



Master's Degree Course in Cinema and Media Engineering

Master's Degree Thesis

Changes and Evolution in Audiovisual Production

The impact of digital and virtual technologies on standards and practices

Politecnico Supervisor: Prof. Tatiana Mazali

NFB Supervisor: Eloi Champagne

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Academic Year 2021 - 2022

Research Interviews

To follow the transcripts of the interviews conducted during the research period at the National Film Board of Canada, mainly in its Headquarters in Montréal.

The transcripts were created by using an online transcription tool called Otter.ai. For this reason, the interviews may present typos or hard-to-read sentences.

List of Interviewees:

- **Marc Bertrand** - Producer, Animation Studio, French Program
- **Jérôme Bretéché** - Digitization Technician, Archive Plans
- **Eloi Champagne** - Technical Director, Animation \& Interactive Studio, English Program
- **David Christensen** - Executive Producer, North West Studio, English Program
- **Candice Desormeaux** - Head, Technical Resources
- **Laurianne Desormiers** - Marketing Manager, Interactive
- **Laurence Dolbec** - Delegate Producer, Interactive Studio, French Program
- **Jimmy Fournier** - Director, R\&D and Digital Platforms
- **Steve Hallé** - Head, Technical Resources
- **Élise Labbé** - Head, Festivals and Audience Development
- **Robert McLaughlin** - Executive Producer, Animation \& Interactive Studio, E. Program
- **Donald McWilliams** - Documentary Director
- **David Oppenheim** - Producer, Ontario Studio, English Program
- **Louis-Richard Tremblay** - Executive Producer, Interactive Studio, French Program
- **Martin Viau** - Technical Director, Interactive Studio, French Program

Interview with Eloi Champagne- April 06, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

Okay, it's the 6th of April and we are going to interview Mr. Eloi Champagne. We'll start easily with a brief description of what you're doing inside the NFB, and maybe a bit of history of your path that led you to this position.

Eloi Champagne

Okay, so my role here is Technical Director, when I started here actually was called Digital Imaging Specialists. But it was more or less the same function, but we changed the name of the title because it made more sense with the industry.

And just as a parenthesis, of what the digital imaging specialists really was: that title was coming from the time where they were scanning film. So it was the person that was the specialist to do the transition from film to digital in the early days of the scans.

But technical director is pretty much the title that works with the function of my position.

About my background before coming to the NFB: so I started working here about 11 years ago, before that, I had my own studio, where I was doing mostly work in the advertising industry, illustration, animation, design. All sorts of things for advertising pitch, publicity, etc. Usually, things that other people will not do, that were too complex or needed, really new, the newest technology; like I was one of the first to do an animation advertisement on the side of a bus with new types of screens. I did 12 stories in super high resolution printouts for Disneyland.

So that kind of work was really my specialty. I also created fonts; so typography was one of my backgrounds.

Before that, I worked for actual typographic shops, doing design and typesettings. Usually I worked in typesetting for a company called Data Chrome and some early multimedia projects, like early web projects. And before that, more typography.

And my background and as far as cool is in photography, 3d animation and Design.

Giuseppe La Manna

Okay. Thank you. And what about your current tasks and duties as technical director here at NFB.

Eloi Champagne

I'm working specifically in the animation studio. So my role is really attached to all the steps of making an animation. I work really closely with the producer and the filmmaker really early on in each of the projects to figure out the best way of making the project in terms of budget and technology.

So finding the right equipment, finding the right software, finding the right style, sometimes so and then when the project has its first phase of development, I make sure that we have all the tools to make it happen.

And I support the filmmakers in that phase, and then when it goes into production, it's really making sure that we have everything ready: that everything is functional, that everything works, that all animators have access to the tools that they need, the space that they need. So that's for all types of animation; it goes from traditional 2d animation on paper that always has a component in digital obviously, because we scan everything, so everything ends up on a computer somewhere. But we also do 2d using Cintiq tablets, or we do 3d CG animation. We do stop motion films; we use Unity or Unreal for VR projects or for real time animation.

So no matter what type of project or animation we do, I have to really make sure that we have the best tools basically, and the best team and the best situation to make the project happen.

Giuseppe La Manna

So of course, technology is a big part, it's almost everything in your job, right?

Eloi Champagne

Yeah, it's definitely central! I often say that my job is to *find technical solutions to creative problems*, you've heard that before, but also *creative solutions to technical problems*.

So everything is around technology. Making sure that we have the best tools to really translate the vision of the creators. That could mean creating shaders, in Blender to really make the vision happen and getting the look that we need.

But it also sometimes means taking what the Creator has in mind and even though the technology is not quite there, finding a creative way to take something that wasn't intended to do that but allows us to make it happen.

So we've used 3d printers really early on, for instance, to do stop motion projects.

One of my pleasures actually is to take some technology that it's not intended for a scope and use the technology in a different way sometime to create a result that will be different. But technology is yes Central.

Giuseppe La Manna

And how would you describe your path during the years here inside the NFB?

Concerning, how technology influences the way of working right now? Or, in general along the path? How has your working method changed because of them?

For example, I mean, of course, in the last few years, you've started to work a lot on virtual reality with the headsets and more. Before there was not this possibility; for example in the use of previz or things like this.

In general technologies that changed or change the way you work, which one would you consider the most important?

Eloi Champagne

Oh, that's a tough one.

I think there's been many, many steps at the NFB. I didn't see the step much.

I mean, I worked on film a long time ago, mostly interested in photography.

But there's been in the history of the NFB, obviously many, many different technological changes that were all important.

I think the **step from film to digital was important**. Sadly, in the middle, there has been video that was really kind of bad, and I'm sure other people will talk about that better than me; But that was kind of a sad moment where everything was really bad quality. So not good enough to replace film. But we used it a lot because it was cheaper. But it was not really a good, good idea. But that switch from when it happened really from film to digital was a big step.

And then the evolution of the tools that the computers that got really much faster think was a big step. Early on, when I started doing 3d animations, the tools or computers were extremely expensive. It was easy to spend \$ 50/75,000 on a computer and the software was also very, very pricey in the same range.

So most people were not be able to afford that. So only places like the NFB or a big production studio could have access to that.

But that changed over a period of 10-15 years, where now the tools are a lot more accessible to students or young creators that come to us with already a great knowledge of the technology. And basically, the role now I think of the NFB is to support them to really make it. Because sometimes they can come here, and they don't know more than we do, but they have ideas of what to do with that technology that maybe we haven't explored.

So I think our role is really to support them. And help them adopt and adapt to that technology.

And the technology is changing really fast. I think that's one of the big changes. It took, you know, decades to go from film to video to Digital but now, every six months, there's really a cycle in terms of technology, and it's evolving super fast.

So I think that's where a place like this, like NFB, is important.

But that's where my role as a technical director, and I think a lot of creators now need to be aware of that, that things are changing really fast, and be able to adapt?

Giuseppe La Manna

Remaining on the same topic, more or less, what about the pipelines?

Because we always see manuals for documentaries production or for movie productions. But especially for those kinds of new content, new storytelling, there is still no standard. I'm sure you've worked on different kinds of projects, from documentaries to VR, and more. Does the pipeline change? Is the classical division in pre, mid and post production still valid?

Eloi Champagne

It has changed quite a bit in the last couple of years; I think for a long time the pipeline was more or less the same, it doesn't matter if it's documentary, if it's traditional feature filmmaking or animation. I think it was in part because of the limited tools available. So you would shoot on film, you would have maybe a choice of cameras, maybe a choice of what film you would use for shooting, you could have access to an optical printer or things like that. But in general, the pipeline was very much the same. So you would have a synopsis scenario, maybe a storyboard (an animatic, probably not, because in those days, it would be complicated to do an animatic). And then you would shoot, you would process the film, you would edit on an editing table. And then the film would probably get made pretty much and that stayed like that for a long time.

The funny thing is, with the digital world, we adopted a lot of the same principles. So editing remained, more or less the same vocabulary, the same language, we still do a cut, we still do things all coming from film, it's all coming from the same process.

But we also kept the offline editing the online editing for a long time, even though now it doesn't quite make sense, because the tools that we have make it possible to do your color corrections as you work, makes it possible to do pretty much everything. You could use a software like resolve and you could do everything. You could do your editing, you could do your compositing, you're keying, your special effects, everything in the same software. And probably if you have a computer powerful enough, you can work all in high resolution. You don't need proxies, ect. But for a long time, the process didn't change.

Now, what's interesting is that **each type of project has a different pipeline.**

Of course, if you do two films in 2d animation using Toon Boom, your pipeline is probably going to be very similar. There might be a little change depending if it's frame by frame animation, or if it

needs a rig and its core, its cutout animation, there might be a little difference, but it's going to be very similar.

But if you're doing a stop motion film, not all stop motion films are going to be the same because there might be a lot of differences in how you use the technology in the film, if you do a 2d, if you do a VR project... they will all have a different pipeline, sometimes most of the time involving different software.

That's really interesting, we need to spend quite a bit of time doing research at the beginning of the project to determine what the pipeline will be. And something that is new. and that comes from software development or game development, we do a **vertical slice**. So we do a quick development phase, where we try the pipeline from beginning to end to make sure that it's actually working and, and to figure out where there are issues that we need to fix. So that's completely new.

Giuseppe La Manna

Okay. And, of course, I think a lot of the components of a crew working on a project have changed during those evolutions. Which new figures appeared and which totally disappeared, if there's some, inside a crew that's now working on an animation project or in general, on an audiovisual content?

Eloi Champagne

It's funny, there's two things that happen.

In smaller projects, you have people that will have more than one role and that will do more. It's possible now for a filmmaker alone to make a project in his basement and do everything.

But at the same time, usually when the project gets larger, you have a lot more division of labor. And very specialized labor where you have somebody that will only do texturing, somebody that will only do the creation of the rig, somebody that will do animation, somebody that will do the lighting, somebody that... So the bigger the project, usually the more division there is, and there's a lot more roles than there used to be in the past.

If we speak about animation, you would traditionally have the key animator, the lead animator, you would have this person doing in between you would have a person doing clean up and you would have a person doing color, that was the truth of animation for a long time.

Now you can have a CG project, you can have a DOP or lighter, you can have a lot more different roles. Same for the Stop Motion project where sometimes technology is going to be heavily involved: now we start using real time engines for stop Motion projects to drive the background.

So you need somebody that will be able to work with you in a 3d engine like Unity or Unreal, you need an integrator, you need somebody that will do modeling, lighting, all the stuff that you would have for a game now we use in stop motion also.

You were talking about VR a bit earlier and now we can use VR to do previz so that's a different set of skills and also probably a different type of talent that you would have getting involved.

So at the same time we need to choose a pipeline for each project and you need to find the right crew for each project. And I think that's very different and it looks more like the way some softwares or some products are developed where there would be the need of some specialized engineer and the need of some designer. So you need to create a team around the art. Like during the making of a building, you need an architect, you need different types of engineers for the different specifications: electricity, plumbing, whatever..

I think making a project in the future is definitely like that.

Giuseppe La Manna

And how does NFB approach this? If you have a big project that needs a lot of people do you usually call for Freelancers outside the NFB?

Eloi Champagne

Right now, in the way we're structured, we depend on external resources. We don't have enough people inside, working full time at the NFB, sometimes even during the development phase or the research we need externals.

So when we have a project, we need to build a team around that project, and then it's going to be freelancers.

I'm hoping to change that in a little bit, so we would have a little bit more people permanently working at the NFB that could support at least the research part. Not the production phase, that's fine to hire a team and most films are done like that all around the world where you build a crew, or you hire a studio that already have employees doing some of the work. But at least for the testing phase, with the research and development phase, I would like to have more people inside the NFB, I think it would be more efficient, and I think it would offer a better service to the Creator.

Bu, as said, each project needs different types of skills and even sometimes, if you can have a director that has a good idea, good visual sense but they're not technically prepared, you need to pair that person with somebody that will be able to support them technically or sometimes the lead is actually somebody that is very technically strong, and in that case, you need maybe to pair that person with a team of designers that are going to be able to help on the creative side. So there's a lot of team building, I find.

Giuseppe La Manna

That was actually the question I was going to ask about: the role of the director.

We've spoken about it last time, but do you feel that it changed? Now it seems you always need a technical background to be able to produce something, and maybe the role of the director wasn't like that in the past. Actually, most of the time we know about Hollywood directors that know really little about how the camera works, the lights, the illumination, that's why there is always the DOP, there is the cameraman and so on.

How do you think this is now possible?

Eloi Champagne

I think it's still possible, but the directors you're talking about in the past, usually would get very close to key people: they would work with the same DOP the same editor the same all the time, if most of the time, because that relationship is so crucial for their vision.

So I think you can still do that. But then in that case, **the role of the director is really all about team building and relationship and creating that relationship.**

But you do have creators that are really, really proficient with their technology, they know exactly how things work. And it's part of their creative exploration. And I think we see that more now than in the past, definitely more than more than that.

It sounds like probably a generation of the people that are born with computers and with the internet, have had those tools in their hands pretty much since they were toddlers.

It's part of their creative process to experiment with it and to know and to be open to the different possibilities.

So I think that's different.

I think the role of the producer is interesting, too, because it's always been, I guess, the case that the producer has to be good at building a team around the director's vision. I think it might, depending on the scope of the project, but it might be even more important now that the producer also understands what the pipeline with the technology involves. W In the past, I don't think it was that important. It was probably very easy at some point to cost a project, you would just look at the time and the type of project and you could just say okay, it's going to be that much by foot or film or that much by minutes and you would have a pretty good idea.

Now most projects are iterative, so you need to make a prototype If you need to build on that prototype, and I think to price and to figure out is more difficult. So you need to know a little bit more about the different steps and the technology.

Giuseppe La Manna

It seems that now there's the need for continuous training for each category of professional. Maybe because, as you said, technology is changing really fast.

How does NFB deal with it? Do you have courses or training? Or do you usually train by yourself?

Eloi Champagne

Yeah, we're not that good right now at dealing with this, honestly, I find that we're lacking in offering the opportunity for people to learn on a continuous basis.

And I think that most of the people that are really strong technologically here are training by themselves. Because it's part of who they are and they just experiment all the time.

But I feel that the institution is not so great at that and could do much better. I think part of the way we could do better is by documenting better what we do, each project should be documented, a lot more tighter and that documentation can also become something that we can share amongst ourselves, but with the public also.

So how did we end up making this film or this project? What were the steps that were involved? What we create the scripts are the things that we invented, sometimes making those projects should be documented in that way, and if we make that accessible, then I feel that this training will be kind of an ongoing thing. But it's also something we can offer to the industry and the people outside. But we're far from that. But that's something we should be working on and we will be working on.

Giuseppe La Manna

Since you work in really close contact with both producers and directors and creatives in general, I want to talk a bit about budgets.

How do you usually choose the budget of a project? How much money is used for technology and how much for the crew, the workers?

Eloi Champagne

If it's new technology, really new technology, and we need to research them, yes, there's probably a cost attached to that.

In those projects that we do that have a lot of tech in, we can usually work with what we already have and it's usually fairly cheap: it's going to end up being the cost of license for software, and a bunch of computers that we often have already.

The technology part is not necessarily super expensive.

The the most expensive part is always the crew and always time; and that's fine, that's how it should be.

And we're always trying actually to make sure that most of the money goes to the talent.

So the directors obviously but all everybody that is involved in making the film, that's where most of the money should go.

We do have something internally where we charge for some of the services: let's say we have the recording studio, we have a mixing studio we have, we have a lot of the technology we use for the online computers, the servers and all that stuff. We need to take that into account because we need to keep that technology updated.

We need to make sure that we have the best people working at keeping this and maintaining this this technology or are working with inter mixing studio for instance, but so there are there's always a percentage obviously that will go it's almost like to infrastructure, in a way, it's the basic technological infrastructure that we need to maintain. And that goes all the way to the archiving of the project at the end and maintaining those archives, there's a need to keep that money. So already our budgets are built to take this into account.

So there's a percentage that will end depending on the type of project, to be some internal billing, to take that into account.

But most of the money should always go to the talent, because that's what makes a difference. It's the people running the software, it's the people making the visuals, it's the actors, it's, that's where the money needs to go. And it's still the case.

So we have a standard, basic budget that we use as a reference, and then each project is different. And depending on the crew we need, depending on the time it will take the size of the project, and the budget will be developed around that.

Giuseppe La Manna

And are there projects that are more technology driven than creativity driven? I mean, it happens a lot of times at university, for example, to start from a new kind of technology or learning about it and you have to make a project using this, but normally, art and storytelling works are born from an original creative idea

Eloi Champagne

Yeah, it did happen throughout the story of an NFB that technology was the lead first.

To this many examples, I mean, IMAX was born here. So the development of the camera up to 70 mm film was really a goal that led to the making of a specific type of movie.

We would go in nature and try to bring people somewhere and then IMAX films are still a lot around that. But it was really the goal of making a film that is more immersive. And then a lot of work was put on the development of the technology. With IMAX Corporation we worked to develop a software called Sandy which is a stereoscopic animation software. And the goal of the software was to allow artists to be as free as possible in the creation of animation. But working on a stereoscopic platform.

So obviously, once the software was developed, the goal was to find a filmmaker that could make a film with that. And obviously the technology influences where the film would be and then the look of the film, but it's really started from the technology.

So throughout the history of the NFB, that's something that happened a lot. In animation, Norman McLaren would experiment with different techniques. And he wasn't alone. It was actually his philosophy that the director should feel the freedom to explore different techniques. And it was

something that he was really pushing actually, that the directors should feel comfortable trying something new technically, with the film that they were making.

And it's still happening. That being said, most of the time, the vast majority, it starts from an idea or a concept. And then the question will be, especially now that there's so many way you can tell a story: Do you want to tell that story and why? Why that technique? Sometimes it's because it's a technique they know when they like, and that's fine. Sometime they want to explore technique because they feel it's going to tell the story better. There's a VR project, a stereoscopic film, but it became a VR project and it makes more sense almost as a VR project, called Blind visor. It's a 2d animation VR project, so stereoscopic, and the story is that the main character sees something different. See the past in one eye and the future in the other eye and and Is it a word as a stereoscopic film because our eyes see both at the same time, it's not quite clear. If you put it in a VR headset where your eyes are isolated, suddenly, it's super strange, but it works. And you get the sense of what the character goes through. But that was a case, I think, where the director is interested in the technology and knows the technology, but really, suddenly, the story makes sense for that technology. But usually, it starts with the idea and then and then what hour it's going to be produced comes from that.

Giuseppe La Manna

About the projects driven by technology, do you think it's mostly because of the nature of NFB? Do you think something like this is possible in a company that works outside the institutional and academic world?

Eloi Champagne

That's a good question. Yeah, I've talked about animation, but I should have talked about our interactive studio works that we have been doing over the years. I think their approach is very much based on technology and how to reach people with that technology.

So early on, it was the internet that triggered that. So can we tell a story on the internet? Can we forget films and let's not use film or shoot anything? Is there a way we can use the internet to talk to people and make something new and make something interactive, where the people are part of the story. And so that's very driven by technology.

And most of these would not be possible outside, simply because there's no profit.

So that's where the NFB is very unique, that we have that incredible freedom of testing, of experimenting with the technology.

Freedom in the form, in the content, in what we are talking about, and in the distribution.

So we have the chance of being able to experiment on all these levels. But most private companies wdoill not have the chance to do that, because they need to make a profit sometime at some point. So they will use the technology that has been proven already. Because they can not spend too much time experimenting, because it's too expensive. They need to make sure that whatever they create has the biggest distribution platform, because that's how they're going to have a bigger revenue.

But we don't have those constraints. So that's incredible.

Giuseppe La Manna

We are almost at the end. Now, I would like to talk about your personal experience and have some examples. So first of all I would like you to compare two projects, maybe one of your past, at the beginning of your experience at the NFB and one you're working right now, or you have worked in the past year or past months, and compare them in terms of technology differences or in general in the evolution in the field of storytelling.

Eloi Champagne

I think, for me, the big difference is besides more powerful computer, more beautiful images, faster things to process.

Oh there is something funny with computers. It's not because they're more powerful that you make things faster, because it never happened. Actually, it happens for a very short amount of time, where suddenly, because you're doing the same thing that you were doing in the past, it's going to be a bit faster, but not for long time, because when you have more powerful computer, you're making things that are more complex, and it's never faster. Ever.

I know that since I bought my first computer when I was a teenager, we make things that are more impressive, I guess are more fleshed out and beautiful.

But I think the biggest difference right now for me is the possibility of the real time aspect of things. So I like the possibility of using VR, (and then that's very dependent on game engine) and the tools that are out there that help me to be able to develop the sense of the story faster.

Thanks to previz or making an animatic, that is closer to the real thing, that makes you understand things quickly and without the big crew.

So after that we have the story, the story is, hopefully better. And then from that we can start production. And it doesn't matter what technique we use, it could be a very traditional 2d animation, film or stop motion film. But because we've worked on the story, quickly, thoroughly, we've been able to iterate faster.

I feel that we're going to have a better project in the app. And to me, that's one of the key changes.

I think what's going to be interesting in a future, fairly near future, is that people keep talking about MIT meta verse and all that stuff, without knowing what it is. But I think what it's going to be, it's going to be a new platform where we will create a new kind of storytelling opportunities, but also a new type of venue where we will show the projects that we do.

And that's going to open some very interesting doors for collaboration for this distribution for we already started seeing people having, you know, going to shows like musical shows and VR, but this can be pushed a lot more with, with the weather brings a lot of interesting possibilities for creation, or we can collaborate around a project without even being in the same building or the same space. And the type of project we will create is going off, so be influenced by that. And that's not so far in the future. That's a few years really, we're gonna start seeing a lot of that.

Giuseppe La Manna

And what about the grammar of the storytelling? I know, it's not exactly your field.

Eloi Champagne

No, no, it's a good question. And it's something, it's a question that has been around since 2013/14 when we started doing VR; all the conversations were about that, especially since the filmmakers got into VR, more than the game people. Like, how can we tell the story? What are the codes? Is it working the same way? Can you do cuts? Can you do that? All around the grammar there were questions.

And my answer to that was: first, let's build the tools that make it possible to create actually in VR, and then those questions will answer themselves by experimenting quickly in VR. So now we are at

that stage, we still haven't answered the grammar questions, only some of it but we're now at that stage where we do have the tool, and it's easy, and it's accessible. So we're starting to build stuff. The funny thing is most games are not good at storytelling, they still do very traditional cinematic. What that tells you what kind of world you are, what kind of era you are, but the rest of the thing is a game that doesn't really tell the story but that doesn't mean it's not possible. So we're still figuring this out. I hope that access to better tools is going to provide more possibilities for creators to play with those codes and grammar.

Recently at the Fire Center, there's an immersive sound installation. So you walk around in an actual physical space, but the sound is specialized. So depending on how close you are to the object or where you are in the room, the sound is different from another part. It's not perfect, but just that we start experimenting with things. But there's still a lot of exciting work to do to figure this out. But a lot of work, nobody really has the answer yet.

Giuseppe La Manna

Okay. And last question. You've already said something, but what do you think about the future of those kinds of immersive storytelling, interactive, but also the classical ones. And how do you see NFB inside these changes in the next few years?

Eloi Champagne

I think there's still a lot of room for traditional storytelling. So movie festival, and I think the streaming platform are going to show more and more like really evolving kinds of animation and storytelling. So that's exciting.

There's really really great stuff coming out of Netflix, Prime and Apple. They are going to follow up with more experimental animation and projects addressed to adults, not just kids shows and stuff.

But I do think that there's a lot of room for installation for immersive experiments for VR.

And the role of the NFB really is to try and experiment with all that. And I think what I hope is that we are going to experiment with the different tools and make them accessible to creators so they can come and play and have access to things that by themselves they won't have access to.

So I think that one of the roles of the NFB is really to make this as accessible as possible to get more creators. So they can iterate and explore and experiment.

And even I would like the NFB to share a failed experiment. I would like to share everything that we do. So we can inform the public and we can inform the industry about what is possible, what is not possible yet. What is a good idea, but we failed, but that we actually share that as much as possible. And I think that should be our role in the future in the coming decades. For sure.

Interview with Candice Desormeaux- April 11, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

Today is the 11th of April and this is the interview for the research project *Changes and evolution in production for Audiovisual and interactive content*. We are with Candice Desormeaux.

We'll start with an introductory question: what is your position here inside the NFB, and I would like you to talk about the path, professional and educational, that led you to this position.

Candice Desormeaux

Okay, I'm a head of technical resources, supervising technical project coordination, the archives team, the technical technological development team, and the team responsible for data wrangling.

I've been at the Board since 2007.

I have a bachelor's degree in Communication Arts from Concordia University and I've recently completed a master's degree in management of cultural organizations at HEC Montreal.

I've occupied several positions at the film board from production coordinator to Production Supervisor. I've also worked in marketing, distribution, and technical resources. And recently, I was an advisor for the technology plan for the National Film Board, which is an exercise we do every five years. So we've just completed our first year, the next five year technology plan.

Giuseppe La Manna

Can you describe what the technical resource does? And what are your duties inside the department?

Candice Desormeaux

The Film Board has several departments, several divisions. The technical resource department falls under finance, operations and technology.

In technical resources, we mainly host all the post production services, in addition to preservation, conservation of media; our services include anything from offline editing, to sound editing, to online sound mixing, we also produce our own deliverables, we have NFB standards, which could probably send you some information, but we have our own set of deliverables. And using digital source masters that we transfer on to digital masters and pivo, which is normally what we do to create producer deliverables.

The previous technology plan had to focus a lot on preservation. Going from the digital shift, analog to digital, we had to put in place a lot of planning and a lot of research in order to ensure that the collection was being preserved long term and ensuring open source as well for data.

So there's been extensive work done in this area. This is often done in collaboration with our r&d department. They help establish all the planning, all the workflows, all the research, that we hence transfer over to production for operations.

Giuseppe La Manna

Then the job of Technical Resource is not connected to a specific department or studio, you work for all the studios, right?

Candice Desormeaux

That is correct.

So we have eight studios in total. Our structure keeps evolving, so I'd have to count again, but we have documentary animation studios and Interactive Studios. Some of them are based here locally in Montreal, but we also have external studios. We have one in West BC Yukon, Northwest covering the prairies and one in Ontario, as well as one in The Atlantic provinces.

So Quebec, Atlantic, so all of these they all have different needs.

But recently what we were able to do, we're still working on it, but this was part of the last technology plan: we want to democratize the access to the infrastructure and the services here in Montreal for the regional studios.

So we now have cloud infrastructure, and we also have a one gig Wavelink, that is connected to Ontario, we have a hub in Ontario, and the next one will be connected to Vancouver, probably by the fall.

So that we can ensure that everyone has access and can secure, because security is a main concern at the film board being government.

So all of the studios have now the possibility of ingesting all of their materials, rushes or animation projects directly in the Secure Infrastructure while having access to post production services in Montreal.

I can detail a bit more if you want: what we mean by accessing Post Production Services is creating proxies, for example, for offline editing. They can have this wired to Montreal, we have a team of technicians who are able to offer syncing services, as well as proxies, and they have the option of finishing outside, but they can also come and finish projects here in Montreal, if they wish. It all depends on how, what their intentions are in budgets as well.

Giuseppe La Manna

It'd like to ask you, how do you think the technologies have influenced the work of your department and of the production in general, since you've been here?

Candice Desormeaux

Well, I think every conversation you'll probably have lately, everyone will mention the pandemic. Of course, it enabled us to accelerate a lot of the plans we had, like being able to provide this cloud infrastructure, as well, in addition to being able to work remotely, which is part of the idea of democratizing this access to post production services. So this had already been part of the intention, the pandemic accelerated the needs and the deployment of these services.

When the pandemic hit, the film board studio creation and innovation, which is the division for studios, production studios, quickly put in place this initiative called The Curve: these were short films that every studio produced using only remote technology, because everyone was in isolation.

Therefore we were able to test the beauty of it. We were able to test offline editing at a distance, directing at a distance, having a producer and director in one location and then having a camera person on site. We were able to deploy some render farms at distance for animation. Through all of those different scenarios, we needed to also involve communication, so we've developed some in house systems, one of them, we call it the flexor, which enables production to assist recording sessions live without any delays in sound and this was one of the greatest challenges we have with sound is the delays.

So we've done very well. but we also had to think about the users' needs because of course, we had to consider users have bandwidth, required bandwidth, then we're able to deploy these types of services and developer on the side, for example, having an integrated chat, as opposed to having to use several systems.

So these are the types of solutions we've put forward.

Candice Desormeaux

There's more because there are different things, mainly for production, or post production. So anytime something would cure, you know, we'd have a team of r&d and technicians who would meet with the

production students and ask what are your needs? How can we help you, and that's how we've rolled out the difference?

Giuseppe La Manna

It looks like the work of the technical resources and the technical director are really complementary, isn't it?

Candice Desormeaux

Very much. The studios have technical coordinators, technical directors, production supervisors, as well, there are different positions, depending on the studios, who do a lot of work in production. And yet, they will need the support of technical resources for the post production portion, but we collaborate.

Ideally, we collaborate from the beginning of a project, we have technical project coordinators in technical resource, who will relay the information, book different meetings with the technicians, the engineers that are on site, to make sure that when a new project starts, we can first see all of the needs, or where there might be some challenges or new solutions to deploy.

Giuseppe La Manna

Before you were talking about preservation, of all the works that NFB produces, every year, but of course, also the old ones in film, video and digital. And what is the role of the technical resources in this?

Candice Desormeaux

We have a conservation lab at Couzens. It's a beautiful space, it's brand new. We have labs that are temperature controlled, and we still have film and negative enterprise.

I think we even have, in some cases for older, we would still have a few copies of oh, what's called I'll come back to it.

And with the vaults there are the lab technicians who transfer the works from film to digital. So they'll prepare the material, they'll do a bit of restoration and then we are equipped to do digital transfers from film.

So recently, because of the pandemic film production stopped, so a lot of production students have turned to archival material and we have quite a few of those.

Right now we have a project called Parade, which is mainly using archival footage. And we also have one out of a French program which is called our Moroni.

So there's a lot of archival materials that are going into these films so they usually transit through the lab. We also have a stock shot department who also treats materials at the vaults. We have scene backs there, you can view all older films are rushes so that they can be digitized into our stock shot library (?).

So we have a lot of services for each different aspect, representative of the different departments we have.

Better off giving you a tour information about their departments or services.

Giuseppe La Manna

Now a question that is more on the side of post production, in particular of new kinds of content that are not typical and that nowadays are getting more and more views and more public. What is the role of tech resources in interactive content, such as virtual reality or online content, ect.

Candice Desormeaux

It's been quite a challenge in the last 10 to 15 years. Since the beginning of interactive projects, the film board has had challenges in terms of recording these experiences for preservation because as you're well aware, interactive, it does not require the same process as film, or video. It's not linear. And of course, it also involves programming. And, as we know, programming also involves maintaining the websites or the technologies, for future reference is always a challenge.

We have new workflows in place, even establishing a structure for how to reference these productions in our systems, we're not even talking about preservation of the work itself has been a challenge, we have a team that did a lot of work in the in the last two years to be able to index, with naming conventions for these types of props, even for video games.

So we were able to establish a structure for these projects, along with workflows to support and preserve, even if it's not the experience, then it would be recording of the experience, for example, to ensure that because we do have that responsibility, as a government organization,

Giuseppe La Manna

Of course, that was one of my doubts, because for example, technologies, such as headsets, in a few years won't be able to read the material that maybe was produced 10 or 15 years before.

Candice Desormeaux

This is definitely a challenge for interactive or even for the dome 360.

Because we have a lot of them, I'm not sure what the percentage or the ratio is of our interactive productions, it'd be interesting to know, but we treat them on a case by case basis.

And the other important aspect, not to undermine is the legal distribution rights, because very often, an interactive project will perhaps have a life of two or three years. And legally, you always have to ensure to maintain the longtail and so the life expenses, and resources that are able to maintain the site or the application for the duration of that project's life based on distribution.

And that is why we have to treat them on a case by case basis because sometimes some of these projects will be a success. And yet you want to redeploy them on different platforms, you have to upgrade the technology.

So I know that Eloi has done a great project called The Orchid and the Bee, and they ensured that with this project, we would be able to redeploy because of the way they've preserved the source materials.

So I'm actually having conversation another project that we have because we want to see How To Best produced the deliverables, which was initially produced for specific dome here in Montreal, the Planetarium, but that they would like to redistribute as VR, as dome 360 unidirectional, whereas this was a multi directional project. So these are all aspects that we're mindful of.

And in these situations, of course, we grow every time a project arrives, and we have to adapt our resources, and gain knowledge through all of this and document the film board. We're looking into better documenting these new technologies, because that's what will help us in the future.

Giuseppe La Manna

Since your duties and the ones of the department in general are really wide; What kind of professionals work in it and are they NFB employers or you call for outsiders and Freelancers that have the knowledge on a specific subject?

Candice Desormeaux

This has been a challenge when it comes to interactive. Studios have often outsourced firms, and so they'll do the bill, they'll deliver. And then once it is ready and distributed it's great, the project is launched, but then going back and maintaining these projects, is what I mentioned can sometimes be

an issue, and we're not developing them unfortunately, so there's no expertise that's being developed. Which is fine, because we have limited resources. So it's always a way to go.

But we still need internal resources in order to either maintain, preserve, or redeploy.

So there are efforts made in that respect. I know that we're hiring new resources as well. In terms of workflow we accompany those teams, or if we're outsourcing, that's when we get involved. So we have engineers, we have technologists, we have technicians, as well, sound image technicians. And I say technical resources, the engineers are in research and development, just so that. But we're all work together in terms of assisting the studios and developing their concept in their projects.

Giuseppe La Manna

And going back to the post production part of your work. Have you noticed since you've been inside NFB for a while a change in the work pipelines?

Candice Desormeaux

When it comes to linear production, the technologies have changed. But the workflows remain pretty much the same.

In terms of linear film an issue when we worked with film, or even tape technology was storage and backing up of storage, and that's specifically an issue for any post production house, where there's material and the material or the assets become heavier and heavier as we develop towards HDR.

So it's becoming a challenge for preservation or even for operations. So that, you know, it's something to always be mindful of.

But the process itself, you know, even from pre production to post production, it's the same workflow or is the same. It's the technologies that we use to accomplish the same linear process that evolves, but the projects themselves are still the same. We're really talking about linear linear film.

Giuseppe La Manna

And what about the budgeting and amount of money invested in Technical Resources?

Candice Desormeaux

I think it's always a challenge depending on the type of project but if you do have pre production meetings with your post production teams and the engineers, then that's when you're able to assess, okay, there might be some aspects of this project that we want to budget more for, or there'll be some days it's time not just resources. So it really depends on the intentions of the filmmaker, what they're trying to accomplish using and which technology: is it AI assisted imaging? Is it shooting into a live recording session for an Atmos mix, for example or a live concert with Atmos mixer?

I'm just providing examples, whether they're good or not. But if you're asking, budgeting for technical resources, that would be the technology plan. So with the technology plan, there's also an investment plan that is established by the directors, Jimmy or maybe I know Steve will be able to give you a bit of information. Will you have the opportunity to meet with the director of r&d?

Giuseppe La Manna

Probably tomorrow, we still have to schedule the meeting, but probably tomorrow, Eloi was telling me before that he is right now talking to him to schedule.

Candice Desormeaux

okay, because Jimmy will be able to really explain his strategy for planning for budget, his strategy also for innovation in terms of how he spent because he's the mastermind behind the technology plan,

or at least the production portion of it. Because we have two sections, so he'll really be able to give you it's not his first one he's been no, he's also responsible for that planning.

Giuseppe La Manna

Okay. And I also remember that you worked with distribution during your career. Have you seen changes in distribution, because of course, now we've said that you had the possibility to use platforms online, to make them possible. But does NFB always work with online platforms. Do you also have distribution, for a selected public, like for example, in cinemas, or shows, museums, or do you usually go directly online?

Candice Desormeaux

They do a bit of both the sales agents, you could talk to them. Some of them have been here for quite a while and they have a CRM in terms of customer management. And then they also use the b2b site and the b2c sites. Those are the platforms for distribution, but they also attend a lot of those Festivals around the world like Cannes and so there they normally present the works.

I take care of deliverables for distribution.

Giuseppe La Manna

Yeah. Okay. And I would like to ask you a question about the future: what do you see in the future of your department? And In general in the future of NFB, what are you going to work on? What are the steps you must do to keep up with the technology and the word that's really changing in the last few years, especially after the pandemic?

Candice Desormeaux

Yeah, I think we've always played an important role in leadership in the community, in Canada. And I think now in terms of establishing standards we still have a very important role to play.

And the sharing of knowledge, Film Board has always had a tradition of accompanying artists and creators to make their films but we also had a lot of education.

And I think in 2022, there's a lot of schools, film schools, media schools, gaming development schools where, perhaps in terms of learning or exchange of learning happens more than with the industry itself engaging with the industry.

And I think we do have a role to play in that respect.

In terms of keeping up with technology we've noticed more important is always your workforce.

But maybe the big difference today is the versatility of employees, and their knowledge and the sharing of knowledge. And of course, there's a different trend in management.

It's different from what it used to be in the 80s, and the 90s. And even in the year 2000, it has evolved a lot.

It does, you know, the different steps that we're taking, whether it's towards diversity, and inclusion, or indigenous people. And it's important for the film board to remain relevant in terms of technology, but also in terms of the social impact that we have. So these are two very important aspects that the film board has to keep in check and balance as well.

So the technology plan has led us to this day and it's Technology watch, so Monitoring constantly, what's happening in being able to plan.

Okay, how do we want it? What are our main goals and orientation? You know, as I was saying, keeping in check, like, at social relevance as much as technology but the idea is always to support that mission, which is to produce and distribute, film, interactive work. But that will engage Canadian, but I think above that it is to create social coherence, because this is what these types of works can do.

That's how powerful they are. So at the end of the day, if all these technologies can support production in order to achieve that mission, the film board's mission and we're keeping in line with what we're meant to be doing. So it's through innovation, of course, and remaining relevant and efficient, which becomes a challenge even with all these technologies.

Giuseppe La Manna

Yeah. I can imagine like we were saying before with the dimension of data and more things that make it challenging.

Candice Desormeaux

Yeah, absolutely. And you know, I mentioned the technology plan, the post production technology part, but the technology plan has two sections. The first one is related to digital technology. But the other one is, the second portion of the technology part is about information technology, which is also like the whole infrastructure aspect, the security aspect. And then the data aspect, how do we have business intelligence? How do we build this intelligence internally for responsible management? And accessibility as well as data. So these are also incredibly important. Especially nowadays.

Interview with Steve Hallé - April 12, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

It's the 12th of April. And this is an interview for the research project changes and evolution in production for audiovisual interactive content. To start I would like you, please, to introduce yourself and state your position here and NFB and then if possible a brief history of the path that led you to this position, both professionally and educationally.

Steve Hallé

So my name is Steven Hallé, I'm the Director of Technical Resources. I was previously a manager within the Technical Services Division. My responsibilities were overseeing the audio department, as well as the digital treatment center and the duplication center.

I've been in the NFB for 18 years now. I came to the NFB, my background is in cameras actually, and I came to the NFB after working for a company where I was camera department manager, the company did go bankrupt, and I found myself in charge of the camera equipment at the NFB in 2004. In 2007, that department was closed and I ended up coming into post production services as a technical and project coordinator.

So that's my background. I have been in the business for a long time. I started working in cinema in 1993. I got into the business because I always wanted to, but I actually found my way into the business because I could drive a truck basically. And, and that's what production assistants do, that's one of their prime responsibilities, being able to drive trucks. So that's my long story.

Giuseppe La Manna

Well, thank you. And what right now as a director in the technical resources are your duties and tasks?

Steve Hallé

So I oversee a department that has about 65 employees, Indirectly. Directly I oversee 4 managers. There is Mira Mailhot who's my direct replacement, she is now in charge of the audio department, the digital treatment center and duplication center. We also have NAME (?) who is in charge of the offline editing suites, online editing, color grading, quality control, and the restoration of the collection that I was mentioning earlier: the collection of our films.

Then we have Candice Desormeaux, who's in charge of technological development, as well as archives. And that's pretty much what I do on a day to day basis as it's a relatively new position. I'm learning but basically I oversee the entire technical resource department.

Giuseppe La Manna

Thank you. And I would like, since you have a technical background, to ask you what would you say were the most important technologies, technological changes, that really had a strong impact in content production?

Steve Hallé

The invention of mini DV cameras: I would have to say that the mini DV cameras changed everything. All of a sudden, you could buy cameras for a few \$1,000 . You could buy tapes at the pharmacy and I think that's when really the democratization of cinema happened. That's where I would put that benchmark. And to me, that is one of the biggest changes in cinema production for a long time.

Giuseppe La Manna

And what about the crew, the people working in a production pipeline? Do you see any difference in the professionals involved?

Steve Hallé

Absolutely. There is. The unionized positions are still the same. They require the same kind of rigor that they always have, and usually we're talking about large, low budget fiction films, mostly coming from the United States, some from Canada.

In terms of closer to what we do in small production documentaries, I do see a certain slackening of quality and competencies of some of the crews.

You know, productions always want to get the most for their money. So, we sometimes see the hiring of less competent crew members, because they charge less. And that does show up.

I mean, in production, we often say pay now or pay later, but you're gonna pay. So, if you get a really good camera assistant who's doing camera reports, you know, using slates at the beginning of every day, if not, at the beginning of every take, that saves money down the line in editing, because the editor has less work to do. Whereas the inverse of that you get a sloppy, not as experienced technician, you'll see the damage later.

You might even have lost footage in that scenario.

So I think the quality of workmanship has gone down a little bit. I think it's important to really evaluate who you're hiring when you hire people, because not everyone's the same skill level anymore.

Giuseppe La Manna

As a technical director how do you approach these kinds of new productions such as Interactive or VR projects?

Steve Hallé

As I mentioned earlier I'm not that familiar with interactive and virtual projects.

So I rely on people like Eloi, and some other experts in our field, Louis Tremblay, Frank Nando, who very, very aware of how those projects work; the programming goes into another gentleman named Martin Viau who's very knowledgeable.

So I learned from them. And you know, I train when I'm called upon to do so I try and make sure we get the brainpower together. And I will work as more of an enabler than an actual knowledge base myself. Because I don't have that knowledge, personally.

And I think there's many of us at the NFB, who are able to do that: what we don't know, we're not going to pretend that we know something we don't know, we have the experts. We know where to find the experts. And we're very good at recruiting experts when we need to, and or consultants when we need to?

Giuseppe La Manna

Would you say that the majority of the projects you're working on at NFB, start from an idea more content driven or technology driven? Because I've learned that, for example, with Norman McLaren, there were a lot of projects that were started because of the experimentation on new technologies. But at the same time, of course, the main creative idea is something really important.

What do you think of this duality?

Steve Hallé

I think the NFB productions, we can almost say, are always content driven.

And I think there have been very few projects, I can't think of any, that were technology driven.

I can say that there've been some I've been personally approached by producers, saying, you know, I've got this project, I've got this director, we want to try something new. Do you have any things to suggest?

I was a large part of one of our first digital productions in stereoscopic 3d, where the producer said exactly: I have this project, I want to give it a kick of some sort, you know, what do you suggest? I was like, Well, you know, digital 3d is kind of new, it'd be fun to try it out. It's a three minute film, we don't stand to lose a lot in that scenario. Let's try it out. So I think we've often done that. It's always started with the content, it's always begun with the content and then we maybe try and find technology to give it an edge or to tell that story better.

Giuseppe La Manna

Can you give some examples of two different productions you have worked on in two different moments of your history here inside NFB? How would you describe the two experiences?

Steve Hallé

So the first one is one of the projects that I was just speaking about, which was the first stereoscopic 3d digital film we did.

So, as I was saying earlier, I'm mentioning a film that was the first stereoscopic 3d digital film that was called "Crossing the line".

I had been approached by the producer that was telling me about this film, and she wanted to have a bit of a technical edge on it.

She asked me if I had any suggestions. One of my original suggestions was, well, you know, we were currently shooting everything in video, and I suggested, maybe you want to shoot this one on film, it's short, it won't cost you a lot of money. And then I thought, maybe you want to try stereoscopic 3d. And we agreed that it was a short film of three minutes and it would be a good trial to see if we could get through the entire production chain. So we collaborated, I had some contacts from my previous job, William F. White, in Toronto. Bill White that had started a stereoscopic 3d camera company. So I contacted him. He was actually currently working in Montreal with the Steven Lowe company. And if you know, Steven Lowe was Colin Lowe's son, Colin was a former NFL player and he has his own IMAX production company.

So, Bill White had been working on some 3d productions with Steve Lowe and they happen to be in Montreal, and they had a new rig which was these silicone imaging 2k cameras, double rig, very small camera so it was very tidy to make a 3d kit with and we basically got together and made some experiments and produced the film in stereoscopic 3d.

Not with a lot of tools, not a lot of budget, but we managed and we learnt a lot.

So that was one production. You know, and it was production that I was very close to, I was technical coordinator. But I made sure to go on set with that show. Make sure everything was working properly. I met a lot of people and learned and the director Tracy Deer learned a lot as well. So it was, it was very beneficial.

So you want me to talk about another production? That's would be very different?

Okay. I mean, you know, as, as a technical coordinator, my main job was to make sure that the producer had the technical support. And that they were accompanied all the way through the production, for me mostly the postproduction side of things, but production as well.

So, for example, another project that I was closely involved with, was called "Pink Ribbons". It was a feature length documentary on the pink ribbons campaign, produced by Rita DHIN. And I was again involved in the post production coordination of that, but as well in the production coordination, making sure that they were able to get cameras, wherever they were going.

So when they were going to San Francisco, try and get them hooked up with the sound person, camera equipment. There were several events that were multi camera shoots, where there would be three cameramen so I helped production, get camera operators, camera assistants, and cameras in places like San Francisco, or wherever they would go. So again, that was a very different type of production. It was a documentary, it was largely talking, hence, documentary in a lot of interviews. There were some special effects backgrounds, we did. So you know, as I mentioned, I accompanied the project all the way through the green screen shooting, making sure we did tests beforehand, and that the green screens were going to work properly. You know, less than less now in the digital world. green screens are more forgiving. But you still do need to light them properly, you need to make sure that there's no spillage and just sort of accompany the production.

Giuseppe La Manna

Now I'd like to move into the other main task of the Technical Resources: Preservation.

We were speaking about it before. So first of all, what is NFB doing right now to preserve both the old content and the modern content that you produced and are producing.

Steve Hallé

Concerning the older content in our vaults we typically have the negatives, the positives, the internegatives, and film prints.

When we go to restore a title, often there's a master list of titles to restore but it is also prioritized if there's a demand.

So if someone specifically wants a copy of a particular film, that will make its way to the top of the list.

We have two people who are doing research on the collection named Albert Ohayon and Marc St-Pierre, and they're often the ones who give us priorities for the collection, based on the importance and cultural value of the film.

And then we proceed to inspect our elements that we have in the vault. So inspecting the positive and the negative, and choosing what is the best quality to digitize.

It goes through a scanning process, either in real time or the airy scanner, which is not real time, I believe it's six frames per second, might even be slower.

It's digitized in a raw format, so we get the full latitude of what's on the negative, everything that's on the negative we have in digital format. And then that gets you know, put on networks. And then our technicians over here at Ilot Balmoral in Montreal, will go to restoration.

So they will do color correction, and then they will do scratch removal, which will never be a complete destined scratch removal. Because there's a certain part where that's elemental to an archive.

So they'll go to a certain point and then, and then they'll give their acceptance of it.

Once they've done their color correction, restoration, they will add a leader onto the front end of the film, they'll add sync marks and information at the head of the film, a sync mark at the tail of the film, they'll make a smaller version mov or mp4 copy for the sound department.

And at that point, the sound elements get evaluated, inspected, and chosen whether they're going to use the optical sound or if there's magnetic again, they'll evaluate what's the best, sometimes they'll digitize both, and it will be the guy who does the restoration in which you choose, which is better.

And then they'll do an audio restoration of that a large part of the collection is mono. So we'll create masters and dual mono. And again, they'll go through normalization of levels, you know, dust and scratch removal of audio elements.

And then once that gets all synced up and married together, it will go through the process of creating a digital master, what we call a mezzanine file, which is an accessibility file. So the masters will get archived on an archival system called either a tempo or Miria, which is our archive solution.

Basically, it records everything onto two or three LTO tapes to be confirmed, and an optical disk tape. And they are often the elements that are kept physically in different locations. So if there's a disaster in one location, material is preserved in another location. That's a concept going to our newer productions. So the elements are already in digital format. So basically, from digital onwards, it's the same process, we do our color correction, we do our audio mixing and in conforming, we marry up all the masters. And we go through the archive process, which is the same archive process.

Giuseppe La Manna

And how have you managed, especially since the use of HDR files, the storage challenge?

Steve Hallé

Storage is a challenge and it requires constant surveying and updating of equipment. So when I mentioned that, either it's tempo or Miria. We've just upgraded from a tempo digital archive to Myriad's, it's the same company at tempo, but it's a newer version of and just so you know, for questions and preservation, especially with a tempo. We have experts who are more knowledgeable than me.

Giuseppe La Manna

We've been talking before about the differences in the production due to the use of videotape and then digital video. Have you noticed a change also in the audio sector? Not only on the recording side, but also on the experience of the public.

Steve Hallé

I mean, I think I would have to go to distribution formats for that. We were probably one of the first to use 5.1 in documentaries. We are now the most equipped. So since summer of 2021 we've been mixing some of our projects in Dolby Atmos so our mixing studios are equipped with Dolby Atmos, our theaters equipped with Dolby Atmos and we are also able to capture audio for Atmos.

I can't speak of the quality of the audio but I can speak about how the NFB has been strong in the research departments of synchronization of audio.

So, something called sprocket tape was invented by the NFB and it was a way of synchronize audio and video. By adding Sprockets to the audio tape you were able to virtually create frames and you could easier synchronize motors that way.

We also were, and this is where you'll really have to go into the archives to do this research because I can't find any documentation on this, but it has been said through oral history that timecode on film, which was adopted by Atmos, and later by Panavision was invented with the research and development department of the NFB and John Pierre Bill Viola.

Timecode on film was an important element, especially for cinema Verity, because we were able to shoot with as many cameras as we wanted, only by printing the timecode on the edge of the negative, which was the same time code is being recorded.

Again, like I said, you could have 12 out on cameras all over the place. Not cabled. No umbilical cords, and you can easily synchronize the audio in post production, are multiple cameras with the sound by just looking at the human readable and machine readable timecode.

Giuseppe La Manna

And what would you think of the future? What will be the challenges for your department or in general for NFB?

Steve Hallé

I think one of the biggest challenges is something you referred to earlier, it's storage.

Storage will always be a challenge.

There was a huge leap in the evolution from standard definition to high definition to 2k to 4k, raw, you know, each step, we're talking about volumes, more and more storage space needed.

I think that chase is over, I don't think the world's gonna go to a queue. It's my personal belief. But you know, it's possible. And at that point, one of the challenges to evaluate is which direction we want to pursue? Is the High Dynamic Range direction we want to pursue. Or VR, how do we want to get into VR?

You know, any new technology, any new form of storytelling?

The challenge is to say, are we going to buy into that? Are we going to experiment? Are we going to support creators who want to use these new technologies? So those are the challenges they're not hard? But they're what keeps life interesting.

Giuseppe La Manna

Yesterday, it was really interesting to talk with Candice about the pandemic situation. She said that it led to faster changes inside the NFB, especially in the technical department. She was talking about live and offline editing, and distance work.

Steve Hallé

I mean, I think certain historians will say that some of the biggest changes in history often happened because of crises. The digital revolution, I think happened because of the tsunami in Japan, there was virtually no more cassettes available for mastering.

So as you know, six months before that, we're doing all our mastering on each DSR cassette, HD camera or cassette. Then they were no longer available.

We knew we were going in the direction of the digital realm. But it gave us that extra kick. And that became a de facto process. And since then, as certainly the pandemic has forced us again, to go into directions, we're already investigating remote collaborations.

Now, if we want to support production, if productions want to continue working, which they did every time we want to continue working as best as I could.

We needed to address that and so with our research development department, and the IT department, they worked on solutions for remote editing.

So being able to, you know, archive material here locally onto our networks, by having maybe one employee come in and receive a hard drive, but then putting it up either on the cloud or doing digital delivery to their homes. Today, we have virtual machines. So we actually have five virtual machines. So the editing machines are physically here, we can provide the directors or whomever the editors with a laptop or a small mini PC or Mac Mini, sent to their home a couple of screens, mouse keyboard, and they can directly connect through software to here at home, so they're editing here, but they're doing it from home. So these are all the remote collaborative tools, we now can do a recording session in our studios here and pipe it to someone in Calgary so they can listen to depending on the quality of their speakers. And they could do pipe in live saying okay, you know, that was a good take, but let's do another take or that was perfect. Let's call it a day. So these collaborative tools are being used now.

Very well and they're largely due to the pandemic reality of not being able to come to work being stuck at home.

Interview with David Christensen - April 12, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

It is the 12th of April, and this is the interview with David Christensen.

I would like to introduce yourself and tell me about what is your position here inside the NFB, and a brief history of the path that led you to this position. So both educational and professional paths.

David Christensen

Okay, my name is David Christensen. I'm an executive producer at the National Film Board. I've been an executive producer for 15 years here. So I was hired in 2007.

I'm an executive producer for the Northwest studio. So the Film Board has regional studios spread across the country. So my studio has offices based in Edmonton and Winnipeg, and we look after documentary and animation, and interactive works in Alberta, Saskatchewan, Manitoba, Northwest Territories, and Nunavut.

Prior to coming to the film board, I was an independent producer, filmmaker, independent director, specifically focusing on documentary and drama. So I had done a number of feature documentaries, for sort of 10 years prior to that I'd been a producer on feature drama, for approximately the same time. And it all kind of started by graduating from film school here in Montreal at Concordia University in the early 90s.

Giuseppe La Manna

Okay, thank you. And can you please describe what are your duties and tasks right now, at the NFB in your position.

David Christensen

Sure. As an executive producer, I look after one of the film boards, regional studios, the Northwest studio. So I have four producers that work for me. I'm in charge of a slate of projects in the studio, we have approximately 30 films on the go at any one time and in development or production or release. You know, my responsibility, I'm a public servant because the film board is financed by Canadian taxpayers, so if you paid your taxes last year, you helped make an NFP film. And my responsibility is to steward that money responsibly.

And as a public producer, ensure the film board's mandate: to tell Canadian stories to Canadians and so on my regional level I need to make sure that we are trying to tell as many representative stories as possible.

So it means that I'm thinking about who's telling the story, what their perspective is, where that story is being told how the story is told, who the audience for the story is? And so I work with my producers to try and engineer a slate of films.

It's never, it's never 100% adequate, but if we look across those 30 films we are telling stories in Alberta, or NWT, or Nunavut or Saskatchewan?

And are we telling stories from more than just one sort of perspective? So say, do we have parity, men and women, or how many indigenous stories are we telling?

And so, on one level, there's that administrative function and at the same time we work closely with filmmakers, as a public producer, to help them tell their stories. So we're not a funder but as a public producer, we work really closely with filmmakers to help them tell the story that they have brought to the film board.

And that work takes many forms. It might be that we're working with a very experienced filmmaker, so they have a good handle on things. So I always say that my job is to make sure that the filmmakers

are just a little bit uncomfortable, actually, about the work that they're doing so that they're not sort of repeating the work they've done before.

Whereas with an emerging filmmaker, who has not done a lot of work, or maybe they need different sorts of support.

They need to be working with a really strong crew, they need my support on a story. You know, so every project is different. But our job is to shepherd in concert with that filmmaker that story along from beginning to end so that we can put it in front of Canadian audiences.

Giuseppe La Manna

Preparing for this interview I have noticed that the territory you cover with your studio is really wide and then also, not really well connected because there are really small populations. Maybe here in Quebec or in bigger cities, it's easier to reach people and content creators who want to create. Is this a challenge for your position?

David Christensen

Um, I mean, the territory is huge it's a significant part of Canada. And even just looking at Northwest Territories, and Nunavut, it's huge, a huge area that spreads across hundreds of 1000s of miles.

So yeah, absolutely. It's a challenge. Just to give you an example we do a little bit of work in the north, in Nunavut. But historically, most of the stories that have come out of Nunavut have come out of Baffin Island that have kind of come out of sort of the caliphate area of Nunavut, there's a whole area west of that near Cambridge Bay, which is it's many hours on a plane to go from one side to the other, that we haven't had a lot of stories come out of there for all sorts of reasons, not the least of which is like, it's a remote area difficult to get to and the support for being a filmmaker in that area of the country is very low. So if anybody has interest in making films there, they usually leave, they go to a larger center for all of this stuff.

And yet, it's important to be hearing the stories from that particular region, or I think about the work that we have done in the studio in southern Alberta in southern Saskatchewan. So it's deep south rural areas of the province that have very small population and certainly there aren't a lot of filmmakers down there.

And yet, they've also paid their taxes, if I can put it like that they deserve to have their stories told at the same time. And so figuring out how to do that, with the amount of money that we get every year absolutely is a challenge.

Giuseppe La Manna

Okay. And, and moving into the technology aspect of your work. Do you actually have noticed during these 15 years in which you've worked for NFB a change due to the new technologies? And if yes, which ones? and not only in filmmaking, it could be also in general, like in the connections with people or in the way the stories have been told

David Christensen

It's a good question. I mean, sure, it the most, the most obvious one is the fact that people are a lot more comfortable, virtually engaging with other individuals.

And, of course, in a way, that wasn't a big deal for my studio, because we were so spread out anyway, that we were often virtually engaging with filmmakers elsewhere, just because we couldn't be in every single place.

Okay, so if you live in Montreal, if you produce out of Montreal. there's a huge creative community here in Montreal, same thing in Toronto, there's a huge creative community there. And so we have two

studios, they're based in Toronto, they're based in Montreal, where everybody comes to them, they don't really have to travel.

I would say that it's possible without certainly denigrating anybody, in those two institutions that perhaps they have so much work to do just in Montreal and Toronto, that they don't need to be looking elsewhere. I don't have that luxury. And I feel a responsibility to the smaller places that don't have any NFB representation to be also present there in some fashion.

So for us, it involves a lot of physical travel. So a lot of the time we're on a plane, but it does also historically involve a lot of just meeting via Skype, phone calls, things like that. So we're used to that virtual remote. And it's just that people have become even more comfortable.

Is that the technology itself that you use to create documentaries?

I mean it's we, of course, when I started 15 years ago, we weren't filming stuff on the iPhone. Now, sometimes, depending on the project, we have the opportunity to do editing remotely. So the editor is in one city and the directors in another city, and I'm in a third city, and we can collaborate again, virtually to review and edit.

I mean, that's certainly different than what it was 10 years ago, something like that. But I think that that's just kind of, for me, it's, it's kind of window dressing, to tell you the truth.

It sure helps us. But on almost all of our projects, we try and engineer it so that we are together in edit suite at important points to be looking at stuff that we're we're we can decide which camera we want to shoot a project on, whether it's that or whether it's the red, or an RV, or whatever it happens to be.

But it's always in service of the story. It's never for the use of the technology itself. And so in a way is when a filmmaker comes to me, and they have a story that they're really interested in telling, I want to know what that story is, I could really care less what they want to film it on, for instance, or how they want to record their sound at that point. Because until I understand it on a narrative level until I understand it on a story level, the rest of it actually doesn't make too much sense.

The difference? The one thing is we do some interactive projects in the studio, not a lot, but we've done some, those are much more technology based, I think because the form is very much the content in the form are very tied together in a way that it's not for me, it's not quite the same if you were making a documentary film, for instance, sure, you have to shoot but that when we're making interactive projects, how an audience experiences, that story is often technologically based. So are they using their mouse? Are they pointing? You know, they're swiping, do they have headphones on? Is it on the phone out there? Is it in there? Is it there, in front of their computer, all of that stuff? It's much more the integration of technology in that regard is much closer to the content of the story. And so there Yeah, absolutely.

There has been, we think about, we think about technology, and I would say that for all the very obvious reasons, just computers getting faster cameras getting better different ways of engaging online, has all had an effect on the kinds of stories that we tell.

Giuseppe La Manna

And, of course, being a producer, you need to cooperate a lot to organize the crew that's working with you and manage the workflow of the project, but also the budgeting. Do you see a change in this, especially in different kinds of projects? Like between documentary animation, or interactive?

David Christensen

For me less so in documentary, more so in animation. We have a handful of animation projects in the studio and the software, the ways of creating those stories has changed significantly, in my 15 years.

And it's just given the filmmakers, more tools, more opportunities to sort of then be able to creatively approach the work that they're doing. That's great.

Same thing goes on an interactive side, as I was mentioning, is that I think there's always a really solid interest in considering what the story is through the lens of the technology that you're going to use to make it and that's. But on the documentary side, I can't say that it is to tell you the truth.

I mean, sure, the cameras are a little bit better, the resolution is better, they're lighter, you can have a smaller kit, all of this stuff. And that, in a way, I think has determined some of the stories that we tell. It's just easier to go into some situations just as a single person as a director who can also shoot and record audio at the same time, you can edit on your laptop, when you're out in the field, all of that stuff has had an impact.

But like I said, it's, it's only kind of after we have kind of talked about this, at least for us in my studio, those considerations of what technology is, and what we will be using, and how robust they are only happens after we have sort of worked through what the story is.

Giuseppe La Manna

Okay, and talking about the budgets?

David Christensen

Well, I mean my studio, like other NFB studios, gets an allocation every year, and my allocation is approximately \$1.4 million.

So throughout the three provinces and two territories across 30 projects, thereabouts, I've got \$1.4 million. And so I then can use that money and create the budgets as we see fit they need to get approved at a certain level.

But really if we're doing a short film over here, and the short film has been shot in Northwest Territories, and there's lots of travel but it's only going to take two or three days to actually do the filming, that has an impact on the budget, versus if I'm doing a film in Calgary, for instance, where I live, so there's no travel. But it's going to be a 20 day shoot.

I mean, the way I think about it is when someone asks you how much does it cost to build a house? Well, what kind of house do you want to build? You know, do you want one floor or two floors? Do you want hardwood floors? All of that stuff. It really depends on the project itself. We don't need to be responsible about the money that we spend. But I can't say that there are any hard and fast rules, once we're starting to build out a project that really is project dependent.

Giuseppe La Manna

And how do you usually find the new project to produce? So do you have sort of a pitching from outsiders that come to NFB to have their works produced? Or do ideas also come from inside your studio?

David Christensen

So we don't have filmmakers in my studio. So nobody that sort of is, unlike here, where you have filmmakers come in, like Toro will be working and Don McWilliams will be working in places like that, that it's very rare in my two offices.

At most we have edit suites, so once the film is at a place, we'll have an editor and the director will come in and work in the edit suites.

In terms of finding projects, we're always meeting with filmmakers. And we're also always open to proposals. So every couple of days, I mean, I'd say certainly every week, every couple of weeks, I'm receiving two or three proposals, from filmmakers saying I have an idea, I'd like to talk to you about it.

But at the same time, as when the producers and myself are in different cities, we're also proactively wanting to meet with filmmakers to find out what they might be doing, find out if they're working on

any kind of interesting projects. So we will accept projects that come through email directly to producers, project ideas, and we will also go out and like, for instance if you did a film with the film board, say two years ago or something like that, and you live in Regina, I'm going to Regina, I'm going to give you a call and say Giuseppe, what are you working on now to have any ideas as this like, let's keep in touch, and that networking that keeping in touch that sort of keeping your finger on the pulse of what's happening in Regina, and Winnipeg, and Saskatoon and a Callaway, it is part of the work that we do.

It's not unlike some federal agencies in Canada here who have specific dates that you have to apply for with this kind of information. And there's only two or three application periods a year we don't have any of that. It's very relaxed when you Come to me, you say, David, I'd like to have a coffee with you because I have an idea. And so I go out and have a coffee with you. And over the course of 45 minutes, you say, here's the story that I'm thinking of. And I think, well, maybe that's really interesting. I can give you a little bit of money to develop it further or No, it doesn't really work in the studio, because we did that kind of film last year. And so it's just, it's, it's a, it's a, I want to take the time to understand points of view and perspectives. And all of that just takes time in terms of meeting.

Giuseppe La Manna

I've been talking with other people inside the NFB, and some of them told me that the producer figure is changing, because maybe now they need to keep up more with the new technology, they need to know more about those. Do you think the same?

David Christensen

No, no. And it's, I think, if I'm speaking plainly, you will get that perspective from having embedded yourself here in the animation studio, where I think there is a certain level of understanding the technology in order to do your work.

As primarily a documentary producer, I don't think it's the same to tell you the truth, I don't feel that role has changed very much in relation to understanding technology in certainly the 15 years I've been here.

I mean, sure, kind of want to know, but I have a staff member who is specifically tasked with when we get to the point where we're going to go into production and her job is to help us think through, what's the best way to do that.

I don't feel I need to be on top of all of this stuff, because again and I'm gonna sound like a broken record, for me, it's the story first and foremost. And if we can shoot the story on an iPhone, or if we can shoot the story on a red that doesn't actually concern me when I'm first thinking about that story. So, to me the film board producer has first and foremost, always engaged on a narrative level with the project. And in my studios it is more important who's telling it, where it's being told, have we done something like this before? And that doesn't involve any kind of technology, to be honest, that's the story itself that the filmmaker wants to, and then we'll find the best way to help them tell that story on a technological level. So for me, I don't feel that the producer role has changed in that regard.

Giuseppe La Manna

So what do you think will be, since there has been the development of new kinds of storytelling that maybe before were not so popular, such as virtual reality storytelling, the future of audio visual production?

David Christensen

Sure, I mean we've been interested in how you tell stories, using augmented reality technologies, virtual reality technologies, telling stories on the web or on your phone.

All of this has been part of the work we have done over the years in my studio.

Not to sound flippant, but **if I knew where this was going, I probably wouldn't be working at the film board.** You know what I mean?

I'm going to sound I think I'm probably going to sound a little bit old fashioned on this, but I, I get excited about the idea of, of glasses or the idea of augmented reality, telling stories.

I get excited about what some people talk about, we'll end up in some sort of holodeck idea and there's all sorts of interesting things that I think people like Jimmy and Eloi are doing in that regard and I want them available to help me on my projects.

But at the same time a well told story that starts at minute zero and ends at minute 20 and just unfolds on a screen for me is not going to go away.

And part of what I think about, especially in my region is the access to this technology, the access to these opportunities to see audio visual work in different ways.

And if you go to the north, broadband access is horrible, like they won't go on nfb.ca, because they can't watch any films, it just eats up, like they would spend hundreds of dollars just watching an NFP film.

So great, you're in downtown Montreal, you have high speed internet, got fiber optics, you can do all of this stuff. That's great for everybody here, but there's a whole other part of Canada that doesn't have and isn't in a position to access stories through those sorts of technologies. You know, Oculus is still pretty rarefied to only somebody. Yes, maybe somebody in big cities is going to use it, But somebody in tuk tuk tuk, far north isn't gonna have an Oculus.

Just they don't have any access to that.

And so the **democratization** of, who has access to this technology and who does not, I'm always thinking about, and that because when I think about the work that we do, I think the work that the film board needs to do needs to be as available as possible to as many Canadians as possible. And so if we design a project that's only available here on your phone, and you have to use augmented reality, and you have to have high speed internet, in order to use it is rural Alberta, or deep, far north isn't going to have access to that technology, maybe they will in 20 years, but they won't know.

And so again, that comes down to a question like, who are we making this stuff for? And we just have to be careful that we're not making it for a very narrow segment of Canadians. we're thinking about how many people as possible can use this technology. So like I said, as I get excited about new, new ideas about how to use all of this, but at the back of my mind, I'm always thinking about the individuals and communities that the expense for people who will never have an opportunity to see any of that stuff, and then I go, we're being financed by the Canadian taxpayer, and the Canadian taxpayers and financing us just to work with people in a major urban city or something like that.

So yeah, I'm a little conflicted in that regard. So I guess I just haven't answer to your question. What do I think that's going to be? I mean, I think, I think that, like I said, I maintain and will forever maintain that just a film that somebody can watch Big screen on their phone, whatnot, it's, that's great. That's how most people will see content. And I don't think that's going to go away.

Is there going to be kind of a newer way of experiencing all this stuff? Absolutely. But yeah, I'm sorry, long, long answer to your question. I'm not quite sure when it's going to be

Giuseppe La Manna

It is an interesting point of view, because, of course, access is a real issue...

David Christensen

huge issue. It's a huge issue here in Canada. I mean Canada's like it's a, it's a well off technologically advanced country. But we really have to be careful that we're not just thinking that Canada is just this place, like Montreal or Toronto or even Calgary.

Canada's so much more than that. And so, we've, I've spent a lot of time in the North and a lot of time in southern and rural places and people don't have these kinds of phones. They don't, they don't have good data plans. Actually, they're not interested in watching a film on a mobile.

We think because our lives are so technologically driven that our lives must be like everybody else's. And it's not the case. As a matter of fact, there's, it's on a generation level.

It's also and I think this is the other thing to consider, though, too, is that I think one of the challenges that I think the film board has is the kind of work we do is how it reaches a younger generation.

If I'm being honest, like, I've got two kids and they're in their early 20s. I can't say that they're interested in NFB work. And I know, we've got friends who have kids who are younger, who are teenagers, their exposure to National Film Board of Canada work is pretty minimal. And is that a big concern? You know, do I hope at a certain point that some of our stuff will connect with them? Absolutely.

But when I was growing up when National Film Board films were shown in almost every classroom, 16 millimeters went on to the projectors. We watched a film about something, but there was always that NFB logo that came up in the classroom.

And so my generation and older generations their experience of the work that the film board was doing was kind of baked into their education, their growing up.

That's not the case with us now. And of course because there's so much competition for eyeballs and all that stuff, how could there be, but I still argue that there's a relevancy concern here is like, how relevant is the National Film Board to Canadians of certain generations. And that, that, I think about that a lot, because of kids, young adults, I think about that, in terms of individuals who are living outside of major cities that don't have access to like, it's great the here in Montreal, you can come down Place des Arts, you can see stuff projected on the sides of buildings, but somebody in East End, Saskatchewan can't come and see any of that stuff, they'll never have that experience.

So how are we sort of trying to stay relevant to people and places in Canada that don't have access to this technology and that aren't able to see the works that we do that on some level?

And I'm not sure how you solve any of that. But that does keep me awake a little bit. That we just really need to be careful that we're not making work that is for such a small subset of Canadians, that if, for whatever reason the government decided that they were going to stop funding the National Film Board, there would be an outcry from Canadians going that's terrible like, look at the work that they've done that's like, but if we're only making it for a small group of people, that's may not be able to have that argument. A. So yeah, it's it's so interesting and for me, it's been a real privilege to have worked and to work in my studio, because I've been exposed to places outside of urban areas, to individuals that are different cultures than I am, and a real understanding of how we don't reach them how on a technological level on a story level that.

Again, another example, for many, many years the Board would make films about indigenous people, by non Indigenous people. And it's only within the last little while, that we've actually started making films, about indigenous people, by indigenous people. And that's a big difference. You know, it's like, that's hugely important. And it's, and it's a way to reach those Canadians that we weren't otherwise reaching, because we weren't telling their stories. We weren't telling them through their lens and their perspective. So sorry, I kind of rambled on there. But like all of this is

Giuseppe La Manna

We were speaking before about the pandemic. Since the distance and the impossibility to move, how did you continue to create?

David Christensen

Yeah, that's a good question. Um, for us, I gotta be careful about how I say this, but the pandemic wasn't too much of a big deal. You know, sure, when the pandemic first hit, and all of a sudden we couldn't meet in person with filmmakers and whatnot we could only meet via zoom, or by telephone or whatnot. That was a change. Yes, because we were very used to getting on a plane going to Saskatoon meeting with filmmakers for a day, all that stuff.

But at the same time, like I said, in my studio, we were always moving around. And we were always working remotely, we were always engaging with filmmakers, via zoom, or Skype or something like that. Anyway. So when all of us had to go home, and we couldn't work in the office, that wasn't a big deal, because sometimes I didn't see my staff for two or three weeks or something like that, and they didn't see me.

But then my staff is all in one office, I've got staff in Winnipeg, I've got staff in Edmonton, we've always worked remotely in that regard.

The trickier thing was putting together documentary shoots that were done safely. Because we shoot, it's one thing to be out outside and be doing a documentary shoot, but sometimes you had to shoot in a person's home. And how do you do that safely, and make sure that that person isn't compromised? How do you make a film where do you want everybody wearing masks? And then it's going to, like, make it like, okay, when people watch the film, 10 years from now, they're like, 2021? Or do you try and make a film without people making masks, in which case, you don't sort of acknowledge that there was a pandemic going on but is it that truthful in a documentary way?

So it's made us think through, I think on a storytelling level, how we approach these films. Initially, it was tough, because we couldn't even bring crews together to film safely and so it in a way, the that, because we had access to the technology, we could work with directors who felt comfortable filming with their camera, we could put together some short films and all and it was just them doing sound recording filming with the, with the iPhone, or whatever it happened to be, and, and then doing their own edit. And we could do all of that remotely. And we, we always knew we could do that. It just forced our hand to actually show us that, yes, we, I mean, the first year of the pandemic, we made eight or nine shorts, with different directors across the region, all shot single handedly, and then edited somewhere else, and approved and then they went up online, and they happened really quickly, you know.

So that's, that's a perfect example of just the technology being at the right place at the right time for when the pandemic hit, we could continue to make work. Have we had a pandemic 10 years ago? I'm not sure that would have been the case to tell you the truth it wouldn't. The cameras wouldn't have been as great broadband wouldn't have been as great. You know, we would have. How do you? How do you shoot, for instance, we had a film that we made in the bush, in NW T by an indigenous director. And she filmed for five or six days, but she had all the space she needed on her iPhone, in order to do that 10 years ago, she wouldn't have had the space on that, how do you kind of download it to all of this stuff? It would have been a lot tougher. So has technology advanced? And was it the perfect place to accommodate the changes that happened as a result of the pandemic? You know, we've done a couple of films that kind of relied on Zoom to tell the story. You know, I don't know how successful they will be, they will feel do the kind of work do people want to go and watch a film that is a bunch of people on Zoom talking. But we had no other way of sort of bringing together all of these individuals to make this film. Our hand was forced. So, the pandemic had some interesting storytelling challenges. And then we just had to figure out the best way to use technology To tell those stories as a result.

Interview with Marc Bertrand - April 19, 2022 - Conducted by Giuseppe La Manna

Marc Bertrand

Why do Canadians spend so much money on an institution that doesn't exist anywhere else in the world? And why? Why are they spending money to do unique pieces that might not go on TV and stuff.

And I always say that 40 years ago, there wasn't an animation industry in Montreal. Now, it's one of the biggest animation industries in the world, especially creatively. Because Norman McLaren existed much from that, the gaming industry saw that there was a good animation industry. So they came to Montreal, now there's a good gaming industry. And now all of the interactive work is in Montreal, and I think that when we started that, about 10, or 15 years ago, it did not exist.

Giuseppe La Manna

Also in Europe, the fame of the National Film Board, especially mentioning interactive content is really, really important.

I met people from NFB in Turin, like Eloi, during the view conference.

It's something that is worldwide known.

Okay, we start: Just I would like you to introduce yourself, tell me your position inside the NFB. And I would like a brief history of the path that led you to this position inside the institution.

Marc Bertrand

Okay. The tough part is going to make it brief.

So my name is Marc. I'm a producer at the National Film Board. I've been the producer for close to 25 years now. I started production in animation, but I've never studied in animation and when I started being an associate producer in the animation department, I had never done anything in animation.

So my my path leading up to what I'm doing today is actually this: I've studied as an actor, in Quebec and for many years I've worked in Quebec and then I moved to Ottawa and I worked as an actor for many, many years.

And then I slowly got involved in shows that were on Parliament Hill in Ottawa. For the tourists that were coming, I would write, direct, and I have crews of actors that would do like small historical vignettes for the tourists to come.

And I did that for 6/7 years on Parliament Hill, and I had that company and I became an expert on what I call theatrical treatment of information.

So I would get hired by companies by national parks to set up stuff and direct.

And then I met my wife, we played in the summer show.

And then I moved to Montreal. And when I got to Montreal, I did a couple of auditions.

It wasn't for me; It was like I yelled at the director: so here is an anecdote:

We did this audition so you learn the lines and it was a beer commercial and there's a camera out there, and we're laughing. Hahaha taking a beer and, and then guy says, Okay, thank you said, Well, I learned those lines. Can I? No, no, I have your back. It's okay. Well, it's a good gig anyway if I get the backs. And then the girl says, well and me, then the guy said, Oh, no, we that's already distributed. And I said, let you let this girl work Glenda lines, and there's no work for her What is this.

I came back home said to my wife, I'm not doing those auditions anymore. I'm done. Ended up having a friend of a friend who was looking for somebody to help on a production. And I had done all kinds of stuff. So stopping cars and doing the cast and then getting costumes and, and those, that first film was a NFB documentary production.

Then I did a couple of documentary productions with Native people. So I ended up in canoes and far north and, and trying to rent Helicopters. Yeah, all kinds of crazy things. And then in 1995 I ended up

in a meeting where all the directors of NFB, and they said, We need a production manager for a project called referendum, and somebody said, well, him, and I ended up having 20/30 directors from coast to coast. And it was supposed to be 20 hours of film stock. And it's just shot from different points of views, French and English, of course, because it was that big referendum thing. And we ended up building up so we ended up with 250 hours of stuff from coast to coast.

So I accompanied that production, not as a filmmaker, but as the director of production. And then when that was all done a year later, somebody told me well, there's an associate producer place at the animation studio, and I had gone everywhere at the old film board, except animation, because there was I remember this door saying animation only authorized personnel. So I know I went for the interview. And then they told me: you start on Monday, and at that time, I was already teaching production managing at Linnaeus, but I knew nothing about animation and they gave me a couple of projects. And I ended up managing those projects and animation. I always said for many years, I remember for eight years, I always said, somebody will find out that I know nothing, that I'm an imposter. We all get this and especially when you're after 40 you think stuff. But after eight years, I said, Okay, stop saying that to others and yourself, because you become an expert.

And then it didn't change my attitude, It just changed the fact that you don't stop lying to yourself. I've learned from the best people in the world, and I really learn my craft and my producing skills in animation, I knew I could produce and do stuff. I really learned here and there was no it was the best place in the world to learn. And now I have like under 150 films to my credit and it's been fun. It's been really really fun. And I still know that I know nothing. But I still know I'm an expert, but I know nothing.

It's because I come to work because I'm curious. I come to work because I know very few things even though I have experience. And I know I have knowledge, but every project for me is a new discovery. And if I have nothing to learn in the project, I usually do not do it.

Giuseppe La Manna

Can you please describe to me your task and duties?

Marc Bertrand

So mainly, you'll find out that the film board works all the same, with the same way of doing things? First of all, we let people know.

Basically, the easiest way is that anybody can send us a project. A project for us is usually not just a script, it's usually mostly a small idea, a small synopsis, the technique that you want to work with, and then your CV, basically, if we have that in a nutshell, and that can take half a page or 15 pages, but in a nutshell, those information and your intentions on why do you want to make a film, not why you want to make it at the film board, or not. And this is my advice to everybody. Don't send us a project that is good for the film board. Because I've been here 25 years, I don't know what's good for the film board, I just like to have something that I haven't seen before, hopefully.

And it should be creative both Technically or narratively. So for example how it deals with time, or how it uses the animation format.

Because animation is very special. I think it's the most evolved form of art in cinema and the most primitive, because just like all cinema, it starts on the page. But then in most cinema, you need to get in some kind of real reality, either by your characters or sets, but in animation, you create, you fully create that reality.

And we don't mind if you send us a project that has carrot talking, but in fiction, it's gonna be harder to make that happen. I can really believe that you can do something with anything.

So then n bring it to another step and say, I don't even know how this is going to be.

I start with what I want to say, what's this, what's the story behind it? And then another layer is how does it look like? And then how does it move? And then In what world does it evolve? And then what does it sound like? And and and I remember a sound person. we had all of these kids and they were animation but they were real kids and he wanted to the director wanted to have something a bit like a kindergarten, where the kids are stuff, but something a bit crazier. And he went in went to a zoo to actually get sound bites and then created and you look at the film, you don't hear it. But there's something happening. It's big. And the suspension of disbelief really works in if, and this is what I really like, if everything sticks, if it all comes together.

And for me, I think that's the fun about animation: it is creating everything.

And for me as a producer is to try to understand what the intentions of the filmmakers are. And then whenever it doesn't stick asking all the questions to understand why that. A producer should be a good coach. So I cannot go on the field because I don't know how to draw. But I'm a good coach, because I understand what it takes to make the game happen.

So the way we work here is we get projects and then we have programs: basically, it's to work with a producer for six months, from start to finish with three people. But from the under represented communities. So either diversity or native. So just so we can now start in French, in French Canada, and especially at the NFB, we've had a bit of difficulty to reach those communities. And basically, because most of the new diversity that the people from diversity that arrive in Montreal, well, they mostly speak English, or, or French words, their second language, and they're not fluent, and they don't want to write in French. And it's, and we have that with Native people also, and we have to find ways to reach out to them. And we thought that if we do a specific thing, where they could actually come here and work for a certain amount of time, then we would try to have a good experience with those people so they could grow and have a regular project afterwards.

Anyway, the film board is very much like that, at one point. it was an institution mandate to go and say, Okay, we want 50% of directors to be women. And then you said 50% of the staff should be at least women. And then they looked at the project and said, Well, men are getting 65 to 70% of the budgets, because they have more experience, even though 50% of the men and 50% of the women but they do cheap, cheaper projects. So let's now say okay, we want As much budget allowed to women directors, and then they'll fit. So if they're if there's more women directors, and after a while they'll get experience and then there was it's kind of rebalance, but see so so and the film board is there to do that also to get more a wider diversity and get at parity between men and women. Hopefully. Anyway, so so. So it's within those, then we read projects. Then we, we know, each studio, okay, have a budget, we look at our budget, and then we establish different parameters to do our programming. Experience. filmmakers. middle middle of career, and then new filmmakers, men and women, diversity. And then so that's part of your programming. Okay, we tried to get, we want to have experienced filmmakers within our walls, so the younger ones can talk to them.

Then, okay, this is the very this is I end animation, because it's kind of complicated that needs a big studio. And, okay, this is your experimental stuff. This is this is might not be experimental, but you're going to have a bigger reach. Let's have some for kids also, although we don't have to, but it's a public that we like to reach also. Okay, this is this is long, this is this is shorter, how many shorts? And then Okay, this one will take four years, this one will take 12 months, this one will take three years.

So within those 50 to 75 projects that we receive, we look at all those parameters and try to figure out what's missing in our programming. What's interesting. And then the best parameter is always trying to say, we should be doing what nobody else can.

My colleagues from the private sector, they live on series and features. We try not to go there. We did some series, but always they were like a minute long and either direct to the web or for educational parts.

But that's the one series that was the first series I have worked on here.

But we're not about series and the way we design that was, let's give three episodes to one guy and then three episodes to another guy.

And then good, let's get this. We had one writer, but different styles of animation.

So we got to learn about filmmakers that way and get the ones that got better at what they did. And they could understand how we work and what kind of projects we were doing.

So the film board and I'm not sure how it works throughout the country. But the fact that we have a place in animation and that animation takes some kind of equipment usually. Although the pandemic showed us that we could close all the doors and still continue production. But still do, because it's such a lonely sport. And you mentioned, having a community is quite important for filmmakers. And the other thing I always say it's like, okay, we should be doing what nobody else can. And usually, it's one project, one filmmaker. So you're the craftsman, you the filmmaker, the writer, and I will surround you with people to help you in certain tasks that you might have to learn.

Giuseppe La Manna

So yeah, this is really a typical of the nature of NFB compared to other production studios, because of course, they are more focused on making profit on their works, for their studio. So I think also, that's why maybe NFB, it's really experimenting a lot in new technology. We've seen this with Norman McLaren a lot since the beginning of NFB. So the question I want to ask you is, in your first 25 years inside the board which were the technologies that most influenced your studio and your work?

Marc Bertrand

That's a hard question. Because I think every project influences the way we will take on new projects, but when I arrived at the studio, there was a room three times this size full of computers, and it was called the animatic. And it was a place that would only render at night, with those big things turning around, and they would that 25 years ago, that was very innovative. And then if I looked at Unger, the first animated film made by computer or so we say, we might not have been the first, it might not have been the first one, but it was very close.

That was done with a building full of computers. And for many years, I think, when I look through other paths, because I, I've looked through, like Pixar was born on how can we sell computers? let's make films and show how computers work so well to do renders.

And for us, it was always okay, how can we get this thing to work for us? And I think we break the mold of film after every film.

I think we have always been very good at innovating. But unfortunately, we are not the best in learning on our innovation.

So I think that your question is very interesting.

But the understanding of our technological growth is within a couple of people here and there, that kind of remember, but are too busy working on new stuff, and building on their own experience than sharing experience.

And I think I always believed that we would not be able to do everything we do if we had a learning mandate.

Okay, yeah. But at the same time, if we did, we would also be learning about what we're doing. And I think that we're very bad at that. We're, some of the very firsts interactive experiences where you have to find the right person that worked on it to understand how it evolved to become what it is.

But only the creator is the one who actually knows the most about that, and he's working for thinkWell now, so if so instead of gathering that know how it just but and I think that's the nature of the beast people come here and then they go outside and they they bring with the font here.

So, to us to really answer your question for me It took me some time to understand what my job was, how to do it? How was the animation done? what was the philosophy of this place, how I could integrate that. And because I come from theater, it was kind of under great either, even though I think filmmakers need to have some kind of a certain strength to know for us to give them \$300,000 to do their dream.

They need to know, they need our help, of course, but they need to understand that. And so when I figured out what I was doing here, I got really interested in stereoscopy.

And David Verrall was somebody who really believed in that, he put a lot of resources from his studio to develop that with Sandy stereoscopic animation, a drawing animation device that was championed by Monroe Ferguson. But David was at the center of that and for me, when that started, even though it was an English program, I was really, really interested.

And that's the moment where I understood that every production was a laboratory at the film board.

And we should continue doing that.

And I'm, I'm not sure it's, it's there all the time. Some people get that. But for me it is always about the process of discovering.

I mean, of course, everybody knew that if you can get one image in one eye and another image in one eye, either by polarization or by color but then you have a sense of depth, right? But for me was like, Okay, what's I come from theater. And there was always a flat screen in the cinema, and now suddenly, it can come into the room, what's important to bring into the room, what's important on how to tell the story.

So I started working because I actually like challenges. I had done one or two, three projects with Theodor Ushev. I told them could you rethink Tower Bowher and do it in stereoscopy, then it was the end of fiscal year so we bought some equipment. So we could also do stereo and we open at that time, David at the bigger laboratory, big stereoscopic guide, and we did a smaller one for Theodore to work on and he did a couple of films and for me that kind of changed. That it was challenging for me, technically but in this third about storytelling also.

And then I could compare okay, what's the difference between having In a stereoscopic image or flat image, what's your involvement? How far can we go into that? And then we also did a project flat, in 3d and also in VR, right:.

And then, for me, the VR experience is the best experience because you're really arise and you actually see a distorted image because we and we do that in stereo, but then in stereo, it makes you uneasy in the VR. It's a bitter experience.

And so what I learned from that, was that, okay, the medium is part of the storytelling. And you cannot approach the medium the same way, with the same story, you have to have a different approach and Blind Vaysha show was a perfect test, because that's where I learned with to, of course, but okay, when you're in the VR experience, the director can not only think about his storytelling, he needs to make you understand what role you're playing.

So it's a whole new way, a whole new way of telling a story. Who are you? What role do you want to take? I'm going to give you this role, and you have to assume it, and if you don't know, you'll be very disappointed. And for me, I think that is the big difference. In my career at the film board I always think it's like, you bring your project I ask why should this project be done in animation. And sometimes I just send people that say animation is not bringing anything to the table to your project,

go and do it in live action fiction, or this is a great subject, but you need more reality so find those people and interview them, you'll have something stronger.

And I'm not saying that we cannot do a documentary in animation. But my point of view is, does animation bring something here to the table? And, there is my analysis of a project, especially, it's too much work to miss.

And we don't succeed in every project. But it's you have to figure out, okay, what, what is this very long, arduous process is bringing to the table and is bringing this storytelling and for me the technique, every line has a sense in the storytelling, for animation,

Giuseppe La Manna

Keeping talking about the projects with different kinds of techniques that of course have to be useful for the narrative and the storytelling, I want to go more on the aspect of the production process. So for example, I was reading about the projects you work on, in stereo called Facing Champlain. And you had an interview where you were talking about how you had to manage the drama team and animation team together. And they didn't speak the same language technique wise.

So talking about these different kinds of projects, how does the workflow changes?

So if you can give me some examples about how you would work on a normal flat animation project or on a stereo project or a VR project, and compare the workflow and the pipeline.

Marc Bertrand

I will do my best to explain it. But first thing off is for me, every new project is a new pipeline that needs to be part of the storytelling.

Giuseppe La Manna

I explain to you why this question: because we always hear in classical cinema or animation, there are manuals, standards that are always respected. For example, there are production manuals for how to make a movie, you can find them online, you can buy them, but do those standards can be applied to projects that use different kinds of technology or different kinds of techniques? For example for VR or even Stereo?

Marc Bertrand

Yes, it's a great question. And the fact that this place is mostly laboratory based as a way of thinking, for me, it's very important to continue doing that that way.

Because for me a pipeline is the first way of formatting and formatting is the first way of standardization and standardizing kills creation.

Every time we sit down with a filmmaker I say, what tools do you like, because if I define your tools, I define your work.

So if you like to work with a certain pen and paper, it starts from that.

So this will define what kind of films we are going to do; if you'd like to have this brush, if you if you're comfortable with an iPad and not a Cintiq. Well, if I give you a Cintiq, exactly take you six months to understand and then come back to your to your tools.

So of course, in the industry, they develop very strong tools. Because animation is harmless, it's costly, and it takes time. And if the tools can do more work, and be less time consuming it's good, but it is not the engineering we start from.. in the same studio, side by side, they'll be Toon Boom, and we'll buy this Toon Boom suite. And then this is going to be TV paint, and the result can be very close, but they're very costly to actually have both ways. But that's a tool you like.

So, in, in general, in traditional animation, I think there are good ways of the process is already pretty defined; you do scenario, and then your storyboard and then your animatic that comes as close as possible to your timeline, and then your keyframes and your posing, and then the animation and then.... so we know that we have very few films that are made that way. And that in our studio.

It's the basis to understand animation, but I have a filmmaker right now. She's a great artist and I wanted to work on her project, but she doesn't know how to animate but she wants to animate all of her film because she doesn't like the way other people animate but she wants so of course, because she's a great artist, and we are doing it because she's dedicated, because we will have her work with the best people in the private industry. This would be a very stupid move for a private studio, so, right now, I'm doing what nobody else can, hire her to do this. The only parameter I give her is, okay, this is your first film, you have a long story to tell but I'll only give you three minutes, it's got to end up to four, but I'm giving you only three minutes to work on.

That's the only parameter because your first proposition was quite short and we'll stick to that you can reinvent the story as much as you want, you can define the way you'll do it. And then slowly the way she thinks a painter wants you is painting, they want you to be in front of the painting for a while, and then slowly get the story.

An animator wants to bring you into the story and create movement too, because there's a linearity to the story because it's within time.

And he has different parameters to do that with movement, but also rhythm and, and sound of course. In stereo it's different, again, then again, different tools with the stereoscopic animation drawing device was kind of a quill, it was developed by IMAX and then it came at the film board to continue being developed.

And it kind of defined the film that Munro Ferguson did, he started to do a very cartoonish one, but then he understood that the flow of this thing was fun and could actually be more spacey, I think June is a better film for me then Falling in love Again, even though on this one he had great success, and it should have because it's very well done.

But technically, June is exploring the medium. And I think Munro would say the same thing.

So what the pipeline there is actually: okay, I have this story, I have this music, I want to explore that now, what does it look like? What is the flow of this? Okay, I can actually follow the line in real time, I can follow the music in real time, and actually develop something that is based on the music narrative, and is more like a flow of movement.

So Paul Morris that was working also in stereoscopic, he was a pilot and he could know very well work with that and having a flow of this, because it was a well, then we've learned a lot of things.

We've learned that in stereo, your whole blocking is important. I invite you into a room because this is 3d, right? So the screen is there. And then I give you the impression that something is going towards you, even though it can never come and go about halfway. But so I invite you there. Well, funnily enough, it's very hard to have a character exit from the side. Because you end up looking where the image finishes. But then the character could come out in your direction and it worked because then if you turn around, there's nothing there but it worked. Or you had to invent a door somewhere so people could exist even and you could actually see the door in space and understand space and a lot more.

But on this flat screen, you don't give it that. If it just goes out, because it's, it's flat.

It's like putting curtains, you understand that if they leave out of the curtain, it's okay. But if the whole thing is open, and the actors come in the room, then they cannot just exhibit behind something because you can tell me what's going on. So I think that stereoscopy is okay, what is the experience that you and where are we bringing people and why are we inviting them there?

In Champlain we used VR. Live action in VR can work in a very short time.

Animation is a lot harder and that's why if you're looking at facing Champlain, there's eight different kinds of animation. Because we went with, we had 16 animators that were also creators and stuff that didn't know about stereoscopy.

We had to teach them, but we were kind of okay, what's your strong points? So we had two people that could do Sandy. And then another one that was very good at drawing. So we did bitmap with that scene with the canoe thing, and it was very a stage but it all worked, because it's all about her ways of getting information from different point of views, and helping her to, but to bring and to film crew they they did the scenario, they thought about it, and then they shot it.

And where there was a bit of integration, let's say the Burj a bird cage and the cage that fly was flying. That was like the toughest part because we did not know how to do that. And then we didn't think about it very well, the best we could, but they went the shots, they came back, they had the material they edited.

And then they said the animation has to fit here, here and here and there. And, and tell the story. And I think we did a very good job in with the panorama tours that we had.

But it was people working nights and days, it was crazy, really, really crazy.

But then again, that's where we learned that okay, this film is perfect for stereo.

You invite people to this great workshop. There's always something to look at and you don't get bored by her because she's quite good and things are happening.

But her space I've been invited to. And I'm very lucky to go through her. And then basically the story in that story was our story. Okay, I delivered that film for a certain date. And I think

all of the crew

not as much as the live action crew, but the animation group that stayed verified and they they were aware that they were delivering something when bits and pieces of information and trying to put them together. And it was really, I think for quite a big crew. The story within the story. And there was it wasn't I wouldn't say fun. Because because it was like just thrashing. It was very, very stressing it was. We did not know what we were doing. We were inventing pipelines for everything. All of the time. We were blasting render farms, we did not have the money that we should have had. It was done on a shoestring budget, we did not have the space to actually end the technology to do a film like that. And when we finished, we actually took two big projectors that we had bought to actually look at the films and we just brought them to the museum and they stayed there for 10 years. Okay. And we went to wait on a board in that room to do the mix. Because we did not know how to mix stereoscopy and we did not know if this was happening here, then where the sound should be, of course,

The pipeline, I don't know, a real stereoscopic pipeline. Pretty much all of the experiences that I did, they started as 2D films and I've learned a lot from 3 years ago, because they said, Okay, we want the stereoscopic environment, this is the stereo is the event. Okay, now? Can it be a good film? And now we even have a theater experience, call that at home. And I learned a lot because we sat down, and we said, okay, the experience is being in the room looking at something. And suddenly, the characters figure out that you've been looking all the time. And this is, what is happening is very private. This is what they want to. And VR was the best and then and then okay. How do we get you in there? Have you seen Hangman VR?

I think you should see the VR and then the film, okay. And they're very, very different experiences. And, and the one is like we fly you in, there is a call to action, you have to do something, then you're involved, and then you go and figure out that you're seeing stuff. And maybe you shouldn't have been there, but maybe you should have but that's part of the experience.

Cutting the film was very different. Because we could not go into one room. And then something happens and then you really look at that as what are you doing here. And the accumulation of four or five different experiences is kind of overwhelming to us.

But you're there the film is all chopped up for you. So when it happens the four wall is cracked open. But we've seen that the classical cinema has already done that but quite a few times so it doesn't have the impact of having it have all this done.

And when they do the theater, then they touch, shoot and then then there's something else happening and then it's overwhelming. Of course. And I told you about Shadowplay was for me like a big stereo. And for VR, it's when I saw the dog house. Have you seen that? You have to see that house called. It's called dog house. No. And it's a VR experience. I think it was done in Denmark. And it's quite old 2015-2016. And can I take two minutes to explain what it is?

You come into a room like this, there are four seats and a table is set up for dinner. So there's plates and glasses and then they tell you, Okay, Mark, you can sit down anywhere you want. This is the older son, this is his girlfriend. This is the Mother, the Father and the youngest son. And that's what would you want to be tried to be somebody that you've never been.

So I said, Okay, I'm going to be a young lady. So I sat down there, and then four other people put on their cat, okay, and we had dinner. So when I'm sitting down in the first scene, I'm not at the table, I'm in the kitchen with my father in law. And he's cooking and we'll get up and then he's taking out the duck or whatever. And he goes into the refrigerator and has a bowl of whipped cream, turns around and splashes a bit of whipped cream on me. And they pick up a towel and start doing this on my breasts. And I actually see my body as a young girl. It's like, doing it like non aggression by it's like the blackout takes that scene is about two minutes, and we sit down, and then it's a family dinner.

My mother in law is always putting a lot of food on my plate. My boyfriend is not very nice with his mother, my father in law is kind of doing all kinds of goofy things.

And the younger brother never says anything. But his father is always on his plate and giving him some stuff. And my mother in law is always filling my plate. And then my boyfriend starts accusing my mother of drinking too much. And then there's a big scene is like,

I'm drinking so much because I'm pregnant, and I don't want my children like you guys, that whole thing. And then there's 14 minutes of that. And then the father goes away, comes back, the son, my boyfriend goes away, and he was yelling at my mother, I was sitting down and I was actually taking the hand of the guy beside me trying to call it calming down.

But what's really happening is that it's all the same dialogue, same language, same rhythm, but different perspective. My mother in law was in the bathroom taking pills and seeing that she was pregnant. And all she sees are empty plates. And she's very ashamed of not having prepared everything. The younger son is always overwhelmed with his parents all of the time. So you have five different points of views. I had that experience and right after I did the Machine to be another: These guys have prepared something where you come in, you put your headset on, and then there's somebody else in another room. And they say try to do a mirror thing like a theater exercise where you can.

So when you start and you look at your hands and then on the other side, it was a young woman again, same thing and then I looked at my hands and then my body and it was her.

And, and suddenly it's like, and then they make you get up and you look at the mirror. And because you have a camera here, you see your whole body's a woman's body again and cut your head off, of course with lighting and stuff. And then they get the mirror off. And then they ask you to give her but

you look at your hand, and it's a woman's hand. Yeah. And in front, it's your hand coming towards you, and then you shake. For me, those two experiences crystallize why VR was, could be interesting in storytelling.

Both ways.

I will never be a young woman of 20, I know exactly how it feels to be patted on my breath. Because I've lived through that.

Those two experiences for me were groundbreaking because they were crystallized that, ah, the medium has another way to tell a story.

But it has to be clear what you're doing in that story. And that you're not only a spectator, you're a participant. And this is why I very often hate VR, because it's a film in a 360 environment. Yeah. And frankly, I don't give it , But if you bring me to a film and there's just yeah looking around and exploring those little things this is what makes the different mediums so interesting.

It's trying to understand what they do what are the limits what they bring to the table and then exploring those limits and and exploring

Tv didn't kill radio and TV did not kill cinema and cinema will not die, it will come down because you can actually look at everything on your tablet. And it's a lot easier to do. But it's not the same experience.

Blockbuster is dead but this is a blockbuster: Netflix is blockbuster so we have everything but it's but then is okay.

What's interesting about this screen can always be the fact that you can change it because you can get an environment and be within that environment. What is so interesting about that for me that's that is what exploring a medium is about and and this is why a good stories a good story. A good story in the wrong medium will not be a better story because it's because the fifth so it has to be properly managed and properly adapted.

Interview with David Oppenheim - April 25, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

We start the interview with a really easy question: I would like you to introduce yourself and tell me what is your position at the NFB, and then a brief history of the path that led you to this position, both educational and professional, if possible.

David Oppenheim

So my name is David Oppenheim, I'm a producer at the National Film Board of Canada working in the Ontario studio, which is based in Toronto. As far as history, I mean probably the kickoff was, after my undergraduate degree, being accepted into a residency for what was then a very new program at the Canadian film center, based in Toronto, the CFC, it's known for short Canadian film center had been around for a while focusing on film, they had director labs, editor, labs, producer labs, they essentially were a creative center for film, production and exploration and in 2000.

They started what was then called Interactive arts and entertainment program.

Now it's known as the Media Lab at the Canadian film center. And I think I was part of the second cohort of residents in that program. It was a six month program that kind of immersed us in interactive storytelling, from an academic point of view, but very much from a practical or production hands on point of view.

So it was kind of combined: Studying works from the 1960s onwards even before but really kind of focused on the advent of computers and what impact the technology had on storytelling.

We also looked further back in time, because there's lots of precedents that didn't involve the computer but really it was focusing on what the internet and the computer meant for storytelling and the half of it was the production of a prototype: a creative project in storytelling.

After that, I started to work in the independent production sector, but actually started working in both linear film and interactive storytelling, so I kind of did both equally for the next 15 years, and until I joined the film board,

I'd say probably from around when I graduated from that program in 2001 and to about 2007, when I worked on my first big project, I worked on in different capacities, different roles, but the first real, significant interactive, storytelling project that I worked on, was a project called *Diamond Road Online*.

And it was a database documentary, nonlinear database documentary that used basically algorithms to bring a real time editor of the narrative: based on choices, you made it recommended you path through the big corpus of data, all of the different videos.

So that *Diamond Road Online* was really the first interactive documentary that I worked on. And I continued to work on them through about 2015, When I joined the film board, and I've been here for the last seven years.

Giuseppe La Manna

Thank you, it's really interesting the fact that you have worked both with linear and more classical kinds of projects.

So I would like to ask you, for a producer, what do you think are the main differences in those kinds of projects in the workflow, the pipeline of work?

And also, I wanted to ask you, if in interactive projects, we are also able to divide the production in pre production, mid production and post, as we are thought in the classical books and standards filmmaking and cinematography.

David Oppenheim

I mean, not really, that there it's the production of interactive storytelling experiences, I think, more closely **follows software production or games**, where it's a much more **iterative approach**.

That I guess of in the last decade or, or two, it's, it's kind of followed more of the **agile methodology** of working focusing on prototyping work as soon as you can, and I mean, at the same time, there's similarity and phases, I think there's what I think we refer to as a discovery phase in interactive production, that's similar to the, the early development phase in filming.

In interactive production, it's mostly its ideation and prototyping and through that, that can be called the discovery phase is where you're doing research and development on your paper prototyping figuring out the kind of art direction, but you're really doing things without doing a lot of coding.

There's different kinds of processes or artifacts that you create along the way but so it's, it's quite different from film but it's broadly speaking, akin to the development phase in a film.

But yeah, overall, I'd say it's a much, much more different way of working.

I mean, that being said it can, with some difficulty fit into a filmic model, if it has to like, and I guess by that, I mean the film board hadn't produced interactives until about 2007. I think the first interactive film was called the *Late Fragment* and it was produced out of our studio by Anita Lee.

But up until then, since 1939, the film board had been producing film, so we kind of has to fit into the classical movie division, the cycles of film production development and production.

But then within those kinds of phases, it sort of took on its own type of production workflow.

Giuseppe La Manna

Yeah, I totally understand. And what about the VR/AR projects, that use HMD, is it also similar to interactive?

David Oppenheim

Yeah, I would say, for us to be our production is in terms of the workflow is similar to interactive production.

I mean, once we have a budget greenlit we work in an agile fashion, using agile methodologies.

I think the main difference with VR production has been the game engine. When we were working on web based interactive projects, or mobile we weren't using a game engine now we are with VR production. And oddly, game engines, over the last number of years, have been used more and more in film production and video production. Yeah. There are parts of your production for us, where it's quite similar to film production, for example, with the *Book of Distance* where we were animating characters, we used motion capture for the initial data, but then we were doing a lot of keyframe animation.

I think more and more, that those sorts of workflows are going to be more similar.

But I would say that the biggest difference between interactive and linear film production is, with interactive production you have a user or a player, or a person who is interacting with what you're making.

And so I think it's much more of a user centered design process, or it should be anyway.

Whereas I think in film I think sometimes you obviously think of your audience, you have you have rough cuts, screenings, or you show your film at a certain point to an audience and you get feedback, but it's not the same kind of hyper focus on user centered design.

And I think, if you're doing that right, then you're working in a much more iterative and agile way. So, I think for me, that's the key difference.

Giuseppe La Manna

Of course, I imagine that from 2007 till Today something that really changed are the professionals, the people who work on those kinds of projects.

What can you tell me about that? Have you seen differences? Are some roles appearing and also some are disappearing?

David Oppenheim

Yeah, well, I mean, I think if you look at who was working within the NFB, up until 2007, it would have been really traditional film production roles, whether it was live action or animation. And then once we started to make interactive stories, which obviously were around before the film board started making them I mean, broadly speaking 1960s onwards. Yeah, I think you started to see coders, programmers.

You started to see in some cases, people who were working with physical computing devices, like computer vision, or so.

Certainly, in terms of who the film board was working with, once we started to make interactive films, we started to work with a number of different types of disciplines, artists.

I think, as we've started to use game engines, that's obviously changed to include more of the disciplines that feed into 3d game engine created work, whether that's technical artists, or who focused on things like lighting or visual effects or stuff like that.

But I think in some ways with VR, it's really brought some of the disciplines that have been working in film like VFX artists, or animators, together with programmers, coders, and I think, in that way, it's not entirely foreign to some of the disciplines that were working in film, previous to interactive production.

It's just, it's broadened it. and then I think when you look at, for example, something like, *Draw me Close*, that was the first time that, to my knowledge, the film board, we had worked with dramaturge, choreographers, theater disciplines, theater, writers and directors.

So in that maybe that was very specific, that was a VR production that also was a hybrid between virtual reality and live theater with an actor. So yeah, you begin to see different disciplines as you hybridize art forms.

Giuseppe La Manna

It's really, really interesting. Because inside of the NFB, I had seen different perspectives from different producers. I think the range of content that NFB creates, and the people that work on these projects is really, really different and wide.

I want to ask you a question that I've asked a lot of producers I've met already. Do you think that the role of the producer now should change? Should producers know more about the technologies that are used in the project that they make?

David Oppenheim

Not necessarily, I think obviously, from a creative standpoint, I think it's important.

I mean, we function as both overall producers who are responsible for every aspect of the production, from the finances to hiring but we function as creative producers at the NFP and I think that as a producer, of course, you need to understand your medium.

The medium in which you're working. So, to that extent, you need to understand the form in which you're working.

But you don't necessarily have to understand at a deep level the technology.

Now, personally, I like to do so as much as I can. So I've taken courses in programming, I've played around and taken courses in the Unity game engine and made a few bad things. But at the same time, I think I spend much more of my time doing the equivalent of watching lots of films, right, I play a lot of VR, I tried different experiences. But I also play a lot of 2d flat screen video games, and go to cite specific, live immersive theater.

Because I think they're all related to VR. And so I think, as a producer, as long as you understand the medium, and its affordances, the rest is good, but not required, you don't have to be a programmer, you don't have to really know the pipeline from a very minute detailed level; I think it helps the more that you also work with a team.

For example, even though I know, just enough to make me dangerous as far as technique, technology, I also understand that I'm a creative producer, not a technical producer or project manager.

So there's a role that comes from software development, **the project manager**, it's not, I guess, it's not unlike a production manager and film, but I think often it's much more of a technical role than in film.

So I would hire a project manager that knows much more about the workflow than the pipeline and can have much more in depth conversations with a game engine programmer or 3d artist than I can.

But even in that role of a project manager, they don't know as much as the 3d artists to the programmer.

So they have to rely on some knowledge but also they have to rely on your capacity of asking good questions, communicating and hiring good people.

And so I think as long as a creative producer really understands the medium it works. I don't think you have to understand the game engine in the same way that you don't have to understand the deep technology of a 3d camera or the workflow of shooting in high definition. You have to understand the medium and how to manage a team and how to ask good questions.

Giuseppe La Manna

Okay, thank you really interesting and another thing that I've been talking a lot with other producers is when you start with a new project, when there's still only the preliminary idea of it, how do you choose the medium? Is it usually the creator that comes to you with the idea of the medium to use or also do you have conversations about with must be the best to use?

David Oppenheim

Choosing the right form for the project as well as the technology, I think has different ways. But I think often because different producers tend to specialize a little bit, you'll begin talking with an artist or you will have an idea yourself that you then go and find an artist or a team to work on it.

So, it's not often that you switch, drastically, the form. For example, someone comes to you to talk about something that they see as a film, More often than not, it ends up being a film, like inform.

But I think other than that within a particular form, let's say, because the majority of what I produce has been interactive we're often just, let's say, I'm speaking with an artist and they have an idea, we know what we're talking about is something that is going to be interactive in some way.

But beyond that, we don't know what medium that will be, whether it'll be VR, or something for a mobile device, or a web based project or something like that.

And so, within the sort of form of interactive storytelling, I think there's a lot of discussion around, well, then what's the right form? What is the user experience that makes sense? And that goes through constant iteration.

Sometimes someone has thought an idea through and they know, it's VR but then there's lots of questions about, well, what type of user experience is it?

Within VR, sometimes it changes, sometimes they come in, or they have an idea that it's got to be VR, or it has to be something else and it becomes something different.

But yeah, it's basically a process of your discussion, I think the best productions come out of really that interrogation in the early stage rather than the technology leading.

Really talking about the creative intentions, the story the what the desired kind of goal is as far as an emotional experience and then what is the best medium form or technology to work in? So if I think asking those questions early is really important and if it's a process.

Giuseppe La Manna

I think also the role of producer means concerning the reaching of the public of the user and for interactive contents but especially the ones that need special medium such as VR it's more difficult.

Do you think that in the future this will be easier? Do you think it will be easier because now it's getting more famous, especially because of festivals that are introducing VR?

And how do you think that the industry but in your case NFB can make people get more involved into these new kinds of media?

David Oppenheim

I think at the beginning of any medium, there's a not linear progression. Where there's an adoption of the technology by which you consume that media.

When the NFB was formed in 1939 there was no television. Most people didn't live in cities. And so if you were lucky most cinemas were in cities, but most people didn't live there.

So there was always a need to reach an audience by whatever means possible.

So the film board created this position of a **traveling film projectionist**. And I think we're sort of in that phase now where more and more people have headsets at home, and they're becoming more and more affordable and smaller, and, but still, it's a very small number of people compared to those who have the television or computer to watch a film, or go to a cinema.

So I think there's going to be a period in which the NFB will continue to find ways to reach an audience in the way we did with the traveling film projectionists.

But there's, I think, a belief that spatial computing using head mounted displays, or other types of displays is not going away: the 3d web or the spatial web, or the metaverse, whatever you want to call it (I prefer not to call it the metaverse) but I think the idea that a 2d screen with a web browser is always going to be the way we in which we access the internet it's just not the case, I think it's going to evolve into something I don't know what it is, but lots of people are betting that it's going to have a three dimensional or spatial interface in some way.

And if that's the case, then there's a lot of people betting on this technology, who aren't artists, but programmers or businessmen, whether it's Facebook or Apple.

And so, I don't think VR or spatial computing is only going to grow. I think, and so artists, it will continue to work within the medium as it changes and more and more people will have access to it.

So I think it's a matter of time, like any computing revolution, it's in its early days, and so it'll get easier as the National Film Board as a public producer and public distributor, it will get easier to reach an audience.

But in the meantime, we do things like we bring our work to Nathan Phillips Square in Toronto, like we did with a piece called *Punjab* where we have 10 Different areas and each area has a headset, and you can come in and try to work. We work with libraries to who are increasingly purchasing VR headsets, we work with libraries to distribute our work and then when a new headset like the Oculus

quest comes out, we make sure we're making work for that headset, because it's the most accessible so I think that's what we do and it's important just like when film was a new medium that we we still make work for a medium even though it doesn't have mass distribution.

And I think that's why as an artistic medium VR is very clearly its own form, its own medium. And that's the amazing thing about an institution like the film board is that it's allowed to experiment with these new forms of storytelling before they reach mass popularity,

Giuseppe La Manna

I think that it's always been like this in the history of the NFB. It really brought a lot of innovations that later would be used in mass communication.

I am thinking now about, for example, IMAX.

David Oppenheim

Yeah, exactly. Yeah, IMAX came out of the NFB. Or if you look actually, I'm forgetting the name of it, but it was a three dimensional drawing tool that was developed in our animation studio.

I'll find it as we're talking. But basically it was a tool developed for animators. And if you look at it, now, it's and it was developed 20 years ago, maybe or more, you can put a picture of the artist working using this tool at the animation studio and Tilt Brush or animation tools now.

So I think **technology in the service of storytelling**, which is kind of a mantra at the NFB, has always been looking at how to harness tools for artists to tell stories with and that was the case during the early days of film all the way up until today.

Giuseppe La Manna

Okay, another thing that I always think about when we talk about VR projects or interactive projects, is that technology has a really short life time.

And I think, even if it is not always what a producer thinks in normal studios, I think it's something really important to NFB, it's the preservation of this kinds of storytelling that really soon begin to get old.

So what do you think about it? And how do you think the NFB could work to maintain and to preserve the contents that you create?

David Oppenheim

Yeah, I mean, it's very important. It's sort of more complicated than film preservation, which the NFB has been working on ever since it was started.

But I mean, a good example, the NFB used flash a lot in its early interactive web based documentaries, and about flash and it takes a lot of time and resources.

And I think, unfortunately, well, fortunately, the NFB has some of that. But we don't if you talk to Jimmy Fournier;

Well, so he's in charge of this type of preservation work.

And I was able to see it from the producer's side, because when Flash was being deprecated, the NFB was looking at how do we make those projects available?

And one of the ones that they used as a test case was part of the *Highrise* series of interactive documentaries that I was involved in just in its final year.

But I saw the difficulty that the NFB faces in having some resources but not enough.

So I'm sure Jimmy will talk about the fact that we could use a lot more in terms of resources from the government that would go towards preservation of interactive works, including now VR. Because we obviously have a duty as a public producer, we have to really work to make sure that what we make is experienced and can be viewed 50 years from now. Even though technology to playback films has changed, it's not changing as quickly as the web or VR technology. So there's a lot of work to be done.

I know Jimmy's involved in some of that work. But I think, certainly as a producer when you work so hard on something for four or five years to make it, you really want it to be archived in a way that it can be seen years later.

I mean, one example is in the 90s, a woman named Char Davies was one of the first women in that era of virtual reality in making amazing work. She's a Canadian. And her project *Osmose*, I tried to see it a few years ago and you can't because it's no longer available for today's headsets. But I do know that they're working to update the version so that you can experience it.

So if you don't preserve works, then you lose the history and the art and whatever that works contributed.

So there's a huge responsibility, especially when you're a public producer. And I think we need more resources to do the work we've done so far.

But we are doing something and Jimmy will be able to speak to that.

I think as producers, we really support that work, because we realize it's so important.

But it's very hard.

Giuseppe La Manna

Yeah, for sure. Tomorrow we'll be asking Jimmy about these things.

I also wanted your point of view, since you've worked on a lot of projects, both interactive and not.

We have books and books about the history of cinema and how technology changes how films and movies are made. For example, I think about the switch from film to digital. Talking about interactives, what do you think were the milestones, concerning technology, that more influenced the production of those content?

David Oppenheim

I mean, I think my history really in actually producing works goes back to 2007.

Really, although I was studying it before then.

But I think when I think there was a big shift, like, I remember when we were making *Diamond Road Online*, we started making it before YouTube. Before most people had high bandwidth internet connection. So it was a video based work and so I think the adaptation of just things like home based internet connections, as they became faster and faster, was a big change.

Where most people and I'd say it's still there's still a very big question of a **digital divide**, which is another issue and a problem that our world faces, but I'd say the proliferation of high bandwidth, internet connections for home was a big heralded a big change.

How we could tell stories, I mean, just moving more towards video based work towards work that required more computing power, I say was another.

I think mobile phones were a big adaptation in terms of location based storytelling.

You had a computer in your pocket at a certain point.

I think the participatory web was another one.

Some of my favorite projects, before I joined the NFB, in fact, were projects that took advantage of web 2.0, or basically social media and kind of a two way conversation between creators and its audience.

So all of the projects, like *Insomnia* that required some sort of web 2.0 technology, were another one.

And I'd say, then now, I would say, Yeah, this sort of starting in 2014, or 15, the kind of fourth wave of VR, depending on how you count it, I would say, is sort of the, the current one, that's, that's making a huge difference in terms of storytelling tools, and a new medium with new affordances to tell stories, and but those are the big ones that have kind of impacted my work, I think over not a very long span of time, right.

It is pretty crazy how fast all those changes happened.

And I mean, it doesn't seem to be.

There's also, of course, I haven't made any augmented reality. But that's also a different or related technology.

But yeah, but what, at the same time, I think the new forms don't don't obliterate the old forms.

And a lot of the same principles of telling a good story still apply even with new technology. But it's fascinating.

Giuseppe La Manna

Yeah, a lot. And I also wanted to ask you, about *Agents*; that was made with the use of A.I.

I am really curious about new kinds of storytelling where the story is different for each person that experiences it.

Can you please talk about how your experience was on working on this kind of project?

David Oppenheim

Yeah. Certainly, artificial intelligence is already having an impact on storytelling, and will have an even greater impact moving forward.

What was really interesting for me is that in this project I mentioned Diamond Road Online, it did not use artificial intelligence in the same way that we used it in *Agents*.

In *Agents*, we were using **reinforcement learning technology**, but there's a relationship with Diamond Road Online, which we were using basically algorithms.

And there was a form of learning that was taking place. But it was really using some of the similar fundamentals such as using tagging and networks, but just not quite the same as the technology today.

But certainly the precursors and its approach was similar to *Agents*, in that we were interested in how software could tell a good story, in concert with a human being with it with an audience?

And I think that's the same question that motivated *Agents*, but we were just using a more recent version, or a more contemporary version of algorithmic database driven databases or software.

Yeah, that was fascinating. and I also just, like, a lot of technology that I work with, or the teams I work with, I know, just the surface, superficial layer, but I think I will continue to do more work using reinforcement learning and other forms of artificial intelligence.

And it was fascinating to have that experience in 2007 and then in over 10 years later to be working with similar creative intentions, but with different technology was pretty fascinating.

But that's where it goes back to what I was saying before, that the tools might be different somewhat, but ultimately **how to tell a good story and how to design an interactive experience rests on very similar foundations, similar questions**, so it's fascinating.

I don't think we I think we are proud of what we did with Agents. But I think there's so much more we wanted to and we still want to explore. I think we did some things right, other things not so much. But that's the whole idea of experimentation, of course.

Interview with Jimmy Fournier - April 26, 2022 - Conducted by Giuseppe La Manna

Jimmy Fourier

The digital shift at the NFB started in 2009-2010 and we had a lot to do in our program: The interactive studio was one of the pillars, but another pillar was the nfb.ca website and another one was the digitization of our collection and making it accessible thanks to restoration and preservation. Those were the three main objectives of this plan.

What is interesting now, is that we are facing the consolidation of what we have done 10 years ago, because for the entirety of production, it was a little bit of a lot of experimentation, trials errors.

And now we are trying to consolidate what we have done for the past 10 to 12 years with better workflows integrated with our current walkthrough at the NFB.

But R&D has always been more distant to the production pipeline, we would work behind the curtains but we wouldn't be able to find a way to integrate those tools into the current pipeline of the NFB if we did not start like that in the past.

But now, we think that is the time to join them into the family. Have more synergy between studios and between the support teams at the NFB, because they use a lot of technology that we don't know about because it came from film and video.

What is also important is to democratize the information to the senior management ; because for me, there are two levels of where the technology is sitting.

The first one is technology for production.

The second one is technology for the diffusion or the export.

They might be linked together but if we take the parallel with the film industry the tools that they're using, the technology that they're using to do their works on linear production, it's not linked with the way they export the production.

Okay, because if you use a special technology to create a different sett, just like what we currently experiment with unity to create a virtual set and shoot, it doesn't have an impact on how you are going to export the works, because it's totally disconnected to the production process: because you do a master linear for film production.

It's important for the people at the NFB to understand that, we can invest in new technology to tell a story and it doesn't mean that we have also to invest on the technology for diffusion, at least for linear products.

But with interactive production, that's one of the challenges, because the technology that you're using to create your works still remains attached with the medium of the experience.

And when you want to use it on another platform or in another way you need to come back to the production process, and then change it or do an adaptation of it.

So that's really the main and principal issue of a studio like us, because in narrative production, they used to go outside to create with the creators with their technology, and when they bring the works inside the NFB, yeah, we export for different type of platform, but when we don't have access to that specific platform or, if the current platform is no longer available or needs to be update, we need to come back to the production process, and they won't have the money anymore, to come back because for NFB the project ended.

We are facing that by the fact that we did a lot of web based flash technology. And now it's impossible to play them.

But in R&D we found a solution: I'll show you a flash based project *The Space we hold*, that is an interactive story.

It's one of the first interactive projects done at the NFB. It's a web doc made in Flash.

If you check on the public website, on the page of the project you would see a banner that says that is no longer available for the public.

But what we have done in the r&d team is to incorporate the interactive production web bases to the preservation process.

So we use technology with web archives workflow, that it's standardized in the ISO, to grab the content and keep it into a word tag as an open format as our the mandate demands.

But in our internal system, that we develop and that keeps our collection we have the possibility to run the interactive projects based on Flash through this web archive process.

This is called MAM and with the MAM, as you can see, we have a list of all our videos and all our assets that we can see.

But we can now use the archived project because the MAM starts the machine internally that uses a remote browser because we integrate a whole browser that can run flash.

And as you can see it's working.

And we have all the interactivity, we keep all the interactivity.

So it's not a video, it's the real project that can be used internally.

So our next step could be to take this work and make it available to our public.

So far, we do it only on demand, because we don't have all the funds to implement this infrastructure and it's a big project, too.

But with this we keep a trace of the interactive projects and with time we would be able to do it with other formats too.

Giuseppe La Manna

This is really, really interesting.

I think this works really well for interactive projects web based.

But for other kinds of projects that are not only web based and need other kinds of device, such as VR or AR?

Jimmy Fourier

That's another challenge. We don't have the recipe for now, the only thing that we can, and we try to do is to keep everything as much as possible.

So we keep into our workflow of reception of assets at the NLRB.

We try to keep the source code, archive it, archive all the stuff that can be linked to the project and to our systems.

So that's the best that we can do.

But we don't have the dedicated staff here to recompile a new project and be sure that we can deliver or update it to another platform.

That's really a big, big, big, big challenge.

So, for me, that's the main issue of interactive production.

And what I do with my teams, while I can and all, it's mostly the technology for the production, the new technology for the production, and, when these, this new technology for the production it's done outside the NFB the only thing that we can do an approbation of technical of what they are using: for

as an example if they want to use Azur platform instead of AWS, we would tell them that we have only an infrastructure on AWS so it might be possible to switch to AWS at the beginning of the project, so we would be able to sit the project into our environment for the diffusion.

But other than that, it's very difficult, because the technology now for those types of production is really part of creativity.

And if the creators want to use this type of technology for a good reason, to achieve what they have in mind, we have to learn about it and let them with their idea.

Giuseppe La Manna

Can I ask you a more general question about how r&d works?

So I understand that you have a five years plan if I am not wrong, but you also work closely with the projects?

Can you explain to me better? Because you are the first person I am meeting of r&d and I would like to better understand how the department works.

Jimmy Fourier

Instead of the names r&d, I prefer to say that we are engineering and development, because we do research only based on the needs of the production, and on the needs of several budget predictions in parallel.

Okay, we are more a team that helps the implementation of the technologies for the audiovisual production.

So in our five year plan as an example, just before the pandemic, we were working and developing a way to connect all our studios together to work remotely, and work at distance, because some teams in the west or in the East don't have access to the same technology as we have in our headquarter.

And for me, it was very important to give them an access link to the same level of technology to them. So the plan space on that it's a five year plan and that was the main topic of the plan.

Five years ago, it was on the infrastructure because we were moving the HQ, so we had to think about all the technological infrastructure, that we implemented both here and in Toronto as a project pilot and at the vault.

And now that's the time to reconnect all the studios together, give them access to this infrastructure, standardize the process, share information between production documents, technically production so that it's part of the plan.

And we link an investment plan on that as well to be fully transparent with the institution and all those plans are stamped by the high senior management and also by the government, of course.

How do we usually operate?, So I think we have some downside in our method, but I will explain it to you.

I want my teams to work in the shadows otherwise; I don't want them to be face to face to production people. That is why we use people that coordinate the technical aspect on a regular basis (The Technical resources and the technical directors).

They are the key person in that, and they are not part of the r&d.

So the people in technical operation receive the request, and they choose based on the project on the other requests, if they need to integrate us on the request.

If so we have a meeting, to see the overview of the project, and for us to think about what can be the next need for them.

We don't go to meet the creators directly, because we don't have enough people to do that. Okay, so we do the implementation for the post production or for the production, but in the shadow of the technical services, when they need to integrate us.

But the downside of that, is that people on the production sometimes don't know what we are doing, and whether we can help them or not.

But it's because of their lack of perception.

And I think with the last technological turn, when I met all these people who work in production to tell them what we were doing, only at that moment they suddenly realize that we exist and what we work on, just because we don't have enough people to manage all the requests in first person, of course.

But also we don't want to do that because we don't recover our cost on production on the r&d.

But people in technical services, post production and support of the production, recover the costs of their work.

But when it stand arise to they have to pay for their service. So if I do myself and and make myself available for the production, they got to go and pass and bypass the other teams and go dirty for me because they say you're free of charge. So yeah, I'm free of charge, because we do development for the entire institution. We have an added value for the institution, the institution, not only on your production, so that's

That's why when we develop something and we pass it on production I always ask my engineers, as soon as you develop a new workflow or new way, to document, and give this documentation and training to people in the field.

So the next time, when they receive another request similar to what we have developed, they're gonna be able to do it with our help. But that's the reason why we want to keep ourselves in the shadows.

Giuseppe La Manna

But I also heard from some producers that NFB is not that good at documenting the work they're doing, especially in the production stage.

Jimmy Fourier

And that's something that I want to change in the next five years.

I want to have a technical Bible for each production. And not only to keep it for us, but to share with everyone.

They are not good at doing that, because they don't see the benefit of doing the documentation for the other one.

If we do it, we tell them that it's gonna be an added benefit and value for their production. Yeah, it's gonna be part of the workflow.

Giuseppe La Manna

Can this situation depend on the nature of NFB? Since it was born with classical cinema for many years there was no need to document the production process, because it followed some rigid standards.

Jimmy Fourier

Yeah, and I will go further than that. In the process, it's going to be very interesting for you.

Then you're going to see how things are really changing with technology. I am going to ask you a question:

When do you think at NFB we have the technical approval in the production phase? Have a guess?

Giuseppe La Manna

It should be before production, no?

Jimmy Fourier

Nope. Right now it is at the complet end of it.

That is because we used to do film. Everything was standardized.

So we knew at the end that we're going to need to do a master, copy zero or final video master.

So the pipeline was a standard.

So at the end, the technical approval sits at the QC (quality control) level.

And that's currently the state at the NFB.

I want to change to not tell them that it's a QC approval. I want to switch the at the beginning.

Just when we switch from investigating, between research phases and production.

And if we are integrated at the beginning of the production, we would be able to say okay, you shouldn't do that and that or that.

But if the production does not take our work into consideration, and changes their mind during the production we're going to have problems later on of course.

So if we do a technical approval at this stage, and the documentation that says this is the technical steps that have to do with the technology that we're gonna use and things like that, like a kind of contract, and if they change something they have to reopen the documentation and contact us again to investigate and analyze the impact on the rest of the product or the rest of the pipeline.

So, that's what I want to implement for the next five years. On top of the tools, it's more process.

So to answer your question, how the technology changed just because the technology was so standardized before and did not change a lot during the years within the recording, and now it's more and more important.

Giuseppe La Manna

Concerning more or less the same topic:

It is a question that I usually ask to creators and producers but maybe you can also tell me your opinion:

We have, from the past century, tons of books and manuals about Cinema and tv production, and they usually divide the production process in pre, mid and post.

Can we still use this division for other kinds of projects? Or should it be more similar to the software development process, using an agile methodology as most of the people I talked to told me?

Jimmy Fourier

Yeah, exactly.

To answer this question I will use a parallel with my work teams: in total we are more or less 10 and there are the ones who are in charge of tools for the production, the ones that are engineers and developers, that work on software or with the website nfb.ca.

In both cases we all work with the lifecycle of a product (hardware or software) and for this reason we are really familiar with the agile methodology.

But for NFB it is still difficult to integrate this methodology to the projects, especially the digital ones that are the ones that really need it.

The main reason why you should work with this approach is that: when you do a film, after its production you don't have to maintain it.

The only thing that you have to do is to adapt it for different kinds of export: home video, web, DCP, ecc, for new distribution platforms.

It is what I was telling you at the beginning, production and export/distribution do not merge at a certain point. You can change the deliverable without affecting the work done in production.

For a digital project, that can be Vr or web based or something else, not only if you want to change the export/distribution program you have to return to production status, but it also needs constant monitoring and updating and maintenance.

That of course affects the budget, because you should think about it during budgeting. And sometimes at the NFB, if the project is completed, you don't have any more funds to re-enter production to change something or maintain it.

So it's not a technical issue. It's more a budget/ legal issue.

That's the reason why we now integrate into our contracts for interactive projects the concept of **End of Life**.

So right at the beginning of a production, we try to integrate into the contract what is the **expected end of life** of this project?

Something that says after we launch a project, we have three years that we need to maintain it, okay.

So people in the infrastructure need to have the infrastructure secure for this period of time.

But we would also need to add a little bit of money to come back to the production if they need to do maintenance on the project.

It was really difficult for the Board to admit it at the beginning.

Giuseppe La Manna

When did you start to acknowledge this need?

Jimmy Fourier

It was with the end of Flash.

We had more than 50% of the interactive collection of the NFB web based on Flash.

So, yeah, we do that to keep them in the archive.

And as I told you now thanks to MAM we can internally see them, but for a external user it is not possible now.

Giuseppe La Manna

This concept of end of life of production is really, really, really interesting.

Jimmy Fourier

And it also concerns legal issues with the Creator.

Of course, because see if they are doing a production and they have in mind that the NFB will maintain it for forever, or if we sell a license of expectation. I know that it's not the case for the web base, but if we imagine with VR, and we sell and we tell you have the opportunity to distribute for the next 10 years, you have to maintain it.

Giuseppe La Manna

And moreover I think also to the hardware required for VR projects, for example. Also the hardware became old really fast and a new one is always coming out. I think about the new Oculus...

Jimmy Fourier

and I'm telling you, it's really interesting because last month, I passed over the asset of the NFB with one of my colleagues to have a look at the amortization of money.

And so we have a lot of tools. We usually consider the amortization plan over a time of 5 years; but we saw a 35 millimeter projector that we have, it's 70 years old.

Still running our Mkhize 15 times.

So, the investment that we have done, has been amortized 15 times the period that was assigned.

It's working, we installed it in this new HQ, but why do you keep a 16 and a 55 and 35 millimeter? Because sometimes when we do a digitization, that is based on three steps the first step is only we digitize at the highest resolution the highest quality possible the second step is the restoration, and the third step is the accessibility part.

So we do all the declination of the process.

But then when we do the digitization, the first phase, we keep the files and we do the restoration later on, when we have to demand okay because the restoration takes longer than the digitization process.

So based on that, sometime when they do the restoration, they want to see the 35 or the 16 print as a reference in the theater.

So that's the reason why, it's one of the reasons, sometimes old films can be projected at the NFB and we keep it because sometimes a lot of theaters in the city have 25 anymore and sometimes other post production facilities want to show them so they rent the place.

Giuseppe La Manna

Can I ask you if you have some general document no documentation but more like general information about the man am I am because I think it's really interesting for my thesis if I have some more detail about data I can read I can use if of course possible are really really really useful because it's something that actually I haven't thought about this this deeply and it's a really really big issue

Jimmy Fourier

taking notes and I was sent you all the information. It's we call it major asset management but it's why they tell us because As what's in the name of the project at the beginning, but it's more of a catalog asset management or collection asset management because what it's done for it's really to, to, to have an overview of all our works at the NFB. And it's really, really interesting. If we take a film, just do every time. So we go to film, we have a lot of filter on that. But if you don't mind on one, so we can do some filtering there, gender directors connection. So we know that it's all acquisition. So if I go to

Monica Antoine, as an example. So I have all the version of the film, the French Spanish, the end in English dub, and doesn't have a play button because the digitized yet okay. Subtitles In English traitors. You have information on the grouping, so you have all the key words, rights information. So I can do again, say, Okay, if we do commercial theater, our drive in Canada right now, am I able?

can pack our rights management tools and the NLB by API and, and if they're stuck shut, then to this film, I will have it there. All the awards want the availability. So I know that it's on nfv.ca. And other document, like photography, the film, educational resource. So this is the, what we call the ARB. And we have a section called descriptive metadata. So all the cataloging of the film. So you know how the description the Mark 21, the agency created the classification. And this, why I'm in charge of the both teams, we use the map as the single source of truth. And we send the information to an API and the public facing link, click on that. So we change at one place, the information of the field. And it's reflected to the public facing technical data, which is very important, and interesting. So with this film, I know that I have mezzanine file DSME made sure all the step died, I told you, and what are the product linked to this film? Digital Product, I know that this product is the Calculate the rights. So we're interesting.

Giuseppe La Manna

Yeah, it's amazing. And what would you need to make this public?

Jimmy Fourier

Oh, I won't make it public. Because the magnets are an internal tool. Okay. But by the API. Yeah. It's only to make this data accessible, because we do a subset of data and make public. And so the technical, we don't have a technical issue to do that. Because when you go to Open ONF twice, yeah. So if I go to nav.ca and do search on mono, on one they get exactly the same but it's more public facing am view. And if they need the educational and Tech Guide, they are that you have to be connected to the campus. So when you do play, we believe exactly the same thing as in the battle. Okay, but the difference of infrastructure, the man is sitting in totally push the information to an API on our AWS infrastructure, cloud. And we have all the security around. So that's, that's really the

Giuseppe La Manna

end of q1 in the future to make the possibility to re reuse the interactive projects that were seen before.

Jimmy Fourier

It's gonna be push, as we do for for film with the watch, to the infrastructure, the AWS infrastructure. And we're gonna implement exactly what we did internally, to the end to the AWS infrastructure, with the cost associated costs, because now I was really lucky, when I clicked to the the button on the demonstration it large, but if I think it's 10 seat that we have 10 slot into our infrastructure to be sure that it's, it's running internally, because it takes a lot of resource to read to redo this work. If 10 other people's was before me, I will have a message say that waiting for a slot. So can for the public facing, you can imagine that, that we need to have a lot of resources to to run, but it's working. But it's you need more resources than it used to be done. Beginning it in the plan to Yeah, for me, it wasn't in the in the plan to do that. But when I spoke with studios about it, because it's not only on me, Okay, we have to we have technical aspects. Okay. We have to do it with the rights. Okay. Because some of them the rights is expired. So we have to renew the rights. We have to do a marketing project on that. And I'm sure that studios want to be involved for the selection of what's more important. And after 10 years, some of those interactive projects, not relevant anymore, for for them. So. So there's a lot of

people that needs to be involved in not only technical aspects. And so far, everybody's not aligned. Because when I asked people on the production in the want to invest more in their time on new project than then talking about the vintage. That's but the question was on the people with more and more and more resources, of course, there'll be a project that will be done. But on the technology side, I'm pretty sure that it's, it's feasible. But we sometimes you have some little bit of degradation of the experience, because we came, but if for as an example, project, connected with an API to Google Maps, and Google Maps, I've changed for the time of the time. I was lucky with GDP, it's a map it's a local map and then it's not connected with an external services. If you are connected with an external services,

Giuseppe La Manna

which still have problem of course problem.

Jimmy Fourier

Because you don't get and you don't keep everything from the external resource. shows that you don't have any magic?

Giuseppe La Manna

Well, it was really, really, really, really useful and interesting. Actually, I might ask you to meet again, no problem in maybe middle of May before I go back. Because I need now to elaborate on this information because it's a lot but later on, might need to see you again.

just a last question, because I asked this to everyone, I think it's really interesting. What is your background? Like? How do you start like, your educational and professional path that led you to be now?

Jimmy Fourier

Computer Engineer, okay. Okay. Graduating 99. Used to work on the research laboratories, before the NFB for five years. But more on automation and nuclear plants, okay. And I decided to when an engineer was placed at the NFB was public, just try it for, because he gave a contract for three years, and I wanted to stop nuclear plants traveling and that was not what I was expecting of research laboratories. So it was a position that began r&d As an engineer and got my permanent, permanent assignment after the three years and suddenly my formal boss, she's left the NFB. So I took a position on that. Project. So I'm here from almost 18 years.

Giuseppe La Manna

Okay, so you've seen a lot of changes, I bet. Yeah. The beginning of interactive also the first digital projects?

Jimmy Fourier

Oh, yeah. Yeah. Yeah, exactly. When I started, the the NFB, my first mandate was to support in development. A team that was doing all the deliverables, okay. For digital results.

Interview with Jérôme Bretéché - April 26, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

Okay, first of all, is playing about ready about the project. So the project is about the evolution, and the changes in technology, and how those changes affects the perfect introduction. So I want also to cover the side of the projection of technology how the work of a projection is to your case changes. What was the evolution during the past years? Of course, I think the biggest one was the switch from DJs from film to digital Anatolian failure video digital. And I would like at the beginning to introduce yourself and explain the path that led you here this position, the NFB and then we will start to talk about the

Jérôme Bretéché

okay the evolution of production. Okay, so my name is Jehan watershed. I studied in cinema in France, first at Sabra and I had more like a theoretical background. I did the first semester degree in film theory. I did then cinema school, animation school in Prague at the Firmoo. And after that had done the second master's degree in let's say, FIM restoration from archives. So I like to say that in my study how like theory, animation archive, and when I was in the second or third university year, I also on the side, did a protectionist training. And actually, in the beginning, protectionist was considered that has a student job and not has like my full profession. But actually I've done I get that degree in 2005. So I'm now like, prediction is for 17 years. When I started, when I did that degree in film screening, when production, it was only 35 millimeters movie theater, movie theaters switch to digital in 2009, in Europe, and I can explain when that switch very precisely happened. And when I moved to Montreal in 2010, after my second master, because I did part of my master in Montreal, I moved back in Montreal in 2010, that basically a few months before the switch from 35 millimeters to but it was very, very, very impressive, because whenever there in March returned all the movie theater, were still working in 35, six months later, it was only digital, it was a very, very violent, very impressive switch. So basically, when I started to study cinema, someone told me all you can have a degree and then you can find easily drop. I was in Paris, there were 250 movie theaters. So I was thinking, Oh, why we're not doing that on the side. So I had that degree was related to like the history of technology, image sound, but also like the whole prior knowledge about what's happening. So I adopt that studies. And I realized that actually, as you said, from the beginning of the century, till the end of the 20th century, it was basically like the same technology the same, or where's the frame light and different way to read sound, but very, in a very analog way, the film changed a lot because it was first night read and it was called like, acid that the cellulose and then polyester so they improved the equipment, but basically, like the technology always was the same. That just changed the way the Will the real was handled to, to keep pm because at the very beginning it was manually change what we call the changeover, which means like, you've got 20 minutes real and you have to mentally switch from one projector to the other one. So basically, that was the 1930 technology and even right now if you go at the cinematic and you've got a 35 millimeter screening because it's where copy you exactly the production is really work the same way. To me, a perfectionist is someone who work on a 35 millimeter stream when I'm doing a digital screening and the film technician but I'm not depression is because it's not totally the same job. It's not the same way of even like consuming the process and the drug. So after that, they just evolved and increased new technology to create some kind of automatisaion. They first put some metal stickers on film with some liquid so they can detect things and so Like the changeover was automatic, so you will always have to refill the field, but the switch was automatic, then they find a way to have bigger wheels and have like very big wheels on the back, you've got all result all the spinning, but at the end of the day, it always works and thing. There were like, so in terms of image, it

was basically always the same thing, the only thing that really changed was the film and the frame ratio, the switch, they invented, like it was in the beginning very square image and 166 that you had the anamorphic for the scope. But as at the end of the day, it always were was the same thing. With the sound, it was a bit different. You first had the very analog, mono like signal, then they had the German like the stereo, which was two different

signal that it's frequency, you know, like frequency and you had like what we call exit at least a small LED that was interpreting this analog signal into like left, right. Then when the siren arrived, it was pretty interesting because at that time, they were like SMP, to try to create protocols and make the same thing everywhere. But at the same time. They were like some companies wanted to bring their own technology. So they were like three Sorong technology that requires the biggest one was Dolby Dolby always had monopole on the screening. They always had like the cinema processors, which is like the machine that interprets the sound. Still no like no, they they also do cerebral they, they're very, very present. So they they were like Dolby Surround. Sonic RET is on technology, which is the HESI EDS and DTS digital theater system create also like their Auntie Sam with a timecode that you will link to a CD. Okay, so you've got three technologies and depending on the country, people use one technology and one other technology two people ETS for the best. But the other was SDDS, maybe Dolby and DTS, but it just really depends on I can show you at some point on the field, how it looks like. But it was like the very beginning of the digital because it was an analog signal. But we've been recalled, that was incorporated into all digital. So you start from analog, but you bet the sound was a digital signal at the end of the day. At that time, I mean, at the end of the 90s beginning of the more beginning of the 2000. For different reason I can expand later, it was complicated to switch into the digital for production for projectors, but the same time like the move already happened for the camera. People were already shooting in or digitally and at that time, especially like 2005 2006 They were like blowing up some digital content. And they printed on 35 millimeters because there were no other way to screen movies. So for most of the pressure is we knew that there will be a transition transition. At some point like the editing was turning virtual in digital camera what were Digital's at the time, we all knew that movie theater will turn also to digital they will already be do a predictive DNS probably 2025 years. But they had some kind of difficulties and at that time a group or previous which is called DCI digital cinema initiative. I know you heard probably about it, you know, it's a group of major and they basically create all the rules for the digital cinema. Hollywood just prepare what will be it will be there is a group of major I don't know like Sony, Disney MGM like their whole web product that is Sony designed like something called blu ray and Toshiba work with that is not procreate HD DVD. Although they will sell it we just released on Blu Ray, no more HD DVD anymore, you know that they have also like a commercial controller on everything. And they really had to think about how we can do screening in a very secure way, how we can block the film, how we can create things, how we can fight against any kind of powers, privacy, instilling and whatever. So that's where the static EBIT DCP is encryption key DMPS but also like the also hard to define cinema resolution and the 2k 4k and the JPEG 2000, which is like the different that is used for the DCP. So if you go to the digital cinema initiative, you can read all the tags, it's super easy to find, and that that explain basically a bit everything. I can send you the link if you want, but it's like 60 pages, but they just think about the whole process of what the screening will be and talking about what the screening will be like you think about the whole distribution system. So who worked? How to switch from the super heavy terrified me murderers to like the DR. DR. or

FTP system. So that's it. When it's like the very precise moment, movie theater, switch from buddy, just the French situation I'm talking about, but I went there was witness of that. In December 2009. There were like different groups of movie theaters in France. The biggest one is called UGC, UGC.

You've got the first second and third biggest movie theater. It's interesting. Okay, they've got a big millions and millions and millions. It's like multiplex. Okay, yeah, pretty well known, but they can easily reach like 18 rooms. So it's the big thing. You've got one in Bertie, one in Lyon in Paris, two biggest university in Paris. The third one is an attorney. Very, very, like they're making a lot lots of cash. There is a second company called MK two. They're very known for production, distribution, but they start opening movie theaters in Paris. They had at a time maybe 10 or 12. But it was very small movie theater. There is more independent cinema. But they had they created their first Multiplex, which is called MK to videotape bibliotech library because it's right next to the National Library in first 14 rooms. And then you've got Google and few independent cinemas. At that time, I was working at very short contract for UGC and MQ, which I like the two guys are so big leader and better, but I was working for these two movie theaters. In December 2009. James Cameron released the movie Avatar, it's a 2d and 3d movie. When I was working for UGC they only had the 35 members so we were like screaming to the movie and at you felt like knew about it and they they realized that it could be a good idea to switch just before to like the digital to be able to screen three they use the expense attend talk about 3d because it can be interesting as well a bit later. If you remind me at the end of the the Christmas time, the Christmas holidays, UGC make a lot of profit but they lose a lot because MCAT you get all the screening and in in July they were like they were like 100% Digital as well. So either we're using like the very first Doremi system first and second generation Christie because first mostly Christie at that time but but the switch was very that that 3d film that make the difference and then no turning back to, to film, just maybe IMAX.

Giuseppe La Manna

Now that I think about it, In Italy it was the same. I remember big multiplex open next to my town, only to start to screen because he was the only one that could screen 3d movies. So they built it to have digital projector projectors and a screen 3d movies. I remember this thing

Jérôme Bretéché

but the funny thing at the end of the day is that they were like some kind of craziness but through hysteroscopic and 3d but few years later like people just came back to 2d Do you know be the difference between the three different textures Copic technology in unfair passive and it's too passive and when I clear that's expenditure is active. That's what we have in here. Okay, and Real D and the Dolby real are more like passive system Yeah, I don't know the difference. So basically like the main difference, if I just do a small recap just because maybe we're like pure information you know no activity can use like a regular screen a white one the tutorials you need like a similar one to have more luminosity but you losing a bit contrast the first one you've got infrared that you have to put on on the windows and the infrared is like the sink. So you got a small sensor between the eyes, we've got the batteries to make it work and they react to that central infrared sensors and that's what is making the flicking between the two eyes the frequency and then that's how it works. The passive technology it's polarization and the real data filter so you lose a lot of luminosity because we will be limited to you from the filter but from from the glasses and you're the ones who will inside the projector that create like the stereoscopic I don't really know much but yeah, pretty different to the original 35 quarters but that's what was designed by the same time Yeah, I won't say it's anecdotal but not sometime it's more gadget center

Giuseppe La Manna

so you were saying me that the difference between a projectionist before and now

Jérôme Bretéché

technician Oh, yeah, it's just the way it works. Like let's say that in the very beginning you need one person per room. If you have a six room cinema, you need six pictures. At the end of the day, they try to create some kind of automated dissertation to be able to make a whole screening so you load the theme, you start the theme you do the focus you check the sound changes on between the advertisement and film but when the film started, you can go to another room but still like a production is limited to five to six room. So the production is had a lot of work to do you have to do the editing of the film he had every time you change advertisement, you have to remove any you had to do like like Steam back, you know, we've had to change all the things now everything is computer, you know, so. So to me, it's a different job because we spend more time doing computer than working directly and playing with, like the mechanical kenyataan. So that's, that's, to me the main difference. I think that we increase we have way more possibilities with the digital because now you it's a bit limitless. So yeah, it's the same logic, the same technology, I mean, so was like light image, protecting image and interpreting someone and putting on speakers but same time. The way you walk is different because you don't use the same tool. But I think that I totally understand like people who are very nostalgic about film. I want you to think that when I'm going out spending and I see some very where to find me murders film, I'm very moved by what I'm looking. But I can also accept the fact that digital brings you like somewhere else and far away like you can do so so many different things. I was previously talking about the fact that before you start recording that I already work on art installation, we have 35 mm matters protector, like the infinite loop is something that was mostly designed the beginning for museum, but also for the purpose. But I know more than the museum part. You know, like when when he was working as creating a loop in 35 millimeters. You always have like destiny hair, you always have possibility to scratch and if you watch the same film, a different moment. You won't see totally the same film. Just give you an example. There was a group and it was pretty nice actually. Fluxus group of artists in New York, Andy Warhol and all that we got to call your call no and there was one flexor strain which is pretty nice. And it's a totally blank 16 millimeters stripe and they just put Hi Anil line on the side. And I think it's a bit sticky. And in Paris at some point we do, they were like this installation in the middle of the museum, I went there for the opening. So it was a totally blank screening. And I could barely see, but I could see on the right side is vertical line. And it was a very nice exhibition. So three months later, I came back, and they were the same age division. And at that time, after a few months, I was able to see a lot of dust, little scratch on film. And this read this line on the right side just get very, very, very messy. And because I really loved that exhibition, I also went just before the closing. And when I get back to the to that part of that installation, that part of the exhibition, it was just like, madness. Like, I don't know, like, insect fight or whatever it was just crawling and so. And I realized that, oh, when I watched like few months ago, it was just a blank film. And I think that was also the idea behind this, Fluxus installations as to to see that how time and space but physical space can have an impact on the film. I'm playing loop sometime mapping on odd outdoor screening. There is like an installation with 24 screenings in all protocol, the movie alone is

I'm not working there anymore. But I used to work there. Like the past few years. And we always create this, it's digital, we always created the same thing. You know, they were like the same loops that our screen on the National Library or on Plaza. If you watch the same, that loop in three years, we had the exact same screening, it could be good, it could be bad, but that's a major difference. With the digital, something else I can that is really important to me and make a big difference with the digital is that the installation I was talking about more material on the store and you can have a look or I can send you links about that. You've got what they call Tableau pictures, you got 24 screening some of them we use 16 laser projector, okay. supermassive and super huge. And because we spend some time on dark walls we have like few predictors quitting overlapping you know, the layout you got the screening. But at the same time we've got camera we don't have tracker there's that can have

movement trackers, three movement trackers, but you can also have movement detectors sensors. If you go in specific space place if you make some specific move that will start the film. We've got also some kind of sensor that makes you interact with the film. For instance, there is one screening where you have like different pattern but one pattern is a river. And if you walk on the river like the fish are avoiding you you know like you're you walk in the snow but where you will just know turns into like grass, for instance. So you can do that kind of tracking and you can in real time interact with Publix. Is it good? Is it bad I'm not making any comment but that's what Moment Factory and many companies do. And they do that with the 35 and you can only do that with digital. You got the digital screening but we've got all the networking related to the digital screening that all of you like this kind of supercomputer that although you allows you to go somewhere else. So and what else we can do with that? Yeah, and we can also link with the public lightning, no we can shut down the city lights and not talking just about like a switch on on the room but I had control on the city lights and other things like when you walk there, you can remotely control things. You can almost control from your phone from home 164 projectors plus servers as well. And when you walk there you've got like this kind of big station they like here with like 1234567 screens to have a point of view. You have access to CCTVs cameras that film everything so you can control it. different places. And with the networking, you can know precisely if everything's right. I mean, in summertime, you can control the temperature of each element of the predictor, you can control so many things we have, because it's outdoor events, so many issues, because you can have birds that just block some some sensor, you can have spiders, put spider webs and create reflection and things, just got graffiti artists who just jump on the on the projector and make it do that. So then you have to recalibrate everything because people jump on the boat without even knowing it, whatever, a predictor inside but, but when you've got that kind of issue, you can also like with a laptop, redo your calibration and do so many things. When you work with, you can do like outdoor screening with film, but everything will be mechanical and physical. So that's maybe some parts of talking about difference between digital and analog that could be some example of

Giuseppe La Manna

how does your work merge with the production pipeline? So are you involved while they produce here, for example, in NFB produce some movies, something? I don't know at which point are you involved?

Jérôme Bretéché

More pottery production is the last part. But if you want me to talk about the difference between analog and digital, it totally changed as well. In terms of film production, like the NFB, it was a bit the same when I was making film. You know, for instance, I was pretty lucky. But I worked with in animation in Prague with great filmmakers. And I remember, you know, like, I'm just, I'm just doing a small panel test with like, the production and then I will talk about the production. But in production, you know, I was working with a very old school, very old school film director, should they enjoy five editing because Tim Beck doing animation, stop motion, that's the technology. I learn and I'm working on. He had this 35 each check, he was doing any measure, and he was just saying checks, numbers in check, like 1234 years old boss, God, whatever. And it just two things it was moving into the back to two pictures is move a bit to pictures. We had no idea. But I know like animators were very skilled. But we had no monitoring that thing feedback. Yeah, at the end of the day, they were like two or three hours out of town of Prague, that just bring the small reel, they went to Barrandov studio, which is the big studios, they're sending the small wheel to laboratories. They had a meeting a week later, so they had to come back to Prague, they had a small production room, rationing scam, Fill him screened the film, they try to look if they're happy or not at all, we have to watch it again, you have to rewind the

film. Feel it again, a second time screen it now when you do animation, you've got a digital camera, you've got right away like your monitoring of what you do. Every time you take a picture, it's automatically goes on into a timeline. And you can screen it right away, you know, and you can check and if you make a mistake, you can go backwards, you can erase a picture you can. So you see all the improvement made with digital, it's almost the same with the production. Before production is when it was filmed. Your you had to go through like the laboratory before being able to do a screening. Right now everything is even non physical. I sometimes have disc in movie theater or film festival, whatever, they will always give you a hard drive to dry whatever you plug and you copy the data. But right now you know I just have server. I just give you an example. We've got like the uptime of optical fiber, we've got different kinds of work. When when you're right, I was preparing this 1pm screening. I just get the information half an hour ago. I mean in terms of time, it's very, very short. They just finished to do export em except export. So I've got to export that are on a server somewhere in the building. I don't even care if it's on the first second third floor. I just had to find the location and copied and it's three short film three people working together. The third person are still working with the online editor. Okay, so what happened Is that for the third film, they won't be ready for 1pm. So they will be almost ready. So the thing is like, I will connect to the optical fiber to the online, I will leave my laptop, take control of the computer, and I will screen at the same time, like what you're doing, you know, I'm able to, to get into like any person room. And instantly like put the image and songs in the on screen and in the movie theater and press play. So that makes you save so much time. You can do in real time, the color grading you can do the Old Navy, like the movie theater used to have a big table and people plug plug the projector and were trading everything at a real time. So that that really change

I really do think that the movie theater has more equipment than the momentum. But because the momentum is mostly designed for the mixing, you know, but they can have access to many things. But we can do more we can do also, as I said 35. And we can we can log basically a bit newer. So that's the difference. We've got this lighting system we've we've got, you know, these cameras, where we can you know, we can see people we can we've got to talk back so we can communicate with the room, we can hear people talking, I mean, if I, I will do like a small tour to explain a bit all the thing we have, but it's a very specific place in here, but nothing to compare like to meet two different worlds. And that again, the unfilled totally two different roles.

Giuseppe La Manna

what were the main changes, like how the technology evolved? And what was the most difficult to adapt to?

Jérôme Bretéché

It depends who you are asking that question. But just from from from a perfectionist, just depends, because right now we are in the studio. Like we don't do much topic screenings. And we mostly work with the film production if you talk about Cineplex or multiplex. Actually, yesterday, I was working because there was a festival on the multiplex called calculator. They have the set, it's, to me really bad, but they have the same equipment in the very beginning. But there are a few improvement, but the way they work already was designed a bit by like the Multiplex, and by DCI, you just create when you work on the movie theater, you've got your GCPs your CPL, your films, advertisement, movies, and other blah, you create playlist, like a specific order of DCPS you want to play, okay, and then you've got what they call the scheduler and you just create like the playlist one has to play at 12 The plan is to as to play at 2pm. And when you place for the press play, you've got your screening, but you can change your masking, you can change your your macro like TVs flat scope, you can turn off turn

on the light, you can do all that stuff. And everything is like automatic automatization. They were the from 2010 Till now, they were a few improvement. First of all, when they start switching to digital, the technology wasn't there because of the DLP the technology wasn't there for the 4k. DLP, it's a micromirror that move and close and open, you know, got red, green, and blue in a very specific amount of time to create like an average like percentage of green blue on each pixel. Yeah, so x pixel is micromirror. Yeah, four 2k. You've got 2048 wide and 1080. When you switch to 4k, you multiply by two the number and by two vertically and horizontally. So you multiply by four in the same and they had some nanotechnology issues. It was not even the mirror but the axis has to be so narrow and If it was too big when they open the mirror that was creating some reflection, okay, so they were stuck with that, but just the mirror they're so small that actually like the robot created the DLP they had to spread the mirror it's it's crazy so that's why they lose time so the 14 was the first improvement and by no like but we are still in the process I mean waiting for it, but the laser will be the one of the new technology laser I mean, journalists like the three P six P but there are still lots of work to do, they did lots of improvements with the speckle effect but light interpretation is pretty very hard to get because it's very very narrow like the the wavelength so when you accumulate different things you like what we were supposed to have a laser but we had some metamerism issues, we we didn't have the proper color and because we do color correction it was we had to wait a bit, but laser will be like the big improvement because you can reach like 6070 80,000 lumen light duration of a bulb like lamp xenon lamp is about between 712 100 812 100 hours it's it's 20,000 hours for for laser so that will be light and you will be able to do basically whatever you want you can have wear darker black as well. Because when you screen black so I think in terms of perfect journal, like the laser will be like the big improvement for the next few years in terms of sound is like immersive sound as we said before that's I think a big improvement but same time I don't know how fast and how like how many movie theater will jump jumped into like that new technology but but yeah, to me like the major difference is not like for the commercial cinema like it's for these kind of places because in here we're always improving to improve because digital will be multiplied the possibilities, of course, but who has adjust to

although like the whole production, the whole production system to be part of to to see very easily at any can at any time of the process. Like what it looks on screen, you talk about my my role a bit in the prediction prediction prediction system. I think before like for the 35 millimeters prediction is huge, just created almost at the very end. Because you you won't go to laboratory until you're almost sure it's done. And right now you can be proud in the very early process. And because you can also remotely control from the movie theater, you can also communicate way more with the production team. So sometime I'm not saying all the time but sometimes you are actually a bit part of the process because you talk with the film directors you talk with the you also give your hands because you know when you study cinema when you watch him all the time. Yeah, you know a bit about editing and different thing and you can see sometimes things that people don't see or you can give a suggestion or make make comments. So actually if your production is like the country will select cinema sometime it can be more involved into like other people. Production. So that's the major difference. Thank you. I think a lot. Yes, I talked a lot.

Interview with Robert McLaughlin - April 29, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

I would like to ask you to introduce yourself, tell me what is your position inside the NFB, and a brief history of the path that led you to this position, both educational and professional.

Robert McLaughlin

My name is Rob McLaughlin. I'm the executive producer and head of the animation and interactive studio at the National Film Board. My personal and professional - educational background is: I grew up in a family, where my father was one of the first people to start working in television. He was a radio announcer. And then in the late 50s, early 60s, when TV stations started opening up across the country, he transferred from radio to television. So I grew up in a house that always had some sort of TV equipment, I would go into the office with him and play with the equipment and he would take me on assignments that he would be on and I would do things from my carry cables or carry batteries or erase tapes, magnetic tape, stuff like that.

So I've always sort of grew up in a house where audio visual things were always sort of part of my childhood almost.

In high school and university I had part time jobs working in TV stations as well switching TV commercials or editing videotape, even cutting film.

During university I had part time paid jobs all my way through university, working in television, mostly, television, but also radio.

I went to university, I studied journalism, ultimately, after a political science economics degree. I went to study journalism to be a crack newspaper reporter, because I wanted nothing to do with TV for some reason, then I got a job.

Well, in journalism school is where I discovered the internet.

It was 1996, Yahoo, and browsers started to become a thing, Netscape.

And I sort of was intrigued by the technology that powered the internet, things like the hyperlink and what it could do for storytelling.

So I learned in university some HTML programming and how to use graphics and apply them to the internet.

And then I was offered a job to work at a newspaper in Edmonton. I worked in newspapers there for two and a half years and the URL Well, 1997 to 1999. Making things for the internet.

Nice way to start, oh, my god long. But whatever you asked newspapers, then I get offered a job at Canadian Broadcasting Corporation, CBC, the public broadcaster because of the internet, and then I then I started working in this convergence of how can TV take better advantage of the internet and I worked there for a short time and then was hired to be the executive producer of sort of a culture piece where I lead a team of 35 people making radio programming, mostly music programming for the radio and the internet at the same time, and I still was diving into storytelling and experimenting with new forms of interactive storytelling for the internet at CBC for many years.

I left CBC because I got offered a job actually here at the film board, and I started the film board in 2008, I helped found the studio with my colleagues, the interactive digital studio in 2008, I started and I worked from the film board till 2011.

And then I quit and went to work in newspapers again. And I worked as a senior executive, again with the Internet called colliding with another form of media, this time newspapers and the business.

So I work to help sort of lead staff through changes about how to write differently for audiences that aren't reading you in the newspaper and how to transition the business ultimately, so as senior executive business role.

And then, after five years of that very difficult work, because mostly it's about efficiency. How do you keep the business going? When your revenues are dropping, and these other revenues are slow to come?

I thought I'd take a break and I got offered a job back here. So since 2016 I've been back. So that's almost six years, I came back to lead the studio that I founded back in 2008. And then, I'm sure you only maybe saw some of the news a few short months ago, that studio was combined with the animation studio for a bunch of reasons that I can talk about later if you want.

Giuseppe La Manna

Eloi told me about it. Okay. Cool.

And when did you discover the storytelling power of the web?

Robert McLaughlin

So when did it start to strike home for me? In 2000, there's a technology called Flash that was the sort of explosion of animated, interactive storytelling because of one soft piece of software, which was flash, I was a fan of that, I saw designers, graphic designers really grab hold of that and make amazing things on my computer screen with relatively low download times.

Because remember, at that time, the internet, the pipes weren't quite as big. So it was always a balance of what can I do creatively and deliver to somebody's home, essentially. So the trade off wasn't imagination and, and what's possible, while part of the what's possible to do had to do with the transmission of this, so I really enjoyed that sort of challenge around how can you manage this amazing piece of software, which I, you know, I don't think anyone's using today, but it was very powerful.

But you had to figure out how to use it in a way to deliver small sized stuffs, and I liked that. So in 1999 to 2000, I was playing at home experimenting, following cool people do amazing things. And as a journalist, I was fascinated by his potential for narrative, not just for graphics, not just for design, not just for motion graphics.

So yeah, even back then I started thinking about it. And there was some places like word magazine, was old school, internet, stuff that use things like frame sets and animated GIFs to tell stories.

So I was fascinated by that stuff. But as a public service journalist, it started to come around, well, no, even back in 1997.

Like the Internet has always been this place for experimentation and storytellers. There's not as many of them as, say, software engineers or business people.

But storytellers were there. I remember, in 1997 1998, we, I did an experimental thing with a story about the space shuttle and built this thing where the Space Shuttle was launched on your screen by clicking a button and then it would automatically scroll this image up and it looked like and then the story was about the people that have to blow up the space shuttle if there's a problem. So if the space shuttles fly, all sudden, it's coming, it's gonna land on Florida, there's a button you can press to explode and kill everyone. Yeah, so is the story about them. And I love that story. Because it's that, you know, that human drama in this technology, so I built this little special website, when I was working at the newspaper, it took a day, maybe I did it.

And people at NASA sent us emails back in Edmonton saying I saw this thing is really cool.

So even then that sense that there is someone that might enjoy this sort of different kind of thing.

But at CBC is where it really kind of came together for me at that group called CBC Radio three, where we made weekly web magazines essentially, and told stories that way. Even back then, engagement numbers were good.

People were using the internet to read and consume content. Napster was a thing. So the pipes were getting big enough to consider it as a viable music delivery thing. Video was still a bit early, but we used a lot of video too. So the internet, yeah, since it's my first look at it, I was like, Oh, this is interesting from a media perspective, right? Yeah.

Giuseppe La Manna

And what was in 2008 the reaction of the NFB to this new kind of storytelling?

I imagine that, suddenly, after years of classical movie production, this change felt strange for some people, no? and how did your studio manage to get involved into the classical pipeline of work of linear storytelling of the board?

Robert McLaughlin

Yeah, it wasn't easy. The film board, while it does have a great history of experimentation, and risk taking in, it is inherently a very conservative organization as well there and even more so now, in some ways, very bureaucratic.

I think it was less bureaucratic in the past, because it was bigger and there was more room probably to sort of go around established processes. So in 2008 there were some brave people, like Cindy Witten, my boss was the best and awesome at like, protecting us from too much questioning, challenging. She cleared roadblocks for the work to happen. And Monique Smart was also in Montreal, you could talk to her if you wanted.

Or you could talk to Cindy too.

They were the bosses that protected me and my colleagues from being squashed by people that might have dismissed it, because the answer to your question is yeah, there were many people that didn't understand.

Why would we build a website when we could make a film? And we tried to demonstrate the creative potential. And I think there was some success there. People appreciate art in the film board. And when they saw it as art, I think they understood it.

When they saw that story. I think they also understood that there was a benefit. And then we made the argument about reach.

That, you know, we could reach 1020 30,000 people quite easily where a film would take a very long time to reach that kind of audience through festivals or screenings.

And then it wasn't always easy.

The harder stuff was more around how do we pay these people? How do we contract these people? What are the legal implications? And then how do we deal with things like accessibility, which is a big part of public media, we can't just make it for a small niche, privileged group? And how do we do all of those things?

But yeah, leadership, I think Cindy and Monique could, you could not we could not have done it with they were not helping create a protected space in some ways for the work to happen. Yeah.

Giuseppe La Manna

Many of the topics of visibility and accessibility of these kinds of interactive products can also be applied to virtual reality, augmented, right? A lot of the previous interviews I had we had been talking about it. What do you think?

Robert McLaughlin

Well, it's ongoing, everything, everything that wasn't possible. Well, not everything. But sometimes things that weren't possible before become possible, sooner than you think. And sometimes you think that things will be possible. Don't become possible, okay.

So it's a bit of an ongoing iteration and testing of where the current landscape is. That's how I approach it. Other people will disagree and want to simplify it. But for me, I don't know when things will reach a certain scale, I don't have to place big bets on that, I can place little bets on that.

So we're iterating and testing all the time through our work, even if instead of trying to produce massive projects that demonstrate in a singular way the potential of a particular technology, my approach has been to place more bets more frequently and smaller.

So when it comes to VR, in order to produce them, I am asking my producers to plan for engagement strategies that put real numbers in place for cost vert and, and audience engagement numbers, just how many people are going to see it and where are they going to see it and how much is it going to cost?

Because ultimately, that is part of our responsibility. I think as media makers, I'm not making things and then asking someone else to figure out the distribution, right?

Whereas in film, no one asked that, right.

We leave that to other pieces of the value chain, and that's cool.

And that's good but I feel responsible because I'm a public servant, that the film board should have that responsibility.

So yeah, I'm not making million dollar things, and then trying to figure out how more than a couple 100 People can see them.

I'm trying to do it. We have projects now that are planning bigger tours, managing the cost of those tours, calculating, there's only so many hours in the day, if you put five headsets and how many people can come and see this. How do we do that work?

So we're becoming better at the distribution side of these things that require special hardware?

So yeah, the short answer is we're trying to plan for that. It would be a mistake not to experiment. I think with these technologies that are coming, at least a little bit. No one should feel pressured to say we believe it's the future of anything like I think some people did with 3d TVs and things. So yeah, small bets. Lots of testing, lots of experimenting, and evolution.

Giuseppe La Manna

And coming to the production side of this kind of content.

Can you describe what do you think are the main differences among similarities in producing VR or augmented reality and a web page or a website, web based, interactive project?

Robert McLaughlin

Between those two?

Okay, interesting. I thought you were gonna ask to compare that to film production. Because most of my challenges here are translating, call it interactive or digital into film language people understand.

Web based versus VR AR.

I mean, the challenge of web products is far more stable. It's far more predictable. There's more expertise and more people around building websites.

Now. The XR VR world is no established commercial business so how to manage its cost and its talents to deliver that stuff.

Everything's a bit looser and a bit weirder.

And you always need to manage that stuff.

But when it comes to web based stuff, the language has been developed, we understand what our pipelines are there or could be. And even browser challenges, cross compatibility between hardware and then software. Things are still not easy. But they're much easier than the XR VR space. Yeah. Yeah. Just the establishment of all of it, whether that's talent, platform, pipelines costing, it's still pretty loose on the XR side of things. Yeah.

Giuseppe La Manna

Back to the differences between linear and the interactive?

Robert McLaughlin

I have scars from trying to figure out how to talk about the differences inside this place, even notions of we use the word development, is the project in development, or is it in production, even that alone, that simple thing?

We're trapped by that thinking, right? Whereas if you're building a website, there isn't a development phase. And then a production phase, you just develop a website, and the words mean different things. And how you plan for the work to happen is so different, fundamentally, creatively, the form of film is very established even though there's differences in nuances in that.

Whereas in discussing web based production, you have to decide what it is like first, even if it's, you know, it's in a browser, you still have to know what the quote-unquote experience might be or trying to shoot for. I could go on and on about those facts but the matter is I work inside a film institution, and it understands its processes and its culture through filmmaking.

And I love that I do. I love it. I think it's awesome. invaluable. It makes the work for other forms of media harder because of that, but that's okay. Yeah.

Giuseppe La Manna

Yeah. Okay, thank you. And what do you see in the future of the institution?

How do you think that NFB is going to face a possible increase of new technology storytelling such as VR?

Robert McLaughlin

What? What do you think that film board exists to do?

Giuseppe La Manna

Tell stories about Canadians.

Robert McLaughlin

So if the film board's only job is to tell stories about Canadians, we'll keep doing that. That's easy.

If you believe the film board's job is to, to engage Canadians, you see this last piece that I'm connecting it to, which is how do we simply tell stories?

Does anyone have to listen to those stories, right, is the work we're producing finding Canadians.

That, to me, is a big part of determining the future of the film board.

You're looking at the last two years where physical film festivals have not happened. Yeah, those business models are changing, because those are businesses, their cultural institutions, too.

I know that but, those are changing things, and the expectations of Canadians about where they're going to consume.

Stories about themselves are changing as well.

The future of the film board will be determined by how well we continue to adapt, I think, in our media making, so that we find the audience's that we need to not discount the authors and the artists and creators.

They're the heart of the film board. I know that. And I'm not discounting that.

But even if we are serving them, as best we can, without an actual connection to the Canadian public, that film board will be challenged to exist. Yeah.

The other thing you have to realize, if you're writing about the film board at all, you have to give the context for which it exists. And it exists in a heavily subsidized Public Media, arts and culture landscape.

There is no profitable business model in Canada for making, you know, there is not without the government and without public support. I don't know what would survive. So ultimately, we exist in that ecosphere. So if we the other piece of the film, but if we're not act, and I don't know who's talked to you about that, but like if we're not producing, actually leading in the hands on work, that I know you're interested in, like, the hands on work of being a producer, with our artists, experimenting, looking at technologies, thinking about that, if we're not doing that, and we shift into simply being a funder. Okay, there are other funding agencies in Canada that will kind of usurp us, I think, yeah.

Giuseppe La Manna

What do you think about the role of producer? Because we had a really interesting talk with other producers. And they told me that now maybe, especially with interactive projects, the producer needs to know more about the technology of the project he's working on.

Do you think that the role of the producer is changing or should evolve in something more technical, or at least with more knowledge of the technology?

Robert McLaughlin

Wow, I mean, I live in a place where everyone accepts easily that people understand filmmaking technology. I wonder if we don't underestimate the amount of technical knowledge our producers have when it comes to filmmaking. I go into one of these: I was in a Foley mix yesterday for about 20 minutes. And I was watching them, the engineers said and he's got Pro Tools open. And sound directors sitting in the foley artists are in the back. And it was very fast and very coordinated. And the producer was also sitting there very comfortably. There was no disconnect about the actual understanding between a microphone in another room and syncing all of the sound into the Pro Tools session.

That to me looks super sophisticated. So Can she help in Pro Tools no, but I think we shouldn't underestimate the amount of technical knowledge our filmmaking producers have. On the filmmaking side.

The bigger question is, do they need that same level of technical understanding in interactive?

Yes. Yeah, for sure. Without it, you can't do it. Like, if you can't imagine, you can't creatively even think about the possibilities.

It's really challenging to lead and understand what's been done, how it was done, why it isn't innovative and where we can take that from?

Some of the pitches I get sometimes from producers that don't live and breathe really interactive work, are works that are so basic, around their understanding of the technical capabilities, right, like, so yeah, they need to know.

Okay. But don't discount the filmmaking knowledge on the tech is they're fucking up here. Right? Like, they know the technology and filmmaking too

Giuseppe La Manna

What is your point of view of preservation of interactive projects? I've talked with different people about how it is also part of the mandate of NFB to preserve the content you create, but for interactive projects, especially now for VR,AR,XR is very difficult.

Robert McLaughlin

It's a big question. Like, because now you've poked my brain to think about why does the film board exist?

Preservation was part of the original mandate of the film board. It's great that we can preserve our film works and our video works. But the reason it's easier is because there's a massive industry to support that period.

Websites die, they have a fixed life span. And that's okay by me. Should we protect websites that we have forever? Why would we even think that's part of what we're supposed to do?

Like I get it's art making, and there's ways that you can preserve certain aspects of it. I'm okay. I'm in a bit of a minority to be honest. I'm okay.

If media has a lifespan. It's not for me, it's not automatically a tragedy that the website I'm making is only going to last for 10 years, and then is gone forever.

There'll be writing about it. There'll be documents about it, but so I'm okay with that.

In the interactive side, we do plan for so that the answer to the real to your other question is in the digital interactive side we plan for, like I say we plan for engagement.

Part of that is understanding the cost of maintaining a website. We purchase licenses for technologies that last for how long? And after that we will make a decision about whether it still has enough value to keep paying for this license? This is the easiest way.

I don't think Jimmy is quite aware of that in the same way. Like I don't plan. I have a website that will probably get turned off next year, which is only two years old because I'm not going to pay for the IBM Watson license anymore. And it had great value and delivered meaning to many Canadians in the right way. And so we plan for it to be a two years thing.

Jimmy won't know that maybe yet. But, yeah, so it sort of depends. It's a tricky question. Right? It sort of depends on how you think about what you're doing. If you think it should be preserved forever, then your budgets are gonna need to be very detailed, and probably bigger.

Giuseppe La Manna

I am really curious about this topic, because usually we are used to thinking about art as something that lives forever.

Robert McLaughlin

You know, theater for example is not. Theater lives in the shortest moment, and is taken away in the hearts and minds that could get all poetic.

But theater is a bigger art form than anything you can imagine on the digital side interactive, except gaming.

Does gaming live forever? Gaming is the third largest employer, Canada's, the third largest employer in the world of people working in video games. It's an industry that's bigger than Hollywood, and film and television.

No one makes business decisions in the gaming world, our cultural decision to say, when we make a video game, it needs to be playable on consoles that are 10 years old. Right?

So art isn't meant to be forever, cinema, people think art needs to last forever, but it isn't art, you know? See how I'm like, you know, people are gonna hate that. People will hate that. Right? Because we've embodied that preservation role that the film board thinks it's playing, it's really only preserving its own stuff so we're not preserving anything else of cultural value. So the preservation thing is kind of new at the film board. For me, it's like, and I'm not sure it's the core, the core of what we do.

Giuseppe La Manna

I've been talking with a lot of people, and especially after the last technological plan, they've been talking a lot about preservation. That's why at the beginning, I didn't even think about it when I started the project.

Robert McLaughlin

Oh, yeah. Okay, so when I get invited to talk about it, I don't.

Because I know already the conversation is how do we preserve? Not, should we?

And I'm back at the should we... So no one wants to hear from me on this because I'm out of sync.

And I'm okay with being out of sync. And I just try to remind people, I do plan. These are public. I'm a very ethical public servant.

And I plan for the work I'm doing and everything is transparent.

And I plan for engagement and value that that material can have over a certain time period for an audience.

I'll also tell you this, on the flip side, it isn't easy to preserve. In fact, over the last three years, I've taken old Flash websites and redeveloped them with updated technologies, and spent a considerable amount of money saying this one should still have value.

I will spend money on it, to translate it into another form that will have another life, but it won't probably be forever either. Right. So it's ongoing. Yeah.

Giuseppe La Manna

Okay. I'm pretty satisfied already with what I have for today. Maybe later on, I will need another half an hour to just refine some things in the future. But of course, we can do it online when you're back in Vancouver.

Robert McLaughlin

What was again the title of the project?

Giuseppe La Manna

Changes and Evolution in Production for Audiovisual and Interactive Content

Mostly, I want to see if the classic movie and TV production manuals and standards can still be used in the production of interactive.

Robert McLaughlin

Okay, cool. Yeah, I mean, there's tons of talk about there.

We didn't touch on one thing which is really interesting about the production techniques, then ultimately, we're not seeing things come together, I would say we are seeing things do this. Okay?

And of course game engines right now, right? It's all unity, unreal. And then thinking about that. In Canada. Like I said, we're the third largest employer of video game makers and we have a massive amount of artists and technicians that know nothing about really film and television that work in in completely other sector that I know could speak the same language and plug into this and we see it with virtual sets and stages and everything that's happening.

I know that so I know I was very specific about those technologies. Where that where the and right now you can see them bumping into each other. Right?

And what where that will go I don't know. But I do think somehow they're coming together in interesting ways. Yeah. Especially in the animation world. Like you know, what is oh tour animation in the age of unity right in the age of Polly's and stuff like in this place, we think oh to animation has to be almost like drawing on. Like, we don't and I know that.

But like somehow there's still this institution that is still evolving. It's thinking about what no tour is, I think, yeah. Which is awesome. And it should be because it helps to find that but yeah.

Interview with Donald McWilliams - May 3, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

My first question is, if you can please introduce yourself and what you've done in your path inside the NFB, please.

Donald McWilliams

Okay My name is Donald McWilliams and I've been connected some way or the other with the film board for the last 54 years. And, but I've been basically in the building for the last 40-41 years or something like that.

So I have seen quite a lot of changes in the way the place runs in its relationship to technology.

So go from there.

And I've been a filmmaker. That's what it is. Yeah. And I sort of lost count of how many things I've done. But anyway.

Giuseppe La Manna

What do you think were the biggest changes concerning technologies that were involved in the production process?

Donald McWilliams

Well, when I started at the film board it was all mechanical technology and when it was created in 39, their equipment was very bad, it kind of really didn't have much of a film industry.

And so you always heard complaints from people and everything kept breaking down.

And you probably notice there are animation stands. And they were basically brought in by McLaren. During the roundabout, the end of the war, the very high standard of equipment, but as I say it, they're not untypical, since they're old, but the film board was always very good at making things work.

And also, they did have, for example, I worked a lot on the optical printer, which predates Adobe After Effects. Yeah. And the film board had the state of the art, I mean, they had two optical setups, were the equal of anything in Hollywood.

And so there was always a great deal of interest in technology, but the important thing about the technology at the time, and mechanical technology, which is **essentially a reaction to needs**, which were being expressed by production.

I think now with digital, because it's so demanding, intellectually, I think the technical people play a much greater role in deciding what the film wants to get to know then that was to detect the digital technology changes so much overnight, that you can leave it to the filmmakers to be with everything.

But we had technical staff there that invented underwater sound recording in the industry and he also built 3d camera rigs. And he also also played some part in the development of underwater housings for shooting, not just the recording.

And so, he, most of what he was doing, were was a response to filmmakers saying we want to try we want this, so he developed a thing which actually went out of use, but when when they started to develop when the Niagra tape recorders appeared, and it was the whole question of it running in sync with the camera.

We developed a thing called the quarter inch tape and it was called sprocket tape. Yeah, it has sprockets in it and this only lasted a very short time.

But he did it not because He suddenly thought, Oh I will build it, but it was because filmmakers said we need to shoot with this lightweight equipment but we have a problem with synchronization.

So he developed it.

There was this tendency for the audit technical advances to come from demands within production. So, but the film board did sort of keep our eye on tech.

For example, a camera from Stanley Kubrick, which he used when he did the Stargate sequence in 2001, we bought one of his rigs. And I'm the only person in the building who got any footage out of it. It was a very complicated camera, but it was mounted on an animation stand.

And then the film board also got into the front projection. And I was involved in that as well. But, but, but these things were kind of short lived, because it came quite late in the day, it was just shortly before the digital era arrived.

And then in the digital era, a lot of these things started to be done with CGI, rather than mechanical setups.

But the basic progress that has been a very important factor in all of this was when the film board started to get rid of its staff filmmakers, okay, which was roundabout 1995.

And so what happened is, since you didn't have a nucleus of filmmakers in the building, there was nobody going over to the technical side of the pinball and the same thing also the the lab was closed down and because we stopped developing film, so a lot of because of all these kind of internal changes the they became then this reliance on the development of technologies outside the film board rather than with within the film board.

The digital era has had an impact in that way. And the the big problem the film board faces now, which I'm sure Eloi has mentioned to you, it's very hard to keep up with all the developments because the film doesn't have a lot of money well, we have a lot of money compared to some people but there is a lot of clever I think improvisation executed by the the "Elois" of the film board to keep us connected to know until the developments in the digital world and he said it was just saying a few minutes ago that it was he found that at this meeting he went to last week ground nor that we are had the camera there as a head of Europe and in many of these, things connected to VR, etc.

We are but but what I think what what is happening now is that, the Film Board wants to do certain things with filmmakers, you want to do certain things and we have certain technologies but it doesn't always it has to be we have to rely on the digital WizKids as I call them to actually make it work at the level which it's ideally.

It should be a given that we can't afford to go out and buy all the latest gizmos because they all come out of date very quickly. So it's a very great challenge.

But I think that the film board as a historically was always interested in technological developments for a very simple reason: documentary filmmakers wanted to have more freedom and so they had to develop lightweight equipment.

And so the lightweight equipment for shooting documentaries was partly developed inside the building and partly modifying equipment that came from outside.

And then as you mentioned, McLaren was very interested in technology. And he challenged the optical printer to do things that it didn't normally do, for example, the whole film Pardo, which is this multi image film: people had done it before, but nobody, they were trying to make a film, there was a whole film with that technique. And so the technical people in the film board, but then delighted to have this challenge.

So, again, I'd say it was an example of the technical people in the film board responding to an express need.

When we did Narcissus, and this, technically, was an incredibly complicated film.

But as Norman said to me, if we have now of course, in the digital world, we could have done it in an afternoon.

But, the thing is that we were able to get it done, because the technical people in the film board responded to the challenge. .

And, for instance, I am probably almost the first person who entered the digital world here. And I had no choice, I was told, I was asked to make a series of films for this film, what we asked to make for television, and then they said, You're doing them, I said, Fine, that's great. And then so yeah, but you have to edit them on an avid.

And they just bought the AVID, it was kind of very primitive at first, but I didn't know the first damn thing about computers.

And so, but again, you see, the film board had decided that they were gonna go digital, and they were going to get the equipment and the filmmakers had to adapt to the new technologies.

They didn't want me to use the Steenbeck anymore . And so I think that the nature of the change is that technology has been playing a bigger role in the approach to the filmmaking than it had, in the prior days, where it was essentially a response.

The tech, there was a technical response to the demands of filmmakers that were made. Now the filmmakers respond to the technical demands, or technical rules, where they make the films.

So I have a situation where I work with infographics because I haven't got the time or the energy or the brains to, to learn all the technical things. And in particular, they change almost every day. I mean, if I don't add it for six months, I come back, and there's so many changes on the avid to do a lot of relearning.

So that's basically the history of the film board. But there are, as I say, that has always been this enthusiasm in the building for working with the technology and even challenging it to make the optical camera do things it was very complicated to do.

And, then I remember the film board did a lot of shooting on green screen.

Well, it still does now, but not, but there was a great deal done of that.

And it was a complicated technology at the time, and then you had to use the optical printer, as well.

And so it was very challenging, but people know, oh, great this, this is what we're going to try and we're going to make this technology work for us.

Giuseppe La Manna

Do you think that, as you said, before it was more technology in the service of the creator and the storyteller, but now maybe for some kind of works, it's more storytelling in service of the technology? So maybe the creator is more into the use of technology than the story itself.

Donald McWilliams

Yeah, I think so. And of course, as a consequence this gets into another area you can look at films and say that, I mean, I can think of the other animation films I've seen where there's too much attention paid to the technology and not enough to what you're trying to say.

So there is a difficult balance, it's very easy to get, the thing is, now you have so many choices. And so, sometimes things take a lot longer to make than they should because the filmmaker keeps changing his mind. So all the technology can do so. So, yes, you can't talk about percentages, but the recipe, the shift, in other words, the tech, the technology itself, is part of the creative process in a way that it was not before. Okay.

Giuseppe La Manna

When you started to work inside the NFB,, do you think that the workflow of a project changed? There are a lot of standards and manuals about cinema and movie making, and the division in production, pre mid post production. Do you think it has changed during the time?

Donald McWilliams

Yes, I think, I mean, this is something we actually do talk about quite a bit. I think it's easier in the digital world to be undisciplined. Because you are faced with so many possibilities. And so there's a tendency to be rather lazy.

Well, let's put it like this, for example. And I was not untypical, as a filmmaker in the mechanical world I was able to shoot myself, I did record sound myself, I could do optical printing, I could do Anika, I did get trained as a narration cameraman, but I could do all these sorts of things.

And I was not unusual in having multi skills. And there is now more of a tendency of the filmmaker not to really understand the post production process, okay. And, for instance, there are technical people here, who will say to me, they start complaining about the filmmaker can't make up his mind and they have to do the damn thing five times over, because he doesn't know what he's doing. But it's because you're not trained in all the possibilities of all the practicalities of the digital world.

Whereas when you were studying, when in the mechanical world, it was easier to get a grasp. In other words, once you figured out how a camera works, you could do it.

I'll give you a very banal example, if I was doing the credit titles for a film I had to make up this in the credits. And then there was a graphic. There was a graphics department that printed up the titles, and then they shot them on the animation stand. Now that's kind of a slow process and I thought it was you shoot on the animation standard news two days before you see the footage. Now people will chop and change that damn credits dozen times, because oh, I made a mistake, or that person's name is spelled wrong.

So just can you give me five minutes to fix it? And so there is what we used to call what we're used to we have an expression. Oh, don't. Oh, that's a problem. Don't worry about it. We'll fix it at the mix. Okay. Yeah.

And there's a lot more of that sort of thing now. Of fiddle family. And around because somebody hasn't really thought it through, or they or they take the technology for granted that you can always fix things which can, but it ends up being expensive because the digital world is not cheap. And so I, maybe some people would disagree strongly, but aren't what I'm saying. But I, people do complain in the technical, technical staff. When filmmakers are not for example, you didn't go to a mix. Unprepared, people don't know, but sometimes they do. Because they have a say, again, this kind of notion that it's easy to do things digitally. So the puzzle, I think the possibilities for getting caught up in spending too much money, or taking too much time, have increased in an odd way, in the technical world, in the digital world.

I mean, it's amazing what can be done. I mean, we worked on the restoration of some 3d films, in 2011 or so. And the technician here, you have a left eye view and a right eye view, on her monitor, she can have both views. And so she could do the color balance between the left and the right. I mean, she could do it in one day, which would take three weeks in the mechanical world. And as a, that helps

breather kind of notion, oh, nothing's a problem, we'll fix it digitally. But it becomes hard for the technicians, because they like to know, they like people to be clear about what they want. They don't want to have to be you'll want to change things overseas. But there's a limit to how much you should be permitted to change things. So there's a difference in, I think, in attitude. But there is no question that the possibilities exist now to do things that could be magical, where they are magical sometimes.

Giuseppe La Manna

Nowadays, people are talking a lot about virtual production. So for example, the production mean production that uses a lot, the live background can change, and you can change the set. And let's give the opportunity to the director or the creators in general to ever express their opinion, even before the the post production they were usually you change the background with the green screen and so on. Do you see this? Of course, like, what is your vision about this, since what you were sending, because at the same time, you can have a more immediate changing of ideas, but you can make the life of technician more difficult during the production. So maybe you can have more delayed than usual.

Donald McWilliams

I think that's true. It also opens Pandora's box of what is truth. And as I think technical people are excited to do that. But as I say they like clarity, but I've always thought that see that? The crux of the thing, the roots of everything is the relationship that the filmmaker has, with the people he's working with. And so it should be a collaborative relationship. And I think you have to try to develop relations with technical people in other words who you're working with, and if you find people that you connect with, you try and work with them each time. And, it has to be a situation of respecting one person for the other. So I think it's important that a filmmaker understands that one a technical person is one human being and to his act, he or she are creative, and may have creative needs, and they also want clarity, because they want to serve, they want to help you make your film better. But if they don't respect you, then it's not going to happen. So filmmaking is a collaborative art. And when you think that we worked, sometimes with very big crews, the collaborations happening during the shooting, unless, of course, your anatomy that and then. But now, the Collaborate, there's a lot more collaboration with the post production aspect. And so therefore, you have to work at developing.

No, you have to work being a team, it gets difficult in a place like the film board now where we're the people who make up as freelancers. And so some people here now never make one film. But so it's not always the politics of social relations, or whatever you want to call it, it's a really important part of the film process. And the more complicated the technology is, and the more specialists there are, it becomes more important to really work at understanding what each person has to do. And so therefore, it becomes important. I can't do the things that the infographics does for me, but I'd say, it's important that they understand what are the possibilities, Or the thing Or what are the negative things, or what are the things which are going to give her too much trouble.

And I was, I can't say to her, I have to know, when I speak to her about doing something, I have to know what it was in my mind where it's going to take her a day or two weeks, okay, you have to understand what the other person's doing, even if you can't actually execute it yourself. So these complications have increased with the digital becoming of the digital world. I mean, you think of the studio, an awful lot of things could not get finished, if there wasn't any Eloi champagne, you're seeing, whereas in the mechanical world, it was easier to be a one man band at work as so.

Giuseppe La Manna

So would you say, I understand, that the figure, the professional role of the technical director now is becoming really important?

Donald McWilliams

It's much more important than it was. And because I think that the scope of things he has to understand is much greater than it was.

In other words, he has to be a specialist in many things. I think the role of the technical directors is much more demanding now, and much more complicated.

And, in other words, I think a technical person in my era, was able to be successful with a narrower parameter, a narrower range of skills. In other words, for example, in animation, McLaren had to understand the animation camera, and some of them were absolutely brilliant cameramen, but he didn't have to know about how the optical printer worked. Whereas, now, a technical person, like Eloi has to understand people say we want to shoot something on the animations, and he has to understand that he has to also understand what can be done in atrophies, he has to understand what can be done in VR, this was the demands, a technical person now has to have a greater range of knowledge. The people who had that in the mechanical era, people who chose to do that. There were, as I say, there were people who, and they usually ended up being head of the technical department because they understood all about the cameras, understood about lenses and about filters.

Giuseppe La Manna

Do you think there is any other role that changed, evolved evolution or disappeared?

Donald McWilliams

Well the animation stand, in a certain sense, has disappeared. I mean, there's still people using it. But my teach take a very simple example if I have died in the period where we were sort of switching over I wanted to do a zoom. And I wanted to, but the animation camera couldn't go high enough. I mean I think I wonder the camera, what field size? Are they gonna go way up and come down? So eventually we did it on a computer. Okay. I mean, the computer could simulate this great distance not quite easily. And that was my, that was the first time I realized the, the, I felt a bit ashamed. Because I loved doing things on the animation standard, I had to give way to a computer.

And I remember another filmmaker, he wanted to do a seven minute pan, the tracking like an animation pan, okay, yeah. And because of the field size he was using, which I think was quite near to the low he was getting, and the speed he wanted of his pan, he was getting jitter. And I remember that they tried to persuade him to shoot it to do this on a computer, rather than on the animator. And but he said no, he refused, I always work on an animation stand. And again, this was the transition between the mechanical world, the digital world, if it got done on the animation stand or the hats out so many there was compromises. But as the computer is much cleverer at accommodating things a jitter. And understanding how you can overcome it. So. So it's a it's the question now, but anyway, that's

Giuseppe La Manna

I would like to have your point of view, about The change from mechanical to digital world and how the people inside the NFB reacted to it? How was this change?

Donald McWilliams

It's a hard question to answer, because the people who see in the mechanical area, they generally left. For example, a lot of the technical people here, technical services people, went to work at Technicolor downtown, which was still doing film. And so however, there was a kind of what I used to call again, the whisk is there was a group of technicians. Not many there was about three or four, who the equivalents of, of Eloi. And they would do all sorts of work. In other words, if there were problems with the animations, and they could fix it, or if somebody wanted some special camera rig built, they could do it. And they stayed on into the digital era, and one of them actually has only just retired, the

last of them is just retired, what? Benoit forte, if you've met him, I think you're going to I mean, he just retired last year, I think. And he was on board a very long time, and he was in the, in the mechanical world and and into the digital and I think he would be a good person to answer that question, but I think there was a, there was obviously a certain degree of suspicion. And people were losing their jobs were being called they didn't they were felt too late in their life to to change over. So I don't think I don't think there was I don't feel myself there was any kind of, there was a lot of discussion, but I think there was an acceptance of an inevitability and I'd say the people who worked in the lab developing film or, well, people who are negative cutters cutting the negative to make the prints. I mean, they knew that days were over. And so I don't think there would be regret, but there was, no, they have to be an acceptance that the world was changing. I know it changed it, the big the big, the thing that was most noticeable was the impact on how the place worked. And that took a lot of adapting. the factors I said, I was told I had to add, add it on an abbot. And it was very complicated, because it was very low res. etc. And I didn't know what I was doing. And so although I was very happy to learn, I mean, giving you a very simple example, the problem was you, you could do effects on the AVID. But when he went to the online, we found all the offense went haywire, because we had done them with a low res, because Cody had the memory for low resolution. And so we had to do all the effects over again, start from the beginning, in the online situation, which is an expensive proposition. But now, of course, you can do all sorts of things on the Abbot, but so I think that it was an accommodation, realizing the future has come, but the future has problems, but we can't do it the old way. So I don't think one was seized with anger. I mean, some people were angrier than some people who lost their jobs. But I think the institution realize it had to change. And so it was uncomfortable. Making the change, but I don't think there was resentment set amongst certain individuals. So I think it was a it was a, I think, I think people at the film board. we're proud of the fact that Film Board had always been in the forefront in a technical way, and therefore could continue to be if it switched. we developed the first 3d animated film we made the film board. We made IMAX film, although we didn't invent IMAX, but the we did. Quite a bit of 3d. I think it was one three, the IMAX. No, it was it was three, the IMAX film, I think there was, but anyway, so there was always

and as we know, I mean, Kubrick saw the film universe, that film, I saw it many times. And it was a big influence on the film board. Sometimes the film board because of the limit to their financial resources, we'll develop a technique while for example, the technique in the Stargate sequence, which was invented by McLaren in that in the 1930s. He did it all inside as a simple camera. Whereas Kubrick was fascinated by a universe that he's traveling through space. And when he found out that it was it was done, there was a 16 millimeter camera or a 35 millimeter camera and doing rewinds and formulas, I think, he said, I can't do that because it's too unreliable. And I'm shooting 70 millimeter anyway, so he built a complete rig, but this this is one of the things about the film world was that somebody would come up with an idea, build something, make something work, and then somebody else outside with more money and resources with the bat a bit further. So the film board had a kind of history of being a seed bed. For example, it was, as you probably know, it was very significant in the in the development cinema, very tea, because they, the film bought, ill health was, was his name. Michelle bro, went over to Paris and shopped for Sean Bruce. So in that way the film board had was seen as a kind of our research place for new ways of thinking either in content or in technology. I mean, the film board, as you also probably know, was very heavily involved in the porter pack revolution through the channels for change program, and it didn't invent the potter pack. Obviously, Sony did, but the film board saw its possibility as a deck democratizing tool, and it can be good And to the general public to shoot themselves. And so there was very always this important relationship between technology as development and how it can be used. And sometimes the film board was creating a technology or an idea or technology or taking a technology, take the porter pack, and really

using it in a hugely creative way for a number of years. So the back and forth, I would say that when he got his feedback between technology and creativity in the film world has been very close always. And I think it's, it's still close, but I think now the technical people play a much bigger role in the, but let's put it like this. If I worked, now, the nautical cameraman, this, the one I worked with, was incredibly creative. But he's still he was still executing something he'd been asked to do. And I think now what happens is somebody like that goes beyond that. He's, he's asked to execute something and they'd but he opens into other possibilities, because he has a kind of knowledge, which filmmaking is beyond the filmmaker. And as the filmmaker does, well, why does this keep up to date every day? So it's, it's sort of again, that the technological, the place of technology is more sophisticated now than it was at one time. I mean, when you think that it was James Wong, how had the idea of putting Vaseline on the lens of a camera and to get money that do trick to look beautiful? ? I mean, it's, it's crazy to think of it I mean, I used well, when we did, Narcissus, we ended up using women's nail polish. Okay, on the lens that we tried. We were using Vaseline and then somebody said, I think I think you should try to do a test with with clear nail polish, you'll find it gives a much better kind of ripple service ripple effect. And it was right. So but you couldn't, you wouldn't? In the digital world, you wouldn't talk about putting Vaseline on the lens there's some sort of bloody software which can do for you. So there was a lot more of this kind of flying by the seat of your pants, as it were you you. You come up with these weird solutions. So there it is.

Giuseppe La Manna

And something I'm really curious to ask you is what do you think about the interactive storytelling? So both, for example, the one that use web page or the one that now use Vista reality or installation

Donald McWilliams

Well, I am not really the right person to ask I just want you for now. Concern all film, or art or wherever it is interactive, that you have a maker and I have an audience. I don't watch a lot of interactive play most of it boring. Okay. It's too simple. So there are there are possibilities. I mean, the only interactive I mean, I always remember the all interactive take the check pavilion, at Expo, there's a group they still exist in Prague. Okay. Because it probably Yeah, the the, I think the room says the black box or something. Anyway, you go into the theater, and there's something like 100 screens, okay. And they're all separate with each other. And then you can, you can change the way the story develops. I mean, you have a limited number of choices like, is the murderer going to get away? Or is he going to be caught, and so the viewers can click and then and then the screen would change with with a different line in the story. And this they're still in business and Prague and I thought that was fantastic. But so there's nothing new about the interactive thing. So I don't know enough about it. As I say I've watched some of the film but does and I can't see the point. I think what a waste is a waste of money. They would work just as well if it was normal rejected because I think thing is to get a response from the viewer I'm not too old fashioned, perhaps but I I'm curious, I love I love installations. I mean, because I've been involved in a few, not at the film board. But I think that's interesting. And I did, I did go in London at the Italian because a tiny, tiny in the academy. In London, they did an exhibition. This is 20 years ago, they did an exhibition, Pompeii, and focusing on on the murals. And so they had actual examples. And then they also had these monitors, I think there was six of them strung around, and you could take a particular fresco. And interactively, you could explore it more, in other words, and it was designed as I thought was absolutely brilliant. But I think and the Italians are brilliant at designing things, there was you could explore it as a five year old, okay. Or you could explore it as if you have a PhD you have the somehow designed it. So it had all sorts of levels of knowledge. I found that, absolutely. Well, I went with my partner, we found it absolutely wonderful. And I haven't come across anything since then. That has has excited me in the same way,

because there was some, it was so well designed, if you design is to explore it as a five year old. That's the path you went on, you didn't get confused. So in other words, a five year old could work and a PhD could work. And so that I thought I came up, but I haven't seen anything. In any gallery or even on the internet that excited me in the same way. As that I don't remember. From where in Italy? I don't remember that. Who designed it or anything? I mean, like in Korean, you have the the world's best cinema Museum. Yeah. I mean, it's fantastic. The way that is designed and that, that in a broad sense, is interactive, because you have so much choice about what you can do or see and learn. And it's so intelligent. And the way it has been designed. I'm not just saying that because you're from Torino. It's my favorite city. But anyway.

But it's so I think, in other words, the problem I think, with so many interactions I see is a gimmick gimmicks, but the film boy did do one brilliant one, which was the McLaren app. Okay, which was done by accident, basically, I don't think you can download it anymore. It was a couple of people in the internet's studio technicians, they came up with this idea of designing an app, which would be one was cut outs, one was hand drawn, and one was synthetic sound. And it was designed for children. Okay. And you could download it. And I went to a couple of sessions in Scotland, where children were doing this in other words, the cutouts with digital obviously, but they can make these films. And there was an interaction between them that so many choices and they could, how they could manipulate it, and they could actually control it. So they're hand drawn soundtracks using a kind of computer system, which was a mimicking what McLaren did. It was it was amazing to see these these children in an hour or two making films. And again, it was somehow design. They knew they were not on a path that was necessarily chosen for them. And it was you can make a film entirely different from the person next to you. And depending on the How you interacted with the various, they gave you all I can't remember that sunlight and you had all sorts of choices. Okay, so how you could manipulate the material

Giuseppe La Manna

would change the experience?

Donald McWilliams

Yeah. And but it was so beautifully designed. And as I say, I found out last week that you can't download it anymore. But but if you haven't once you've downloaded the you've got it, but then the film doesn't offer it anymore. But it was, I mean, I still hear people say, what a wonderful interactive thing. This was for children. So if I was younger, if I was 21, or something, I might do something interactive, but it's again, everything always comes down to the the creativity or the intelligence of the person who is doing the damn thing or designing it.

Giuseppe La Manna

I was really curious about your point of view. But it's, it's really interesting. Interesting. Do we have time for the last two questions? So the first one is back in the mechanical time, let's call it like this. What did you expect of the future of audio visual production? Did you have any expectation there was just

Donald McWilliams

so they wouldn't change? But, but, I mean, what you did what one, I think in I don't know how typical I was. But what I did think was that the idea that cameras got smaller and easier, in other words was a soapbox so called Super Eight revolution. I actually had the living super shooting Super Eight. So it always it was always, you always thought in terms of a refinement of the existing technology. In other

words the idea that first of all was sync sound, you have the umbilical cord tape recorder connected to the camera. And then the ultimate thing was the quartz crystal. And so you work entirely independently. And then, for example, I remember Ricky Leacock. He was an American when he was English originally, but he was America. He was the kind of the king of Sydney variety in America, which would leak up he was a brilliant cameraman. And he developed six sound for Super Eight. Okay, and he had and they use the camera quite a lot was a neat so and he built a blimp. So it was inside a blimp, and it had a quartz crystal in it. And you have an accurate which had a quartz crystal and so you can actually shoot Super Eight was perfect sync sound. And this is what you thought the future was improvement of the technologies and easier to I mean, it's easy, super eight cameras. And then the porter pack, which actually was quite big, but they gradually they started to get a bit smaller. But so I think that's how we tended to think. And the total digital revolution came for a lot of us a bit of a shock. But we have intimations within the videotape, . And for example, it was this system they used in Hollywood called Edit triad, which was a tape based online system. Okay. And the film bought bought one in Hollywood, the only rented them when the film bought bought bought one and they played around with it for two years. And they only managed to do a couple of onlines but it was a huge system. He filled a room. It was all these. So you have umpteen cassettes. So complicated. But, but so intimations, but again, we didn't you thought of tape, you didn't think that somebody was going to come up with a notion of no tape? Okay, of digital. Except I would assume the futurists but I think most of us are working to sort of refinements of the existing technology.

Giuseppe La Manna

And, as a last question, do you have any expectations for the future?

Donald McWilliams

No, I just think it's gonna get more and more complicated. And I think the part of the thing which worries me always is the possibilities of creating false realities, and I'll be going now about fake news. I think that is the the great danger. You mentioned earlier things like the green screen, the fact that you are able to now you will be able to bypass all of that and and present things as being true by putting people into all sorts of unexpected environments. So you just took it, I mean, people, people now using drones I mean, and I look at it, and I think it's really interesting. And then terrific, I think, but it becoming already becoming increasingly Yeah. But so I have no, I just think well, it's what McLaren McLaren like did talk about is the the, what seems to be kind of inbuilt inbuilt into these technological developments is a is a tendency towards greater naturalism, which in other words, to make things more real

so you can see it if you look at the difference between, say Mickey Mouse, and a stop motion film from today and the stop motion and the sense of realism can be extremely real naturalism, as McLaren would call it. So I think I think that is the for me, the danger is in a decline in the use of abstraction. So I mean, I can't forecast the future. I mean, I just think we we don't have a clue what's going to happen I mean everybody's running now with VR, but we got I'm sure we can think of a time coming where you have VR you don't have to wear a contraption. I remember reading years ago, a British science fiction novel called when an English it was called the continuous Catherine Morton hoe. It was about a news and television news real journalist who'd had cameras implanted in behind his eyes, and he could never close his eyes or go to sleep because he would blow a fuse and it would kill him. So and it was made into a film by Bertram to burn Yeah, he was called Deathwatch was Romy Schneider I remember and Kia delay. And that made that novel which was brilliantly written science fiction, it made a great impression on me because the because I mean, now. It was it was reality TV. Before anybody was talking about reality TV, because this novel was written in the 19. I don't know.

70s or 80s. Okay. Maybe the 70s. Yeah. And. And he created the world, which so well written the book, you accepted this as yes, this is what the future will be. Television. He couldn't otherwise he thought the whole point was, there was this woman who was supposed to be dying of cancer. And he befriends and follows her around you see in films her whole life, and she does she's not aware of that she's being filmed, you see, okay. And it became, it became a TV series, you see, it becomes a TV series, this woman's last six months of life because she has cancer. And so, because the twist in the whole thing, and she really doesn't have cancer. But anyway, so yes, it's the brave new world. I mean, we can I think we, we do not know what the future is, we can assume that these are possibilities, which are a probability is probably that's, that's, that's and the film boards problem, of course, will be to want to keep up to date, technically, but also more, perhaps more importantly, to make films which would seem to be the truth. it was do not seem not manufactured realities. Because even now, we know, I could probably go make a documentary, which is entirely false. Oh, yeah. But the film board doesn't do that. These things. So. So it's, I don't know whether that answers the question.

Interview with Martin Viau - May 9, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

Yeah. Okay, so we'll start with something really easy. So please tell me again, please your position inside the NFB, and what is the path, both educational and professional, that led you here?

Martin Viau

So let's extend for another hour then. So hello, my name is Martin Viau. I'm a Technical Director at the interactive studio of the National Film Board of Canada. Yeah, my path, right. Yeah. It's not an easy question.

So I'm gonna do it really fast. But it took me quite a long time to do it. So after regular school, I went to the university and I studied to be a policeman.

Okay, yeah. And then I decided I didn't want to be a policeman. So I studied in medical school, learning and job to detect cancer.

And yeah, that's kind of bad news. So I studied there. And when I started working in that area, I thought it was quite depressing. And I wasn't, I wasn't strong enough to work in that area, actually, because, like, you need to be really solid mentally.

And so I've decided to go back to university and then. So then I studied the cinema. And then I specialized myself in a new media at the time, it was called Multimedia. So it was quite a long time ago. I'm 47. So you can guess like, was a while ago. And then after actually after university, I started working on some film productions.

And I was at first building or designing some special effects in Montreal. It is quite well known in the film industry, and lots of big American movies are shooting in Montreal, so yeah, so that was that's that's what I was doing. And then I started my own little company building websites when flash.

So yeah, so Flash was so fun, seriously, at that time, the internet was kind of really boring. And then flash came and then we could animate and like code some quite crazy stuff.

So that's why I started my own little company with a partner and we started working in the web industry. It was quite fun but actually even if Flash was really fun, we were still limited by the bandwidth, the speed, the speed of the Internet at that time.

So at some point I got bored of it. I was missing the fun of designing stuff with high resolution like nice graphics and everything and we were limited with the weight and the waiting time and the pre-loading of assets and everything so I got bored of it.

Then I started working at the National Film Board of Canada for the documentary studio. And my first job here was to build some DVDs.

So meaning designing and producing I mean DVDs and, and then blu rays and then shooting and creating some extras for productions and everything. So we were building some quite interesting DVD collections and everything. And then, 13 years ago, one of our bosses at that time, Monique, amazing woman, she, was in charge of all the production in French part of the National Film Board of Canada.

So that lady was in charge of the French production. And she was like a case of words. We've been doing documentaries for 80 years, we've been doing animation films, we, at some point, we were creating some fiction movies and everything, which we're not doing anymore, but she was like, It's time to go somewhere else we need to. So she created what she called the interactive studio. So she

hired one guy, Greg Sweeney. And so his mandate was to write like, build a project, build a studio from scratch and think about what is interactive and how the NFB could produce interactive works. So, when I learned about that, I went to my next office and I said, I'm doing DVD and blu ray production. I'm pretty good at what I'm doing. But I know that my job is going to be obsolete in not so long. So we won't need any DVDs or that kind of support, though. So I'm interested in joining that guy who I never knew about, but I just met him. And she said, Okay, well, next month, you're starting to work with him. So we started the interactive studio from scratch and so yeah, it's been so that's my, yeah.

Giuseppe La Manna

And right now, what are your duties?

Martin Viau

now. So my job has evolved quite a bit since 13 years ago, but right now, I'm technical director. So my main objective is to assist the producers and the authors, the creators, to put their ID to develop it with the good technologies and to use the good platform to produce and to distribute their ideas successfully.

So meaning, like the project I told you about about Chomsky vs Chomsky, we knew that we wanted to talk about AI, we knew that we wanted people to understand what is an AI you create all you feed an AI and what can we do? What can it create? What so we thought that like the creators wanted the people to understand those those things, but I was I was in charge of finding the good way to talk about it and the good way to feed an AI or to create the chumps key AI so I was I was helping them choosing what kind of what kind of assets we needed to feed an AI what kind of AI Shall we use? And what the user can live as a journey so was it looking at a film was it playing on the smartphone? Was it wearing a VR headset so people can see like the deep deep hands of an AI and too many plate virtually some some content so they would understand what we fed in the AI and what the AI is giving back. So yeah, that's my job.

Giuseppe La Manna

And okay, since I want to like the project is mostly about how it changes due to the production changes to the technology. I would like to ask you in this 13 years, what would you consider technologically speaking the turning points that changed storytelling?

Martin Viau

Hmm, I think there's a few of them. For sure the the high speed internet changed everything seriously, like, just just in terms of the, the support, meaning. I don't know how to say it properly. But let's see, let's see, we had DVDs before. But now with Netflix, everything is digital, we don't need the physical support or some. But it's, it's there. Now it's happening because of the high speed internet, it wasn't possible with regular what we used to call their regular speed internet. The other thing is that all the devices that we can manipulate now just those smartphones, it's crazy. It's like, it's like, I remember my computer that I bought at university, and the first one that I bought was in. So I was 20. So like in 1995, my computer like cost, maybe \$5,000, which was freaking huge at the time. And it was, like 1000 times slower than my iPhone that I'm holding right now. And it was big it was. So all the devices that we can we can that we can buy or or that we can use as a broadcast. Slate now. It's it's one of the turning point. The other ones, what's your thing? Well, like two or three years ago, I would have been tempted to say like virtual reality, augmented reality is a huge turning point, which I still think but it's not as huge as I thought it was a few years ago. Meaning it's, it's quite interesting. It's, it's something

totally different than than what we used to have. But it's there's nothing like a good story. So a boring story, even if it's in VR or in mixed reality. It's a boring story. And what I what I think about those technologies is that it's such a hype right now that people use it to tell stories that doesn't make any sense to use that kind of technology, like sometimes a crazy, huge, interactive experience could have been like a straight linear film, and it would have been better actually. So. So it's one of the turning point. But I think that we don't we still don't manage to use it properly every time. Okay, that's what Yeah. And for sure that the tool, the digital tools, like basic stuff like Photoshop, like you wasn't there before, and now it's it's there. It's like, the kids know how to use it that nine years old. So it's like, and it's so powerful right now. And all the editing. Oh, yeah. And one of the main turning point is that we all have a camera in our pocket now. That's that maybe the one one of the big, like, changed. High Speed Internet and pocket camera. Yeah.

Giuseppe La Manna

And, like leaving, staying in technology during the production. So we have, you know, standards for classical fiction and documentary production. You know, you divide the pipeline in pre production, meat production, post production, it's really standardized for interesting projects. Is it the same? Can we still that in your experience, of course, can we still divide like these categories of different stage of production? Or does it change?

Martin Viau

I think we do but the sometimes the Yes, sometimes the steps are a bit different or are not in the same ordered and classical film production. But yes, I still think we can. We're still working on that. Actually. It's quite funny, because this morning, I was it was in the meeting that we were trying to figure out what would be the workflow of one of the projects that we're working on and what we were asking ourselves like, Okay, so we're gonna have to record voices. Are we doing it before we start animating? Are we doing it before we start capturing the 3d environment in the point cloud? What about the point cloud? Are we going to save it that way? Are we going to reduce it in some mesh renderer are we so so the, I think that there may be more steps or more stages. And they're all different, depending on the project or the the final platform that we want to use to grow as a project. But I think that there, yeah, there's a workflow, but it's still ongoing. Actually, we're still learning from it. Like, I can give you a crazy example. And it's, I should be ashamed of it. But I'm not. Well, that's not be a shame. So like, maybe 10 years ago, when we were we were working on a on the web project that was called a barcode. So the intention behind the project was to we, we've shot 100 100 films. So a film that would represent let's say, a car tires, a film that would represent makeup for women, a film that would rule would represent food. And so what we're asking the people to do is to use either their cell phone or their even their computer, bring a barcode, we don't have Yeah, so bring a barcode in front of their camera, when they were in that web experience, okay? It was it would have it scan the barcode core, but barcode and it would have categorized the object that you were holding, and then showing you one of those 100 film that made sense with the barcode. Okay, so that was all in digital experience, and everything was working was a cool project, actually. But at some point at the NFB, where we have vaults did it what showed you the vault and we have to go actually, we're gonna go Okay, nice. So in the vault, we have all those fims negatives and everything. 35 millimeters 16, Baba, and for the, the NFB two. So in our systems to know that we've, we've created 100 film, we needed to evolve something like Yeah, and I was like, Yeah, but those are all digital films. It's like, I can I can put them on on YouTube, I can put them on the on the hard drive, but I cannot put them on a while I can put them on the on the tape. But that doesn't make any sense. And they were like, Yeah, but just to make sure that we still have those 100 films in our system, we need the physical support. Okay, so I was burning freaking DVDs with those films, to bring them at the vault. So they would have stamped

it. And they kept those DVDs in the in the refrigerated vault just just for the so the process wasn't like well defined at that time. What is a digital film? It's like, so So we're still we're not doing that anymore. Okay. But we weren't doing it 10 years ago. So yeah, so the process are still ongoing. And it's it's quite. And actually, one of the biggest challenge that we're facing right now, it's not only the in the production phase, like what are the phase in production is what are the phase in conservation action. So that's lots of our experience that we've created in the last 13 years. Half of them are dead now, or halfway dead. So what are we doing with that, like? That project that I'm telling you about? barcode? Is, is a flash project? Yeah. So it's technically dead right now.

Giuseppe La Manna

I know. I've talked with Jimmy food. Yeah. About the mam. Yeah. So we've been talking about how to prepare. Yeah, the flash project right now they're working a lot on it.

Martin Viau

Exactly. And for for lots of projects, it's working. But for some of them, it's not working like. I'm going to give you another example. Not in our studio, but in the other interactive, because we have the French interactive Studio, you I'm working in, and they have the English interactive studio. So one of their first project was the test two with David Suzuki, so he's an ecologist, scientific. And he was. So the project was quite simple. So it was David Suzuki film. He was talking to the user in your I think it was on on iPads and on whatever computers and from what he was saying that was pre recorded. They were triggering some the the Twitter API. So if David Suzuki was talking about, let's say, pollution and wells health, so it was triggering life, what was public on Twitter about those topics, so there's no way that we can keep that like it's it's something that is alive. So right now So we can record it, but it's that it's not alive anymore. You know what I mean? Yeah, I understand the

Giuseppe La Manna

API changes, so you cannot use it anymore.

Martin Viau

Yeah. Or even if it doesn't change if we, if we keep a copy with the Jimmy, which is fine, what he's doing what his team is doing, but it's not, it's not like your real life project, or, or let's say a project, we can contribute, and I can I can share a peak, or a video with a project or an audio file. If we if we keep it, like, in a conservation way, like what Jimmy's team is doing. It's, it's totally, it's great. It's better than nothing. But still, I cannot contribute to the experience anymore. So, so yeah, so anyway, long, long way. But what I meant is that, yeah, the steps are the fine. Are they evolving? Yes. Are they keep evolving? Yes. And there are more steps because we need to think the conservation is way more complex than conservation for film.

Giuseppe La Manna

Okay. Yeah, really interesting thing that I've been talking and I didn't think at at the beginning of the project is the concept of end of life. Yeah. Of this. Yeah. And it's also right now more even more difficult with, for example, future reality that use some hardware that gets too old really, really fast. Really faster. No, yeah,

Martin Viau

it is. On the other end, it's like, honestly, a VR project is a VR project, meaning I think the thing that is the more complex to keep alive is something that is web based. Okay? Like an application you can. It's funny, like 13 years ago, me. And then while we were doing a talk, at the old NFP, and we were

talking about conservation, and at the end of our talk, we were saying to people, so the only recipe that that will work, if we want to keep all our projects that we're going to be doing alive for quite a while. We have to cryogen eyes, a computer, with the software's and everything. So So for each project, we would have to keep one computer the browser specs, the the mouse, the keyboard, everything like it's so yeah. I don't know. I made a detour. Yeah. But

Giuseppe La Manna

do you think there are differences in the professional figures that work on interactive projects, compared to more classical like both animation or flat?

Martin Viau

A few years ago, I would have to tell you that cuz it was the this period that we were that we launched this to you, our spirit was like, the creators. I project is not made of one Creator. It's, it's a bunch of creators like, like the author, the, the cameraman, the the coder, the sound engineer, designer, everyone are as important as the other one compared to a film where the director is like, Okay, we have producers, and we have the director and everyone works for the director. And it's like, he's the one or she's the one who's calling the shots. In an interactive project, I think that it's more democratized like meaning, like I said, like a graphic artist could be as important as the sound engineer or as the coder or decoder, it could be the like, the, the director actually so so meaning if the if the code or if the technology is quite important in an experience, it could be the core of the team. So what I mean is that strangely in their film, it's mainly a director and who's having a team working for or in an interactive is like it's more everyone is at the same level. Everyone is as important as your work theater people. That's what I think.

Giuseppe La Manna

I have noticed that people really rely on your figure here, I don't even think it was a profession that was present in classical cinema ?

Martin Viau

Was it? I don't know if it was before or not in television? It was it. I know a lot of people who work in television like meaning broadcast room and news rooms and everything, and they have technical director, but it's the role is quite different. So how do we how do we, we're not seriously I'm laughing, but what I'm gonna talk to for myself, I'm not I'm having a hard time, but like, every, every week is a new week with new things to understand or to, to learn or to. So it's like, it's what, you know, but it's quite funny. So my father, he's a mechanic used to be a mechanic, okay. It's pretty old. And he's retired now. And I remember that at some point, like, in 1990, something I was looking at him and I was like, man, it's quite something. Like 40 years ago, we used to be a mechanic and he was changing the oil in cars and changing tires and changing exhaust system and everything and, but now he needs to learn electronical systems and computers and, and I was like, man, it's quite a job that he's I think, like, every year, there's something new that he needs to learn for. And, and now I realized, so I told myself, I'll never be a mechanic. But yeah, so. So yeah. So no, honestly, seriously, like, it's quite, like, if of what I'm doing. I have to learn it. Yep. Okay, so the only the only stuff that I really, Master, I use it twice. And that's it, like, we go somewhere else afterwards. So we need to master something and then use it once and then get rid of it most of the time. But it's not I mean, I'm not complaining, but honestly, it's, it's like I'm 47 and I told myself that like 55 I'm going to be too old to do that. And I'm actually after we were speaking, but afterwards, we're gonna go in my lab. And I'm gonna, I'm gonna present you to one of my colleagues. So, Marianne, she used to be she used to be a student two years ago and she came at the NFB for you say that time mustache so yeah. And we liked internships. So

and we liked her so much that we kept we kept her and and she's maybe your age, actually. And sometimes I'm looking at her and I'm like, Man, she's so brilliant. Like, at some point I'm gonna have to leave my place to someone because it would make more sense for someone else to do that job than I'm then I do actually. Which is okay, but

Giuseppe La Manna

Yeah. Okay, I think we can go with a last question. More of your experience. what would you consider the most challenging project because of the technology?

Martin Viau

I would have to say I would have said the we launched a project four years ago that was called the enemy.

So we really shot is my boss section. Okay. And he's the one who will replace the oops, Winnie I told you about. So the you replaced the one that created the studio 13 years ago. So yeah, so the enemy soldier shot is going to tell you a bit about it, but was a multi user meeting 20 users virtual reality experience were in a big room 20 people were wearing headsets with backpacks. And we're walking and at that point four years ago, so we started working on that project, maybe eight years ago, was quite hard, actually to put 20 people in the same space and making sure that there's no collision. Oh, yeah. So that was my main challenge, actually. So So we've we've worked on that experience for years. And at some point, we were having something like freezing ice. So the, the reality is, it was really realistic. So it was quite, like overwhelming to, to to live that experience, but they like 48 hours before the launch. So we had that 25 backpacks 25 Oculus Rift, we've built in some rigs on each of the oculus rift with with reflective balls. Okay, so we could detect like every user, just to make sure that in my headset, I was seeing you there just to make sure that we don't. And so technically, everything was working fine. Yeah, so 48 hours before lunch was in Paris. We were there installing the computers, the backpacks plugging the Oculus, putting those reflective balls installing our passive sensors to detect each headsets and everything and So it was the first time that we were plugging more than two USB two users because we didn't have the the equipment's the 20, computers and everything. So at night, actually 24 hours before launch and launch meant, like 300 tickets were sold for the launch date and everything we were we plugged those computer and the production team word, maybe eight or nine of us. We started living the experience within our headsets with our backpacks. And we realized that theoretically, it should have worked, but it didn't work, actually. So sometimes my headset was detected as it set number one, but sometime depending on where I was positioned, it was detected as it said, number seven. So what I was seeing was it set number one and bang it set number seven different point of view, and everything's who was crazy, they gave a nightmare. So, so 24 hours before lunch, we called up to track people, they did love some sensors. And we've had them for for help. And they came during night and we with them, we figured out a way to totally modify our system and to to move from a passive tracking experience to an active tracking system. Yeah. So we were Yeah, we were drilling holes in the headset, putting LEDs so we can detect the heads. And so that was the most challenge, challenging experience. But now, now that thing is done, and we know how to do it now. So we're not doing it anymore. That's why we're seeing now the most Yeah, the most challenging thing is that is what we're what I'm working on with Chomsky versus Chomsky, because we've built that crazy AI, which is like super intelligent is quite, it's quite frightening, actually. And the other thing that is really frightening, and that we put lots of effort on now is that we don't want that AI that AI Noam Chomsky AI to, say, bias, or I don't know, racist stuff for us. Yeah. So we don't want him to talk about the Ukraine and Russian Anwar and or we don't want him to say crazy stuff. But how do you control something that you train them that you want to keep evolving and everything? So it's like, limiting something that is growing is? Yeah, yeah. It's kind of crazy, actually.

Yeah, so AI is quite child challenging. Yeah. We thought that virtual reality was challenging, but it's nothing. Ai.

Giuseppe La Manna

So actually, you are answered to my last question. It was for the future of interactive and immersive storytelling. What do you consider the challenges for the future?

Martin Viau

Yeah, I don't know. No, but I would love to see AI, but I'm pretty sure that that's some point for we're gonna, hopefully, at some point, we're going to, we're going to forget about it or oral it won't be something that is going to take as much place that it's doing right now.

I honestly consider that it's dangerous. It's kind of we're not using it in a bad way. You know, but, uh, but still like that, that machine could create some quite big drama if we if we don't control it, or if we, so I don't know, I don't know about AI. I'm kind of perplexed. I'm like, could be really. Last night, I was talking with my daughter who's 16 and she's studying and she wants to work in health, medical and so she she's thinking about university and, and she was telling me about like, AI used in, in the prediction of like, could you have disease because of your family? So, in that kind of purpose, I think it's quite interesting in some other purpose AI is really frightening for me, like, even intelligent cars. Oh, yeah. So you're gonna talk with Vincent? Talk, talk with him about AI and driving. Okay. Is so so. So Vince did a project he built, built it himself, like five or six years ago, a VR project about So what about the What about AI and car So, so in a situation of an accident, like, the car detects that there's going to be an accident. But there's no way that it can avoid the accident. So what's the decision? This decision is going to be taped on? Like, are you going to smash a family with kids?

are you gonna crash in in a truck full with gas that is that could explode and I don't know kill 2030 people? Are you gonna is the car is going to turn in jumped into the water into the ocean so so it's the less worst option? Yeah, it's damage control actually. So. Yeah. So talk with Vince about that is quite an interesting movie. So yeah, hopefully AI hopefully, we're we're still going to be organic in decision making, and not only rely on AI. Yeah. So that's why I said hopefully. I really liked the human gut feeling over the AI decision making. For most of the Okay, yeah, most not all, but most old school.

Interview with Louis-Richard Tremblay - May 10, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

Okay, so, the first question is really easy. I would like to introduce yourself and tell me what your position at the NFB is, so we can record it, and then a brief history of the path that led you to this position; both educational and professional.

Louis-Richard Tremblay

So my name is LouisRichard Tremblay, I'm executive producer for the interactive studio at the National Film Board of Canada for almost three years now, but I've been a producer at the NFB for five years before that.

And before that, for another five years, I was head of the digital station, exploring new ways in journalism for Canadian Broadcasting Corporation, whereas you Canada French parliament and before that, for almost 10 years, I was both head of project and adult production, in the reverse order, with a new culture highly music driven project, that CBC that was called bound APA.

And before that, I did a little time just being an independent producer on the music scene. So basically producing events and concerts. Okay. And before that, I was I, maybe for two years, I was involved in different organizations, but more on the diplomatic diplomatic scene. Because I studied political science, before getting into radio and then switching all my career.

Giuseppe La Manna

What is your experience with the interactive world? How and when did you start to see the potential of this new kind of storytelling?

Louis-Richard Tremblay

Like, somewhere '94-'95, I was doing a lot of student radio. And we had the show, like a friend of mine and night about emerging technology, but more like a cultural angle to it. And Montreal was already burgeoning with those kinds of people at Concordia University. It was the early days of Wired Magazine, and all of those waves of change really struck us. We were political students at master's degree, and mostly fascinated by social change.

So we got into new technology and interactivity and computers through a fascination of social: How did some social change happen? Yeah, and then doing the radio at that time, it was early internet days. So we used to program well, basic programming, of course, but just play basically with things.

And that brought me on the music scene at the time of Napster's and looking to all of that and trying to figure out how to build websites and so on and so on and, and slowly moving into the show culture where every everything technical I was add of Video Caption of live concerts and live events. When I said I was at a production this is where like, every special project and very early like, early 2001 2002, we were doing live webcast with multi camera and stuff like that.

So since that I've been exploring, I would say into all those possibilities. The relationship between what we now call physical life and virtual life, even though I don't like it a lot, but so yeah, really you're like, end of the 90s and beginning of 2000.

Giuseppe La Manna

What would you consider the most important turning points in the technologies that really changed the immersive storytelling? Starting from the web till today?

Louis-Richard Tremblay

It's interesting, because technologies progress in waves. So I think, the point and shoot navigation, they were called hotspots at the time, okay.

But we did a couple of experimentation of filming live shows with 360s camera and then porting them to a web interface, and allowing people to navigate the show and the see other points of view using multiple camera to me, and this was 2003-2004.

Live to a portion of it live to the web sometimes with allowing people to play with different angles, okay, yeah.

So I think, since then, it all, like, the technology was very limited. I remember we used to do a show, where we put a whole rig on a guy with a 360 camera on top of his head. It was like, like, it would seem like, like someone coming from space.

And nowadays, like those the same, you can do the same thing with, with some not even anyone noticing that this person is filming. So I think very early, the table was set.

And since then, everything has been evolving, of course, like, I won't recall his name, but the guy in his, in his garage, who invented the lenses that gave birth to Oculus, and so on this, this is a major change.

So all those points were problematic to do something very appealing and engaging for the audience suddenly found through engineering most of the time, a viable solution.

So there are a couple like this, this point in time, of course, today, the creation of Facebook in 2006 and so on, I like how those are turning points.

And because I was in a place where we were really the moment they would come out, we would try to do some media production with them. But I think that the history of that is really about new capacities.

Tapping on imagined capacities of things, to me, those are the turning points. So they're really grounded in the history of the evolution of media technology. And don't cease peculiar time and space. But usually, maybe an ending that you have like the potential exists maybe five to 10 years before you have people just playing with it, trying to explore it.

And then suddenly, someone, a company or a small startup nowadays, they figure out the solution, and then it drives the acceleration. I think that's pretty much my experience of the last 20 years or so.

Giuseppe La Manna

Since I want to compare the words of interactive to the other kinds of production that are inside the Board, I will ask you as a product of the interactive department. How do you choose a project and how do you say to the Creator, this is a project to be made in an interactive way or not?

Louis-Richard Tremblay

Good question. Well, we usually if we ask one question is all is the interactive you want to act out? It is relevant and meaningful in the experience you want to create. And if someone is not able to resonate with their project in an experience, language and vocabulary and grammar. Usually for us. This is a big no go.

This was not the case. Maybe at the beginning of The studio because we're at the NFB, and it stems from a film tradition. So most of the people coming at us were coming from film or video production.

So we had to really challenge them. And they had to challenge themselves. And that's the other question sometimes that follows is like, are you okay to challenge yourself as a creator as a thinker of how to produce something, and to buy to really put the visitor the participant add the order traditionally called the user, at the core of your reasoning of the experience, which is highly different process from creating a field? You don't start from the same point? So this is the main question, always interactivity relevant to what it is you want to make live. And then there's the story unfolding. But the story is that of the user, not that of the Creator.

Giuseppe La Manna

And you said, of course, that the studio was born in a context of history of classic cinema, traditional cinema, traditional documentary that always had some standards that now are really known, like, you know, for example, the production is always divided in pre, mid and post production and so on.

Do you think the pipeline and workflow of an interactive project can be the same? Do you think it changes? Do you work in a different way compared to the other studios? Because for example, lots of people told me it's more. Also, the production is more interactive and iterative than a classical project.

Louis-Richard Tremblay

Yes. Like, the way I like to say it is like when you do an interactive project is, especially when you're in an exploratory kind of mindset, you have to invent the pipeline going forward, because you miss referential.

Sometimes, you want to produce something, and you have to invent how to produce it, before even producing it.

So this is the iterative and lots of back and forth.

And there's no such thing as a scenario where you will bring out the mastery of the pipeline of production of cinema to make it happen, like it's a different state of mind and a different approach.

We have what we call a baseline pipeline. But every project has its own pipeline.

It's a little different when you do games, because the game production is pretty well sorted out today.

But if, if you want to mess with how design the game, then you have sometimes to rethink some part of the pipeline. So sometimes it's an old pipeline, you have to invent sometimes, it's some just little parts to solve the problem, like an example of working with an AI or machine learning, processing, and allowing them to influence the way the project will be made. And the output of the project changes the pipeline.

Giuseppe La Manna

Can you describe to me this base pipeline you were talking about?

Louis-Richard Tremblay

Yeah, the way we see it. Now. So it's iterative.

So that's, that's the first thing there's, there's step by step.

The way we reason it is there's three core lines of production. So if you portray or **imagine the triangle so you have the technological pipeline**, like pure technology, like software programming pipeline that has its own logic, **then you have the experience design pipeline**, where you have to go through certain point of maturity to actually okay the this that now we have an experience and people understand what the experience is about and how to navigate through that experience, to the surroundings of the experience, **and there's then there's the editorial pipeline**, which is in cinema

would be the scenario and the editing and, like the and **at the core at the center of this triangle, well sits the project.**

So depending if we have, like, if we take the technological pipeline, usually you have to make sure that the material and experience intentions are livable within a programming frame. Okay? If you do an installation, same kind of challenges on the experience pipeline, it's really while we call them iteration, or prototype, or like, but But it's basically it stems from the how do you design experience with technology, so it's like prototype, prototype ABC, then after, you may have like alpha, alpha prototype for just a chapter, then total Alpha prototype, then you move on to the beta. And then for a final project, that's pretty much it.

And the third one the tutorial has to adjust to all those uncertainties. To me, that's the big big difference where in cinema, you can foresee something created. And, when you use lots of technology and experience design, you it's more like an emerging, kind of, of crossing point. Of course, cinema can be emerging in a thought process. But the pipeline of pre production production, post production is pretty well. Structure. There's a little difference in animation. I think, because of the oldest technical aspect you need to bring in when you do an animation piece. Sometimes you're pretty close to pipelines of interactive production.

Giuseppe La Manna

Let's move on to the professionals that work in the interactive world.

First of all, let's talk about the most important people in cinema production: director and producer.

Let's start with the director. Do you think that in an interactive project, the role of the director is still the same? Is there only one director or is it something more cooperative?

Louis-Richard Tremblay

Yeah, for me, like there's no such thing as a director as we foresee it in cinema in the interactive or, or immersive production, basically, because of the need to understand the user experience design.

Which is not the design of sitting in front of a screen, whether it's in your iPhone, cinema or home, it's a different state of mind, you will ask something from the user.

So it has to be very clear. And this is a different set of skills. The thought process is not the same at all. Even if there's some comparison, it's really different. Yeah, for the director, for me, it's like it's teamwork, like, because you cannot you don't master the pipeline, so you don't master the output.

Giuseppe La Manna

What about the producer in interactive? Is it different? During past interviews I have been told that the producer in the interactive should be much more prepared about the technology. Do you think the same?

Louis-Richard Tremblay

Yes, pretty much, because you cannot manage a budget if you don't understand the technology, the cost of technology, the risk of choosing one technology instead of another. You cannot foresee a calendar. If you don't understand the triangle conjecture and the need for those three points to merge to the center.

You cannot foresee the way people will engage with your experience.

Cinematic producers know how people will engage. They will either buy a ticket, buy a movie on service like Netflix or Whereas subscription, they will click on YouTube, whatever . they know how to access the cinematic experience, which is not the case.

If you're dealing with immersive, the way you set up the onboarding, the way you engage people, the way you set up the outpouring of an experience has to be imagined as the experience itself. So for me, this is really the big, big difference between the need of skill sets and producer and interactive needs to master.

And there's the key one also that I missed, which is a basic understanding of system thinking. So you don't need to be able to program. But you need to understand how programming works. What is a programming system, like there is no programmer in our team and outside of the technical director who has good enough skills of programming to engage.

But I've been working with programmers for the last 20 years. And because I was even coming from social science. I was obsessed with systems. And my master was about emergence in the organ or organizational systems. So I grew up in a good enough understanding of how do you build a system; Okay, so inputs, outputs, what influences it, certainty and certainty. And you don't have that in cinema, it plays out totally differently. It's more like other factors, like you said, managing people, we like you have to do the same.

Sometimes there's even a skill of being a translator between developers' needs or programmers' experience designing and editorial needs. So there is like a chemistry ongoing between humans there that is, well, that brings a lot of risks, like, I would say, 20% of the time, we miss the human chemistry in a project years, sometimes you're still able to output something, but you won't have a great experience, we will have a good enough experience.

So this is the big difference. While in cinema, you have to master the image capture and the organization of the sequence to create a good movie. And then there's layers and layers and layers. But yeah, that's to me, those are like the big big differences.

Giuseppe La Manna

Remaining on the professionals. You already told me something about it in the last answer. How is it to manage those kinds of teams with people from different worlds?

You have a lot of people from that come from Game Design or software development, storytellers , ecc.

Louis-Richard Tremblay

That's another big difference. It's like, most of the time, almost all the time the people you're working with, we're not taught in the same schools. So not in the same school of starts.

So if you take people coming from design schools, all sorts of design schools, usually collaboration is at the center. The user is what they take into consideration. So they are some they come with in a team with already the right mindset and cultural reflexes to work with other people.

So if you like there may be a little difference when you go into the programming school. So a little less true for people coming from engineering school, because collaboration is of essence, especially in

our days, like a program like to do anything. Like we're not at the Renaissance anymore, like you cannot master all this. The key word is team.

They're brought into a school of working with other people with different skills there. different visions, and they're accustomed to work together, challenge themselves, while if you take them and this is generalization of course, but like the vision of the director, when they come from cinema school is the holy grail, you know, he's, he's the master of division. So it stems from the cultural upbringing of those different people.

And more and more you have that, like the people who are more like on the editorial line and if they're really into literature and stuff, not scenarios with like a cinema school, but they come from the theater department, History Department, politic, like, they're, they're, again brought in team kind of culture kind of work.

So if you go at, I don't know, like one of the most impressive game successful also is all the Assassin's Creed series: there's historians in there, there's like all sorts of skilled to bring an experience as is engaging, subtle, with layers of complexity. So to me that's, like, no one self can think about that. And the humility that comes with that is really a big, big difference. So the culture is very different. Like we were called, even sometimes by like, people like the communist of of creators.

But it's really how you can operate and manage such a thing because they have the right cultural settings, and they will understand your language, and they will understand that decision or process. That will sometimes not be the sole decision of one individual but a group of in the individual not not a big number, maybe that usually how we build things is like we have three ads, which are this the three points of the triangle user experience, editorial intentions and technological vision. To merge, like for that to coexist.

Giuseppe La Manna

Is this triangle something that you theorized inside your Studio?

Louis-Richard Tremblay

I think so.... it's like the guy who was the executive producer that brought me in as a producer. We used to work together at CBC for like, almost seven years.

Then we stopped working together. And I think it's something coming out of the relationship we have. I haven't seen. I haven't I don't know. But I never look, either. But it is sure it comes from many influences we had. But yeah, it's possible that it's something quite specific to the way the interactive studio thinks about things. Yeah. Because I'd be curious if you find that.

Yeah, there is a woman, Professor Sandra Gaudenzi. She's on a sabbatical right now. I should put you in contact with her. I'm going to meet her in like three weeks a month or a little more than a month. And she's interviewed us a couple of times. And she's about theories of interactive. Yeah, I'll put you in contact. She's Italian.

Back to the triangle, i think It's the best way. And we read and we've been like I said, right, early days I was in the theories of those things. It's a simple schematic that matches pretty much all the time, what we're actually doing in the fields.

Giuseppe La Manna

Okay, now I want to move on to a topic that I call legacy. But it's divided into two aspects. The first one is more something coming from software development.

And it's the legacy of the knowledge gained making a project. So documentation: do you usually do it for a project that involves massive use of software development?

Do you write down documentation that maybe you will be able to use for similar kinds of projects in the future? Do you think it's something that should be done?

Louis-Richard Tremblay

Yes, we'd like. That's something I think I've implemented, that I made a priority when I was producing, and especially as an executive producer, because to me, that's one of the great values of doing that it's actually true.

Well, exploring, learn to explore, tell the story of that exploration and of the knowledge that was created and share it with the creative community.

To me, like this is something that is part of the pipeline that we are like, nowadays, it's like, we have to do that, especially because of the components of data.

How do you work with data? How do you work? How do you work with interconnection and dependencies of different databases when you create interactive projects nowadays?

So yeah, I think it's highly important. I understand how not everyone is doing it, because it's additional work, and you need to take the time to structure it, and then to do it.

But as a public institution, this is really like something we need to do. We've been doing it for a couple of years now. When finishing a project, hiring someone to document the project, so to interview the different actors of the project, from different perspective and outputting long form article about what were the like, knowledge, gain and pitfalls also like to really, really share that, where we think it went well and where we lost it and why we lost it. So yeah, that's to me, that's really the I think it's even more that it's like a season more important than the other one because of many reasons. But because there is like, there was a conference organized by the fi center in MIT a number of years ago. I like the title. And it's pretty much Gary's, the essence of the challenges is update or die. So for the legacy of being highly dependent on technology projects, if you don't update it, at some point, well, you won't access it that.

like 85 projects from the Interactive Studios are decommissioned at the moment, because they were all programming flash. So people, well, we figured out ways but after almost like a five year process to emulate the experience, we were able to emulate all. None. Projects with no dependency, no live dependency on databases or API or whatever.

Giuseppe La Manna

I've seen the MAM. I was with Jim Fourier.

Louis-Richard Tremblay

Okay. Yeah. So he was leading that. So I think, like 90% of the projects we were able to emulate. But although the ones were a little more complicated, we have to reprogram them, for people to experience the full experience again. So this is the end of this, this won't change.

Unless when you put Well, it's the same in movies, you have to take into consideration the legacy of the work. So the best legacy and the more vivid one is the knowledge legacy of what you learned doing it. And this will infuse all future projects, I think way more naturally fluidly and down like wanting to preserve an experience,

Giuseppe La Manna

you know, for movies, but the legacy is more connected. to the film itself, then the work that was done. but for new kinds of projects such as VR or projects that use artificial intelligence, it's more difficult to keep those alive. So next question.

It's still about legacy, but more about the end of life of a project. Do you usually define it with the creators? In The beginning, when you start to write a contract or budgeting. How does it work for your team to decide which is the date of the end of the life of a project?

Louis-Richard Tremblay

Okay, good question. We're moving towards more precision on that. But not there yet. And depending on the creative team, or the the Ideator of the project, they have more are more or less maturity on thinking about those things. So some of them don't even think about that. So when you ask a question, it's pretty tough to project yourself in three years, five years, even more 10 years and 50 years? Well, it's highly theoretical exercise. And, but usually, we do ask the question. And the contracts either lifetime. And because they are database dependencies and stuff like that, all those questions are, when we sign the contracts are have to be asked, because Okay, so let's, for instance, say, Okay, we're going to use database on this platform, or whatever the cost of hosting that is that so we have to figure out the cost. And for how long we're able to, well manage that, guys. So those are like key questions that go really deep into creation, like, for instance, working with training, in machine learning processing. You have to decide, will it learn, in real time, during the whole existence of the experience, are willing to learn then pause that because their learning process costs money? It's. So those are like the very detailed question that we go into. And they all they all have a space in the contracts, the different contracts with different people who work with. But it's, I would say it's quite early. And it's not. It's a whole way, a different way of thinking about it. Because it's built into the project. Instead of like, all those questions are asked when you think about a film, but they're outside of the project, that film has been produced. So they're there extra to the project while in interaction when you have dependencies there within the project. So if you kill some of those lines, then the project is no longer available.

Giuseppe La Manna

And it's a really specific question, but just to give me an idea about it, usually, which percentage of the budget goes to maintaining the life of the project?

Yeah, like from the day it is released to the public till the end of it.

Louis-Richard Tremblay

I won't have a precise answer, but it's more like over maybe five percent, something like 5% of the total budget, I would say, but depending on the project, it may vary a lot. But it's somewhere along 1% 10% of the project.

The way we're the only studio well the interactive studio where we have a maintenance percentage in our yearly allowance. Because we have to maintain the project to live and be connected to the contract. So that's, that's a rose estimate, I would say. But you have to have a budget that's for sure. We could be very more precise, but because every project are so different. It's really tough to give a precise answer. But if we were, let's say, doing gaming with always the same platform of programming, and then we would have a better idea, of course,

Giuseppe La Manna

Something that I really love about NFB, is the amount of things you do.

Really, I don't understand how you manage to do all these kinds of different things. Yeah. Because every project is so different from the other. They have different creators, different crews working on it. Also technologies involved.

Louis-Richard Tremblay

It's been like that for almost like it's since its creation, and mainly driven. i Well, not driven by everyone. But nowadays, like this, the cinema business, the pipeline of producing a film is pretty mastered. But that was not the case at the beginning. Like, I like I often use the I quote, McLaren, saying I think it was in 1941, when he came to the NFB said something like, *cinema hasn't been invented yet invents itself moving forward*. like today I'm not sure you could say that about cinema. But you can definitely say that about the media in definitely. In that time, well, media was cinema, and radio. That was it. There was no, the transistor didn't even exist.

Giuseppe La Manna

I mean, I don't know, I think, in the last t years, you can say it again, about cinema. For example, thanks to digital production, the use of.

Louis-Richard Tremblay

Yeah, and AI going into cinema. There's pretty amazing things. But we're not there at the NFB to my knowledge. But if you go to Hollywood, like virtual sets, where you put actors are definitely a thing now,

Giuseppe La Manna

Actually Eloi is working on a virtual set for a stop motion production

Louis-Richard Tremblay

I'm not surprised. Yeah. But this is definitely happening. It's like, and then it will like all I said before, of what the project producer must master, then it changes.

Yeah, I guess if suddenly, you don't need to understand how to build a set and the physical and our space, you need to build it in whatever space you want to make it. Of course, like it's, it's a big difference. Even actors at some point, how do you direct a virtual actor based on an AI

Interview with Laurence Dolbec - June 3, 2022 - Conducted by Giuseppe La Manna

Partial transcript due to technical problems

Laurence Dolbec

I thought he was going to be able to replicate Noam Chomsky is. Well, brain actually, and be able to make it as a, as a, as a, an artificial intelligence of its own. And he was like, Yeah, well, I'm not sure that's possible. And that's how the, the project came to her mind. And then she approached Louis because she knew him. And she was producing Do Not Track he produced do not track with her back then. And well, then we started the project, we started the project almost, it's going to be four years 2018 End of end of 17 or something like that. And back then there was like, you know, it was a you know, we knew it was going to be a super huge project costing a lot of money. And back then Santa was working at I still feel that are doing mainly documentaries and stuff and because she's she's a documentarian at first she's that's it and then she moved away from traditional documentary to put herself to dedicate her work to interactive work. And there was also this initiative from the media found the FMC, which fully media, Canada, which is the Canadian media calm, and there was like an initiative with for CO producing with German territories. And they took this opportunity. And so we were at first group purchasing with ISIL. And then we were looking for our German co producer. And Sandra and Lucia went in Berlin, looking for a creative department, creative studio, and they met SBB, which is a printer builder, which are based in Berlin. We knew Kingsland Fong, who were actually neighbors from them. And that's how they got involved. SBB is doing a lot of interactive installations, I mean, the museums, they're pretty active. And they're a big, big, big gig on like developing in the creative world. So this is kind of how it started. We did a study phase with them with all of three. And then centralist ice deal. And we kind of reevaluated the needed for the ice still in the project. And then it was decided that that we were only going to produce with SBB this project. So we didn't get any funding from the media firm, because we're a federal agency. So we cannot ask another federal agency for money. So SCP when other side, and they got fine. They got money from the median board, in Berlin. And that's how the project CO production really started. I wasn't working on the study phase, or the prototyping. So the first phase of this study and beginning of like it first developed, and I guess, was, was done it for Yeah, there was a prototype that was done that was showcased in Sundance. It was quickly prototype, but it's very pretty, but it was done in DVD, which is, you know, not not what was the name that like, you know, it's like Unreal, or whatever, those are the game engine. So it was a game engine that is not made to, you know, you can't put that in, in

VR glasses. So so but that was the kind of wanted to, to make sure that they could have like a potential, you know, AI that was running and that the conversation made some sense and that, you know, they start doing a prototyping to make sure that they had like something to grasp, which found which was an amazing success and had like praise at Sundance, so you're like, Oh, I guess we have something in our ends. I was in the studio back then. But I was not. I was doing another I did for a different type of role than in the studio. So I was hearing about it, but I was not and not very into, into it. So I kind of arrived on the project as the delegate producer. Like at the end, we'll meet in the middle just after, after the prototype, we'll send you a had a baby when there was like a baby's in that production. So there was a lot of stuff and go and stuff. And he had to she said, a lot of shuffle of the teams, a lot of things. Sandra, the baby macchiato baby, like everyone had a baby in SPB, too. So I kind of picked up the added development phase, because that's there was like a switch in the studio. And Pixar got promoted to executive producer, actor, who is the delegate producer was now a producer. So I had to, like someone had to take the delegate producer role. And I took it. And so I kind of accompanied the project in kind of the end of the development phase. And we, then well, once we had like, the clear funding from the median board, we started the production phase. And the

production phase was like, started almost two years ago now in mid, mid pandemic, and it was, and mokdad was pregnant, so she had to leave. So I took her role as a producer, and I'm still producer on the of the project that Jack and we are kind of more in the the executive role of this. And my revenue is now the delegate producer, we're kind of like, we're doing the same role normally in the studio. So we're kind of playing it by ears, it's not a traditional, there's a lot of people involved, and it's not a traditional way to to, to play this, this special project, because it's such an humongous project, it is become a beast, with like, you know, at first it was like VR, only, then we got an installation, and then the installation, then we have to have distribution. There's a lot of concept of like how we tour this thing, we make it viable, broaden out of this, because all of this, because one of the reason was that the medium word asks to be recuperate. So it's a loan, it's not a it's not a, it's not a credit. So there has to be, well, you know, they don't have to fully recuperate, but we need to kind of make money. And the only way that we seem to make money with this was with ticket sales. So it became that's how we kind of became this whole beast. So right now, we are kind of working towards a launch in November of the installation, we're planning to tour the installation for at least 18 months before dropping anything in the store, possibly. Because we want to make sure that people buy tickets and not just go online and see it for free. And it's it's become like it's a technology super, like super technology that headsets are really expensive. It's it takes a gaming computer to run an app on your so it's still even if it's going to be like public facing it's still going to be attracting only a small part of the population. So yes, Chomsky is interesting because it's not been a super like it's been super iterative, that we are re faced so much obstacle and and the production, it's still deferred deferred from, from what the traditional. So we kind of did, like a studies at first and then we did the development phase, which is where the prototype kind of happened. And then we launched a megalong production phase. And, you know, we kind of also see it that once we launch it, there's kind of an afterthought of it, which is kind of like the distribution of it, which right now it's not like the distribution of it's it's kind of there's not a lot of things that has been done in tours that way there's been like the infinite that the Fire Center did in County Ohana but there's kind of like such few installation, interactive installation that are touring that we kind of are

inventing our own distribution model as, as we're, as we're producing. So, it's pretty interesting, but it's yeah, it's, that's why we're so much people around it, because it's a long way to go to make that thing happened. But it did not differ in, in, in the so we kind of did the study, that the study phase is pretty, you know, regular that we're kind of asking the creators to reflect some on the concept that is like, you know, we always give them a document, which is called like heart, hand and head, which kind of define the, the purpose of the of what they want to say, who they want to address it to, what people are doing, what people are thinking with the emotional arc. Why them why, why now, all kinds of question that makes them for kind of a concept that is like, basically spending. And after that, we went into prototype mode to make sure that we were able to, to accomplish what we wanted to accomplish, which was to have, so the AI is not chunky, and a very defined thing that is not Chomsky. And what we wanted to have was the metaphor of talking about the AI with an actual AI that is able to maintain a relationship discussion. So that the, that was kind of the basis of the prototype to make sure that people were able to laugh and have a proper conversation. That makes sense, that made people curious, and that was kind of working. But it does not come with no obstacle to build an AI. So once we launched their production, we, we we, we did this super big work almost a year on just working on the AI and learning and have training and making sure that we had some some, like the proper, the proper, like, path was designed. The fallbacks and the questions and the type of so there's different kinds of type of AI in the back. Which Which one was was was was answering some basic question and other ones. So just to design the whole path of like, how you got to ask a question, and it comes back to you with something that made sense, was something super huge to develop. So that

kind of kind of had, like, I jack, the whole big chunk of the production. And once we have that SBB in the meantime, they kind of work very in a German way, which means that they establish the whole environment. Okay. First, all the sceneries so there's like four different stages. And so it took them almost six months to do. And the goal was to make sure that everything so they coded everything, so they coded. So they kind of saw we have different kinds of effects and stuff that plays into the VR. And they kind of created the amortization of all the interactive stuff that they wanted to do.

Giuseppe La Manna

So SBB works more on the Virtual Reality part, the environment, and the front end, no?

Laurence Dolbec

Developer basically. So we have Sandra, that is, that is the creative director. We have move AI that is developing the AI. We have Cindy Bishop, who's the backend architect. So the goal, she makes the link between the AI and the content, basically. And then there's FVb that are that are coding, but mainly they're developing the design of the environment, the physicality and stuff. And so there's there's a few game there's a few, there's a few interactivity in this. So they kind of arrived are. So the first the alpha phase for them was to set the whole environment and to make all the tools that they want to activate. Possible. And then the better is going to be the feature freeze, which I call which is like all the interactivity These are being locked all the end for all the chapters because it's the stories divided in, in, in chapters. And after that the data goal, which is like what we're going to see, between the better and the better goal, they have to do all the content freeze. So to make sure that the conversation is sustainable, that the AI does not say, like, Nazis to weird stuff, to make sure that, you know, if the monologues come there, it's good. And then there's going to be your quality control. And then there's going to be the setup of the environment. So there's the VR AR part. But there's also the installation, the installation is separate. It's it's a, it's it's a huge space where you get in the onboarding zone, where there's three different screens and gameplays. That it's kind of the waiting line. So people are waiting and doing a little games. So the whole principle of the Sandra, what she wants to say is like what makes us so special and what makes us different. And she firmly believes that the machine will never be as intelligent as us. And she's a clear adamant of saying machine learning and sell of artificial intelligence, because she's like, they're just translating Trey's translating what we want to tell them and they're injecting, they're also doing or they're incorporating all their bias. And, and she's like, we are firmly different in our endless creativity, our VNC to collaborate. And so those the collaboration is very interesting. It's very intricate in the in the, in the project. And in the first space. There's actually collaborative games where you do Bong or whatever, but you have to play in team that makes sure that you know, the machine right now isn't really playing. It is not collaborative, it just does what you tell them to do. So there's the first onboarding, onboarding. And then you go into a space where you're for around a moment. The limit is kind of the center is, it's like where the, the AI talks to you and where you have the monologue, and then different kinds of chapters where we go through different interactivity. And there's also a collaborative component where people play together. And then then you are onboarding and then you see, so it's a there's always 12 people? Well, it's, it's, there's about 200 people per day, depending on the the hours. But mainly, we did it because of the COVID. We had extra things. So we did the onboarding game to make sure that if people were getting arriving late, that you know, they could have a waiting spurt if they the past that that little gaming is not very important. Then it's like three different bats have four people. So there's always eight people that are doing simultaneously and one, one path that is getting washed while the other thing. So it's kind of a rotating thing. Maybe what I could could do is we could take another moment where next week, I'm at the NFB I could show you. I could show you like we have like the length. I have visuals and I have stuff

Yeah. So and then once you go out, then you step out. And since you know, there's not a lot of moments where you can take your camera to take pictures, then you realize that there's other there's two other people, two other sets of people that are playing with a moment. So there's three models, there's three of them. And then you see, and you see interacting and playing and doing the thing that came from them. The Internet, which was done by all kind of was inspired by the infinite as it's a big wall, you've probably heard about it. It's a big exhibition that was done by the fire center and Felix and Paul who it was in the space. And it was super interesting because they had like, track if floor tracking. Yeah, so and when you remove your glasses, you're all in like it blank, boring, ugly space. And but like people were like passing each other by like centimeters, but it was super precise. And the wow effect. They're like, oh shit, we were like 25 And I thought that was alone in there. So it was kind of the same thing of like going up and seeing that there's other people playing and that you can take pictures you can see See how they look? That was kind of the goal of it. So yeah, I'm probably I'm sorry, I'm just ranting. So me No,

Giuseppe La Manna

How do you divide such an experience in chapters that tell something to user?

Laurence Dolbec

That's the genius of Sandra. So Sandra was, was responsible for is responsible for everything that as is related to content, she had her the whole, the whole, she kind of did the kind of, I'm just going to show it to you. And I'm not going to be able to, I'm going to talk to meet see if people will associate you have to understand that Sandra's is also a teacher. And she is doing her things pretty. It's pretty impressive. I've we've never really been seeing people that the sorry, I don't know why. So she kind of did. So that was kind of the core journey that she did. And the desk, we previously wanted to have a desktop mobile, but we're not going to have the money to do it. But then. So that's the VR core journey. And that's like how the location based experiences playing and where it's ending out and what this what it does. And the goal, you know, she kind of sold, those are her 10 chapters, and she really did all the interaction, which is kind of the level of emotions that we're playing the level of interactions, and the level of learning things, and where people were collaborating. And she she's a scholar. So that's, that's her way to do it. So for kind of like each chapter, she said, Okay, there's like, you do this, you learn this, and you feel this. And then this is what you're experiencing, this is where you're at. So this is a base where SVB already had like everything to kind of say, Okay, so here's is the onboarding, there's going to be the main space and an introduction. So that's in the LBE. But now you start here, Hi, there. And then there's this. And then there's this. So it was kind of set already, she was kind of having chapters, she had a story in mind. She's a storyteller. And she was kind of act after that, like, kind of like she, she, she she just went on and she came up also with a script. So they're scripted moments, and there's unscripted moments, because it has to be a story. So you know, it Chimpsky guides you, it's not Chomsky. But the, the AI guides you through the experience. And there's moments where there's conversation and when you have conversation, it's real conversation with with an AI. So the frame of everything that she does was kind of like she the, the backbone was there. And now, for each chapter they were there. Well, it was a conversation between FET and Sandra. And they were like, okay, so technically, we can do this, this this, this is not going to work. This is we're gonna have technical problems doing. And then sometimes Cindy, which is the backend was like, Oh, well, maybe I found a solution. Maybe we do this and this and this? Well, they're still doing it. They're still in the midst of its production production right now. So we're on to the beta phase. But right now, they're just establishing every kind of interactivity and what they're going to be doing, and how is this going to be shown in the in the, in the physical, visual. But we already have a base script for the for the for the

thing, so that's how they played the or, and it's also since there's, you know, a real conversation that there's a minimum. So if you don't say anything, okay, the whole time, if you talk for like 15 minutes. So it's not an experience that will last precisely as a super big amount of time. But that's kind of how also we are playing it. Because if you're talking too much, maybe they're gonna trigger something that,

Giuseppe La Manna

This is something that Louis Risha told me, he used a lot in the in the interactive studio. And it's like this triangle, the project is in the middle, and you have the three sides that you told me. So the front end, Sandra has the creative, and

Laurence Dolbec

it's like, Square One this thing because there's also the AI. Yeah, the project in the center, it's normally. So we hired move AI as service providers basic. So they're in big responsibility for the project. But the mean square is not moving, I doesn't fit in that square, they're just like a satellite help us get the projects to the right place. But it's always a discussion between Sandra, who's the creative director, and SBB, who's like, front end design leads, and Cindy, which is the back end and kind of the glue between the two of them because they couldn't be couldn't do it. All of them are working for the center, and the center is the project. So it's kind of inevitable.

You probably have like, two friends. And you know, when you're traveling to friends, there's always one that it's stuck, or one that takes the lead and when that triangle relationship is, is quite difficult to maintain, but it's the best thing that could happen. Because there's always another person. So when Sandra or FTP kind of put heads on, on certain things where Cindy could come up with another idea that deviates them from being stuck. So the concept is really interesting. But it's also very hard to maintain the the the just the flow, but it's It seems it's working. When a project is successful, it means that the triangle is successful also.

Giuseppe La Manna

And in this case, how have you managed to use the three points of the triangle. In this precise case,

Laurence Dolbec

there has been some challenge, but it was, it was always great because those people love each other. So and the D chose each other, so it's good. It was difficult because there was distance. And we never seen each other well, we haven't seen each other since 2019. So that was kind of the challenges in that project was only human, never really creative. In the sense that there was a lot of people that change at sVv. In the prototype, there was one designer that had a baby that had to go and Sandra had to work with another designer and finding that fluid and finding that path. Sandra is a very Latin Spanish girl working with squared Germans, so there was kind of some class but there they they profoundly are in respect of each other's work. So it definitely took took some extra time that the human factor may the extra time in the in the production. But ultimately, now we've found like, some likes, so it's to make sure that you, you become especially in distance, it's long to create those relationships. So when there's changes, it provokes like super long things, and there was a lot of lost in translation because we're in two different kinds of languages. So we're always speaking not in their native language, but on both sides. So there was some struggle but it was not with more finding. How to communicate things with each other. That's all it's always the same thing that seems to be The Happening is how you make sure that you understand the right idea that you want to say. And once this is once people get their flow of like working, or how to respond to comments, or how to play this or Health Canada,

like, analyze the conversation. It's really, it's really optimal. But, yeah, Sandra's speaking, never ending speaking, and they're not speaking at all. So it's just human factor. But, yeah, ultimately, it you know, it's headbutts, it's its creation, that's how it is. So it's no different, I think, than any other production we do. But the thing is, we do not have the concept of a hierarchy. And we do not really accept the concept of a hierarchy. We do in, in, in a way that people, some people, we do have seen, so responsible, like, I don't know if you know, Farsi, which is like, kind of at a table of that, that you determine who's responsible, who's accountable, who's consulted, and who's important. And sometimes in a production when there's a lot of people, when we do that exercise of like, you are responsible to do this, but you're the one that is accountable. And you're not going to be consultants, because you're only informed. So that sets kind of the pack. But they're, they're the accept the hierarchy, and the kind of a creative, and directors perspective in a way that, you know, it's your project, you're going to be signing your name on it as Wiebe is going to be signing their name on it, so you have to be proud and be, but we are all about collaborative, which is kind of a bit different from the linear world where there's new, so always so like a, like a vision that has to be followed, and it's their vision. And this, if you do this, you'll fail because if he did, the person that has the concept normally doesn't have the technology skills, so they're not going to be able to do what they wish to do, if they're not listening to their partners. So that's kind of where the triangle plays where, you know, yes, there's someone at the top of the triangle that kind of leads, but your two pillar at the at the bottom, if you if you don't listen to them, you're just gonna fall from face. So that's kind of how we approach it and it's one of the main difference and the collaborative adness the fact that that that

sometimes play in the extra hours of time that it takes to have a a real collaborative effort. So yeah,

Giuseppe La Manna

and moving on to something more bureaucratic. how many people more or less are working or worked at the project? If you ever account of them not precisely, but just to

Laurence Dolbec

A lot of them but I'd say one. I say like, approximately like 30 salesmen but I include in this like marketing I include in this, the lawyer I include in this press relation and stuff like that. Close close close knit is like, I don't know early to call for canceling. I'd say like 15. close knit. Close. Close.

Giuseppe La Manna

Okay, yeah. So more on the production of the creative part and. Okay, good. Good. And what about the budget? I don't know if I can ask was, how much was the budget? For the project?

Laurence Dolbec

a little bit less than a million dollar. So yeah, it's a it's been a because there has been like, a duck? Well, it's, I think, yeah, 900 800 or something. But that doesn't take, I'm not sure if this takes account with the study. So it's six senses, budgets. And, but it's very small for what we do. And the amount of hours that we put in this. People are well paid, but it's just that the mainly the AI is what cost a lot of money to train the AI, but also data scientist or a lot of it's very expensive to be to have to head to work with them. So yeah, I'd say an all in all, it's approximately more or less between 18 and 1 million.

Interview with Elise Labbé - June 21, 2022 - Conducted by Giuseppe La Manna

Giuseppe La Manna

can introduce yourself, tell me what is your position inside the NFB, what are your tasks and a brief history of your path that led you to this position.

Elise Labbe

Yeah. Okay. So my name is Elise Labbé, I'm head of festivals and theatrical screenings, I used to be head of marketing. And I was also working in distribution. And I was also a programmer for the NFB cinema in the past. So I've been at the National Film Board for a very long time, I started cinema, film. And then I started working at the NFB right after my, during my studies, actually. So I've been here for a very long time, and I've seen the institution evolved with, you know, her, its productions and also with the distribution side of things, because at the beginning, it was, you know, print, copies, films, and it evolves with the, the digital filmmaking and distribution side of like, it became less and less heavy in terms of weight, but maybe more and more heavy in terms of technology, because we need to adapt. So, at the end of the day, I'm in charge of doing the festival strategies for the films and also the immersive projects. And that means each project has a path. And as a team, we work on that path together. But my focus is festivals and also releasing in theaters for feature documentary films, we produce, you know, animation, documentary, shorts, and immersive. So my main tasks are that like, you know, working on strategies, and then developing contact and maintaining relationships with festival programmers, festival directors, artistic director, and people who are looking for content for their cinemas as well. So the India team, we do festivals, but also when I said, you know, theatrical screenings, we do also what we call bookings, like individual bookings of films. So if a cinema in any country on this planet would like to show an NFB film in its theater, or cinema, I'm in charge of that, too. So everything that has to do with the big screen experience, so showing films on the big screen, and during the pandemic and became, you know, hybrid, because, you know, most festivals, and some theaters and cinemas turned online or had some, you know, online experiences. So I don't know if it recaps it. Yeah. Yeah,

Giuseppe La Manna

it's a good start. So now I can go through with more questions. Since you've been here. you saw the digital digitalization of the movie industry, talking about feature documentaries and short films. So just to leave aside the interactive production right now, how the distribution and the festival did change. So what did you see that are the main changes, and how now they are working?

Elise Labbe

Like I mentioned that, like, we had lots of physical stuff like copies prints, VHS, or DVDs and blu rays. So it was like multiple formats, but they were physical. Even for like, at the time I started at the festival office, some countries that was in 2011, I think, or 10. Some countries were still requesting VHS format for submissions. Some others would ask DVDs or blu rays. And it was starting, you know, recently they were starting being open to receiving Vimeo links or digital copies. So there was a moment in during these years where it was all possible. So it was not only digital, it was like from VHS to online, you know, going through blu ray and DVDs. And so we had to keep, you know, a collection of all these physical prints or copies because some countries or some festivals would still use the old format. And so there was a transition after a couple of years where pretty much all festivals were or are now you know working with online formats, but it happens like from time to time that's a cinematic for example, would ask for a print either 16 millimeter or 35 or something

thing on the hard drive. But during the pandemic, we, you know, stop, because there was no one at the office. So it was not possible to send, you know, formats and our copies on a drive. But before the pandemic, it was happening still, that some festivals will require that we send it, like, let's say, a crew drive to Berlin, because they wanted to have the film on their crew drive, but that would still, you know, it was manipulation, it was a lot of work. Yeah, but now, since we are sending digital, it's, it's still a lot of time, because sometimes it takes like hours for them, or for us to upload or download, or print. So, you know, it's not all easy, because if people think because it's all digital, it's easier, it looks easier. But sometimes it's there are technical challenges and issues, and sometimes it doesn't work, or there's, you know, a problem with with with with the file or it's corrupted, or like it happens a lot, or the quality of the file. So the problems are different than the ones we had in the past, you know, a print could get lost. Yeah, you know, in transportation or been good burn or break or so. They're well, we're leaving today that is digital is is great, but there are still issues and problems with it. So I don't know if it. Yeah. So not I talked about the prints submissions. And there was also a time for I mentioned a lot of the festivals, but the cinemas here in particular in Canada, there was a some moment when the ad to track the transition from print to online. And when that started, we needed to deal with KTM keys KTM Yeah, okay, cheese, we needed like each theater or each. That was quite a heavy process for us, because like, we were sending lots of lots of people to lots of different venues. And that was that was not fun. For us, it was difficult to, to deal with that. Because we we, every time I film was sent to someone, we needed to require our attack services Akkadian code and provided to the cinema. So it was it was it was difficult for us because it was lots of complications. And but after a while, I don't know why like it was for security reason, the KTM keys to protect because it was all new to everybody. And people were afraid that someone would copy or fire. Yeah, pirate. So after a couple of years, I'd say maybe two, three years with we start like generating TDM keys, and we're just sending the file in, which was people that and also sometimes they sign agreements,

Giuseppe La Manna

have you ever had piracy problems?

Elise Labbe

Not Not that I would remember. Know, the type of films that we produce or, you know, films that are not so commercial, or Yeah. We had a film that was in 2000, or four thick, we shot in Tibet. And it was the Chinese authorities. We needed to hide the suit from the Chinese authorities in Tibet, because the Tibetan that were in the film were would have been in danger. Okay, that's a beautiful film that went to Cannes two dozen Oh, four, it was called what remains of us. And that film, because there was there was no prints anymore. It was digital. And we were showing it in many cinemas here and then to Ken and to other festivals. But every time he would show the film, we we need to hire a security agent that would go with the infrared camera in the venue to watch the audience just like the you know, the LA Studios did a few years ago, we I think we were one of the first company to do that in those years. So every time there was a screening, we needed to have a security agent to watch the audits with an infrared camera to make sure they would not pirate the film and put it online or share it with and we needed to check the bags of everyone that was entering this because they had iPhones. Well, maybe it wasn't iPhones but like cell phones that could record and so that like the technological aspect of like everyone carrying a phone in its in their pocket was a security issue for us. So this is, like 50 years before. No one would have been able to record the content in a theater. That's the only time I remember that there was an issue, but the film was not a part of it to that yet. But we need to make sure that it would not be pirated. Yeah.

Giuseppe La Manna

What are the distribution practices that you use here?

Elise Labbe

there, there's windows where we all lead the rollout. So there's a natural order of things that starts normally with festivals. Some films are not like big films for festivals, but most of the films would be just going in festivals. So that when the rollout is film, festivals, if it's a feature, we would probably do a tactical release. And then it might be on TV. So broadcast, but now with broadcasters, the online component of the broadcast, and there's the educational component as well, if it's a form for students, or teachers, we have the, you know, campus, they don't Yeah, so we'd go on campus, and then eventually it would be online on nfb.ca. So when, you know, I said, we were doing strategies for each film or project. That's what we do is we watch the film, we discuss the potential if it has, you know, international or no international potential festival potential or not, well, we really seen theaters and cinemas here, maybe my colleague will sell it to, I don't know Germany that will eventually want to open it in theaters, it happens rarely with our films, because it's, it's docks, and often their most like most most of the time for Canadian audiences more but sometimes we have films that are, you know, appealing to other countries. So festivals, theaters, broadcast, campus or not, and then online, so we would discuss a for a specific film. Okay, we start let's say, we started with Toronto Film Festival, or it might be in Amsterdam, or Anson, June, and then we give it maybe a year. And we see how it goes some fest, some films just take off, like right away, like you're invited everywhere, the tour the world, and then a year, most of them a year later, for short films, they would be put online on nfb.ca. So during that year, the rest, you know, happens either TV sales that broadcast. Yeah, it depends on the film. But for some films, we give them more time. Some films, if they're, let's say pre sold to TV, if there's a pre sale to CBC to Canada, then we would work with that, to date, they're given us because let's say we they are a co producer makes a pre sale to CbCr to Canada. And they say they're gonna err in December 2023, or 220. So we have we have to do our work before it's on TV. So if if we have funding to release, sometimes we receive funding that attach that there's an obligation to release in cinemas. So we need to release in cinemas before it's on TV. So we work with the obligations we have and the dates that we sometimes cannot we have no influence, or we're not the ones deciding that the TV date, it's the broadcaster that does that. Yeah, sure. Yeah.

Giuseppe La Manna

And when do you start to develop the strategies for a feature film? during its production process? When after the development,

Elise Labbe

the way we work is like tomorrow, to not today we have a brief on a project. Okay, a brief is the team that's producing this, in this case, it's an interactive work. The team is there like the core team, like director, producer, and they tell us what the project is about. And most of the time there are already like, they've started shooting, but they're still it's still early in the process of making the film. So the brief is for us to first hear about the project, what it's about what it's going to look like, it's a shorter feature and who is making it the profile of the people the like the director. And so it gives us an idea of the potential but like very early on, but that's the first moment where we sit and we start thinking and then we'd say You know, this is a film for communities or it's a film for theatrical or it's for sale international sales or this is for Sundance or Berlin or Canada or not. And then that when they film is India today In room at one point, we're gonna watch a cut. So it's close to find cut or a picture lock or when when it's, it's starting to look like your film, not finished, like there's no music or the film is not made or it's, it's, it's not finished, but it's good enough for us to watch, then then we start working in the real strategy, because we have the past production calendar, we know when it's going to be

finished, we need to have you know, our main marketing colleagues need to have the finished film to provide clips excerpts, make a trailer, stuff like that, and, and we need a DCP to be sent to our festivals. But before that, we need to have a good enough copy, digital to send to submit to festivals. So I decided, you know if it's ready enough, or maybe sometimes like we have a film right now, that's almost three hour long. And it's not finished, but we will need to send it eventually to a festival that it's that isn't up to edit at the end of October. But we're waiting for the film to have its music, okay, or the music that looks more like the font, it's going to help the film, or to receive that invitation. Because if you send it too early, and it's it lacks something, it's weak, then they reject it, and you're not able to send it the second year. So each film is different, like sometimes like animation, you don't need to wait for the final mix. Because the music is there. It's just like not makes but for programmers, it's, it's okay. But each film is different. Or sometimes there is no subtitle English subtitles, it's all in French, so you're not able to send it to Amsterdam, because they don't speak French. So of course, you know, each film is treated differently, but the rollout is we have a brief and then they work on the film, then we watch a car then we discuss as the group's potential and strategy. And then I'm like my team is the first to work with the film because festivals are first. And so we're often in a position where we need to deliver content or files or materials and it's not ready if it was going to be ready. But it's not ready. There has been some delays or technical issues or so we often deal with with, you know, delivering materials. Very last minute.

Giuseppe La Manna

What about the budget for distribution and festival, is it counted in the initial budget of the project?

Elise Labbe

if it's a CO production, because we do co productions, we sign a distribution agreement, okay. And in that paper, there's a mention of the amount of money we're going to invest in marketing and distribution. So there is an average amount. Not so much detail. But we know if it's a film that will receive funding for with the obligation to release in cinemas, then we'll need to invest money to release in theaters. And because that's very costly. So if it's just a short film, then that amount is smaller, because we don't need to, you know, buy ads or promote the film when it's in cinemas. There's some money for traveling of filmmakers. There's some money for graphic and design and posters and tax and, you know, electronic press kit. And so there's when we enter in production, if it's not a CO production, there's not really a discussion in regards to like, there's a general budget for the year from marketing. And they have a certain number of let's say we have 100 titles this year, they would, you know, give average amount to each but when we're close to a picture lock or we start working the strategy, then it becomes more clear that the amount of money we're going to need to release the film. Yeah. Yeah.

Giuseppe La Manna

No, I would like to move into interactives. That maybe it's different. So first of all, let's talk about how do you generally distribute work for the distribution and how do you promote those kinds of content?

Elise Labbe

It's still evolving. I've seen like it we've we've been producing immersive works for 1012 years, maybe? I don't know if someone told you about what we're doing in that. Yeah.

Giuseppe La Manna

I've talked with people from all Interactive Studios around Canada.

Elise Labbe

So it had, it has evolved over the years. What I feel I may be wrong, like, for example, we've produced Bear 71. Yeah, that was like 11 years ago,

Yeah. So if we would want to show work that were produced, like 12 years ago, the technology is evolving so fast that I, I think that we would not have been able, we would not be able to show them the works right now at science I'll type fee, for example, were able to show the words that are still active and alive. But I didn't know how we keep like, like the files, the films are in like the digital vault there. There's a team that takes care of, you know, preserving the collection. The immersive and interactive works. I'm not sure how. I'm not even sure how it works here at the NFB. But I feel it I know we're not so well organized.

Giuseppe La Manna

Depends for web based

Elise Labbe

studios for web based Yes. For the immersive

Giuseppe La Manna

interactive know that, because it's still it's not I talked with, I don't know. Jimmy? Yeah. Yeah, he told me about this issue. And they're still thinking about how to go through them

Elise Labbe

right now. I think it's in the studios, that they keep track of what they've done and like, make sure it's still accessible, but I'm not sure they're doing it very actively. It's like, it's like if we produced an animation film, and the animation studio would just take care of preserving it for 50 years. It's, it needs to be preserved in the collection. And I think the institution is not, has not found money to do that. Probably, it's the question of, you know, teams and human resources. And so what I know from, because I've been looking at what they were doing over the years, but I've been, I was not involved with like, I was involved, but not so much involved with festivals with immersive and interactive content. Like we would do some missions, but I was not underground. Like I'm just returning from Tribeca where I went for the first time, like two weeks ago. So I did all the experiences there. And then I was in NC last week. And I did all MCs VR. Yeah. So I, the it's a, it's a different thing, like the VR experience. And the rest of what they call immersive is, is anything that is not like linear or 2d. So there was some holographic or hologram content there. There were some technology that was the I don't know how it was an iPad, and you would you would just watch something on an iPad, like, there was no no technology more than the iPad. But it was gimmicky a bit. But like, I hope we won't produce stuff. Because for me, there's no added value. I'd rather watch that on my TV set or my laptop instead of just the gimmicky part of it. So here we produce web based immersive content. And we we produce VR content. And we like what we had at Tribeca was we had two pieces, but one of them there was a an installation with it. That's I find that the most challenging part of having works like that travel or being presented to audiences is because the the file in itself is you can upload under the set and it's, but it's still it's one person at a time. So there our plus disappearance we had there that ERPs was we had three sets, but it was three person at a time for 2025 minutes. So at the end of the day, you have, I don't know 75 People by 10 days, let's say so a maximum of 750 people have watched your content, but then it's not shown in other festivals until because you need to have a place for it. Yeah So these would be best being presented in museums or cultural centers or like for a long period of time. But we use festivals to start, you know, raising interest and spark interest from media industry. So

we're hope, like, we're in Tribeca, we hope that the Venice, Venice programmer was there, and we hope that she's going to invite the two works we had there, and the best of Venice VRM and then probably added for Amsterdam in November. And, you know, we've received interest from Kaohsiung in South Korea, like, there's some festivals that will invite the works. And then and then what, you know, they need to be shown to a large audience, let especially the other work we had is an indigenous story. Very sensitive story. And it needs to be seen by Canadians. So, you know, we're trying to have the, the VR set travel across the country, in indigenous communities, for example, through live public libraries, maybe or, you know, other networks. But it's still, it's, it's not so easy having

sending the technology thing to some people that don't know how it works. It's, it's not like people that have done it, like, who have equipment that know how it works. They're all the same people, they all know each other, they're all connected, and they go on the App Store, and they upload, you know, VR content, and they do it at home, it's easy for them, but the rest of the world or the population that do not have access to it, you need to bring it to them. And and it's just 2345 set of VR, Oculus quest to that will go to, I don't know North Alberta for five days. And who's gonna go? Oh, yeah, well, it's good. You know, even if you send the equipment and the build, who's gonna tell the people that they have to go and it's not as easy as film like, you go to the, you know, you you find a cinema schedule online. You have your favorite cinema, a local cinema, you go to the movies, you know, how, you know how to go there, you buy a ticket, you watch a film. Now, there's this veneer, indigenous, you know, experience that is there. Like, it's not natural. Yeah, like people don't? If you don't know it exists, how will you know? Yeah, yeah. So if you don't know, you don't know. I so it's limited in terms of reaching audiences that way. But there's, I think there's more people buy equipment. I have no idea the numbers, but I think it becomes more less expensive, probably. Yeah. Also, so. But I don't know how it's going to evolve in like, five years from now. I'm not sure it's not like buying a large TV for your, you know, home cinema. It's, it's, it's, and the technology changes a lot. And also, there's like, I'd see that like the Vive board, the Oculus, the whatever else we teach you. So, you know, you won't buy like five different equipment for a home. It's either you buy one kind or the other kind of like, I don't know where we're not facing a wall. But there are some challenges in front of us in regards to Yeah, reaching, showing our works to people because the works we produce are meaningful. And like, often there's like a social aspect of in the storytelling, and that's why we we make them

Giuseppe La Manna

of course, there is at least it's something I have perceived. Sometimes it seems that those kinds of products instead of being made for large public or being made for only the people who are already in this field.

Elise Labbe

with you. Yeah. I saw that in Tribeca, okay, that the people that were there to do the experiences with me were not like, people from the street. They were like privileged people that that knew that world it's like it's like you feel there's but they live in the same bubble.

Yeah. Yeah. So I don't know if six kids. My kids are not the ones that will go to Santoshi to do VR experiences, they still go to the movies. Like they go in, they buy, but, and they're young. I mean, so I was just thinking, Is it maybe for a younger audience? Like, I have the Oculus quest at home. They like, like, when I bought it, and I brought it home. They spent like many, many, many hours on it. And then they forget about it. Yeah. See, so it has the power of attraction to young people. But then, you know, they don't spend their days doing, you know, experiences with the quest. They. They have a life they go to school, they do sport, you know? I don't know.

Giuseppe La Manna

Yeah, like David, I met him. And he was telling me at night now seems that for interactive projects, it's like it was at the beginning of the NFB with traveling projectionists

Elise Labbe

Yeah. Yeah. But I mean, it's money. Like, it's expensive. Also. When and it's not like a collective experience. You know, like, 200 people sitting in a room, it's like, very individual experience.

Giuseppe La Manna

Yeah. And how does it work? Like for festival? How do you choose? Like, what are the, if this film of this experience goes to this festival, these other festival? What are the features of the film that make you say, Okay, this film, or these experiences good for I don't know, Benny saris good for school for Tribeca.

Elise Labbe

I personally, like I want I travel to some of these festivals often and I watch films there, or I do VR experiences or so there's kind of a intuitive knowledge of what kind of projects they're looking for. But, I mean, it's not exact science. But you know, so often, I would say, Oh, like this, for sure. I don't like don't want to send that to whoever because it's, it's not the quality is not there, or even the subject matter is very local. I'm not often wrong, like most of the time, like, it's when people argue with me that we need to send it to all these festivals. And a year later, it was rejected everywhere. So there's Yeah, knowledge of what kind of films the program and there's lots of also read limitations and rules, you know, Premiere status and, and format and length. And so, yeah, which, I mean, they're like the big festivals we try to, I try to send them like our best films and works. And some Kenyan festivals do program like our films that are more local or regional. At doesn't mean, they're not good films. It's just like, not all films can be invited at Sundance, or it can or Berlin or Tribeca, or it's highly, highly competitive. Like, in Nancy, I've watched all the short film programs. And the films were really strong, very, very strong films, and they they received like, 3500 films this year, and they invited 270. So it's not it's not 5% of what they receive that they, they invite. So it's very difficult.

Giuseppe La Manna

I've experienced a different light compared to the past of, I don't know both an increasing number of productions that goes to the festival and increase of quality. Does production like is this something that has happened and why do you think increase of

Elise Labbe

number for sure, I think it because of the pandemic it has increased even more. Because during the first year that pandemic, people were just waiting to see what would happen and they didn't want to ruin the carrier or the life of their film by sending it to an online festival. People were very reluctant to having their films shown online. And this year, it's like all like the two years people have been waiting the or they've sent their films and also some productions are delayed and they're already No. So I've heard like, for example, Toronto Film Festival, they've received a lot more films than the received the past years. And I think people do films with less money, more and more with phones or with cameras that are not expensive. And see there was a Brazilian producers. She said they had a film last year and unsee, a feature animation film they did with \$200,000, which is nothing \$200,000 for a feature animation film. That's nothing. So people make films with small budgets. And sometimes they're like, super good films. So there's more more content more competition? I don't know if there's more good

films, like in general, I felt in NC there were lots of good films. But I would not see maybe not all, you know, but it animation in particular, I think the good films were there this year. So we're just one player, we, you know, we're not such a big player. We're in China that was famous for our animation productions. But there's lots of other good players that do that do great works. Yeah, Master animators. Yeah, yeah. What

Giuseppe La Manna

about feature documentaries? Because maybe usually, it's I don't I think among the on the cinema industry, audiovisual in general documentary is it was more important before now it's getting more in second. Yeah, at least for the general public, not for the people. Sometimes I feel like the same. I was saying about interactive project may be also applied to documentary do you feel in festival this is just, let's say, a provocation. And

Elise Labbe

I think, from the mass production of documentaries on the planet, there are some super strong documentary documentaries that do travel a lot. And then there's all the rest that that is less seen. Okay, so I don't know in percentage, but maybe 5% of what's being produced in documentary filmmaking, not just here in Canada, but everywhere, are the films that everyone hear about the films that were at Sundance, for example, fire of love, like that film is just just doing it, I think IMAX has bought it or not do and it's going to be shown on IMAX and IMAX theaters, eventually, these are the films that people know about. So what's sad is all the rest of the production of documentaries is probably more seen on the local basis, or the you know, TV channel, local TV channel, or online. But there's so many channels on like, there's, the online offer is so huge that like you as a consumer of your or respected or your loss, because you don't know where to get content. If you're a documentary fan, there are some documentary channels online, but it's more and more difficult for, you know, a normal human being to, to know where to go to find the content that they like to watch. So I probably the Netflix of this will have, you know, attracted a lot of people that, you know, over the past years, and people are just are lazy or don't don't make any effort effort to find contents, because they're used to watch stuff on Netflix or

Giuseppe La Manna

get to use your to. Yeah,

Elise Labbe

yeah, we put we put a lot of our documentary films on Amazon. Yeah, I hear big numbers like, like, it's minutes of content that is being watched on Amazon like, but to me, that's not I don't know who's watching, you know, and I don't know what title is the favorite or

Giuseppe La Manna

so when you you don't get those kinds of information when you give it to Amazon? Like they don't say

Elise Labbe

they you can see how many minutes of content people are watching. It's not so precise. Yeah. But on an fb.ca We have a good idea of, you know, we would put a future doc online. And the next day, we'd know you know, there was five dozen people that have watched it like these are numbers we can probably share with you if you'd like to have like, data of what's being consumed online.

Giuseppe La Manna

Okay, maybe Yeah. And what about It was a really big issue of years ago about movies that it was more for feature films and movie fictional. But the fact that most movies don't go to cinema to theaters and they just get to I don't know, festival and then online. Yeah, remember that was the big issue. And Ken, what do you think about this? And how in general, do you think the industry the NFB by in general, the environment you work with have reacted to the introduction of this new streaming platform?

Elise Labbe

There was a created a lot of frustration. And I think there was this reaction of like, people want to protect a theatrical window or the theatrical experience in my experience. And yeah, that was like, four years ago, I think we can like because, yeah, because of Netflix and, and then they wanted to boycott the film. Roma, Roma, that's more than four years ago, five or six. Yeah. And with the Oscars, it's the same thing. Because in order to be qualified to the Oscars, you need to release in theaters. So the the Netflix of this world started opening films in theaters just to qualify the films in order to have them qualify to the Oscars. But at least it created the it opened the conversation, what what happened at that moment. And I think the studios and the people that are producing content are very in favor of at least protecting the cinema experience. To offer a minimum of the cinema experience with the big films that are producing some films are not good quality. And these they don't, they don't like they don't mind or they don't care. But putting them online, quickly. Even us, we don't release our all our films in cinemas, because it's very expensive. But what we do is I mentioned we do the there's a community network that we work with, like all the public libraries in Canada, there is a lot of like groups that want to watch content. In cinemas are in theaters are on the big screen. So it's not like chat trickle release, because people don't there. These are free screenings. For example, here in Montreal, we have a missile that could sue. So there's I think 15 ms online also in Montreal. So in each neighborhood, you would go to watch an NF B movie once in a while because we have the NFP it's called snake oil, Amazon, no NFB elements, and it'd be at home. So it's like in your local neighborhood, you have your Amazon like also you can watch a film on them. So it's still the cinema experience. It's so we tried to preserve a window where people can watch our films on the big screen, whether it's commercial or or, you know, free community screenings before putting them online or before putting them on a TV channel or before putting them on iTunes or Amazon or so the what happened with with Ken and Romo, I think it woke like the people realize how important it was. Because we work in cinema, what is cinema is going to the movies. So every year I attend, there are two conferences here one in Quebec, it's called cine Quebec and the other one is called Show Canada and Show Canada every year travels to a different can in cities city. So this year was in Quebec City next year is going to be in Vancouver. It was in Toronto, Halifax different places. And this conference is all the theater owners and programmers in Canada, go there regroup there and discuss what's coming, you know, in the app this year in terms of content, but also how can they work improving the network of commercial cinemas in Canada? So Show Canada This is what the discussion is about that is about how can we maintain preserve increase Horace Amedeo improve improve the cinema experience because there's all in the question of the the length of the window window into the cinema like tatical window. It used to be six months before you know the film was before the before the online thing there was no No problem. Because after those were not put online, so. So at the beginning was six months, and then it was reduced to three months. Then it was there was a discussion a month ago about some

studios wanted to release like online like three weeks after it wasn't in the cinemas will not program these films, they will just boycott the phones, if they don't respect a certain number of weeks or

months, you know, before putting the film online, they will not because when they decide to play or present a film there, cinemas, they have their guarantee that the producer will not put online before a certain date. So they need to respect that agreement. So if it's not respected, then they will boycott the studio, or the film. Okay. Yeah, yeah. Yeah. Really. So it's a it's a it's a business a it's, you know, it's listen to mom. And it's also a business. So it's a question of balance between, you know, what to invest in order to promote and bring the audience watch the film. And the revenues that are going to be generated also generated with, you know, popcorns

Giuseppe La Manna

Oh, yeah, of course, all. So surrounding. So yeah, theater experience, that

Elise Labbe

comfort and all of that. So they tend to want to add a lot of DI box we're, what was the is the Atmos son? Yeah.

I know, the spectacular, plus, plus, plus, plus experience. I don't I don't think that's what it's gonna bring people more to the cinema. It's more than the quality of the films.

Giuseppe La Manna

But if you're thinking, like, am I studying about this right now for my thesis, and it's the same thing that happened after the television, introduction of television, the cinema started to be more spectacular. Yeah. 3d. Random blue. Yes. Yeah. So now they have to do the same. Yeah, but the box and Atmos

Elise Labbe

people want good films. That's what it's good to keep people you know, going to do movie, it's good films. And it's fun going to the movies, but you don't go for the plus plus plus experience, you know,

exaggerated. Yeah. But still, it's cinema and the cinema experience is gonna, it's gonna stay. It's not an option. It is not an option. It so there's a balance to be found between all the players, all that Windows, the commercial aspect of it. The accessibility as well. Yeah, for us, accessibility is very important. That's why we we offer most of our films on nfb.ca.

Giuseppe La Manna

Yeah, we were one of the first institutional journal studios that created our online sharing platform.

Elise Labbe

Yeah, yeah. It's free. Yeah. accessible, and really easy.

Giuseppe La Manna

Oh, yeah, I used it like just last three months, I post tons and tons of stuff on it. So I experienced it.

Elise Labbe

And it's the longevity the the long tail. That is That is great. Also about about our platform, but our collection as well. I mean, we receive requests every week, from far away for films from the 60s from this, like there are films in Sheffield right now in the UK, from the 60s that are and we needed to send a DCP of one of that film. And that there was lots of communication because the the they sent us a

picture because it was a black and white film, but there was some green in the image. And they were here they were arguing No, no, no, it's okay. And everything is good. So at the end, they agreed here to do in a new master DCP of this very old film because there was they said under 200 films they were showing there on DCP only our film was not the quality was not great. Okay. Yeah. So the you know, the the print is one thing, but like when we produce DCPS from very old prints. Probably there's not someone sitting in a theater watching the DCP from beginning to end of course. And then it was going to be shown in front of an audience so we need to make sure it was great quality. So every time we have a request for a film that is from the collection, we need to produce a new ID don't save them we need to produce a DCP every time from from the Master

Giuseppe La Manna

does your Department also works in on the long tail. Yeah,

Elise Labbe

yeah, we do that in my team. Yeah. So it's probably 30% of what we do is long tail. So this is just an example of like a zoonotic in Paris. There's lots of lots of people asking, or retrospectives, we have a lot of, especially in animation. Like there's a in Poland, the, they want to show, I think, 400 minutes of animation, it's five programs of 80 minutes of short animations. That's a lot. So then we need to, we need to produce the DCPs of each of these films. And then we need to send the transcript because they need to translate polish, need to find the stills or photos. They would ask for posters, like sometimes we don't have the poster because it's too old. So we do receive a lot of requests like that. And before it was lots of shipping, because we need to ship the prints.

It was very expensive, more expensive

Oh, yeah. It was very expensive. We had we had a big budget for FedEx, and shit sending the prints to like, different countries. And sometimes it would get lost or destroyed or broken or Yeah. No, it's just the digital aspect. That is a burden sometimes. But the cost or none, I guess. Yeah. I mean, it's for the cost of technology. Yeah. So here we pay

Yeah, yeah, a few years. And the festivals in cinemas need to pay the people that do it, but also invest in technology. And the technology will probably evolve. And

Giuseppe La Manna

that brings me to my last question. Really general? Yeah. And I think also hard to answer. Yeah. But what do you see in the future of festivals and distribution? So both for I call them flat content and immersive and interactive content? What do I do?

Elise Labbe

I don't know, maybe I don't have much imagination, I think the festival experience will remain. I feel especially after this pandemic, people, like you want to go to the restaurant, you don't want to order you want to go out. But you will choose your experiences. So you will be more careful maybe in deciding what, what to do on Friday night. So people will still want to go to the movies, or it will still want to attend a screening in the festival. I'm not sure the hybrid aspect of it will remain because I've what I've seen recently is that the festivals that kept the hybrid aspect have lost in terms of in terms of live audience in their venues, because people are still reluctant to go, Well, that was this spring in Canada. So you're we're a bit behind Europe in terms of maybe house measures, but like NC major states, they decided not to be online at all. And theaters were packed. They decided not to offer it

online. So people had no choice but to go. So they had 13,000 accreditations this year, and it was 10,000 before the pandemic so there is three I said 13 Heisman so it's like, a lot more people returned to NC after the pandemic. Probably if they would have offered their content online less people would have traveled so I'm not sure about the hybrid aspect of it. They they can use it if they need to, on some some maybe some special films, but not offer it like in general for them the whole program or the whole festival, but they they might keep some, you know, hybrid aspect for to reach me Maybe audiences that are further not in not in the city where the festival happens. Okay, yeah, for interactive and immersive. I don't know, I feel that this world is very secluded, or it's very. I don't think the rest of like the festival network will open to it so much. I've seen some trials, some that tried it, but stop after a year. Okay. Because if you do it, you do it well. And to do it well, you need to have staff equipment, budget, location, venue, promotion. So it's a lot of it's sort of investment in Yeah, not just money wise. But

Giuseppe La Manna

how does it work? Like, do the for example for experienced the need headset? Do the production needs to bring all the commands he provided

Elise Labbe

now, but when it started, for example, I remember in NC when we went the first year with it was minor tour. Maybe you saw my new tour that we did minor tour as a film. Okay, it was not so good. And then and then we didn't in VR? I think it was, I think it worked on it. My notorious called and then I did it here in VR. I think it's the first time I did some VR experience. Okay. And it was like, flabbergasted, like, it was like, wow, so the artistic director, events, he lives here in Montreal, so I call myself say, Come, come, come over. He did it. It's like, a while, because the film was like, not was not flat, but it was not. Okay, yeah, that film was much better in VR. So then he invited the experience of VR there, then see, but we had to bring the equipment, and was very different. It was not like with the border and the insurance, there was. Yeah. And I think the first two years, in festivals, like in Sundance, we needed to bring the gear. And then they started to invest in equipment, and they still do need to invest because it changes so fast. Yeah, that's why I'm saying I think the festivals that do it now are the ones that I've mentioned, like the Sundance Tribeca and see what it is just an emission, Venice, it finance to them. But there's lots of festivals in, in Asia, fantastic film festivals that do involve like that invested in in technology a bit. And they do invite our works. There's one in Amsterdam, also called Imagine, that is a fantastic film fest. And because it's fantastic, I think they like the technological aspect of it. Okay. So I think these will just the the, they got the, they're good at it, they became good at doing it, because they've been doing it for a couple of years. And they have like they're a trade, it's like, people know that they curate good VR, or interactive or immersive content. But I don't think like other festivals, like hotdogs and Shodo tried it. It's just too, it's heavy, into like, if they do it, they will probably need to let go on other things. Because the budgets are not increasing. And you need the venue the space, you need a home. So Sundance and Tribeca and NC and it, they have the venue, they have the space they they have the staff they've trained the staff, so they curate content and then museums and other people that like to program content like that, that are not festivals they can they watch what's in the Venice program, and Oh, they've programmed that piece would like to see it. So which we share the bill they do it and then they invite it. Yeah. But yeah, the festivals that do it do it well, the ones that have tried it and let it go because it was too heavy. And then I think museums is a great avenue for content like that, you know, have it installed there for a couple of weeks or months and and then they promote it well because they are in South Carolina Zoo or you know, Museum of, you know, history or science or

