



# InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

## Domain 1 Research Questions

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

Geneviève Sheppard, UBC

April 2006

**1.1.** What types of documents are traditionally made or received and set aside (that is, created) in the course of artistic, scientific, and governmental activities that are expected to be delivered on-line? For what purposes? What types of electronic documents are currently being created to accomplish those same activities? Have the purposes for which these documents are created changed?

- Textual records:
  - Correspondence, emails, research reports, contracts, storylines, treatments
  - Occur in both electronic and paper form (latter usually a print out of the digital form)
- Art Work:
  - Hand drawn animation, paper cut-outs, pixilation, puppet animation, pinscreen, computer animation, claymation, India ink drawings, paint on glass, sand
  - Analogue material is usually digitized when possible (e.g. drawings, paintings); some material exists in recorded form on film, video or computer image files (e.g., puppet and sand animation)
- Databases:
  - Synchronic: integration of multiple databases created through in-house software developments
- Music:
  - Scores (scanned and included in the database, Synchronic), recorded music
- These records are created for the purposes of creating moving image products; the records support either the creation or distribution of moving image materials
- One change in the purpose for which these documents are created is the fact that many of the analogue records are digitized so that it can be included within the Synchronic database. The purpose of the creation of the initial (analogue) record is the same, but now a digitized version is created to form part of an integrated database system

**1.2.** What are the nature and the characteristics of the traditional process of document creation in each activity? Have they been altered by the use of digital technology and, if yes, how?

- A number of activities traditionally (and still do) characterize the creation of animated films at the NFB and result in a variety of documents
  - E.g., budgets, budgetary reports, research reports, proposals, sign-offs pertaining to various stages of the production process, correspondence and contracts
  - The majority of these documents are now either born digital or scanned and brought into the digital domain
- Traditional animation was tightly controlled in the sense that film and frame size, frame ratios and projection speed were standard. With digital animation, the frame ratio can be whatever the animator wishes and the frame rate will depend on the video system being used
- The process of creation of the actual animated film depends on each individual animator who may use traditional forms of animation, digital methods or a combination of both
- The digital entities making up the animation may be created directly in the computer through the use of graphic tablets, electronic pens, electronic paintbrushes, software etc.; traditional methods include hand drawings which are then scanned in sequence
- Regardless, ALL animation is brought into the digital form in order to release it as a product
- A variety of off-the-shelf software is used in the creation of animation productions (Adobe Photoshop, Aftereffects, Painter, CTP from Crater Software, Flash and Softimage)
- Both PC's and Macintosh computers are used depending on the preference of the animator
- While a work is in progress, all files pertaining to the production are stored on a network server and on a backup server; during the process of production files are often burned onto a DVD each day
- It is not possible to generalize a workflow or document creating process because each animator follows his or her own steps in order to create the final product

**1.3.** What are the formal elements and attributes of the documents generated by these processes in both a traditional and a digital environment? What is the function of each element and the significance of each attribute? Specifically, what is the manifestation of authorship in the records of each activity and its implications for the exercise of intellectual property rights and the attribution of responsibilities?

- The digital entities created by animators are stored as TIFF format files for 2 dimensional work and as TARGA format files for 3 dimensional work
  - These are written to film or to digital Betamax and are stored on digital linear tape (DLT)
  - Off-the-shelf graphics software are used including: Adobe Photoshop, Aftereffects, Painter, CTP from Crater Software, Flash, Softimage; this software can then be modified to create the effects intended by the animator
- The documents that are created in the course of creating a production are stored as a production file in the Synchrone database

- These documents (e.g., contracts, proposals, reports, emails) take various forms, but are mostly Word documents
- Paper documents that form part of the production file are scanned into the database
- Synchrone is an Oracle database engine
  - Functions as a centralized management system by presenting all qualitative and quantitative information on an NFB production (or co-production) in one view
  - Consists of various modules; allows a degree of interactivity
  - Different views are provided depending on the competencies of the individual; permissions are also built into the system for various actions
  - Its core is an electronic rights management system – provides information about rights pertaining to a given production and determines the royalties that must be paid out when a production is sold or broadcast
  - Includes scanned copies of all contracts and relevant documents for the production of films (scanned as TIFF files)
  - One of the system's modules is a title codes module – foundation for a final approval process in a production and combines technical and legal aspects with production content; this allows electronic signing-off and greenlighting of productions by delegated authorities as they go through production stages
  - System contains a vault management system which allows users to access master copies production footage and other elements of production
  - Financial and budget database systems which existed before Synchrone have been integrated into it
- Are complex intellectual property rights issues due to the auteur status of the animator; most of the films produced by the NFB are initiated from external sources
  - SEGDA is a computerized system set up to manage all the information pertaining to rights to NFB productions

**1.4.** Does the definition of a record adopted by InterPARES 1 apply to all or part of the documents generated by these processes? If yes, given the different manifestations of the record's nature in such documents, how do we recognize and demonstrate the necessary components that the definition identifies? If not, is it possible to change the definition maintaining theoretical consistency in the identification of documents as records across the spectrum of human activities? In other words, should we be looking at other factors that make of a document a record than those that diplomatics and archival science have considered so far?

- The digital entities created during the process of film production are considered to be records by the creator and may be considered as records in the Diplomatic sense based on:
  - These entities are fixed in that they are part of the Synchrone system or NFB server
  - The entities are the result of an action, that is, the production of an animated film
  - The records in question possess an archival bond since all documents related to a particular production are linked through an assigned production number; all the

records possess an archival bond with the other records related to the activity of creating the animation product

- Three persons may be identified to be involved in the process of animation production.
  - The author may be the NFB or individual animator depending on whether the animation is created by an animator who is an employee or whether an animator is obtained on a contract basis
  - The writer, who undertakes the creation of the animated film, is the animator
  - The addressee is comprised of the different audiences to whom the productions are aimed at
- In terms of the digital environment:
  - The creator is the NFB since the records created in the course of a production exist in the fonds of the NFB
  - The originator is the NFB since the digital entities reside on the NFB's server
- The records in question possess an identifiable context including:
  - Juridical-administrative context: The NFB and the legal and organizational environment in which it operates
  - Provenancial context: The NFB and its mandate, structure and functions as an organization to produce, distribute and promote films intended to interpret Canada to Canadians
  - Procedural context: The film making process, steps of production in the creation of an animated product
  - Documentary context: the Synchrone database holds the records relating to animated productions
  - Technological context: The hardware and software used in the production process (e.g., Oracle database, Adobe Photoshop, PC and Mac computers)

**1.5.** As government and businesses deliver services electronically and enter into transactions based on more dynamic web-based presentations and exchanges of information, are they neglecting to capture adequate documentary evidence of the occurrence of these transactions?

- Yes, to some degree. The production file contains documents mostly related to the initial stages of production; little, if anything, is documented about the creation of the film itself (e.g. snapshots of the production process are not necessary)
- Documents related to the production (mostly textual documents) are contained within the production file which is stored in the Synchrone database
- Every production is assigned a number and this same number applies to all the documentation concerning the production; this number applies to paper and digital records (and the digital copies of paper records held in Synchrone)
- During the course of production of an animation product the digital entities comprising the production are held on a server (and backup server); each frame of film is separately identified so it can be accessed and worked on by the animator, if necessary
- The way in which entities are documented and maintained depends on the individual supervisor for each production and size of the project (small projects may only be lightly

documented)

- Problems have been encountered in post-production due to insufficient or poor documentation
- Changes made to digital entities in the course of production are not necessarily documented (may simply be a record stating a change in direction occurred)

**1.6.** Is the move to more dynamic and open-ended exchanges of information blurring the responsibilities and altering the legal liabilities of the participants in electronic transactions?

- No, responsibilities appear to remain constant:
  - The animators are considered to be the authors of the products created
  - Terms and obligations are outlined in contracts
- Producers are responsible for moving the animation through the steps of production within budget and time limits
- Post-production employees are responsible for taking the animators final output and turning it into the final product (as envisioned by the animator)
- Complexities exist with respect to film rights due to the contracting out of work; the re-purposing of material involving re-encoding alters the original production to some degree and may distort the author's original intent
- Copyright law applying to the use of third party segments in films led to the development of an electronic rights management database which is now an integral part of the Synchrone system

**1.7.** How do record creators traditionally determine the retention of their records and implement this determination in the context of each activity? How do record retention decisions and practices differ for individual and institutional creators? How has the use of digital technology affected their decisions and practices?

- Retention guidelines for different records are not specifically outlined in the final report, but the NFB maintains virtually all of its records dating back to 1939
- Synchrone contains all the qualitative and quantitative information pertaining to a NFB production; contains entities arising from the creation of film and all supporting documents
- A formal archives staff exists to provide records management for headquarters and all regional offices