with them, and some of these were sacred songs and ceremonies, well, events, you know, of various kinds, right. And he realized that of course, you know, this was, A, not part of the general collection, and B, there was issues about ethics and distribution in the way that they were, the way they were collected. So, anyway, to jump to the present, a couple years ago, he caught the digitization archiving bug, as one does, perhaps when you're past sixty you start thinking about these things, so be warned, and borrowed the Nagra, again, you know, his trusty, you know, machine, took it home, he had the facility to dub them, and we have them in a locked cabinet, or locked box over here, and it's really by permission only. Now they're so specialized, he catalogued them, he archived them, he pointed out some of the, I think he even has some of the best tracks cause it is very, a lot of it's very sparse. But, that's a collection that he did personally, it was not a WSP thing, and so it was handled that way, right. Now I'm not quite sure whoever is going to want to use it, but it would be up to him to give permission, let's say, for it.	02:33:33;28
Jan	Were there any that were just too poor quality in your -	02:35:44;06

Barry	Well, the only, the very first tapes in the Vancouver collection when they were just starting to learn on a Uher machine, a stereo Uher, before they got the Nagra, and also the only poor quality physical tape was the early ones. We eventually did digitize them all, just because for the sake of completeness, but, you know, they're part of the collection but they're not the best recordings, and there's not too much that was actually used in the Vancouver publication, right. So as I say, the good part of that is that by tape, I don't know, 30 or so, and once the Nagra was involved, and once they were a little better at it, and so on and so forth, the tapes are very uniformly good quality. So the actual distinction is, for better or worse, a technical one. We have up in the office here tapes that have other provenance, whoever recorded it or did it, variable quality, things that were given us, things we recorded, somebody recorded examples of this that and the other that are not part of the collection, we have them in the office there, occasionally consult them, but they're not standard quality. So we said, Nagra tape on, you know, good quality tape, 7 1/2 ips half track stereo, in other words the standard of that day, professional would have actually been 15 inches per second for pieces, but 7 1/2 for recording, right, so none of the 3 and 3/4 stuff or quarter track, or, you know, poor quality tape, or stuff like that. There are tapes around, right, that have been accumulated ever since the 60s really, cause the studio goes back to the founding of the university in '65, right. So there are odds and ends, we call them. The only time we've gone back to a little bit of that, there was a couple of interviews that in fact were used for the Vancouver soundscape, the Bob Swanson, fantastic interviews about Air Chime and the making of the physical horns, and a couple of earwitness accounts. I was hoping for more but we found a couple of earwitness accounts that led into the Vancouver Soundscape, so we did go back and they're not officially part of the collection but we did digitize them for the database just because they appeared and some people might want to listen to the original interview. I wish we had all of them but maybe some of them were, I don't know why we don't have more, but there's a couple that are there. So yes, there are a few exclusions based on sound quality.	02:35:47;27

Barry	We've also been given a bunch of DAT tapes from other - I've always wanted to have a kind of international collection cause some people have reasonably documented some things, some places that they've been, and this is the thing, they have to be now documented, and then somebody's going to have to catalogue them and put them into the subject index [laughs], right, and frankly, the, just doing it for our own recordings, Vancouver 2010, 2011, and now Jenni Schine's Broughton Archipelago recordings of Billy Proctor. That takes a lot of time, right, so that's the other impediment to just sort of opening it up and unlike some websites where you can contribute anything or freesound for instance, there is the alternative, right. You can see how it's going to go, freesound. Poorly documented, variable quality, often you know, you don't know even exactly how or when it was recorded but it might be interesting, you're like sifting through a, you know, yard sale. I'm sorry, I think it's good, but that's not the philosophy of this collection, we've always maintained the same, best quality of analog and now digital, and the uniformity of cataloguing, archiving, and subject index and integrated, even though it's more work, right, to do it that way. Now, on the other hand if we have a need for something else, you know, that's there, it took us a while to get the Chemainus tapes in, that's another little subset we added that was to the BC one, you know. We've basically done all the ones that are at the same quality and then only if there's some special need for a recording that we happen to have. It would be nice though to do more digital recordings that have been done internationally. I have a couple that, you know, we already started a new little subproject, but right now our priority is the Vancouver one.	02:38:15;06
Jan	Could you talk a little bit about, how your sort of guidance in selecting sites and venues? I know you and Hildi worked on that a bit, on this new round of recordings that Vincent has been undertaking.	02:40:07;27

Barry	Yeah. Yeah, we, Hildi of course is a wonderful resource on everything to do with the World Soundscape Project and its legacy and its extensions. Well, we took the Bob MacNevin list that we made in the 90s, you know, with the two columns of 70s and 90s, and then just redid it for, you know, updated it, right. And, because Bob was a little bit more precise about documenting where he was, the IDs, the spoken ID on the tape, as well as the catalogue, and particularly when he did soundwalks and things like that, the way that he did the recordings and then documented them, he didn't do events so much, but everything else, places, places and ambiences, and soundwalks through those. It was a pretty good survey, I mean there could've been more of course, but he was doing it in his spare time and so on and so forth, but he did an excellent job on that and he did, we did have that, which I've already talked about, those to compare, so it was simply natural to add the third one, right. And the last thing I want to do and I think I'm going to get the post-doc in the fall to do it, Randolph Jordan who's coming, cause he's interested in the Vancouver recordings, but from a film perspective, but to get to know the collection. One of the things that we want to add to the catalogue is a link to these temporal cross-references that when there is a comparison, now you have to kind of dig and find where it is, but we know, we have with this table, so to complete that process, or to really make it, yeah, now that links are very easy to do, then it will be, I don't know, a couple of icons, ones say "go to 70s", "go to 90s", "go to 2010", right, whichever direction is appropriate, or, well, the direction is obvious from the dates I think. So maybe we can get away with three icons or something that would link, so you'd just click and then you could go to that. So that's the one thing that is now going to be really good about, and fairly easy - famous last words - to add to the collection, to reflect that longitudinal.	02:40:27;19

Barry	And of course we're making a big deal of it, cause forty years of longitudinal recordings of one city? I don't think there's anything even close to that, right. There are historic recordings, you know, of other cities, Tony Schwartz for instance, in the early 50s, pioneered New York soundscapes, particularly on you know, events, and people, cross cultural, multicultural, you know, activities. Not so much ambiences, but some of those as well, you know, streetcars and bells and things like that, but a lot of people oriented things. Sure, there are other fairly thorough documents, there's other types of collections, obviously bird song and nature recordings, you know, are all over the place and becoming increasingly well documented, Smithsonian has quite a few great collections, they're putting those online, that's how we're finally listening now to Tony Schwartz's recordings without the LPs that I used to have, and so on and so forth. But I don't think any city has had the longitudinal, right, so that's incredibly important for us, because we're here, and it's something we need to do, right, twenty year period is quite amazing, even when you live here, you don't, you know, just like your kids growing up, right, you don't notice they've grown until suddenly, [laughs], right, the city keeps changing and even when you're here you don't necessarily do it until, and that's the nature of sound, right. It's ephemeral, and so recording has the possibility of literally doing that, here's a recording from twenty years ago, forty years ago, right, and we wish there were more. But there may well be, right, you know, there's more WFAE, local and regional areas, I don't know of anyone that maybe is exactly doing this, but, of course the other thing that needs to be mentioned is that the Finnish group, you know, went back to the five villages, and added a sixth Finnish one, and then they studied those villages, and it's called "Acoustic Environments in Change" and it's particularly good, much stronger on the sociological anthropological ethnographic side of things, right, but also recordings and extending the methodology. We don't want people to just, I mean, slavishly duplicate, I mean, you know, like that's not necessarily good, they should, just like we were a bunch of amateurs in the 70s, right, just figuring out how to do this, well, if they have more sophisticated tools and approaches, you know, they shouldn't just slavishly do what we did, besides, everything has changed anyway, including the methodology.	02:42:44;06
Jan	Yeah, your methodology is changing, I mean, perhaps not, I don't know if it's a fundamental change, but, I mean, you've added things like, GPS.	02:45:24;27

Barry	Oh, the literal methodology, yes, and of course the ubiquity of being able to take high quality cell phone pictures, right. I mean, there were really good photo documents from the Canada and European, not as many on Europe, but still quite a lot. And we found that they were done on 35 mill slides, black and white, and they digitized beautifully and they're now all in the collection, right. So fortunately, needless to say, they weren't as visually oriented, preoccupied in those days, cause of the, just the logistics of recording were so demanding. But, fortunately, on those two field tours they did take photographs, and now of course it's just a standard thing that you would do anyway, you know, it's just an ordinary, cell camera, or whatever, and the quality would be good. So yeah, there are certain things, the log sheets, of course, we've made those into PDFs and that for researchers, that allows them to do that, and, again, the five villages, having a 25 year longitudinal study of a whole village, that's a wonderful spin-off that we could never have done. They went back to those villages and some of the researchers stay in touch with them as well, Heikki Uimonen, you know, stays in touch with the people in Dollar, and of course some of them want, you know, some of them have museums, or people that want to have, you know, recordings, so they can now use the database. I think, the others, Helmi, probably stays in touch, perhaps with the people in Lesconil, you know, and the same thing with Cembra. Anyway, there are ongoing connections and the Finnish group has definitely contributed a great deal to that. That's not part of our database cause that's published by a professional press, Granum, but they did reprint the Five Villages, now we have even better than the original, and of course two CDs from the 70s and two CDs from the 2000 recordings.	02:45:37;14
Jan	There are sort of two other main questions that I have in mind. One is, what are your hopes for the future of this project? Expansion, preservation...?	02:47:42;07

Barry	Well, all of the above, particularly the preservation [laughs] and the continuing, particularly as I near retirement, right. There's one topic, though, that maybe specifically though, we've covered a lot and I've tried to cover a lot just because this is a documentary type of thing and you know, like everything [laughs] it's going to disappear unless someone records it right, it'd be, it's so good, I have to say, Jan that it's so wonderful that you as, coming in as an outsider and then becoming really interested in the project, sort of has forced us to, or encouraged us, but forced us in a way, to sit down and actually document what we just, what we know, our own oral history, right. It's funny, we've been, we've been priding ourselves in documenting everything else, but, you know, it's a bit, you know, happenstance as to, and so, there are some publications, right, there are some print things but we didn't, we haven't actually interviewed ourselves, right, you know, there are a few interviews, you know, with the recordists, there was in fact one track on the Vancouver Soundscape where the recordist just chatted about, gave funny examples, we didn't reprint it but now it's on the database, you know. There are a few things, and the cross-Canada tour was nicely documented in the Sound Heritage, but nothing to the extent that you're doing it right now, so, I have to say, thank you very much for that because we should know, that of course, the ephemerality of aurality and soundscapes is, you know, inevitable, and then dealing with the actual archiving as a means of doing that, right. So the one thing though that I didn't talk about as much is soundscape composition, we kind of left it off.	02:48:01;12
Jan	That was my second question [laughs]	02:49:43;07

Barry	Yeah, okay, I'd kind of like to do that first, cause then that ties up another major, major theme is to see soundscape composition. I gave you the little sketch of the history and of course I've published a couple of articles in Organised Sound and Contemporary Music Review about that history with the details in print form and there's a lot more interest in that because it's being taken up a lot internationally, you know, and particularly in Europe now, it's just been slow to get there, but they're now really keen on it. So, soundscape composition, which, well, I don't even know whether we used that term back in the 70s, you know, it was just basically what we did, you know, and then it required a certain amount of reflection on what it was. Now, I think Hildegard would be the first to say that maybe there is no definition, but, I did venture, for better or worse, to give some general characteristics of it, and interestingly enough it is not merely the use of environmental sound, because that's, that, it can be, but it could use environmental sound and often does, but it's not a necessary condition, and also people who use environmental sounds as just samples, sampled sound now. They can obliterate the source, or the source can become treated as a sound object or abstracted from its environment, just the fact that it's environmental sound and it's so readily available on the internet and through your own recordings right now. That doesn't make it a soundscape composition, cause it's not about the environment, it just happens to have material that is from the environment, right. So, the idea is that the context is an integral part, the original context is an original, is an integral part of the document, whether it's documentary, or artistic, or installation, whatever it is, it's about that, that material and it, deliberately evokes the listener's recognition of that material, and their associations and their knowledge of it, right. So Vancouverites are going to respond to Vancouver sounds because it represents home, and people from Europe will, kind of like tourists, get to know Vancouver through its recordings and then maybe come here and discover. But, it is about Vancouver and whatever, either associations you have with it, or how it differs from where you come from, right. My Copenhagen train station piece, you know, when people, when my students here listen to that, the rapid transit, the local transit, like the Metro, you know, like, they say, "oh that's like the Skytrain", right, cause there are some similarities, the way it revs up, and the door closing signals and things like that.	02:49:44;14

Barry	So you're always either comparing it to what you already know or in similar or different. So, the listener's associations are always important. The composer has had some kind of fidelity to, to their knowledge of the context as well that comes out, what do they want to say with it, and this ranges from phonographic, just straightforward, lightly edited, transparently edited, not processed, document or documentary approach through to abstracted, but not abstract. Abstracted means it relates, somehow, to the original. So for instance, many pieces that Hildegard and I have done are quite clear, there's an abstracted element in the processed sounds to something that is more, for instance, inner, memory, symbolism, some kind of other inner essence of the sound but related back to the original. And whether the listener knows that it's a processed version of the original is more what a student of composition would be informed about, not the listener, but in fact in almost all cases it's a processed version of something from the original context. Beneath the Forest Floor, thump thump thump thump thump, well the insiders know that it's the beating of raven wings slowed down, right, because we know Hildi and she's divulged that. But in the piece itself, it's suitably ambiguous. Is it the forest floor, being, you know, the cedar floor, that when you hit the ground it goes thump, or a log that's hollow and resonates, or, maybe something to do with the birds, or maybe some, just, you know, dark spirit of the forest, right. You know, it's delightfully open-ended but I would say it's abstracted, right, as well as the way that she does the wanding of the microphone and that's not natural, but it actually has, evokes the feeling of the forest, coming across something very fast, right, suddenly the high frequencies of the stream are on you cause they're absorbed a few metres away, right, that sort of thing. Or, in my case in the Island piece for instance, then, the processed sounds are these magical elements that you project onto this imaginary island that's not, it's a composite of many islands [laughs], right, it's not any one specific island, it's what you put into it. Or even the more pedestrian, that's a bad pun, not intended, of the Copenhagen commuter piece, right, who are, they're not pedestrians, is that it's the daydream world that you fall into when you're a commuter, right, it's the processed sounds that, you know, blur when you fall, half-fall asleep, that sort of...so that's what I mean by abstracted and a couple of examples of that.	
Barry	So soundscape composition both in its range from more documentary, phonographic, to abstracted, and, but always maintaining this relationship to be about something. That's, you know, it's about something, and it's, you know, whereas others, say a random collage of environmental sound, you listen to it and you try to make sense or connection or pattern, but eventually it's not about anything, you know, it's about something else, somebody's, you know, using these sounds abstractly or that. A more radical case would be Claude Schryer's Vancouver Soundscape Revisited on the '96 CD where he has some, he did systematically catalogue all of his sources according to various ways they might be connected from more acousmatic to environmental to whatever and then he has wonderful streams of consciousness and the ways he sequences those through, totally outrageous, like the fire movement, right. Might start off with firecrackers but it may end up [laughs] with a trolley, and a player piano and end up with a foghorn in the harbour, a boat horn in the harbour or something like that [laughs]. Wonderful, you know, vertiginous sequences, streams of consciousness, right, that take you through breathtaking transitions.	02:55:15;26

Barry	Right, so there's many many approaches but that's of course what makes it enticing is the fact that composers and sound artists, since we're not going to just privilege it being music, can use environmental sounds, but somehow about places, and some of them can be more socially and politically activist, like, raising environmental awareness about, you know, some data that scientists are giving us, you know, air pollution, water pollution, environmental issues, right. So just like we did it as an antidote for noise pollution, or an alternative rather to noise pollution negativity. Well you can be trying to raise awareness of place, of environmental issues, of social classes, social issues, soon as you deal with the real world and don't abstract from it, then, I tell my students, a messy business. It seems so easy to record, but then what are you going to say about it, right, and it's interesting to see students jumping into that, cause they know they can record really fast, right, and easily, and readily, but then, I say, "well what are you going to say with this material?" Well, is it just going to sit there, and we interpret it? "Oh, this is about political class struggle", well, no, it's really just a shopping mall [laughs] recording, how are you going to say something about gender or politics or, you know, something about, you have to make, right, a lot of decisions. So there, it's incredibly challenging, and music composition gives you almost no clues whatsoever, right. In fact it gives you the negative, it says, oh that's program music, that's film music, that's just, you know, incidental stuff, right. But now we're dealing with the real sounds, not just, you know, abstracted synthetic sounds or instrumental sounds, right. So there's a lot of very interesting challenges, but it has definitely caught on, I can't, you know, of all the requests I get say for concerts or things like that they're almost all for soundscape composition or workshops, right. Computer music? Forget it, nobody's, that's, that's so, I don't know, whatever, it's just like, I don't know, everything's computer music now or whatever. That's not where the issue is. So it has become, it has become widespread, and the portability of multichannel, 8-channel and multiples of 8 are quite wonderful, 8 around, for instance, or 8, and then 8, and then 8 up above and below can reproduce a sense of a 3-dimensional environment. So that is clearly one of the directions that everything is going in, is multichannel reproduction as well as the documentation of soundscapes worldwide.	02:56:35;15
Jan	I think we're out of time unfortunately, but I had one last question. Can we put in another tape?	02:59:14;21
Nathan	Another tape? Yeah.	02:59:20;03
Jan	I don't...it has to be up here.	02:59:25;02
Barry	Oh.	02:59:27;03
Jan	In your discussions about composition, I had this sense of engagement that I...that I associate with aesthetic engagement, the sort of idea that this aesthetic experience makes you sometimes cry, sometimes laugh, that's evoked by the soundscape composition. So I wondered if you could comment just a little bit on the interplay between the communicative and sort of community aspects of your work in soundscapes with the kind of aesthetics in soundscape composition.	02:59:34;07