

From Asynchronous Exchange to Entity Sharing

The New Paradigms of the Bibliographic Workflow

BIBFRAME Workshop in Europe 2026, Barcelona,
8th September

Tiziana Possemato

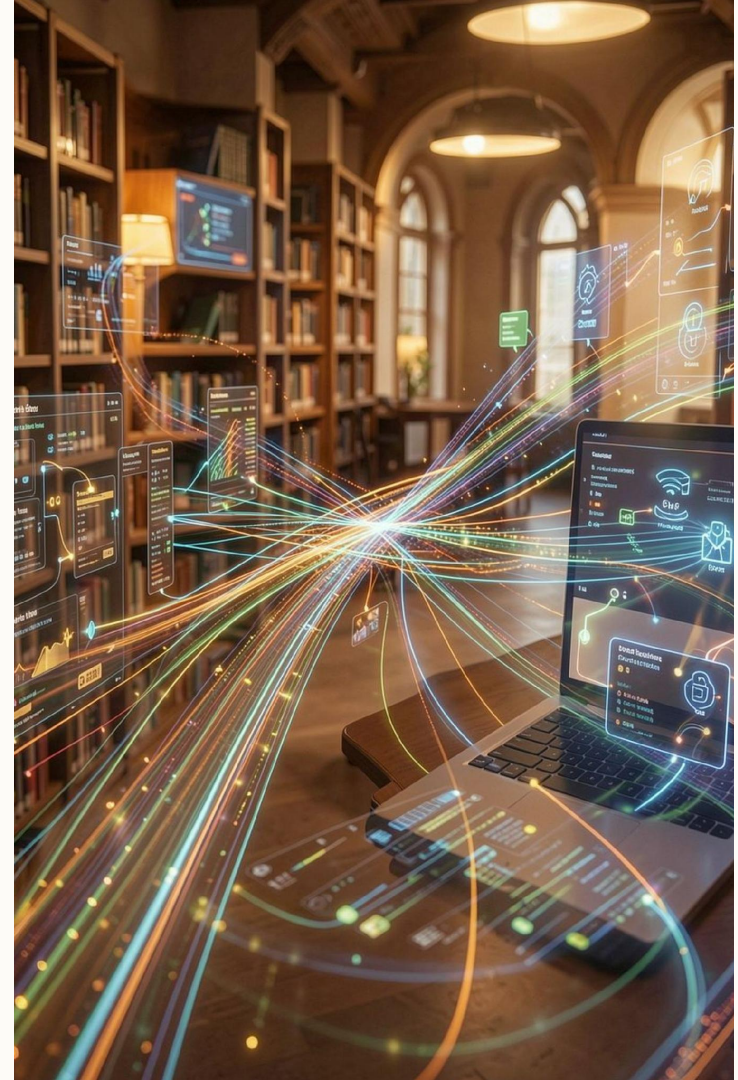
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Serena Cericola

Casalini Libri, Metadata Specialist





The Traditional Model: MARC as an Interoperability Technology

Export / Import of MARC Records

ILSs provide tools to extract bibliographic records from the local database, translating them into structured files according to the MARC standard, ready for transfer to other systems.

Querying via Z39.50

Catalogers query external institution catalogs directly, identify the matching bibliographic description, and download it in MARC format to integrate into their local system.

The Traditional Workflow: Transferring records

In both operational modes, catalogers retrieve a record to transfer it into their own cataloging environment. Interoperability is thus based on transferring record duplicated rather than direct entity sharing.



Export/Import

From ILS1 to a MARC file, then into ILS2.

Z39.50

Remote OPAC via Z39.50, imported MARC record.

Local Import

Files, in different formats (MARC, Onix and other) provided by external providers are loaded into local ILSs.

Both operational paths share the same logic: data is always duplicated and isolated in separate environments without direct integration between systems.

The Limitation of the Traditional Model: Interoperability without Integration

In the traditional record-based model, catalogers never work directly on remote data; they are bound to a linear flow in five sequential phases: search → retrieval → download → import → correction. This approach highlights a clear separation between interoperability and integration.

Asynchronous

Data must be physically transferred before it can be manipulated in the local system.

Record-Oriented

The exchange involves only the record, not the semantic entity it represents.

Duplication-Based

The same information is replicated and isolated across separate databases without synchronization.

Poorly Integrated

Systems exchange files but do not share the same workflow or operating environment.

Drivers of Change: Towards an Ecosystem of Interconnected Data



APIs

Enable direct, real-time interaction between different applications, eliminating file transfers.



JSON / XML / RDF

Standardize machine-readable structured data exchange and representation.



Ontologies & Vocabularies

Define shared, unambiguous semantics for consistent interpretation across systems.



Linked Open Data

Transform data into globally identifiable, linkable, and reusable resources via persistent URIs.

The New Paradigm: From Record to Entities

Traditional Flow (Obsolete)

Asynchronous chain of manual actions:

- Download
- Save
- Import
- Edit

New Collaborative Flow

Real-time logical operations:

- Search
- Identify
- Reuse
- Enrich
- Synchronize

Interoperability in JCricket: Two Operational Models

Inside the JCricket editor, interoperability takes shape through two distinct functions modeled on the cataloger's workflow. In both cases, cataloging becomes **synchronous**, **interactive**, and **bidirectional**.

1

Copy Cataloguing

Traditional mode querying the configured external ILS via API. Search and retrieval occur seamlessly within the same environment: catalogers analyze individual fields of a selected record and selectively copy useful data into the JCricket entity.

2

Search and Import with On-the-Fly Clustering

Queries the ILS via API and automates acquisition. The selected record transfers directly into JCricket's Cluster Knowledge Base (CKB), where an algorithm translates bibliographic data into relational entities based on BIBFRAME.

Copy Cataloging Function: Search and Selection

 ShareVDE

Dashboard

Explore
100 places in France every
woman should go

Simple search
100 places in France every
woman should go

Advanced search

Editor

Options ▾ ➔ 👤 ▾

Editor layout ▾ UND, ENG, + ▾ ✎ ▾

Find it via search

To view an entity here, open it through [explore](#) or [search](#) screens.

Open via ID

Open

Create new...

Agent	Opus	Bibliographic	Concept	Controlled vocabulary
Person	Original work	bf:Work	Date	
Family		Instance	Genre/Form	
Organization		Item	Topic	Content type
Conference			Place	Carrier type
			Event	Language
			Generic concept	

External integrations

Choose provider

ILS Lehigh ▾

Search across all fields

orient express

Search

"Agatha Christie's Murder on the Orient Express, [videorecording] / , Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet."

"Race," rights and the law in the Supreme Court of Canada : historical case studies
Walker, James W. St. G., 1940-, Osgoode Society for Canadian Legal History ([1997], [1997], ©1997)

(Re-)Claiming Bodies Through Fashion and Style : Gendered Configurations in Muslim Contexts.
Thimm, Viola (2021, ©2021)

.NET Design Patterns

Copy Cataloging Function: Selective Data Copying

ShareVDE

DashboardExploreSimple searchAdvanced searchEditor

"Agatha Christie's Murder on the Orient Express, [videorecording] /, Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet..."Options >> >>

Editor layout >UND, ENG, + >>>

External integrations >

Overview >

"Agatha Christie's Murder on the Orient Express, [videorecording] /, Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet...">>>>

This instance is currently not visible. Please link it to a work.

Metadata >Logs

Basic info

URI

https://dev.svde-lod.org/instances/1786357255165

Publication type

Title statements

Title

"Agatha Christie's Murder on the Orient Express, [videorecording] /, Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet...">>>>

English (ENG)

Contributors

Contributor

Publication attributes

Publication provision activity

"Agatha Christie's Murder on the Orient Express, [videorecording] /, Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet...">>>>

Admin Metadata >>>>

Titles >>>>

Title:

"Agatha Christie's Murder on the Orient Express, [videorecording] /, Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet...">>>>

Index Title:

"Agatha Christie's Murder on the Orient Express, [videorecording] /, Paramount Pictures ; EMI Film Distributors, Ltd. ; produced by John Brabourne and Richard Goodwin ; screenplay, Paul Dehn ; director, Sidney Lumet...">>>>

Copy to

Publication: 1786357255165 >>>>

< Go backDownloadImport >>>>

Automatic Record Import via Clustering On-the-Fly

Editor layout ▼UND, ENG, + ▼✎ ▼

Find it via search

To view an entity here, open it through [explore](#) or [search](#) screens.

Open via ID

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Agent	Opus	Bibliographic	Concept	Controlled vocabulary
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Family		Instance	Genre/Form	Content type
Organization		Item	Topic	Carrier type
Conference			Place	Language
			Event	
			Generic concept	

External integrations

100 places in France every woman should go

Admin Metadata

Titles

Title:
100 places in France every woman should go / Marcia DeSanctis.

Index Title:
100 places in France every woman should go

Alternative Title (undefined):
One hundred places in France every woman should go

Series

← Go backDownloadImport

The Four Entities created

Agent → DeSanctis... → "100 places in France every wom..." → 100 places in France every woman sho... → "100 places in France every woman should go..."

Opus → "100 places in France every wom..." → **Work** → 100 places in France every woman sho... → **Instance** → "100 places in France every woman should go..."

Publication ⓘ

100 places in France every woman should go

Online resource. Published in English in 2014 in Palo Alto by Travelers' Tales.

Publication statement

Palo Alto : Travelers' Tales, [2014]

©2014

ISBN: 9781609520830 - 1609520831

Series statement: 100 Places

Media type: Unmediated

LCCN: 2014045563

Responsibility statement: Marcia DeSanctis

[Borrow a copy at Library of Congress](#) ↗ Download ▾ More options ▾

Related agents

Filter agents... 🔍 Type

2 results

☐	No.	Name	Type	Start year	End year	Location	Relationship	⚙
☐	1	 DeSanctis, Marcia	Person				author	

The Four Entities created

Bibliographic records are **clustered on the fly**, saved in the CKB, and indexed in SOLR for Share portal searches. The process matches existing database entities automatically to reconcile or create new entities, eliminating duplicates and ensuring consistency.

This screenshot shows the 'Person' entity page for John Grisham. It includes a portrait photo, a brief biography, and a list of works. The 'Original works by' tab is selected, showing a table with one result: 'The Rooster Bar' by Grisham, John (author).

No.	Title	Year	Genre	Creators
1	The Rooster Bar			Grisham, John (author)

AGENT

Gathers actors responsible for creation/contribution: authors, publishers, translators, and other contributors.

This screenshot shows the 'Original work (Language)' entity page for 'Rooster Bar'. It lists the author as Grisham, John and the main title as 'The Rooster Bar'. The 'Publications of this' tab is selected, showing a table with one result: 'The Rooster Bar (Volume In English)' related to 'Rooster Bar, English, (Text)' by Grisham, John (author).

No.	Title	Year	Genre	Creators
1	The Rooster Bar (Volume In English)			Grisham, John (author)

OPUS

Represents the intellectual work, the highest level of conceptual abstraction, acting as the core node linking other entities.

This screenshot shows the 'The Rooster Bar' entity page. It includes a summary of the work, a list of related works, and a table of instances. The 'Instances of' tab is selected, showing a table with one result: 'The Rooster Bar (Volume In English)' related to 'Rooster Bar, English, (Text)' by Grisham, John (author).

No.	Title	Year	Genre	Creators
1	The Rooster Bar (Volume In English)			Grisham, John (author)

WORK

An entity representing the Work as materialized in a specific text, language, version, or revision.

This screenshot shows the 'The Rooster Bar' entity page. It includes a summary of the work, a list of related works, and a table of instances. The 'Instances of' tab is selected, showing a table with one result: 'The Rooster Bar (Volume In English)' related to 'Rooster Bar, English, (Text)' by Grisham, John (author).

No.	Title	Year	Genre	Creators
1	The Rooster Bar (Volume In English)			Grisham, John (author)

INSTANCE

Describes the physical or digital manifestation of the Work: edition, format, publisher, and publication details.

Managing Collaborative Work at Scale

 **ShareVDE**

Dashboard

Explore
100 places in France every woman should go

Simple search
100 places in France every woman should go

Advanced search

Notifications

Today (5)

⚡ Import: 100 places in France every woman should go / Marcia DeSanctis.
Updated: Thu, Sep 3, 2026, 9:52 AM
Import status: Completed
Clustering outcome: Updated

⚡ Import: 100 places in France every woman should go / Marcia DeSanctis.
Updated: Thu, Sep 3, 2026, 9:51 AM
Import status: Completed
Clustering outcome: Created

The Paradigm Shift

Traditional Copy Cataloguing Model	New Copy Cataloguing Model
Record copy	Sharing and reuse of entities
Separate databases	Interoperable systems
Export / Import	APIs and real-time integration
Asynchronous process	Synchronous interaction
Flat bibliographic record	Entities and relationships with external resources
Local cataloging	Connected cataloging
Duplicated data	Shared and linked data
Linear workflow	Interactive, bidirectional workflow

JCricket: to Integrate, Not to replace

From "Record Sharing" to "Data & Entity Sharing"

1

RECORD SHARING

Unidirectional, asynchronous records import/export, prone to duplication.

2

SYSTEM INTEROPERABILITY

Real-time API connectivity breaks down silos.

3

ENTITY & DATA SHARING

Linked data sharing enables bibliographic entities to be reused across systems.

ILS/LSP

JCricket integrates with ILSs like FOLIO and Alma, allowing them to manage cataloging and administration while maintaining operational control over local collections and internal workflows.

Multi-Editors Support

JCricket workflows can be combined with other editors and applications, such as Sinopia, Marva, Wikidata.

A unique library ecosystem

Millions of bibliographic and authority data entries from various institutions are shared and interconnected instantly, creating an unprecedented *knowledge network*.

The challenge: A New Dimension in Metadata Quality

When entities become shared resources edited by many institutions simultaneously, metadata quality also depends on how the community governs collaborative editing.

JCricket evolved into a collaborative workspace where governance questions became visible, were discussed, and translated into operational Best Practices.



A Broader Governance Framework

In this context, various governance scenarios can emerge, which require the application of targeted Best Practices concerning:

- Adding information
- Replacing a value
- Managing multiple values
- Evolving controlled vocabularies
- Protecting contributions made by other institutions
- Merge and split policies
- Removing relationships
- Selecting authoritative external sources

The real challenge concerns responsibility, transparency, provenance, and the coordination of decisions within a community.

Governance should be recognised as a fundamental dimension of bibliographic infrastructure.





JCRICKET

Entity Editor



Thank you!

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