

The NISO ERM Data Standards and Best Practices Review: A Midterm Report

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The DLF Electronic Resource Management Initiative, Phase I

Electronic Resource Management:
 Report of the DLF Electronic Resource Management Initiative

August 2004

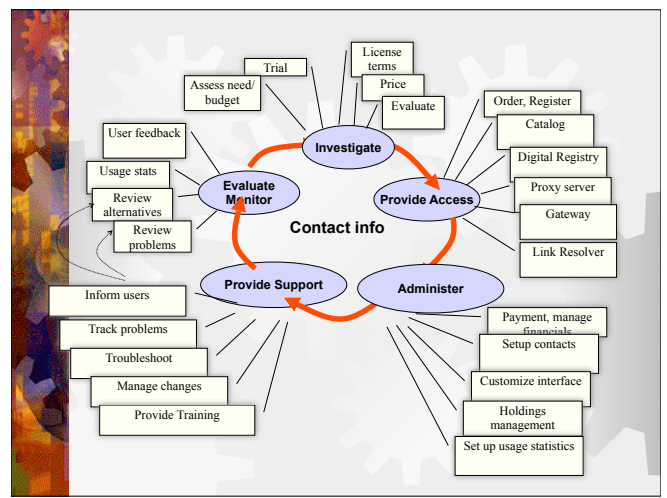
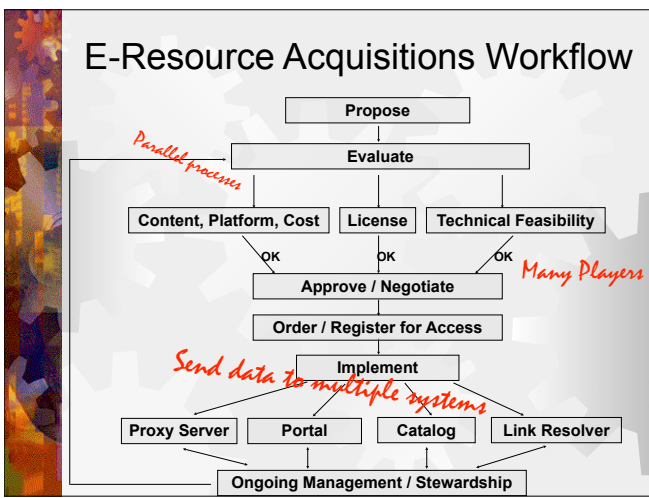
Timothy D. Jewell, Ivy Anderson, Adam Chandler, Sharon E. Fieb, Kimberly Parker, Angela Riggio, and Nathan D. M. Robertson

ERMI Goals

1. "Develop common specifications and tools for managing the license agreements, related administrative information, and internal processes associated with collections of licensed electronic resources"
2. Describe architectures needed for electronic resource management
3. Foster systems development
4. Promote best practices and standards
<http://www.diglib.org/standards/dlf-erm02.htm>

Functional Requirements

1. Support the 'Life Cycle' of electronic resources:
 - ✓ Selection and acquisition
 - ✓ Access provision
 - ✓ Resource administration
 - ✓ User support and troubleshooting (staff and end-users)
 - ✓ Renewal and retention decisions



The DLF ERM 2004 Report

1. Relationships (*Data Model*)
 - ✓ Packages and their constituent parts
 - ✓ Knowing which resources share the same interface, license terms, business terms...
2. Information (*Data Dictionary*)
 - ✓ License permissions and constraints
 - ✓ User IDs, passwords, administrative info
 - ✓ Contacts for support and troubleshooting
 - ✓ Cancellation restrictions, price caps, etc.
3. Workflows (*Functional Requirements*)
 - ✓ Mounting Trials
 - ✓ Routing Licenses
 - ✓ Placing Orders
 - ✓ Implementing access
 - ✓ Notifying relevant staff



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ERMI Successes

1. Articulated the relationships among licenses, resources, packages, providers, and platforms
2. Fostered recognition that licenses and related metadata had to be properly managed
3. Spawned the development of systems to manage e-resource information
 - ✓ "If last year's hot product was federated searching, then 2004 belongs to electronic resources management (ERM)" and of the impact of the DLF ERM documents: "in a nearly unprecedented move, nearly every large automation vendor has used the specifications created by librarians."

Andrew Pace, *American Libraries*, 2004

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But . . .

ERMI was not a Standard

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And we've seen:

- Abandoned vendor development projects
- Slow, difficult, partial and/or failed implementations
- Recent conference ERM program themes:
 - ALA: "Promise and Disappointment"
 - ICOLC: "What Went Wrong?"

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And:

- Tough economic times
 - Libraries need to be more efficient
 - But ERM purchase decisions delayed or shelved
 - Vendor development constraints
 - Push to open source development
 - ERMes, CORAL
 - Push to "network level" sharing
 - Distributed print repositories ("DPR's")
 - Consortial Patron Driven E-book Buying
 - ILL optimization

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Can further ERM data standards and best practice development help?

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Why Standards?

1. Reduce re-keying
2. Reduce maintenance cost & disruption
3. Durability of data
4. Avoid supplier lock-in
5. Easier development path
6. Platform for collaboration
7. Whole system economies

Source: "The Business Case for Standards" (JISC)

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Learning from ERMI, SUSHI, CORE, etc.

- Comprehensiveness is difficult
 - To describe
 - To build and implement
 - Example: e-metrics
 - Many useful sources, multiple views needed
- E-resources and markets change quickly
- Small-scale development works
- Data sharing is necessary

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Standards vs. Best Practices?

1. NISO Standards
 - ✓ Balloted
 - ✓ Examples: MARC, ONIX-SOH, Z39.50
2. Formally Designated Best or Recommended Practices
 - ✓ Examples: KBART, SERU
3. "Local" Best Practices

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Midwinter 2009 ERM Gap Analysis Focus Group Takeaways 1

1. Libraries need help with workflows and best practices
2. Existing ERM Systems
 - ✓ Under-developed
 - ✓ Need more functionality
 - import / export data,
 - support everyday business activities / functions
3. Data exchange is critical

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Takeaways 2: Standards

1. ERMI data model still important
2. Data dictionary key to functionality and interoperability
3. License elements / values need simplification
 - ✓ ONIX-PL may or may not serve library needs
4. Vendor and product identity management is a major problem:
 - ✓ represent vendor-resource-holdings relationships
 - ✓ manage resources and holdings in standardized, shareable way

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The NISO ERM Data Standards and Best Practices Review: the "Plan"

1. Perform a 'gap analysis' regarding ERM-related data, standards, and best practices
2. Begin with review of ERM data dictionary, mapping elements to other relevant standards projects
3. Consult with vendors, libraries using ERM systems and other stakeholders for additional feedback on data requirements and ERM system implementation and management issues.
4. More information at:
 - ✓ <http://www.niso.org/workrooms/ermreview>
 - ✓ http://www.niso.org/apps/group_public/workgroup.php?wg_abbrev=ermreview

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Gap Analysis Working Group

1. Ivy Anderson (CDL, co-chair)
2. Tim Jewell (UW, co-chair)
3. Jeff Aipperspach (Serials Solutions)
4. Deberah England (Wright State)
5. Rafal Kasprowski (Rice)
6. Bob McQuillan (Innovative Interfaces)
7. Tim McGeary (Lehigh)
8. Angela Riggio (UCLA)

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The NISO ERM Data Standards and Best Practices Review: Deliverables

1. Recommend future of ERMI Data Dictionary
2. Describe typical challenges libraries face in using currently available ERM systems and services
3. Identify gaps in interoperability and best practices

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Survey Work Plan

1. Assimilate recent ERM survey work
2. Identify major topics to focus on
3. Possibilities:
 - ✓ System implementation problems
 - ✓ Workflows, internal communication
 - ✓ Licensing
 - ✓ Consortial services
 - ✓ Cost per use/evaluation
 - ✓ Ebooks

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ERMI "Mapping" Strategy

1. Work from related standards and best practices
2. Determine correspondence, overlap
3. Compare meanings, uses
4. Determine whether ERMI data dictionary should address, or relevant standard (w/ revisions) sufficient to address ERM needs

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Current E-Resource Standards Landscape

E-RESOURCE MGMT FUNCTIONS	STANDARDS - EXISTING OR IN DEVELOPMENT										PROJECTS / BEST PRACTICES				
	DLF-ERMI	MARC	ONIX-SOH	ONIX-PL	Shibboleth	COUNTER/SUSHI	CORE I2	VCARD/DOI	KBART	SERU	TRANSFER				
Selection & evaluation	•														
Acquisitions & invoicing															
Access provision	•	•			•										
Configuration and setup	•														
Discovery / public access			•												
License information	•				•										
Access maintenance	•														
Title and vendor changes			•	•											
Usage monitoring	•														
Renewals	•														
Problem resolution															
Contact management	•														
Workflow management	•														

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Standards & Best Practice Categories

1. Link resolvers and knowledge bases
2. The Work, manifestations and access points
3. Integration of usage & cost-related data
4. Coding license terms & defining consensus
5. Data exchange using institutional identifiers

Source: R. Kasprowski: "Best Practice & Standardization Initiatives for Managing Electronic Resources," *ASIST Bull.*, Oct/Nov 2008 (v. 35 no. 1, pp. 13-19)

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Standards & Best Practices Group 1: Link resolvers & knowledge bases

1. OpenURL (deferred)
2. KBART (**K**nowledge **B**ases and **R**elated **T**ools)
3. IOTA (**I**mproving **O**penURLs **T**hrough **A**nalytics)

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Group 1: OpenURL

1. Status
 - ✓ ANSI standard Z39.88, OCLC is maintenance agency
2. Recommendations

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Group 1:



1. Status:

- ✓ Is NISO Recommended Practice **RP-9-2010**, approved Jan. 2010
- ✓ Entering phase 2, recent endorsements

2. Recommendations:

- ✓ Incorporate these KBART elements into ERMI:
 - date_first_issue_online; num_first_vol_online; num_first_issue_online
 - date_last_issue_online; num_last_vol_online; num_last_issue_online

➔ Fully Endorse

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Group 2: The Work, manifestations and access points

1. MARC
2. ONIX for Serials
 - ✓ SOH (Serials Online Holdings)
 - ✓ SPS (Serials Products and Subscriptions)
 - ✓ SRN (Serials Release Notification)
3. Project Transfer
4. DOI and CrossRef (deferred)

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Group 2: MARC

1. Status: ANSI/NISO Z39.2, established in 1960's (Machine Readable Cataloging)
2. Comments & Recommendations:
 - ✓ ERMs should better utilize ERMI elements:
 - Electronic Resource Title Continues
 - Electronic Resource Title Continued By
 - Uniform Title
 - ✓ ERMI should track changes in online hosting, platforms and/or providers

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Group 2: ONIX for Serials

1. Status:
 - ✓ EditEUR/NISO partnership
 - ✓ 3 sets of application messages defined and/or piloted, each with outline specification, XML schema, and HTML doc.
2. Recommendations:
 - ✓ Incorporate many ONIX values into ERMI:

Standard	Adopt ONIX	Doesn't Map/NA	Ontological Differences
Products & Svcs.	8	12	7
Release Notific.	17	13	6
Online Holdings	3	12	6

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Group 2: TRANSFER

1. Status:

- ✓ Code of Practice V. 2.0 released Sep. 2008
- ✓ ~34 participating publishers, as of Sep. 2010

2. Recommendations:

- ✓ Incorporate some form of these elements into ERMI:
 - Archiving arrangement for backfile content, transferring & receiving publisher
 - COUNTER Compliancy, change on transfer
 - Online subscription type
 - Re-registration activation code
 - URLs for re-registration and backfile content archive
 - First and Last online volume/issue

➔ Fully Endorse

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Group 2: Possible Future Consideration

1. ISBN-13
2. ISSN-L
3. ISTC
4. NISO Recommended Practice for the Presentation and Identification of E-Journals

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Group 3: Integration of usage & cost-related data

1. COUNTER

- ✓ *Counting Online Usage of Networked Electronic Resources*

2. SUSHI

- ✓ *Standardized Usage Statistics Harvesting Initiative Protocol*

3. CORE

- ✓ *Cost of Resource Exchange Protocol*

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Group 3: COUNTER & SUSHI

1. Status:

- ✓ COUNTER well-established (Mar. 2002+)
- ✓ SUSHI = ANSI/NISO Z39.93-2007
www.niso.org/workrooms/sushi
 - COUNTER Rel. 3 requires ability to send reports via SUSHI
 - NISO will maintain COUNTER XML report schema so SUSHI & COUNTER schemas always in sync.

2. Recommendations

- ✓ Refer to but don't incorporate into ERMI
- ✓ Future systems should accommodate both

➔ Fully Endorse

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Group 3: CORE

1. Status:

- ✓ NISO Recommended Practice (RP-10-2010)
www.niso.org/workrooms/core

2. Recommendations:

- ✓ Add to ERMI: Access and Payment period begin and end dates
- ✓ Clarifications to CORE:
 - Names & Identifiers (OrderID, ProductID, Vendor/Institutional ID, etc.)
 - Requester, Responder, Medium, Platform

➔ Fully Endorse

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Standards & Best Practices Group 4: Coding license terms & defining consensus

1. ONIX-PL (**ONIX** for **P**ublications **L**icenses)

2. SERU (**S**hared **E**lectronic **R**esource **U**nderstanding)

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Group 4: ONIX-PL

1. Status:

- ✓ Issue 2 of ONIX-PL Dictionary released April 2010
- ✓ EditEUR committed and promoting
 - Mark Bide reports strong UKSG workshop attendance but uptake seems low so far
- ✓ Problems
 - OPLE editor not yet web-enabled
 - JISC/RELI license markup project seems stalled
 - NISO/EDITEUR ONIX-PL working group disbanded

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Group 4: ONIX-PL

1. ONIX-PL vs. ERM:

- ✓ ONIX-PL
 - Elegant, open-ended development environment
 - Uses value "qualifiers"
 - 15 usage and 26 general terms have no ERM equivalent
 - Too granular for libraries?
- ✓ ERM
 - Allows "interpreted" values, but no development path
 - Extensive reliance on notes (good and bad)

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Group 4: ONIX-PL

✓ Comments and Recommendations:

- ONIX-PL seems a better, more robust long-term approach
- Important to retain ERM permission values lost
 - Permitted (interpreted)
 - Prohibited (interpreted)
 - Not Applicable
- Focus on usage permissions and prohibitions
 - Possible to encode ERM interpreted permissions in ONIX-PL?

➡ Endorse with reservations?

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Group 4: SERU

1. Status:

- ✓ NISO Recommended Practice: (RP-7-2008)
www.niso.org/workrooms/seru

2. Recommendations:

- ✓ Key difference: meant to be open to interpretation
- ✓ Incorporate some form of the following into ERM:
 1. content additional to subscription
(Element that could have use in ERM)
 - *2a. trusted third party (under "Archiving & Perpetual access")
 - *2b. third party archive (under "Archiving & Perpetual access")
(See Transfer)

➡ Fully Endorse

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Standards & Best Practices Group 5: Data exchange using institutional identifiers

1. I² (Institutional Identifiers)
2. Vcard
3. Shibboleth

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Group 5: I²

1. Status:

- ✓ Working group formed 2008; 2d phase just begun
www.niso.org/workrooms/i2
 - Collaboration with ISNI being pursued
 - Release no earlier than Dec. 2011?

2. Recommendations:

- ✓ Incorporate I² Institutional ID elements into ERM
- ✓ Once registry operational, libraries may want to
 - create a record to store the registry's information
 - put mechanism (i.e., tickler or alert) in place to ensure their information updated annually

➡ Fully Endorse

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Group 5: Vcard

1. Status:

- ✓ Version 2.1 “widely supported by e-mail clients”
- ✓ Version 3.0 “is an IETF standards-track proposal”

2. Comments & Recommendations:

- ✓ Recording, maintaining contact info important and problematic
- ✓ Vcard structure simple but functional & flexible
- ✓ Add Vcard-structured name field to ERMI?

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Group 5: Shibboleth

1. Description & Status:

- ✓ Is a “standards based, open source software package for web single sign-on across or within organizational boundaries.”
- ✓ Uses Security Assertion Markup Language (SAML) to enable an Identity Provider and Service Provider to exchange information
- ✓ IdP version 2.2.0 released Sept 23, 2010

2. Comments and Recommendations:

- ✓ Most SAML elements map to ERMI, but for different purposes
- ✓ No need to expand ERMI, but more standardization needed to ID users?

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Summing Up: working well

Group 3: Usage & cost-related data

- ✓ COUNTER
- ✓ SUSHI

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Summing Up: low-hanging fruit?

Group 1: Link resolvers and knowledge bases

- ✓ KBART

Group 2: The Work, manifestations and access points

- ✓ MARC
- ✓ ONIX for Serials (SOH, SPS, SRN)
- ✓ TRANSFER

Group 3: Usage & cost-related data

- ✓ CORE

Group 5: Institutional identifiers

- ✓ I²
- ✓ Vcard

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Summing up: still needs work

Group 4: Coding license terms

- ✓ ONIX-PL
- ✓ SERU

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Summing up: review needed?

1. OpenURL
2. DOI and CrossRef
3. IOTA (Improving OpenURLs Through Analytics)
www.niso.org/workrooms/openurlquality
4. ISBN-13
5. ISSN-L
6. ISTE
7. NISO Recommended Practice for the Presentation and Identification of E-Journals -- PIE-J
www.niso.org/workrooms/piej

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Strategic Direction for ERM Data Standards?

1. We need more:

- ✓ Modularity, specialized applications
- ✓ “Light weight”, open-ended, flexible standards
- ✓ Efficient data sharing and transport
- ✓ Flexible, dynamic structures for “knitting” pieces together where needed
- ✓ Clear relationships among ERM standards
 - A “NISO ERM Best Practices Framework?”

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Draft work plan to completion

1. By Dec. 31st, 2010

- ✓ Further assimilate mapping results
- ✓ Further review past surveys on ERM issues
 - consider & implement supplemental work
- ✓ Draft Report

2. By March 31st

- ✓ Present at ALA midwinter, ER&L
- ✓ Refine, complete report & rec's

3. By July 2011

- ✓ Present at NASIG, ALA

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For more information . . .

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