

Envisioning the Future of Finnish Library Data with BIBFRAME and RDA

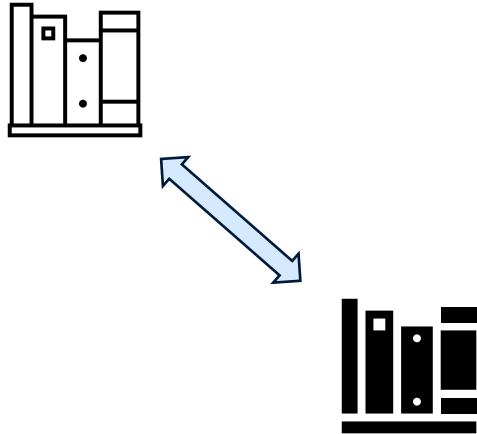
Matias Frosterus

Linked Open Bibliographies: Exposing, Linking, Reusing

Strategy

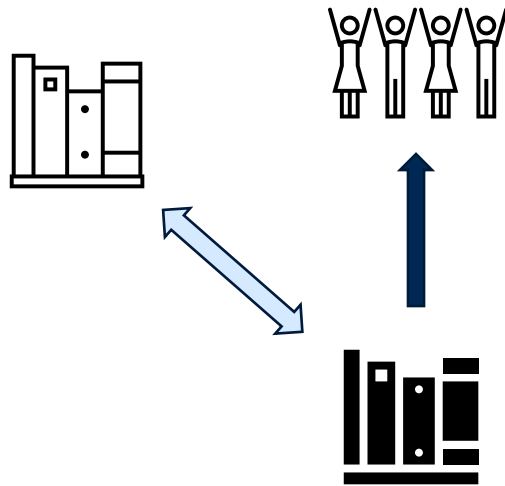
- Strategic plan of the National Library of Finland 2021–2030
 - <https://urn.fi/URN:NBN:fi-fe2020042822711>
- We will develop the description of information resources in accordance with the principles of open, linked data.
- Digital service solutions will primarily be based on open-source code, open interfaces and broad Finnish and international collaboration.

Motivation for linked library data



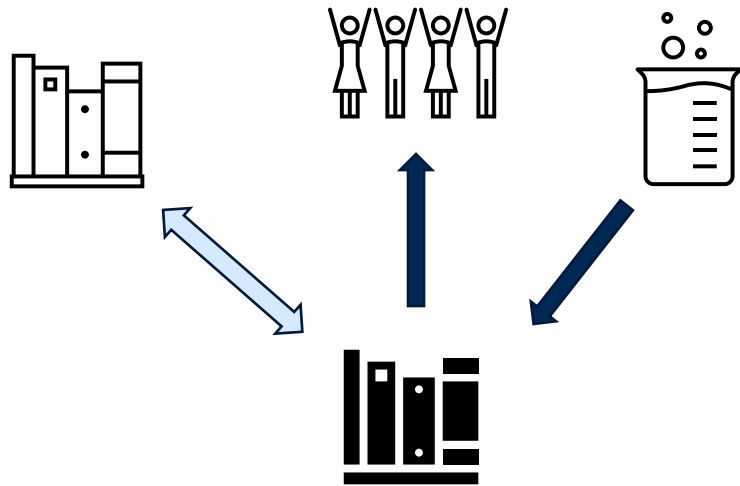
- Interoperability with library data
 - A starting point

Motivation for linked library data



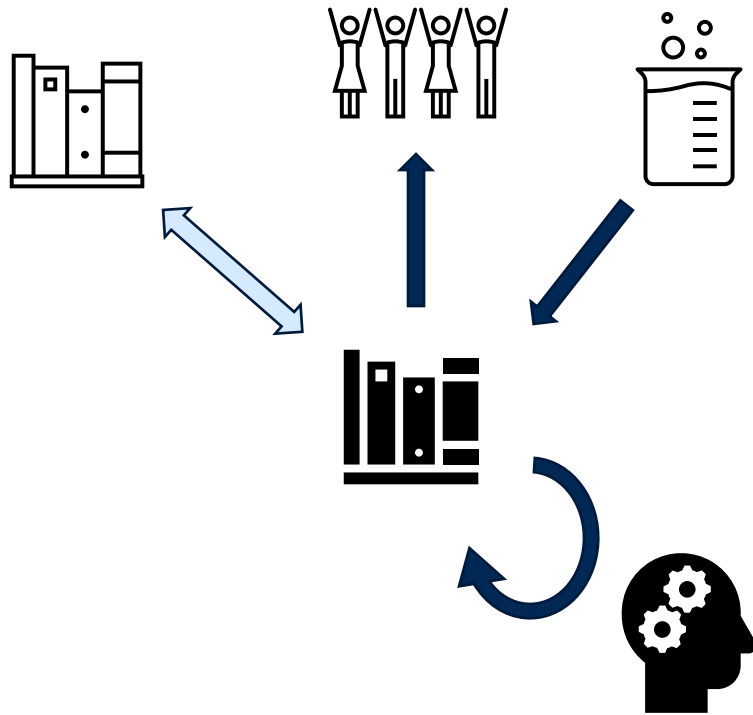
- Non-libraries can make use of library data
 - Better re-usability for our data
 - Makes our data more valuable

Motivation for linked library data



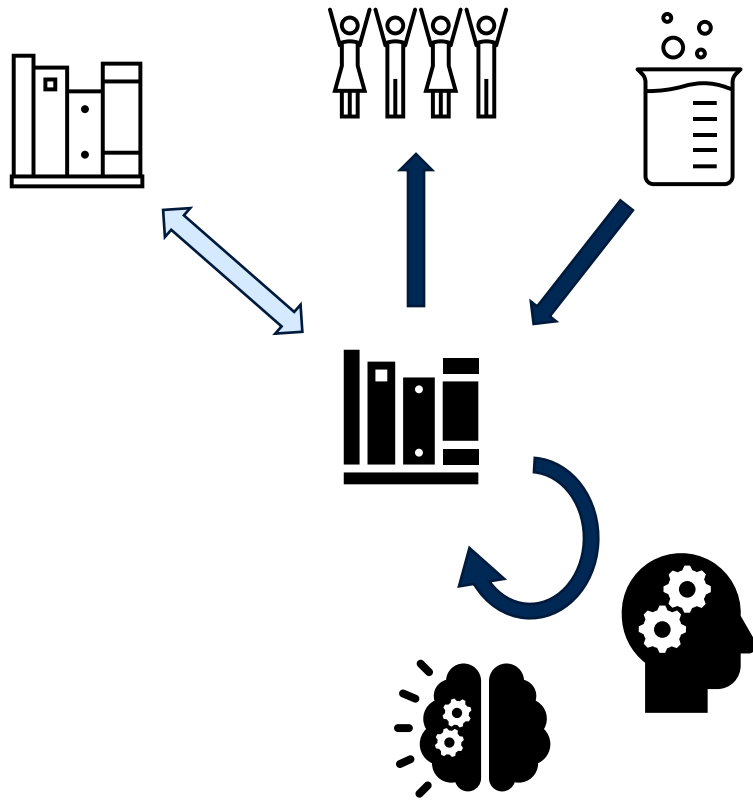
- Libraries can enrich their own data
 - For example by linking to research data

Motivation for linked library data



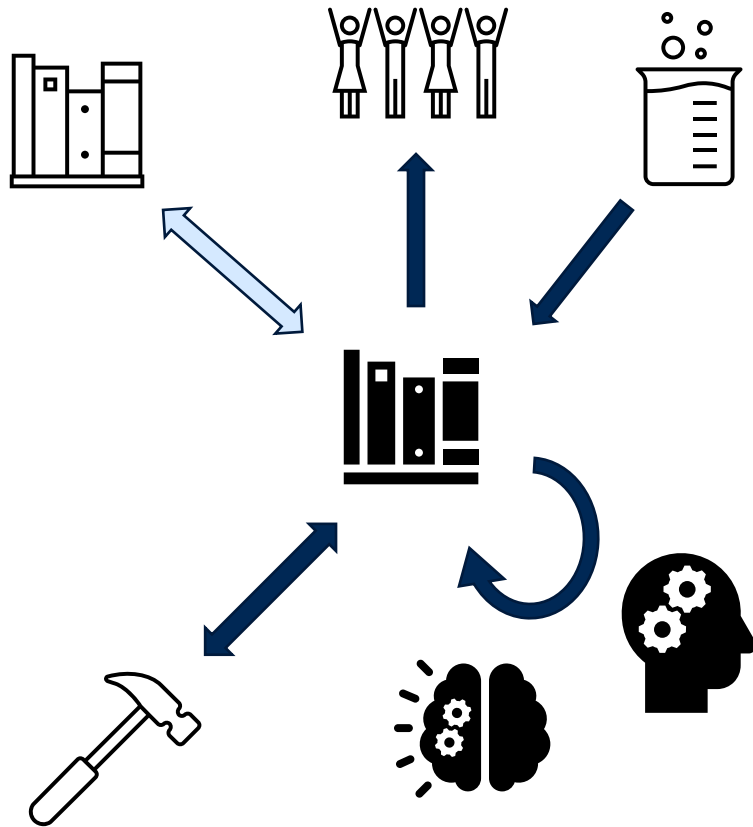
- Cataloguers can better utilize metadata that has already been produced
 - For example, when cataloguing a new edition, the old Work-level annotation can be used as is

Motivation for linked library data



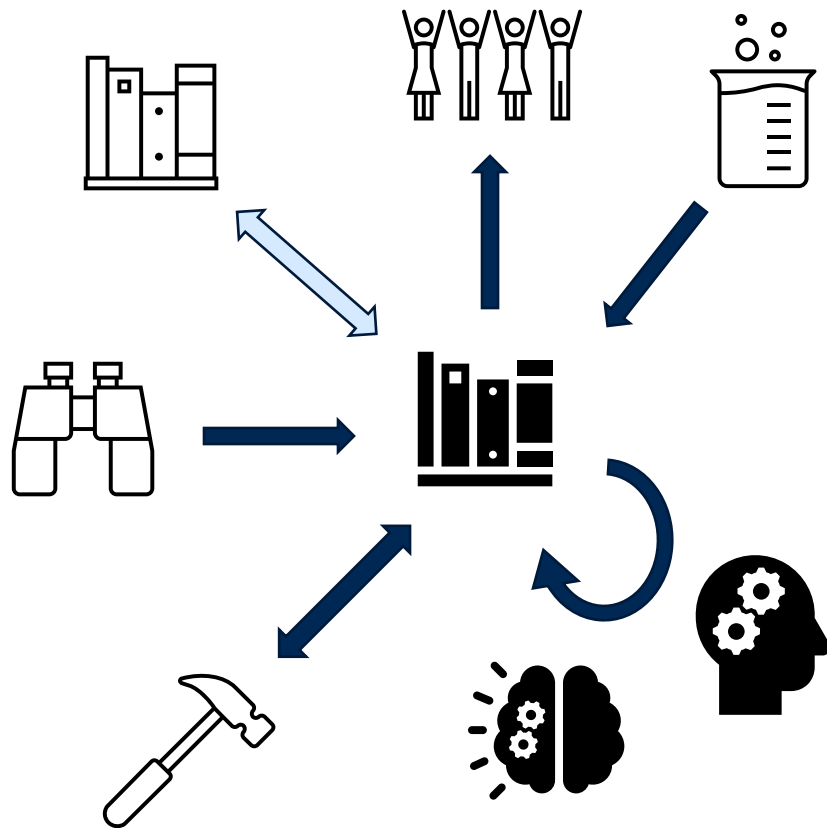
- Enables wider and smoother utilization of RDA

Motivation for linked library data



- Makes it easier to employ new systems and tools for library data
 - Machine-readability of data

Motivation for linked library data



- Enables new ways and points of view for accessing the data for end-users

Our linked data continuum



Union
Catalogue
Melinda

Adoption of
Original RDA

Identifiers

Concept-
based SKOS
vocabularies

Official RDA

New
Melinda

Finto
Thesaurus and
Ontology
Service

BIBFRAME

Works and
expressions

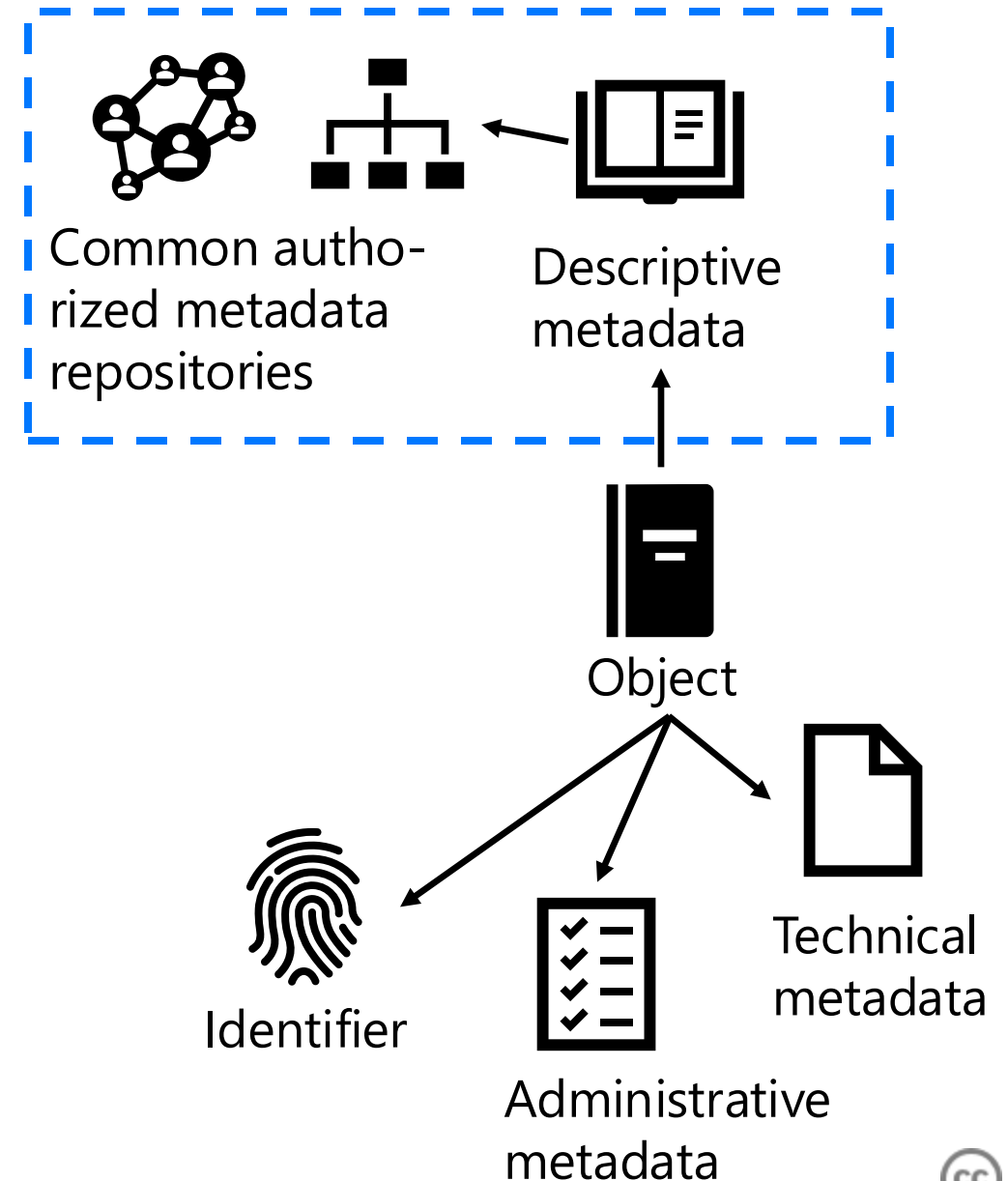
Metadata vision

- White paper style vision of how metadata is going to develop during this decade in the GLAM sector
 - Published by the National Library of Finland in 2020
 - <http://urn.fi/URN:ISBN:978-951-51-5905-2>
 - (Unfortunately only in Finnish)
 - A beginning for discussion



Metadata vision

- Customers and users
- Development of the metadata itself
- Information architecture
- Systems and tools
- The ecosystem of cataloguing (annotation)
- The role of the National Library of Finland

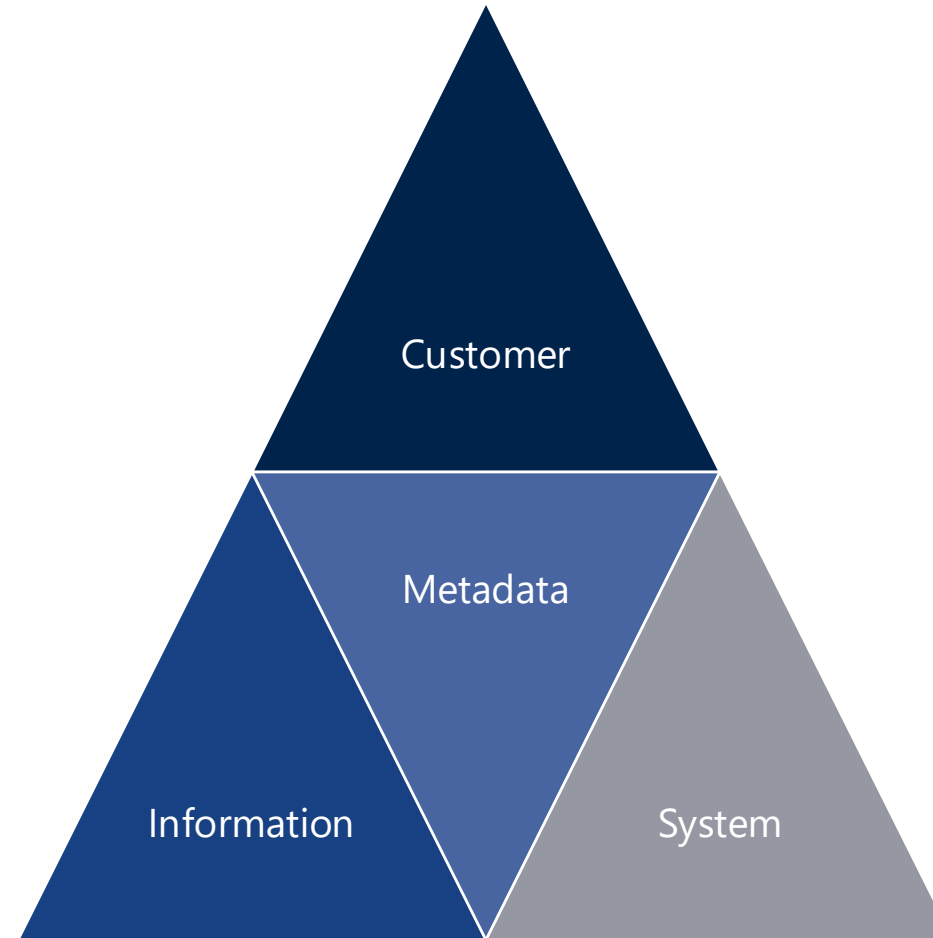


Key messages of the Metadata vision

- The importance of identifiers
- Common authorized metadata repositories
- International interoperability
- Multilinguality
- Semantic interoperability



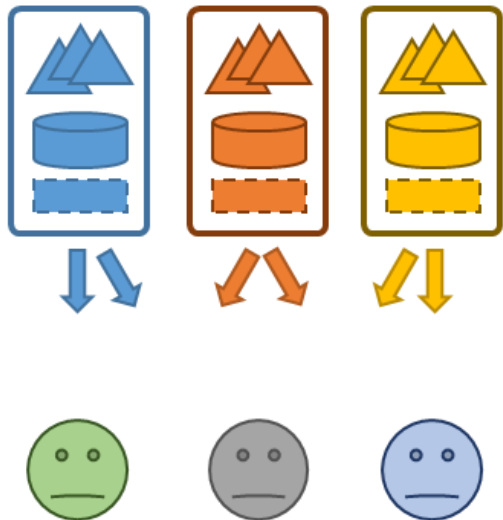
Key messages of the Metadata vision



Metadata as a medium

Key messages of the Metadata vision

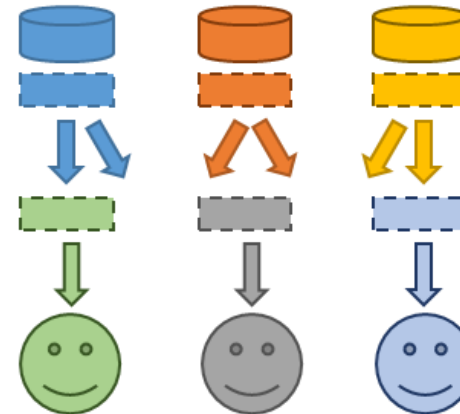
Overlapping information
Siloed systems
Non-modular



Common Authorized
metadata repositories



Interoperable
metadata



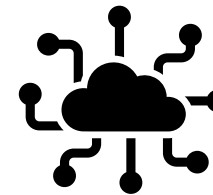
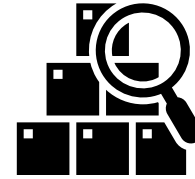
Services tailored for
specific user groups

Key messages of the Metadata vision

- Metadata as the basis for AI
 - Open metadata makes for more transparent systems
 - The causes and effects in the functionality of AI more understandable
- Automation is going to get more prominent
 - Frees up human resources to be able to contextualize and link the information in order to serve the more complex information needs of the users
 - Human control
 - The ability to hide complexity but also to show it
 - Linking should be easy
- Provenance data

Key messages of the Metadata vision

- Development possibilities for the search interfaces of the end-users
 - Search expansion
 - The need to be able to answer the question "Why this set of results?"
 - Can be very difficult!
- Powerful interfaces
- Modularity



The reception

- The goal was to form the beginning of a conversation
- A useful thing to refer to
 - For us but also others have been referring to it
- Complementary to the strategy

The reception

- Public libraries launched a project called Towards the Metadata Vision
 - A deep dive into what the linked data future holds for the public libraries
 - Interviews with library people in Finland as well as a trip to Sweden
- The final report of the project was published in 2023
 - https://www.kirjastot.fi/sites/default/files/content/ykn_kohti_metatietovi_siota_loppuraportti2023.pdf (only in Finnish)
 - An overview of the landscape and the incoming changes, the attitudes towards it, and a rough timeline prediction
 - A continuation project was launched for building a clear roadmap and preparing the architectural changes

Linked Library Data Project in the National Library of Finland

- Preparing the adoption of linked data for bibliographic cataloguing for the National Library and in part for the whole Finnish library sector
 - BIBFRAME data model
 - Deep integration with RDA
- 2022-2024
- Main outputs
 - Bibliographic data model
 - Including conversions to and from
 - Agent data model
 - Additions to our Metadata Thesaurus

Adapting BIBFRAME

- Adapting BIBFRAME to our data and cataloguing conventions
 - Adopting official RDA in 2025
 - Extensive use of aggregates
 - Especially with music
 - Extensive use of our Finnish Metadata Thesaurus
 - A controlled vocabulary of values for use in cataloguing
 - URIs instead of strings
 - Some miscellaneous additions
 - E.g. age restrictions
- BIBFRAME 2.4 relation structure very useful for us
- Latest version of the BFFI data model can be found here
 - <https://schema.finto.fi/bffi/>

When adapting our model, what do we do when BIBFRAME and RDA differ?

- We mostly adhere to RDA
 - Going with WEMI
 - Splitting some BIBFRAME properties in accordance with RDA
 - e.g. BIBFRAME issuance to "mode of issuance" and "extension plan"
 - Adding some new properties
 - e.g. variant access point
 - Also using existing additions from BFLC
- Some exceptions
 - No nomens
 - Use of AdminMetadata

BIBFRAME and RDA

- Arguably the biggest differences
 - Works and expressions instead of just works
 - Aggregates



From Work to Work and Expression

- BIBFRAME works are essentially expressions
 - For every expression there exists a bf:Work
- To add in RDA works we just isolate some of the bf:Work properties and subclasses for bffi:Work and leave some for the bffi:Expression

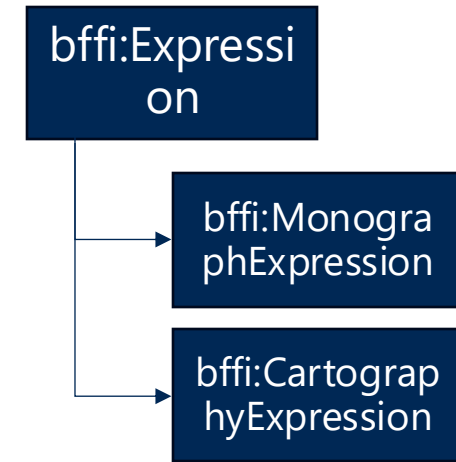
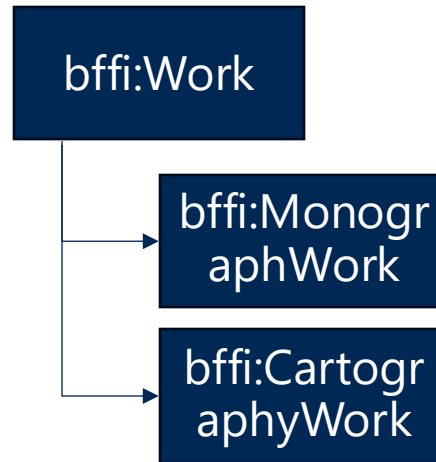
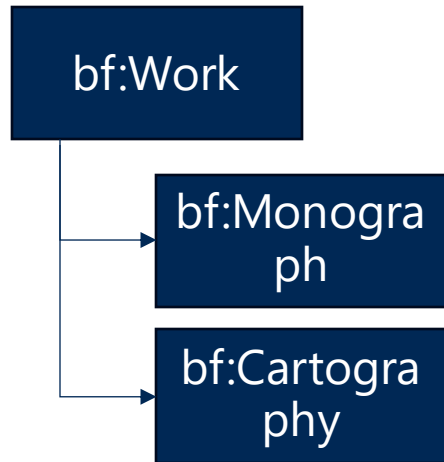
bf:Work -> bffi:Work and bffi:Expression

bf:Work

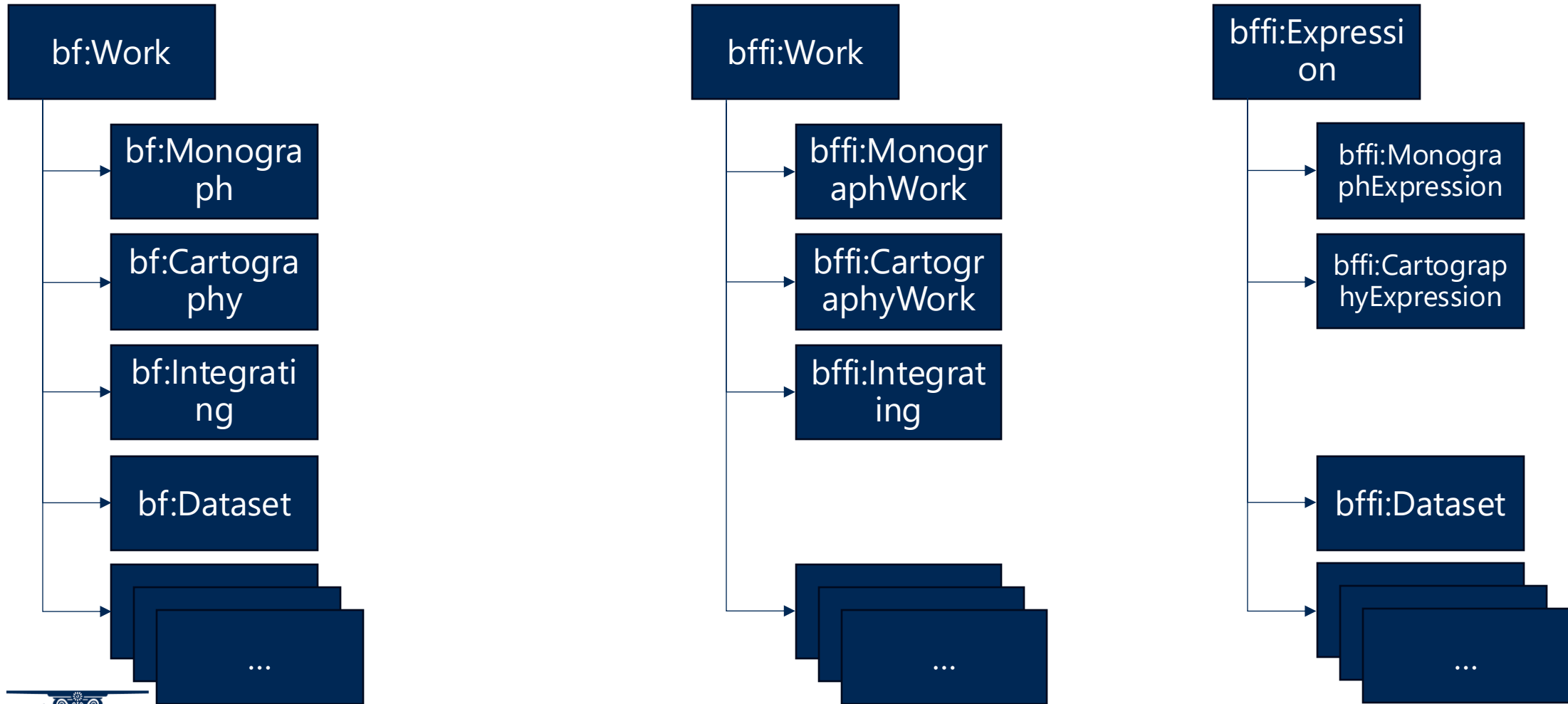
bffi:Work

bffi:Expressi
on

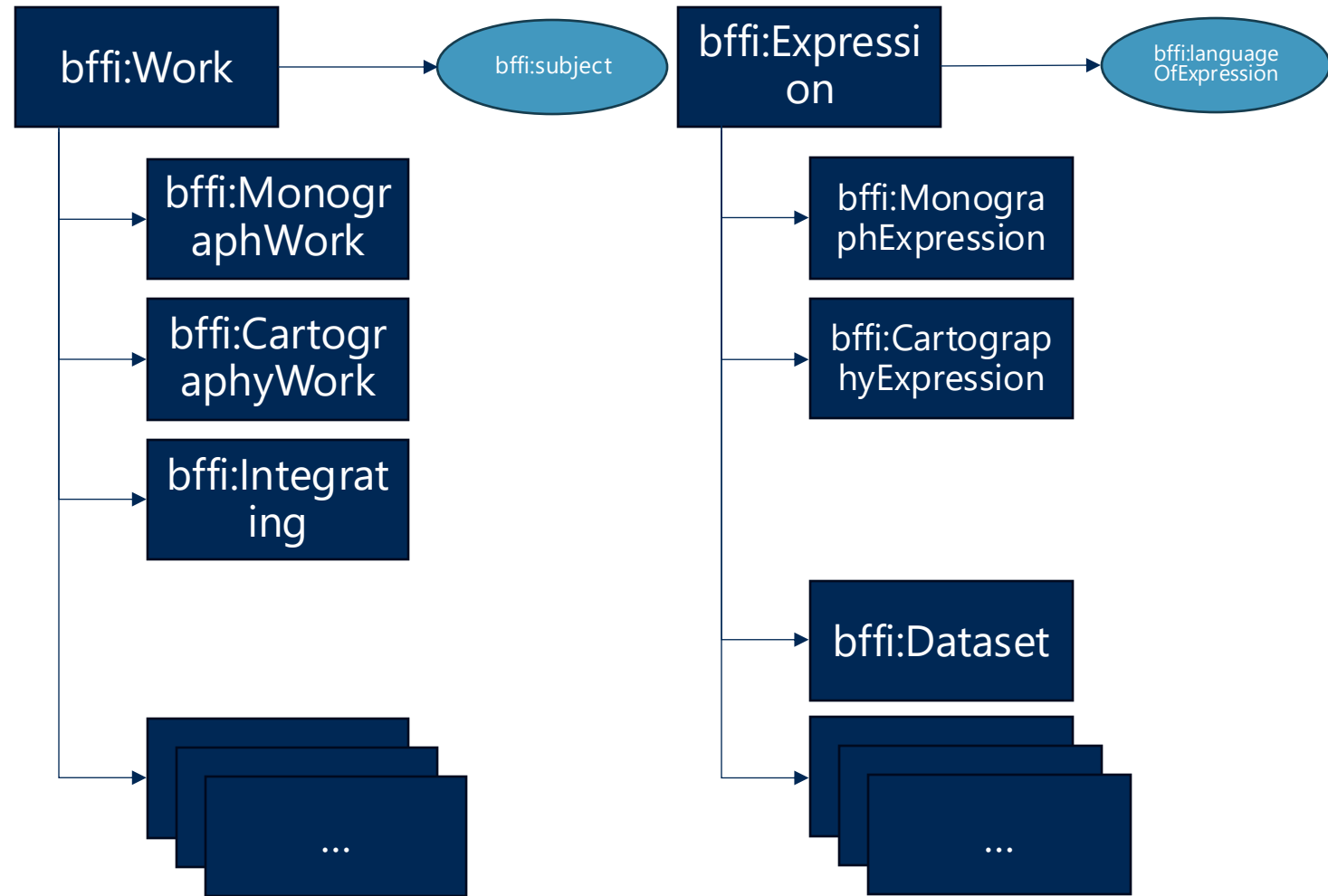
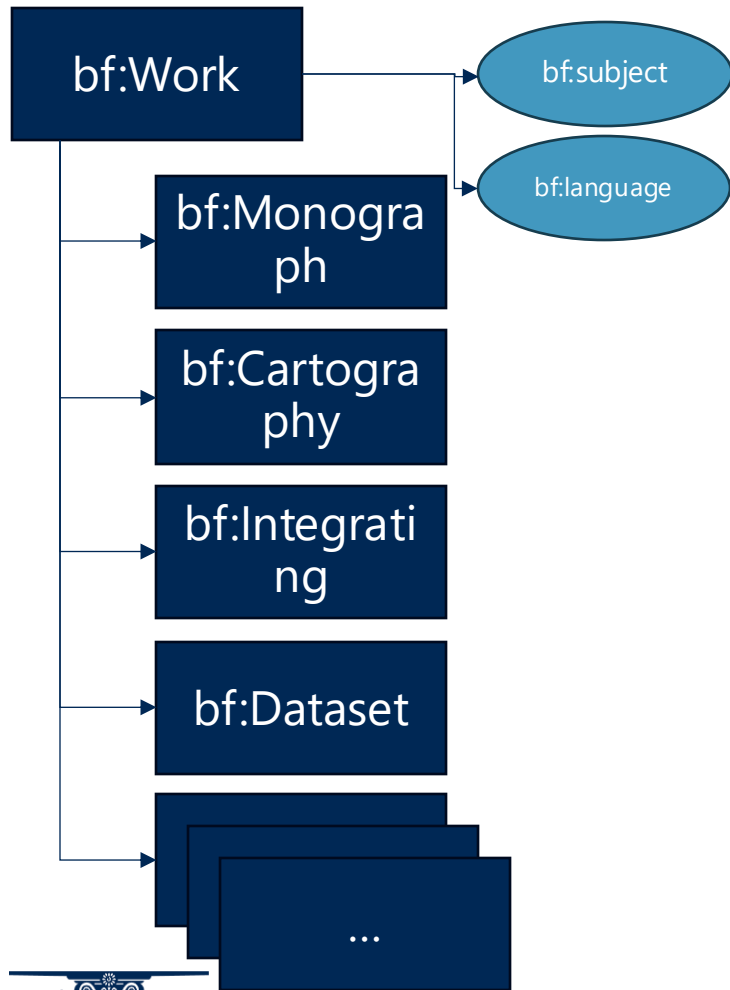
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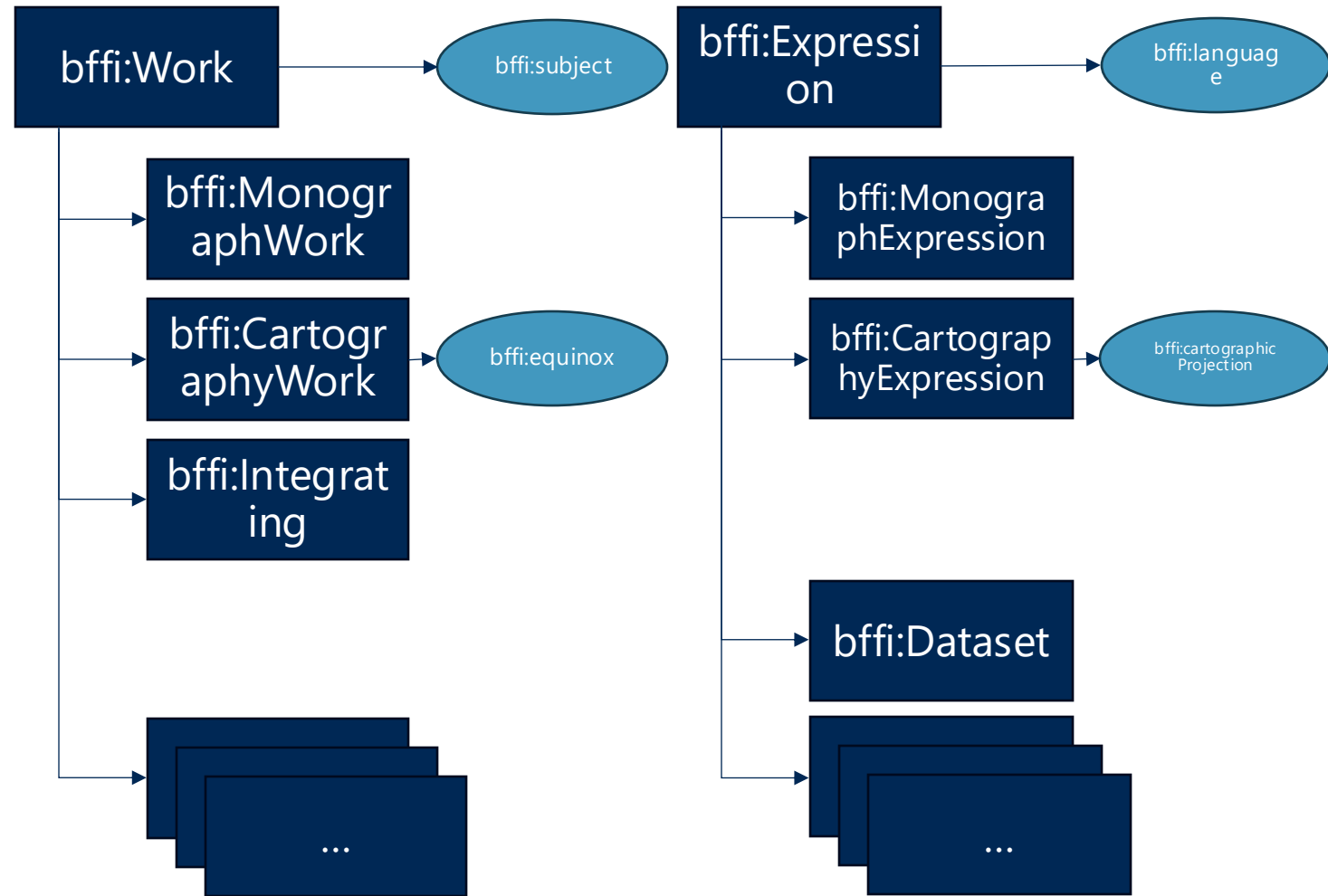
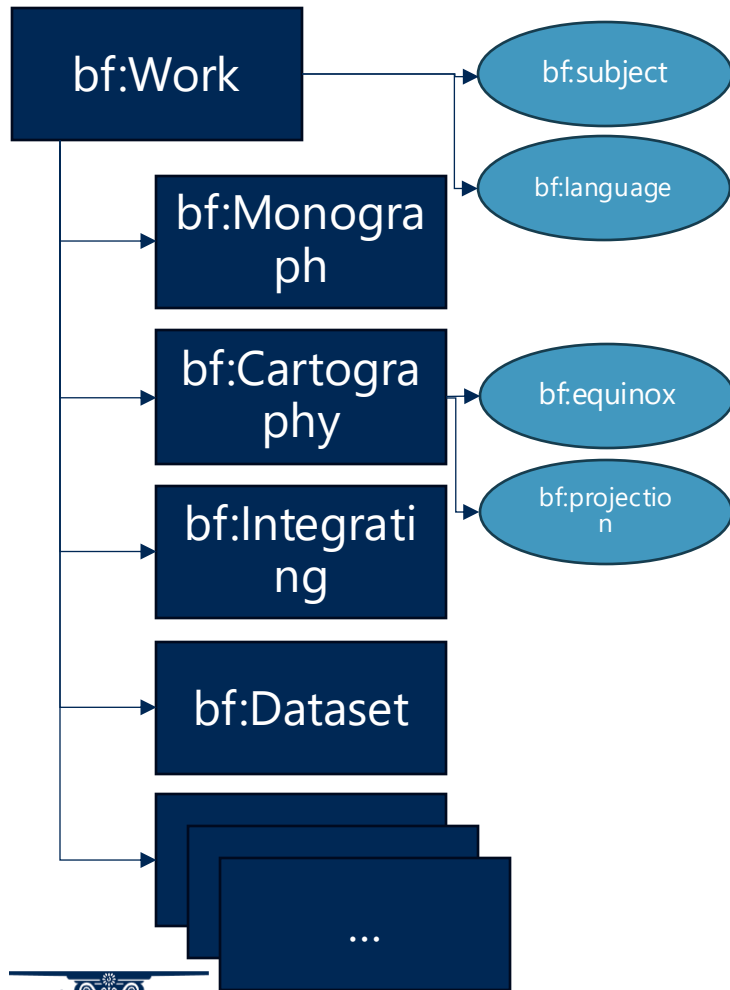
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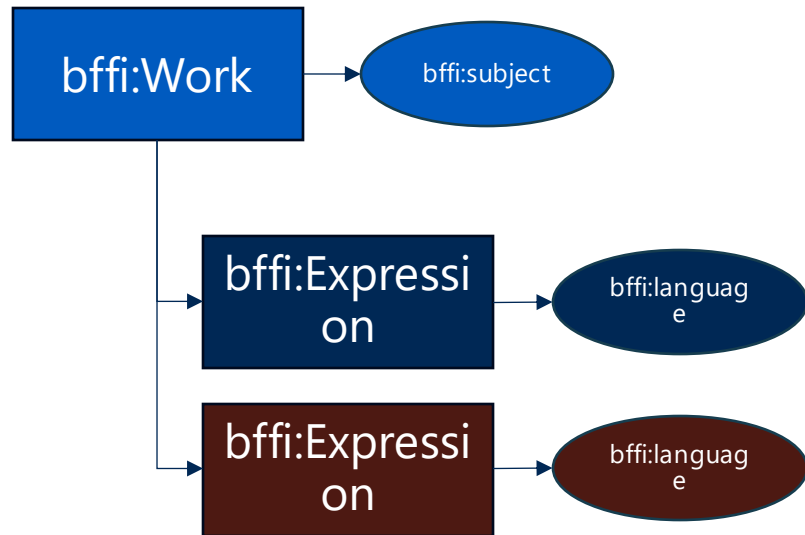
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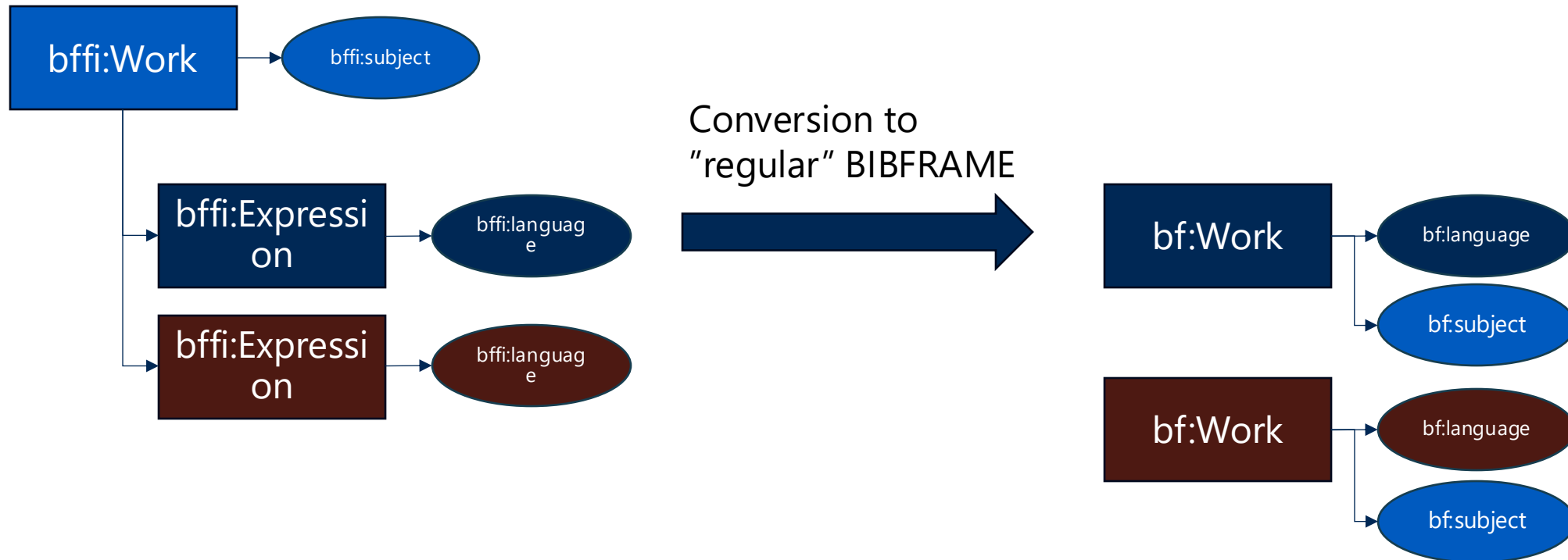
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Do we break interoperability?



Do we break interoperability?



Aggregates

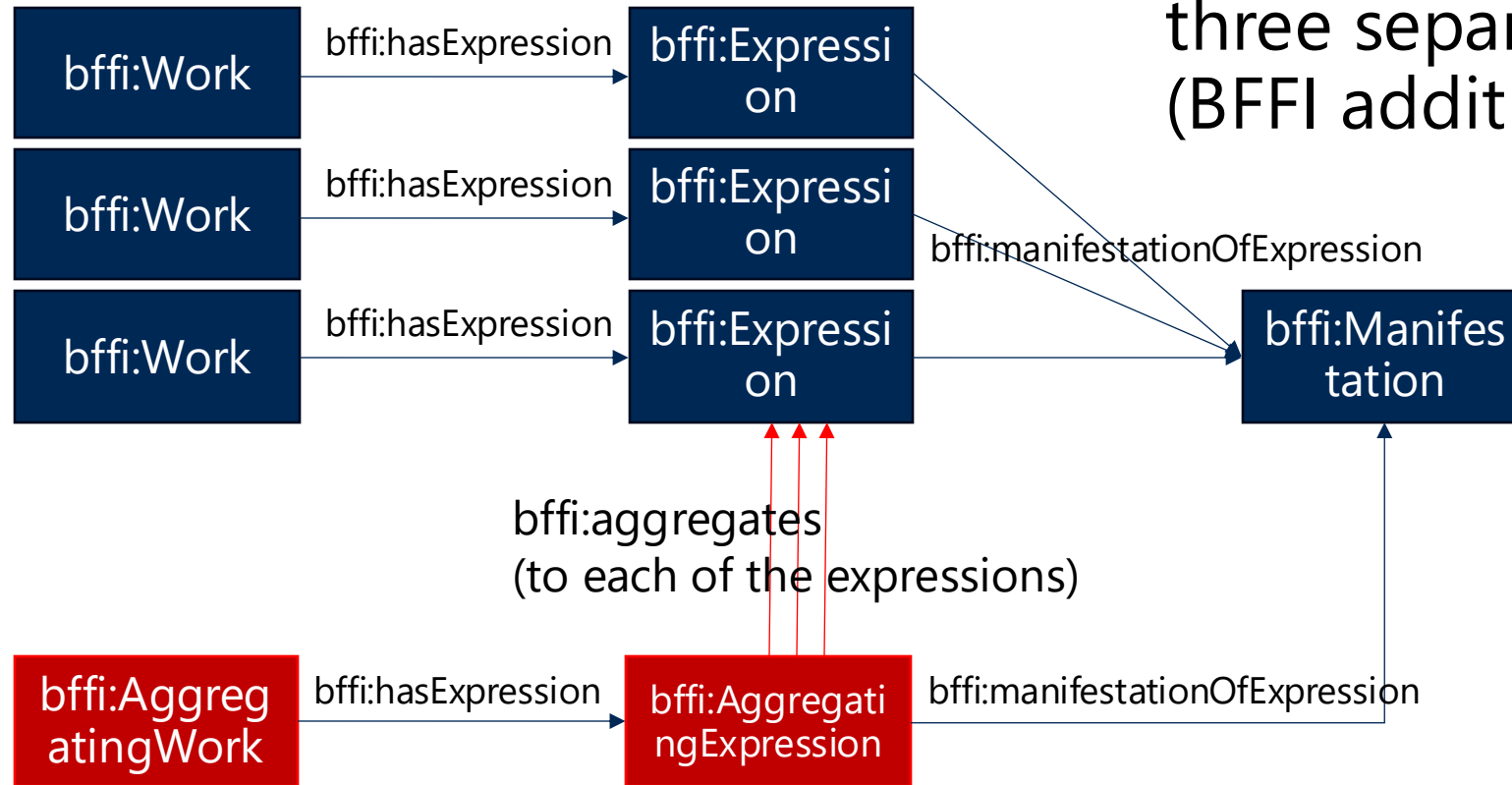
- An aggregate in RDA is a manifestation that embodies multiple expressions, for example
 - A monograph with supporting content such as illustrations or an index
 - A monograph with multiple short stories by different authors
 - A series of publications
- Aggregating work is the plan to arrange several expressions of one or more works and embody them in a single manifestation
- Aggregating expression is the realization of the aggregating work
- Finally, you also have the individual works and expressions that are aggregated

Aggregates in BIBFRAME

- Quite a straightforward implementation
 - Two new classes required for the aggregating work and aggregating expression
 - New aggregating relations between the aggregating expression and the individual expressions
 - A new role for a contributor (aggregator agent)

Aggregates in BIBFRAME

Example of a publication containing three separate works (BFFI additions in red)



Diachronic materials and music in BFFI

- Official RDA approach relatively easy to replicate in a BIBFRAME based data model with minimal additions
 - Further refinement possibly needed as cataloguing conventions solidify around Official RDA
- Conversions pose the challenge between the current level of cataloguing and the desired level
 - Especially true with music
 - Finnish national discography Viola is on a different level compared to the rest of the union catalogue Melinda

Next steps

- Developing the conversions further
- Converting suitable slices of our National Bibliography and Discography
 - Start small and expand
- Start work on switching the system of our union catalogue Melinda to support linked data





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