



InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

Diplomatic Analysis

Case Study 09(2): Digital Moving Images - National Film Board of Canada

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INTRODUCTION

As a single component of case study 09, *Digital Moving Images*, National Film Board of Canada (NFB), was primarily developed to as a comparison against the Hollywood animation studio. This case study is part of the artistic focus of experiential, interactive, and dynamic systems studied by InterPARES 2. The primary focus of the NSB Final Report is the context in which the animation is created. It endeavours to present an overview of this context so that procedural and maintenance variations that are inherent in a film and video collection covering 65 years worth of material will be accounted for.

The following text presents the results of the diplomatic analysis on the digital entity identified in the case study Final Report. The creator of the NFB films and videos considers all of the entities created in the course of producing the final moving image productions to be records. These include textual, artistic, database, and musical documents. Therefore, it is not a single digital entity that is under examination in this analysis, but an aggregation of digital entities and the identification of their potential to be records.

The purpose of the diplomatic analysis is to assess the status of the identified digital entity as a record. Once the status of the digital entity has been determined, preservation strategies may be proposed by Domain 3.

IDENTIFICATION OF RECORD(S)

A record, as defined by the InterPARES glossary, is a document made or received and set aside in the course of a practical activity. A record must also possess all of the following five components, as established by InterPARES 1 research conclusions: fixed content and form, embedded action, archival bond, persons and contexts. The application of the definition of a record on NFB moving image materials is therefore analyzed according to the following parameters:

1. To be identified as a record, the digital entity must possess fixed content and form,¹ and be affixed to a stable medium (or physical carrier).

According to the answers to the following core research question in the Final Report: Q. 4a, the distributed database system, Synchrone, stores “scanned copies of contracts and relevant documents for the Board’s entire output....”; Q. 18, “all work done using the computer as an intermediary...is kept on the server system....”; Q. 18e, different versions of the digital entities are assigned different identification within the animator’s server. Once set aside when the production is complete, they become part of the records keeping system or the Synchrone system. In the latter, it is not known what identifying metadata is attached to the digital entities.

Therefore, the content and form of the digital entities created during the process of film production are fixed through their affixation to either the NFB server or database systems, and through their unique version identification.

2. A record must also participate in an action, defined as the conscious exercise of will by an officer of the creator or by an external person, aimed to create, maintain, modify or extinguish situations. A record results as an unintended by-product or product of the action.

The specific action identified in the answer to a core research question 1 in the Final Report that results in the record by-products is the creation of films in the animation section of NFB.

3. A record must possess an archival bond, which is the relationship that links each record to the previous and subsequent record of the same action and, incrementally, to all the records which participate in the same activity. The archival bond is originary (i.e., it comes into existence when a record is made or received and set aside), necessary (i.e., it exists for every record), and determined (i.e., it is characterized by the purpose of the record).

According to the answer to core research question 7 in the Final Report, all matters dealing with a particular production are linked through an assigned production number, which includes the final film stored in the archival vault. Therefore, all records possess an archival bond with all other records relating to the activity of creating a film production.

Therefore, when the final version of the digital entities has been achieved, they are received and set aside and their archival bond is naturally accumulated within the project folder, directories, and sub-directories to which they are affixed.

¹ The InterPARES1 Authenticity Task Force has defined fixed form as the following: 1) binary content of the record, including indicators of documentary form, must be stored in a manner that ensures it remains complete and unaltered, and 2) technology must be maintained and procedures defined and enforced to ensure that the content is presented or rendered with the same documentary form it had when set aside. (See ATF Research Methodology Statement, available at: http://www.interpares.org/documents/interpares_ResearchMethodologyStatement.pdf).

4. Record creation must involve at least three persons, whether or not they explicitly appear in the record itself. These persons are the author, addressee and writer; in the electronic environment, one must also take into account two additional necessary persons: the creator and the originator.

- The record's **author** is the physical or juridical person having the authority and capacity to issue the record or in whose name or by whose command the record has been issued.

Originally, the NFB was the author of its productions as they were all created by employees whose work under copyright was declared that of their employer. Since that time² the NFB films are created by auteur animators whose relationship with the NFB is on a contract basis. Although the National Film Board possesses the authority to approve the initial film proposal and also aids "in all facets of making the film from creation through distribution to preservation," it is the individual animator who makes the final approval decision (core research question 11). Therefore, the animator is the author.

- The **addressee** the physical or juridical person(s) to whom the record is directed or for whom the record is intended.

As different records involved in the production of the film are aimed at different audiences, it is impossible to state exactly who the addressee is for every single record (the records need to be examined individually). However, if the aggregation of the records as a whole are viewed from the overall activity of creating a film, in a very general way the addressee is the audience for whom the film is intended (which is most likely the public at large).

- The **writer** is the physical or juridical person having the authority and capacity to articulate the content of the record.

The writer of the records is the individual animator who undertakes the creation of the animated film production as the final film and its various components are considered to be that animator's authentic work.

- The **creator** is the person in whose fonds the record exists.

All of the records created in the course of the film production exist in the fonds of the NFB which possesses its own archives; therefore, the NFB is the creator.

- The **originator** is the person to whom the Internet account issuing or the server holding the record belongs.

The digital entities examined in this analysis exist on the NFB's server; thus, the NFB is the originator.

² The Final Report does not specify exactly when this system changed except for very generally stating that it has altered "over the years" from the time period of WWII.

5. Finally, a record must possess an identifiable context, defined as the framework in which the action in which the record participates takes place. The types of context include juridical-administrative, provenancial, procedural, documentary, and technological.

- The **juridical-administrative context** is the legal and organizational system in which the creating body belongs.

The NFB has been influenced by a variety of legal and organizational alterations since its inception. Its fundamental existence is based on its status as a federal cultural agency responsible for the creation and production of films in Canada. Although it began in 1939 as a small body, it expanded greatly during WWII to become an organization whose employees were involved in all aspects of film creation and were guided by copyright law which stated that their films were the property of the Board. Since that time, decreased employee-produced films, increased independent film-makers, and increased outlets have resulted in the catalogue of the NFB consisting of extremely complex rights management issues.³ Other legal influences have included Acts such as the National Film Act.

- The **provenancial context** refers to the creating body, its mandate, structure and functions.

The NFB's primary productions consist of documentary films and auteur-driven animation, in which it functions as an authoritative body that approves a production and provides aid in the production's creation, distribution, and preservation. In these initiatives it is guided by its mandate, which has undergone a number of alterations over its lifetime. The main premise of the NFB's mandate was developed in the 1950 National Film Act which was "to produce and distribute and to promote the production and distribution of films designed to interpret Canada to Canadians and to other nations." Further additions to this mandate include being a "world centre of excellence in production of film and videos," and "a national training and research centre in the art and technique of film and videos." The Final Report does not include any information on the structure of the NFB other than that the creation process of the auteur animators is guided by NFB producers and technical supervisors.

- The **procedural context** comprises the business procedure in the course of which the record is created.

As stated in the Final Report, "because of the Board's auteur approach to film making, each film is unique in its creation, and that the procedures adopted for one will not necessarily be applied to any others." As this analysis is being conducted on an aggregation of records rather than a single digital entity, it will examine the overall procedure of the NFB that would generally be involved in an NFB film production (even though it is a final product and not a record) instead of that surrounding a single record.⁴

³ See the Overview section in the Final Report for more information on the juridical-administrative context of the NFB.

⁴ Since this is the approach taken in the Final Report, it would be impossible to outline the specific procedures involved in the creation of individual records as this information was not provided for the reason stated above.

Diplomatic analysis of **procedural phases** in the creation of an NFB film production can be broken down as follows:⁵

- a. **Initiative:** the introductory phase of any procedure is “constituted by those acts, written and/or oral, which start the mechanism of the procedure.”⁶

The initiative phase of the procedure of creating the production involves the NFB receiving a film proposal submission from an external source, which includes the choice of three possible procedures (stipulated by the NFB) the animator chooses to follow.

- b. **Inquiry:** this preliminary phase “is constituted by the collection of the elements necessary to evaluate the situation.”⁷

The inquiry phase of the procedure of creating the production entails the decision of the NFB, based on its evaluation, of whether or not to approve the film proposal.

- c. **Consultation:** this phase is “constituted by the collection of opinions and advice after all the relevant data has been assembled.”⁸

The consultation procedure of creating this production takes place during the creation of the film, in which the NFB producer guides the animator, green-lights benchmark points, and ensures the animator stays true to the original proposal. It also includes the role of the NFB technical supervisor who oversees the workflow and naming conventions (provided by the NFB), aids in software selection, and helps move the digital entities to post-production (core research question 4c).

- d. **Deliberation:** this phase is “constituted by the final decision-making.”⁹

The deliberation phase consists of the final approval of the animator of the final production, whether it is in the form of film, video, or internet.

- e. **Deliberation control:** this phase is “constituted by the control exercised by a physical or juridical person different from the author of the document embodying the transaction, on the substance of the deliberations and/or on its forms.”¹⁰

The deliberation control phase consists of the act of the NFB in passing the final production, after the approval of the animator has been obtained.

⁵ The phases of procedure as dictated by Diplomatic Analysis; see Luciana Duranti, *Diplomatics: New Uses for an Old Science* (Lanham, Maryland and London: The Scarecrow Press in association with the Society of American Archivists and the Association of Canadian Archivists, 1998), 115.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

- f. **Execution:** “the documents created in this phase are the originals of those embodying the transactions.”¹¹ In other words, the execution phase results in the issuing of the first record capable of producing the consequences intended by its author.

The execution phase of the procedure takes place when the final product is written out to film or to Betamax and broadcast to its intended audience.

- The **documentary context** is defined as the archival fonds to which a record belongs and its internal structure.

As well as being connected through the production number, as stated in the answer to core research question 4a in the Final Report, all of the digital entities in the actual creation process are stored in a production file which exists in the Synchrone intranet system (one film is given one file). This system includes a number of databases which house all of the contracts, master copies, production footage, financial and budget records, scanned documents, and news releases connected to a given film. The storage of all of these materials within the Synchrone databases and their production number establishes an archival bond among all of the records resulting from the same activity of creating a specific film production.

- The **technological context** is defined as the characteristics of the technological components of an electronic computing system in which records are created.

The completed film is stored as source files in either TIFF or MPEG encoded files, which are written onto digital linear tape (DLT), while the digital materials are encoded in Cineon and avi formats. As well, the Synchrone system which houses the production files is built on the Oracle database engine and implements a Register to access any information relating to any title throughout its lifetime. Software implemented by the animator in the creation process includes Adobe Photoshop, Aftereffects, Painter, CTP from Crafter Software, Flash, and Softimage. Hardware includes PC's or Macs. For more information on the technology implemented during the film production, see the Final Report.

CONCLUSIONS

The above analysis reveals that the digital entities created throughout the process of developing National Film Board animated films meet the requirements needed to be records. Although the actual film is a final product and a publication (and therefore not a record), all of the digital entities that are created as the by-products of its creation are set aside and thus possess an archival bond with one another and a stable form and content. Due to the auteur status of the animator and the transient nature of digital materials, intellectual property and copyright issues are becoming increasingly more complex and directly influence preservation and re-purposing issues. Many of the methods currently employed in these areas (such as conversion) are considered to be causing loss and therefore damage to the original, which may not be acceptable to the author. The preservation strategy is based on the notion that film is a “known” material

¹¹ Ibid., 116.

that can be scanned at any time to re-create the digital form when it becomes obsolete. However, care will have to be taken in future transformations to ensure that the author's original intent remains intact.