arry 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 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 arry So it s really you know just the introduction of the 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 beta tapes obviously that was not for home users you know that was kind of for amateur users right and T tape was then the first way that a which was well established could be related to the then the nd of course it was wonderful to think that you know your analog tape piece mastered on recording analog tape would be reproduced absolutely you know identically as far as any ear because remember you know when we were you know mastering here the old s and they were done locally at mperial 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

ut anyway the question was do we use the already digitized version or do we go back to the stereo comparison the original analog tapes from the seventies played back on agra nd lo and behold the original machine they were recorded on f course 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 agra Swiss built hand made right probably cost around in 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 ne 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 quality bit kilohertz or the professional sampling rate which is not really that different in terms of quality that's more a question of standardization r do you go then to the newer ones bit vou know kilohertz you know well there again you know the size and so on and so forth gain we feel that digitizing the analog recordings the way we have is pretty good and yeah

- an What decision did you make about
- arry The standard quality artly cause when we first started we didn't have the bit or the 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 owadays you know 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.
- an nd when was that

arry	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 s you know but it took several summers and times and hundreds of hours think we re up to know its at least hours of tapes ow of course we re also of course adding and this is where you know Vincent ndrisani 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 m even though cant quite imagine being without tape cause ve had tape ever since 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 dont 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 ut video is far worse a lot of you know the early videotapes portapack units don t even know inch inch like all the different formats most of them disappeared right from the early days So would not want to be a professional archivist you know it s a nightmare right and you must lay awake at nights and ave says well we re buying twenty years with what we have now [laughs] sobering thought right ut hopefully digital files will migrate more easily than things that were tape based	
an	ut you ve done a lot of m gonna just pause for a moment on before going onto the next this last little time period but	
arry	Yes	
an	You were you ve been a caretaker and curator of the collection	
arry	Yes	
an	or a long time	
arry	Yeah	
an	ecause think without your work my sense is that it would have been a risk	
arry	Well Schafer left in right so that was it nd ildegard 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	
an	ut so you when did you decide to actually when did you start with the for example website and the kind of	
arry	T universe call it	
an	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	
arry	h yes	

nd then the payoff though was two things were obvious besides just digitization was finally audio files arry could be linked to those so we had lots of those right and the links in the andbook nd just want to mention that because the whole idea of hypermedia was actually the idea of that was already there in the s in a research environment nd Ted elson you know of the famous Xanadu roject right had come and given a lecture in the s in omputing Science here about this sort of hypermedia know now that there were even theoretical versions of it even back as far as the s Vannevar ush for instance evidently did something proposed something like that ut 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 elson s little buzzword was you know all knowledge is deeply intertwingled [laughs] it was very inspiring as you can see So was putting the andbook together you know in print form at that time when that lecture happened 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 ross disciplinary usually or something that had something in similar something different comparison right So that idea was already implicit in print form in the andbook when it was published in riaht 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

egan aybe 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 ould you talk a bit about how these new formats have changed the way people access or maybe change the way arry n a way then when two things obviously happened in the s 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

nd also another piece that wasn t as widely distributed The host of reboll which is sort of about the Scottish ighlands 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 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 ohn Imsly and ohn Rimmer ohn Rimmer in particular from ew Zealand did quite a few pieces and some of them have soundscape elements or he would come and bring his material from ew Zealand right to do there s a whole list of names guess one of the other fairly famous pieces is enis Smalley the famous ritish acousmatic composer collected some material for Valley low that was related to his residency at anff for instance right and so there s anyway there s that tradition That tended to fall off in the s and the last decade because for the reasons that ve been saying cost of travel and the

arry So that started becoming more but then again that was not the audio because of the bandwidth issues and the fact that was not going to compress the files or you know mean it would be way it would be contrary to the nature of the high fidelity recordings for one thing also mp 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 gigabytes to digitize a collection and everything else you know where are we gonna get it

Well the only the very first tapes in the Vancouver collection when they were just starting to learn on a arry Uher machine a stereo Uher before they got the agra 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 repart of the collection but they renot the best recordings and there s not too much that was actually used in the Vancouver publication right So as say the good part of that is that by tape don t or so and once the agra was involved and once they were a little better at it and so on and know 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 agra tape on you know good quality tape ips half track stereo in other words the standard of that day professional would have actually been for recording right so none of the and inches per second for pieces but 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 s really cause the studio goes back to the founding of the university in

arry	We ve also been given a bunch of T tapes from other 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 and now enni Schine s roughton rchipelago recordings of illy roctor 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 its going to go freesound oorly documented variable quality often you know you dont know even exactly how or when it was recorded but it might be interesting you re like sifting through a you know yard sale m sorry think its 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 its more work right to do it that way ow 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 hemainus tapes in that s another little subset we added that was to the 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 t would be nice though to do more digital recordings that have been done internationally have a couple that you know we already started a new little subproject but right now our priority is the Vancouver one	
an	ould you talk a little bit about how your sort of guidance in selecting sites and venues know you and ildi worked on that a bit on this new round of recordings that Vincent has been undertaking	

arry Yeah Yeah we ildi of course is a wonderful resource on everything to do with the World Soundscape

arry	nd of course we re making a big deal of it cause forty years of longitudinal recordings of one city 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 s pioneered ew York soundscapes particularly on you know events and people cross cultural multicultural you know activities ot 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 s that used to have and so on and so forth ut 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 necessarily do it until and that s the nature of sound right ts 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 ut there may well be right you know there s more W local and regional areas 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 innish group you know went back to the five villages and added a sixth innish one and then they studied those villages and it's called coustic nvironments in hange 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 mean slavishly duplicate mean you know like that s not necessarily good they should ju	
an	Yeah your methodology is changing mean perhaps not don t know if it s a fundamental change but mean you ve added things like S	

h the literal methodology yes and of course the ubiquity of being able to take high quality cell phone pictures right mean there were really good photo documents from the anada and uropean not as many on urope but still quite a lot nd we found that they were done on 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 ut 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 s and that for researchers that allows them to do that and again the course we've made those into year longitudinal study of a whole village that s a wonderful spin off that we five villages having a could never have done They went back to those villages and some of the researchers stay in touch with them as well eikki Uimonen you know stays in touch with the people in ollar and of course some of them want you know some of them have museums or people that want to have you know recordings

arry	Well all of the above particularly the preservation [laughs] and the continuing particularly as near retirement right There's one topic though that maybe specifically though we've covered a lot and 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 did be it's so good have to say an 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 to solve how 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 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 anada tour was nicely documented in the Sound eritage but nothing to the extent that you re doing it right now so 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 didn't talk about as much is soundscape composition we kind of left it off	
an	That was my second question [laughs]	

arry 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 bstracted means it relates somehow to the original So for instance many pieces that ildegard and 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 nd whether the listener

Right so there s many many approaches but that s of course what makes it enticing is the fact that arry 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 tell my students a messy business t seems so easy to record but then what are you going to say about it right and its interesting to see students jumping into that cause they know they can record really fast right and easily and readily but then say well what are you going to say with this material Well is it just going to sit there and we interpret it h 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 n fact it gives you the negative it says of that s program music that s film music that s just you know incidental stuff right ut 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 can t you know of all the requests get say for concerts or things like that they re almost all for soundscape composition or workshops right omputer music orget it nobody s that s that s so don't know whatever it s just like 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 channel and multiples of are quite wonderful and then up above and below can reproduce a sense of a around for instance or and then 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

anthink we re out of time unfortunately buthad one last questionan we put in another tapeathannother tapeYeahandon tit has to be up herearryhann your discussions about compositionhad this sense of engagement Tf [ea rarry nother tape