

Knowledge Bases and Related Tools (KBART)

*A Recommended Practice of the
National Information Standards Organization*

Approved August 17, 2026
Prepared by the NISO KBART Standing Committee



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Contents

Foreword	iv
Section 1: Introduction	1
1.1 Scope of the KBART Recommended Practice	1
1.2 KBART Timeline	1
1.3 Terms and Definitions	2
1.4 Additional Resources	4
Section 2: What's New and Changed in Phase III	6
2.1 KBART File Changes	6
2.2 KBART Manifest Introduced in Phase III	8
2.3 Compliance Rather than Endorsement	8
2.4 Summary of Additions, Removals, and Edits in KBART Recommended Practice Phase III.....	9
Section 3: Guidelines for KBART Title-List Files	14
3.1 Data Contacts	14
3.2 Title-List Method of Exchange	14
3.3 Title-List Frequency of Exchange	15
3.4 Title-List Data-Format Requirements	15
3.5 File Organization	17
3.6 Considerations Specific to Free-to-Read/Open-Access Content	20
3.7 Title-List File Name	23
3.8 KBART Title-List Data Fields	25
Section 4: Guidelines for KBART File Manifest	48
4.1 File-Manifest Overview	48
4.2 Determine If a Manifest Is Necessary	48
4.3 File-Manifest Method of Exchange	49
4.4 File-Manifest Frequency of Exchange	50
4.5 File-Manifest Data-Format Requirements	50
4.6 File-Manifest File Name	51
4.7 KBART File-Manifest Data Fields	52
Section 5: Compliance Process	64
5.1 Compliance Requirements for Phase III	64
5.2 Phase III Compliance Process	67
5.3 Maintaining Compliance	68

5.4 Phase II Endorsement and Phase-out	68
5.5 Benefits of Compliance	68
Section 6: License Language	70
Section 7: Recommendations for Future Work	71
7.1 Introduction to KBART Road Map Items	71
7.2 Support of Other Formats for the KBART File	71
7.3 Support for Article-/Chapter-Level Data	72
Appendix A : KBART File Templates and Examples	75
A.1 KBART Title List Template File and Example File	75
A.2 KBART File Manifest Template File and Example File	75
Appendix B : Illustrations of Other File Format Use Cases	76
B.1 Use Case 1: Multiple Values	76
B.2 Use Case 2: Coverage Information	81
B.3 Use Case 3: KBART Automation	83
Appendix C : Details of Article/Chapter Use Cases	86
C.1 Use Case 1: Topical Collections	86
C.2 Use Case 2: Open-Access Articles from Hybrid Journals	86
C.3 Use Case 3: Linking from Outside Library Discovery	87
C.4 Use Case 4: KBART Automation	87
C.5 Use Case 5: A&I Coverage and Selected Full Text	87

Foreword

About this Recommended Practice

KBART (Knowledge Bases and Related Tools), first published in 2010, is a recommended practice for the communication of electronic-resource title-list and coverage data from content providers to knowledge bases. KBART specifies file format, delivery mechanisms, and fields to include and in Phase I supported only serials. KBART Phase II was published in 2014 to include monographs and consortial collections in addition to serials. Beginning in 2019, the NISO KBART Standing Committee identified the following needs, which are now addressed in KBART Phase III:

- The KBART Phase III Recommended Practice (RP) now provides fields and values to support new content types, such as multimedia. While the KBART Phase II RP gave recommendations for monographs, serials, and consortial collections, many content providers also sold access to audio, video, and other content in the intervening years. To represent new content types, content providers added miscellaneous columns at the end of their KBART files. KBART Phase III's explicit support for such content standardizes and simplifies the effective communication of related metadata.
- The KBART Standing Committee completed a full top-to-bottom revision of the Phase II specifications and examples to provide better clarity and address confusion arising from previous versions of the RP. In addition, during the revision, some items were changed to meet current needs, such as better support for hybrid-open-access content and a fully revised embargo section.
- As KBART Automation (following the publication of the KBART Automation RP [NISO RP-26-2019]) now falls under the purview of the KBART Standing Committee, KBART Phase III provides file-level recommendations for KBART Automation. In addition, KBART Automation has been added to the stated scope of KBART and the KBART Standing Committee.
- KBART Phase III has been revised to accommodate global content, with the introduction of translated and transliterated publication titles and conventions around contributors' surnames. The KBART Phase III recommendations allow better global adoption, along with providing examples on how to display this information in a KBART file.
- The KBART endorsement process was completely overhauled as part of Phase III to make it clearer for applicants to understand the criteria that the Standing Committee uses when reviewing submitted files. The new process, renamed "KBART compliance," institutes a two-tier system (gold/silver) that acknowledges which data requirements are more likely to be difficult for content providers to supply and creates a path for recognizing the quality of submitted files, even in the absence of full (gold-level) compliance.
- KBART Phase III adds provisions for a file manifest. This manifest shows an inventory of all KBART collections from a content provider, including the timing and

status of updating the associated KBART files. This helps simplify the efforts of libraries and knowledge-base suppliers when they are looking for the KBART files applicable to a specific collection. Content providers include a file manifest when submitting files for compliance verification.

- In KBART Phase III, the Standing Committee reports known use cases and a road map for possible future work on two items: allowing the provision of KBART files in file formats beyond tab-delimited text (e.g., XML, JSON) and considering representing article-/chapter-level data using KBART. The current RP does not support either of these scenarios with recommended practices but reviews key aspects for future consideration.

NISO Topic Committee Members

The Information Discovery & Interchange Topic Committee was composed of the following members when it approved this Recommended Practice:

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Section 1: Introduction

1.1 Scope of the KBART Recommended Practice

KBART, which stands for “Knowledge Bases and Related Tools,” is a NISO Recommended Practice (RP). KBART recommends best practices for the communication of electronic-resource title lists and coverage data from content providers to knowledge-base (KB) suppliers. KBART specifies the file format, delivery mechanisms, and fields to include in files that describe serials, monographs, video, multimedia, and all other content types.

Although KBART was originally envisioned to improve the efficiency and effectiveness of OpenURL link resolution, the RP has been adopted widely and is used in greatly expanded ways. Currently, KBART files are used for a number of purposes, including the following examples:

- Knowledge bases use KBART files to facilitate linking to available content
- Discovery systems use knowledge-base holdings, created based on KBART files, to indicate institutional holdings in the discovery service
- Content providers use KBART files to communicate to libraries and institutions their available holdings
- Libraries and library consortia use KBART files as a tool for e-resource management, to track their holdings
- Content providers use KBART files to communicate their own collection lists internally

In addition, in 2019, the KBART Automation Working Group released the KBART Automation Recommended Practice (NISO RP-26-2019). KBART Automation provides recommendations for the automated retrieval of KBART holdings snapshot reports. In contrast with a general KBART title-list file that lists all of a content provider’s offerings, these reports communicate title and holdings information for content that an individual institution is contractually entitled to access, as well as content that may be accessible for other reasons (e.g., open access, trial access). KBART holdings snapshot reports are formatted as KBART files, as defined by the KBART Recommended Practice. With the release of its Recommended Practice, the KBART Automation Working Group’s work was completed, and it ceased to meet. Since that time, the KBART Standing Committee oversees current needs and considerations for future releases related to KBART Automation.

Although KBART is used heavily for communicating title-level holdings and linking information, it should be noted that KBART is not a bibliographic recommended practice. The data stipulated by KBART is sufficient to allow knowledge bases to correctly identify what titles and journals are in the file. More robust bibliographic data may come from MARC, ONIX, or other bibliographic metadata feeds, which KBART does not replace.

1.2 KBART Timeline

The below timeline, also summarized in Figure 1, outlines KBART’s progression from conception and initial publication to the Phase III revision’s publication.

- 2007: UKSG report “Link Resolvers and the Serials Supply Chain” recommends the creation of a group that would determine best-practice solutions for improving the exchange of metadata with knowledge bases. NISO and UKSG establish the KBART Working Group.
- 2010: NISO and UKSG co-publish KBART Phase I Recommended Practice (NISO RP-9-2010). NISO and UKSG establish the KBART Phase II Working Group.
- 2014: NISO publishes KBART Phase II Recommended Practice (NISO RP-9-2014). After its publication, NISO establishes the KBART Standing Committee to take over continued KBART work from the KBART Phase II Working Group.
- 2017: NISO establishes the KBART Automation Working Group.
- 2019: NISO publishes KBART Automation Recommended Practice (NISO RP-26-2019). After its publication, responsibility for maintaining KBART Automation and assessing future needs is transferred to the KBART Standing Committee.
- 2020: KBART Standing Committee begins work on KBART Phase III.
- 2026: NISO publishes KBART Phase III Recommended Practice (NISO RP-9-2026).

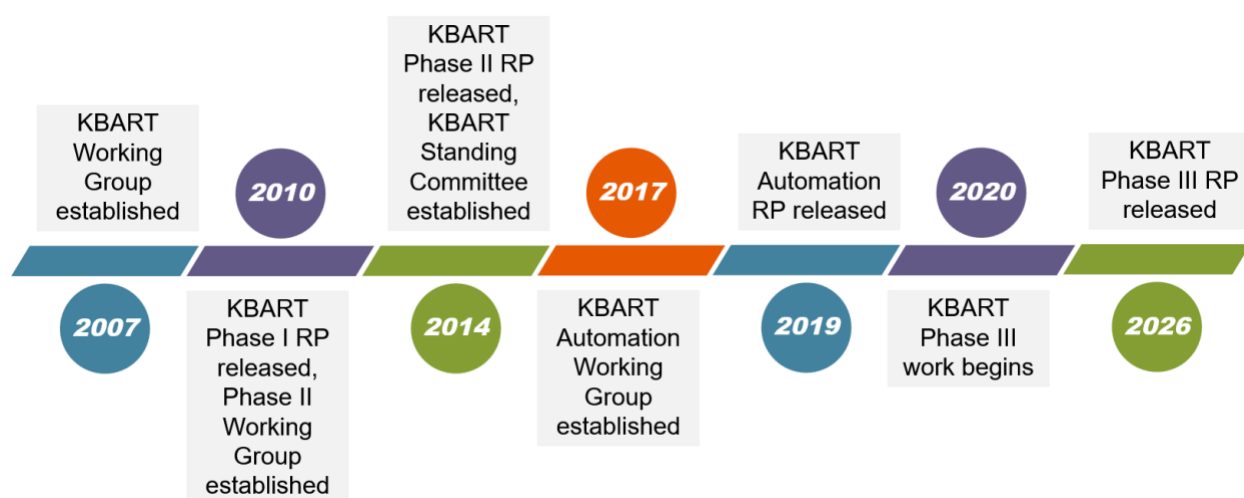


Figure 1. Simplified timeline of the KBART RP's development

1.3 Terms and Definitions

See, below, the definitions of key terms used in this recommended practice.

<u>Term</u>	<u>Definition</u>
Content provider	Organization that makes content available for purchase or freely accessible online. May be a publisher that produces content directly or a third party that aggregates or hosts content from one or more publishers. Generally, it is also the organization that produces KBART files (title lists and file manifests) describing its collections.
Collection	Bundle of content made available for purchase or otherwise

	made accessible to library users. Comparable to “package,” “database,” “target,” or other terms used by different parties in the supply chain for content and metadata. Along with global listings of free-to-read titles (3.5.5) and all titles on a platform (3.5.7), one KBART title-list file should be created for each collection offered for purchase or access (see 3.5). The KBART file manifest in turn lists each KBART title-list file as a single record (see 4.7.6).
KBART	An acronym (pronounced “KAY-bart”) for “Knowledge Bases and Related Tools,” <i>KBART</i> may refer to NISO’s KBART RP (as in “KBART requires a file manifest when a content provider delivers ten or more title lists”) or a specific KBART-compliant file (as in “KBART facilitates linking by offering KB suppliers a proprietary title identifier used in the content provider’s link structure”). “Related tools” include such concepts as link resolvers, discovery systems, and electronic-resource management systems, which might make use of KBART files in various ways.
Knowledge base (KB)	Originally structured around populating a library’s public e-journals list and OpenURL link resolver, a KB is a database with two functional components: a global listing of known content offered for libraries’ purchase or subscription or otherwise accessible, along with a mechanism for individual institutions to customize a list of selected titles to match their holdings, e.g., a portion of the journals offered in a collection or a narrower date range than other institutions’ access on the same platform. Rather than disclosing full descriptive metadata on each title, a KB generally includes only enough metadata to disambiguate from similar titles for the purpose of accurate linking. This is in contrast to discovery systems and library catalogs, which include richer bibliographic description as well as metadata at the narrower level of articles, chapters, and other forms of “item” content published within the “titles” that are KBART’s focus.
Knowledge-base supplier	A vendor that offers KB systems to libraries, generally built using metadata supplied by content providers in the form of KBART title lists.
Monograph	Used to describe any resource released in individual-title units of content, in contrast with a “serial,” which receives multiple releases under a single title. In addition to its traditional usage for a book with certain characteristics, “monograph” in the KBART RP embraces such discrete content types as TV episode, manuscript, or piece of

	recorded music. See 3.8.21 (description of the <code>publication_type</code> field) and 2.1.4 (discussion of “serial” versus “monograph” nomenclature).
Phase II	The second of three versions of the KBART RP, published in 2014.
Phase III	The third and current version of the KBART RP, published in 2026.
Recommended Practice (RP)	A form of publication released by NISO—alongside standards, technical reports, white papers, and primers—that recommends best practices in an area of the information supply chain. In contrast with standards, which carry formal, prescriptive force, RPs suggest optional approaches that parties can choose to adopt. Used here to refer to the KBART RP (specifically its current, Phase III release unless otherwise indicated).
Serial	Used to describe any resource that receives multiple releases under a single title, in contrast with a “monograph,” which is released in individual-title units of content. In addition to its traditional usage for a journal or magazine title, “serial” in the KBART RP includes any type of publication produced serially, such as a podcast, book series, or TV series. See 3.8.21 (description of the <code>publication_type</code> field) and 2.1.4 (discussion of “serial” versus “monograph” nomenclature).
Standing Committee (SC)	Comparable to Maintenance Agencies in the context of some other NISO projects, SCs are charged with the work of regular monitoring and review of an RP or standard to ensure its continued relevance and accuracy. Contrast with the Architecture Committee and Topic Committees, which work at a higher level to oversee the work in each of NISO’s areas of stewardship, and with Working Groups, which collaborate on short-term, ad hoc assignments. Used here to refer to the KBART SC, created after the publication of the Phase II release.

Note that a glossary is also maintained on the Standing Committee’s web presence at <https://www.niso.org/standards-committees/kbart/kbart-glossary-relevant-terms>.

1.4 Additional Resources

The examples provided in this document are not intended to be comprehensive. Please use the

KBART Additional Resources page to assist in the development of your KBART file (glossary, FAQ, field and file examples, KBART validator tool, etc.): <https://www.niso.org/standards-committees/kbart/kbart-additional-resources>.

Section 2: What's New and Changed in Phase III

2.1 KBART File Changes

2.1.1 Considerations When Developing Phase III

As the KBART RP has been more widely adopted, the KBART Standing Committee recognized the need to support additional content types, better represent global (non-Western) content, and clarify some fields from Phase II recommendations.

The KBART file is intended to be a lightweight format, readable for nontechnical users while providing enough information to identify and disambiguate resources and communicate access rights. Thus, the Committee needed to find a balance between expanding the recommended fields and keeping the file and fields from becoming cumbersome and overwhelming.

Affirmative answers to the following questions made it more likely for new fields or field values to be added in KBART Phase III:

- Is this data critical for a KB supplier or librarian to be able to identify the record or disambiguate it from others?
 - If not, it may be appropriate for a more fulsome metadata record instead of a KBART title list.
- Is it feasible for content providers to supply this data?
 - If content providers of any size or type would struggle to find or provide the data, it should not be a requirement in KBART files.
- Is this data useful for describing multiple types of resources?
 - Data that is narrowly applicable to a single resource type is not included in the RP.
- Can this data be conveyed in a single field and without required maintenance, such as for a large controlled vocabulary?
 - Data requiring multiple fields and regular maintenance were generally considered too complex for KBART, though some pairs of fields with directly connected concepts were added.
- Can this data be readily conveyed using a flat, tabular structure?
 - KBART title lists are communicated as tabular data to facilitate both ease of production and human readability (see discussion of related considerations in 7.2).
- Does this data relate to content at the title level?
 - KBART is designed around title-level information, and therefore, concepts better suited for the chapter or article level, such as subject or language, have been excluded (see discussion of related considerations in 7.3).

Overall, fields or values were selected to be added if they applied to content types broadly, clarified what was in KBART previously, or gave more flexibility for non-textual content types. Preference was also given to maintaining consistency with Phase II if a change (such as reordering or renaming fields) would not produce substantial value.

2.1.2 New Title-List Fields Added in KBART Phase III

To account for expanded coverage of work types, separate `first_editor` and `first_author` fields were replaced by a single `contributor` field and a corresponding `contributor_type` field. Additionally, `alternate_title` and `alternate_title_type` fields were added to better support translated and transliterated titles.

The `duration` field was added to support audiovisual content, allowing disambiguation of similarly named titles in a medium for which there is not widespread adoption of standard identifiers.

The `content_type` field was added to allow clarification on `publication_type` (3.8.21), which accepts only two values. See 3.8.21 and 3.8.22 for a full explanation and allowed `publication_type` and `content_type` values.

Finally, the KBART Standing Committee has officially recommended that content providers place **additional fields** in the rightmost columns of their KBART files as needed, as long as the added fields are carefully considered and the files remain compatible with common programs such as Microsoft Excel.

See the respective sections under 3.8 for full instructions on these fields described above:

- Alternate Title (`alternate_publication_title`, 3.8.3)
- Alternate-Title Type (`alternate_title_type`, 3.8.4)
- Contributor (`contributor`, 3.8.14)
- Contributor Type (`contributor_type`, 3.8.15)
- Content Type (`content_type`, 3.8.22)
- Duration (`duration`, 3.8.27)
- Optional additional fields (3.8.31)

2.1.3 Significantly Changed Title-List Fields in KBART Phase III

Note: See 3.8 for guidance on these fields.

The following fields are the same in name as Phase II fields but have undergone significant reworking for KBART Phase III. Please see the appropriate section for the new recommendations for each field:

- Print-Format Identifier (`print_identifier`, 3.8.5)
- Online-Format Identifier (`online_identifier`, 3.8.6)
- Title-Level URL (`title_url`, 3.8.13)
- Embargo (`embargo_info`, 3.8.17)
- Coverage Depth (`coverage_depth`, 3.8.18)
- Publication Type (`publication_type`, 3.8.21)

The reasons for these changes—except in the case of `embargo_info`—stem predominantly from Phase III’s explicit accommodation of non-journal and non-book materials.

2.1.4 On “Serial” and “Monograph”

In the field `publication_type` (3.8.21), “*serial*” and “*monograph*” remain as the only allowable values. The Standing Committee considered many alternatives that would reflect the expanded scope of content that Phase III KBART files can represent, but ultimately decided to maintain these legacy terms, which are still used widely as cataloging terms to distinguish between ongoing and one-time content. See Table 5 (in 3.8.22) for examples beyond traditional serials and monographs.

2.2 KBART Manifest Introduced in Phase III

Previous iterations of KBART focused on making data clear for KB suppliers and content providers, to ensure simple implementation and wide adoption. As the number of KBART files has grown, metadata about these files has become increasingly necessary. Stakeholders have created ad hoc file lists to manage current collections and identify new ones, resulting in inconsistent practices and duplication of efforts.

To address this, KBART Phase III introduces recommendations for a KBART file manifest (or “KBART manifest,” or simply “manifest”), to be sent with each file delivery. The file manifest serves the following purposes:

- Clarifies the files that the provider sends and their purposes
- Informs recipients of what was delivered (or made available)
- Indicates what is new or has changed since the last delivery
- Allows the authority on the collection, the content provider, to provide instructions necessary to create a collection in a KB or update an existing collection’s information
- Shortens the communication cycle between the content provider and the KB supplier regarding collection information.

The KBART manifest should include collection-level metadata for each bundle of content, whether packages sold in groups (such as by subject or region), free-to-read content, or lists of potential individual-title purchases. The RP uses the term “collection,” but “package,” “database,” and “target” (among other terms) are used across different KB supplier systems and are equivalent for the purposes of the KBART file manifest.

The KBART file manifest is fully outlined in Section 4 of this document.

2.3 Compliance Rather than Endorsement

KBART requirements have grown progressively more specific as the KBART format has evolved. With KBART Phase I (2010), all content providers were encouraged to “endorse” the KBART process by submitting a sample file to the KBART Working Group. With the release of KBART Phase II (2014), the endorsement process required file-naming standardization, sample files, and a provider-hosted public platform for KBART files. A registry was developed to recognize content providers striving to meet KBART standards.

For Phase III (2026), the Standing Committee aimed to create a more thorough, rigorous, and transparent process, which is now characterized as “compliance,” with two levels of compliance

available. *Gold-level* compliance will be granted to providers able to meet all field requirements of Phase III. *Silver-level* compliance was created to recognize that some providers may find it difficult to conform their data to all field requirements. The goal is to encourage as many provider organizations as possible to seek compliance.

The details of KBART compliance are outlined in Section 5.

2.4 Summary of Additions, Removals, and Edits in KBART Recommended Practice Phase III

The changes implemented in KBART Phase III are summarized in Table 1. Sections are listed in order of their appearance in Phase III, and relevant sections from Phase II are cross-referenced where applicable.

Table 1. Summary of Changes in KBART Phase III

Phase III Section Name	Phase III Section Number	Phase II Section Number(s)	Change Type
Introduction	1	<i>N/A</i>	New section
<i>N/A</i>	<i>N/A</i>	1.1, 1.2, 1.3, 1.4	Removed from Phase III (“KBART after Phase I”)
What’s New and Changed in Phase III	2	<i>N/A</i>	Phase III–specific section
Guidelines for KBART Title-List Files	3	6	Significant edits (see subsections)
Data Contacts	3.1	6.3	Moved section, minor edits
Title-List Method of Exchange	3.2	6.1	Restructured into subsections
Overview of File-Exchange Options	3.2.1	<i>N/A</i>	Moved section (from 6.1), significant edits
Website Considerations for KBART-File Harvesting	3.2.2	<i>N/A</i>	New section
Title-List Frequency of Exchange	3.3	6.2	Moved section, added examples
Title-List Data-Format Requirements	3.4	6.4	Minor edits
Tab Delimited	3.4.1	6.4.1	Minor edits
Plain Text	3.4.2	6.4.2	Minor edits

Phase III Section Name	Phase III Section Number	Phase II Section Number(s)	Change Type
UTF-8	3.4.3	6.4.3	Minor edits
Publication per Line	3.4.4	6.4.4	Minor edits
Publication History/Title Changes	3.4.5	<i>N/A</i>	New section
Column Headers	3.4.6	6.4.5	Minor edits
Gap Coverage	3.4.7	6.4.6	Minor edits
Consistent Formatting	3.4.8	6.4.7	Minor edits
Alphabetical Order	3.4.9	6.4.8	Minor edits
Summary of Formatting	3.4.10	<i>N/A</i>	New section
File Organization	3.5	<i>N/A</i>	New section
Principles of File Organization	3.5.1	<i>N/A</i>	New section
Regional or Consortial Collections	3.5.2	3.3, 3.4.1	Significant edits, restructure
Frontfile and Backfile Collections	3.5.3	<i>N/A</i>	New section
Subject Collections	3.5.4	<i>N/A</i>	New section
Free-to-Read/Open-Access Collections	3.5.5	4.4	Significant edits, restructure
Aggregated Collections	3.5.6	<i>N/A</i>	New section
“All Titles” Collections	3.5.7	<i>N/A</i>	New section
Considerations Specific to Free-to-Read/Open-Access Content	3.6	<i>N/A</i>	New section
General Considerations for Free Content	3.6.1	<i>N/A</i>	New section
Flipped Publications	3.6.2	<i>N/A</i>	New section
Title-List File Name	3.7	3.4, 6.5	Complete rework
Title-List File-Naming Conventions	3.7.1	3.4.1, 6.5.1	Significant edits, restructure
Provider Name	3.7.2	6.5.2	Significant edits
Region/Consortium	3.7.3	3.4.1, 6.5.1	Significant edits, restructure
Collection Name	3.7.4	3.4.2, 6.5.3	Significant edits

Phase III Section Name	Phase III Section Number	Phase II Section Number(s)	Change Type
Title-List File Date	3.7.5	<i>N/A</i>	New section
Title-List File Extension	3.7.6	<i>N/A</i>	New section
KBART Title-List Data Fields	3.8	6.6	Complete rework (see individual subsections)
Title-List Fields and Labels	3.8.1	6.6.1	Minor edits
Publication Title	3.8.2	6.6.2	Significant edits
Alternate Title	3.8.3	<i>N/A</i>	New section
Alternate-Title type	3.8.4	<i>N/A</i>	New section
Print-Format Identifier	3.8.5	6.6.3	Significant edits for new content types
Online-Format Identifier	3.8.6	6.6.4	Significant edits for new content types
Date of First Issue Available Online	3.8.7	6.6.5	Minor edits
Number of First Volume Available Online	3.8.8	6.6.6	Minor edits
Number of First Issue Available Online	3.8.9	6.6.7	Minor edits
Date of Last Issue Available Online	3.8.10	6.6.8	Minor edits
Number of Last Volume Available Online	3.8.11	6.6.9	Minor edits
Number of Last Issue Available Online	3.8.12	6.6.10	Minor edits
Title-Level URL	3.8.13	6.6.11	Significant edits
Contributor	3.8.14	6.6.12, 6.6.23	New section; in conjunction with “Contributor Type,” replaces previously separate “First Author” and “First Editor” fields
Contributor Type	3.8.15	<i>N/A</i>	New section

Phase III Section Name	Phase III Section Number	Phase II Section Number(s)	Change Type
Title Identifier	3.8.16	6.6.13	Minor edits
Embargo	3.8.17	6.6.14	Complete rework
Coverage Depth	3.8.18	6.6.15	Significant edits for new content types
Notes	3.8.19	6.6.16	Minor edits
Publisher Name	3.8.20	6.6.17	Minor edits
Publication Type	3.8.21	6.6.18	Complete rework
Content Type	3.8.22	<i>N/A</i>	New section
Date Monograph First Published in Print	3.8.23	6.6.19	Minor edits
Date Monograph First Published Online	3.8.24	6.6.20	Minor edits
Volume for Monograph	3.8.25	6.6.21	Minor edits
Edition for Monograph	3.8.26	6.6.22	Minor edits
Duration	3.8.27	<i>N/A</i>	New section
Parent Publication Identifier	3.8.28	6.6.24	Minor edits
Preceding Publication Identifier	3.8.29	6.6.25	Minor edits
Access Type	3.8.30	6.6.26	Additions for clarity
Optional Additional Fields	3.8.31	<i>N/A</i>	New section
Guidelines for KBART File Manifest	4	<i>N/A</i>	New section
Compliance Process	5	2	Complete rework of the compliance process (formerly “endorsement”)
License Language	6	<i>N/A</i>	New section
Recommendations for Future Work	7	<i>N/A</i>	Phase III–specific section
KBART File Templates and Examples	Appendix A	Appendix A	Complete rework
Illustrations of Other File Format Use Cases	Appendix B	<i>N/A</i>	Phase III–specific section
Details of Article/Chapter Use Cases	Appendix C	<i>N/A</i>	Phase III–specific

Phase III Section Name	Phase III Section Number	Phase II Section Number(s)	Change Type
			section
<i>N/A</i>	<i>N/A</i>	3	Removed from Phase III (“Metadata for Consortia”)
<i>N/A</i>	<i>N/A</i>	4	Removed from Phase III (“Open Access Metadata”)
<i>N/A</i>	<i>N/A</i>	5	Removed from Phase III (“E-Books and Conference Proceedings”)
<i>N/A</i>	<i>N/A</i>	Appendix B	Removed from Phase III (“Survey Results”)

Section 3: Guidelines for KBART Title-List Files

3.1 Data Contacts

Both the content provider and the KB supplier should designate specific staff members to be responsible for metadata files and exchange. Doing so expedites resolution of any problems that may occur. Content providers need to inform the designated KB supplier contact about any changes to the data-exchange process. KB suppliers should notify the designated content-provider contact about any errors in the data. Both contacts are responsible for passing messages to the appropriate staff within their organizations and ensuring appropriate action is taken.

To facilitate this relationship, the KBART Standing Committee has provided the KBART Registry (<https://sites.google.com/niso.org/kbart-registry/>), which includes a web form for registering organizational contacts as well as platform URLs and metadata URLs. Organizations may register multiple contacts as appropriate, e.g., if different individuals or groups are responsible for books, journals, KBART Automation, or other relevant workflows.

3.2 Title-List Method of Exchange

3.2.1 Overview of File-Exchange Options

Content providers should make their KBART files available on a publicly accessible and discoverable web page whenever possible, such as in a “librarians” section of the site (as long as it is not necessary to authenticate to view this information).

Delivery via FTP (or SFTP or FTPS), either the content provider’s or the recipient’s, is acceptable if public posting is not possible. Information on how to obtain the files should be publicly accessible.

Public accessibility of the KBART files is beneficial, as it reduces the barriers needed to obtain those files for use by KB suppliers. Librarians also use this information to troubleshoot issues with their KB, or to notify their KB supplier of any missing content. Providing the files publicly makes the data-exchange process transparent for all affected parties and increases its efficiency.

3.2.2 Website Considerations for KBART-File Harvesting

Following the below criteria for providing KBART title lists facilitates automated harvesting or collection of the files by KB suppliers and other consumers of the files:

- The page that contains the file links should be publicly accessible.
- A link should be included for each title-list file (per collection, as described in 3.5).
- Although the file name must include a date stamp, the link to the file should not.

For example, the publicly accessible page <https://www.example.com/kbart> may include the following collection-level links:

- <https://www.example.com/kbart/global/alltitles/>
- <https://www.example.com/kbart/global/collection1/>
- <https://www.example.com/kbart/global/collection2/>

Each link in turn downloads the most recent version of the respective file:

- *ExampleProvider_Global_AllTitles_2025-08-22.txt*
- *ExampleProvider_Global_Collection1_2025-08-22.txt*
- *ExampleProvider_Global_Collection2_2025-08-22.txt*

3.3 Title-List Frequency of Exchange

KBART files should be made available any time the content provider changes title or package offerings that would impact a KBART file. Changes that would require new files to be regenerated include the following:

- Title-level coverage was updated.
- Titles within the collection offering were added or removed.
- Significant metadata elements were updated (e.g., title URL).
- Quality issues were remediated.

Only those files impacted by a change should be regenerated and made available for consumption. If a content provider is not able to detect changes that would impact its KBART files, a monthly metadata update is recommended. The content provider should communicate the frequency of the data delivery to KB suppliers, at minimum via its KBART file manifest (see 4.7.11). With the intended frequency of updates known, the KB supplier can then use the date stamp supplied in the file name (see 3.7.1 and 3.7.5) to troubleshoot issues with data currency or file ingestion.

3.4 Title-List Data-Format Requirements

3.4.1 Tab Delimited

Content providers should provide metadata formatted as tab-delimited values.

This is a generic format that minimizes the effort involved in receiving and loading data and reduces the likelihood of errors being introduced during exchange. Comma-separated formats should not be used: even though the commas that regularly appear within KBART files can be “commented out,” doing so leaves a greater opportunity for error than the use of a tab-delimited format.

3.4.2 Plain Text

All metadata should be provided as plain text.

If metadata is provided in a format that supports additional style or formatting, it should be presented without those enhancements. Data should not include colors, typefaces, italics, or other markup.

3.4.3 UTF-8

Text should be encoded as UTF-8.

The UTF-8 character set is well supported and encompasses the writing systems of many languages.

3.4.4 Publication per Line

One publication should be given in each line of the file, with a column for each field as defined in 3.8.

The exception to this recommendation is the guidance on handling gap coverage (see 3.4.7).

3.4.5 Publication History/Title Changes

If a serial publication has undergone a major name change in which a new publication identifier (e.g., ISSN) is assigned, then the title list should include a separate row in the file for each version of the publication if the content for the time period in which the publication was known under that name is hosted on the content provider's platform. The coverage fields (i.e., `date_first_issue_online`, `num_first_vol_online`, `num_first_issue_online`, `date_last_issue_online`, `num_last_vol_online`, `num_last_issue_online`, `embargo_info`) must reflect the coverage of content available on the content provider's platform for that version of the title. For the row representing the ceased publication, fields such as `date_last_issue_online` and `num_last_vol_online` should be populated. For the row representing the continued publication, these should be blank (unless that version also ceased publication). Indicate the `preceding_publication_title_id` (see 3.8.29) in each row as appropriate. For content providers whose site design for historical titles employs a single URL and title ID for all related historical titles, the `title_id` (see 3.8.16) can and will remain the same and should be listed as both `title_id` and `preceding_publication_title_id` where appropriate.

An example of the applicable KBART fields for a ceased publication that continues under a new ISSN is shown in Figure 2, which represents a serial published as *Ethics, Place & Environment* (ISSN 1469-6703) from 1998 to 2010 and continued as *Ethics, Policy & Environment* (ISSN 2155-0093) from 2011 to the present. Note that the earlier title's proprietary `title_id` would also be given as the succeeding title's `preceding_publication_title_id`.



publication_title	print_identifier	online_identifier	date_first_issue_online	num_first_vol_online	num_first_issue_online
Ethics, Place and Environment	1366-879X	1469-6703	1998-03	1	1
Ethics, Policy and Environment	2155-0085	2155-0093	2011-03	14	1

date_last_issue_online	num_last_vol_online	num_last_issue_online	title_id	preceding_publication_title_id
2010-10	13	5	cepe20	
			cepe21	cepe20

Figure 2. KBART title-list excerpt showing a serial title change

3.4.6 Column Headers

Data should be provided with column headers (see 3.8.1) and without a blank row between the headers and the first row of content.

3.4.7 Gap Coverage

A gap in coverage occurs when content was published continuously for a period of time, but some of that content is unavailable in the collection represented by the KBART title list, and the unavailable content is not at the beginning or end of the included dates.

A title should be listed twice if there is a coverage gap of greater than or equal to 6 months, with

only the coverage fields (i.e., `date_first_issue_online`, `num_first_vol_online`, `num_first_issue_online`, `date_last_issue_online`, `num_last_vol_online`, `num_last_issue_online`, `embargo_info`) changing.

For example, if a serial is published monthly and there are 8 months of content missing from the collection represented by the KBART title list, then two rows for the title will be included. The first row would include the coverage up to the 8-month gap, and the second row would include the coverage after that gap.

3.4.8 Consistent Formatting

All rows and fields should be formatted consistently.

3.4.9 Alphabetical Order

The KBART title-list file should be supplied with rows in alphabetical order by title to ensure ease of checking and import by KB suppliers.

3.4.10 Summary of Formatting

KBART title-list files should have the following features:

- Formatted as tab-delimited values
- Provided in plain text
- Encoded as UTF-8

These requirements should be followed within each file:

- Each column should represent one data field as defined in 3.8.
- The header for each column should match the corresponding data-field label verbatim, with columns in the order listed.
- There should *not* be a blank row between the column header and the first row of content.
- Rows should appear in alphabetical order.
- Each row should represent one publication. The exception to this is serials with gaps (see 3.4.7 for more information).

Download a blank KBART title list and a file with example titles using the links in Appendix A.

3.5 File Organization

3.5.1 Principles of File Organization

As much as possible, each KBART title list that a content provider sends should reflect a collection or package that its customers can activate in a knowledge base. Libraries receive various benefits from having the content provider's metadata organized in this way:

- They may review the KBART file to consider possible acquisitions (or activations, for freely available content) at the collection level.
- They may review the KBART file to consider possible acquisitions (or activations, for freely available content) at the title level.

- They may activate acquired or free collections in a KB.
- They may activate acquired or free titles in a KB, potentially in an “All Titles” file if not acquired as part of a package (see 3.5.7).

Content providers should generate a KBART title-list file corresponding to each of their collection offerings as indicated below.

3.5.2 Regional or Consortial Collections

If a content provider’s offering is available to all and is not region or consortium specific, it should be designated as “Global”. If the title-list offering varies by region or country (e.g., Asia-Pacific, EMEA, North America, South America) or is specific to a consortial agreement (e.g., Fenway Library Organization, Bibsam, Carolina Consortium), separate collection files should be generated for each version of the collection.

The following list includes examples of regional and consortial collections:

- Cambridge Journals 2017 North American Full Package
- Academic Video Online: Premium - Outside North America
- Ebook Central Academic Complete, China Edition
- British Periodicals Collection IV (China Edition)
- Springer Nature Contemporary (GWLA)
- Wiley Shared Ebook Collection 2012–2019 (SCELC)

3.5.3 Frontfile and Backfile Collections

If content is sold in separate collections of frontfile and backfile content, separate KBART files should be created for each frontfile or backfile collection.

The following list includes examples of frontfile and backfile collections:

- American Medical Association Backfiles
- American Medical Association Current
- Emerald Backfiles
- SAGE Complete Deep Backfile Purchase 2016
- Wiley Journals (Frontfile Content)

3.5.4 Subject Collections

If content is sold in separate collections based on subject, separate KBART files should be created for each subject collection.

The following list includes examples of subject-based collections:

- Credo Reference: Social Sciences
- Elsevier ScienceDirect Book Series Backfile Package Neuroscience
- Project Muse 2020 Film, Theater, and Performing Arts
- Springer Book Archive—Technik & Informatik

- Wiley Science, Technology, & Mathematics Journals 2020

3.5.5 Free-to-Read/Open-Access Collections

If a subset of a provider's content is free to read (as defined in Access and License Indicators, NISO RP-22-2021 or as subsequently revised), a separate KBART file should be created for that content. Free-to-read content may also be represented in other collections, but like the "All Titles" file (3.5.7), this file includes content from across the entire platform.

The following list includes examples of free-to-read collections:

- AIP Publishing Subscribe to Open (S2O) Journals
- Cambridge Books—Open Access
- Emerald Open Access
- European Mathematical Society Subscribe To Open Journals
- MIT Press Direct to Open (D2O) eBooks
- Project Muse Subscribe to Open (S2O) Journals
- Queens University Press Free-to-Read eBooks
- Queens University Press Free-to-Read Journals
- Taylor & Francis eBooks (Open Access)
- Walter De Gruyter: Open Access eBooks
- Walter De Gruyter: Open Access Journals
- Wiley Online Library Open Access

See 3.6 for additional considerations unique to representing free-to-read content in this title list and others.

3.5.6 Aggregated Collections

Packages and databases that contain multiple content types (e.g., books and journals) should include those content types together in a single file.

The following are examples of aggregated collections:

- ABI/INFORM Global
- EBSCOhost Academic Search Premier
- Gale Academic OneFile
- JSTOR Security Studies

3.5.7 "All Titles" Collections

An "All Titles" file must also be provided that includes all titles on the content provider's platform, except in the case where the content provider is an aggregator.

Titles no longer offered for sale should be included in the "All Titles" files so that libraries with grandfathered access to the content can select these titles. If this is not possible, content providers should provide a separate collection for content still available on the platform but no

longer offered for sale.

A title composed of both paid and free content should appear as one line in the “All Titles” file using the “mixed” code (“*M*”) in the `access_type` field (see 3.8.30). In addition, the free content from among that noted as “mixed” in the “All Titles” file should also be separated out and listed in the “Free to Read” file (see 3.5.5 and 3.6) using the “free” access type (“*F*”).

Titles whose entire coverage is free to read (not a mixture of paid and free as noted above) should use the “free” access type (“*F*”) in both the “All Titles” file and the “Free to Read” file (see 3.5.5 and 3.6).

A complete “All Titles” file is mandatory to support KBART Automation because, in order for the library-specific API calls to activate titles in the KB for a library, those titles must first be present in the KB.

Separate “All Titles” files should be generated for both serials and monographs unless they are part of an aggregated database or a single package in which serials and monographs cannot be acquired separately.

The following are examples of “All Titles” collections:

- AIP Scitation Complete
- Annual Reviews
- Cambridge University Press Journals Complete
- IEEE Xplore All Journals
- Journals@OVID Complete
- Oxford University Press Journals
- Sage Journals

3.6 Considerations Specific to Free-to-Read/Open-Access Content

3.6.1 General Considerations for Free Content

Identifying free-to-read, or open-access, content within a KBART file poses a significant challenge. The purpose of KBART files is to communicate what content is accessible to users who have purchased or have access to a specific set of content. The data within each KBART file that is generated (see 3.5) should represent the content accessible within that collection. With the exception of the “All Titles” file, the assumption should be made that the user of the file has purchased that collection, and the file’s data should represent all content and dates of content they have access to.

KBART files communicate title-level information and do not currently handle article-, chapter-, or issue-level access. For this reason, communicating free-to-read articles and chapter-level access (i.e., hybrid open access), or free issues, is not supported in KBART (see 7.3).

Identifying free-to-read/open-access content can be accomplished not by a single field, but rather by a combination of three elements: the file type (see 3.7.1 and 3.7.6), coverage statement (start date, volume, and issue; end date, volume, and issue; and embargo), and access type (see 3.8.27).

Although free-to-read or open-access titles are included in the “All Titles” file (see 3.5.7) and the

relevant (when applicable) collection file(s) (see 3.5.2, 3.5.3, 3.5.4), it is essential also to include this content in a separate free-to-read, or open-access, file. This becomes critical when some of the content has an access type of “M” (“mixed,” see 3.8.30) in the “All Titles” or collection files.

3.6.2 Flipped Publications

A “flipped” publication is one that has transitioned from a subscription- or purchase-based model, in which readers or their institutions pay for access to the content, to a free-to-read model, in which the content is freely accessible to everyone. KBART title lists should represent the current status of each publication’s listed content, regardless of past or potential future inclusion in a different free/paid business model (e.g., diamond OA, Subscribe to Open). Interested parties should pursue mechanisms outside the KBART file if they wish to track such details as how prior years’ subscriptions were funded. Flipped publications can be represented in KBART files as described below.

Scenario A: A publication flips to free-to-read completely, with all the content freely accessible to everyone.

Actions in applicable KBART files: Note the change in the “All Titles” file. Move the title from the KBART file for subscribed publications to the “Free to Read” KBART file.

- 1) “All Titles” KBART file
 - a. notes: enter “*The publication flipped to free-to-read on YYYY-MM-DD*”
 - b. access_type: enter “F”
 - c. No changes needed for date_first_issue_online, num_first_vol_online, num_first_issue_online, date_last_issue_online, num_last_vol_online, num_last_issue_online, or embargo
- 2) “Free to Read” KBART file
 - a. Create a row in the file for the title, reusing the metadata from the KBART file(s) for subscribed publications, with some modifications
 - b. notes: enter “*The publication flipped to free-to-read on YYYY-MM-DD*”
 - c. access_type: enter “F”
 - d. No changes needed for date_first_issue_online, num_first_vol_online, num_first_issue_online, date_last_issue_online, num_last_vol_online, num_last_issue_online, or embargo
- 3) KBART file(s) for subscribed publications
 - a. Remove the publication’s entire row

Scenario B: A publication flips the newer content to free-to-read while the older content remains under subscription.

Actions in applicable KBART files: Note the change in the “All Titles” file. Add the title to the “Free to Read” KBART file. Update the title’s coverage dates in the KBART file for

subscribed publications.

- 1) “All Titles” KBART file
 - a. notes: enter “*The publication flipped to free-to-read on YYYY-MM-DD*”
 - b. access_type: enter “M”
 - c. No changes needed for date_first_issue_online, num_first_vol_online, num_first_issue_online, date_last_issue_online, num_last_vol_online, num_last_issue_online, or embargo
- 2) “Free to Read” KBART file
 - a. Create a row in the file for the title, to represent only that portion of the content that is free to read
 - b. notes: enter “*The publication flipped to free-to-read on YYYY-MM-DD*”
 - c. access_type: enter “F”
 - d. date_first_issue_online: enter the starting date of the free-to-read portion of the publication
 - e. num_first_vol_online: enter the starting volume of the free-to-read portion of the publication
 - f. num_first_issue_online: enter the starting issue of the free-to-read portion of the publication
 - g. preceding_publication_title_id: enter the title_id of the publication portion under subscription (see 3.8.16)
- 3) KBART file(s) for subscribed publications
 - a. Edit the file’s row for the title, to represent only that portion of the content that is fee based
 - b. notes: enter “*The publication flipped to free-to-read on YYYY-MM-DD*”
 - c. access_type: enter “P”
 - d. date_last_issue_online: enter the last date of the subscribed portion of the publication
 - e. num_last_vol_online: enter the last volume of the subscribed portion of the publication
 - f. num_last_issue_online: enter the last issue of the subscribed portion of the publication

The below illustrations reflect snippets from the updated title row in the three respective KBART files of scenario B, with the “All Titles” file in Figure 3, the “Free to Read” file in Figure 4, and the subscription file in Figure 5.

publication_title	print_identifier	online_identifier	date_first_issue_online	num_first_vol_online	num_first_issue_online
Journal of Library Publications	0123-4567	4567-0123	2008	1	1

date_last_issue_online	num_last_vol_online	num_last_issue_online	notes	access_type
			Flipped to free-to-read on 2020-01-01	M

Figure 3. KBART title-list excerpt from *PublisherABC_Global_ALL-Journals_2025-10-21.txt* showing a flipped publication

publication_title	print_identifier	online_identifier	date_first_issue_online	num_first_vol_online	num_first_issue_online
Journal of Library Publications	0123-4567	4567-0123	2020	13	1

date_last_issue_online	num_last_vol_online	num_last_issue_online	notes	access_type
			Flipped to free-to-read on 2020-01-01	F

Figure 4. KBART title-list excerpt from *PublisherABC_Global_OA_2025-10-21.txt* showing a flipped publication

publication_title	print_identifier	online_identifier	date_first_issue_online	num_first_vol_online	num_first_issue_online
Journal of Library Publications	0123-4567	4567-0123	2008	1	1

date_last_issue_online	num_last_vol_online	num_last_issue_online	notes	access_type
2019	12	12	Flipped to free-to-read on 2020-01-01	P

Figure 5. KBART title-list excerpt from *PublisherABC_Global_SubscriptionPackage_2025-10-21.txt* showing a flipped publication

3.7 Title-List File Name

3.7.1 Title-List File-Naming Conventions

The file name consists of four elements ordered and punctuated as shown below:

[*ProviderName*][_*Region/Consortium*][_*PackageName*][_*YYYY-MM-DD*].[*txt/tsv*]

Content providers should avoid using spaces or special characters in file names. An underscore (“_”) should be used only in the designated places outlined above. Underscores are delimiters of the file-name parts, and thus they must not be used in the parts themselves. Both upper- and lowercase characters are allowed as long as the content provider is consistent in its file names throughout cycles of transmission.

3.7.2 Provider Name

The provider name should be the name of the content provider, without punctuation.

This ensures that one provider’s data is clearly distinguished from data provided by others with similar collection names. The file name should be consistent for each metadata file deposited for a given content provider.

The following are examples of the provider-name element in KBART file names:

- *SpringerNature_Global_SpringerJournalsAll_2025-08-14.txt*
- *ProjectMuse_Global_OpenAccessBooks_2025-02-02.txt*

- *OxfordUniversityPress_Global_OxfordScholarshipOnline-Music_2025-01-27.txt*

3.7.3 Region/Consortium

“Region/Consortium” should include any information based on where the package is sold, or to what consortium it applies.

If the file is for a universal list, “*Global*” should be used.

See below for examples of the region/consortium element in KBART file names:

Title list that is not region or consortium specific:

- *JSTOR_Global_AllTitles_2025-01-14.txt*
- *JSTOR_Global_ArtsSciencesICollection_2025-03-16.txt*
- *Nloab_Global_AllTitles_2025-12-13.tsv*
- *Oapen_Global_AllTitles_2025-12-09.tsv*

Title list that is consortium specific:

- *IOP_CRKN_ElectronicJournals_2025-01-01.txt*
- *IOP_NESLi2_Option12011_2025-05-31.txt*
- *OxfordUniversityPress_SCELC_AllTitles_2025-01-09.txt*

Title list that is region specific:

- *SpringerNature_AsiaPacific_Medicine_2025-01-28.txt*

3.7.4 Collection Name

Separate files should be produced for each collection or package of content that the provider offers. The collection name provided should be a human-readable, shortened version of the collection name customers would expect to see in the knowledge base (see 3.5 and 4.7.2).

Common values that should be used for the appropriate files are: “*AllTitles*”, “*AllSerials*”, “*AllJournals*”, “*AllProceedings*”, “*AllMonographs*”, “*AllBooks*”, “*FreelyAvailable*”, and “*OpenAccess*”.

See below for examples of the collection-name element in KBART file names:

Title list that is frontfile/backfile specific:

- *AMA_Global_Backfiles_2025-06-01.txt*

Title list that is subject specific:

- *Sage_Global_STM_2025-06-01.txt*

Title list that is freely available/open-access specific:

- *Wiley_Global_OpenAccess_2025-03-01.txt*

Title list that is aggregated-database specific:

- *Gale_Global_AONE_2025-06-01.txt*

Title list that includes all serials on a platform:

- *IEEE_Global_ALLJournals_2025-06-01.txt*
- *TaylorandFrancis_Global_ALLTitles_2025-06-08.txt*

Title list that includes all monographs on a platform:

- *SpringerNature_Global_ALLBooks_2025-06-01.txt*
- *SPIE_Global_ProceedingsVolumes_2025-06-03.txt*

3.7.5 Title-List File Date

File date is the file-creation date using the ISO 8601 date format (YYYY-MM-DD) with full year, month, and day.

A change in this date indicates to a librarian or KB supplier that a new file is available and changes have been made to the package that the file represents.

3.7.6 Title-List File Extension

All files should be saved with either “.txt” or “.tsv” as their extensions. The file extension used should be consistent across all files.

3.8 KBART Title-List Data Fields

3.8.1 Title-List Fields and Labels

The content provider should include all the field labels listed in Table 2 as columns in the KBART title-list file. All fields are mandatory if the data exists and is appropriate to the content. Every effort should be made to gather the data, even if it must be obtained from another area of the business or an external source.

To avoid confusion and unnecessary errors, KBART relies on the consistency of the data structure. Therefore, content providers are required to include column headings in the first row of each file, using the field labels given in Table 2, in the order listed. (Download an example KBART file with the required headings using the link in Appendix A.)

To allow for additional information not required by the KBART Recommended Practice, content providers are permitted to include extra data columns after the last KBART field (see 3.8.31).

While not every field will be displayed by all KB suppliers to their users, the fields provided in the KBART files are important for identification and disambiguation of titles and may be ingested or otherwise utilized by consumers of the files.

Table 2. KBART Title-List Data Fields Summary

Field Label	Field Name	Section	Description
publication_title	Publication Title	3.8.2	Title of the publication

Field Label	Field Name	Section	Description
alternate_publication_title	Alternate Title	3.8.3	Alternate form of the publication title Used in conjunction with alternate_title_type
alternate_title_type	Alternate-Title Type	3.8.4	Descriptor of the alternate title given in alternate_publication_title Choose from these allowed values: <i>portion, abbreviated, parallel, transliterated, translated, other</i>
print_identifier	Print-Format Identifier	3.8.5	Standard identifier of the physical (print-format) publication Must be ISSN for serials and ISBN for monographs
online_identifier	Online-Format Identifier	3.8.6	Standard identifier of the online (electronic-format) publication Must be eISSN for serials and eISBN for monographs
date_first_issue_online	Date of First Issue Available Online	3.8.7	Date of the first issue available online Applies only to serials. Leave blank if coverage begins at an embargo date (see 3.8.17).
num_first_vol_online	Number of First Volume Available Online	3.8.8	Number of the first volume available online Applies only to serials. Leave blank if coverage begins at an embargo date (see 3.8.17).
num_first_issue_online	Number of First Issue Available Online	3.8.9	Number of the first issue available online Applies only to serials. Leave blank if coverage begins at an embargo date (see 3.8.17).

Field Label	Field Name	Section	Description
date_last_issue_online	Date of Last Issue Available Online	3.8.10	Date of the last issue available online Applies only to serials. Leave blank if coverage is to the present (even if embargoed [see 3.8.17]).
num_last_vol_online	Number of Last Volume Available Online	3.8.11	Number of the last volume available online Applies only to serials. Leave blank if coverage is to the present (even if embargoed [see 3.8.17]).
num_last_issue_online	Number of Last Issue Available Online	3.8.12	Number of the last issue available online Applies only to serials. Leave blank if coverage is to the present (even if embargoed [see 3.8.17]).
title_url	Title-Level URL	3.8.13	Direct link to the title's content
contributor	Contributor	3.8.14	Full name of the first (or main) contributor Applies only to monographs. Used in conjunction with contributor_type.
contributor_type	Contributor Type	3.8.15	Descriptor of the contributor given in contributor Applies only to monographs. Choose from a list of standard contributor types provided.
title_id	Title Identifier	3.8.16	Proprietary title identifier
embargo_info	Embargo	3.8.17	Embargo information Applies only to serials. Describes when a resource's availability changes (becomes available or unavailable), using standardized syntax.

Field Label	Field Name	Section	Description
coverage_depth	Coverage Depth	3.8.18	Extent of content coverage Choose from these allowed values: <i>full, partial, abstracts</i>
notes	Notes	3.8.19	Notes Free-text field to provide specifics for data provided in other fields, e.g., coverage_depth, access_type
publisher_name	Publisher Name	3.8.20	Name of the publisher
publication_type	Publication Type	3.8.21	Type of publication (with regard to an ongoing versus one-time release pattern) Choose from these allowed values: <i>serial, monograph</i>
content_type	Content Type	3.8.22	Type of content Describes how the publication's content is presented (<i>text, image, audio, video</i> , etc.). Choose from a list of standard types provided.
date_monograph_published_print	Date Monograph First Published in Print	3.8.23	Date the monograph is first published in print Applies only to monographs
date_monograph_published_online	Date Monograph First Published Online	3.8.24	Date the monograph is first published online Applies only to monographs
monograph_volume	Volume for Monograph	3.8.25	Volume number for monograph Applies only to monographs. For proceedings, use the volume within the conference-proceedings series.

Field Label	Field Name	Section	Description
monograph_edition	Edition for Monograph	3.8.26	Edition of the monograph Applies only to monographs
duration	Duration	3.8.27	For audio- or video-based content, the duration (i.e., length) of the content Applies only to monographs, generally those with <code>content_type</code> of <i>audio</i> or <i>video</i>
parent_publication_title_id	Parent Publication Identifier	3.8.28	Title identifier (3.8.16) of the parent publication Applies only to monographs. For a conference-proceedings volume, the <code>parent_publication_title_id</code> is the <code>title_id</code> of the conference-proceedings series.
preceding_publication_title_id	Preceding Publication Identifier	3.8.29	Title identifier (3.8.16) of the preceding publication title (when applicable) Applies only to serials (including conference-proceedings series)
access_type	Access Type	3.8.30	Type of access granted to consumers of the collection Choose from these allowed values: <i>P</i> (paid/fee based), <i>F</i> (free to read/open access), or <i>M</i> (mixed access)

3.8.2 Publication Title

Field label: `publication_title`

Serial: Required

Monograph: Required

Give the full name of the publication as it appears, for example, on the print (physical) edition of a work, or on its web home page. Including the subtitle as part of the publication title is highly encouraged, to further disambiguate similarly described resources.

Subtitles should be appended to the end of the publication title field, separated from the title proper by a space, colon, and space (“ : ”). Special characters should be encoded using the

UTF-8 character set. Abbreviations should be avoided (but may be appropriate in the alternate-title field). Leading articles in a title should be included; for instance, “*The Holocene*” should be listed as “*The Holocene*”, not “*Holocene*”.

The name of a package should not be given as a row in title-list files but should be listed as a row in the KBART manifest. Any packages of titles (i.e., collections) should be sent as separate title-list files as appropriate (see 3.5), with the package name identified in the file name (see 3.7.1 and 3.7.4), and the delivered files should also be listed in the KBART manifest (see 4.7.2). Even in cases where a package contains just a single title, the title list should follow this recommendation, with the title name given as a row in the title list, and the package name given in the manifest.

Each serial (e.g., journal or conference proceeding) should have its own title. Previous titles of the serial should be listed as separate entries, each with its own set of coverage dates corresponding to the period of time in which that title was used (see 3.4.5). KB suppliers should then ensure appropriate matching between related titles.

For monographs, do not include volume or edition information as part of the publication title.

A conference-proceedings series is considered a serial, while each volume within a conference-proceedings series is considered a monograph. The conference-proceedings title should be entered as a serial title, and the title of an individual proceedings volume should be entered as a monograph title.

3.8.3 Alternate Title

Field label: <code>alternate_publication_title</code> Serial: Optional Monograph: Optional
--

Give any alternate publication title information such as portion of title, abbreviated title, parallel (translated or transliterated) title, or other title information useful for identification. Only one value should be supplied. If it is desired to provide additional alternate titles, they may be included as extra data in fields after the last KBART field (see 3.8.31).

This field corresponds to MARC 246 (Varying Form of Title) and 210 (Abbreviated Title) fields and is used in conjunction with `alternate_title_type` (3.8.4). See examples of the fields `alternate_publication_title` and `alternate_title_type` in Figures 6 and 7 (in 3.8.4).

3.8.4 Alternate-Title Type

Field label: <code>alternate_title_type</code> Serial: Required if applicable Monograph: Required if applicable

If an alternate title is supplied, indicate the type of alternate title used in the `alternate_publication_title` field (3.8.3). Select from the following *type* definitions:

- *portion* – Version of the publication title that represents a part of the full title but is not an abbreviation
- *abbreviated* – An abbreviated form of the publication title, often rendered according

to standard disciplinary conventions or based on common usage

- *parallel* – The publication title rendered in another language, generally a translated or transliterated version of the title. When known, specify instead *translated* or *transliterated* as appropriate.
- *translated* – A translation of the original publication title. If in doubt, use *parallel*.
- *transliterated* – An transliteration of the original publication title from one script to another (e.g., Chinese characters transliterated into Latin characters). If in doubt, use *parallel*.
- *other* – Used if none of the other alternate-title types applies. The notes field (3.8.19) may optionally be used to specify the nature of an “*other*” title type.

The `alternate_title_type` field is required when the `alternate_publication_title` field has been supplied. If it is desired to provide additional alternate titles (3.8.3) for a KBART title entry, they may logically be paired with additional alternate-title types, which may also be included as extra data in fields after the last KBART field (see 3.8.31).

Figure 6 illustrates how a KBART title list might express both the alternate title and the alternate-title type for each publication.

publication_title	alternate_publication_title	alternate_title_type
On the Origin of Species by Means of Natural Selection	The Origin of Species	portion
The journal of bone and joint surgery - British volume	J. bone jt. surg., Br. vol.	abbreviated
日本レオロジー学会誌	Nihon Reorōji Gakkai shi	transliterated
世界电影	World Cinema	translated

Figure 6. KBART title-list excerpt showing alternate titles and alternate-title types

Figure 7 shows that the alternate title types given as “transliterated” and “translated” in Figure 6 could alternatively be given simply as “parallel” if the more specific designations are not known to the content provider.

publication_title	alternate_publication_title	alternate_title_type
日本レオロジー学会誌	Nihon Reorōji Gakkai shi	parallel
世界电影	World Cinema	parallel

Figure 7. KBART title-list excerpt showing alternate titles and the “parallel” alternate-title type

3.8.5 Print-Format Identifier

Field label: `print_identifier`
Serial: Required (when available)
Monograph: Required (when available)

Provide the standard identifier for the publication’s printed (physical) version. For serials, this should be the ISSN (presented with all nine characters, including the hyphen and the check digit). For monographs, use the ISBN-13. ISBN-10 is not acceptable. In cases where multiple

ISSNs or ISBNs exist for the title, only the print-format ISSN or ISBN should be used in this field. From one KBART delivery to another, be consistent in the value chosen, e.g., hardback ISBN versus paperback ISBN.

Only ISSN or ISBN should be used in this field. If neither ISSN nor ISBN exists for a title, leave this field blank, and another identifier must be provided according to the instructions for optional additional fields (3.8.31.2).

3.8.6 Online-Format Identifier

Field label: <code>online_identifier</code> Serial: Required (when available) Monograph: Required (when available)
--

Provide the standard identifier for the publication's online (electronic) version. For serials, this should be the eISSN (presented with all nine characters, including the hyphen and the check digit) or the applicable ISBN-13. ISBN-10 is not acceptable. In cases where multiple ISSNs or ISBNs exist for the title, only the online-format ISSN or ISBN should be used in this field. From one KBART delivery to another, be consistent in the value chosen, e.g., EPUB ISBN versus PDF ISBN.

Only eISSN or ISBN should be used in this field. If neither eISSN nor ISBN exists for a title, leave this field blank, and another identifier must be provided according to the instructions for optional additional fields (3.8.31.2).

3.8.7 Date of First Issue Available Online

Field label: <code>date_first_issue_online</code> Serial: Required; blank values acceptable (see below) Monograph: Not used

For serials, give the initial publication date of the first issue that is available online, in the format YYYY-MM-DD. Use only those parts of the date that apply. For example, if the serial is annual, only YYYY should be used, whereas if the serial is monthly or quarterly, only YYYY-MM should be used. Only when a serial's issue covers specify the day should YYYY-MM-DD be used. When a content provider hosts preprint articles before an issue is made available, they may use the date the articles are made available, or they may choose not to include the title until an issue is published. After an issue becomes available, a new KBART file should be provided to include the accurate date of the first issue available online.

The ISO 8601 date format should be used for all dates (YYYY, YYYY-MM, or YYYY-MM-DD). Non-numeric dates (e.g., Spring or Summer) are not supported in ISO 8601. Convert these into an appropriate date (e.g., Spring 2020 into 2020-03 or 2020-03-21) and use a consistent method of conversion of these dates across deliveries.

This field may be adapted to describe nontraditional media published serially, such as a television series or podcast.

For serials, this field is left blank if access to the content begins at an embargo date (see 3.8.17).

For monographs, leave this field blank.

3.8.8 Number of First Volume Available Online

Field label: num_first_vol_online

Serial: Required; blank values acceptable (see below)

Monograph: Not used

For serials, give the volume number of the first issue that is available online. Do not include any captions (e.g., “vol.” or “v.”). The house style for citing content may be used; for example, an alphanumeric value may be used in this field if appropriate (e.g., “A1”, “III”).

If the first volume available online is a supplemental or special volume, the value populated in num_first_vol_online should match the value expected in the incoming-link syntax (e.g., OpenURL, stable link structure). Common examples include “S1”, “suppl1”, “supplement1”, etc.

KB suppliers should use equivalent logic to normalize this data and the data provided in OpenURL queries to maximize the likelihood of a citation being matched to a source.

This field may be adapted to describe nontraditional media published serially, such as seasons of a television series or podcast.

For serials, this field is left blank if access to the content begins at an embargo date (see 3.8.17).

For monographs, leave this field blank.

3.8.9 Number of First Issue Available Online

Field label: num_first_issue_online

Serial: Required; blank values acceptable (see below)

Monograph: Not used

For serials, give the issue number of the first issue that is available online. Do not include any labels (e.g., “no.” or “n.”). The house style for citing content may be used; for example, an alphanumeric value may be used in this field if appropriate (e.g., “IV”).

If the first issue available online is a supplemental or special issue, the value populated in num_first_issue_online should match the value expected in the incoming-link syntax (e.g., OpenURL, stable link structure). Common examples include “S1”, “suppl1”, “supplement1”, etc.

KB suppliers should use equivalent logic to normalize this data and the data provided in OpenURL queries to maximize the likelihood of a citation being matched to a source.

This field may be adapted to describe nontraditional media published serially, such as episodes of a television series or podcast.

For serials, this field is left blank if access to the content begins at an embargo date (see 3.8.17).

For monographs, leave this field blank.

3.8.10 Date of Last Issue Available Online

Field label: `date_last_issue_online`
Serial: Required; blank values acceptable (see below)
Monograph: Not used

For serials, indicate the publication date of the most recent issue available. Again, use only that level of date description that is specifically given on the serial's cover (see 3.8.7).

The ISO 8601 date format should be used for all dates (YYYY, YYYY-MM, or YYYY-MM-DD). Non-numeric dates (e.g., Spring or Summer) are not supported in ISO 8601. Convert these into an appropriate date (e.g., Spring 2020 into 2020-03 or 2020-03-21) and use a consistent method of conversion of these dates across deliveries.

For serials, this field is left blank if the serial is available “to the present,” whether or not an embargo (see 3.8.17) is included.

This field may be adapted to describe nontraditional media published serially, such as a television series or podcast.

For monographs, leave this field blank.

3.8.11 Number of Last Volume Available Online

Field label: `num_last_vol_online`
Serial: Required; blank values acceptable (see below)
Monograph: Not used

For serials, give the volume number of the latest issue available online. Do not include any labels (e.g., “vol.” or “v.”). The house style for citing content may be used; for example, an alphanumeric value may be used in this field if appropriate (e.g., “A1”, “III”).

If the last volume available online is a supplemental or special volume, the value populated in `num_last_vol_online` should match the value expected in the incoming-link syntax (e.g., OpenURL, stable link structure). Common examples include “S1”, “*suppl1*”, “*supplement1*”, etc.

KB suppliers should use equivalent logic to normalize this data and the data provided in OpenURL queries to maximize the likelihood of a citation being matched to a source.

For serials, this field is left blank if the journal is available “to the present,” whether or not an embargo (see 3.8.17) is included.

This field may be adapted to describe nontraditional media published serially, such as seasons of a television series or podcast.

For monographs, leave this field blank.

3.8.12 Number of Last Issue Available Online

Field label: `num_last_issue_online`
Serial: Required; blank values acceptable (see below)
Monograph: Not used

For serials, give the issue number of the latest issue available online. Do not include any labels

(e.g., “no.” or “n.”). The house style for citing content may be used; for example, an alphanumeric value may be used in this field if appropriate (e.g., “*TV*”).

If the last issue available online is a supplemental or special issue, the value populated in `num_last_issue_online` should match the value expected in the incoming-link syntax (e.g., OpenURL, stable link structure). Common examples include “*S1*”, “*suppl1*”, “*supplement1*”, etc.

Knowledge base suppliers should use equivalent logic to normalize this data and the data provided in OpenURL queries to maximize the likelihood of a citation being matched to a source.

For serials, this field is left blank if the journal is available “to the present,” whether or not an embargo (see 3.8.17) is included.

This field may be adapted to describe nontraditional media published serially, such as episodes of a television series or podcast.

For monographs, leave this field blank.

3.8.13 Title-Level URL

Field label: <code>title_url</code> Serial: Required Monograph: Required
--

Indicate the URL at which the content is presented. The URL provided should link directly to the content provider’s platform. Avoid URLs that redirect to content, e.g., DOI and PURL.

For serials, this page should be a listing of the available volumes and issues.

For monographs, this page should be a table of contents.

3.8.14 Contributor

Field label: <code>contributor</code> Serial: Not used Monograph: Required
--

For monographs, give the full name of the main contributor. The full name should ideally appear as it does on the publication’s preferred source of information (in AACR2/RDA terms), for ease of identification and verification. Examples of the preferred source of information are: the title page (for textual works), opening credits/title frames (for video content), the label or embedded metadata (for audio content), etc. Where culturally appropriate, a publication may list an author with the surname first; the KBART file should reproduce the author’s name as it appears on the resource. If the title’s main contributor cannot be identified, the first contributor is acceptable. This field is used in conjunction with `contributor_type` (3.8.15).

For serials, leave this field blank.

3.8.15 Contributor Type

Field label: contributor_type
Serial: Not used
Monograph: Required

For monographs, give the type of the main contributor listed in the contributor field (3.8.14). The contributor type must be one of the following:

- *author*
- *editor*
- *artist*
- *director*
- *narrator*
- *producer*
- *performer*
- *composer*
- *other role*

The value “artist” includes contributors such as illustrators, photographers, etc. The value “*other role*” is used if the contributor type is not identified using other entries in the list above or is not available. The notes field (3.8.19) may optionally be used to specify the nature of an “*other role*” contribution.

For serials, leave this field blank.

3.8.16 Title Identifier

Field label: title_id
Serial: Required
Monograph: Required

Provide the proprietary identifier for the publication. If you include a title identifier in the link structure for that content, supply that value in this field. If multiple identifiers exist, supply the one used for linking.

Other KBART fields also refer to titles by their respective title_id value:

- For monographic series, the series-level entry’s title_id is included in the field parent_publication_title_id (see 3.8.28).
- Serials that have changed titles will give the title_id for the preceding title as the value in the preceding_publication_title_id field (see 3.8.29).

3.8.17 Embargo

Field label: embargo_info

Serial: Required (when applicable)

Monograph: Not used

In this RP, an embargo is a period of time, expressed relative to the present date, in which a publication's content is not available to those who otherwise have access to the publications in that title list.

The dates of availability change after a specified time interval, which is sometimes referred to as a "moving wall." The moving wall for available content can be reset on a daily, monthly, or yearly basis. The embargo statement in a KBART file communicates exactly when content's availability changes within the context of that file (i.e., for paying customers in a paid collection, or for everyone in a freely available collection).

The embargo statement has three parts: type, length, and units, as described in Table 3. These three parts are written in that order in a single string with no spaces.

Table 3. Possible Embargo Descriptor Values

Descriptor Category	Allowed Values	Notes
Type	<i>B</i> for beginning <i>E</i> for ending	If access to content begins at the moving wall, the embargo type is " <i>B</i> " (for "beginning"). A publication with this embargo type should always have blank <code>date_first_issue_online</code> (3.8.7), <code>num_first_vol_online</code> (3.8.8), and <code>num_first_issue_online</code> (3.8.9) fields. If access ends at the moving wall, then the embargo type is " <i>E</i> " (for "ending"). A publication with this embargo type should always have blank <code>date_last_issue_online</code> (3.8.10), <code>num_last_vol_online</code> (3.8.11), and <code>num_last_issue_online</code> (3.8.12) fields.
Length	An integer expressing the length of the embargo	
Units	<i>D</i> for days <i>M</i> for months <i>Y</i> for years	The units field indicates the granularity of the embargo, i.e., how frequently the availability of embargoed content changes.

The embargo field always expresses the period of a publication's availability to consumers of the

title list. Depending on the file type, the embargo carries slightly different meanings. First, in an “All Titles” file (3.5.7), an embargo should be applied only when content is completely unavailable on the platform. In a title list for free-to-read publications (3.5.5), content under embargo exists on the platform but is not yet open to nonsubscribers. Finally, in the title list for a paid collection (see 3.5.2, 3.5.3, 3.5.4, 3.5.6), embargoes may represent either content that could be purchased in another collection on the platform but is not yet available in this one or content that, like in the “All Titles” file, is not available at all on the platform.

Example scenarios and the applicable data values are shown in Table 4.

Table 4. Publication Scenarios with Applicable Embargo Values

Data Value Example	Implication of “E” or “B”	Example Scenario in an “All Titles” or Paid-Collection List¹	Example Scenario in a Free-to-Read List
<i>E6M</i>	Content published <i>after</i> the embargo date is <i>not yet</i> available.	An aggregator receives and makes available journal content 6 months after publication. New content is made available on a monthly basis.	A journal is paywalled for six months, then freely available. Content flips to freely available on a monthly basis.
<i>E24M</i>	Content published <i>after</i> the embargo date is <i>not yet</i> available.	An aggregator receives and makes available a monthly magazine except for the latest two years. New content is made available on a monthly basis.	A monthly magazine is paywalled for two years from publication date. Content flips to freely available on a monthly basis.
<i>E180D</i>	Content published <i>after</i> the embargo date is <i>not yet</i> available.	A newspaper database provides access to all issues of a daily newspaper except for the latest six months, which are sold only in a different subscription product. Each day, an additional issue is made available in the database.	A newspaper database has its articles behind a paywall for six months after publication. Each day, articles that are more than 180 days old become freely available.
<i>E1Y</i>	Content published <i>after</i> the embargo date is <i>not yet</i> available.	An aggregator receives and makes available journal content only for the previous calendar year. A new, full year of content is made available on January 1.	A journal is paywalled for the current calendar year. Content for the previous year flips to freely available on January 1.
<i>B365D</i>	Content published <i>before</i> the embargo date is <i>no longer</i>	An online newspaper provides customers exactly one year of past content. Each day, a new issue is made available and the issue that was published	N/A ²

Data Value Example	Implication of “E” or “B”	Example Scenario in an “All Titles” or Paid-Collection List ¹	Example Scenario in a Free-to-Read List
	available.	exactly one year ago that day is removed from the customer’s access.	
<i>B10M</i>	Content published <i>before</i> the embargo date is <i>no longer</i> available.	A journal provides subscribers the most recent ten months of content, with the oldest month of content becoming unavailable the first day of each month. One might say colloquially that the subscriber has access to “10 months” of content even though on a given day, the statement is not fully precise.	N/A
<i>B2Y</i>	Content published <i>before</i> the embargo date is <i>no longer</i> available.	A magazine provides subscribers with online access to content published in both the current and previous calendar years. No other years are available, as these are periodically packaged as standalone backfile/archive purchases.	N/A

Note 1: These examples are not intended to imply that the same `embargo_info` value must be given in a paid-collection file and its corresponding “All Titles” file. They are grouped in this column only to illustrate that the embargo statement is understood to have the same meaning in both a paid-collection and an “All Titles” KBART title list (i.e., unavailable even to paying customers), in contrast with its meaning in a “Free to Read” collection’s title list (i.e., unavailable only to nonsubscribers).

Note 2: No embargoes of the “B” type are listed for free-to-read title lists. Although freely available content may be withdrawn behind a paywall for a variety of reasons, this is not expected to be triggered on a scheduled, rolling basis as expressed in an embargo statement. In a free-to-read KBART file, adjustments of this nature should be indicated instead using other coverage fields such as `date_first_issue_online` (3.8.7) and `date_last_issue_online` (3.8.10).

The following gives additional guidance on applying the recommendations related to embargoes:

- This data field is applicable only to serials.
- For a title with embargoed content, this data field could be left blank for some KBART files, depending on the availability of the content for the intended user of the file: see examples in 3.8.30 for additional details on the usage of `embargo_info` in conjunction

with `access_type`, coverage dates, and the type of KBART file.

- In an “All Titles” list or paid-collection list, the embargo is never used to indicate the distinction between content that is available by virtue of payment versus content that is freely available. Only in a free-to-read title list is open (no-cost) availability relevant to the `embargo_info` field, and in that case, the distinction is applicable only because the content’s availability changes within the context of that file.
- In an “All Titles” list, only content unavailable to any subscriber should list an embargo. In a paid-collection list, an embargo may indicate either that the content is wholly unavailable on the platform (in which case the same embargo would be given in the “All Titles” file) or that it is merely not available in this collection (in which case the “All Titles” file should not show that embargo for the publication, instead reflecting the most permissive access, or the least-limiting embargo, anywhere on the platform).
- Most embargoes will be the “E” type, e.g., content in aggregator databases with limitations on the most recent content, or journals that make backfiles freely available but limit the most recent issues to subscribers.
- When there is an embargo at both the beginning and end of available content, leave `date_first_issue_online` (3.8.7), `num_first_vol_online` (3.8.8), and `num_first_issue_online` (3.8.9) and `date_last_issue_online` (3.8.10), `num_last_vol_online` (3.8.11), and `num_last_issue_online` (3.8.12) blank and concatenate the two embargo statements, starting with the time period when content becomes available. Separate the statements with a semicolon. For example, “B10Y;E30D” indicates that the past 10 calendar years of content are available, except for the most recent 30 days.
- For simplicity, “365D” will always be equivalent to one year, and “30D” will always be equivalent to one month, even in leap years and for months that do not have 30 days. However, this is not to say that one year must always be represented as “365D” or one month always represented as “30D”. Instead, as described above, comparable time periods represented using “1Y” or “12M” (for “365D”) or “1M” (for “30D”) should be selected depending on whether the moving wall shifts on an annual, monthly, or daily basis.

3.8.18 Coverage Depth

Field label: `coverage_depth`

Serial: Required

Monograph: Required

Indicate the extent to which content is covered within the range given in the coverage (date, volume, and issue of first and last publication) and embargo fields. This field can have one of three values, which should be selected to represent the majority of the content within that publication:

- *full* – Coverage includes the full text of the content (or, as applicable, other forms of complete content, such as full films, courses, episodes, etc.). If the full text does not match the print (physical) equivalent, the `notes` field (3.8.19) can describe what is excluded (e.g., “Excludes graphics”).

- *partial* – Coverage includes the full text of some, but not all, articles (or, as applicable, only portions of the non-textual items available on the platform, such as scattered clips or selections). This value should be used only if a significant portion of the content is omitted, perhaps due to a specific policy. For example, a particular journal may publish only research articles online, and not letters or book reviews. Other databases may include only articles in certain subject areas, or a media resource may exclude promotional content. Any such policy should be described in the *notes* field (3.8.19; e.g., “*Excludes letters and book reviews*” or “*Excludes graphics*”). The coverage depth should not be set to “*partial*” in cases where only a few articles are missing for technical reasons.
- *abstracts* – Coverage includes only abstracts or a description of the content. The content itself (e.g., full text of a journal article) is not available.

3.8.19 Notes

Field label: notes Serial: Optional Monograph: Optional

This is an optional free-text field that can be used to provide specifics for data given in other fields, e.g., *coverage_depth* (3.8.18) or *access_type* (3.8.30).

One use case for this field is to further explain the coverage-depth field to describe the specifics of the coverage policy, e.g., “*Excludes letters and book reviews*” or “*Excludes graphics*” (see 3.8.18).

Another use case occurs when a title is hybrid open access. In this case, describe the specifics of the open-access content coverage. For example, if individual articles are open access due to the author paying an article processing charge or similar fee, the entry could state, “*Selected articles are Open Access*” (see 3.8.30).

Data in this field can, for example, be used by a link resolver to display information about content exclusions.

3.8.20 Publisher Name

Field label: publisher_name Serial: Required Monograph: Required
--

Give the name of the publisher of the title.

This field is especially important if the file represents an aggregation of content from multiple publishers.

Publisher names can also help to distinguish between titles with the same name.

3.8.21 Publication Type

Field label: `publication_type`

Serial: Required

Monograph: Required

Indicate whether content is a series or a one-off publication. This field is used in conjunction with `content_type` (3.8.22) to describe related facets of a title (see examples of combining the two fields in Table 5, in 3.8.22). This field has only two possible values:

- *serial* – Content receives multiple releases under a single title (e.g., a journal publication with issues and/or volumes, a conference series title with multiple proceedings, a television series).
- *monograph* – Content is released in individual-title units (e.g., print or electronic monographs, a single conference-proceedings volume, a movie, a television-series episode).

Note that the same content type can be labeled with different publication types. For example, a podcast as a whole is a “*serial*”, but a single episode of a podcast is a “*monograph*”.

3.8.22 Content Type

Field label: `content_type`

Serial: Required

Monograph: Required

Indicate how the title presents its content. This field is used in conjunction with `publication_type` (3.8.21) to describe related facets of a title. The content type must be one of the following:

- *text*
- *image*
- *audio*
- *video*
- *data*
- *interactive*
- *multiple*
- *other*

Table 5 gives some examples of how the fields `publication_type` and `content_type` could be combined to describe common materials.

Table 5. Examples of Publication-Type/Content-Type Combinations

Publication Type	Content Type	Publication Examples
<i>serial</i>	<i>text</i>	Journal, magazine, newspaper, conference-proceedings title
<i>monograph</i>	<i>text</i>	Book, conference-proceedings issue, manuscript
<i>serial</i>	<i>video</i>	TV series
<i>monograph</i>	<i>video</i>	TV episode, film
<i>serial</i>	<i>audio</i>	Radio show, podcast
<i>monograph</i>	<i>audio</i>	Radio show episode, podcast episode, song
<i>monograph</i>	<i>interactive</i>	Video game, software, virtual/augmented reality, online course (with testing/assessment)
<i>monograph</i>	<i>multiple</i>	Combination of music audio plus score, sheet music, and lyrics; significant combination of text and video or audio
<i>serial</i>	<i>multiple</i>	Book series with online course access
<i>serial</i>	<i>data</i>	Series of datasets or tables of statistics (e.g., OECD indicators)
<i>monograph</i>	<i>data</i>	Dataset, table of statistics
<i>monograph</i>	<i>image</i>	A collection of images
<i>serial</i>	<i>other</i>	Anything that does not fit in the above
<i>monograph</i>	<i>other</i>	Anything that does not fit in the above

The content type “*multiple*” should be used only when a significant form of multiple media types are offered as one product, e.g., “Book with an online course.” When a title does not contain a significant second media offering, it should not be listed as “*multiple*” but use the content type of the significant media. For example, although a movie has textual subtitles, it should use the content type “*video*” and not “*multiple*”.

3.8.23 Date Monograph First Published in Print

Field label: date_monograph_published_print
Serial: Not used
Monograph: Required (if physical format exists)

Give the date when the monograph was first published in print (physically). The ISO 8601 date format should be used for all dates (YYYY, YYYY-MM, or YYYY-MM-DD), including month and day if given in the publication.

This field is mandatory for monographs for which there is an equivalent item published in print (physically). For born-digital monographs (i.e., no print or physical format exists) and for serials,

leave blank.

3.8.24 Date Monograph First Published Online

Field label: date_monograph_published_online

Serial: Not used

Monograph: Required

Give the date when the monograph was first published online. The ISO 8601 date format should be used for all dates (YYYY, YYYY-MM, or YYYY-MM-DD), including month and day if given in the publication.

This field is mandatory for all monographs. For serials, leave blank.

3.8.25 Volume for Monograph

Field label: monograph_volume

Serial: Not used

Monograph: Required (when applicable)

Give the monograph's volume number, if applicable. Do not include any captions (e.g., "*vol.*" or "*v.*"). Use of text or roman numerals is acceptable (e.g., "*Five*" or "*V*" instead of "5"), but consistency in use of number formatting across a series or among related works is essential.

This field is applicable only to monographs. For serials, leave blank.

3.8.26 Edition for Monograph

Field label: monograph_edition

Serial: Not used

Monograph: Required (when applicable)

Give the monograph's edition number, if applicable. Include only the edition relevant to the publication date. It may be that additional text is needed after the edition (e.g., "*3rd ed. Revised*"). Use of text or roman numerals is acceptable (e.g., "*Five*" or "*V*" instead of "5"), but consistency in use of number formatting across a series or among related works is essential.

This field is applicable only to monographs. For serials, leave blank.

3.8.27 Duration

Field label: duration

Serial: Not used

Monograph: Required (when applicable)

For monographic audio or video materials, indicate the duration of the content. Duration format should align with the presentation on the site and be clear and consistent across content.

ISO 8601 format is recommended, using *hh:mm:ss* or *hh:mm*. However, expressions such as "*1hr. 15min.*" or "*75 minutes*" are acceptable.

Avoid formats such as "75" with no indication of scale of time.

This field is applicable to monographs only, generally those with `content_type` of “*audio*” or “*video*” (see 3.8.22). For serials, leave blank.

3.8.28 Parent Publication Identifier

Field label: `parent_publication_title_id`

Serial: Not used

Monograph: Required (when applicable)

Give the `title_id` (3.8.16) of the monographic series (book series, conference proceedings, etc.) within which the monographic title is published.

This field is mandatory for any monograph that belongs to a series. For monographs not in a series and for serials, leave blank.

3.8.29 Preceding Publication Identifier

Field label: `preceding_publication_title_id`

Serial: Required (when applicable)

Monograph: Not used

For serials whose title has changed and whose current platform hosts content under both the new and old titles, indicate the identifier of the preceding serial title. The new title’s `preceding_publication_title_id` should match the old title’s `title_id` (3.8.16), which should be present in one or more KBART title-list files from the current content provider. No preceding publication identifier is needed if the current content provider hosts only the current title, such as when another content provider maintains an exclusive archive of the preceding title. This field is applicable to serials only. For monographs, leave blank.

3.8.30 Access Type

Field label: `access_type`

Serial: Required

Monograph: Required

The type of access for the publication has three possible values:

- *P* = Fee based (paid) – When access to a publication within the context of the collection is solely based upon a fee, either subscription or purchase (or a combination of the two), the access type is “*P*”.
- *F* = Free to read/open access (free) – When access to a publication within the context of the collection is solely based on any one of the numerous open-access models (e.g., diamond/platinum open access, author-pays open access, etc.) or the content is freely available, the access type is “*F*”.
- *M* = Hybrid/selected content (mixed) – When the collection includes a mixture of both purchased content and free or open-access content as described above, whether at the article level or issue level, the access type is “*M*”. The notes field (3.8.19) may be used to describe the extent of mixed (“*M*”) content within the title and the date the title became freely accessible, if applicable (e.g., “*Selected articles are open access*” or “*The publication flipped to free-to-read on YYYY-MM-DD*”).

The following are examples of applying `access_type` to titles in a collection:

- A “Freely Available” (or free-to-read) KBART file (see 3.5.5 and 3.6) should include titles in which the content is 100% freely available within the dates of coverage specified. If access to the most recently published content is behind a paywall, the embargo field (3.8.17) should be utilized to represent the restriction of freely available access. For example, a journal with a restriction on the most recent 12 months would have a coverage start date of the first volume and issue that are freely available, no end date, and an embargo of “*E12M*”. In this file, the access type would be “*F*” for every title.
- The “All Titles” KBART file (3.5.7) should include all titles in which content is accessible on the content provider’s platform. The coverage dates should represent all content available. The same title as in the above “Freely Available” file would not include the embargo here and would again give no end date. The access type would be “*M*” for mixed content since the platform offers free access to the majority of the content, but the most recent content requires payment. Titles that have individual articles, chapters, or issues that are free to read would use the “*M*” access-type indicator for mixed free and paid content. Access type should be “*P*” for those titles that are 100% paid content, “*F*” for titles that are 100% freely available, and “*M*” for those titles that contain a mix of paid and free content.
- A paid-collection KBART file (see 3.5.2, 3.5.3, 3.5.4, 3.5.6) should include all titles in which content is accessible to those who purchase or subscribe to that collection. These files could include fee-based titles, freely available titles, and mixed titles. The coverage statement for each title should indicate the range of content the user has access to, regardless of whether it is paid or free. The access type should be “*P*” for those titles that are 100% paid content, “*F*” for titles that are 100% freely available, and “*M*” for those titles that contain a mix of paid and free content.
- Paid-collection files should include an embargo value only in cases where some content is not available or not accessible even though the fee has been paid.

3.8.31 Optional Additional Fields

3.8.31.1 General Guidelines for Additional Fields

In order to supply additional information for other purposes not required by the KBART Recommended Practice, content providers are permitted to include extra data fields after the last KBART field (`access_type` [3.8.30]).

Examples for optional fields could include additional identifiers (see 3.8.5 and 3.8.6), subjects, additional contributors and contributor types (see 3.8.14 and 3.8.15), language of the content, and more-granular content types as used by the content provider (in addition to the accepted values listed in 3.8.22). When expanding upon existing KBART fields, follow the relevant recommendations as much as possible. For example, identifier fields should contain only one identifier, an additional contributor field should be paired with a contributor-type field, etc.

Although the optional additional fields are technically unlimited, providers are strongly encouraged to limit the number of these fields that are added. This is to keep the size of the file reasonable, making it as easy as possible for the content provider to maintain it, for nontechnical users to navigate and read it, and for KB suppliers to consider customized handling of those fields’ contents.

Additionally, a provider should be internally consistent with the fields added. For example, a provider's journals files should all have the same additional fields and in the same order. Its books files may have a different set of additional fields than the journals files, but any fields common to both files should be in the same order in both.

This consistency should be maintained over time. Changes to the fields provided should be communicated to recipients ahead of time, and these changes should generally be infrequent.

3.8.31.2 Instructions for Providing Additional Identifiers

In addition to the general guidelines for additional fields above, the topic of providing additional print-format identifiers (3.8.5) or online-format identifiers (3.8.6) merits specific instructions.

Not all content types use an ISBN or ISSN as books and journals do. If the media does not use either an ISSN or ISBN (e.g., videos, podcasts), another title-level identifier must be provided. However, it is critical that KB suppliers know what type of identifier is provided. Therefore, it should *not* be given in the `print_identifier` or `online_identifier` field but instead in an extra field after the last KBART field (`access_type` [3.8.30]). In this case, the column header should be the identifier name, from the following list if possible:

- `doi`
- `eidr`
- `isrc`
- `oclc`
- `upc` (or `ean`)
- `ismn`
- `isan`
- `proprietary_id` (platform-specific identifier; should already also be included as `title_id` [3.8.16])

For identifier types not listed, use the standard form of the identifier name as the column header.

As the content of that field, provide the identifier value, expressed according to the common practice for the identifier if possible. Whichever identifier is chosen should be used consistently. For example, if using the UPC/EAN for video content, always use the UPC/EAN for all video content if possible.

Identifiers such as DOI should not be used on the article/chapter level, only on the title level. In addition, these additional identifiers should not be used in substitution of an ISBN or ISSN (3.8.5 and 3.8.6) for content which uses the ISBN or ISSN as a requirement (e.g., books or journals).

The general guidelines for additional fields (3.8.31.1) should be followed in relation to additional identifier fields.

Section 4: Guidelines for KBART File Manifest

4.1 File-Manifest Overview

The KBART file manifest itemizes the KBART title-list files offered by a content provider and gives additional metadata, communicating what new files are available, the names of the collections those files represent, what files have changed, and other key information. KB suppliers can (and should) use the provider's manifest to map to collections in their systems and share this mapping with the content provider (using the same file or a copy as mutually agreed upon). The content provider typically does not have access to the knowledge base product, so this sharing of package information brings transparency to the process for the content providers. This may help the content provider in answering customer inquiries for KB suppliers' products, such as advising them which collection(s) to activate to best represent the content they have from the provider.

Like KBART title-list files, the KBART file manifest is a tab-delimited text file and can be extended beyond the required and optional fields to communicate other useful information between the content provider and KB suppliers. Needs for additional fields to communicate between the content provider and the KB supplier may differ depending on the circumstance. Both parties should determine and agree what will work best for their situation, but the KB supplier should (at minimum) include the name and internal identifier for each collection as appropriate.

The KBART file manifest is an initial step in automated collection creation and maintenance. In order to create, deliver, and process the KBART manifest data, especially on an industry-wide scale, content providers and KB suppliers will need to work out individual adjustments, and additional KBART Automation recommendations may need to be made. However, the manifest as it is described should be enough to begin exploring these possibilities.

Download a blank KBART file manifest and a file with example collections using the links in Appendix A

4.2 Determine If a Manifest Is Necessary

The file manifest is highly recommended for all content providers who have more than one KBART file, or more than one collection that does not have or require a KBART file. (See 4.7.5 for more details on what collections require a file, and which collections' information should be included only in the manifest.) The more collections the content provider has, the more necessary the manifest becomes.

The manifest has many benefits to all parts of the data supply chain:

- Content provider
 - Time and effort can be dedicated to file preparation and delivery rather than ad hoc explanations to KB suppliers and other recipients about what files represent or when and how they will be delivered
 - Coordination of collection name with KB suppliers' products
 - Collection title lists loaded into KBs faster

- Creation of duplicate or incorrect collections minimized
- KB supplier
 - Less reliance on the file name for collection information (e.g., name)
 - Reduced ambiguity and less research needed
 - Time savings (e.g., file harvesting, KB maintenance)
 - Fewer mistakes based on incomplete information or incorrect assumptions
- Librarian
 - New collections available more quickly
 - Consistency in collection names between the content provider and the KB supplier
 - More-accurate data in the KB
 - Improved experience for library users with more-accurate holdings data

Because of these benefits, content providers that have more than 10 individual KBART files or collections should consider the file manifest mandatory. It is highly recommended for any provider that has more than one collection, even if it must be manually maintained.

4.3 File-Manifest Method of Exchange

4.3.1 Preferred Method: Single Manifest File

Content providers should make their KBART file manifest available, ideally as one file containing details of all of their collections, regardless of where and how they are made available to the KB suppliers. This makes collection mapping and finding missing collections easier for both the KB supplier and the content provider, and makes it easier for them to work together.

However, for those content providers who have multiple locations for their files (different websites for books versus journals lists, or some files delivered via FTP and some through HTTP, etc.), special care is required to make the location of each file clear and understandable by the recipient. Some KB suppliers may be able to automate or partially automate the creation of collections in their systems using the manifest file, but any ambiguity in the locations of the files and the protocol of their transmission (HTTP, HTTPS, FTP, SFTP, FTPS, for instance) may make such automation difficult or impossible.

If the content provider is following the recommendations on title-list methods of exchange (see 3.2) for individual collections' KBART files, then all of their files should be available on a website, which is also where the KBART file manifest should be found. This simplifies the creation and maintenance of the file manifest (and file deliveries to KB suppliers in general) by having one method of delivery that is identical across KB suppliers. This should be possible if the RP is followed as indicated.

4.3.2 Alternate Methods

For providers that make some KBART files available on their site and deliver others directly to the KB supplier's FTP folder, or have multiple sites that contain KBART files, it is suggested that they take one of the following approaches:

- Provide the same link to the full file manifest in each location their files can be found (if via HTTP), or a copy of it (if FTP).
- Supply separate manifests to each location, covering only the files sent in that location (e.g., the journals HTTP site gets one manifest, the consortium-specific lists via FTP get another manifest, and the books HTTP site gets a third manifest). However, it is recommended to also keep a separate single manifest that covers all collections, if at all possible, for the reasons covered above.

In other words, depending on the number of locations and methods by which files are exchanged, it may make sense to have multiple file manifests, particularly if the manifests are able to be automatically generated, but the goal should be a single manifest covering all collections.

The content provider may opt to create bespoke KBART file manifests for each of their file recipients, particularly if they are able to automate the manifest creation. If automation is not possible, or if they want to avoid creating customized manifests, the content provider should make sure that their file deliveries are aligned across all of their recipients. For example, use a consistent directory structure when delivering via FTP to all recipients, make sure that each recipient is receiving the same files via HTTP and FTP, and so on.

The easiest and most logical option for both the content provider and the KB supplier is to provide all files through a single HTTP(S) page that is publicly accessible, as this requires only one uniform manifest to be created for all files and recipients.

4.4 File-Manifest Frequency of Exchange

An updated KBART file manifest should accompany each new delivery of title-list files and represent the most current listing of files. See 3.3 for further information on frequency of file delivery and 4.7.11 for instructions on expressing this data in the file manifest.

4.5 File-Manifest Data-Format Requirements

4.5.1 Follow Individual KBART-File Guidelines

The file manifest should be generated as a tab-delimited text file and follow the recommendations for individual KBART title-list files as indicated in 3.4.1, 3.4.2, 3.4.3, 3.4.8, and 3.4.9.

4.5.2 File Collection per Line

Each line of the file manifest should represent information for one individual KBART file only, or one “discovery only” collection only (see 4.7.5 for more about “discovery only” collections). Each collection’s file should have its own line in the file manifest. No file should be delivered without an entry in the manifest.

4.5.3 Column Headers

Data should be provided with column headers (see 4.7.1) and without a blank row between the column header and the first row of content.

4.6 File-Manifest File Name

4.6.1 File-Manifest Naming Conventions

The manifest file name is separated into elements with an underscore, like the individual KBART files, but the elements are different, and “*Manifest*” is included verbatim in each file’s name (see 4.6.4):

[*ProviderName*][_*ManifestType*]***Manifest***_[YYYY-MM-DD].[txt/tsv]

Content providers should avoid using spaces or special characters in file names. An underscore (“_”) should be used only in the designated places outlined above. Underscores are delimiters of the file name parts, and thus, they must not be used in the parts themselves. Both upper- and lowercase characters are allowed as long as the content provider is consistent in its file names throughout cycles of transmission.

4.6.2 Provider Name

Give the name of the content provider (see 3.7.2).

4.6.3 Manifest Type

This element is used to disambiguate multiple manifest files; e.g., if a content provider’s journals files are located on one web page and its books files on another, that would require multiple manifest files to be created per 4.3.

If only one file manifest is available from a provider (as is preferred), use “*AllCollections*”.

Use values that are consistent with the content, where it is found, the content type, or any other information that can differentiate one manifest file from another.

Examples of file-manifest file naming, with manifest type bolded:

A provider has all of its KBART Files located in one place and generates a single manifest file (highly preferred):

- *ExampleProviderName_****AllCollections****_Manifest_YYYY-MM-DD.txt*

If one set of KBART files is found on a “books” web page and another on a “journals” web page, the manifest type could be “*Books*” and “*Journals*”, respectively:

- *ExampleProviderName_****Books****_Manifest_YYYY-MM-DD.txt*
- *ExampleProviderName_****Journals****_Manifest_YYYY-MM-DD.txt*

Some providers have certain files available on their KBART web page and other files delivered via FTP:

- *ExampleProviderName_****Website****_Manifest_YYYY-MM-DD.txt*
- *ExampleProviderName_****Books-FTP****_Manifest_YYYY-MM-DD.txt*
- *ExampleProviderName_****FTP****_Manifest_YYYY-MM-DD.txt*

Some providers may have different content platforms or distinct product groups whose files are generated and delivered to separate websites or FTP directories:

- Scenario: Content provider has two content groups, one called “Academic Platform” and

one called “Public Libraries,” and their files are found in two separate places:

- *ExampleProviderName_AcademicPlatform_Manifest_YYYY-MM-DD.txt*
- *ExampleProviderName_PublicLibraries_Manifest_YYYY-MM-DD.txt*
- Scenario: Content provider has two platforms, one called “News” and one called “Research Plus,” and their files are found in two separate places:
 - *ExampleProviderName_News_Manifest_YYYY-MM-DD.txt*
 - *ExampleProviderName_ResearchPlus_Manifest_YYYY-MM-DD.txt*

4.6.4 Manifest

“*Manifest*” should be a separate element in the file name to differentiate it from individual KBART title-list files, and it should appear in every file manifest’s name.

4.6.5 Manifest File Date

Date is the file-creation date using the ISO 8601 date format (YYYY-MM-DD) with full year, month, and day.

The change in date indicates to a librarian or KB supplier that a new file is available and that changes have been made to the collection that the file represents.

4.6.6 Manifest File Extension

All files should be saved with either “.txt” or “.tsv” as their extensions.

4.7 KBART File-Manifest Data Fields

4.7.1 File-Manifest Fields and Labels

The KBART file manifest’s fields are listed and summarized in Table 6. Refer to the section listed for each field for a full description of its usage. (Download a blank KBART file manifest and a file with example collections using the links in Appendix A.)

Table 6. KBART File-Manifest Data Fields Summary

Field Label	Field Name	Section	Description
collection_name	Collection Name	4.7.2	Official name of the collection
collection_id	Collection ID	4.7.3	Standard or local collection identifier
collection_url	Collection URL	4.7.4	URL for accessing the collection
collection_type	Collection Type	4.7.5	The collection’s type, i.e., as describing full text or other resources

Field Label	Field Name	Section	Description
file_name	File Name	4.7.6	Name of the collection's KBART title-list file Optional for " <i>Upcoming</i> " collection type; blank for " <i>Discovery only</i> "
file_location	File Location	4.7.7	HTTP(S) or (S)FTP site where the KBART file is found Optional for " <i>Upcoming</i> " collection type; blank for " <i>Discovery only</i> "
date_added	Date Added	4.7.8	Date the collection was added to the manifest
date_file_updated	Date File Updated	4.7.9	Date the collection's KBART title-list file was updated Optional for " <i>Upcoming</i> " collection type; blank for " <i>Discovery only</i> "
record_count	Record Count	4.7.10	Number of rows in the collection's KBART title-list file, minus the header Optional for " <i>Upcoming</i> " collection type; blank for " <i>Discovery only</i> "
update_frequency	Update Frequency	4.7.11	The frequency with which recipients can expect to receive updates for the KBART title-list file
linking_supported	Linking Supported	4.7.12	The most granular type of linking supported for the collection Optional but recommended
collection_description	Collection Description	4.7.13	Short description of the collection's content Optional but recommended
previous_collection_name	Previous Collection Name	4.7.14	Previous collection name, if applicable (blank by default)
freely_accessible	Freely Accessible	4.7.15	Indication whether the collection is free to read or requires payment

Field Label	Field Name	Section	Description
notes	Notes	4.7.16	Any other information Optional field

All fields are required unless otherwise indicated in the description column above. See `collection_type` (4.7.5) for more about “populated” versus “upcoming” and “discovery only” collections.

4.7.2 Collection Name

Field label: `collection_name`
Populated: Required
Upcoming: Required
Discovery only: Required

Give the official name of the collection as it is known on the content provider’s platform, in its sales or marketing materials, on an invoice, etc., as indicated in 3.5.2, 3.5.3, 3.5.4, and 3.5.6. The collection name should be given as customers would expect to see it labeled in the KB.

Otherwise, if it is a generic title list—“All Titles” (3.5.7), “Free to Read” (3.5.5), “OA Journals,” etc.—use a consistent label for the type of content the title list represents.

If a collection has different or alternate names (for example, common abbreviations) these can be included in notes (4.7.16) or a custom field (4.7.17).

Collection name is required for all records in the manifest.

4.7.3 Collection ID

Field label: `collection_id`
Populated: Required
Upcoming: Required
Discovery only: Required

Provide an identifier to differentiate collections from one another on the provider’s platform. These are often internally generated product IDs, sales codes, or other identifiers assigned to particular collections of content. This is useful both in disambiguating two collections with very similar names and in providing a stable data point for that collection over time, even if a collection’s name or branding changes.

An ISBN, NISO collection identifier, or other standard identifier may also be used if that identifier is assigned at the collection level (rather than the title level) in accordance with the guidelines for that standard identifier.

If no collection identifier exists for the collection (standard or internally generated), a URL that leads a user to the collection’s content may be used if it is unique (not used by another file in the manifest or on another manifest) or, barring that, a marketing or other web page for that specific collection.

Collection ID is required, if available, for all records in the manifest. Every effort should be made to populate this field.

4.7.4 Collection URL

Field label: <code>collection_url</code> Populated: Required Upcoming: Required Discovery only: Required

Give the URL that leads directly to an interface to browse or search the specific collection (for authenticated users), used in KBs to link to the collection in cases where collection names and information are surfaced to librarians and researchers. If the content provider's platform does not have collection-specific pages, a link to the general search or browse function of the site is acceptable.

Collection URL is required for all records in the manifest.

4.7.5 Collection Type

Field label: <code>collection_type</code> Populated: Required Upcoming: Required Discovery only: Required
--

Provide a `collection_type` value to instruct the KB supplier how to handle the record. Select from the following accepted values:

- *Populated*
- *Upcoming*
- *Discovery only*

“*Populated*” describes a collection that has a KBART file associated with it, containing titles that belong in that collection. The assumption is that the collection will be created in the KB supplier's knowledge base, and the file used to populate the collection with title-level metadata.

“*Upcoming*” describes a collection that is expected to have a KBART file associated with it, but the product has not yet launched on the provider's platform. This serves as a notification that the collection is forthcoming.

“*Discovery only*” describes a collection that is not suitable to have a KBART file created for it (e.g., article-/chapter-level collections; see 7.3), but information about the collection may be useful to KB suppliers for populating discovery services and to librarians for resource-management purposes using their KB supplier's products.

Some vendor terms for the concept of a discovery-only collection include the following:

- Database
- Online Reference
- Abstract and Index

Depending on which collection-type value is used, other fields in the manifest may or may not be required. See Table 6 (in 4.7.1) or each field's description for which fields are required. (Note that, where applicable, the values “*Upcoming*” and “*Discovery only*” should be given as

both the `collection_type` and `update_frequency` [4.7.11].)

Collection type is required for all records in the manifest.

4.7.6 File Name

Field label: `file_name`
Populated: Required
Upcoming: Optional
Discovery only: Leave blank

Give the name of each KBART title-list file as indicated in 3.7.

File name is required for the “*Populated*” collection type (4.7.5). This field is optional for “*Upcoming*” and should be left blank for “*Discovery only*”.

4.7.7 File Location

Field label: `file_location`
Populated: Required
Upcoming: Optional
Discovery only: Leave blank

4.7.7.1 File-Location Overview

Give the HTTP(S) or (S)FTP location where the KBART file is found. Different considerations must be made depending on the protocol used to transmit the files, as discussed below. (The insecure protocols HTTP and FTP may, in other contexts, be formally deprecated or otherwise fall out of favor, but the KBART RP does not take a position on their use, as KBART files are explicitly intended for broad public consumption. In contrast, because KBART Automation involves files with institution-specific data, the KBART Automation RP requires secure transmission.)

File location is required for the “*Populated*” collection type. This field is optional for “*Upcoming*” and should be left blank for “*Discovery only*”.

4.7.7.2 HTTP(S) File Location

For files delivered via the provider’s website (over HTTP[S]), include the full link to the file, minus the file name.

The below are examples of a title list delivered via HTTPS:

Full link to the title-list file:

- https://www.example.com/files/kbart/ExampleProvider_Global_ALLTitles_YYYY-MM-DD.txt

Path to include in the manifest as `file_location`:

- <https://www.example.com/files/kbart/>

4.7.7.3 (S)FTP File Location

For files delivered via an FTP, SFTP, or FTPS site (either the content provider’s or the KB supplier’s), include the full link to the file, minus the file name. This helps in determining the

path to the file that will be used, as admin credentials would have a different path to the file than the specified username's credentials.

The file path should *always* be expressed as the logged-in user's file path, not the (S)FTP owner's. For example, if the content provider owns the (S)FTP server, then the file path should be expressed as viewed by the logged-in KB supplier accessing the manifest and the KBART files. Similarly, if the KB supplier owns the (S)FTP server, then the file path should be expressed as viewed by the logged-in content provider.

See below for an example of the difference in the file location as viewed by a user with administrative access to the server compared to the file path for an external user:

A content provider's path to the files, with administrative access:

- *sftp://example.com/metadata/delivery/files/kbart/*

File path listed in the manifest as *file_location* (i.e., what the logged-in external user sees as the path to the same set of files):

- *sftp://example.com/kbart/*

For delivery via SFTP, the username should preferably be included in the domain, as it would be parsed by that logged-in user.

See below for an example of SFTP file location, with username:

Full link to file, as viewed by a logged-in external user:

- *sftp://user@example.com/path/to/file/ExampleProvider_Global_AllTitles_YYYY-MM-DD.txt*

Path to include in the manifest as *file_location*:

- *sftp://user@example.com/path/to/file/*

Inclusion of the username before the domain is helpful, as it disambiguates which account should be used to log in to retrieve the files, as decided upon by the sender and recipient. If the SFTP server uses an SSH key instead of a password for authentication, there is minimal security risk to including the username.

However, if the SFTP server uses a password or passphrase to authenticate, and there is a security concern over including it, the username may be omitted. When using FTP, the username should generally be omitted, as this can be a security risk. The server owner and recipients should then communicate externally (i.e., beyond what is in the manifest) to confirm the username and authentication method to be used.

See below for an example of FTP file location, without username:

Full link to file, as viewed by a logged-in external user:

- *ftp://example.com/path/to/file/ExampleProvider_Global_AllTitles_YYY-MM-DD.txt*

Path to include in the manifest as *file_location*:

- *ftp://example.com/path/to/file/*

The server owner's organization then verifies the username and authentication methods to be used by each recipient.

Other methods of communicating the correct file path may also be used, as long as they are consistent, describe the file path for the logged-in user, and are mutually agreed upon by the sender and recipient.

4.7.8 Date Added

Field label: date_added Populated: Required Upcoming: Required Discovery only: Required
--

Give the date that the collection was added to the manifest. Ideally, this value would be the date that the collection and KBART title-list file were first made available on the content provider's site, but simply including the first date that the collection was included in the manifest is also acceptable.

Once added to the manifest, this value should remain static.

The purpose of this field is to indicate which collections may be new to the recipient and require special handling or actions to be taken.

Date added is required for all records in the manifest.

4.7.9 Date File Updated

Field label: date_file_updated Populated: Required Upcoming: Optional Discovery only: Leave blank
--

Give the date that a collection's KBART file was updated. Ideally, this value would change only when the contents of a particular KBART file were actually changed, added, or removed. This should be the same as the date used in the KBART file name, as indicated in 3.7.5.

Date file updated is required for the "*Populated*" collection type (4.7.5). This field is optional for "*Upcoming*" and should be left blank for "*Discovery only*".

4.7.10 Record Count

Field label: record_count Populated: Required Upcoming: Optional Discovery only: Leave blank

Give the number of rows (i.e., records) found within the file, minus the header.

Record count is required for the "*Populated*" collection type (4.7.5). This field is optional for "*Upcoming*" and should be left blank for "*Discovery only*".

4.7.11 Update Frequency

Field label: update_frequency

Populated: Required

Upcoming: Required

Discovery only: Required

Give the frequency with which recipients can generally expect to receive an updated version of the file. Some files may be updated monthly, quarterly, annually, irregularly, or not updated (closed), and some collections may not have available files at all (upcoming, discovery only).

The update frequency must be one of the following:

- *Daily*
- *Weekly*
- *Biweekly*
- *Monthly*
- *Bimonthly*
- *Quarterly*
- *Semiannual*
- *Annual*
- *Irregular*
- *Closed*
- *Upcoming*
- *Discovery only*

“*Biweekly*” means once every 14 days/two weeks, “*Bimonthly*” means once every 60 days/two months, and “*Semiannual*” means every 6 months or twice a year. See below for the use of this value for communicating changes to closed collections.

Except for “*Upcoming*” and “*Discovery only*”, all of the above values describe “*Populated*” collections—i.e., collections that have a KBART title-list file available. These collections may allow full-text, audio/video, image, or “full content” access, or other collections that would have a KBART file available. See 3.5 and 4.7.5 for more information about the types of KBART files to be created. (Note that, where applicable, the values “*Upcoming*” and “*Discovery only*” should be given as both the collection_type [4.7.5] and update_frequency.)

The values above can all be considered approximate. If the content changes at a frequency that is fairly regular but in between two of the values listed above, choose the value closest chronologically. For instance, if content changes approximately every six weeks, “*Monthly*” is closer to this than “*Bimonthly*”. Avoid using “*Irregular*” unless the content is updated at unexpected and differing intervals.

“*Closed*” does *not* mean that the collection is no longer being sold, just that the contents of the

collection (and the corresponding file) are fixed and generally have no need to be updated. A “closed” collection indicates to the KB supplier that the file needs to be loaded or processed only once (generally), and that future updates are not expected, saving time spent in file processing or requesting updates from the content provider. However, on occasion, an updated file for a usually closed collection may be necessary, to update linking information (in the case of a platform change, for instance); correct metadata; change, add, or remove titles; or change the collection name or file name, etc. If a rare update for a closed collection is required, the `date_file_updated` value should reflect the date the file was actually updated. A value in the `notes` field (4.7.16) should also document that an update is necessary and the reason, for the future reference of the recipient. Content providers should also be in contact with KB suppliers through alternative means to communicate about updates for closed collections to make sure they are aware of the need to make an update.

“*Upcoming*” indicates that the collection and/or the metadata file for the collection is not yet available, but that the collection will be a full-text or populated collection eventually. Once the collection and the metadata are available, this value should change to a frequency such as “*Monthly*”, “*Semiannual*”, “*Irregular*”, “*Closed*”, etc., as per the above. KBART title-list files may be provided for these collections, if available before the launch of the product, but the collection should remain marked as “*Upcoming*” until the product has launched or is otherwise available to users.

“*Discovery only*” should be used for collections/products that will never have a KBART file created for them, whether the collection is outside the scope of what is covered in KBART files (for example, databases or directories), or such a file cannot be created for the collection for whatever reason. KB suppliers can then use the metadata provided in the manifest to create a collection in their KB without any title information included (also known as a “zero-title” collection, an ERM-only collection, etc.). These collections are necessary for the KB to provide access to the content if it is included in a discovery service (such as EBSCO Discovery Service [EDS], Ex Libris Primo or Summon, OCLC WorldCat), and also to provide electronic-resource-management functionality to librarians.

Update frequency is required for all records in the manifest.

4.7.12 Linking Supported

Field label: `linking_supported`

Populated: Recommended

Upcoming: Recommended

Discovery only: Recommended

Give the most granular type of linking supported by the content provider for the collection.

One of the following accepted values must be used, listed here from least granular to most:

- *Collection*
- *Title*
- *Item*

“Collection” linking occurs when the only link available to give to the KB supplier is to the

collection itself. In this situation, there are no title-level links in the KBART file, or all of the titles share the same URL, even when there are titles available on the platform. This is the least desirable linking and should be avoided whenever possible, except in the case of collections using the “*Discovery only*” `collection_type` value (4.7.5). Some KB suppliers may decline to include the content if it supports only collection-level linking, depending on the situation and the content included.

“Title” linking offers the URL to the title, as indicated in the `title_url` of the KBART title list (3.8.13). Title links must be included in the KBART files, even if item linking is available. These are important both in cases where linking to a title is desirable or even preferred (e.g., to an important journal, or to a book instead of a chapter) and also as a fallback linking method when item linking is not working.

“Item” refers to articles, chapters, reference entries, and other “parts of the whole” content that can be linked to individually on the provider’s platform and are contained within the titles represented in the KBART title list. (Note that KBART title-list files should include entries only at the title level, even though the manifest may indicate that the platform facilitates linking to items [see discussion at 7.3].) Item linking can include OpenURL implementations, a direct-linking syntax, or both.

The content provider should be prepared to share the following item-level linking information separately with KB suppliers:

- The syntax used in building working links
- The metadata fields used in links
- How to include customer IDs in the syntax (if applicable and necessary)
- Notice of any metadata (such as item-specific identifiers) that is stored outside the KBART file (such as in an article-/item-based discovery feed) but is necessary in linking to the item
- Examples of working links using real content
- Information on how to obtain a demo account for link-testing purposes, if the content provider is willing to offer one

Not all item-level linking syntaxes or scenarios may be supported by all KB suppliers or link resolvers.

Providing a `linking_supported` value is recommended for all records in the manifest. However, for “*Discovery only*” (4.7.5), only the `linking_supported` values of “*Collection*” or “*Item*” should be used, since in that case, no KBART file is provided to include title-level linking.

4.7.13 Collection Description

Field label: `collection_description`
Populated: Recommended
Upcoming: Recommended
Discovery only: Recommended

Give a short description of the content found in the collection. This description could be

displayed to librarians and other users of the knowledge base, if the KB supports it. It may also be useful to help the KB supplier to understand the contents of the collection.

Collection description is recommended for all records in the manifest.

4.7.14 Previous Collection Name

Field label: `previous_collection_name`

Populated: Required (when applicable)

Upcoming: Required (when applicable)

Discovery only: Required (when applicable)

By default, this field should be left blank. If the collection name (and therefore, the file name) ever changes, give the previous name of the collection (see 4.7.2). The presence of a value in this field alerts a KB supplier or other recipient that the official name of the collection has changed, and that they may still have the collection listed under this previous name.

Updating the collection name without indicating the previous collection name can create challenges for consumers of the KBART title-list file. Failure to note the collection name change may cause duplicate collections to be created, or cause KB suppliers to stop updating a collection if they use tools to automate the processing of those files, due to the change in the file name.

If there are multiple previous names of a collection, include only the most recent previous name in this field; do not include multiple.

Previous collection name is required for all records in the manifest, if applicable (i.e., any collection that has a previous name).

4.7.15 Freely Accessible

Field label: `freely_accessible`

Populated: Required

Upcoming: Required

Discovery only: Required

Provide a `freely_accessible` value to indicate whether all of the content in the collection is free to read/freely accessible or if it requires payment—in part or in whole. Select one of these accepted values:

- *Free*
- *Paid*

In order to use the value “*Free*”, 100% of the content included in the collection must be freely available. For serials included in the file, each issue must be composed cover to cover of 100% free articles for the date range indicated.

Providing a `freely_accessible` value is required for all records in the manifest.

4.7.16 Notes

Field label: notes
Populated: Optional
Upcoming: Optional
Discovery only: Optional

Give any general notes or other information that the content provider wishes to share with recipients of the manifest.

Notes is an optional field.

4.7.17 Optional Additional Fields

Just like in individual KBART title-list files (see 3.8.31), a content provider has the option to append additional fields to the KBART file manifest that may be useful for their content or collections in particular, as long as they do not use the same field-header value as one indicated in this recommended practice. These additional fields can also be used by the KB supplier in communicating information back to the content provider (such as the collection name as displayed in their KB, their internal code or identifier for that collection, etc.).

Optional fields may relate to any of the collection-type values (see 4.7.5). If optional fields pertain only to certain collection-type values, the content provider must communicate this information to KB suppliers.

Section 5: Compliance Process

5.1 Compliance Requirements for Phase III

Requirements for each level of KBART compliance are listed in Table 7. Refer to the section listed for each requirement for a full description of its usage.

Metadata is evaluated on a per-content-provider basis, leading potentially to the content provider's rating as KBART compliant. Please note that third parties who produce metadata for content providers are not assessed for compliance separately, and KB suppliers fall outside the scope of compliance eligibility.

Table 7. Criteria for Levels of KBART Compliance

Requirement by Category	Compliance Level		KBART Section
	Gold	Silver	
Title-List Data Format			
Tab Delimited	Required	Required	3.4.1
Plain Text	Required	Required	3.4.2
UTF-8	Required	Required	3.4.3
Publication per Line	Required	Required	3.4.4
Publication History/Title Changes	Required		3.4.5
Column Headers	Required	Required	3.4.6
Gap Coverage	Required		3.4.7
Consistent Formatting	Required	Required	3.4.8
Alphabetical Order	Required	Required	3.4.9
Title-List Data Fields			
publication_title	Required	Required	3.8.2
alternate_publication_title	Required if applicable		3.8.3
alternate_title_type	Required if applicable		3.8.4
print_identifier	Required if applicable	Required if applicable	3.8.5
online_identifier	Required	Required	3.8.6

Title-List Data Fields			
date_first_issue_online	Required if applicable	Required if applicable	3.8.7
num_first_vol_online	Required if applicable	Required if applicable	3.8.8
num_first_issue_online	Required if applicable	Required if applicable	3.8.9
date_last_issue_online	Required if applicable	Required if applicable	3.8.10
num_last_vol_online	Required if applicable	Required if applicable	3.8.11
num_last_issue_online	Required if applicable	Required if applicable	3.8.12
title_url	Required	Required	3.8.13
contributor	Required if applicable	Required if applicable	3.8.14
contributor_type	Required if applicable	Required if applicable	3.8.15
title_id	Required	Required	3.8.16
embargo_info	Required if applicable	Required if applicable	3.8.17
coverage_depth	Required	Required	3.8.18
notes	Required if applicable	Required if applicable	3.8.19
publisher_name	Required	Required	3.8.20
publication_type	Required	Required	3.8.21
content_type	Required	Required	3.8.22
date_monograph_published_print	Required if applicable	Required if applicable	3.8.23
date_monograph_published_online	Required if applicable	Required if applicable	3.8.24

Title-List Data Fields			
monograph_volume	Required if applicable		3.8.25
monograph_edition	Required if applicable		3.8.26
duration	Required if applicable		3.8.27
parent_publication_title_id	Required if applicable		3.8.28
preceding_publication_title_id	Required if applicable		3.8.29
access_type	Required	Required	3.8.30
Optional Additional Fields			3.8.31
Fields and Labels	Required	Required	3.8.1
Title-List File Organization			
Collection Representation (subject, backfile, aggregated content, etc.)	Required if applicable	Required if applicable	3.5.2, 3.5.3, 3.5.4, 3.5.6
Free-to-Read/OA Collections	Required if applicable		3.5.5, 3.6
“All Titles” Collections	Required	Required	3.5.7
File Manifest	Required	Required if applicable	4
Title-List File Name			
Provider Name	Required	Required	3.7.2
Region/Consortium	Required	Required	3.7.3
Collection Name	Required	Required	3.7.4
Title-List File Date	Required	Required	3.7.5
Title-List File Extension	Required	Required	3.7.6
Provider name consistent in all files	Required	Required	3.7.2
Region/consortium consistent in all files	Required	Required	3.7.3
Collection name consistent in all files	Required	Required	3.7.4

Title-List Row Consistency			
<i>All content types</i>			
All rows have at least one identifier (print or online)	Required	Required	3.8.5, 3.8.6
If a row has both print and online identifiers, they are different	Required	Required	3.8.5, 3.8.6
Print identifier: ISSN for serial, ISBN for monograph (or empty)	Required	Required	3.8.5
Online identifier: ISSN for serial, ISBN for monograph (or empty)	Required	Required	3.8.6
<i>Serials</i>			
Monograph fields are blank for serial titles	Required	Required	3.8.23, 3.8.24, 3.8.25, 3.8.26
<i>Monographs</i>			
Serial fields are blank for monograph titles	Required	Required	3.8.7, 3.8.8, 3.8.9, 3.8.10, 3.8.11, 3.8.12
Consistency across Rows			
Title changes are represented by multiple rows where title ID, print identifiers, and online identifiers are each consistent, unless these changed along with the publication title	Required if applicable	Required if applicable	3.4.5, 3.8.2, 3.8.5, 3.8.6, 3.8.16
Coverage gaps are represented by multiple rows where publication title, title ID, print identifiers, and online identifiers are each consistent	Required if applicable	Required if applicable	3.4.7, 3.8.2, 3.8.5, 3.8.6, 3.8.16

5.2 Phase III Compliance Process

Interested content providers should take the following steps to become KBART compliant:

- 1) Read the full KBART Recommended Practice.
- 2) Develop your KBART title-list and manifest files according to the RP.
 - a. Determine what files you need to create and maintain as described in 3.5.

- b. Format your data for each collection/file using details in Section 3.
 - c. Create a manifest file using details in Section 4.
 - d. Ensure that you have a process in place for regular data exchange as outlined in 3.2.
 - e. Use the KBART Additional Resources page to assist in the development of your KBART file (glossary, FAQ, field and file examples, KBART validator tool, etc.):
<https://www.niso.org/standards-committees/kbart/kbart-additional-resources>
 - f. Please send any questions about how to format or present data to kbart@niso.org.
- 3) Register your organization on the KBART registry website (<https://sites.google.com/niso.org/kbart-registry>), providing a link for downloading your KBART III-formatted title-list and manifest files.
 - 4) When your files are ready for the KBART Standing Committee to review for compliance, email kbart@niso.org with details of where the files can be accessed.
 - 5) The KBART Standing Committee provides feedback on the data and, if necessary, requests revisions to comply with the recommendations.
 - 6) After the review is complete, approved content providers are rated as KBART compliant at either the *gold* or *silver* level. The Standing Committee also provides a logo for your site, issues a press release, and updates your entry in the registry. In the KBART registry, the KBART logo and level of compliance are displayed next to compliant content providers' names, recognizing their contribution in providing quality KBART files to the community.

5.3 Maintaining Compliance

After receiving a compliance rating, you can now share links to your compliant files with your data-supply-chain contacts. If you make substantive changes to your metadata structure or supply workflow, please contact the KBART Standing Committee to ascertain whether compliance resubmission is required.

The KBART Standing Committee reserves the right to revoke or downgrade the compliance rating for any provider who is unable to maintain the consistency of metadata over a long period of time as originally submitted for assessment.

5.4 Phase II Endorsement and Phase-out

The Standing Committee recognizes that some content providers have been working towards KBART Phase II compliance while KBART Phase III was still in development. For a temporary period after Phase III is released, the Committee will still offer Phase II endorsement to reward such efforts. For those content providers that have not yet begun the process of developing KBART files, the Committee asks that they work toward Phase III compliance.

5.5 Benefits of Compliance

Through the above compliance verification, stakeholders can be assured that metadata is trusted and activated within a global KB at the appropriate level of granularity, without the burdensome

task of title-by-title checking. This ensures that mediated institutional access for end users is accurate, comprehensive, and timely.

Section 6: License Language

In cases where content providers generate holdings metadata, content providers and subscribing institutions are encouraged to include KBART and KBART Automation in their license agreements among the content provider's performance obligations. The following language is suggested:

Itemized Title Lists and Coverage Data

The Licensor shall make available to third-party knowledge-base suppliers an itemized holdings report that specifies the titles included in the Licensed Materials. The Licensor shall use reasonable efforts to update itemized holdings reports as soon as is practicable when holdings information changes and shall provide this information to knowledge-base suppliers in a timely manner and to the Licensee on request. If the Licensed Materials include content covered by the NISO "Knowledge Bases and Related Tools (KBART) Recommended Practice," the Licensor shall provide itemized holdings reports for the Licensed Materials in KBART-compliant format.

In addition, the Licensor shall make available to third-party knowledge-base suppliers and Subscribing Institutions institution-specific holdings reports. If the Licensed Materials include content covered by the NISO "Knowledge Bases and Related Tools (KBART) Recommended Practice," the Licensor shall make such holdings reports available for automated retrieval via an API that adheres to the requirements in the latest revision of the NISO Recommended Practice "KBART Automation: Automated Retrieval of Customer Electronic Holdings."

Individual negotiations might incorporate other elements, including but not limited to the following:

- A requirement to share KBART files with specific parties, such as knowledge-base suppliers, individuals with certain roles in the library, consortial partners, or discovery-service providers
- The frequency of KBART-file delivery according to content types available and applicable business models
- Consortium-specific requirements

For content providers that are not yet KBART compliant, librarians may express their support for the recommended practice by using the above clauses to start a conversation and encourage compliance. Libraries are welcome to direct content providers to NISO's [KBART website](#), where they can learn about the Recommended Practice and contact the Standing Committee with questions about compliance.

Section 7: Recommendations for Future Work

7.1 Introduction to KBART Road Map Items

When KBART Phase III was first proposed, two potential work items were identified as out of scope for the revision, but a thorough investigation was needed to see if they would be viable for a future iteration of KBART beyond Phase III. As part of the KBART Phase III proposal, it was decided that a future road map for these two items would be issued. The below sections, “Support for Other Formats for the KBART File” (7.2) and “Support for Article-/Chapter-Level Data” (7.3), are these road maps that the KBART Standing Committee developed during the work for KBART Phase III. The road maps contain the current challenges, use cases, problem statements, and possible future recommendations for the two potential work items.

7.2 Support of Other Formats for the KBART File

7.2.1 Introduction to Consideration of Other Formats

Since the inception of the KBART RP to facilitate populating KB tools, KBART title lists have been formatted as tab-delimited text files. Two intentions have driven this decision: ease of preparation by any content provider, and ease of consumption, including by human readers. Its human-readability has led to KBART’s adoption for many purposes outside its original scope, such as content providers using KBART files to identify what content they sell in packages and library customers using them to understand what content was purchased. File formats such as JSON and XML are designed to handle complex data structures with ease, potentially opening valuable new avenues for expressing KBART data. However, these formats could both raise the barrier to entry for content providers considering KBART adoption and pose challenges for ready readability, and therefore, they are not supported in KBART Phase III.

Possible use cases for these additional file formats are explored below, followed by recommendations for future releases of the KBART RP. (As referenced below, see Appendix B for examples illustrating how KBART data might be represented in XML or JSON files in the future.)

7.2.2 Summary of Use Cases for Other Formats

Scenarios where a future KBART release might benefit from accepting file formats beyond tab-delimited text fall into three general categories:

- 1) Multiple values: Several fields require the content provider to choose a single value for the purposes of the tab-delimited KBART file, even though other values exist. Such fields include title identifiers (3.8.5, 3.8.6; e.g., where both ISBN and OCLC number exist), contributors and contributor types (3.8.14, 3.8.15; e.g., where a film’s director and producer are equally prominent), and alternate titles and alternate-title types (3.8.3, 3.8.4; e.g., where a title is known by both its translation and its transliteration).
- 2) Coverage information: Data around content coverage is spread across multiple tab-delimited KBART fields, including relatively simple data points such as date of first issue available online (3.8.7) and coverage depth (3.8.18), as well as the more complex encoding of gap coverage (3.4.7) and embargoes (3.8.17). This is helpful for some processing operations and general readability but in some cases requires the reader of the

file to compute values across several fields.

- 3) KBART Automation: The current version of the KBART Automation RP directs content providers to transmit data for every title available to the receiving institution. This may be inefficient, such as when an institution subscribes to an entire standard package *except for* a few titles that are excluded.

7.2.3 Possible Benefits of Allowing Other Formats

Many of the challenges or limitations of the current tab-delimited text format of KBART files would be resolved in file formats such as XML or JSON. First, multiple values can be provided in those files' native nested syntax, e.g., providing multiple identifier values alongside unique identifier types in a single compound object. (See examples in Appendix B.1.)

Information currently derived from multiple KBART fields, such as coverage information, could be supplied more directly in other file formats. Instead of computing how a gap in coverage is to be interpreted across multiple rows or calculating which journal issues are included in an embargo period, as is currently required, the consumer of a file in XML or JSON format might conceivably parse coverage data much more quickly as encoded in a single, compact object representing issue information. (See examples in Appendix B.2.) In this case, a future file's complex expression of data could be more immediately accessible than that of current files to both human readers and machine processing.

Finally, other file formats' nested, hierarchical structure could greatly simplify the expression of institution-specific holdings information according to future KBART Automation rules. As one illustration of new possibilities, such files could reference standard KB packages at the collection level and, through embedded title-level statements, stipulate custom inclusions or exclusions. (See examples in Appendix B.3.) In conjunction with a separate, traditional KBART title list for the collection, this could reduce efforts to prepare and process custom holdings data. Today, many content providers natively communicate data via XML and JSON. If the KBART RP were to allow these formats, content providers could be more open to implementing KBART Automation, since XML or JSON files might minimize the development work currently necessary to translate holdings information into tab-delimited text files.

7.2.4 Conclusion on Other Formats for the KBART File

The advantages of allowing other formats, such as XML or JSON, cannot be overlooked. At the time of this writing, OCLC, Ex Libris, and ProQuest can all use XML and would need only a small amount of development work to implement changes if a KBART schema were created. However, tab-delimited text still plays an important role in creating KBART title lists. Having human-readable formats is still a necessary function, and in future iterations of KBART, tab-delimited text files should not be replaced. We recommend that future versions of KBART allow the option of XML or JSON files, but this should be in addition to tab-delimited text files, still posted to a public page. KBART Automation, however, might no longer require tab-delimited text files unless the content provider prefers them.

7.3 Support for Article-/Chapter-Level Data

7.3.1 Introduction to Article-/Chapter-Level Data Considerations

The KBART Standing Committee reviewed possible use cases related to whether and how a

KBART file might fill common needs for data at the more granular level of articles and chapters. Phase III does not support the inclusion of article- or chapter-level data, but this section summarizes specific considerations in this regard as well as describes how various scenarios might be handled in communication with discovery providers. (Appendix C offers a more detailed discussion of the individual use cases.)

KBART currently manages library holdings at the journal issue/book level, assuming that libraries purchase material on that level rather than by chapter/article. However, there may be cases where library users have access only to individual articles or chapters within a journal, book, or collection. This document discusses possible use cases and weighs their impact against the additional workload the management of article-level data in a KB would entail. While currently KBs manage records in the thousands, adding article-/chapter-level data would add hundreds of millions if not billions of lines. This potential addition entails the following possible concerns:

- Operational challenges: Providing, loading, cleaning, and updating the data on both the KB and content provider sides is a huge operation.
- Technical challenges: Loading and indexing data on that scale require scalable hardware, as well as technology to ensure good performance.
- Management challenges: Libraries would have to maintain their activations on an article instead of journal-issue level.

Possible use cases are explored below.

7.3.2 Summary of Use Cases for Article-/Chapter-Level Data

The Standing Committee identified five general use cases that have common features and suggest common approaches. These are the use cases:

- 1) Topical collections in discovery services: A discovery service may contain index articles and chapters related to a specific topic, where only portions of issues and books are available to institutions.
- 2) Open-access articles from hybrid journals in discovery services: A discovery service may index individual open-access articles from hybrid journals that the library does not subscribe to.
- 3) Linking from outside library discovery: A user finds an article from a topical collection or hybrid journal outside library discovery and uses OpenURL linking to get to the appropriate copy (that is accessible to them).
- 4) Institutional holdings data via KBART Automation: If a journal is hybrid open access or a part of an article-/chapter-level topical collection, and the library/institution does not subscribe to the journal, then its title-list files delivered via KBART Automation would not include the individual open-access articles or chapters.
- 5) Abstract-and-index databases with selected full text: Sometimes, abstract-and-index databases offer partial full text, meaning that part of the content is available with full text from the same provider, while part is handled only via the KB and OpenURL link resolution.

Each of these use cases is based, at least in part, on real-world scenarios that have arisen in the

daily work of Standing Committee members or have been raised by parties using KBART files.

7.3.3 Proposed Solutions for Article-/Chapter-Level Data

Most often, the challenges implied in the above use cases are best addressed in a discovery service. KBART, KBART Automation, and KBs themselves do not have a mechanism for indicating access at the article/chapter level. However, discovery providers can adjust existing approaches to their indexing to accommodate available articles and chapters outside of issues and books that an institution would otherwise have access to. In that way, the availability status of a particular article or chapter can be inherited from the discovery collection level or conveyed at the item level in the publisher's discovery-data feed (e.g., using NISO's Access and License Indicators [ALI] recommendations [NISO RP-22-2021 or as subsequently revised]). In the case of databases with selected full text, the discovery provider might split the collection into items with and without full text, managing the full-text items on the collection level (and having those items inherit their availability status from the collection) while handling the other content by the KB, on the journal-issue level.

For users accessing article/chapter entitlements outside of their library's discovery service, the source database (where the user found the item) often already has open-access flags and links. In other cases, access may be indicated and/or provided using external solutions such as the Unpaywall API (for open access) or browser extensions such as GetFTR and EndNote Click (examples current as of this publication).

To facilitate solutions outside of KBART title lists, the RP makes the following recommendations for content providers:

- 1) Do not create KBART files for collections that are composed of article/chapter-level content.
- 2) Discuss with discovery services how to give the content the proper availability status.
- 3) Include an entry in the KBART file manifest for each article-/chapter-level package, and indicate that it is a "*Discovery only*" collection type (see 4.7.5), even though no KBART title-list file is created for the collection.

These recommendations are in addition to related guidelines elsewhere in the RP, including 3.5 ("File Organization") and Section 4 ("Guidelines for KBART File Manifest").

For more details about individual use cases and approaches currently recommended, see Appendix C.

7.3.4 Conclusion on Article-/Chapter-Level Data Support

The KBART Standing Committee concluded that a title-level tool like KBART is not appropriate or practical for managing article-/chapter-level entitlements. In the case of topical collections, this would be handled on the discovery-service level, and a KBART package file should not be created. As described in 4.7.5, content providers should mention in their file manifests that metadata for discovery-only collections can be accessed outside the KBART files delivered. For hybrid open access, this is handled on the discovery-service collection level with free articles/chapters tagged in the XML using the NISO ALI recommendations. For all such considerations, content providers should consult with discovery providers to determine the best methods for communicating needed details. The RP remains silent on the practical considerations between these parties.

Appendix A: KBART File Templates and Examples

A.1 KBART Title List Template File and Example File

Download a [KBART title-list template file](#), saved as a UTF-8 tab-delimited text file with all required fields present but with no rows populated.

Download a [KBART title-list example file](#) with the required field labels as well as some rows of example content.

A.2 KBART File Manifest Template File and Example File

Download a [KBART file-manifest template file](#), saved as a UTF-8 tab-delimited text file with all required fields present.

Download a [KBART file-manifest example file](#) with the required labels as well as some rows of example content.

Appendix B: Illustrations of Other File Format Use Cases

B.1 Use Case 1: Multiple Values

B.1.1 Multiple Identifier Values with Identifier Types

B.1.1.1 Multiple Identifier Values in KBART Tab-Delimited Text (Current Recommendation)

As required by KBART Phase III, the value supplied for the field `online_identifier` (3.8.6) must be an ISSN or ISBN. If no ISSN or ISBN exists, an alternate identifier (e.g., EIDR, OCLC, ISAN) can be given as an additional custom field (3.8.31). In that case, the name of the identifier (e.g., “oclc”) is used as the label for an additional custom field, and the identifier value is given as that field’s value.

B.1.1.2 Multiple Identifier Values in KBART XML (Future Possibility)

More than one identifier value could be supplied for a single field, in conjunction with identifier types that further specify each identifier value. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
<online_identifiers>
  <identifier type="ISSN">9876-5432</identifier>
  <identifier type="DOI">10.56789</identifier>
  <identifier type="ProprietaryID">1234</identifier>
</online_identifiers>
```

B.1.1.3 Multiple Identifier Values in KBART JSON (Future Possibility)

More than one identifier value could be supplied for a single field, in conjunction with identifier types that further specify each identifier value. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
{
  "online_identifiers": {
    "identifiers": {
      "ISSN": "9876-5432",
      "DOI": "10.56789",
      "ProprietaryID": "1234"
    }
  }
}
```

B.1.2 Multiple Identifier Values with Identifier Types and Product Types

B.1.2.1 Identifier Types in KBART Tab-Delimited Text (Current Recommendation)

KBART Phase III requires selecting a single value as a physical identifier, generally the ISSN or

ISBN (see 3.8.5). In the case of monographs, this requires selecting among the ISBN values of various bindings, even if multiple values exist that might be useful for discoverability or access.

B.1.2.2 Embedded Identifier Types in KBART XML (Future Possibility)

Using XML, multiple instances of the same identifier type could be supplied for a single field, in conjunction both with identifier types and with product types that pertain to each identifier. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
<physical_identifiers>
  <identifier>
    <identifier_type>ISBN</identifier_type>
    <identifier_string>9780123456789</identifier_string>
    <product_type>paperback</product_type>
  </identifier>
  <identifier>
    <identifier_type>ISBN</identifier_type>
    <identifier_string>9791234567890</identifier_string>
    <product_type>hardcover</product_type>
  </identifier>
</physical_identifiers>
```

B.1.2.3 Embedded Identifier Types in KBART JSON (Future Possibility)

Using JSON, multiple instances of the same identifier type could be supplied for a single field, in conjunction both with identifier types and with product types that pertain to each identifier. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
{
  "physical_identifiers": {
    "identifiers": [
      {
        "identifier_type": "ISBN",
        "identifier_string": "9780123456789",
        "product_type": "paperback"
      },
      {
        "identifier_type": "ISBN",
        "identifier_string": "9791234567890",
        "product_type": "hardcover"
      }
    ]
  }
}
```

}

B.1.3 Multiple Contributor Values with Contributor Types

B.1.3.1 Multiple Contributor Values in KBART Tab-Delimited Text (Current Recommendation)

KBART Phase III requires a single contributor to be selected as the main contributor for each title (see 3.8.14). For traditional publications, identifying the first author or first editor is straightforward. For other media, it may be less obvious which of several contributors should be selected as primary (e.g., a film's producer, director, or leading actor). If the content provider wishes to provide more than one contributor value, these can be added in extra data fields after the last KBART field (see 3.8.31).

The contributor entry is paired with a single descriptive contributor type from a small controlled vocabulary (see 3.8.15). If the value “*other role*” is used, the RP gives the option of specifying the nature of the role in the notes field (3.8.19). If additional contributors are listed in an extra field to the right of the required KBART fields, an additional custom field could also be included to specify those additional contributors' contributor types.

B.1.3.2 Multiple Contributor Values in KBART XML (Future Possibility)

Using XML, multiple contributor values could be supplied for a single field, in conjunction with respective contributor types. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
<contributors>
  <contributor type="director">Michael Curtiz</contributor>
  <contributor type="actor">Humphrey Bogart</contributor>
  <contributor type="actor">Ingrid Bergman</contributor>
  <contributor type="screenwriter">Julius J. Epstein</contributor>
  <contributor type="screenwriter">Philip G. Epstein</contributor>
  <contributor type="screenwriter">Howard Koch</contributor>
</contributors>
```

B.1.3.3 Multiple Contributor Values in KBART JSON (Future Possibility)

Using JSON, multiple contributor values could be supplied for a single field, in conjunction with respective contributor types. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
{
  "contributors": [
    {
      "contributor_type": "director",
      "contributor": "Michael Curtiz"
    },
    {
```

```

    "contributor_type": "actor",
    "contributor": "Humphrey Bogart"
  },
  {
    "contributor_type": "actor",
    "contributor": "Ingrid Bergman"
  },
  {
    "contributor_type": "screenwriter",
    "contributor": "Julius J. Epstein"
  },
  {
    "contributor_type": "screenwriter",
    "contributor": "Philip G. Epstein"
  },
  {
    "contributor_type": "screenwriter",
    "contributor": "Howard Koch"
  }
]
}

```

B.1.4 Multiple Alternate-Title Values with Alternate-Title Types

B.1.4.1 Multiple Alternate-Title Values in KBART Tab-Delimited Text (Current Recommendation)

KBART Phase III requires a single alternate title, where applicable, to be selected for each publication (see 3.8.3). In some cases, a clear, single value exists to use in this field while in other cases, multiple variants may be considered equally valuable for inclusion (e.g., a shortened, colloquial version, a formally abbreviated version, and a commonly used translated version of the title). If the content provider wishes to provide more than one alternate_publication_title value, these can be added in extra data fields after the last KBART field (see 3.8.31).

The alternate_publication_title entry is paired with a single descriptive alternate-title type from a small controlled vocabulary (see 3.8.4). If the value “*other*” is used, the RP gives the option of specifying the nature of the alternate title in the notes field (3.8.19). If additional alternate titles are listed in an extra field to the right of the required KBART fields, an additional custom field could also be included to specify those additional titles’ types.

B.1.4.2 Multiple Alternate-Title Values in KBART XML (Future Possibility)

Using XML, multiple alternate-title values could be supplied for a single field, in conjunction with respective alternate-title types. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```
<titles>
```

```

<publication_title>
  <title type="primary">Revista Brasileira de Parasitologia
  Veterinária</title>
  <title type="parallel">Brazilian Journal of Veterinary
  Parasitology</title>
  <title type="abbreviated">Rev. Bras. Parasitol. Vet.</title>
  <title type="normalized">Revista Brasileira de Parasitologia
  Veterinaria</title>
</publication_title>
<publication_title>
  <title type="primary">Journal of Asian Studies</title>
  <title type="parallel">亞洲研究學報</title>
  <title type="parallel">Yàzhōu yánjiū xuébào</title>
</publication_title>
</titles>

```

B.1.4.3 Multiple Alternate-Title Values in KBART JSON (Future Possibility)

Using JSON, multiple contributor values could be supplied for a single field, in conjunction with respective contributor types. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```

{
  "titles": {
    "publication_title": [
      {
        "title": [
          {
            "type": "primary",
            "title_string": "Revista Brasileira de Parasitologia
Veterinária"
          },
          {
            "type": "parallel",
            "title_string": "Brazilian Journal of Veterinary
Parasitology"
          },
          {
            "type": "abbreviated",
            "title_string": "Rev. Bras. Parasitol. Vet."
          },
          {
            "type": "normalized",
            "title_string": "Revista Brasileira de Parasitologia
Veterinaria"
          }
        ]
      }
    ]
  }
}

```

```

    ]
  },
  {
    "title": [
      {
        "type": "primary",
        "title_string": "Journal of Asian Studies"
      },
      {
        "type": "parallel",
        "title_string": "亞洲研究學報"
      },
      {
        "type": "parallel",
        "title_string": "Yàzhōu yánjiū xuébào"
      }
    ]
  }
]
}
}

```

B.2 Use Case 2: Coverage Information

B.2.1 Coverage Information in KBART Tab-Delimited Text (Current Recommendation)

The description of a title's coverage on a platform or in a package is contained in a variety of loosely related fields in a Phase III KBART title-list file. Depending on the need (e.g., link resolution, collection comparison), different combinations of those fields may come into play. In most cases, though, the question of level of access to a particular piece of content can be answered only by a calculation based on several fields, such as date of first issue available online (3.8.7), date of last issue available online (3.8.10), embargo (3.8.17), and coverage depth (3.8.18).

B.2.2 Coverage Information with Gap and Embargo in KBART XML (Future Possibility)

An XML record could specify directly in a record the exact issues available as well as state which issues are embargoed or fall in a coverage gap on the platform. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```

<issues>
  <issue year="2023" volume="23" number="2" embargoed="True" />
  <issue year="2023" volume="23" number="1" />
  <gap>
    <end year="2022" volume="22" number="4" />
    <start year="2022" volume="22" number="1" />

```

```

</gap>
<issue year="2021" volume="21" number="4" />
<issue year="2021" volume="21" number="3" />
<issue year="2021" volume="21" number="2" />
<issue year="2021" volume="21" number="1" />
</issues>

```

B.2.3 Coverage Information with Gap and Embargo in KBART JSON (Future Possibility)

A JSON record could specify directly in a record the exact issues available as well as state which issues are embargoed or fall in a coverage gap on the platform. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```

{
  "issues": [
    {
      "issue": {
        "year": "2023",
        "volume": "23",
        "number": "2",
        "embargoed": "True"
      }
    },
    {
      "issue": {
        "year": "2023",
        "volume": "23",
        "number": "1"
      }
    },
    {
      "gap": {
        "end": {
          "year": "2022",
          "volume": "22",
          "number": "4"
        },
        "start": {
          "year": "2022",
          "volume": "22",
          "number": "1"
        }
      }
    },
    {
      "issue": {

```

```

        "year": "2021",
        "volume": "21",
        "number": "4"
    }
},
{
    "issue": {
        "year": "2021",
        "volume": "21",
        "number": "3"
    }
},
{
    "issue": {
        "year": "2021",
        "volume": "21",
        "number": "2"
    }
},
{
    "issue": {
        "year": "2021",
        "volume": "21",
        "number": "1"
    }
}
]
}

```

B.3 Use Case 3: KBART Automation

B.3.1 Library-Specific Holdings in KBART Tab-Delimited Text (Current Recommendation)

Current recommendations in KBART Phase III and the KBART Automation RP require sending data in tab-delimited text format (see 3.4.1) with a line-by-line listing of titles (see 3.4.4), and with a proprietary collection ID sent separately in a KBART file manifest (see 4.7.3).

B.3.2 Library-Specific Holdings in KBART XML (Future Possibility)

An institution's KBART Automation file could potentially be sent in XML format, which some content providers could produce more easily than a tab-delimited text file. Such a file could conceivably embed a full collection's content merely by reference to a collection-level identifier, allowing the title-level details to be retrieved from the corresponding KBART title list supplied for that collection. The KBART Automation file could then efficiently convey additional title-level inclusions or exclusions with regard to that package. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```

<kbart>
  <collection>
    <collection_name>...</collection_name>
    <collection_id>...</collection_id>
    <collection_url>...</collection_url>
    <collection_type>...</collection_type>
    <file_location>...</file_location>
    <date_added>...</date_added>
    <date_file_updated>...</date_file_updated>
    <record_count>...</record_count>
    <update_frequency>...</update_frequency>
    <linking_supported>...</linking_supported>
    <collection_description>...</collection_description>
    <previous_collection_name>...</previous_collection_name>
    <freely_accessible>...</freely_accessible>
    <notes>...</notes>
  </collection>
  <titles>
    <title_inclusion>
      <publication_title>...</publication_title>
      <title_id>...</title_id>
      ...
    </title_inclusion>
    ...
  </titles>
</kbart>

```

B.3.3 Library-Specific Holdings in KBART JSON (Future Possibility)

An institution's KBART Automation file could potentially be sent in JSON format, which some content providers could produce more easily than a tab-delimited text file. Such a file could conceivably embed a full collection's content merely by reference to a collection-level identifier, allowing the title-level details to be retrieved from the corresponding KBART title list supplied for that collection. The KBART Automation file could then efficiently convey additional title-level inclusions or exclusions with regard to that package. (Note: The following is intended as an illustration of how an additional file format might represent KBART data in the future and is not necessarily consistent with other examples or with an eventual recommendation.)

```

{
  "kbart": {
    "collection": {
      "collection_name": "...",
      "collection_id": "...",
      "collection_url": "...",
      "collection_type": "...",
      "file_location": "...",
      "date_added": "...",

```

```
"date_file_updated": "...",
"record_count": "...",
"update_frequency": "...",
"linking_supported": "...",
"collection_description": "...",
"previous_collection_name": "...",
"freely_accessible": "...",
"notes": "...",
},
"titles": {
  "title_inclusion": {
    "publication_title": "...",
    "title_id": "..."
  }
}
}
```

Appendix C: Details of Article/Chapter Use Cases

C.1 Use Case 1: Topical Collections

Scenario: A content provider offers subscriptions to individual articles and chapters related to a specific topic. A library wants to make this content available to its users.

Example details: At one point, Springer Nature created an algorithm to offer article-level access based on topic, with accessible articles changing monthly. The discovery partner was unable to provide article-level access in the discovery service unless it was communicated in the KBART files. As the KBART files represented title-level access, the initial compromise was to create KBART files covering the full journal issues in which any articles were accessible. Because the discovery service indicated access to the full issues of those journals—including content not available to that customer—this was not a satisfactory solution.

Discussion of potential approaches: The model described in this scenario is not a current standard practice, and the Standing Committee could find no other active examples of it. Further, it is unclear why the discovery service was not able to index the collection by individual item. Because the real-world example comes from some years ago, more discovery providers may have added this capability. Because KBART files would not address this need, and KBs do not require article-/chapter-level metadata, the Standing Committee currently advises the following:

- 1) Content providers should not create KBART files for collections that are composed of article-/chapter-level content.
- 2) The content provider should discuss with discovery services how to give the content the proper availability status.
- 3) Include an entry in the KBART file manifest for each article-/chapter-level package and indicate that it is a “Discovery only” collection type (see 4.7.5), even though no KBART title-list file is created for the collection.

C.2 Use Case 2: Open-Access Articles from Hybrid Journals

Scenario: A content provider offers subscription access to journals in which some articles are made freely available (i.e., hybrid open access). A library wants to make the open access (OA) articles available to its users even though it does not pay for subscription access to the journals’ other articles.

Example details: The library does not subscribe to many hybrid titles from a content provider but wants its users to be able to access the open access articles from these journals. In many cases, libraries cannot afford the subscription fees to many packages or individual journals and rely on OA sources to supplement their subscription access.

Discussion of potential approaches: Similar to Use Case 1 (C.1), this can be managed at the collection or even the item level in the library’s discovery service. In their data feeds to discovery services, content providers generally include indicators for OA on the article level (see, for example, NISO’s Access and License Indicators recommendations [NISO RP-22-2021 or as subsequently revised]). The discovery service can show articles’ availability based on such indicators, or, to offer libraries more control over what their users can access, they can create OA collections that are managed on the collection level and that include articles from open access

journals as well as articles from hybrid journals. Thus, the same steps as in Use Case 1 (C.1) are recommended.

C.3 Use Case 3: Linking from Outside Library Discovery

Scenario: A content provider offers article-/chapter-level topical collections or free articles in hybrid OA journals. A library makes this content available to its users via its discovery system, but a user discovers the content elsewhere (outside of the discovery system) and wishes to access it.

Example details: The details of this scenario are the same as in Use Cases 1 and 2 (C.1, C.2), with the added detail that the discovery-system-based approach does not address the needs of this particular user. The user may begin in an abstracting-and-indexing (A&I) database, where OpenURL link resolution would normally make the appropriate copy available to them. However, the link resolver's KB is based on a KBART title list, which does not include metadata at the level of the article or chapter.

Discussion of potential approaches: To the extent such a scenario is realistic (e.g., see the hypothetical nature of Use Case 1 [C.1]), the provider of the source database (i.e., wherever the user found the item) can support the user in various ways. Often, such databases already include flags indicating OA content as well as links. External solutions can be recommended or integrated as well, including using the Unpaywall API to harvest OA indicators into the database's metadata or facilitating article-level access through such browser extensions as GetFTR and EndNote Click. The inconveniences of such an approach are much less onerous than managing hundreds of millions of lines of article-/chapter-level data in a KB.

C.4 Use Case 4: KBART Automation

Scenario: A content provider follows the KBART Automation RP to send holdings snapshot reports to a library's KB supplier, saving the library the effort of customizing available titles and dates in its KB. However, the KB does not include data on articles and chapters from topical collections or hybrid OA journals, so the library's users would not have access to this content via normal channels such as a link resolver.

Example details: This scenario is merely an extension of all the use cases discussed previously, changing only the mechanism for populating the library's KB.

Discussion of potential approaches: Accordingly, the recommendations from Use Case 1 (C.1), apply as do the possible additional approaches from Use Case 3 (C.3) for supplying the desired article-/chapter-level metadata (and potentially access) to users.

C.5 Use Case 5: A&I Coverage and Selected Full Text

Scenario: A content provider offers abstracting-and-indexing (A&I) databases with partial full-text coverage, where some full-text content is included within the database itself while a link resolver delivers content outside that subset. Users wish to gain access to the included content.

Example details: Depending on the context from which they approach the content, the user will potentially experience false positives (content that appears accessible is not) or false negatives (content that would be accessible is never presented).

Discussion of potential approaches: If the user accesses the content from within the database, the database's metadata and linking configurations should grant the expected access.

If the user accesses the content via a link resolver, because the KB does not include data at a level lower than journal issues, the library must choose whether to prioritize avoiding those false positives (by activating only content where full books or issues are available) or avoiding the false negatives (by activating books and issues where only some chapters or articles are available).

If the user accesses the content from a discovery system, the discovery provider can supply all the available content without erroneously presenting unavailable content as available. One approach for accomplishing this is to split the content into two collections: items with full text and items without. The items with full text would be managed at the collection level, with the collection's items inheriting their availability status from the collection. The KB would handle non-full-text content at the book or issue level, routing the user to external searches or interlibrary-loan options as appropriate.