



# InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

## Domain 3 Research Questions

### Case Study 24:

### City of Vancouver Geographic Information System (VanMap)

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**1. What types of entities does the diplomatic analysis identify in this case study? (i.e., records, publications, data, etc.)**

The public version of VanMap (which is less complete than the in-house version) is a publication.

The in-house, operational version of VanMap can be considered data only, for the reasons outlined below.

**1a. If there are no records, should there be records? If not, why not?**

Yes. “The fundamental purpose of VanMap is to meet the needs of internal users in providing services to Vancouver’s citizens and businesses.” VanMap is used to conduct transactions between government and citizen, but no records of these transactions are being created.

**1b. If there should be records, what kinds of records should be created to satisfy the creator’s needs (as defined by an archivist)?**

There are two options in terms of what records VanMap should produce:

- a. Regular snapshots of the entire system.
- b. Snapshots of specific views on which decisions were based.

**1c. What characteristics of records (as defined by an archivist) are missing yet necessary to preserve these entities?**

- a fixed documentary form: the extrinsic elements are fixed, but the intrinsic elements are fluid because the data are being overwritten;

- a stable content: there is no fixed content because the data are constantly being overwritten;
- an archival bond with other records either inside or outside the system: there is no archival bond because VanMap has not been set aside as a record; and
- an identifiable context: due to the lack of archival bond, there is no record context. VanMap cannot be considered a record until it has been set aside.

## 2. Are the entities reliable? If not, why not?

According to the diplomatic analysis, some reports produced by the system would be considered unreliable because “[t]he persons involved in the documentation are not all represented on all pages. Chronological date is not captured....Reports contain superscription of author, addressee, date and time.” The maps lack certain elements, such as persons and date, that are required to make them complete in form. The tabular reports are complete in form because they have all the persons, the date and the time.

### Amount of control exercised on the process of its creation:

There is a high degree of control exercised over the process of creation, in that the VanMap Team determines which data are included and how they are presented. The departments contributing the data establish procedures for creating the data and for authorizing certain staff to enter the data. Access to the data is tightly controlled by the departments and the City’s Information Technology department. Both the VanMap Team and the departments are ultimately responsible to City Council, the activities of which are regulated by provincial statutes. There is also a certain amount of data created and supplied by external agencies.

The degree of control exercised over the creation of these data are unknown but is assumed to be high, since the external agencies are crown corporations and privately-owned utility companies whose activities are tightly regulated by provincial statute.

## 3. Are the entities accurate? If not, why not?

Yes, because they are produced by authorized City staff according to pre-established, controlled procedures. However, the Team has added a disclaimer to VanMap stating in part that “[t]he City makes no warranty as to the accuracy or completeness of the information.”

The VanMap Team considers data accuracy to be the responsibility of the originating departments and will refer any complaints regarding accuracy back to the originating departments. For data supplied by external agencies, VanMap adds a special disclaimer stating in part that “[t]he City of Vancouver assumes no responsibility for the accuracy or completeness of the field information shown in VanMap....Location of underground utilities should always be confirmed by manual digging.”

4. **To what degree can the entities be presumed to be authentic, and why?**

**Benchmark Requirements Supporting the Production of Authentic Copies of Electronic Records** (these apply to the creator):

1. **Expression of Record Attributes and Linkage to Record**

**1.a Identity of the record**

**1.a.i Names of the persons concurring in the formation of the record:**

- **name of author:** City of Vancouver
- **name of writer:** VanMap Team
- **name of originator:** Citywire (City's intranet) and Jonathan Mark (VanMap Team chair)
- **name of addressee:** City of Vancouver staff

**1.a.ii Name of action or matter:**

There is no act, because VanMap is not linked to a specific business procedure.

**1.a.iii Date(s) of creation and transmission:**

- **chronological date:** None apparent, though date-stamping may occur automatically. This still needs to be established.
- **received date:** For most of the data, this would be the same as the chronological date, since most of the data are read live (i.e., residing in their original databases) by VanMap. For data that are exported from other systems, the dates are not apparent, though this may be capture automatically. This still needs to be established.
- **archival date:** Not applicable.
- **transmission date:** Not applicable.

**1.a.iv Expression of archival bond:**

Not applicable. There is no archival bond because there is no record.

**1.a.v Indication of attachments:**

Not applicable (no attachments).

**1.b Integrity of the record**

- **name of handling office:** VanMap Team?
- **name of office of primary responsibility:** VanMap Team.
- **indications of types of annotations added to the record:** Not applicable (record not completed).
- **indication of technical modifications:** No technical modifications undertaken for preservation purposes .

2. **Access Privileges:**

Access privileges for creation and modification of the data are carefully controlled by managers of contributing City departments in collaboration with the

Information Technology Department. Access privileges for creation and modification of data supplied by external agencies is unknown but assumed to be highly controlled (see question 1a above).

3. **Protection Procedures: Loss and corruption of records:**  
There are well-established procedures to control access to data, to back up data and to ensure full recovery after accidental loss (i.e., caused by system failure). However, since data are routinely overwritten and the overwritten data are not saved, it may be difficult to track and correct any deliberate tampering with the data.
4. **Protective Procedures: Media and Technology:**  
Not applicable since no record is created and set aside.
5. **Establishment of Documentary Forms:**  
The VanMap Team has developed certain requirements, such as the inclusion of the protocol “VanMap staff edition” on all pages. However, other elements, such as date and time and name of creator (“City of Vancouver”), appear only on the tabular reports. More requirements are needed to ensure consistency and completeness of documentary form.
6. **Authentication of Records:**  
None.
7. **Identification of Authoritative Record:**  
Not applicable since VanMap is not a record and since there is only one version of the data at any given time.
8. **Removal and Transfer of Relevant Documentation:**  
Not applicable since there is no transfer of records from active to semi-active or inactive status.

**Baseline Requirements Supporting the Production of Authentic Copies of Electronic Records** (these apply to the preserver):

Again, due to the lack of formal recordkeeping procedures the following baseline requirements cannot be fully answered.

1. **Controls over Records Transfer, Maintenance, and Reproduction:** To be determined.
  2. **Documentation of Reproduction Process and its Effects:** To be determined.
  3. **Archival Description:** Not applicable.
5. **For what purpose(s) are the entities to be preserved?**
- VanMap is not currently being preserved.

**6. Has the feasibility of preservation been explored?**

Not by the creator. A report for InterPARES 2 produced by the San Diego Supercomputer Center addresses this issue.

**6a. If yes, what elements and components need to be preserved?**

Not applicable.

**7. Which preservation strategies might most usefully be applied, and what are their strengths and weaknesses, including costs and degree of technical difficulty?**

See Question 6, above.

**7a. Which alternative preservation strategies might be applied? What are their strengths and weaknesses, including costs and degree of technical difficulty?**

Not applicable.

**8. What additional information does the preserver need to know to facilitate appraisal and preservation?**

Unknown.

**8a. If required information is missing, where should it come from and how should it be made manifest?**

Unknown.

**9. Are there any policies in place that affect preservation?**

Yes.

**9a. Are there any policies in place that present obstacles to preservation?**

Contracts signed with external data providers might prevent long-term preservation of their data.

There may also be privacy and security issues relating to making certain data public (such as names of property owners, details of water distribution systems, location of gas lines, etc.). These issues would not necessarily affect preservation, however, but rather the period during which public access to the data is restricted

**9b. Are there any policies that would need to be put in place to facilitate appraisal and preservation?**

No.