

Exposing Complex Objects

A Practical Approach



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Outline

- eco4r: Main Goals
- Overlay Journal: The Architecture
 - A layered Architecture
 - Components and roles of each Layer

Terms

- Compound Objects: semantically related web resources
- Compound/Complex Publications: a subset of compound objects with a bibliographic domain
- OAI-ORE: RDF Framework to build aggregations of web resources
- Resource-Map: OAI-ORE entity that holds all the information about an aggregation.

eco4r: The Goals

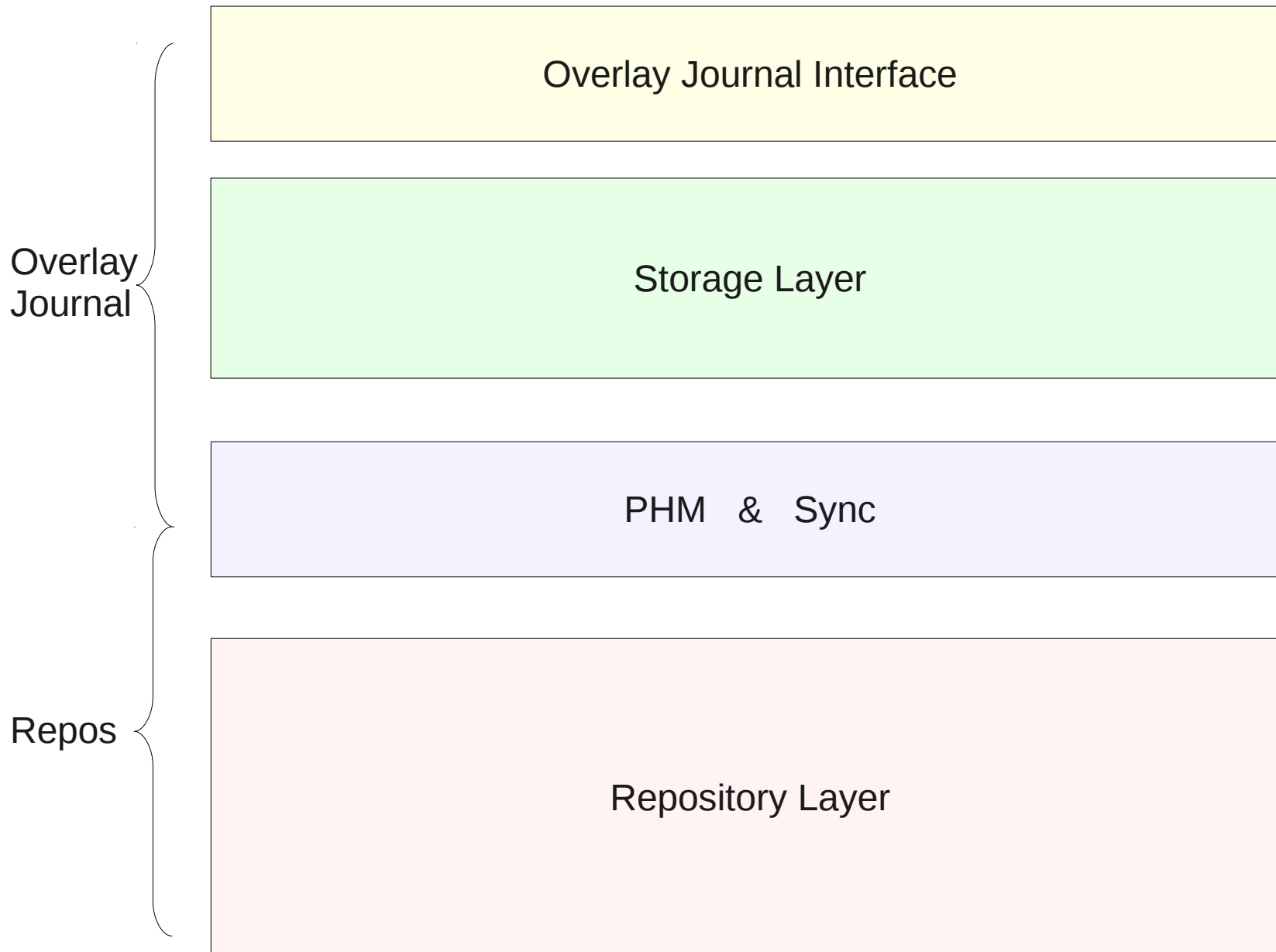
- I. Expose Information about complex publications
 - Not only descriptive and technical metadata but also structural and semantical
 - A good level of interoperability
 - Semantic web compatibility

- II. include these representations in a third party environment and to build thematical aggregations among them

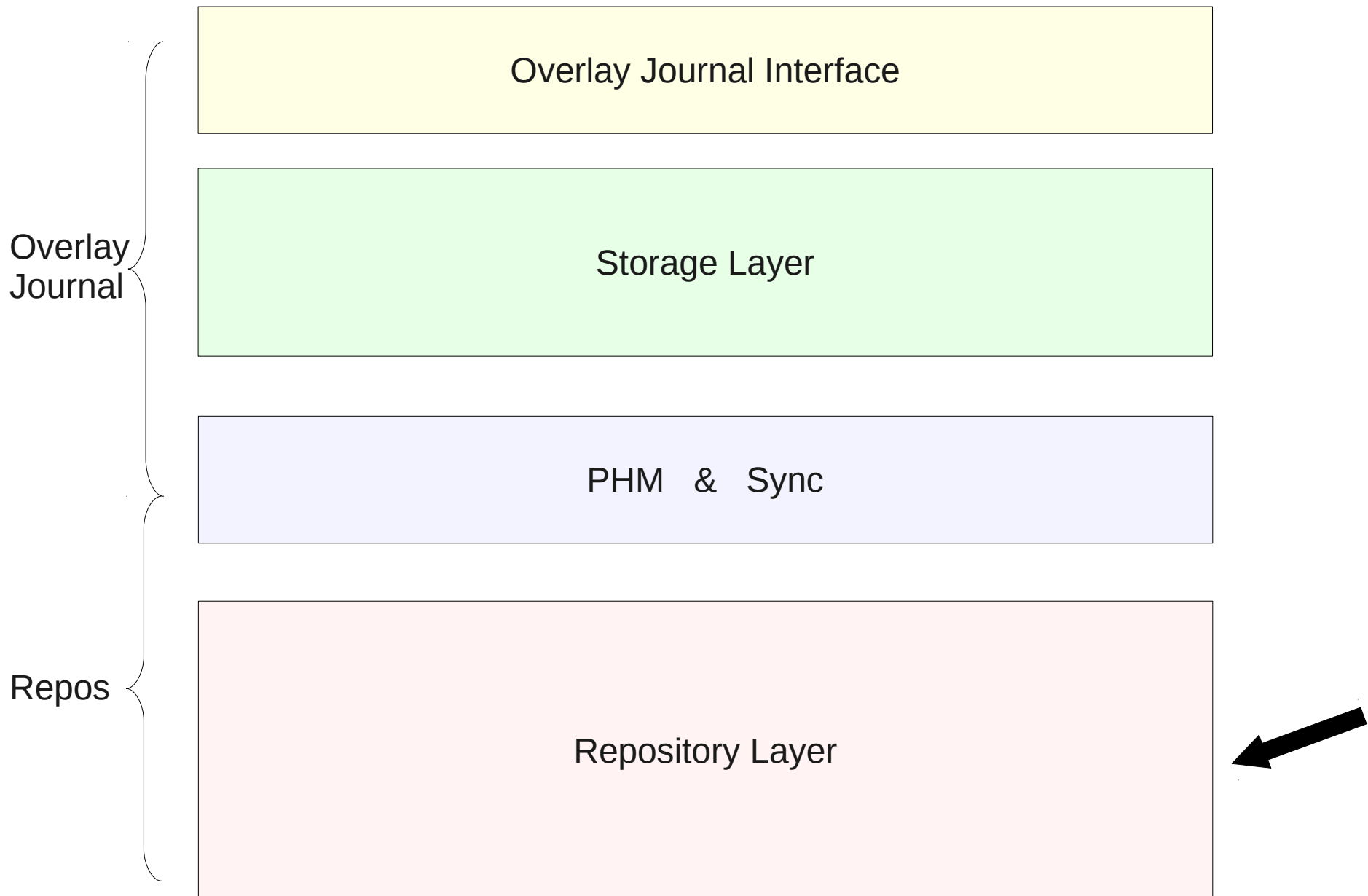
eco4r: The Goals

- Context Analysis: Data, Repositories and Frameworks
- Data Model based on:
 - OAI-ORE (Open Archive Initiative – Object Reuse & Exchange)
 - FaBiO: FRBR-Aligned Bibliographic Ontology
 - Further common vocabularies: DC, DC-Terms, FOAF...
- Implement plugins for Fedora and OPUS
- Develop and Implement and Overlay Journal.

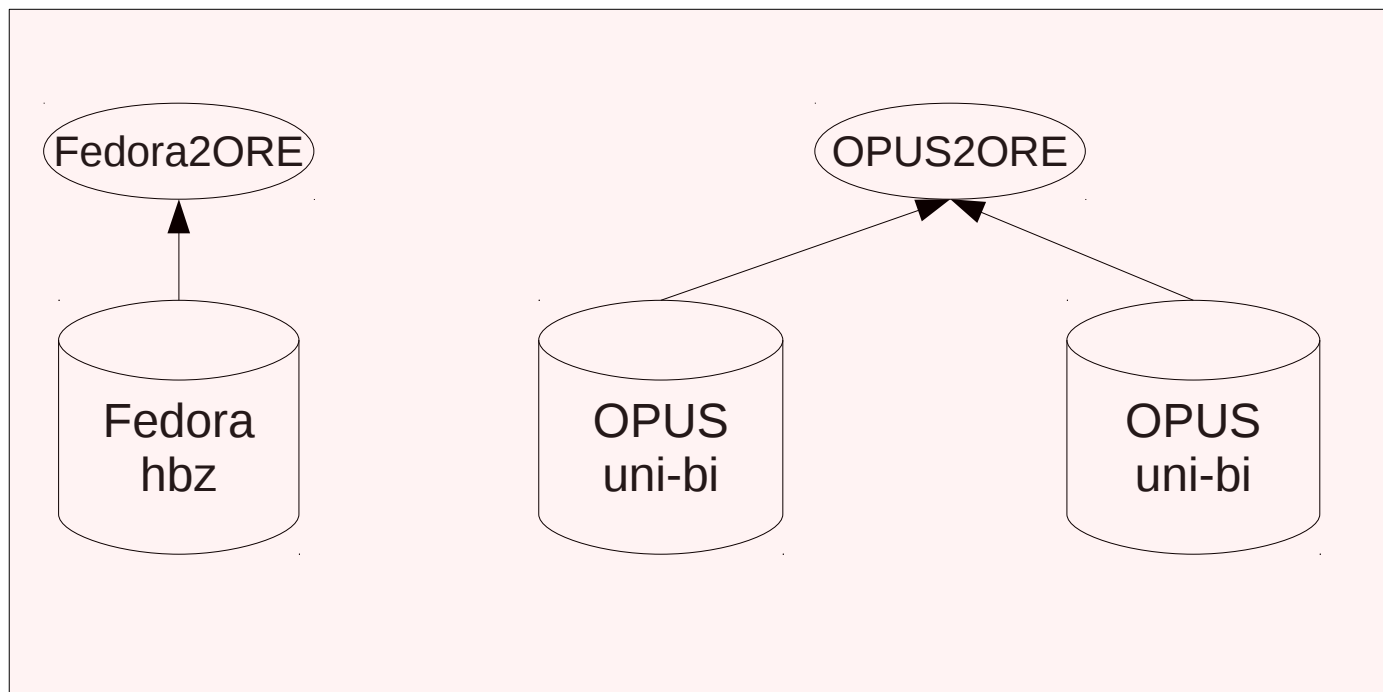
Overlay Journal: A Layered Architecture



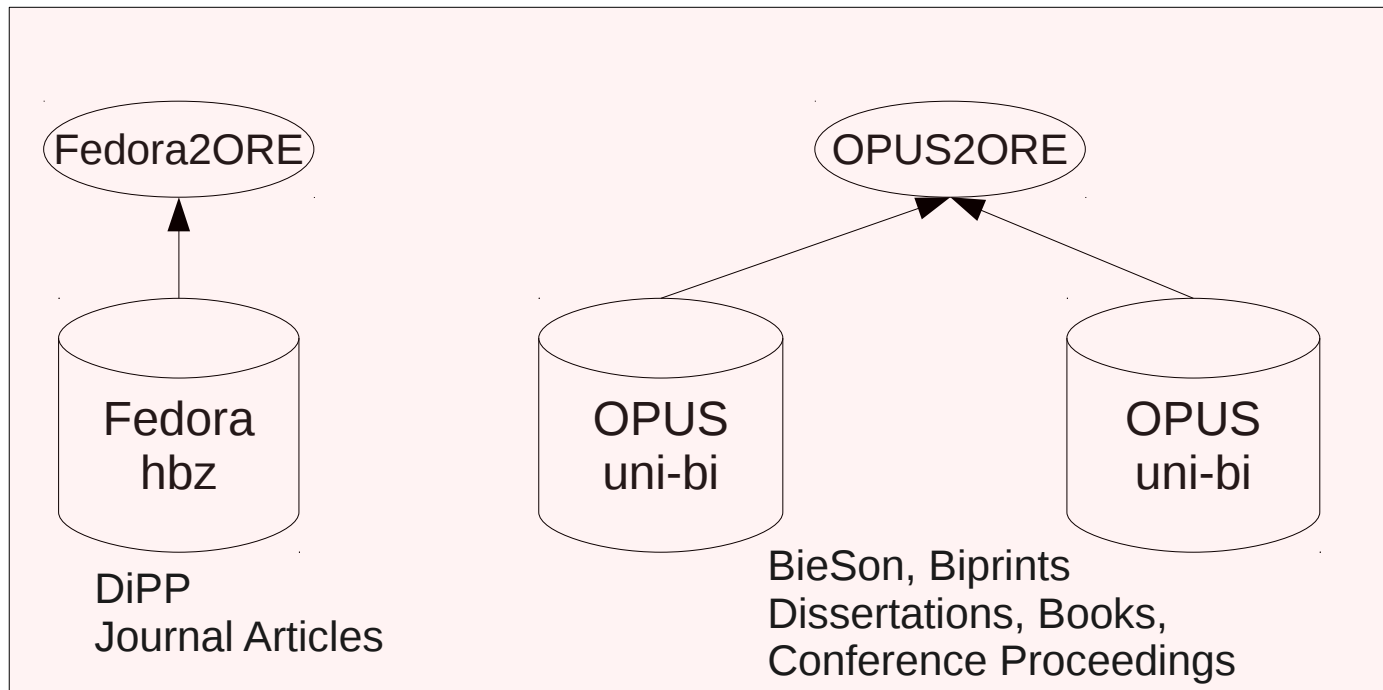
Overlay Journal: A Layered Architecture



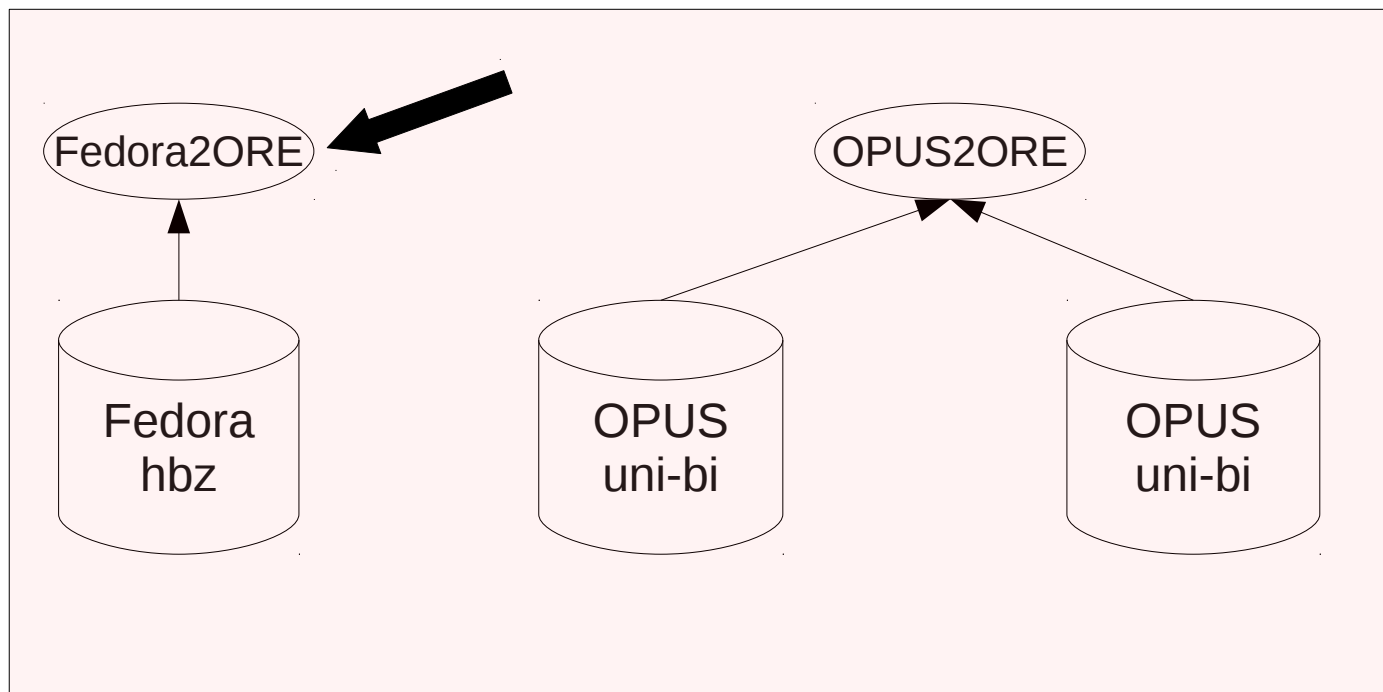
The Repository Layer



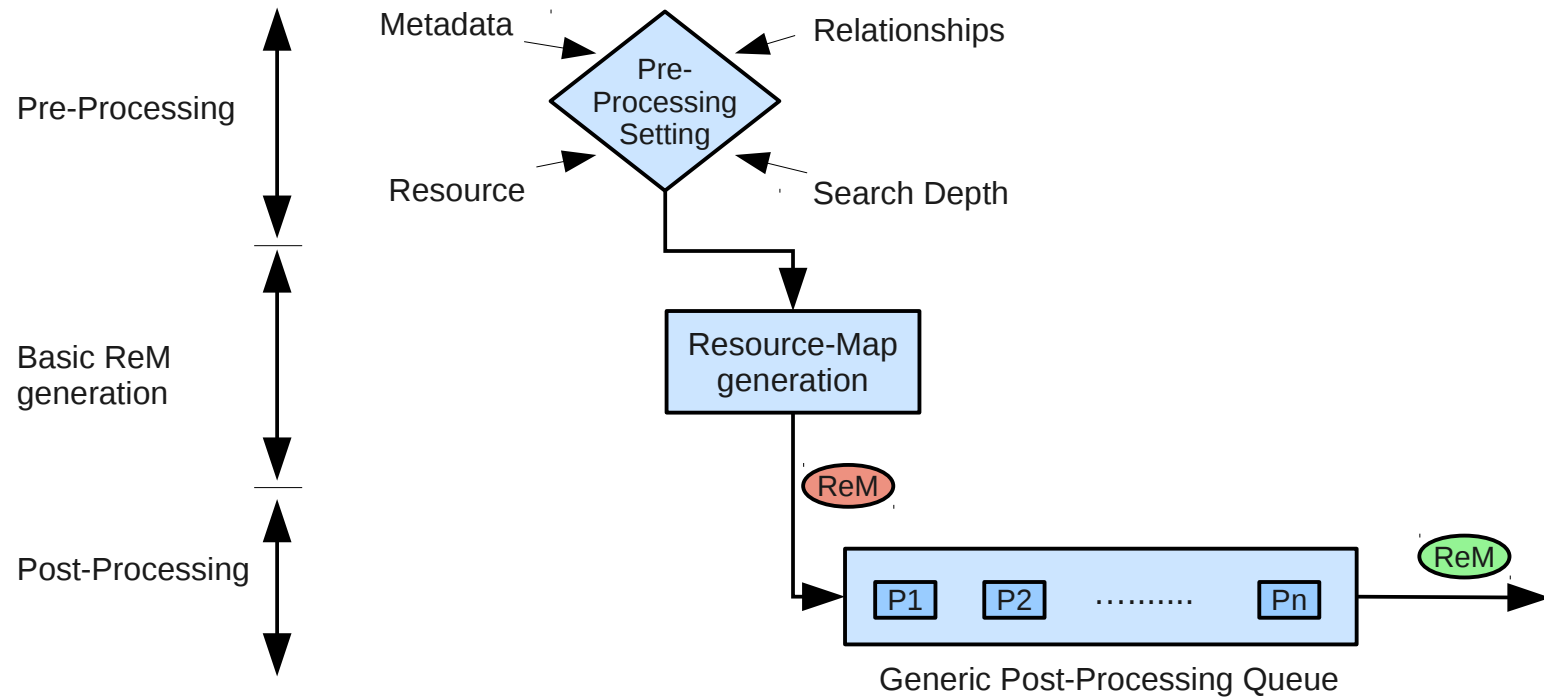
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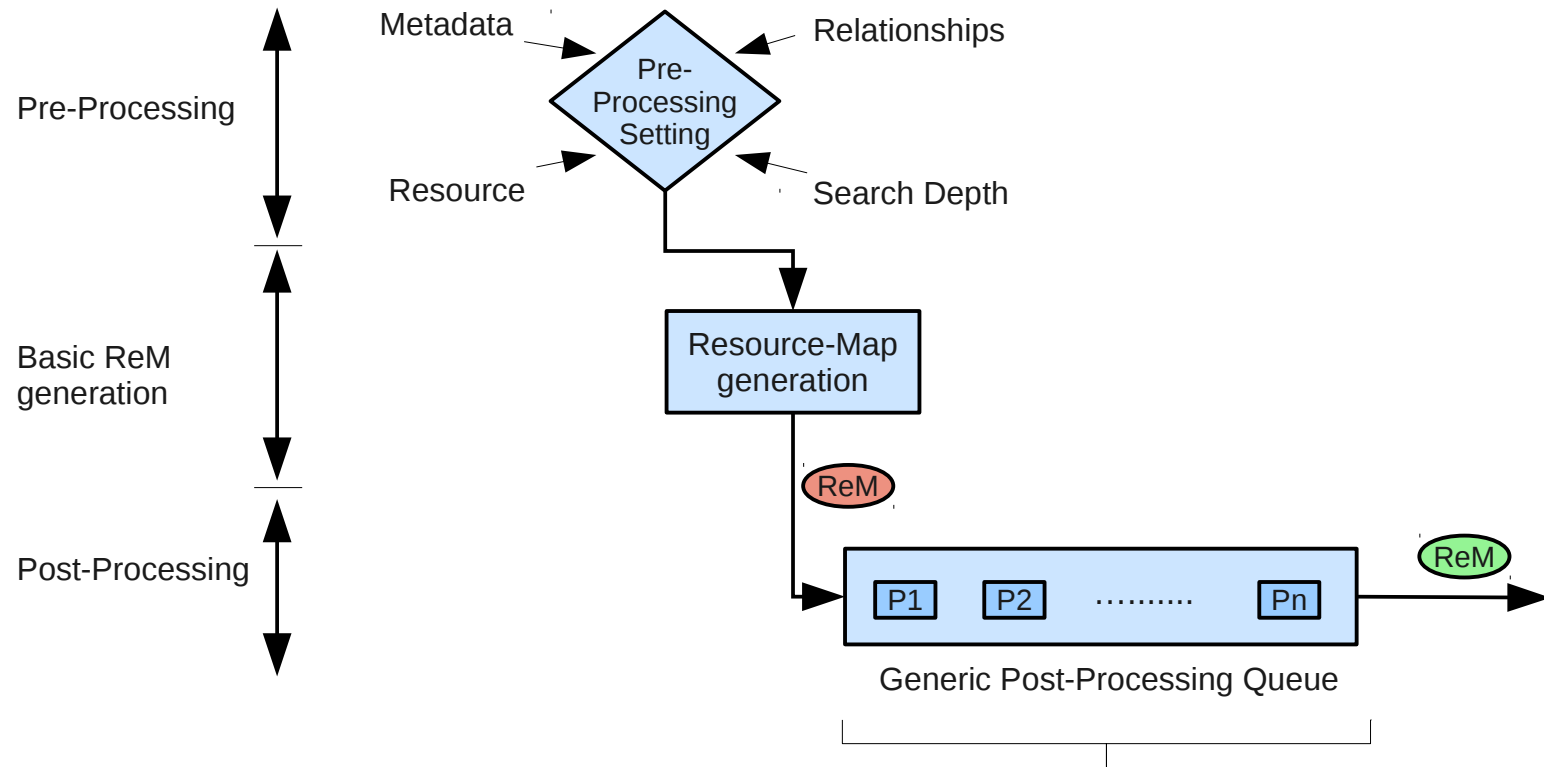
The Repository Layer



Fedora 2 ORE Workflow and Configuration

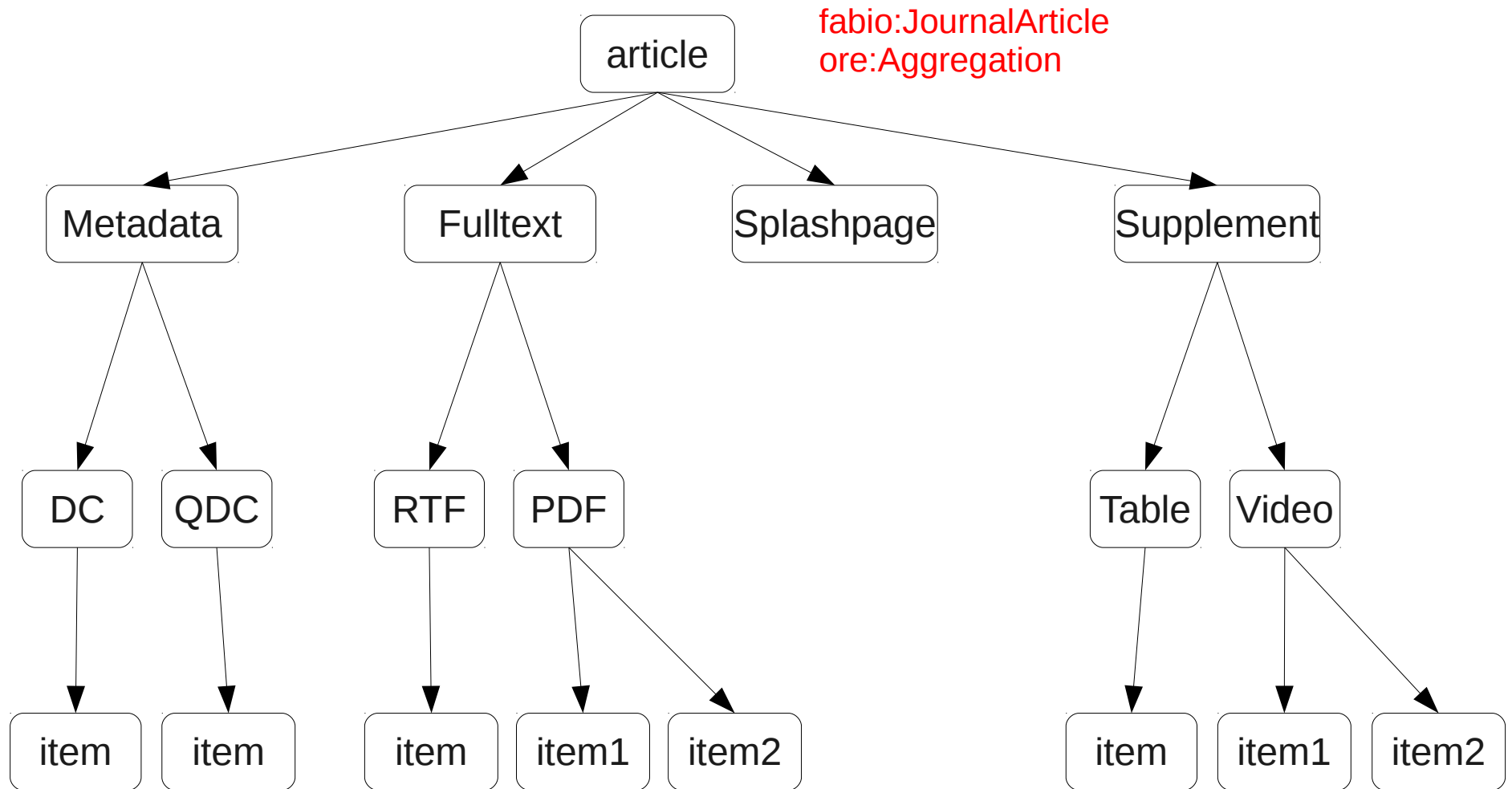


Fedora 2 ORE Workflow and Configuration



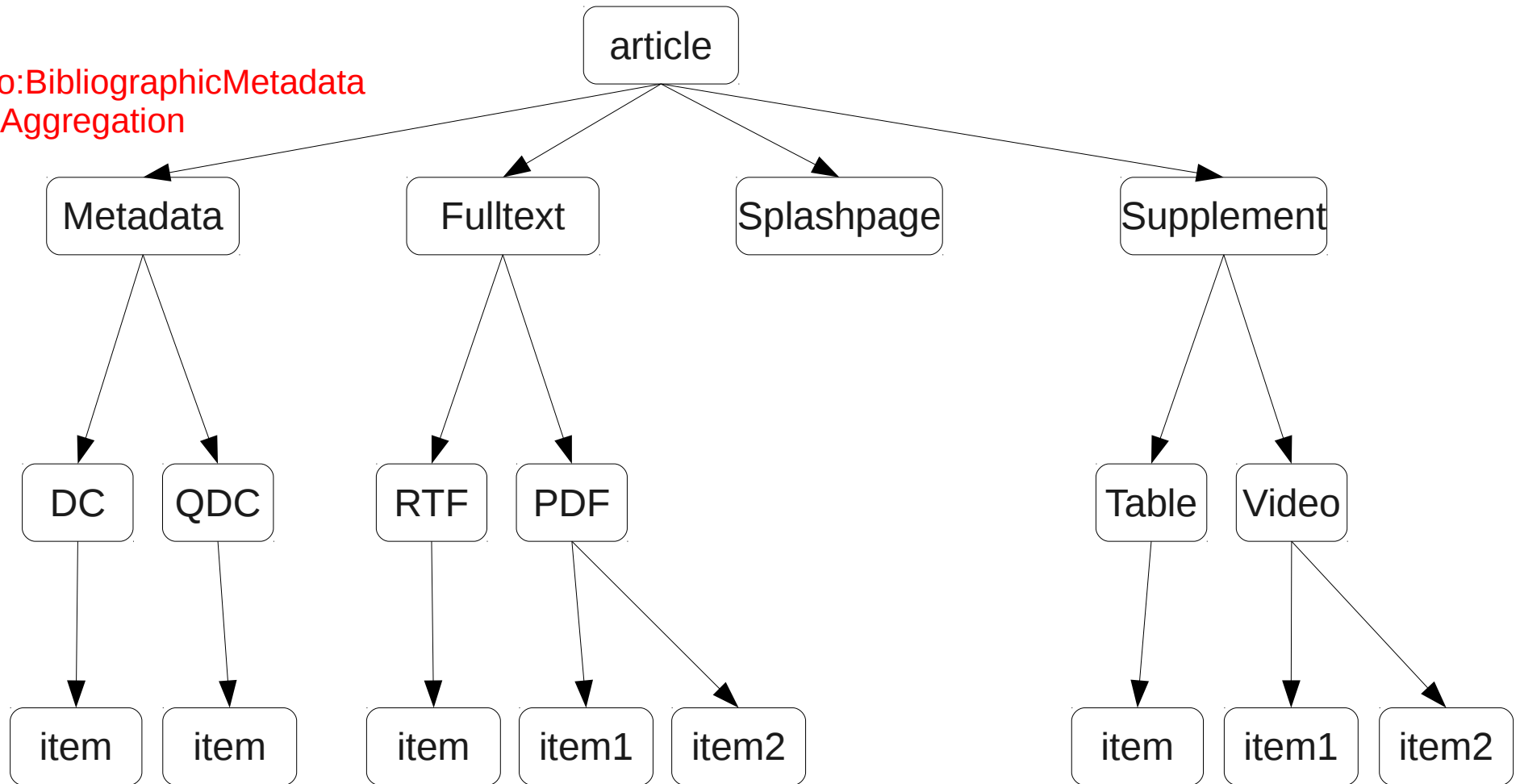
In eco4r: used to map to the eco4r data model

eco4r Data Model: A Sample

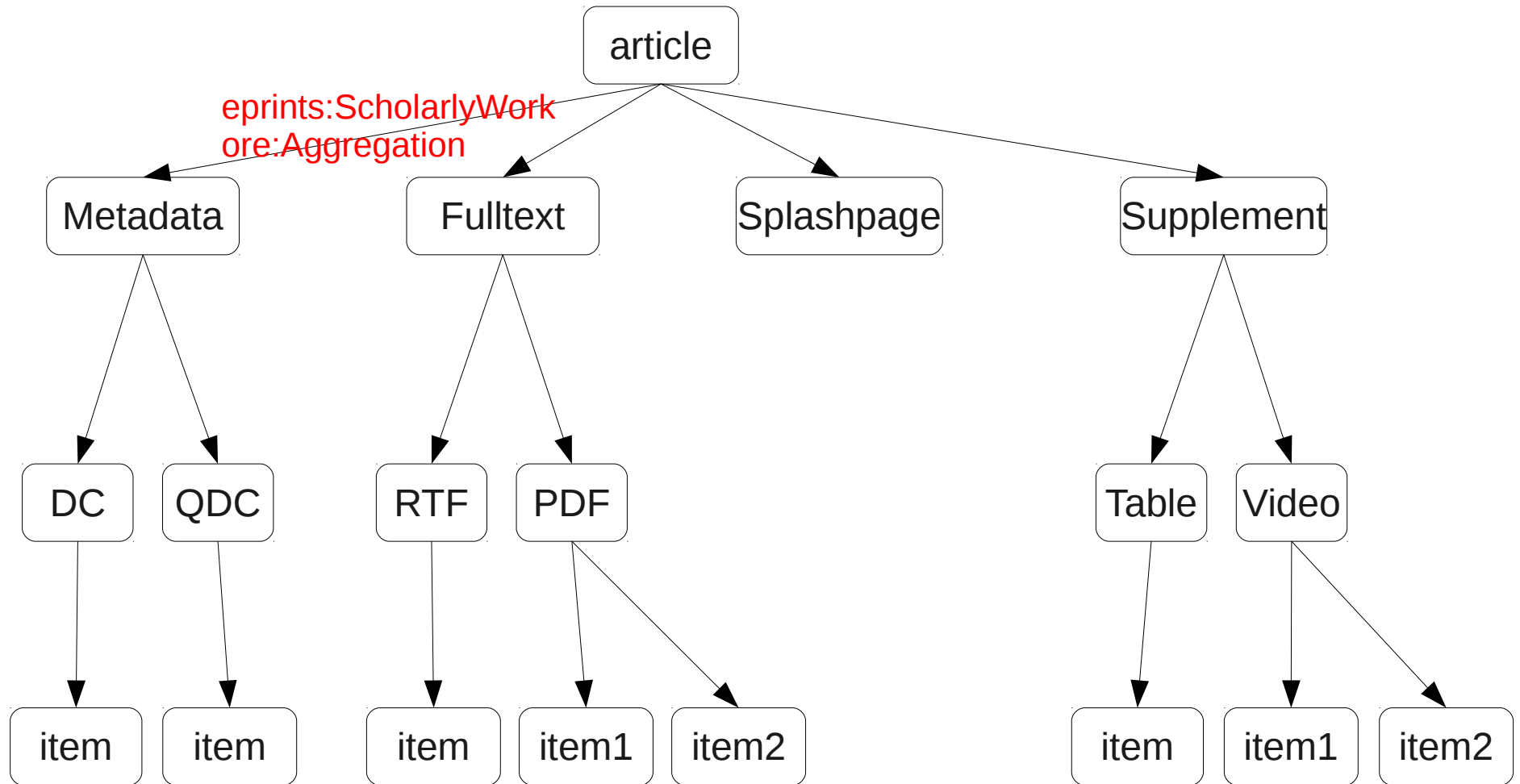


eco4r Data Model: A Sample

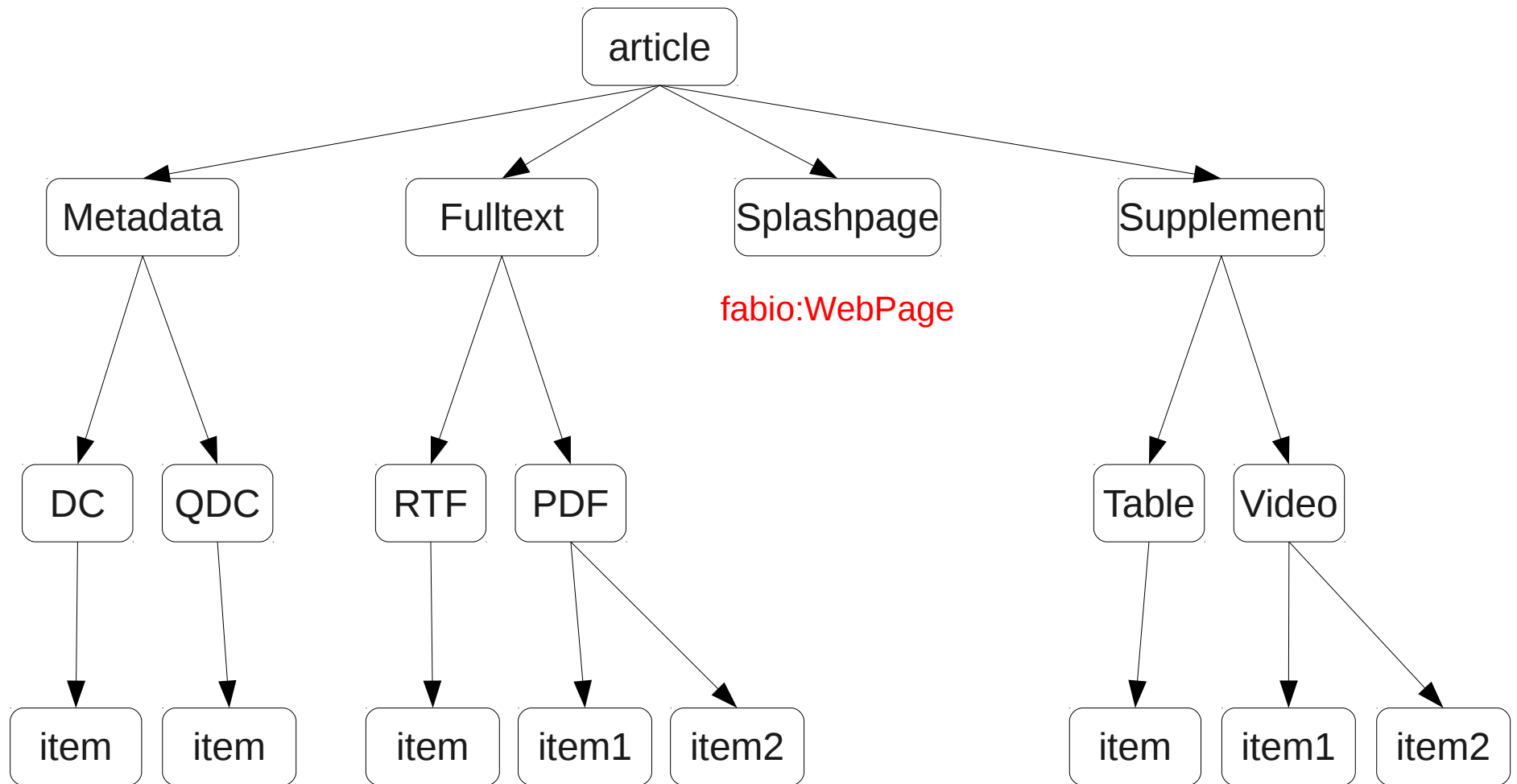
fabio:BibliographicMetadata
ore:Aggregation



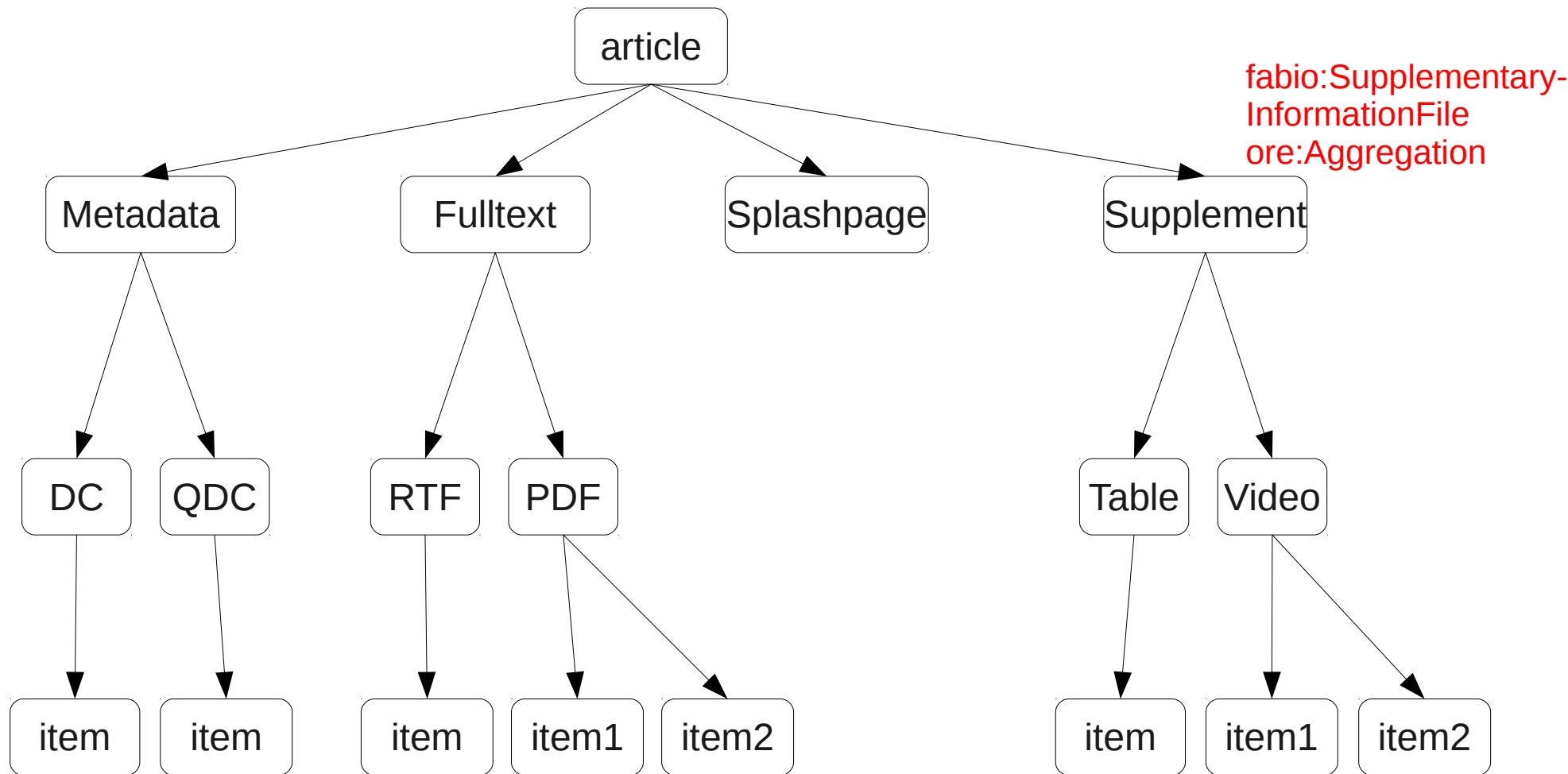
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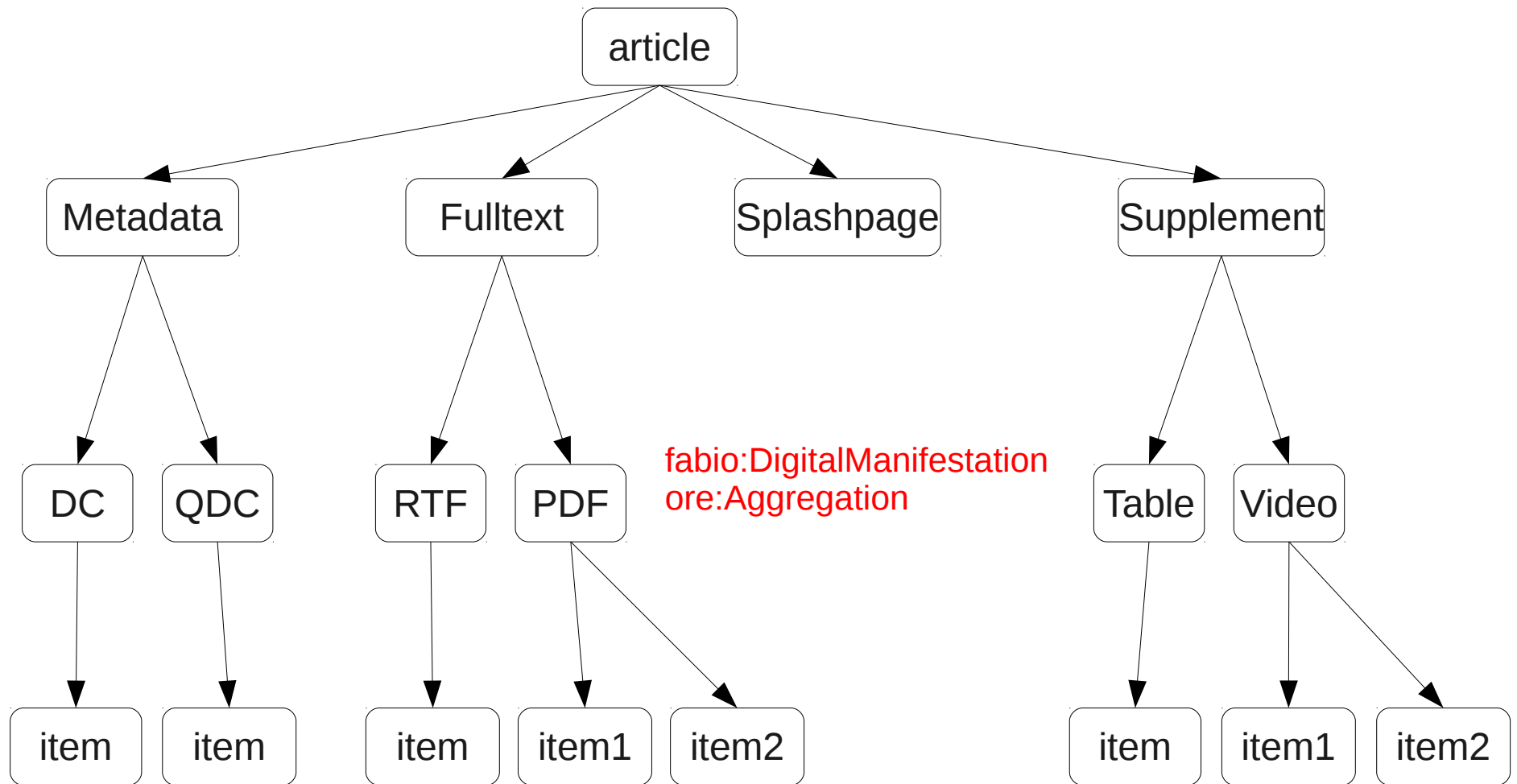
eco4r Data Model: A Sample



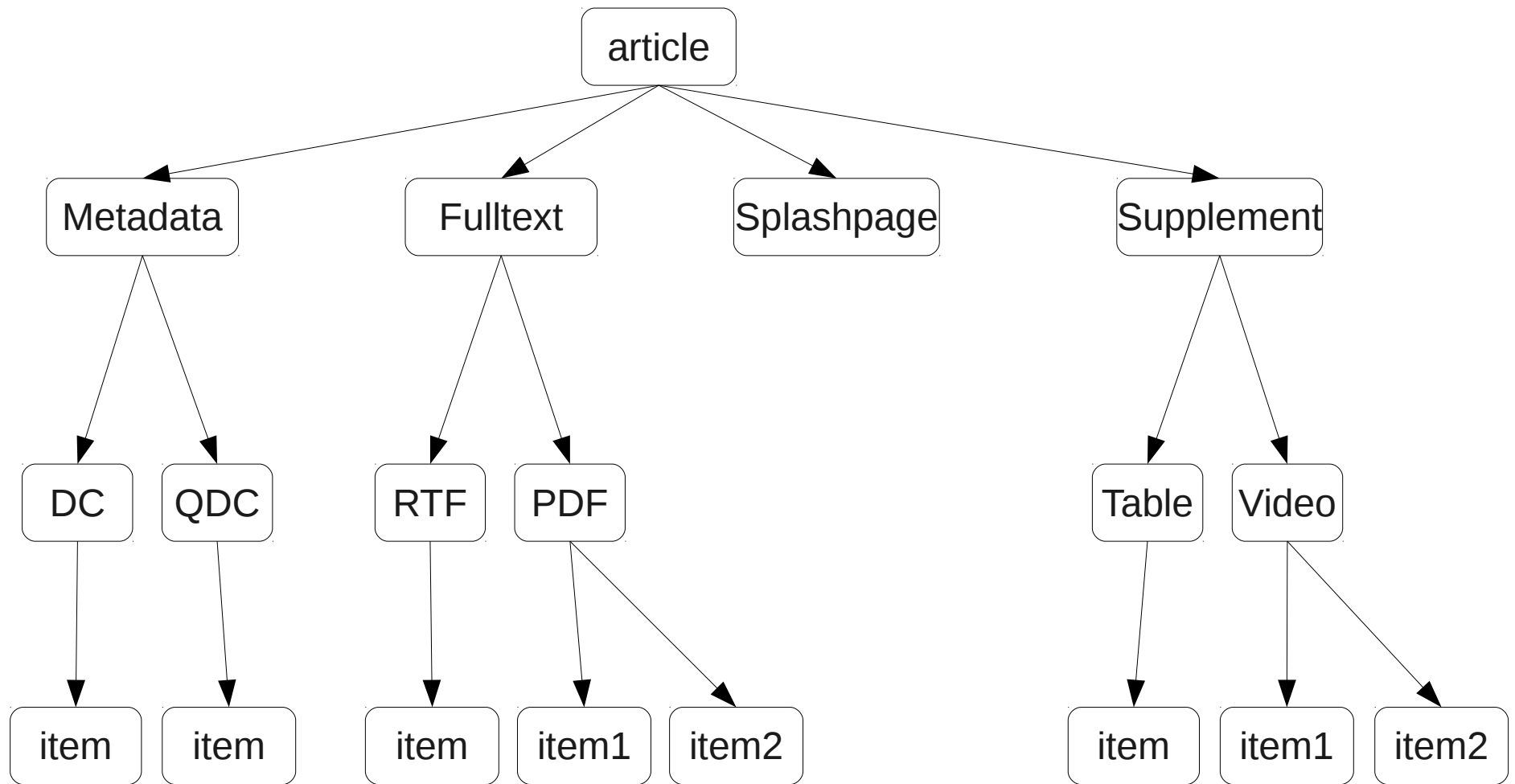
eco4r Data Model: A Sample



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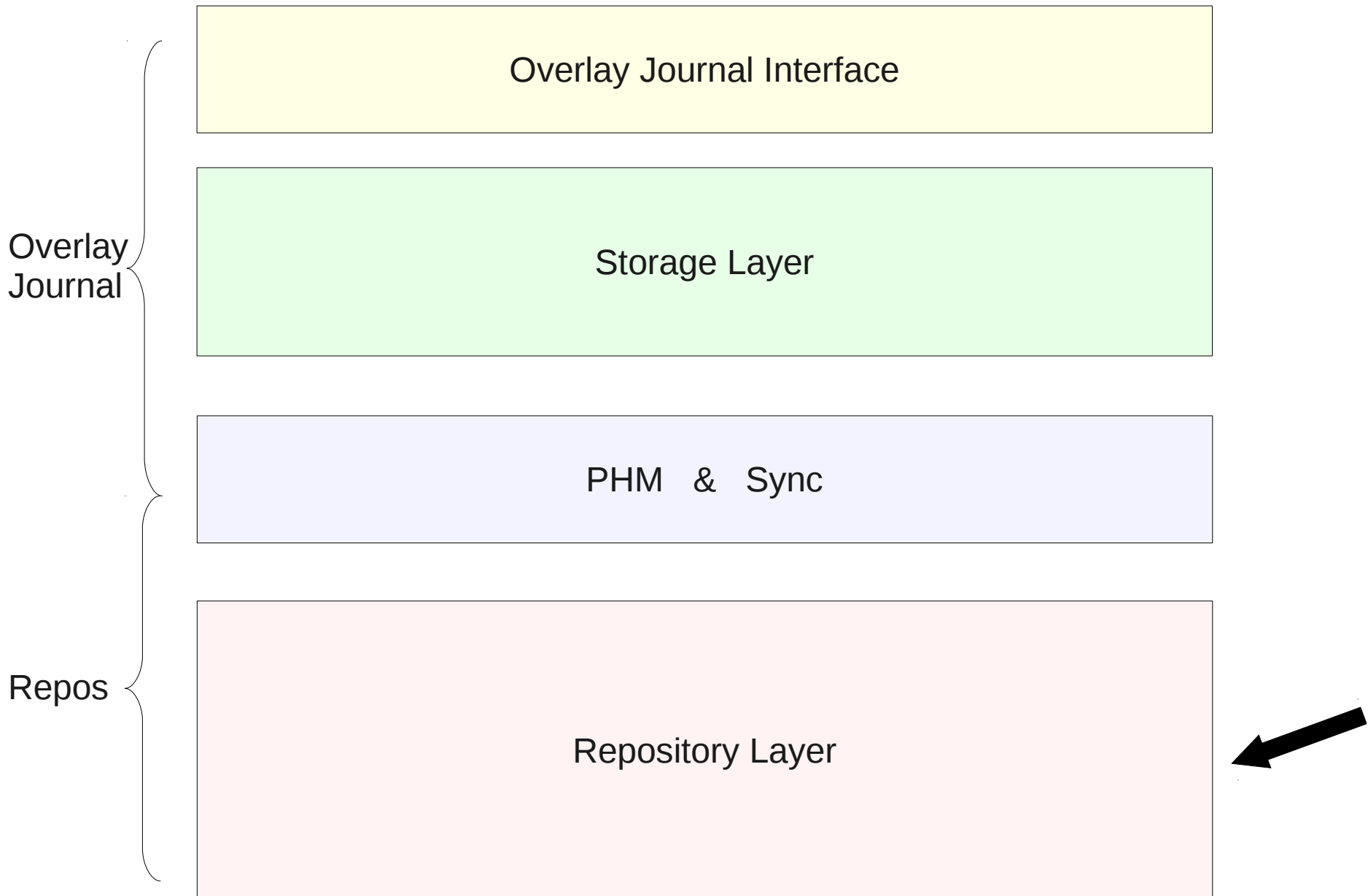


eco4r Data Model: A Sample

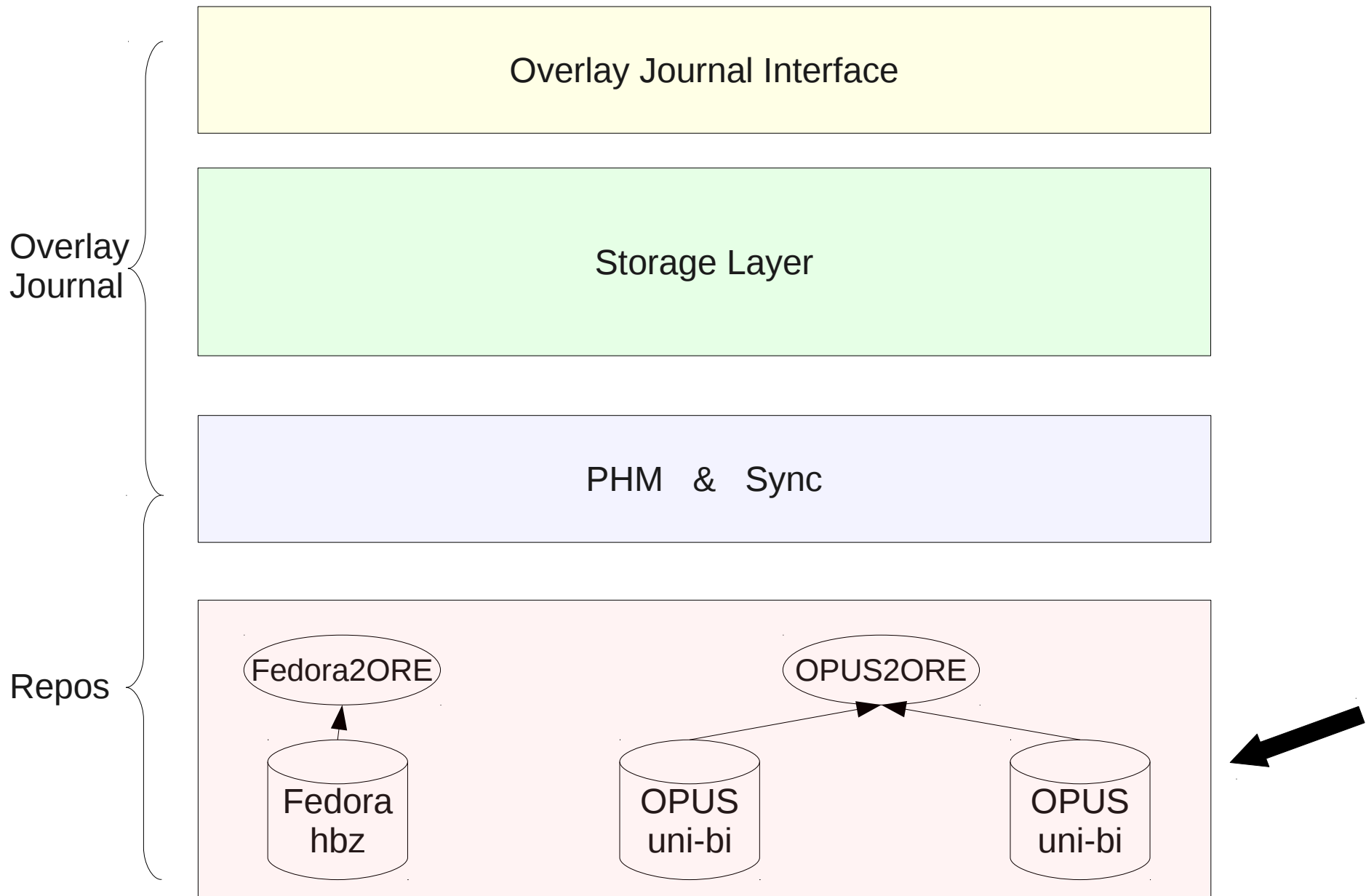


fabio:DigitalItem

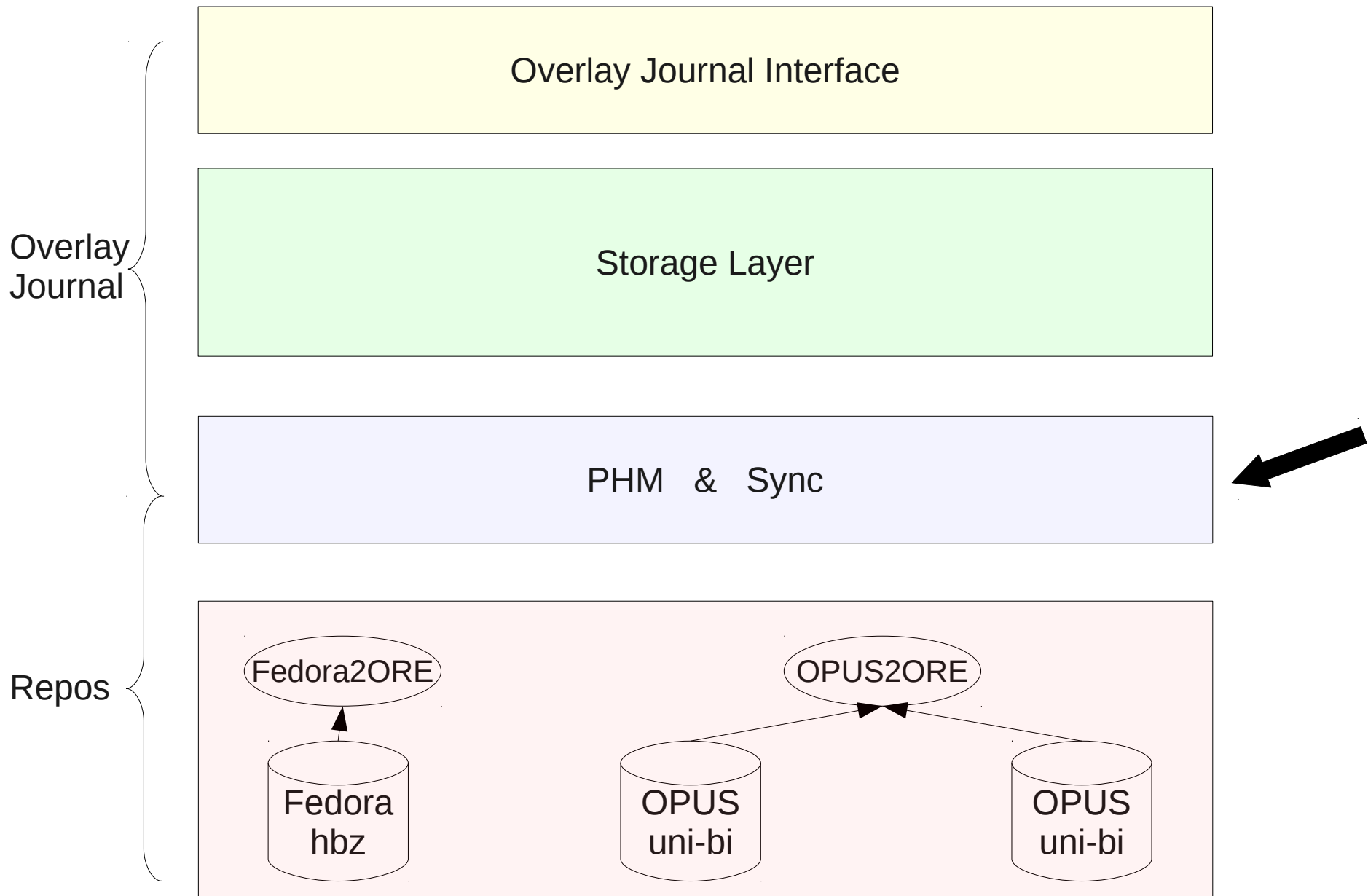
Overlay Journal: A Layered Architecture



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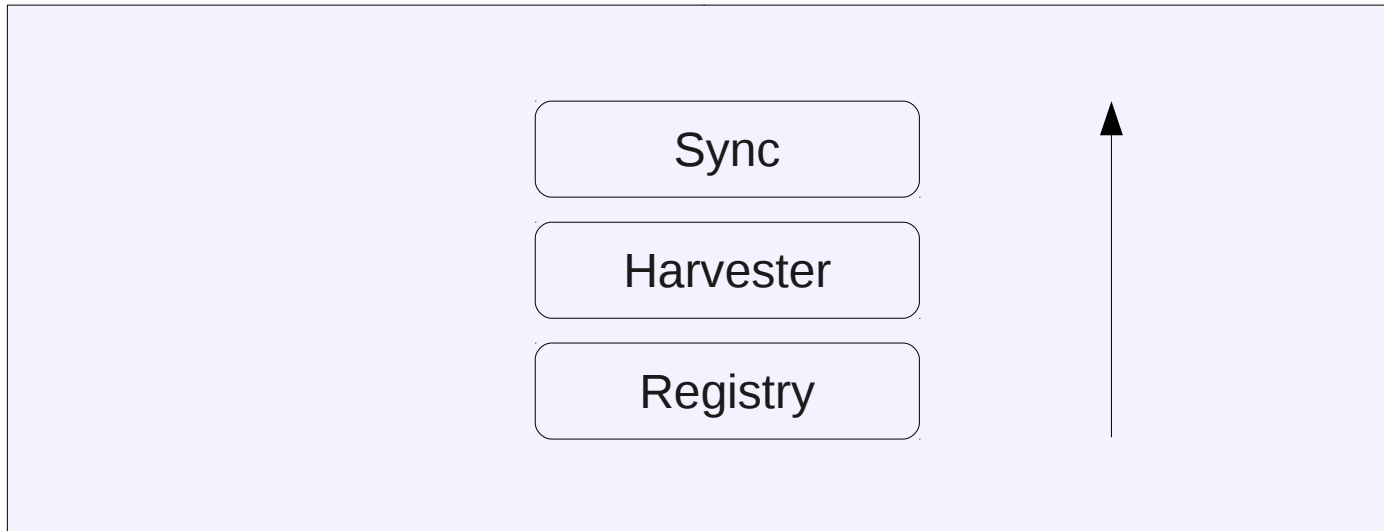


Overlay Journal: PMH & Sync

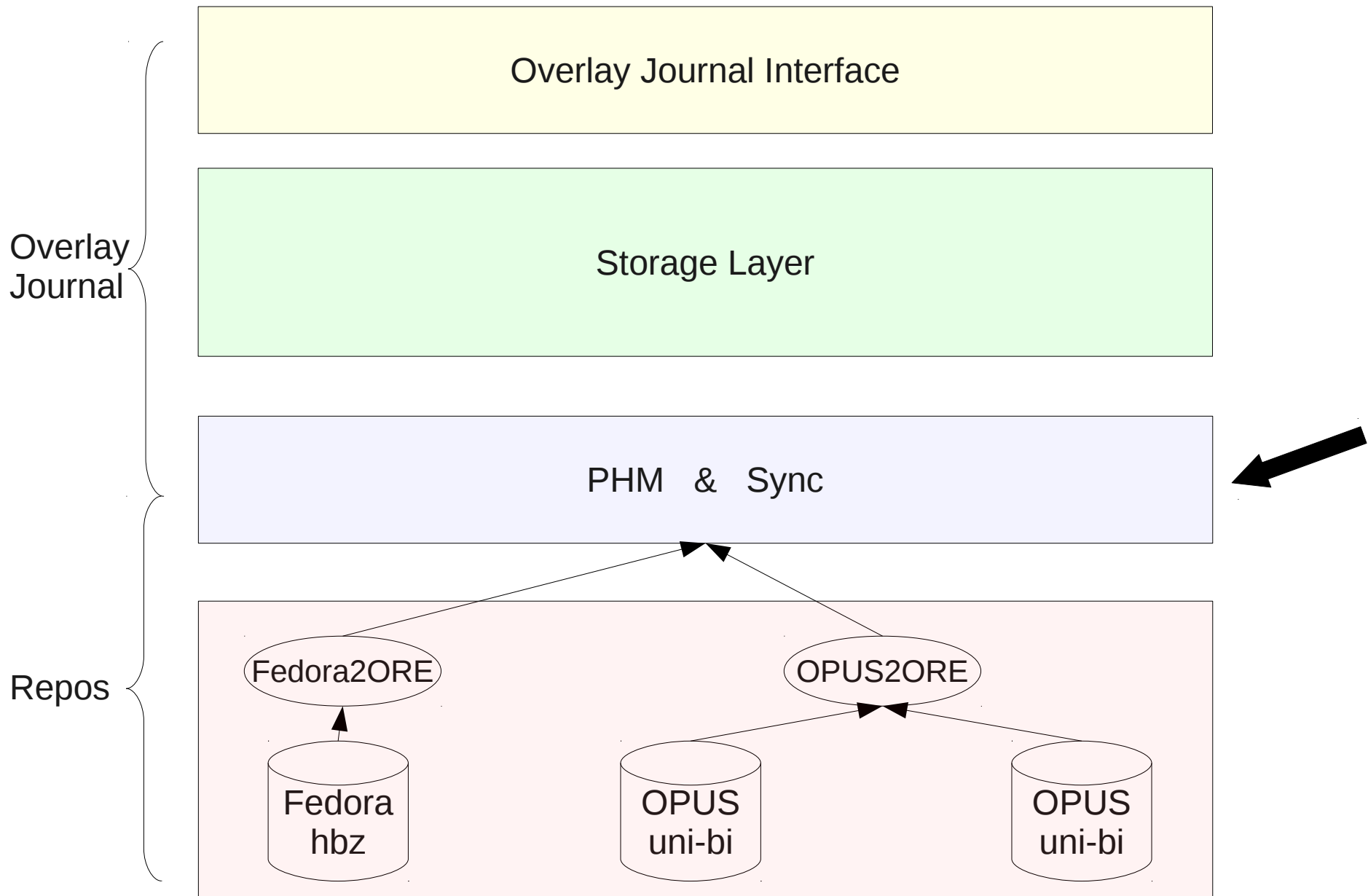


Overlay Journal: PMH & Sync

PHM & Sync



Overlay Journal: PMH & Sync



Overlay Journal: Storage Layer

Overlay Journal Interface

Storage Layer

PHM & Sync

Reps

Fedora2ORE

OPUS2ORE

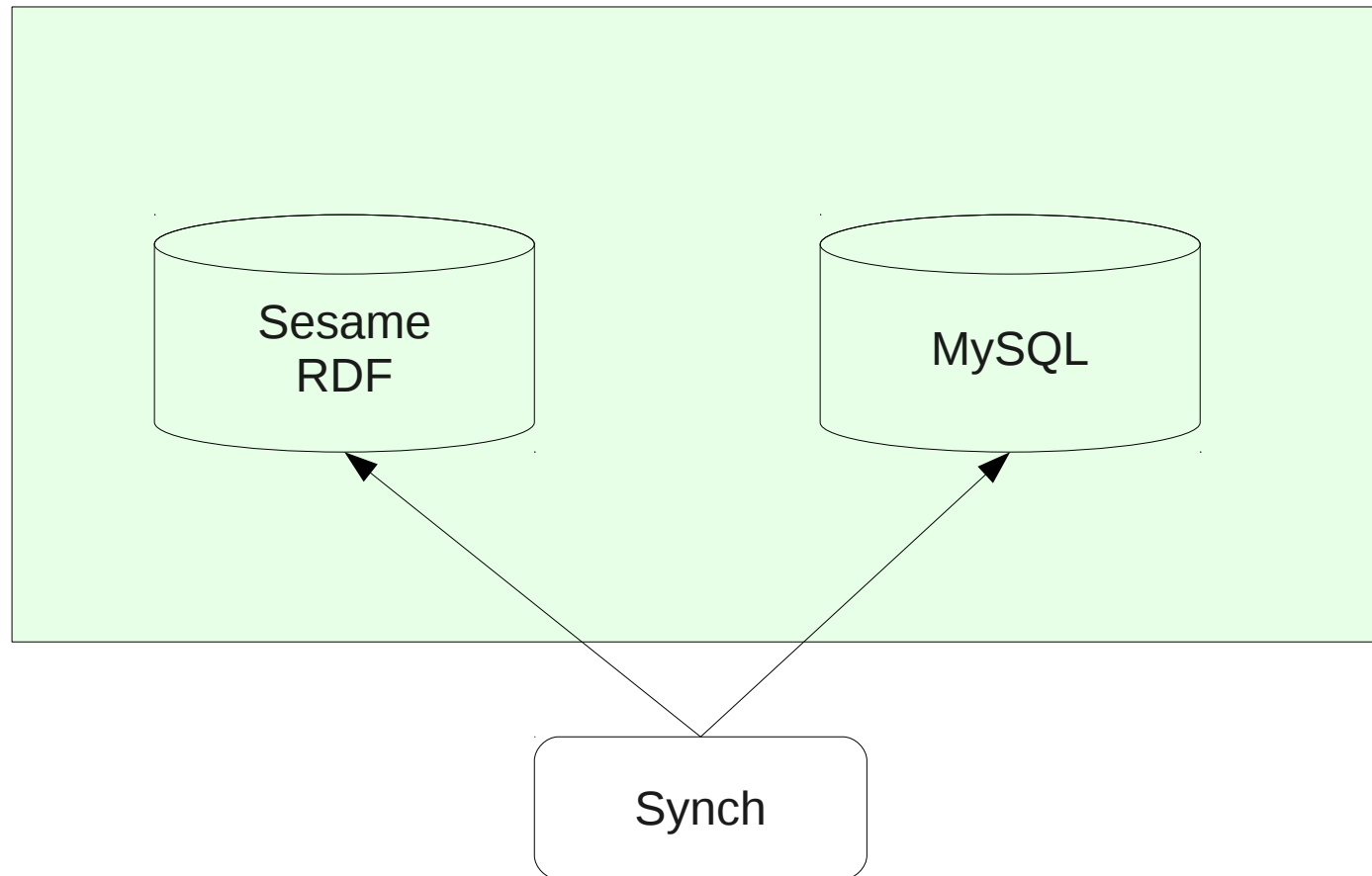
Fedora
hbz

OPUS
uni-bi

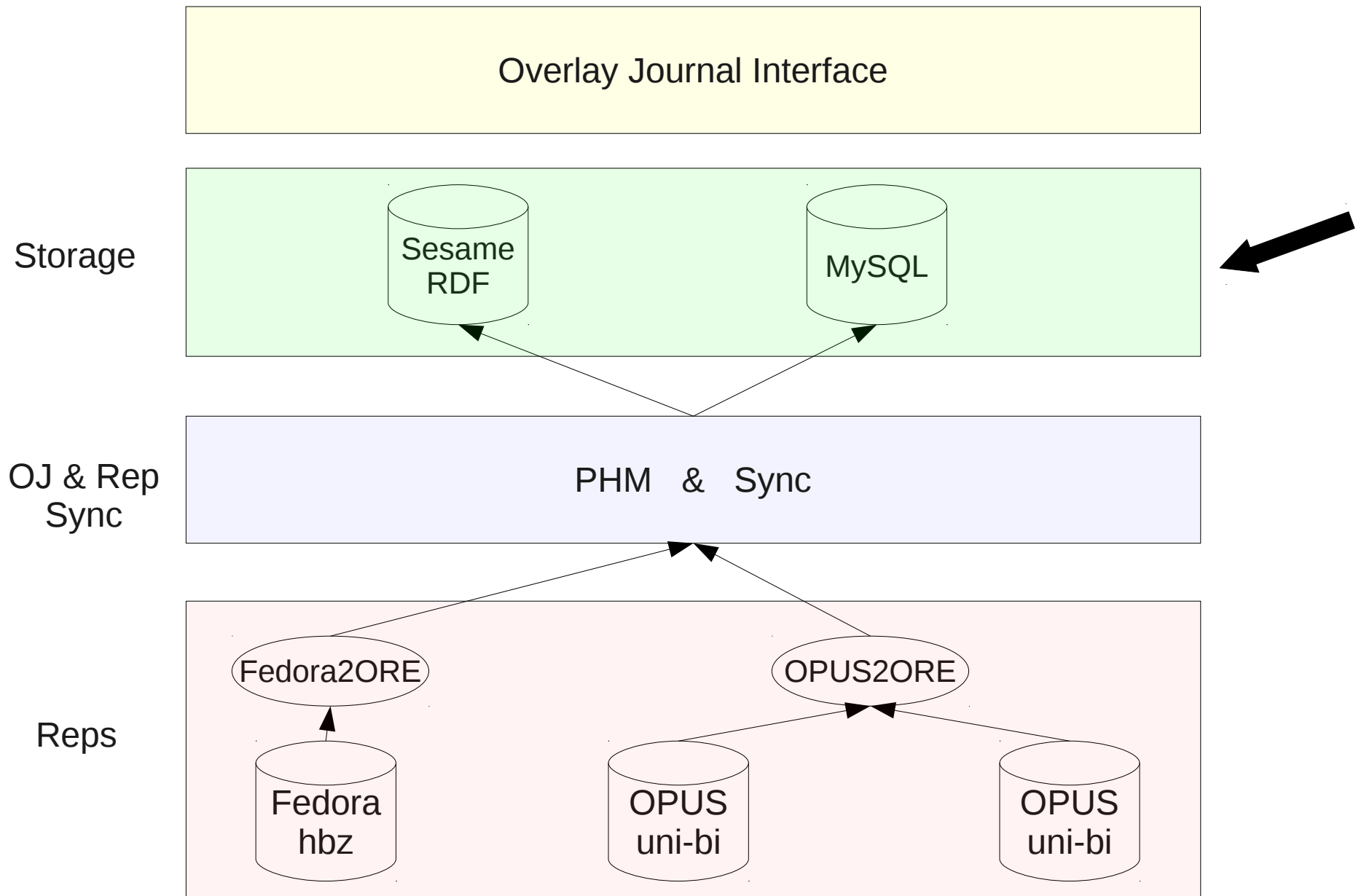
OPUS
uni-bi

Overlay Journal: Storage Layer

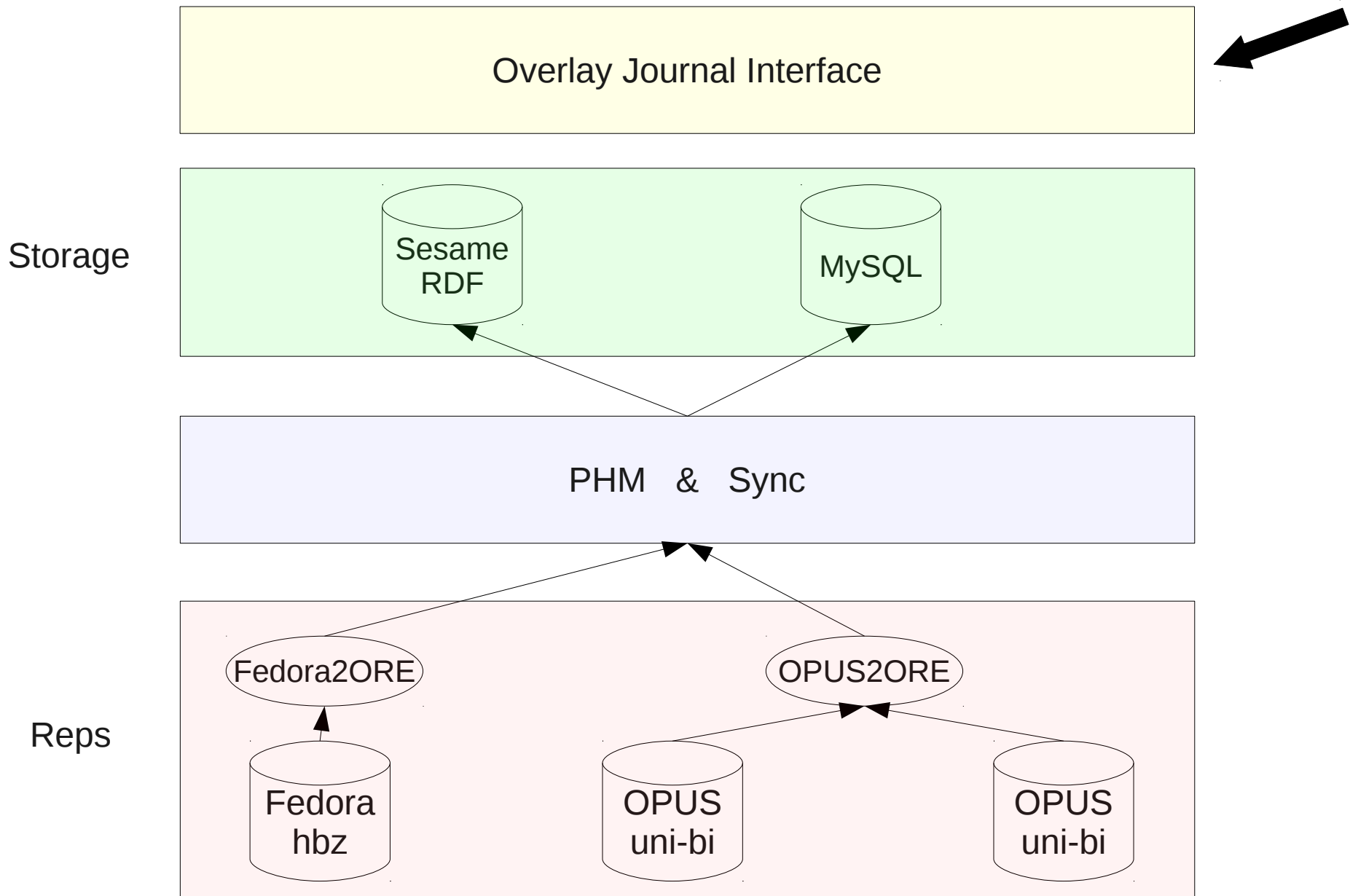
Storage Layer



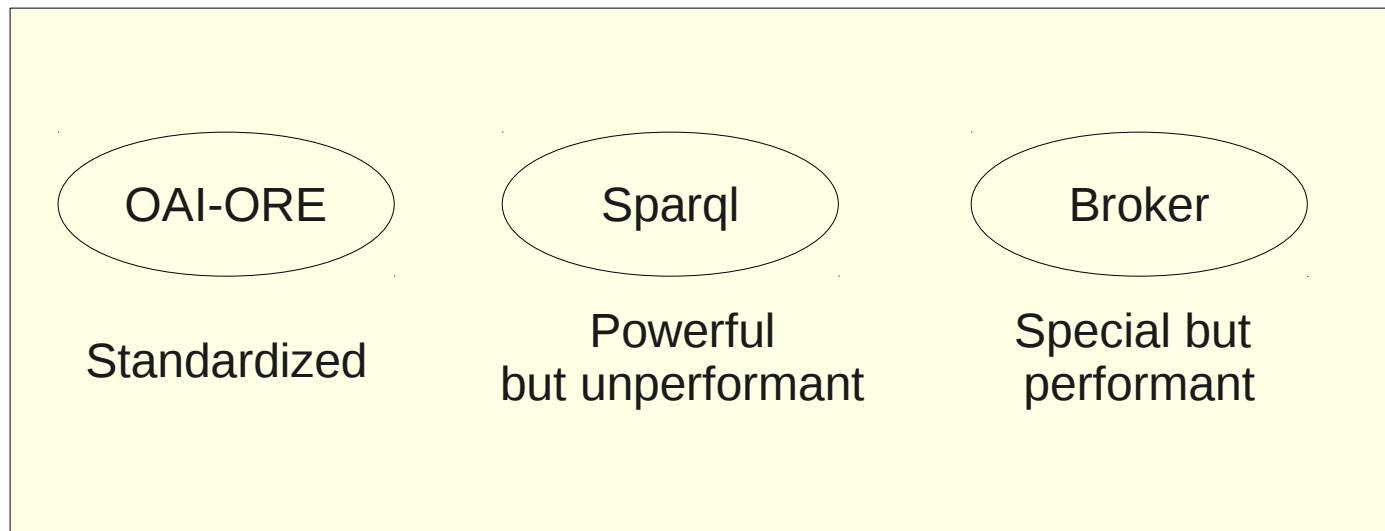
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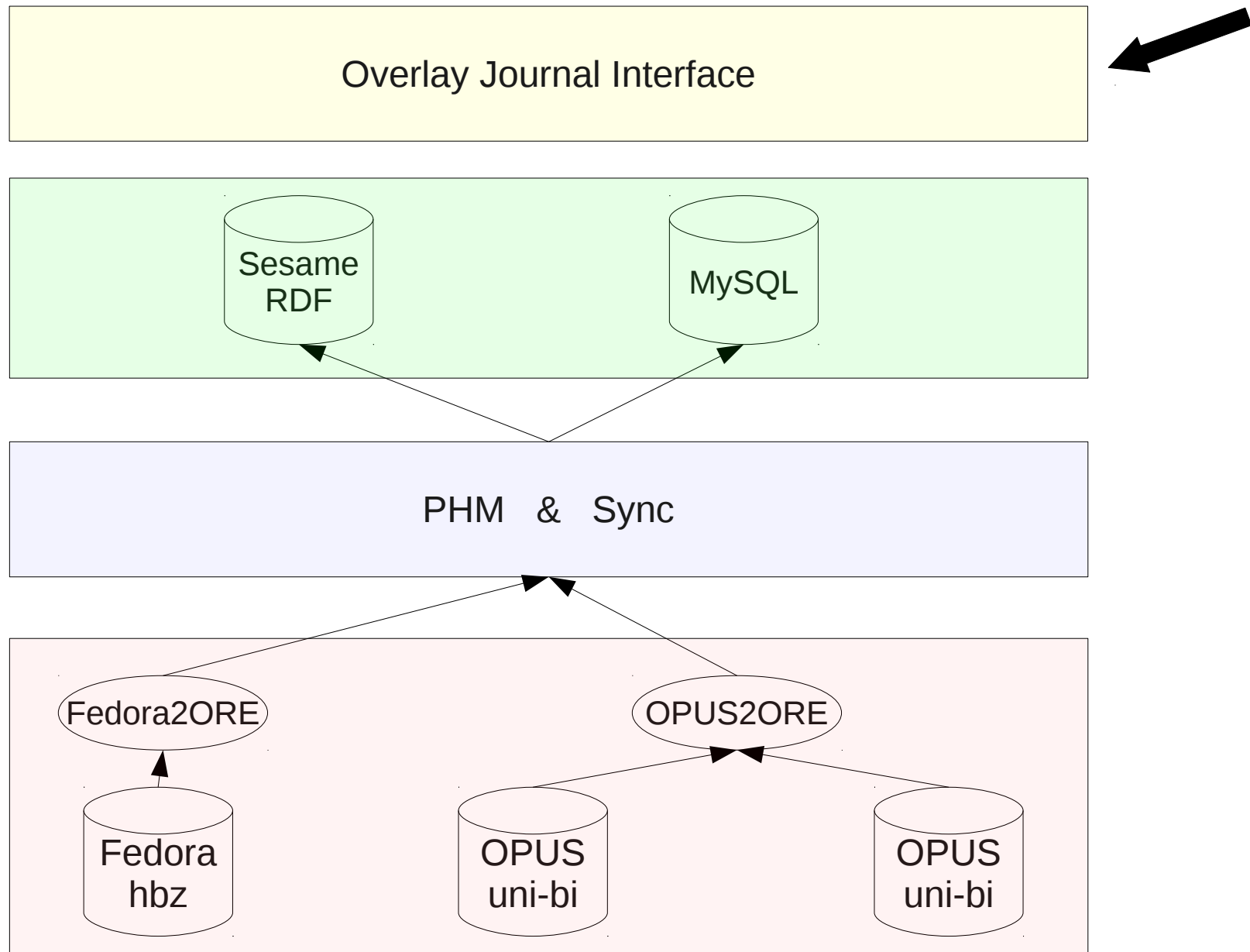
Overlay Journal: OJ Interface



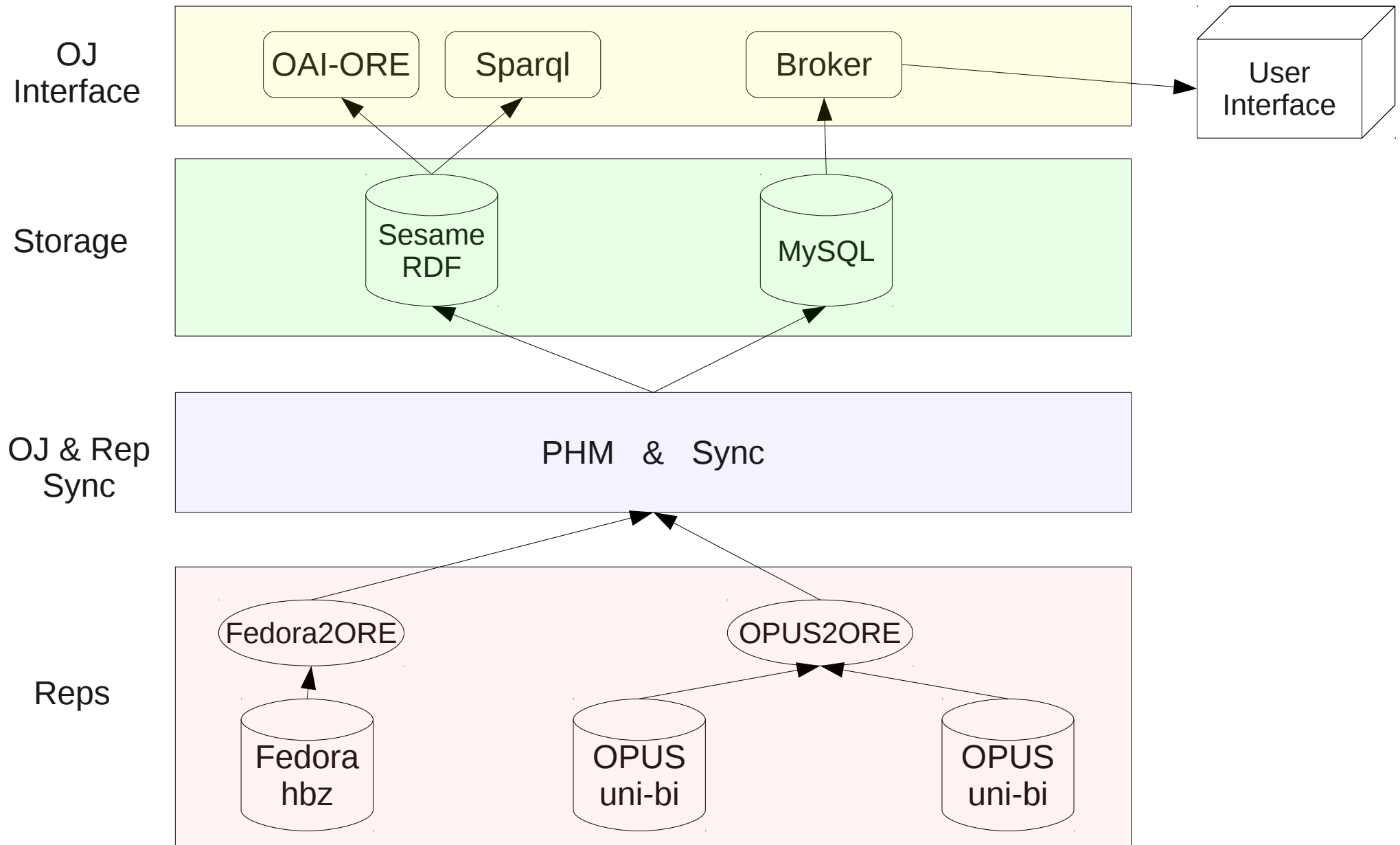
Overlay Journal: OJ Interface



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Overlay Journal: OJ Interface



Review

- Well, aggregating information from distributed repositories ist not extraordinary
- BUT! We achieved this goals using techniques like RDF and OAI-ORE
 - RDF data can be interoperably exchanged using standards
 - Data can be easier integrated in the Semantic-Web
 - Facilitates interlinking the data with external informations (authority Information, DBPedia ...)

Thank you