



InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

Diplomatic Analysis

Case Study 13: *Obsessed Again...*

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INTRODUCTION

The InterPARES 2 case study 13, *Obsessed Again...*, was conducted to examine the creation and management of the interactive electronic composition of composer, Keith Hamel. *Obsessed Again...* is a work for bassoon and interactive electronics written in 1992 by Canadian composer Keith Hamel, under a commission by bassoonist Jesse Read. The interactive elements in the work were realized by utilizing the Max music software environment along with a commercial Proteus 1 synthesizer and an IVL pitch-to-MIDI converter. Because of obsolescence, the work has not been performed for several years. The computer files required to perform *Obsessed Again...* are incompatible with current operating systems and the hardware previously used is aging. As a result, the composer is currently composing a second version of this work so it can once again be performed.

A number of records were created during the composition process, such as the musical score and the computer code; only the computer code is in digital format. Due to technological obsolescence, this analysis was unable to examine the entities of the original computer code. A new computer code is currently being produced and recommendations will be based upon this new code. Thus, it falls into the InterPARES investigation area of artistic activities that are carried out using experiential, interactive and dynamic computer technology.

The following text presents the results of the diplomatic analysis on the digital entity identified in the case study report. The purpose of the diplomatic analysis is to assess the status of the identified digital entity as a record, and based on the analysis, Domain 3 of InterPARES 2 could propose applicable preservation strategies. The digital entity identified in the case study report is the computer code. This diplomatic analysis therefore centers on the identification of the computer code as the record.

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 to the creator's computer code entities 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).

- **The content of the computer code is fixed.**

The digital entity is fixed to the hard drive of the composer's computer and its content remains stable after creation.²

- **The documentary form³ of the computer code is not fixed.**

Due to the nature of the performance, the documentary form is not fixed.

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 computer code participates in the composition of a musical work and, thus, is the natural by-product the composition.

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).

The computer code is stored on computer disks, which remain in the possession of the composer. This action makes it explicitly set aside and linked to other records produced during the same procedure such as the musical score, contract and notebooks.

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).

² The composer is writing a new code because of technological obsolescence; however, the purpose is to produce the same effects.

³ Definition of documentary form from the Glossary Definitions, Terminology Database, InterPARES Web site: The rules of representation according to which the content of a record, its administrative and documentary context, and its authority are communicated. Documentary form possesses both extrinsic and intrinsic elements.

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.

The composer, Keith Hamel is the author of the record.

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

The addressee of the record is the performer, Jesse Read.

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

The composer, Keith Hamel is the writer of the record.

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

The composer, Keith Hamel, is the creator of the record because the digital entity still resides in his fonds.⁴

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

The composer, Keith Hamel, is the originator of the record as it is stored on the hard drive of his computer.

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.

There are no specific laws or regulations within Canadian jurisdiction that govern musical composition; however, the composition is subject to the Canadian *Copyright Act*.⁵

⁴ The composition still resides in the fonds of the composer, although technically it should belong to the performer, Jesse Read, who commissioned the work.

⁵ According to copyright law, this composition belongs to the performer because it was composed under contract.

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

The composer, Keith Hamel is the primary individual responsible for the work *Obsessed Again...* However, as stated above, Jesse Read is the performer who commissioned the work and thus, technically the work should solely reside with him. There is no mandate or a formal business structure for the work *Obsessed Again...* The Final Report states that Jesse Read's role in the work was one of an 'interpreter' of Keith Hamel's musical work, as seen in the technological framework within which Keith Hamel could create *Obsessed Again...*

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

Some of the procedures identified in the Final Report include:

- There is no formal procedure employed by the composer; the compositional process is unique for each work. However, a generally summary of the steps followed for *Obsessed Again...* can be summarized as follows: the sketching of pre-compositional ideas, the creation of interactive elements using software, the testing and modification of these elements, and the production of the final version of these elements and the score.

The creator's activities can be broken down in the following **procedural phases** of diplomatic analysis:⁶

- a. **Initiative:** the introductory phase of any procedure is "constituted by those acts, written and/or oral, which start the mechanism of the procedure."⁷

The initiative phase of the procedure of creating a composition begins with ideas that are first sketched out on paper to determine the interaction between the instrument and electronics. These sketches include basic pitch and harmonic content.⁸

- b. **Inquiry:** this preliminary phase "is constituted by the collection of the elements necessary to evaluate the situation."⁹

The inquiry phase of the procedure of creating a composition involves creating the interactive elements onto the computer using the necessary software.¹⁰

⁶ 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.

⁷ Ibid.

⁸ See answer to core research question 6 in the Case Study 13 Final Report.

⁹ Duranti, op. cit.

¹⁰ See answer to core research question 6 in the Case Study 13 Final Report

- c. **Consultation:** this phase is “constituted by the collection of opinions and advice after all the relevant data has been assembled.”¹¹

The consultation phase of the procedure of creating a composition involves testing all of the interactive elements through the utilization of the Proteus synthesizer as a virtual performer.¹²

- d. **Deliberation:** this phase is “constituted by the final decision-making.”¹³

The deliberation phase of the procedure of creating a composition involves all modifications to both the score and software files.¹⁴

- 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.”¹⁵

The deliberation control phase of the procedure of creating a composition would involve any final inputs from the performer, Jesse Read before the work is performed and executed.

- f. **Execution:** “the documents created in this phase are the originals of those embodying the transactions.”¹⁶ 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 of creating a composition is the final version of the digital elements used to create the final score in a digital format.¹⁷

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

Although the computer code resides in the archives of the composer, Keith Hamel, it should technically belong to the performer, Jesse Read, who commissioned the work.

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

The work was originally created on an Apple Mac II computer (68020), running Mac OS 7, and upgraded to an Apple PowerBook laptop running Mac OS X 10.3.2. Max software was used.

¹¹ Duranti, op. cit.

¹² See answer to core research question 6 in the Case Study 13 Final Report.

¹³ Duranti, op. cit.

¹⁴ See answer to core research question 6 in the Case Study 13 Final Report.

¹⁵ Duranti, op. cit.

¹⁶ Ibid., 116.

¹⁷ See answer to core research question 6 in the Case Study 13 Final Report.

CONCLUSIONS

The above analysis of assessing the computer code as a record demonstrates that this case study does possess all of the elements necessary for being considered a record. Thus, computer code is also regarded as the authoritative record. However, due to technological obsolescence, it has become necessary for the composer to rework this piece in order that it may be performed again. This situation must be taken into account when establishing any recommendations for future preservation.