



# InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

## Diplomatic Analysis

### Case Study 03:

### *HorizonZero/ZeroHorizon Online Magazine and Database*

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## INTRODUCTION

The InterPARES 2 case study 03 was proposed to explore the “distinction between electronic records and publications”<sup>1</sup> through the examination of the production of *HorizonZero*, an online presented, interactive magazine focusing on Canadian art. It falls into the investigation scope of InterPARES 2’s first focus: artistic activities that employ experiential, interactive and dynamic computer technologies.

The *HorizonZero* production started in August 2002 and ended in December 2004, with a total of eighteen issues produced. Its Web site now acts as “a unique repository of Web-based interactives, essays and journalistic writings, fiction and poetry, photography, video, animation, games, and other digital artworks—all reflecting the ever-widening spectrum of contemporary artistic possibility.”<sup>2</sup>

The following text presents the results of diplomatic analysis on the digital entities identified in the case study final report. According to the report, “this case study focuses on the documents<sup>3</sup> that are created in the process of producing an issue of *HorizonZero*.”<sup>4</sup>

More specifically, the answers to core research questions 3 and 23 identify three categories of documents generated by the production activity: administrative documents, journalistic/artistic documents (which are the intellectual contents of the magazine), and programming codes (which create the presentation and interactive features of the Flash site of the magazine). The same answers also makes it clear that “this case study is especially interested in the documents of the latter two categories”<sup>5</sup> namely the issue contents and the computer codes. In addition to

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<sup>1</sup> Case Study 03 proposal (no page number given).

<sup>2</sup> *HorizonZero* Web archives, <http://www.horizonzero.ca>.

<sup>3</sup> The term “document” used in the final report will be replaced with “digital entity” in the subsequent analysis since the concept of document has its archival definition and may not necessarily mean the same meaning of common usage.

<sup>4</sup> Case Study 03 Final Report, Section A: Overview.

<sup>5</sup> *Ibid.*, Section D: Narrative Answers to the 23 Core Research Questions.

journalistic/artistic documents, the issue contents category includes a database called ZeroHorizon, which contains some of the digital objects used on the flash Web site. The selection of these digital objects are based on their potential values for future use (e.g., for education purposes). The intellectual contents, programming codes and the ZeroHorizon database<sup>6</sup> therefore form the centre of this diplomatic analysis, the purpose of which is to assess their status as records. Based on the analysis, Domain 3 of InterPARES 2 will propose applicable preservation strategies.

## **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 (a) issue contents and (b) programming codes is therefore analyzed according to the following parameters:

**1. To be identified as a record, the digital entity must possess fixed content and form,<sup>7</sup> and be affixed to a stable medium (or physical carrier).**

- **The content of the issue contents (i.e., the texts, still images, and audio/video files), including the content of the ZeroHorizon database, and the content of the programming codes are fixed.**

For each issue, the contents contained in the text, still images, and audio/video files are finalized at the moment when the Editorial Team passes them to the Production Team for online presentation. The programming codes are finalized after the proofread of the text site and the tests of the flash site. In other words, after the decision is made to publish a particular issue and after the functionalities of the Web sites are tested, both the issue contents and the program codes will not be changed or modified. Since the ZeroHorizon database contains digital objects drawn from the issue contents (mostly interactive artistic works), they remain unchanged as well.

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<sup>6</sup> The database is considered as digital entity as a whole.

<sup>7</sup> 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](http://www.interpares.org/documents/interpares_ResearchMethodologyStatement.pdf)).

- **The documentary forms<sup>8</sup> of the issue contents (i.e., the text, still images, and audio/video files), of the ZerrHorizen database, and of the programming codes are fixed.<sup>9</sup>**

The documentary forms of the issue contents, the ZeroHorizon database, and the programming codes are decided by the Editorial and Productions Teams of *HorizonZero* and the technologies used in preparing and presenting them. This is to say, when the contents (i.e., texts, images, video and audio) are selected and applications (MS Word, Adobe Photoshop, and other applications for audio and video) are used to process/render the contents, the elements of the documentary forms for these digital entities are determined (for intrinsic elements, for example, the writers of the texts and/or images are determined when the selection is done; for extrinsic elements, for example, either texts or images or audio/video and their appearance are determined when the applications are used for presentation). When the work is finalized and as a result, these entities are kept in the Issue Folder, they remain fixed and unaltered. The ZeroHorizon database is also considered as fixed in form in the sense that the same search formula always gets the same results and displays.

- **The issue contents (i.e., the text, still images, and audio/video files), the ZeroHorizon database, and the programming codes are fixed to a stable medium.**

The issue contents are saved on the TEAM server; the ZeroHorizon database is saved on the server that hosts the database<sup>10</sup> the programming codes are saved on the hard drives of the programmers that are installed with the programming applications. All these digital entities are stored on or carried by physical digital media. Stable media allow them to be set aside and retrieved later.

**CONCLUSIONS:** By satisfying the above requirements, the examined digital entities—i.e., the issue contents, programming codes, and the database—qualify as digital documents.

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<sup>8</sup> The InterPARES 1 Authenticity Task Force defines documentary form as: 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. Intrinsic elements are the discursive parts of the record that communicate both the action in which the record participates and the immediate context. The types of intrinsic elements include name of author, name of originator, chronological date, name of place of origin of record, name of addressee(s), name of receiver(s), indication of action (matter), and name of writer. Extrinsic elements refer to specific, perceivable features of the record that are instrumental in communicating and achieving the purpose for which it was created. The types of extrinsic elements include overall presentation (e.g., textual, graphic, image, sound, or combination of these), specific presentation features (e.g., special layouts, hyperlinks, colors), and special signs (e.g., watermarks, logo). The report of the Appraisal Task Force is available at [http://www.interpares.org/book/interpares\\_book\\_d\\_part1.pdf](http://www.interpares.org/book/interpares_book_d_part1.pdf).

<sup>9</sup> Based on InterPARES 2 findings, a digital entity has a fixed form when its binary content is stored so that the message it conveys can be rendered with the same presentation it had on the screen when first saved. Because the same presentation of a record can be produced by a variety of digital presentations, fixed form does not imply that the bit streams must remain intact over time.

<sup>10</sup> The final report does not supply information about where the database is hosted but makes it clear that it is an “Internet accessible database” (Final Report, Section A. Overview). Also unknown is whether there are other copies of the database maintained by the *HorizonZero* Team and where these copies are save to.

**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 issues contents and the programming codes participate in the action of publishing *HorizonZero*, as indicated by the answer to core research questions 1 and 23, which note that “the primary activity is the production of an issue of the on-line magazine, from conception to publication.”<sup>11</sup> They are the instruments for the production.

The ZeroHorizon database does not participate in the above action; instead, it is created exclusively for dissemination purpose. Dissemination of digital art works is not an action within this context, but a function of the *HorizonZero* Team.<sup>12</sup> The actions of dissemination include the above action of publishing and the action of creating the database, for which the database is its end product.

CONCLUSIONS: Since the database does not satisfy the requirement of participating in an action, and therefore being either a by-product or instrument of the action, it is not a record. The examination of its status as a record will not be continued in the rest of the analysis.

**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).**

Since the digital documents created in *HorizonZero* are organized in accordance with issues—i.e., they are respectively saved in issue folders—they naturally acquire relationships among themselves through the order by which they are put into the folders. The relationships with its previous and subsequent documents for one document in the folder—i.e., its archival bond—are original since they came into being at the moment when the documents are first saved into the folders; they are necessary since they demonstrate the fact that all of the documents are resulted from the same activity; and they are determined since only the aggregation of these documents permits the purpose of creating them to be archived.

**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.

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<sup>11</sup> Case Study 03 Final Report, Section D.

<sup>12</sup> See the Team’s mandate in the final report.

The author of the issue contents and programming codes is the Banff Center, who has the authority and capacity of generating these documents to fulfill its mission-identified functions. While the Department of Canadian Heritage jointly own these produced documents, it did not participate in the process of making them, and consequently is not their author.

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

The writer of these documents, collectively, is the *HorizonZero* team as a whole. The identification of persons (author, writer and addressee) in diplomatic analysis requires examining records at the individual level, which is not the case for the current analysis. Documents in the analysis are examined as groups, and the writer for these groups can only be the *HorizonZero* team since it includes individual writers for individual documents. For example, the writer for the English texts should be the English Language editor in the Editorial Team and the writer for graphics should be the graphic designer in the Production Team. No matter whoever is the writer, however, the analysis satisfies the requirement that these documents have identifiable writers.

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

The identification of addressee also needs to be done at the individual document level. Depending on to whom the document is directed or for whom it is intended, the issue contents and programming codes have different addressees, and there is no one addressee for all of them. The addressee of these documents, therefore, can only be identified at a general level—i.e., the *HorizonZero* team members who are responsible for further processing of the documents generated by previous steps as established in the workflow of producing issues.

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

The creator of these documents is the Banff Center, under whom all of these documents will be grouped together. As the funding agency, the Department of Canadian Heritage jointly owns these documents; however, these documents are used and maintained in the jurisdiction of the Banff Center.

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

The originator of these documents is the Banff Center since it equips the *HorizonZero* Team with the servers that hold these documents.

**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.

Although the final report states that “*HorizonZero* is not bound by specific laws or regulations governing its activities,” existing laws respect intellectual properties (including copyrights) and these contracts should be observed by *HorizonZero*.

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

These documents are created by the *HorizonZero* team established under the Banff New Media Institute within the Banff Center. See detailed information regarding mission, structure and functions of the Banff Center in the final report.

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

As note earlier, diplomatic analysis examines documents at the individual level; therefore, the business procedure in the course of which the document is created should also be examined in relation to the single document in question. The definition of procedure also makes it clear that it is linked to individual documents, as it reads: procedure refers to a body of rules governing the conduct of transaction, or the steps undertaken in carrying out a transaction.<sup>13</sup> In archival science and records management, an activity consists of one or more transactions, and it is transaction that generates records. Since the current analysis is conducted at the activity level and documents are examined by groups, it is difficult to analysis the business procedures for the generation of all of the documents. It is reasonable to believe, however, by breaking down the activity of producing one issue of *HorizonZero* to various transactions, **procedural phases**<sup>14</sup> can be identified. For illustration purposes, the procedure of selecting art works for one issue is provided here as one example.

- a. **Initiative:** the introductory phase of any procedure is “constituted by those acts, written and/or oral, which start the mechanism of the procedure.”<sup>15</sup>

The team meeting deciding the issue theme starts the procedure of selecting art works.

- b. **Inquiry:** this preliminary phase “is constituted by the collection of the elements necessary to evaluate the situation.”<sup>16</sup>

Soliciting art works through accepting proposals developed based on the decided issue theme.

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<sup>13</sup> InterPARES 2 Terminology Database.

<sup>14</sup> 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.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

- c. **Consultation:** this phase is “constituted by the collection of opinions and advice after all the relevant data has been assembled.”<sup>17</sup>

Comparing submitted art works against the decided theme through research, discussions and communications.

- d. **Deliberation:** this phase is “constituted by the final decision-making.”<sup>18</sup>

Selection of the art works is made final.

- 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.”<sup>19</sup>

The Editor-in-Chief approves the selection decision.

- f. **Execution:** “the documents created in this phase are the originals of those embodying the transactions.”<sup>20</sup> In other words, the execution phase results in the issuing of the first record capable of producing the consequences intended by its author.

The selected art works are passed to editors for editing and/or graphic design.

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

This is no information supplied in the final report regarding how the documents generated by *HorizonZero* form a series within the fonds of the Banff Center, which is the creator/originating body. Therefore, the *HorizonZero* documents have a creator, but the internal structure of its fonds is not clear. Within the series, as discussed above in requirement number 3, documents are organized in accordance with issues and they are burned to CD for preservation purpose, which are also organized according to issues.

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

These documents are created mainly using applications for word processing, graphic design and flash construction.

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<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid., 116.

## CONCLUSIONS

According to the above analysis, by satisfying requirement numbers 3 to 5, these documents—i.e., issue contents and programming codes—are identified as records.

### Discussions on e-Records and e-Publications

As noted in the introduction, this case study was proposed to explore the “distinction between electronic records and publications.” In the process of publishing *HorizonZero*, both e-records and e-publications are generated. As the above diplomatic analysis indicates, the documents (texts, sound, images, and audio/video files) generated for the intellectual content for the magazine and the programming codes for its online presentation (including both the text and flash sites) are all e-records. The ZeroHorizon database and each issue of the magazine published on the text and flash sites are e-publications. They are end products of the activity of publishing the magazine online and the activity of creating a database, respectively. Being end products makes them stand-alone, self-contain entities, which means they do not necessarily require relationships with other entities for understanding their meanings. The purpose of creating them is to allow public online access, which makes them hosted on some server yet not saved with other documents generated in the process of producing the magazine. The efforts made to distinguish e-records from e- publications in the context of InterPARES is mainly for the establishment of strategies for long-term preservation of reliable, accurate and authentic records, which are obviously different from the strategies designed for preserving e-publications.