

**Dollars for Digital:
Evaluating Strategies for the Monetary Appraisal of
Digital Content in Archival Donations**



**Report of the
Ad Hoc Committee on Monetary Appraisal of Electronic Records (MAER)
National Archival Appraisal Board (NAAB)**

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Dollars for Digital: Evaluating Strategies for the Monetary Appraisal of Digital Content in Archival Donations

The National Archival Appraisal Board (NAAB) was established in 1974 to provide monetary appraisal services for donations of archival records to Canadian cultural institutions. Methods of monetary appraisal evolved largely in the context of paper and analog records. Today NAAB recognizes that digital materials (both digitized and born-digital) make up an ever-larger share of modern archival holdings; and that Practicing NAAB Appraisers (PNAs) need guidance in adapting the methods of monetary appraisal to these digital records. Accordingly, in January 2019 NAAB established the Ad Hoc Committee on the Monetary Appraisal of Electronic Records (NAAB-MAER) to investigate these issues and make recommendations. For the Committee's full terms of reference, see [Appendix A](#).

The present document is NAAB-MAER's consultation report. We would like to thank the NAAB Board and its Chair, Karen Teeple, for the opportunity to develop and present our views. And we thank the secretariat of the Canadian Council of Archives (CCA), especially Louise Charlebois, for all their logistical and other support throughout our work.

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1. INTRODUCTION

Digital archival materials present a number of challenges for the monetary appraisal process that are distinct from the challenges posed by the appraisal of analog materials. These include the scale of collections, duplication of content, the need for and difficulty of item-level analysis, questions around tangibility, how to evaluate quality or renderability, as well as the general absence of a digital collectibles or auction market. The challenges, however, are not so removed from those presented by traditional collections that the principles and knowledge that NAAB has developed over the last 45 years cannot be of service. For this reason, this Committee has leaned heavily on past appraisals, established practices, and the expertise of the NAAB appraiser community. It is our view that the principles and accepted approaches of appraisal apply regardless of medium. In this regard, the community is still operating with a paper mindset in a digital world.

The Committee is mindful that digital technology changes rapidly, and we strove to present recommendations that can be adapted to keep pace. Our recommendations in many cases point to work that remains to be done. They may form the basis of a future work plan for this Committee, or perhaps be handed off to a standing committee at NAAB. Our hope is that the report spurs discussion in the archives community, allowing some consensus to emerge as a basis for continued action.

1.1 Committee Activities

The Committee's work took place over almost three years, with monthly meetings beginning in February 2019. We started with group discussion of the issues and a review of relevant literature, including existing guidelines from NAAB and the Canadian Cultural Property Export Review Board (CCPERB), similar work from organizations like the Art Dealers Association of Canada, and current and past writing on the topic by archivists in Canada as well as other jurisdictions. [Appendix B](#) contains a list of the literature the Committee found most helpful.

The Committee attempted throughout to communicate its activities more broadly to the archival community. Committee members made presentations to the NAAB Appraiser Masterclass in Toronto, Ottawa, and Fredericton. We provided regular updates to the NAAB Newsletter, and members discussed the Committee's activities at the annual Technology Unconference (TaATU) session of the ACA conferences across these years. Several members also pursued individual research projects related to the work of the Committee. Heil and Kampen continued work on a survey and interviews that predated the establishment of NAAB-MAER, and Rogers and Sassur published an article on monetary appraisal in *Archivaria* 90.

In January 2020, NAAB granted Committee members temporary access (10 weeks) to the NAAB database of past appraisals. These represent monetary appraisals by NAAB panels for institutions mainly (but not exclusively) submitting applications to CCPERB for certification of materials as cultural property

under the *Cultural Property Export and Import Act*. We began by selecting only those appraisals that included digital content, subjecting them to high-level, individual review. Following this, we regrouped to discuss appraisals of interest and develop an appraisal comparison tool by defining points of comparison. The comparison tool allowed us to assess approximately 130 appraisal reports against a common set of about 20 categories. Important to this process was the understanding that not all appraisals used the same approach and that the rationale for valuation may not be easily distilled into a single spreadsheet cell. Section 2, below, is a summary of this analysis. The Committee limited its analysis to appraisals conducted between 2014 and 2019, omitting appraisal work done outside of the available NAAB examples.

The Committee had a meeting scheduled with CCPERB Board members and staff for March 2020 to discuss general issues relating to monetary appraisal of digital materials. However, this date unfortunately coincided with the COVID-19 pandemic in Canada and the shut-down of many activities. The meeting was postponed to almost a year later before we were able to meet, via Zoom, in February 2021. In the interval, CCPERB released its revised *Guide to Monetary Appraisal*, which unilaterally and radically shifted the process of cultural certification and monetary appraisal for Canadian archival institutions.

The new CCPERB guidelines were circulated in July, revised in November 2020, and finalized in September 2021. They disallow precedent (past appraisals) as an acceptable basis for assessments, and they narrowly define the concept of **fair market value** so that only comparable sales history can count as evidence of monetary value. CCPERB recognizes that digital archival materials can be significant cultural property, but it finds little evidence of "a market in which digital objects trade" so that "in most instances, CCPERB has not been able to determine a fair market value in excess of zero for digital records." (CCPERB, "Communication to Archival Stakeholders," p. 13). NAAB has spent much energy in 2020-2021 dealing with the fallout from this shift, consulting with the Canadian archival community, articulating its concerns, and communicating these to CCPERB. NAAB-MAER played a role in this by drafting a brief for the NAAB Board, focussing on the digital aspect of the issues (see [Appendix C](#)).

Against this backdrop, the Committee had its meeting with CCPERB on February 23, 2021. We prepared a list of questions for discussion and circulated these in advance to CCPERB (see [Appendix D](#)). Most of that discussion revolved around just a few questions relating to the general shift in CCPERB policy and the understanding of fair market value. While the archival community and CCPERB remain at an impasse, the Committee hopes that its report may illuminate a number of other digital-related issues and considerations that go beyond CCPERB's new interpretation and practice. The Committee also recognized that monetary appraisals of digital records exist outside of the cultural property certification process, and that the Committee's work could still prove valuable when assessing gifts in kind.

Finally, a common concern from appraisers and one raised by CCPERB board members was the absence of a commercial market for digital archival material. We confirmed this issue, although we were able to

find some examples of sales data amongst non-fungible token (NFT) sales, digital photography markets, and the sale of commercial data sets. We also expanded our search for records valuation examples (analog and digital assets) through an inquiry of bankruptcy precedents. NAAB is currently building a database of existing sales data, which may include digital samples for future analysis.

1.2 General Principles

Over the course of the Committee's work, a number of general principles emerged, and these informed our analyses throughout this report.

1.2.1 Digital objects have value as cultural property and are the content, not the carrier

This may seem trivial, but it speaks to an anxiety that hovers around the edges of digital monetary appraisal: what exactly is the object of the appraisal, what is the "thing" that holds monetary value? Is it the DVD, the thumb drive, the laptop computer, the external hard drive that is transferred to an archive? Or is it the content that is contained on them? For most archivists, the distinction between content and carrier is clear in practice: we acquire a writer's laptop because it holds the records (drafts, correspondence, working files) that reflect their activities. The laptop itself may (or may not) have value as an interesting artefact in its own right, and an understanding (and documentation) of the original computing environment in which the files were created is critical to subsequent preservation and future access. But in order to ensure long-term accessibility, the files themselves *must* be extracted from the original carrier and processed into the institution's digital preservation system. In many cases, moreover, files are directly transferred from disk space to disk space (e.g. email) with no intervening carrier. It is the content object and its research potential that is the reason for acquisition; and it is the content object that must be maintained over time, as physical storage media are regularly refreshed / replaced and file formats may be migrated.

The terminology of **culture property** (as for instance in the *Canadian Cultural Property Export and Import Act*) centres on "objects," and there has been a tendency to equate "object" with three-dimensional entities in physical space and therefore with the carriers of digital materials rather than their contents, the latter being seen as "intangible." Even in its most recent *Communication to Archival Stakeholders* (Dec 2020), CCPERB is not quite willing to move away from this language: "Digital records that are **associated with physical objects** can be certified as cultural property" (our emphasis).

But the distinction between digital object and carrier does not reduce to that between intellectual and physical object. The bit-stream (the string of 0s and 1s) that make up a digital object is always somewhere physically represented on some physical medium – or it does not exist. In this sense, digital objects are no more and no less "tangible" than those analog cultural property objects that require special equipment to render them accessible to human perception (e.g. audio or video works on tape). The distinctiveness of digital preservation relates mainly to the transitory nature of the carrier and the

special challenges of preserving the ongoing "renderability" of digital objects across time and continually changing hardware and software environments (see e.g. UNESCO, *Recommendations, 2015, p.8*).

Insisting on digital content objects as cultural property will be essential in any effort to modernize the legislative and policy framework of archival monetary appraisal.

1.2.2 Monetary appraisal of archival records should be format agnostic.

This report does not offer a set of how-to guidelines for monetary appraisal of digital materials: we have found no special formulas that apply uniquely to digital archives. The same considerations apply to all archival records, regardless of their format or the media on which they are carried. However, those considerations do encounter special challenges in relation to digital media, and it is these that we have strived to emphasize.

Archival institutions acquire analog materials and will continue to do so into the foreseeable future. The bulk of records created today are born-digital. Some may be migrated to analog formats (e.g. printed to paper) and acquired in this form, but this is not a sustainable strategy for dealing with digital records as archival records. Retention in digital format reflects how the records were originally created and used, and the digital form itself adds value for researchers. It allows, for example, quick text searches, but it also facilitates new types of research that can draw on advanced computational techniques (e.g. natural language processing, entity recognition, topic modelling). All this is to make the point that there really is just "monetary appraisal of archival materials," some of which happen to be digital, some analog.

This matters in relation to CCPERB's finding, cited earlier, that in "most cases [it] has not been able to determine a fair market value in excess of zero for digital records." If this understanding holds, then archival materials as they exist today are effectively excluded from the framework of monetary appraisal of cultural property. Such a conclusion is obviously untenable for the ongoing preservation of archives as cultural property. So far as the intention of the original legislation (the *Cultural Property Export and Import Act*) is to support the preservation of documentary heritage by providing economic benefits to those who donate their materials to Canadian institutions, legislative amendments may be required to resolve the current impasse. Today, documentary heritage is created and commonly acquired in digital formats. If CCPERB's current interpretation of fair market value is valid, then the current system is broken and the Act in its present form is no longer fit for purpose. These are questions that go beyond the scope of our Committee's terms of reference. However, we can only conclude that the **format neutrality** of monetary appraisal should be a guiding principle in any review/reform of this broader legislative framework.

1.2.3 Standardization of practice requires standardization and sharing of information.

One challenge for assessing current practice of monetary appraisal of digital materials is the relative dearth of shared information. In part, this derives from the need for confidentiality in donor relations when it comes to monetary appraisals and sales. With traditional analog materials, this has been less of a problem because appraisers have been able to draw on NAAB's forty years of practice, their own often extensive experience, and the existence of an open collectibles and auction market **for certain types of records**.

None of these mitigating factors, however, hold as well with digital materials, which represent new and uncertain territory. If the profession is to establish consistent practice, the management and sharing of information is vital. This has at least three aspects: (i) information about digital materials that institutions provide to appraisers; (ii) information about digital collections that appraisers capture in their appraisal reports; and (iii) information about past appraisals maintained by NAAB.

These are issues we return to throughout this report, and our recommendations seek ways to promote better standardization and sharing of information across each of these areas.

2. PAST APPRAISALS: TRENDS

The Committee spent considerable time examining appraisal reports maintained in the NAAB Database of Past Appraisals. To locate these reports, Committee members searched for “digital” and “electron*” to find potential values assigned to electronic records and media. The Committee entered information from the appraisal reports into a spreadsheet ([Appendix E](#)) for further analysis.

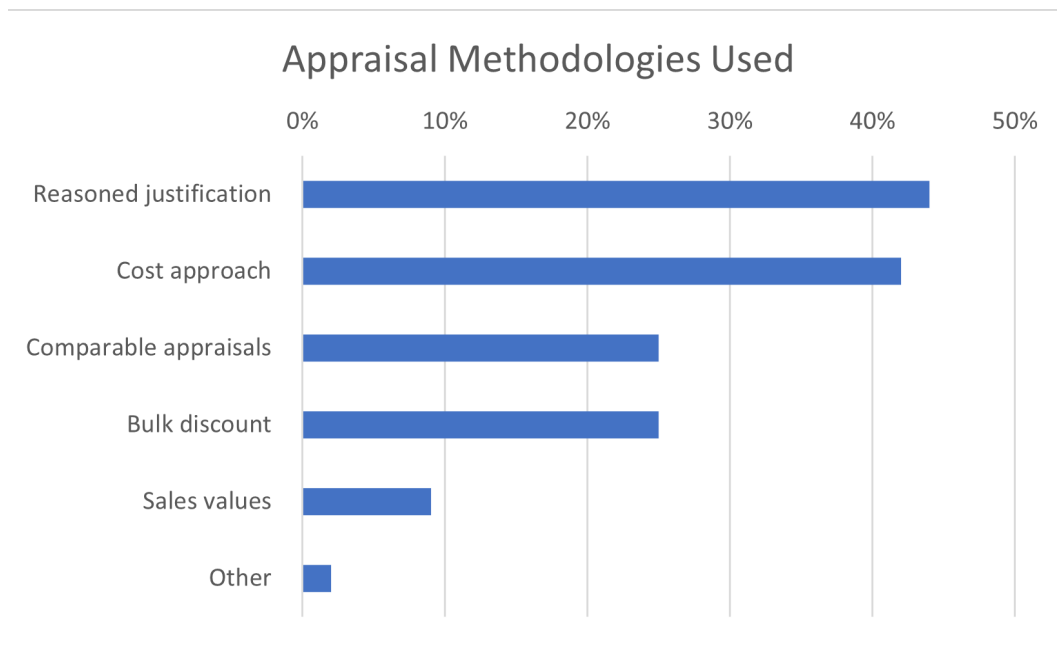
One of the main challenges we faced was working with changing and non-standard language as it related to describing digital records. Many reports mentioned the presence of electronic records and media, but did not assign any direct value, instead rationalizing the value as a portion of the total value for a unit of archival records. As a result, the Committee agreed to add a column for an estimated digital amount to analyze alongside actual amounts that were provided. We noticed a trend over time when digital began to account for a larger percentage of the overall collection being appraised, and we could gather more meaningful and useful information from the report as these records were addressed directly.

The Committee adopted a maximalist view of “digital” records to include digital audio and video media, such as DVDs, DATs, and DVCam, among others. We recognize that the same monetary appraisal issues surrounding digital images and textual material have not always applied to digital audio/visual material, which appear to have been valued similarly to their analog counterparts. That said, by including digital audio and video in our overall analysis, we can glean lessons for the monetary appraisal of digital records as a whole.

Although the Committee continues to conduct a deeper analysis on this data, our initial findings are as follows.

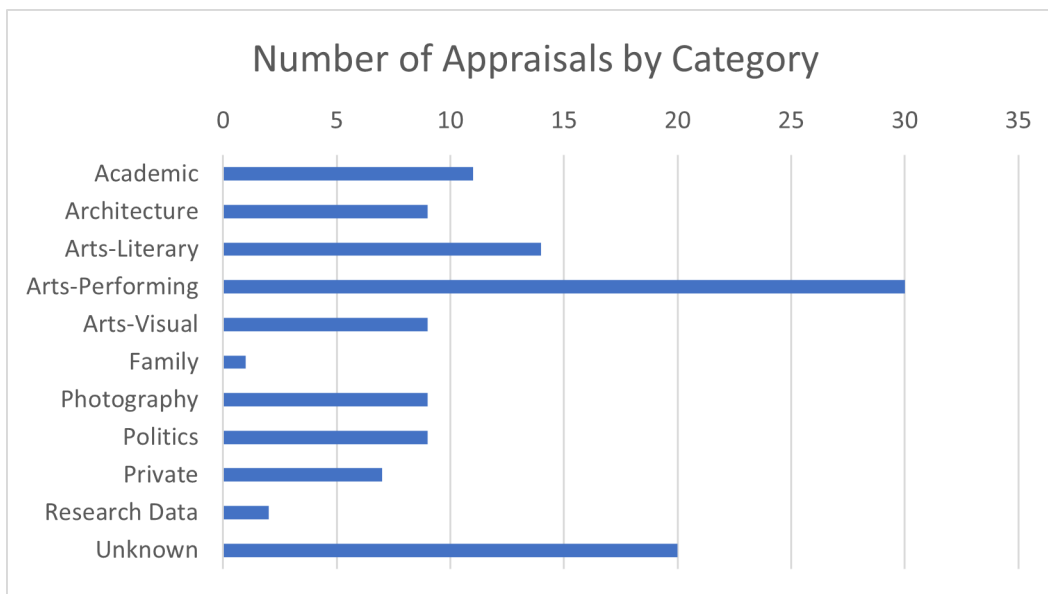
The Committee examined 122 reports with a combined value assigned to digital records and media of over \$1.8 million.

Appraisals used the following methodologies and comparators, often in conjunction with one another, with 41% of appraisals employing two or more methodologies. In the following table we chart the methodologies that were explicitly cited by appraisal reports.



This presentation needs to be qualified somewhat. "Reasoned justification" may only have been explicitly invoked in ca. 43% of the reports, but in fact appraisers typically provided a "reasoned justification" in their discussion / application of the other methods.

Digital records are widely diffused among the types of records creators and funds, as the following table shows. We categorized appraisals under broad headings for Creator Type (Individual - 55%, Corporate - 22%, and Family - 6.5%), and further subdivided by the predominant nature of the material, as reflected below. Another 16% of the appraisals are still being categorized.



An early analysis shows that:

- A significant number of reports (44%) identified the relevance of digital records in relation to the remainder of the collection being appraised.
- Access considerations were examined in nearly 10% of appraisals.
- Consideration for curation (selection) of digital records was acknowledged in 17% of appraisals.
- Six (6) appraisals considered questions of preserving the digital objects.
- Only three (3) appraisals mentioned the presence of metadata alongside the digital records.
- No appraisals examined whether institutions sought any control over the retention of digital copies by donors.

A number of limitations should be noted with our data set. The date range we examined reflects what is in the NAAB database, and this is predominantly 2014-2019. But we know anecdotally of a number of large database appraisals done in the late 1990s, early 2000s (see e.g. Cook, "Bucks for Bytes") but these are not included in the database. Secondly, the data set represents only appraisals conducted by NAAB panels, usually (but not always) for a CCPERB application. We had no way of knowing which appraisals were in fact accepted or altered by CCPERB. Further, it does not capture monetary appraisals for gift-in-kind (GIK) tax receipts that many institutions issue independently. Having a way to share these GIK appraisals and incorporate them into a single data set would greatly facilitate future analysis.

3. CURRENT APPROACHES

There are currently five main approaches to monetary appraisal of archival materials, as reflected in NAAB panel reports and methodology:

1. [Market value comparables / sales comparison approach](#)
2. [Cost approach](#)

3. [Past appraisal comparables / precedent values](#)
4. [Reasoned justification](#)
5. [Blockage discount](#)

In this section, we provide a brief description of each approach, identifying issues and problems that arise in their application to specifically digital materials. For each approach, we provide a quick summary of benefits and drawbacks.

3.1 Market Value Comparables / Sales Comparison Approach

The **market value comparables**, or more accurately, the **sales comparison approach**, determines the value of archival material based on past sales in an open market, such as through auctions or other known purchases. Unlike artwork, which may each have their own sales history, the sales comparison approach for archives relies on examining individual pieces from a creator that have sold in the past, or more often on comparing the value to the sales of archival material of a contemporary and similar creator.

We often see this appraisal approach used on collections with a commercial component, such as with photographer's collections, digital entertainment assets, or previously sold polling data or other datasets. Electronic resources, such as ebooks, are regularly bought and sold or licensed in an open marketplace, and corollaries may be found in this realm. There are also numerous examples of digital art sales demonstrating a variety of sales models (Heil, "Challenges in the Monetary Appraisal of Digital Archives," p. 6-8). There is a drawback, however, to comparing the sale of archival materials to these markets. This is evident in the niche collectability of archives outside of rare and specific high-profile examples, many of which exist outside of Canada. These examples generally serve as poor models for comparability with most archival materials.

In its "Communication to Stakeholders," issued December 2020, following up with revisions to the *Guide to Monetary Appraisals*, CCPERB clarified that "CCPERB has no jurisdiction to determine a value for archival cultural property, or any other type of cultural property, based on any valuation other than fair market value" (CCPERB, "Communication to Archival Stakeholders," p. 8). CCPERB further cited *Henderson Estate v. Canada* (referenced most recently in *Canada (Attorney General) v. Nash*) for a de facto definition of "fair market value" as "the highest price reasonably expected if an asset is sold in the normal method in the ordinary course of business in a market without undue stress composed of willing buyers and sellers" (*Canada v. Nash* at para 12). With this shift in its *Guidelines* and directions, CCPERB now relies on market value as seen in auctions and purchases as the primary indicator of value for archival materials, digital records included. Unfortunately, few if any digital records have been sold at auction, or if purchased through contract, these sales figures remain closed to scrutiny for comparison.

Auctions and other sales markets tend to reflect popular trends in collecting, disproportionately favouring the traditionally saleable objects and collections of more famous or wealthy creators. As a result, few if any comparables exist for the records of racialized individuals and communities, women, and other populations historically underrepresented in archives, and the reliance on market value comparables continue the systemic biases that archival institutions are working diligently to correct (Aiton Kerr, “CCA Letter to the Minister of Canadian Heritage,” p. 2). Furthermore, sales values are poor indicators of the future value of unique objects, being too open to speculation and not to real value, reflecting market volatility and popular trends in collecting. It is not clear that the sales market is directly related to a broader sense of institutional market factors, which is an issue currently being examined by other committees of NAAB.

The most recent and high-profile example of digital sales can be found in the burgeoning Non-fungible Token (NFT) market. The NFT that is sold is, in effect, a certificate of authenticity that points to the actual digital object (Munster, “People’s NFTs Keep Vanishing”). The digital object resides separately from the NFT, which is a permanent journal entry on a blockchain and which, in theory, can never be altered. It is difficult to ascertain a clear understanding of the market based on NFT sales at the present time, as few digital archival objects have been included. The majority of NFT sales have been reserved for digital art and limited-edition collectibles.

Summary of benefits	Summary of drawbacks
<p>As of 2021, this approach is the only acceptable method for CCPERB</p> <p>Lends semblance of objectivity to the value as a reflection of a real market</p>	<p>Examples of digital sales are anomalies in the market. These examples mostly reflect the nature of the creator, and not the content of the purchase. In addition, resulting sales figures are bulk amounts and cannot be applied to individual digital file types</p> <p>Need to infer value of many digital fonds based on analog sales or higher profile digital sales. CCPERB does not currently accept this approach.</p> <p>Robust markets, such as the art market, do not transfer easily to the archival paradigm outside of the idea of a sales value for a unique digital object</p> <p>Lack of transparency or availability in sales information</p>

	<p>Sales values reflect collectible market and are poor indicators of future value of unique objects</p> <p>The focus on unique objects actively works against the integrity and context of the fonds</p> <p>Sales values privilege a pre-established market</p> <p>Sales market not directly related to a broader sense of institutional market factors and diverse market contexts</p>
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3.2 Cost Approach

The **cost approach** bases the monetary value of a fonds (or parts of it) on the replacement costs of the various items in it, basing this on the technical factors involved in producing and / or reproducing items for preservation.

The cost approach seems to have initially taken hold especially with non-textual analog materials – photographs, sound recordings, and moving images. Publicly available price information for commercial reproduction services furnished a baseline set of unit costs based on the physical format of items (e.g. photographic prints, negatives, contact sheets; film stock, VHS, Umatic tapes, and so on). Typically costs are given as a range (e.g. colour/b&w 35mm negatives = \$1-3), with contextual factors such as quality, significance, subject-matter, and creator's prominence used to determine which end of the range to use. Given these price schedules and an item count of different media types in various contexts, the appraiser can calculate an overall cost figure.

In recent years, digital materials have been assimilated to this approach by establishing price ranges for a variety of digital file formats. These appear to be mainly derived from analogies between analog and digital formats, then extrapolating from the established analog price schedules. By 2018, a comprehensive price schedule for ca. 50 digital file formats appear in a number of NAAB appraisals. In this scheme, to take a few examples, a JPEG (compressed) = \$1-2, with a TIFF (not compressed) = \$3-5; and an MP4 (compressed) = \$1-3, while a WAV (uncompressed) = \$3-10. Alternatively, file size rather than format sometimes provides the basic unit on the assumption that the larger the file size the greater the quality, e.g. small photographic file (1-5 MB) = \$2, medium file (5-10 MB) = \$3, large file (10-100 MB) = \$4. Typically the formulas are applied at the series level (or some other sub-group), where the appraiser considers quality, context, and subject-matter to determine which cost figure from the range to apply.

The main benefit of the cost approach is that it provides a seemingly "objective" framework of benchmark values that can be transparently applied by counting items by format. At the same time, its use of a range of values also accommodates a more nuanced consideration of contextual factors in selecting which end of the range to apply in any given case.

It is this objective-but-nuanced aspect of the cost approach that has made it attractive to appraisers, especially where there is limited comparable sale price data. Over time, as appraisals using the cost approach have been accepted, the price schedules have become established as precedent, and this too lends the approach a certain objectivity. Appraisers do not need to "make the numbers up", they can rely on past precedents and tweak the formulas over time as circumstances and vendor prices change.

However, there are drawbacks with the cost approach, especially as it applies to digital materials. Archival materials, analog or digital, do not lend themselves easily to the concept of "replacement." Archival materials are typically unique. The purchase cost of their material carriers does not truly represent a "replacement" of the unique item(s) they carry. Reproduction cost is arguably more relevant, where creating a copy safeguards against potential loss and therefore the need for replacement. The extrapolation of reproduction costs into the born-digital realm makes price schedules based on file format questionable. There are no real differences in the cost to reproduce a JPEG, TIFF or MOV files, aside from the size of the initial file. With born-digital materials there are no vendors offering reproduction services for the simple reason that none are needed. Perhaps the more relevant comparison here would be with **data recovery services**, but those costs depend less on the specific file formats and more on context-specific factors like the nature of the storage device, the degree of damage to it, and volume of data it holds. Such cost recovery models also problematically focus on the carrier rather than file format or the content.

Another difficulty is confusing quantity or volume with archival value. From a research potential perspective, the quantity of material is certainly relevant in appraising a set of records, but it is just one factor and not always the most significant. One concern is that a cost approach based on file format will discourage and even penalize pre-transfer curation by the donor. By "curation" here, we mean the identification and removal of duplicates, selection or separation of higher-interest content, and the identification and removal of superfluously converted or copied files (e.g. JPEGs converted to TIFFs with no difference in resolution or quality). Most archival institutions seek to encourage these selection practices. Monetary appraisal methods should align with and support archival best practices, or at least not counteract them. At the very least, any application of unit costing to digital materials must make room for a positive evaluation of donor curation efforts (e.g. by using the lower end of a price range for non-curated materials). For more on this, see the section 4.2 below on [Curation and Preservation](#).

In their recent Guidelines (Nov 2020), CCPERB stated that the cost approach should only be used in exceptional circumstances, but did not define these or provide an example. It seems likely that

appraisals employing the cost approach as per-unit formulas will be rejected by CCPERB under the current guidelines.

Are there other cost considerations that are more relevant to monetary appraisal of digital materials than unit formulas based on file format or size? Overall **cost of stewardship** models have been developed in other contexts; we consider these below in [section 4.3](#).

Summary of benefits	Summary of drawbacks
Provides objectivity when using shared pricing formulas based on past precedents.	Connection between quantity (unit counts) and archival value seems arbitrary.
Allows nuance in use of price ranges.	May encourage inflation or "data dumps" of duplicate or irrelevant content.
Efficient, particularly for large-scale digital collections.	Does not encourage donor pre-transfer curation.
	Not favoured by the current CCPERB Guidelines.

3.3 Past Appraisal Comparables / Precedent Values

Past appraisals or **precedent values** are often used as part of a reasoned justification. The approach relies on relevant appraisals of similar materials typically within the past 5 years to help determine appropriate values, and is a useful tool in the absence of an active recent market.

Comparable appraisal methods were found in approximately 20% of recent digital appraisals. For example, in a 2015 appraisal of a photographer’s fonds, we see comparables used to establish values for digital images. We also saw comparables used to estimate paper-to-digital equivalencies. For example, in a 2016 appraisal of an author’s papers, comparables were used to establish values for textual files based on an estimated paper equivalency. An if-printed page count was estimated based on the file types and sizes, and the value based on recent, comparable per-metre paper values.

One of the difficulties with this approach is that precedents may be based on confidential or inaccessible information. This lack of transparency can make verification or information sharing challenging.

In its new Guidelines, CCPERB states that it "does not accept appraisals that [...] rely on previous appraisals or previous determinations made by CCPERB" (CCPERB, *Guidelines for Monetary Appraisals*, p. 5). This renders this methodology unusable for current applications for Canadian Cultural Property certification.

Summary of benefits	Summary of drawbacks
<p>Does not require a sales market, though past appraisals may have relied on sales data.</p>	<p>Not presently an acceptable method for CCPERB applications. If basing appraisal on a past appraisal that includes market value comparables, you must point to the original sales data (for CCPERB applications).</p> <p>Digital aggregate pricing can be very contextual, depending on condition and curation. Like any application of precedent values, it should be done thoughtfully.</p> <p>If precedents are based on confidential documents, there may be a lack of transparency.</p>

3.4 Reasoned Justification

The above-mentioned approaches were qualified or considered against a **reasoned justification**, or research value, in more than 40% of the appraisals we considered in which appraisers determined fixed values for digital content. The biggest advantage of this approach when it was articulated as a methodology is that it allowed the Committee to consider how the digital content was related to the overall property, and whether the appraisers considered the digital content in relation to equivalent analog materials or as providing unique context to the overall donation. Considering reasoned justification historically thus reveals the variety and ingenuity of the strategies and market considerations brought into the art of appraisal in the archival sector. The reasoned justification considers the archival property as a whole and potentially illuminates a road map to bridging research values and market values, by assigning a monetary value to the property’s use. It also provides greater context as to how the appraiser calculates their overall assessment of FMV, and the rationale for their decision making in the articulation of their expert opinions. Reasoned justification articulates important qualities of a property such as research potential, heritage value, rarity, quality, historical significance, identification of the most recent sales of other works by the creator in question, and, where applicable and demonstrable, recent sales of works by other creators of comparable stature in support of monetary valuations. These qualities are precisely those used to determine the property’s outstanding significance as outlined by CCPERB (*CCPERB, Application Guide*, p. 28).

Reasoned justification allows for the assigning of monetary value to collections in non-commercial sectors or institutional markets, and therefore may allow for the inclusion of research typically neglected by markets. Often sales of archival records are not determined at the item or file level, but rather an entire archive is sold to an institution and the appraiser must compare one donation to

another as a whole similar or dissimilar in its component parts. This would be a reasoned justification for assigning value to a considered property on the basis of having comparable research value. It is often used when the market for materials is limited owing to the fact that only major institutions have the resources needed to preserve such collections for historical research purposes.

Among the examples from appraisals, we considered there were arguments for instance about the volume of text, significance or historical importance that could be generated from print outs of textual files and numerous examples of digital photography that had analog equivalents. These strategies were promising in that they considered the digital files or records for their overall relationships or relevance within an archival property. As noted, CCPERB has deemed this approach unacceptable for the certification of cultural property.

Summary of benefits	Summary of drawbacks
<p>Does not require a sales market</p> <p>Recognizes inherent value to memory institutions and researchers</p> <p>Triangulation allows for a stronger justification based on the varied expertise of the appraisal panel.</p> <p>Recognized as a more equitable approach, greater diversity of collections than represented in markets</p> <p>Allows for consideration of curation</p>	<p>No longer considered an acceptable method for CCPERB applications</p> <p>Potential for gut feelings, imprecision or token values being assigned (somewhat inscrutable process--reliance on expert opinion).</p>

3.5 Blockage Discount

The application of **blockage discounts**, while noted by the Committee in the statistics, do not constitute an appraisal strategy per se, but is just an accounting methodology used to reduce the overall value assigned to a property on the basis of market saturation and large volumes of similar types of records. Its most common application was in the appraisal of large media donations where the potential for duplicate materials implied a need for a bulk accounting formula. The strategy implies that the volume of material is too large for curatorial review by the appraisers and is thus highly problematic.

4. ADDITIONAL CONSIDERATIONS

There are also five additional approaches or considerations the Committee examined. These include:

1. [Contextual or Holistic Pricing](#)
2. [Curation and Preservation](#)
3. [Cost of Stewardship](#)
4. [Institutional Capacity](#)
5. [Bankruptcies](#)

4.1 Contextual or Holistic Pricing

Contextual or holistic pricing is the contextual evaluation of a collection as an integrated whole. It is an evaluation of a digital collection as an integrated whole, similar to reasoned justification. What makes this approach distinct from reasoned justification is its deliberate consideration of interconnected digital objects and how their arrangement or relationship might increase value. This is not considered an acceptable approach for CCPERB applications without recent comparables.

In our consideration of [Curation and Preservation](#) (below, section 4.2), we provide examples of how selection or curation can increase value by improving a digital collection (e.g. removing duplicates, removing system files, providing metadata or file manifests, etc.). With contextual pricing, the appraiser might consider these factors alongside the collection’s total value to the collector (e.g. research value, as in reasoned justification) and the collection as an integrated whole. An example of where contextual pricing could be applied would be the donation of a full computer workstation. For example, an author donates their laptop. In this scenario, a monetary appraiser is not evaluating the value of a laptop, nor would it make sense to price out the value of each individual file. A unit-pricing approach of \$/GB also doesn’t make sense here. In this scenario, the appraiser is valuing an author’s workspace, a collection of papers with their original order preserved, or a potential researcher’s peek into how the author worked. The specific number of papers or media devices matters less than how they are organized and connected.

Summary of benefits	Summary of drawbacks
<p>Effective for large, digital personal collections where the interconnected nature of the material matters, or the extraction of discrete objects would devalue the whole.</p> <p>Effective for use in collections where coverage or timespan is also a consideration.</p>	<p>Not considered an acceptable method for CCPERB applications without recent comparables.</p>

4.2 Curation and Preservation

Selection or curation can also impact value. For example, in a 2015 appraisal of a photographer’s papers, we saw unit pricing applied to different file formats - a RAW photography file being assigned a higher value, \$4.00, than a JPEG file, \$1.00. However, the appraiser also noted that the per unit value would have been much lower if the digital collection had not gone through a significant selection process before appraisal. This consideration for curation and/or de-duplication is an interesting approach that acknowledges the ease with which digital collections can be inflated.

When prior selection or curation work are taken into consideration, the quantity or size of a digital collection may decrease, but the quality or value may increase. For example, a 2015 appraisal of a fonds of corporate architecture materials noted the collecting institution’s pre-appraisal work to identify and eliminate duplicate files in their justification. We see a similar approach applied to a 2016 collection of research data, a relatively small collection, just ~900MB, given a relatively high value in part thanks to the selection and curation work done pre-appraisal to define and describe the donation.

An example of preservation work affecting appraised value would be a 2014 collection of a politician’s papers that included digital manuscript files. These were appraised at a higher value because the collection included both the original, but obsolete file formats and versions converted to accessible and readable MS-Word format.

Summary of benefits	Summary of drawbacks
<p>Recognizes the monetary value of prior description, curation, and preservation work.</p> <p>Recognizes accessibility or renderability of the content.</p> <p>Discourages “data dumps” that may contain duplicate or irrelevant content (e.g. systems files, irrelevant files, etc.).</p>	<p>May discourage the donation or acquisition of “difficult” content, that is digital content that is at-risk, not easily renderable (accessible, viewable), or unwieldy.</p>

4.3 Cost of Stewardship

Much work has been done in recent years on ways to formulate the **total cost of stewardship** for digital collections (see the [dedicated page on OCLC's website](#), with links to the report by Weber et al. as well as supporting calculators and tools). This perspective offers an interesting point of departure for monetary appraisal, as it speaks to the actual costs that institutions really do incur when they acquire archival

fonds; in comparison, the kinds of replacement costs invoked in the current [Cost approach](#) often seem fictitious and forced.

Cost of stewardship is defined as "all of the costs associated with building, managing, and caring for collections so they can be used by and useful to the public" (Weber et al, p. 5). It can include such activities as appraisal and selection, processing and description, preservation and conservation, digitization and reformatting, and storage and maintenance. The model is associated with a set of tools to help institutions understand and calculate these costs on given collections.

Can this provide a foothold for monetary appraisal? On initial reading, it would seem to be more relevant to administrative costs or insurance value. Its connection to past sale prices is not immediately apparent. But in part this may reflect the newness of the approach (the OCLC report is from 2021) and the fact that up until now most institutions have not fully understood these types of costs. It would be interesting to run the costing tools against fonds with digital components that were actually purchased and compare costs against prices. Would it have made a difference to the price the institution paid if it knew those costs? Will institutional purchasing practices change as these ways of calculating costs become more widely known?

As noted above, sales of entire fonds (analog, digital, or hybrid) are rare among Canadian archives and certainly are not (and have never been) the primary method of acquisition. The market for archives is mainly institutional, and this is even more true for electronic records, where the requirements for digital preservation (infrastructure, expertise) make it not feasible for individuals to collect digital materials at scale. An institution's decision to acquire a fonds is essentially a yes or no decision based on a number of factors: the research potential of the records, an institution's mandate (which may be prescribed by legislation or its parent body's policies), its acquisition policy and traditions, the interests of the community of researchers it serves, as well as considerations of institutional prestige. The cost of stewardship is the price it pays for its particular obligations and decisions.

Galleries, libraries, archives and museums acquire their distinctive resources in order to make them available for the enjoyment and creative use of their researcher communities.

But where galleries, libraries and museums purchase their resources on a market, the price of archival acquisition is the cost of stewardship to which the archives commits. In this sense, cost of stewardship could be seen as the archival equivalent of purchase price.

How far can we push this analogy? No firm consensus emerged among Committee members. It seems clear that using this model as a factor in monetary appraisal would be a radical departure from current and past practice. It would need to be weighed against some of the other considerations discussed. For example, an extremely unorganized ("non-curated") collection would have a higher cost of stewardship that should not be rewarded in a higher monetary appraisal. Two collections with similar stewardship costs could have quite different research potential / value. And in many market situations, higher

maintenance costs may lead to lower purchase costs as buyers are reluctant to take those costs on. Finally, some may object that the cost of stewardship is simply the "cost of doing business" for archives and has no direct relevance to the fair market value of the records it acquires.

Many questions, then, remain. It is not yet clear how exactly the cost of stewardship can be translated into practical and equitable methods of monetary appraisal. And it would certainly not be acceptable under the current CCPERB Guidelines. But NAAB and the archival community should also be looking at the broader legislative and policy framework within which monetary appraisal takes place, with a view to its modernization, especially if and as the impasse with CCPERB continues. In this light, cost of stewardship is a promising line of inquiry because it provides a focus on the only concrete costs that institutions typically incur when they acquire digital materials.

Summary of benefits	Summary of drawbacks
<p>Calculates real costs of preservation and access</p> <p>Useful for insurance purposes</p>	<p>Unclear how strategy should map onto tax-receipting structure of current donation landscape</p> <p>Not yet mapped to existing appraisal evaluations</p> <p>Not currently acceptable to CCPERB</p>

4.4 Institutional Capacity

Should the capacity of an institution to preserve the long-term accessibility of digital materials factor into the monetary appraisal of electronic records?

From a purely market standpoint, the monetary value of an object has no relation to the ability of its purchaser to preserve it; it is rather simply a function of supply and demand and what happens after the sale has no bearing. And this was broadly CCPERB's attitude to this question in the discussions in our Feb 2021 meeting. But on the other side, a tax receipt is a benefit that is ultimately paid for by Canadian taxpayers; why should they extend this support for digital objects that may become inaccessible to Canadians after a short period of time if the acquiring institution has no preservation plan or capacity to develop one? What good is cultural property if it cannot be accessed?

With respect to CCPERB applications, there has been a long-standing requirement with analog materials that institutions must first obtain certification as an organization designated to acquire cultural property. This is a separate application process managed by the federal department of Canadian Heritage (PCH), and it is intended to ensure that the acquiring institution demonstrates its capacity to preserve and provide access to the materials for which it issues tax receipts. There are nine classes of

materials under which organizations can be designated, the two most relevant to archives being class 7 (Archival material) and class 9 (Audiovisual collections).

There is clearly overlap between these two classes, which is problematic in itself. But over the past year or two, a number of Canadian archives have been required to apply (or re-apply) for class 9 certification (AV collections). What is new here is that the application form for class 9 now falls into two parts: one for analog collections and another for digital. Institutions must now demonstrate their capacity for long-term management of digital objects.

This is an interesting development. It does provide a strong rationale for archives to press their funding bodies on the need for resources to develop robust digital preservation programs, as there are now consequences for not having one (an institutional cost of inaction). On the other hand, it seems peculiar to tie this solely to audio-visual material, as the same considerations apply to class 7 materials – and to some (though not all) of the other classes as well. Some institutions, moreover, may only have an interest in certifying analog materials. In the section of the class 9 application dealing with the digital, one can agree or disagree with particular questions, but the implications of a yes or a no for any given question are not clear, and the expectations / standards PCH is applying to institutions with respect to digital capacity are not stated.

This is an area for NAAB follow-up with PCH in the future. Requiring a demonstrated ability to preserve digital records is not objectionable in itself and can even be used by institutions to their advantage in relation to their funding bodies. But it should be decoupled from audio-visual materials specifically, and there needs to be consultation and transparency around standards and expectations.

This opens up a future line of activity for the NAAB-MAER Committee (or a successor): to develop templates / checklists to help institutions and appraisers assess institutional capacity; to work with PCH to revise the application form / process; and to provide support and guidance to institutions completing any such application.

In general, the goal here should be to encourage the development of institutional capacity for digital preservation, recognizing that different institutions will find themselves at different phases at different times along a continuum. Institutional capacity cannot by itself define the monetary value of a given collection, but we should find ways that allow its presence or absence to be one factor that enhances or diminishes the overall evaluation in a given case.

4.5 Bankruptcies

In order to examine other possible appraisal methodologies, the Committee extended its analysis by reaching out to accounting and audit organizations. This would serve in providing possible examples of a commercial market for digital archival material. Two major organizations provided their approach of

handling bankruptcy cases of companies and their valuation of digital records in bankruptcies and acquisitions or mergers.

As an example, a notary/lawyer ending his practice will sell his office. This sale includes all the legal documents, but mostly the list of clients. In Quebec, the National Archives receives the closed documents.

In bankruptcy cases, the market sets the tone and therefore the value when there is a transaction. It is more common when technologies are involved, or when pharmaceuticals representing million-dollar investments were not 100% complete or brought to market. Bankruptcy sales includes tangible and intangible assets, such as copyright, trademarks, etc. In many instances, the buyer will acquire the non-tangible assets, the name of the company, trademarks, copyrights, etc. This is very common in retail. However, the information assets are not even considered. Moreover, in the end, the amount paid for the non-tangible assets is often redistributed among creditors or debtors.

A bankruptcy is not the optimal time to assess the information assets of a company because it is a sign that the company is not doing well. The context of the assessment, moreover, may not meet the condition of determining fair market value without “undue pressure to sell or buy”.

It is more relevant to look at the valuation of information assets in the context of acquisition, where a company will buy another one, not related to a bankruptcy, otherwise it can be seen as liquidation. There may be potential for the reuse of the information assets, for example with Facebook buying Instagram. Overall, the valuation never explicitly identifies historical or archival digital assets, but does not necessarily exclude them because they are part of the whole. The valuation is what the buying company sees in the bankrupt assets it is seeking to acquire.

Bankruptcy experts usually value businesses but also tangible and intangible assets, like clients lists, databases, or other records containing information that can be reused in a business and commercial spirit to generate future income. Valuation methodologies are based on the market sector primarily looking at clients. When appraisal takes place, it is about the interests of a party for a given product, in a given sector; or about interests for intellectual property with databases, for scientific formulas of products, all based on expectancies to generate future income. This requires making appraisals using monetary fluctuation or discounted cash flow models. Then they can establish a correlation, for instance, with a certain client list, with x number of clients it can be expected to generate this amount of income, that will be cost-efficient. With some form of attrition, the result of these valuations will be good for a certain amount of time. The models used all follow the same pattern but are built case by case. There is no rule of thumb to suggest that a list of clients is worth this specific amount (e.g. \$x per client). It all depends on the potential use of the list. Very often there is no value, and in other cases it can be worth a fortune. It depends on the niche, the type of market and the expectations of the capacity to generate profit using the information asset. It is purely mercantile, there absolutely needs to be a

benefit able to generate income. This only happens in a highly competitive environment. Outside of this context, when there is no potential benefit and the resulting valuation is close to having no value. Even with companies filing for bankruptcies that are still operational, the assets may have no value, even for intangible assets. It is purely a commercial value, with no correlation between the commercial value and heritage value or research potential of information assets, in conjunction with the fair market value as defined by the Revenue Act.

5. RECOMMENDATIONS

Based on our analysis in the previous sections, the NAAB-MAER Committee makes the following recommendations. Many of these point to work that still needs to be done and potentially provide an agenda for future work for this or a successor committee.

5.1 Legislative / Policy Framework

The recent unilateral changes to CCPERB's guidelines and PCH's class 9 application form have forced archives to react and adjust their practices. But longer term, this points to the need to return to the bigger picture of the legislative and policy framework and to ask whether this still adequately serves the overall policy goal of encouraging the preservation of Canada's documentary cultural heritage.

In its new guidelines, CCPERB has narrowed the concept of **fair market value** (FMV) as applied to monetary appraisal of archives such that past precedents are no longer recognized and archival records in their modern (digital) form are effectively excluded from the regime of economic benefits. This has brought increased scrutiny to the concept of FMV and how it should be interpreted. That goes beyond the scope of the present report, but we will just raise the question here as something that needs more thorough investigation: does in fact FMV (however broadly or narrowly construed) offer the best framework for securing an equitable and transparent distribution of economic benefits to diverse donors or does it entrench a systemic bias that ultimately rewards dominant cultural groups? What would be an alternative? Can we re-orient the framework so that the research potential of archival materials (digital or analog) – the reason we acquire and preserve materials in the first place – are front and centre in monetary appraisal? The promotion of greater diversity and representativeness in archives' acquisition practices should be a fundamental policy goal.

Recommendations

- 5.1.1 Advocate for reform to modernize the current legislative framework to make monetary appraisal of archival materials truly format agnostic and provide greater equity and benefits to a more diverse range of donors.

- 5.1.2 Advocate for revisions to the PCH institutional certification process to clarify expectations of institutional capacity and decouple digital preservation concerns from one particular class of material (audiovisual collections).
- 5.1.3 Develop a model to clarify the different characteristics of markets in works of art, real estate, and archival fonds; see for example Ian Wilson's ongoing work in this area (Wilson, "Characteristics of Markets," 2021).
- 5.1.4 Investigate the concept of fair market value and its role in monetary appraisal of archives; see for example Marcel Caya's ongoing work in this area (Caya, "Notes for legal research," 2020).

5.2 Market Improvements

The main market for archival fonds is institutional. The very success over the last 40 years of the monetary appraisal / tax receipting process has meant that institutions have been able to acquire records without expending direct purchase funds by providing donors with an alternative economic benefit (tax receipts). This (along with general budgetary constraints) has resulted in a relative lack of sales of fonds. It is ironic that success of the system (from the policy point of view) now acts as a detriment for CCPERB applications as it has led to a lack of the sales history data that is now supposed to furnish the sole basis of monetary appraisal. But sales of fonds or parts of fonds do sometimes occur, and with analog materials there remain active collectibles and auction markets. Tracking information about such sales remains a challenge.

But with digital materials, these problems are amplified. In the current framework, it would be useful to shore up such market information that does exist but also the market itself for digital archives. Most archival institutions in Canada do not have acquisition budgets. But those that do may be able to develop creative ways to support these goals.

Modest purchases could be targeted at individuals and groups who would not greatly benefit from tax receipts. Some institutions (e.g. Queen's University Archives, University of Victoria, University of Guelph) have used split-receipting (part cash payment, part tax receipt) as a strategy along these lines. Digital records could be explicitly targeted for purchase, and where hybrid analog-digital fonds are bought, institutions could explicitly parse out the cost of the digital component.

All this would help generate an increase in market data about digital archives, which can feed into future monetary appraisal – but only if that data itself is accessible to other institutions or appraisers. NAAB has recently begun addressing this with the development of databases to track both past NAAB appraisals as well as institutional purchases. Access to the databases is restricted to PNAs in order to protect donor and institutional confidentiality, but there should be ways to anonymize data to allow expanded access. Archives can work with their donors to emphasize the importance of controlled,

anonymized sharing of information about purchase prices and appraisal valuations and can build donation agreement templates with language to facilitate disclosure of monetary values.

Recommendations

- 5.2.1 For institutions with resources to pursue this option, explore purchases of digital records from individuals and groups who do not greatly benefit from tax receipts
- 5.2.2 Explicitly parse out the contribution of the digital component to the overall price of purchased hybrid funds.
- 5.2.3 Develop donation agreement templates to facilitate controlled, anonymized disclosure of monetary values for either purchase or gift-in-kind appraisals.
- 5.2.4 Continue to develop an archival sales database and work to make this as widely accessible as possible.

5.3 Institutional Capacity

All cultural property is subject to the threat of physical deterioration over time, but digital materials are especially at-risk of becoming inaccessible without active and robust digital preservation programs. Digital storage media rapidly degrade, file formats quickly become obsolete, and the metadata needed to render, understand, and manage digital objects over time is easily lost. While there may be no direct connection between the monetary value of a digital fonds and the ability of an institution to preserve it, monetary appraisal can support capacity development, an important long-term policy goal for the Canadian archival system. Maturity models for assessing institutional capacity for digital preservation already exist and could be adapted, along with checklists, templates, and model action plans. Standard management of appraisals (see [section 5.4](#) below) could require institutions to address preservation issues for any digital materials included in an appraisal. NAAB could and should play a role in working with the PCH to articulate reasonable expectations and standards for capacity and providing guidance for institutions completing certification applications.

Recommendations

- 5.3.1 Develop templates and checklists for assessing institutions' capacity for digital preservation in the context of a maturity model. This could be done in conjunction with the CCA as a model for developing digital capacity nationally.
- 5.3.2 Work with PCH to develop standards and expectations for digital preservation capacity in the context of the designation application process.

- 5.3.3 Provide guidance / support for institution's completing designation applications (the current class 9 application or any future revised ones).

5.4 Management of Appraisals

NAAB has established procedures for the conduct of appraisals by NAAB PNAs. Our recommendations here mainly relate to incorporating digital concerns into these procedures in a standardized way, particularly with regard to the documentation institutions should prepare for appraisers. The NAAB-MAER Committee (or its successor) could develop the supporting templates and guidelines as part of a work plan.

Recommendations

- 5.4.1 Require institutions to provide documentation to appraisers relating to preservation and access plans for any digital materials included in the collections to be appraised. This is again an area for potential collaboration between NAAB and the CCA to support institutional capacity.
- 5.4.2 Identify a core set of technical metadata institutions should provide to document the digital portion of a fonds / collection.
- 5.4.3 Identify software tools that institutions and appraisers can use to create / present metadata.
- 5.4.4 Develop templates to support documentation requirements.
- 5.4.5 When possible, include an appraiser on NAAB panels who understands the appropriate digital formats and preservation issues related to the fonds and can evaluate access requirements when a collection has a large digital component.
- 5.4.6 Encourage digital archivists to become PNAs.

5.5 Content of Appraisals

NAAB has established a template for the information that should be gathered and presented in an appraisal report. Our recommendations here again mainly relate to incorporating digital issues into the template in a standardized way. With analog materials, institutions typically process the records prior to monetary appraisal, as this brings the collection into sharper focus, allows especially significant materials to be highlighted, and ensures that monetary values are not being assigned to materials that will later be discarded. Analogous processes that should be brought to digital materials include de-duplication, creation of checksums, generation of file-level metadata and its presentation in formats

that can easily viewed and understood by appraisers. The NAAB-MAER Committee (or a successor) could develop guidelines to support both institutions and appraisers in terms of what to do and what to look for and the factors that may enhance (or diminish) assessments of value. The types of information we captured in our Appraisal Comparison Tool ([Appendix E](#)) point to data elements that could be incorporated into appraisal reports (see [Appendix F](#) for suggestions).

Recommendations

- 5.5.1 Acknowledge that digital conservation or curation work done prior to monetary appraisal may well enhance assigned values by allowing the significance of the materials to be made more visible.
- 5.5.2 Develop guidance for standard pre-appraisal curation.
- 5.5.3 Identify specific digital-related factors that should be included in the NAAB appraisal template and revise the template accordingly.

5.6 Information Management

Over the past few years, the NAAB-MAER Committee discovered the value of the NAAB Appraisal Reports Database both as a tool for appraisers to examine past reports, and for historical research and analysis. Indeed, without this tool, this Committee’s work would have been more challenging. The recommendations outlined here seek to improve this tool for all future appraisal work and analysis.

Recommendations

- 5.6.1 Redesign the appraisal reports database to support more consistent data-collection, reporting, and analysis (see [Appendix G](#) for suggestions on fields and data values)
- 5.6.2 Explore options for anonymizing data to allow open public access, exploring an explicit opt-in approach for institutional consent.
- 5.6.3 Encourage institutions to follow up with NAAB to record whether appraisal was accepted by CCPERB or not.
- 5.6.4 Encourage institutions to share their Gift-In-Kind appraisals submitted to the Canada Revenue Agency in order to expand the base of appraisal data beyond NAAB and CCPERB applications.

5.7 Committee Renewal Process

With this report, the NAAB-MAER ad hoc Committee approaches the end of its term and mandate. Our original terms of reference envisioned research and development of a "framework of guidelines and best practices." In a sense, this report takes us only part way there. We have tried to assess the challenges facing monetary appraisal of digital materials, identified a number of issues that are still up for debate, and sketched out future directions work could take. This does indeed provide a framework, an agenda for action, but much remains to be done to fill it out. Many of our recommendations itemize specific tools, templates, and guidance documents that could and should be prepared, and we have assembled some of the materials and elements that could go into this. In this way, the recommendations can be taken as future action items on a potential work plan. Current Committee members are open to continuing participation in future work as determined by the NAAB Board.

We have framed this document as a consultation report, and we hope that its circulation in the Canadian archives community will spur discussion, debate, and feedback. One option would be for the existing NAAB-MAER Committee to receive this feedback, analyze it, and report on it at the NAAB monetary appraisal conference planned for spring of 2022.

Recommendations

- 5.7.1 Decide the best organizational structure for the implementation and ongoing review of the recommendations presented in this report.
- 5.7.2 Determine how feedback will be received, and analyze and report on it in time for NAAB's planned conference on monetary appraisal proposed for Spring 2022.

APPENDICES

Appendix A: Committee Terms of Reference



Ad Hoc Committee on the Monetary Appraisal of Electronic Records Terms of Reference

Mandate

NAAB provides monetary appraisal services for donations of archival records to Canadian cultural institutions. Institutions acquire diverse types of materials for archival preservation and access. These include traditional paper-based records and analogue materials but also increasingly incorporate digitized and born-digital records in various media. The professional literature on monetary appraisal of electronic records is sparse, and the Canadian Archival System has struggled to cope with the lack of policies and procedures. The monetary appraisal of born-digital archives, in particular, is surrounded by uncertainty. This hinders institutions' ability to advise potential donors or evaluate the monetary value of potential donations and to this extent acts as a brake on acquisition. The development of guidelines will support and enhance institutions' capacity to acquire and better assess the electronic records their donors create and wish to transfer for preservation and access.

The Ad Hoc Committee will begin to tackle this problem by researching and developing a framework of guidelines and best practices for monetary appraisal of digital archival records.

Membership

The Committee shall have a maximum of seven voting members.

Committee membership shall be by appointment only, by the NAAB Board of Directors upon consideration of the expertise and knowledge needed to fulfill the Committee mandate.

Non-member observers may also be appointed, at the discretion of the Chair. Non member observers will not have decision-making powers within the Committee.

Term

The Committee will begin its work in January 2019, for a period of two years.

Governance

The Committee shall be chaired by a professional archivist selected by NAAB's Board of Directors. The Chair shall preside for the term of the Committee, unless otherwise determined by the NAAB Board of Directors, at its sole discretion.

A current NAAB Board member will be nominated as a Board Representative to the Committee. The Board Representative shall serve as a full voting member of the Committee. In addition to participating in the work of the Committee, the Board Representative will liaise and communicate between the NAAB Board of Directors and Committee.

Deliverables

The Committee will develop a framework, consisting of guidelines and best practices, related to the archival monetary appraisal of electronic records.

Administration*Working Language*

The Working Group will function primarily in English; however, as resources permit, all official communication and deliverables will be translated and made available in both French and English.

Decision-making

The Committee will strive towards consensus. In such case as consensus cannot be reached, decisions will be made using a simple majority of at least fifty percent plus one vote.

Resources, Budget and Administration

The Committee shall meet by any electronic means that meets their needs. NAAB shall provide access to a teleconference line, as needed for Committee work. Video conferencing and email communication are encouraged.

The Committee is required to keep Minutes of meetings and forward a copy to the Secretariat for record keeping. The Minutes should record the date, attendees, decisions and next steps from each meeting. Upon request by the Committee Chair, a secretariat staff person may be assigned to assist with preparation of Minutes.

When communicating via email, the Committee is encouraged to copy the Executive Director or other secretariat resources, as determined from time to time by the Board of Directors.

Appendix B: Bibliography

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Appendix C: Letter from NAAB-MAER re: Updated CCPERB Guidelines for Monetary Appraisals

20 September 2020

RE: Updated CCPERB Guidelines for Monetary Appraisals

Dear NAAB Executive,

Thank you for the opportunity to consider the proposed Guidelines document. As the members of the NAAB ad hoc Committee on the Monetary Appraisal of Electronic Records we wanted to take this opportunity to raise a few concerns we see regarding the application of the proposed guidelines specifically to electronic records. This is supplementary to our mandate to produce a report in 2021 regarding a more fulsome account of the monetary appraisal of electronic records in Canada. At present we see several key areas of concern:

Difficulties of applying market values to archival materials

We trust that many of our colleagues will speak to the difficulties in applying the concept of market value to archival materials at more length, and some Committee members will touch on this more directly in their own institutional or individual responses. Here we just focus on the digital aspect. The concept of "fair market value" does not map well to a digital landscape. It is a model well-suited to individual, physically tangible pieces of art or collectible items, but begins to fall apart when considering data sets, linked or interdependent digital materials. To take one example, there is a long history of sales at market for correspondence, especially individual letters, but none that we are aware of for their modern digital counterpart, email archives.

Further, whatever market does exist is effectively closed and secretive. Sales of digital records to institutions such as Emory University or the Harry Ransom Centre are known through press releases, but privacy built into the donation contracts does not allow for the actual sales amounts to be known. Even if we had access to these values, chances are high that individual values assigned to categories of records would not be available, as purchases would have been negotiated for the bulk of the records.

Historical or research value should be central to monetary appraisal of archival materials, supplemented by sales history comparisons for collectible items or whole fonds when known.

Historical or research value should be central to the monetary appraisal of archival materials, supplemented by sales history comparisons for collectible items or whole fonds when known. Few fonds as a whole are bought and sold in the market in Canada or abroad, and when they are, few details are publicly available due to confidentiality. Individual items may exceptionally have a value on the collectibles market, but it is artificial to reduce the monetary value of a fonds to the sum of its collectibles. This was true of analog and paper records, it is even more the case with digital materials (e.g. databases, email, digital manuscript drafts). Here no markets have been established, there are no brokers or sellers, no clear analogy to the book market or the art auction, no transferable skill set. Unfortunately, there is also little hope of establishing free and open markets for digital records due to their inherent instability; that is to say, creators and custodians have traditionally negotiated the transfer of digital records directly with institutions, and this model best serves the preservation of the record in its original form. There are few, if any, intermediary sellers of digital archival material, because the steps required to preserve these files and guarantee their authenticity is far too onerous.

The current creator archival institution model works because archives understand these digital preservation issues and have established procedures based on recognized international standards to transfer and maintain these records. The revised CCPERB Guidelines diminish the ability of institutions to apply to certify modern records as important as celebrated authors or politicians, up to and including the records of any Prime Minister in the 21st century. There is no doubt that such records are immensely important, and in any tangible format (on paper or other physical media) these would easily be certified as Canadian Cultural Property.

The reason archival institutions acquire fonds and the reason they contribute to the national cultural heritage is their historical and research value. What we need is an agreed-upon framework for translating research value into monetary value in a way that is reasonable, transparent and fair to all donors. We would encourage CCPERB to work with stakeholders in the field, including the archival community, NAAB, and the CRA.

Difficulty of applying cost method to digital materials

Attempts to apply the cost method to digital materials seem highly problematic. They typically take the form of applying a cost formula based on digital file format (1 tiff = \$x, 1 wav = \$y), formulas derived by finding analogies with paper or analog records and adapting cost models that have become established for the latter. But how much does it cost to produce or replace an email archive or a set of Word documents? CCPERB's guidelines instruct applicants to use the cost method only in "exceptional circumstances." For digital materials what would those exceptional circumstances look like? We suggest that more relevant costs for electronic records are the costs of transfer, processing, long-term preservation, and access. But in general, the cost approach seems secondary to the historical or research value that is the reason an archives acquired a fonds in the first place.

Past appraisals based on research value should be accepted as precedents.

The new CCPERB Guidelines no longer accept the use of past CCPERB appraisals as precedents for the assessment of monetary value. But past appraisals based on research value will provide an essential baseline for archival materials. This is especially true for digital records, given the arbitrariness of the cost approach, the absence of a collectibles market at the item level, and the paucity of information about sales at the fonds level. For the few sales of fonds that do occur, it is not usually possible to determine the contribution of the digital materials to the overall price of what are typically hybrid fonds, combining analog and digital records. If the goal of the guidelines is to support long-term consistency and transparency in the assessment of monetary value of digital records, past appraisals-based research value provides important data which should not be dismissed. Precedent values establish a continuity and dialogue with the community to determine fair values for archival records in the emerging digital context. The committee has spent a great deal of time working with precedents in order to identify the ground rules for dealing with digital archival properties, and while we are not beholden to these strategies, it would be a shame to lose this foundation.

Acceptable "images" of digital records

Finally, we note a practical difficulty relating to the requirement to include digital images of the materials assessed on the application form. This makes sense for analog materials, but what does it mean for born-digital records? In some cases, it may be unproblematic to provide thumbnails and screen captures, but in others there will be more uncertainty (e.g. databases, sound files, emails).

Identifying the various digital cases and the acceptable formats for submission would be useful for institutions and appraisers. It is something that our own committee is looking at, and we would be happy to provide CCPERB with input and suggestions along these lines in the future.

Our goal here was to focus on the digital. We trust that other voices in the archival community will and have addressed other aspects of the guidelines. We support a comprehensive review of these guidelines and further consultation with the archival community to ensure the ongoing preservation and retention of these important historical and cultural records for future generations of Canadians.

Sincerely,

NAAB Ad Hoc Committee on the Monetary Appraisal of Electronic Records

Richard Dancy (Co-Chair), Jeremy Heil (Co-Chair), Yves Lapointe, Simon Rogers, Sarah Romkey, Jess Whyte

Appendix D: CCPERB Discussion Questions

The NAAB-MAER Committee met with CCPERB officers via Zoom on February 23, 2021. The following questions were prepared by the committee and circulated to CCPERB in advance of the meeting. But most of the actual discussion was taken up with questions 1 and 2 and the new (2020) CCPERB guidelines that narrow the definition of **fair market value** to evidence of comparable sales history.

Existence of market

1. Successfully transferring digital records from creators to institutions with intact metadata and unbroken lines of provenance typically requires a direct relationship between the two parties, due mostly to accepted international standards and practice for digital preservation. Whereas photographs and paper fonds may pass through a booksellers shop, digital records may not see a broker between donors and archives, which leads to the absence of sales figures. How would you propose this situation be rectified?
2. Due to the lack of an open market for digital archives and the significant technical hurdles to establish such a market, are there any other criteria you would accept to assign a value to this kind of record?

Concept of tangible physical property

3. How is "physical tangible property" defined for digital materials? Do you feel the legislation requires a physical carrier, or is the digital object itself the primary focus?
4. What if there is no "original media carrier", e.g. where digital files are transferred to a repository over a network?
5. Digital preservation requires regularly replacing media carriers / copying digital materials to new storage devices, as well as sometimes migrating them to new file formats; does this impact the original monetary appraisal?
6. Would CCPERB be interested in this committee exploring other ways to conceptualize "physical tangible property", e.g. focus on the digital object as an entity that is dependent on a particular physical computing environment (combination of hardware, software and operating system) and must be capable of being rendered in different computing environments over time?

Markers of monetary value

7. How is "condition" evaluated for digital assets?
8. What does CCPERB consider a unique archival digital record? (for example, tiffs converted to jpgs)
9. The Cost Approach and reasonable justification for determining value (p43-45) leans heavily on uniqueness or rarity of the item. This is often difficult to translate to digital assets. Do you have examples of how this has been illustrated for born-digital assets?
10. Would metadata created by the institution through forensic analysis constitute a unique set of data? would this additional information be considered a gift-in-kind appended to a CCPERB application? Examples we have in mind could include data visualizations, content analysis, descriptive metadata.

11. Is there a preference for providing access to born-digital materials in their original (digital) format vs migrating them to analog formats (e.g. printing out emails)?
12. Digital preservation systems typically retain records in their original file formats and create additional copies in designated preservation and access formats. Do these additional copies enhance or decrease the value of the original donation?
13. Is it viable to link specific file formats to a dollar value (e.g. 1 tiff = \$4)?

Preparation / description of materials for assessment

14. How does CCPERB / appraisers want to receive representative samples for large digital collections?
15. What elements should be highlighted in a summary?

Institutional capacity for long-term preservation

16. Does the collecting institution's ability to preserve/provide long-term access to a digital asset affect the review?
17. Should institutions demonstrate their capacity for preserving the accessibility of digital materials? does this enhance the monetary value of the materials? conversely, does the lack of capacity diminish monetary value?
18. The categories for institutional designation originated before the existence of digital records. The authority to collect is somewhat ambiguous under the current classification for collecting repositories to receive digital records. Does CCPERB perceive a need to resolve this ambiguity?

Qualifications of appraisers

19. What qualifies an appraiser to consider monetary appraisal of digital records from CCPERB's perspective? Is NAAB qualification recognized by CCPERB? What about Media archivists?

Class 9 designation

20. General feedback- have you been receiving applications, and have they included the information that you were hoping for?
21. Will the Class 9 designation apply to material other than A/V, e.g. institutions that collect born-digital material in other classes?
22. Would you like feedback from us on the class 9 application?

Appendix E: Appraisal Reports - Data Analysis Headings

The following fields were used in the Appraisal Comparison Tools developed by NAAB-MAER to analysis the appraisal reports contained in the NAAB database.

Appraisal report number

Year

Creator Type

- Individual
- Corporate
- Family
- Conceptual Entity

Category

- Arts - Visual
- Arts - Performing
- Arts - Literary
- Architecture
- Photography
- Family
- Personal
- Media
- Politics
- Academic
- Private

Province of collection institution

Valuation Total

Physical Valuation

Digital Valuation

Digital valuation estimate

Justification for Valuation (Summary)

Approved methodologies for digital content

- Sales value
- Other market value
- Cost approach
- Bulk discount
- Research value (reasoned justification)
- Past appraisals
- Other methodology

Summary of assigned values for file types (if applicable)

Scope - Digital - Size (in GB, TB)

Scope - Digital - Number by File Types

Scope - Digital - Total Number of Files

Scope - Digital - Number by Media carrier

Was there consideration for curation?

Was digital preservation considered?

Were duplicate files considered or addressed?

Was donor retention of copies considered?

Did justification include an analog equivalency?

Approximate date range for digital content

Was access a consideration?

Is metadata present for digital content?

Was the presence of metadata considered?

Was the digital content's relevance to the fonds or total archive addressed?

Was bulk pricing used?

Outlier factors (awards, outstanding significance, other notes

Appendix F: Digital Preservation Questions for Appraisers

The following are preliminary suggestions for questions that could be used by appraisers to gain a better overview and understanding of the quality of digital collections. These were extrapolated from our data analysis.

1. Does the donor still retain copies of records that formed any part of this donation?
 - a. If YES, does the institution have any guarantee that these copies will not form any part of another donation?
2. Does any material reside on obsolete or at-risk media (e.g. CD-Rs, diskettes, USB keys)?
 - a. If YES, does the institution have a plan to extract records to a secure digital preservation storage space?
3. Has the institution processed the material through its intake and digital preservation workflows?
 - a. If NO, does the institution have a plan and timeline to process the material?
 - b. If YES, was the institution able process the material in accordance with its preservation plan?
4. Has the institution examined and omitted duplicate files from the submission?
5. Was there any metadata included with the digital records?
6. Is the material available in digitally accessible formats (e.g. jpeg versions of image files)?
 - a. If YES, and if these records are open, are they easily available to researchers?

Appendix G: NAAB Appraisals Database Improvements

The following are suggested fields and values for enhancing the NAAB Appraisals Database. This list is intended as a starting point for further discussion, with the hope that any enhancements could assist in future analyses.

Nature of materials *[Check all that apply]*

- Analog
- Digital
- Microform

Type of creator *[Check one]*

- Corporate body
- Family
- Individual person
- Conceptual entity

Type of appraisal *[if db were expanded to include GIK appraisals]*

- CCPERB
- GIK

Province / territory of acquiring institution

Type of institution

- [needs list of controlled terms]

Value of analog and digital material determined separately?

- Yes | No
- Note

Value

- Total value
- Value of analog [if separable]
- Value of digital [if separable]

Appraisal accepted?

- Yes | No
- Note [elaborate]

Anonymized data can be publicly shared?

[allows institutions to opt-in to publicly accessible version of db]

- Yes | No

Methodologies applied *[Check all that apply]*

- Sales history
- Other market value
- Cost approach
- Past appraisals comparison
- Research value (reasoned justification)
- Bulk discount
- Other methodology

GMDs

[Check all that apply; for each have separate boxes for Analog | Digital | Microform]

- Textual records
- Photographs
- Graphic materials
- Architectural drawings
- Sound recordings
- Moving images
- Data sets

Extent

- Analog extent
- Digital items *[number of files]*
- Digital size *[global total in MB, GB or TB as appropriate]*
- Kinds of carriers, formats

Date range

- All materials
- Analog materials
- Digital materials

Digital duplicates *[as % of total items]*

Donor retaining copies?

- Yes | No
- Note

Appraisal / selection exercised on digital materials?

- Yes | No
- Note

Digital files normalized?

- None | Some | All
- Normalization paths *[original format > normalized format > purpose (preservation or access)]*

Metadata extracted or created?

- Yes | No
- Note

Long-term storage environment *[Check all that apply, have separate boxes for In-house | Vendor]*

- Media disc
- External drive
- Server
- Tape

Backup

- None | Some | All
- Note *[describe backup regime]*

DOCUMENT HISTORY

<u>Version</u>	<u>Date</u>	<u>Version notes</u>
v1.0	Jan 13, 2022	Incorporate Board feedback and edits
v0.1	Oct 28, 2021	First draft submitted to NAAB Board