

“I don’t think we’re going to face a disaster like we faced with Flash again”.

An Interview With Jimmy Fournier and Louis-Richard Tremblay of the National Film Board of Canada

Tobias Conradi and Florian Krautkrämer

This interview was held on June 27, 2023, at the National Film Board of Canada (NFB) headquarters in Montreal. The interviewees are Jimmy Fournier, Chief Technology Officer (CTO) of the NFB, and Louis-Richard Tremblay, Executive Producer of the NFB Interactive Studio. Jimmy Fournier is the Director General of Technologies and is in charge of all the technological aspects of the institution, which includes the IT department, technical resources, post-production, digital platforms, and all the technical aspects of production and distribution. He has been at the NFB for nearly 20 years and has done considerable work on various aspects of archiving, as well as on the NFB's digitization plan. The plan contains three main objectives: 1) digitizing all the NFB's works and making them available via digital media; 2) restoring works; and 3) ensuring the accessibility of those works. The NFB's interactive productions are also part of the digitization plan. Louis-Richard Tremblay, as an executive producer, oversees programming decisions such as: What project gets to move forward; in what capacity; in what context? He manages a team of around a dozen people and produces 20–30 percent of the projects. In 2023, at the time of this interview, close to 400 people were working full time for the NFB. Three-quarters of the staff are located in Montreal and the other 100 are located across the country. About 125 people are responsible for the technical backline (IT, technical services, digital platforms etc.), which includes ten to 15 people doing technical maintenance. At any given time, there are around 200 projects under production in different phases. The NFB's annual budget is 65–70 million Canadian dollars.

Since this interview was conducted, the NFB has shut down its interactive studios. Responding to a request for the reasons for this step and what this means for the future and archiving of interactive productions by the NFB, Jimmy Fournier explained: “The NFB has decided to invest in and explore new forms of innovation, by reinvesting in production, distribution, and audience engagement, which will serve not only the NFB but the Canadian audiovisual sector.”

Historical Background of NFB Interactive

Florian Krautkrämer: The NFB is one of the leading institutions worldwide when it comes to interactive works and also the archiving of those works. When you go back in history, can you think of certain key moments that led to this position for the NFB? What were the central decisions to make interactivity one of the most important things in the NFB's agenda?

Louis-Richard Tremblay: A profound question! I can. The NFB is rooted in a tradition of exploration in media. I think it's been true since 1941, when John Grierson reached out to his friend Norman McLaren.¹ Then there were multiple stages. There's a long history of synchronization in the field of sound. In 1967 there was the renowned multi-channel projection *In the Labyrinth* during Expo 67, which led to IMAX theatres and the first computer-animated films.² And so I think it was almost natural at the end of the 2000s ('08 and '09) that the decision was made to move into and introduce the digital era. It was in a context where the decision makers at that time were mostly well grounded in Montreal, very well positioned in the Canadian industry also, and really understood what was happening. They wanted to digitize the NFB's collection and render it available to the public directly – to explore and to contribute to what was happening in the field of the internet at that time. The Quebec ecosystem was pretty rich already because of an early 1990s injection of funds into the multimedia industry. There was lots of investment to bring all the big studios into Montreal and nurture a middle ground of multimedia creators.

There was also a big move when the Government of Canada created the Canada Media Fund, which was financing what we called at that time the “convergence”, or converging funding: When you do a TV series or a movie for cinema, you add money and incentives to do something for the web, so that also spurs a middle ground.

FK: When was that?

LRT: That was in the early 2000s. I can't recall the exact time, but roughly around then, after what we usually refer to as the end of the first internet bubble, around 1999, something like that. So that created an ecosystem, and they decided all the talent was pretty much out there. And it was really an opportunity. Arte was also in

1 Norman McLaren (1914–1987) was a Canadian animation film director who worked for the NFB from 1941 and founded the NFB's animation studio.

2 Cf. also: Government of Canada, “Key Moments in NFB History”. <https://www.canada.ca/en/national-film-board/corporate/archives-and-history/history.html>, last accessed: September 25, 2024.

the field at that time, and there were a couple of interactive documentaries on the web, inspired by some of the converging funding projects.

Montreal was a place where the talent was available, but the documentary format was never explored. Eventually the question was: What should an interactive documentary be with all the [digital] means of today? And I think that's where we started, both in Vancouver and in Montreal at the same time.

So, I think, those are the key elements. It's not only the capacity to do it, but also the willingness of an institution like the NFB to say, "Okay, so we don't know what you're doing, we have confidence in you, make it work!"³ which was pretty much the same thing that happened at CBC (Canadian Broadcasting Corporation) before. It's like, "We don't understand, but we think there's something interesting there. Let's explore it," which is, I think, the spirit of the NFB from its very foundation. It's in the culture, I would say.

Jimmy Fournier: I think, at that time, they made a really good decision by giving the studios the opportunity to learn and not putting obstacles or boundaries in their way – as can happen with large institutions like the NFB. They gave them the opportunity to build two different studios. They gave them space to do that. Not trying to include it directly into the current structure of production, but regarding it more as a lab, with the ability to explore...

LRT: ... and to sometimes fail. (*laughter*)

JF: But failing is part of the learning process, right? And I think it's very important for an institution like the NFB to have this kind of vision. At that time, not everyone involved had seen the potential. But ten to 15 years later, we realized that without taking those chances, we would not have what we have now. Because now we are more in the process of consolidation and have established the ability to teach other studios and institutions as well.

Technological Development, Perseverance, and Archives

Tobias Conradi: On the NFB website, you will occasionally find the sentence: "Technology is moving fast, and we were no longer able to support this format." See *High-rise – Out My Window* (Katerina Cizek, 2010), for example. So when you say that there was a certain lab character to the early interactive work, was that something that took you by surprise? Was the archival problem something that was underestimated at the beginning, or was it something that you already had on your minds as a future

3 See also the article by Frédéric Dubois on the "sandbox-mindset" in this volume.

problem? You now provide creatives with an extensive guide.⁴ Is this the outcome of a painful learning process?

LRT: I think it's part of the spirit of early experimentation. Creators in 2009–2010, and I would say almost up to 2015, were excited about the possibilities and the field of creation it opened. And from a creator's point of view, the question of how the work will live through time comes second. Was it a consideration amongst producers? A little more, but not much. It was kind of the same spirit, where it was too soon to even understand what exactly we were doing. We were just trying to figure out how things were playing with interactive documentary formats. So from the creator/producer point of view, I wouldn't say it was much of a concern when going into different projects. However, it became more and more urgent when Adobe started to send signals about no longer wanting to maintain Flash. Then suddenly people realized that, "Whoa, okay, so this is something we had neglected." For whatever reason, it was neglected. I think the decommissioning of Adobe Flash was the turning point where people said, "Whoa, okay, we have to think about that." And afterwards this pretty much changed; now we ask ourselves what will remain of a certain project in ten or even 50 years from now. The work has become more mature in that sense.

FK: And do those questions already reflect back on the production process?

LRT: Yeah, like, well, we're putting that into place, I would say. Now we're starting to implement it. Very early on we can decide not to go with one technology because the technology is not perceived as stable enough or is not supported enough. We ask those questions as early as possible now. Sometimes we may decide to move forward anyway. But the question is asked, which was not the case five years ago.

JF: There is also a connection to the answer to the previous question. At the beginning of 2010, I was one of the engineers that raised their hand and said: "It won't last. It won't last. Warning, warning, warning!" ... and – Thank God! – it did not stop the process, because if they'd taken only that into consideration back in the day, they would have probably stopped and we would have lost not only the project, but also all the lessons we were about to learn. Now we know: How do you build an audience? How do you build a project? The lessons prevailed, and we still archive 95% of the projects and have them accessible internally at the NFB. When people from univer-

4 The guide we refer to here is not accessible on the public internet. We were provided with access ahead of the interview. However, some basic information for creators who want to work with the NFB is available online: NFB, "Journey of an NFB Project". <https://production.nfbonf.ca/en/journey-of-a-project/>, last accessed: July 17, 2024.

sities do research on a particular project and they want to have it back, we give them access to the archive.

TC: Failure is part of the pioneering spirit.

LRT: Yes, exactly, I think so. Also, what remained were the navigation videos. So if someone ten years later wants to figure out how something worked, this is possible. The project *Fort McMoney* (David Dufresne, 2013) is a good example because it's connected deeply to servers in real time, to APIs (application programming interface) and stuff like that. This part of the experience is lost.⁵

At the moment, we have a project that uses machine-learning processes of different kinds. It's connected to GPT-3. Will we connect it to GPT-4? No, the decision has already been made. So at some point there's going to be some loss of that experience. But something of it will be preserved. For me, an interactive project that is connected is kind of a living thing. So the question becomes: "How do you archive a living thing?" That's one "*allegoria*" that I think sometimes works.

TC: This was also one of our specific questions: What do you think about how you can archive the experience? This is a question that is also important for video games. People know how to archive a game, but how do you archive the play?

LRT: ... and even more: How do you archive the human experience of it?

TC: Do you archive screencasts or something similar?

LRT: I can only think of one project. It was about Twitch and we used the Twitch platform. It was about the streaming culture and how it's a very community-based structure. We have archived the project. It is still there in HTML5. But what's interesting in terms of the human experience of it is, because it's a Twitch-based project, some of the best value is the captures of people taking the cast and just casting it to their twelve friends. This is when you have a human experience of our time. But that's the only specific example I can think of, and here it was because of the nature of the project that we used screencasts.

TC: However, for the conservation of the experience of playing, you can use the exhibition room downstairs, right? And it is possible for some of the older projects to put a vintage computer there, that still runs Flash, let people play it and make it also accessible to the public. So not exclusively for universities, that is ... Is that something you are planning to do?

5 See also the interview with David Dufresne and Anita Hugi in this volume.

JF: Yes, that is something that is feasible. Remember, at the conference (*Doing Interactive Documentary*, Lucerne, Switzerland, March 18, 2023), I was connected via VPN to the infrastructure here.⁶ We use our internal collection system, which collects all the information on all of our work. All the media-asset management (MAM), so we can give access through the MAM, because it's close to our infrastructure, to people who want to have access.

But – the beauty of what we have developed with Rhizome⁷ is the possibility of emulation. The web-based emulation is integrated into the playback system. So we don't need a vintage computer, we have something better.

FK: Do you have an example where you said at the start of the production, “We can't go on with this or with certain parts of the project because it will not be accessible in five to ten years...”?

LRT: It happened one time in the studio. It was one of the reasons, not the only one, but we were working on a project called *Marrow*. It was developed in co-production with Atlas V in Paris, France, financed by us and the CNC (Centre National du Cinéma). It relied heavily on AI learning models and it was based on scenes. It was a complicated project and at some point we said, “This is not viable. It's not something we can put into circulation, distribution. We don't know how we will archive it outside of just filming it.” One of the considerations was, “What will remain of that in five to ten years?” It was too much of an original piece, more like a performance. There were three main reasons, but that was definitely one of them.

JF: From what we've learned from capturing interactive web-based works, we know that we have some limitations when these works access external services, simply because we can't capture the entire range of external services.

TC: Like *Prison Valley* (David Dufresne, Philippe Brault, 2010), which linked to Facebook.

FK: You just mentioned the cooperation with CNC. A lot of the regional film funds have their own philosophies of archivism. Do you see that your approach and your philosophy of archiving those projects also influence other institutions like the CNC or other film funds? And are you in conversation with them about those questions?

6 You can find a recording of the talk on YouTube: <https://www.youtube.com/watch?v=YyW4y6gAUBk>, last accessed: September 25, 2024.

7 See: <https://rhizome.org/about>, last accessed: September 25, 2024.

LRT: I was in a couple of conversations. Do we influence them? I don't know. But there is definitely conversation, dating back a number of years and to the collaboration with Arte. All the early players that were in the interactive documentary, all had to ask themselves basically the same questions. I think we were amongst pretty much the first to actually find out how to do it.

JF: So I think we have been an early important player. And we worked with a partner like Rhizome, who is also in the field.

LRT: One important event was the *Update or Die* conference in 2017.⁸ I think that was definitely a tipping point where the people at MIT Open Documentary Lab, with Phi Centre and us, from the NFB, worked together. The spirit was, "Okay, we didn't think about archiving. We should," and then it went on.

Possible Future Problems

FK: Do you now feel relatively safe when it comes to those questions? Of course, compared to ten years ago, but are there also some things happening now or in the near future where you're saying, "Okay, this could become a real problem for us", maybe comparable to the discontinuation of Flash? Or do you think that, well, now you have learned such a big lesson and the infrastructure is so good that you're relatively safe for the next ten to 20 years, or more?

LRT: I don't know if we live in an era where we can say, "Yes, we have it all figured out. We're safe!" Things are still moving fast. Just think of what is happening with machine learning... It's just that it's tough to follow. But I think we're definitely in a better position. We've learned to ask the right questions much earlier in the process. However, to me the question of "How can we archive the experience?" is still pretty open. The essence of the experience is really something tough to capture.

8 Update or Die, May 5, 2017. Centre Phi, Montreal. "A one-day conference curated by the MIT Open Documentary Lab and Phi, in collaboration with IDFA DocLab and the Netherlands Institute for Sound and Vision. Unstable platforms, rapidly changing technologies, and shifting investment priorities are the new normal in today's media landscape. As attention turns to the next big thing, digital games, artwork, interactive news features, and web-based documentaries made as recently as five years ago face obsolescence. The Massachusetts Institute of Technology (MIT) Open Documentary Lab and Phi propose a one-day multi-disciplinary conference to discuss the pressing issue of disappearing digital documentaries." <https://10times.com/future-proofing-emerging-digital-documentary-forms>, last accessed: September 25, 2024.

JF: The web is more mature. I don't think we're going to face a disaster like we faced with Flash again. That is, as far as the web is concerned! The world learned from that, not only us. But when it comes to new formats, questions still remain: With the VR-experience applications, for example, we don't have the answers on that. But for web-based works, we are more mature.

TC: We already touched upon this question, but in your guide for interactive productions, you say, "Choose mature technology over new when possible (recommended)." Isn't this a bit of a double-edged sword? New technology gives you new opportunities; you can do new stuff with it. But, as we have talked about already, it's not clear if it will persist. Mature technology, on the other hand, may be something that becomes obsolete at some point. What do you think about this relationship? How would you prioritize this question?

LRT: I think things are moving fast. We're still in a creative thought process of exploration and creation. We have to follow the public: Where do people stand? What are they looking for? What do they resonate with? And like you say, sometimes old things don't resonate anymore with a critical quantity of the population, and as a public service we have to ask ourselves this question: "Okay, what are people curious about?" And these are usually the spaces where we try to do the creation.

It's a puzzle in many ways. You want to do something that's cutting edge. But as a producer, we're not the creator, so we have to kind of spark the desire to explore during the creation process.

JF: You know, we at the NFB own one of only two working pinscreens. We're going to continue to do things with old technology in the digital world. But we serve the story, not the technology, above all.

TC: It is a bit like Polaroid photography, which is still used because it serves a specific aesthetic.

LRT: Right, it's really the notion of how you detour technology to amplify a story, or the experience of the story? I think that's the philosophy.

Production

FK: I would like to ask one question concerning production. You mentioned contemporary technologies, and when we look at the genre of interactive documentary, we see signs of a decrease in bigger productions. For example, if you look at TV stations like Arte or the BBC, they're not as involved in producing interactive works as they

were ten to 15 years ago. Do you also notice something like this within the NFB? Is the amount of projects that are proposed to you in this genre also decreasing, or is it remaining the same?

LRT: It's decreasing. For many reasons. I think the first five years of the studio were the core of production, both in Montreal and in Vancouver. After taking all the steps back on the archival and the engagement part, we noticed that we may have big and varied projects, but when you see the statistics, you have to say: "Well, we're doing something wrong." Because the audience doesn't get deeply involved in those types of projects. So for us that was definitely part of the question. Often projects were pitched to us, inspired by *Fort McMoney* or similar projects, because we're about exploration in media forms. We had induced something, but we didn't want to do the same thing twice.

Also, the web culture evolved massively between 2010 and 2016. We followed VR, XR, got a little more into installation, more into the game format. The latter is something very interesting because there are a lot of young creators who are gamers and who are coming out of film schools. They understand interactivity and they adopt a gaming approach for the web format. We've had some pretty great success with games. AR came into place. *East of the Rockies* has been a very successful AR application with impressive numbers for a narrative experience.

I think it also has something to do with users' consuming habits. People are on social media. So we've done Facebook projects, we've done Instagram projects, we've done a number of projects to reach people and to be relevant to audiences in the format they are accustomed to and familiar with. We have tried to explore interactivity by playing with the "sound off, sound on" feature on Facebook and how to detour it to say something, to tell a story. We – and other partners as well – know there is potential in experimenting with social media, but we have to match it to the attention span of the typical web consumer – and *mobile* web consumer. We moved away from big formats that need two hours of users' time. Mature web creators work with narratives that prompt you at 18 seconds, then at one minute, and then at three minutes. This is different from early web docs where the interaction and decisions were given to the user. Now the relationship between maker and user is more balanced. There is a better understanding of what the user reacts to, basically.

TC: Is this also a lesson learned from game development?

LRT: Oh, of course, absolutely. In many ways, not just on the engagement part of it, but also on the pipeline, on the approach to the design. We've learned a lot from the games we produced in cooperation with the more mature video game industry and with independent developers. But we do not usually work with big production stu-

dios (AAA), but with the independent studios, where you actually see their pipeline. The culture of interactivity is a game culture. (*laughter*)

Distribution: Infrastructure, Amazon, and YouTube

TC: Two questions concerning the field of distribution are the most interesting to me. One is your relation to YouTube. I have seen that in April 2023, you had 1,613 videos online on YouTube. Which means they are hosted by a private institution, whereas the NFB is a public institution. Is there a discussion about this?

The second question leads towards the NFB infrastructure: I have seen that you also offer internet domain purchasing, managing, and cloud hosting services. These are reserved for projects that were done in line with the interactive project guide. The question is: How big is the infrastructure that you are offering? Is all of this self-hosted? Is this *your* infrastructure or do you also buy, for example, Amazon cloud services?

JF: Yes, our cloud infrastructure is part of the Canadian government cluster provided by Amazon Web Services (AWS).⁹ This is very secure, and it is offered for the projects that we produce. However, we don't offer that to everyone who wants to have their projects in the cloud infrastructure. The Development Guide is dedicated solely to creators who work with us. Projects that are produced by the NFB are hosted on our infrastructure.

LRT: Co-productions are also hosted by us most of the time, because the value of that is immense. An independent producer we would co-produce with knows that if everything is hosted by the NFB, there is a future for this project.

JF: Yes, because even if we don't revisit the works and update them as often as they may need it, we still keep the infrastructure alive. You have to distinguish the work and the infrastructure it is based on. By maintaining and securing the infrastructure, the works stay alive much longer. This is part of the technical aspect of our job: to maintain that infrastructure. Creators have to use the tools that we give them, the sandbox that we give to them, and if they follow those rules and these services, we're able to maintain their project. There are some exceptions for projects that build on

9 AWS, "The Trusted Cloud for Government in Canada", <https://aws.amazon.com/canada/publicsector/government/>; Government of Canada, "Government of Canada Cloud Guardrails", <https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=32787>, last accessed: September 25, 2024.

other technologies that we have more difficulty supporting. In those cases, we try to find an external partner, to help us maintain the infrastructure for the production.

About the YouTube perspective: You're talking to the guy who's in charge of the NFB.ca streaming platform. For me, YouTube is a competitor! But we see the numbers. We determined that, when we release a new film, and we put it on our platform and on YouTube, it doesn't reach people on YouTube. The numbers that we have are for the long tail and for the whole collection. What makes me proud: When you search for a film on Google and it's on our website and on YouTube, our website comes first. Because our search engine optimization (SEO) is very, very powerful.

Also, we realized that views on YouTube result mostly from just parts of our films being embedded into a playlist with a small clip going viral. This means there is no attachment to the brand, no attachment to the movie. For us there is no value in these views. But if a person comes to our website and is dedicated to spending tens of minutes on the film, this has more value than small clips embedded into a playlist that is seen in India.

I try to calculate and determine the value with our Google Analytics profile. Here we can determine that people come to our platform and then come again. We can trace a digital journey and do things better for our users. With YouTube, I don't have these numbers and can't determine as precisely what we're doing well or poorly.

Should Everything Possible Be Archived?

FK: You said before that it's impossible to archive everything, every aspect of an interactive film, game, or project. We have been wondering: Should everything really be archived in the first place? How do you discuss this? Is there some kind of selection process, where you assess the importance of projects or negotiate the resources (time and money)?

LRT: We definitely discuss this, although we don't have a framework for those discussions. We decide more case by case and context by context. But definitely there is a conversation. And sometimes it starts just within the process of creation. The first question is: "What is the experience about? What will people take away from the experience?" But later we talk clearly about archiving. We don't have an "archivist". But we try to figure out: How do you estimate the archival value of a project? We try to figure out, sometimes with expertise from friends and people who are actual archivists, what may be the value of something in 20, 50, or 100 years. This is definitely not my expertise, but this is how we do it. We have the conversation and try to take the best decision – and, of course, based on our resources, that's for sure.

JF: Exactly! And as we said: we won't stop the process of creating new projects and devoting resources for archiving. Because creation is our primary mandate.