Next Generation Repositories Scaling up repositories to a global knowledge commons

Kathleen Shearer, Eloy Rodrigues, Andrea Bollini, Alberto Cabezas, Donatella Castelli, Les Carr, Leslie Chan, Chuck Humphrey, Rick Johnson, Petr Knoth, Paolo Manghi, Lazarus Matizirofa, Pandelis Perakakis, Jochen Schirrwagen, Tim Smith, Herbert Van de Sompel, Paul Walk, **David Wilcox,** Kazu Yamaji



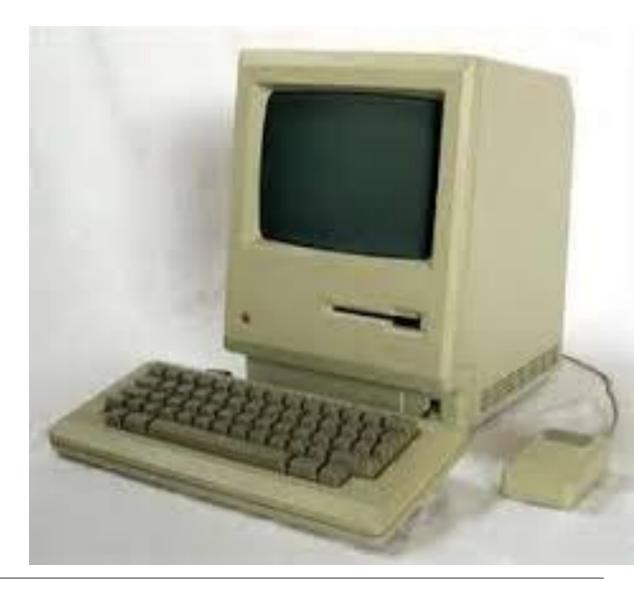


The current scholarly communication system is broken



COAR's Vision

A global knowledge commons based on a network of open access repositories But... repository systems are using <u>old</u> technologies developed over 15 years ago that do not support the functionalities we need.



Next Generation Repositories

Major strategic priority for COAR

Working Group launched in April 2016

Aim: to identify functionalities and architectures for the next generation repositories within the context of scholarly communication



Next generation repositories working group

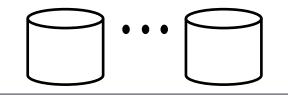
The aim of this activity is to develop a **global network** of repositories that allows **frictionless access** to open content and encourages the creation of **cross-repository added-value services**.

Current repositories

Services we can develop with repositories today **Conceptual layer** Batch disco very Metadata

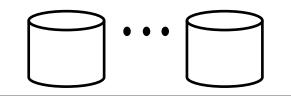
Interoperability

Persistence layer



Current repositories

Services we can develop with repositories today **Conceptual layer** Batch disco erv Metadata Interoperability Persistence layer

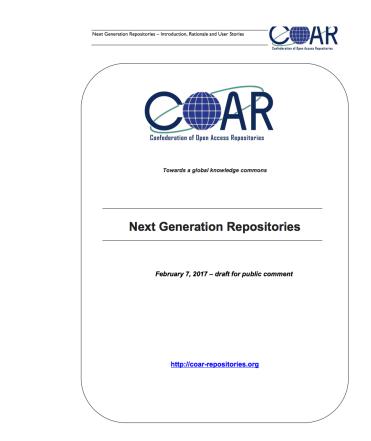


Interoperability CORE to the IRs mission. (*Crow, 2002 -SPARC's position paper on IRs*);(*COAR, 2011 - The Case for Interoperability for Open Access repositories*)

Lack of interoperability in the scholarly communication system is a major barrier to innovation.

User stories

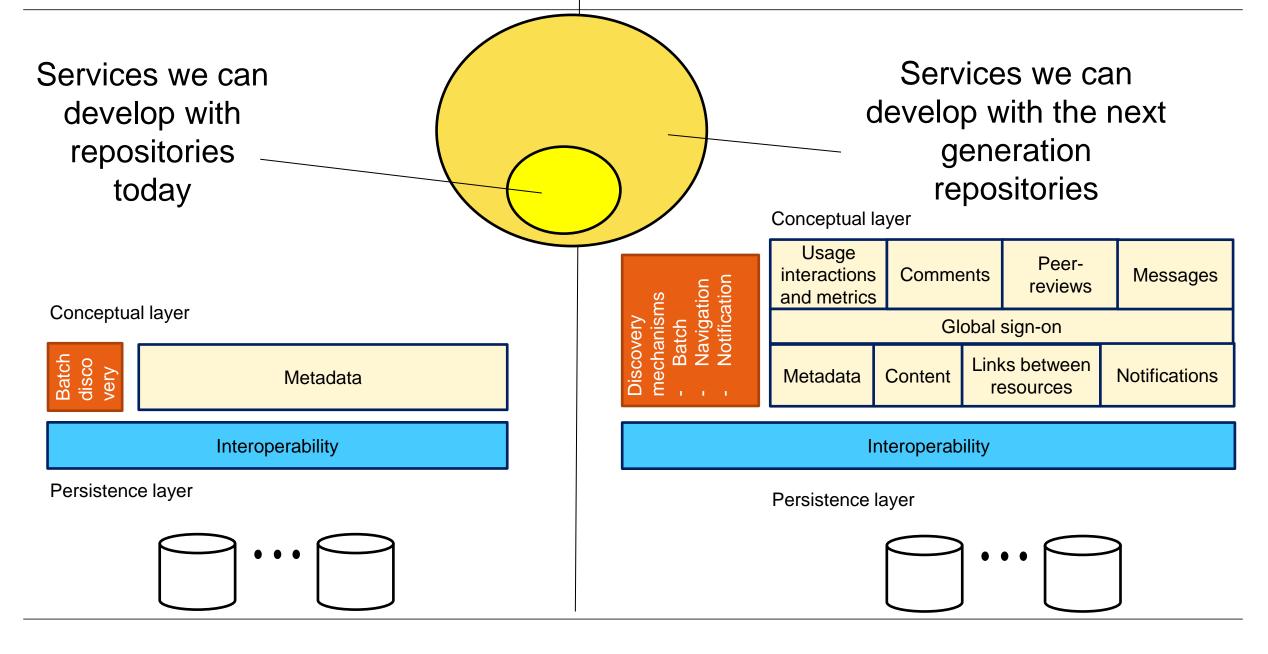
- Data mining
- Discovering metadata that describe a scholarly resource
- Discovering the identifier of a scholarly resource
- Discovering usage rights
- Resource syncing and notification
- Recognizing the user
- Commenting & annotating
- Providing a social notification feed
- Recommender systems for repositories
- Preservation
- Peer-review
- Comparing usage



https://www.coarrepositories.org/files/COAR-Next-Generation-Repositories-February-7-2017.pdf

Current repositories

Next generation repositories



Next generation repositories working group

"...making the **resource**, rather than the repository, the **focus** of services and infrastructure."

Behaviours and Technical Recommendations

- Exposing Identifiers
- Discovery Through Navigation
- Interacting with Resources (Annotation, Commentary, and Review)
- Resource Transfer
- Batch Discovery
- Collecting and Exposing Activities
- Identification of Users
- Authentication of Users
- Exposing Standardized Usage Metrics
- Declaring Licenses at the Resource Level
- Preserving Resources

#nextgenrepositories @COAR_eV office@coar-repositories.org COAR: Building a Global Knowledge Commons https://www.coarrepositories.org/files/NGR-Final-Formatted-Report-cc.pdf

November 28, 2017

Next Generation Repositories

Behaviours and Technical Recommendations of the COAR Next Generation Repositories Working Group

November 28, 2017

Supporting technologies

- Notification protocols: AMQP, Kafka, WebSub, Webmention, Linked Data Notifications, Activity Streams
- ResourceSync
- Signposting
- ETag
- HTTP Signatures
- IPFS
- ORCID
- OpenID Connect
- Activity Streams 2.0

- SUSHI
- SWORD
- Sitemaps
- Social Network Identities
- Web Annotation Model & Protocol
- WebID
- WebID/TLS
- WebSub
- Webmention
- IIIF
- COUNTER
- Creative Commons Licenses

User stories and priority areas

BatchData mining Discovering metadata, identifiers, usage rights that describe a scholarly resource Resource syncing and notificationNavigationNavigationNotificationRecognizing the user Commenting and lifecycleAnnotationRecognizing the user Commenting Social interactionResearch evaluationCommenting Social interactionPeer review evaluationPeer review Comparing usage				
Research workflows and lifecycleCommenting CommentingCommenting, annotating, social notifications • Recommender systems for repositories • PreservationSocial interactionSocial interaction• Commenting, annotating, social notifications • Recommender systems for repositories • PreservationResearch evaluationPeer review • Peer-review • Comparing usage• Commenting, annotating, social notifications • Recommender systems for repositories • Preservation		and exposing	Navigation	 Discovering metadata, identifiers, usage rights that describe a scholarly resource
and lifecycleSocial interactionPreservationResearch evaluationPeer reviewPeer-reviewPeer reviewPeer-reviewPeer-reviewComparing usage		workflows	Annotation	
Research evaluation Peer review • Peer-review • Comparing usage			Commenting	 Recommender systems for repositories
Research • Peer-review evaluation • Comparing usage				 Preservation
			Peer review	 Peer-review
	_		Metrics	Comparing usage

User stories and priority areas

	Discovery and exposing resources	Batch	 Data mining Discovering metadata, identifiers, usage rights that describe a scholarly resource Resource syncing and notification
		Navigation	
		Notification	
	Research workflows and lifecycle Research evaluation	Annotation	 Recognizing the user Commenting, annotating, social notifications Recommender systems for repositories Preservation
		Commenting	
		Social interaction	
		Peer review	 Peer-review Comparing usage
		Metrics	

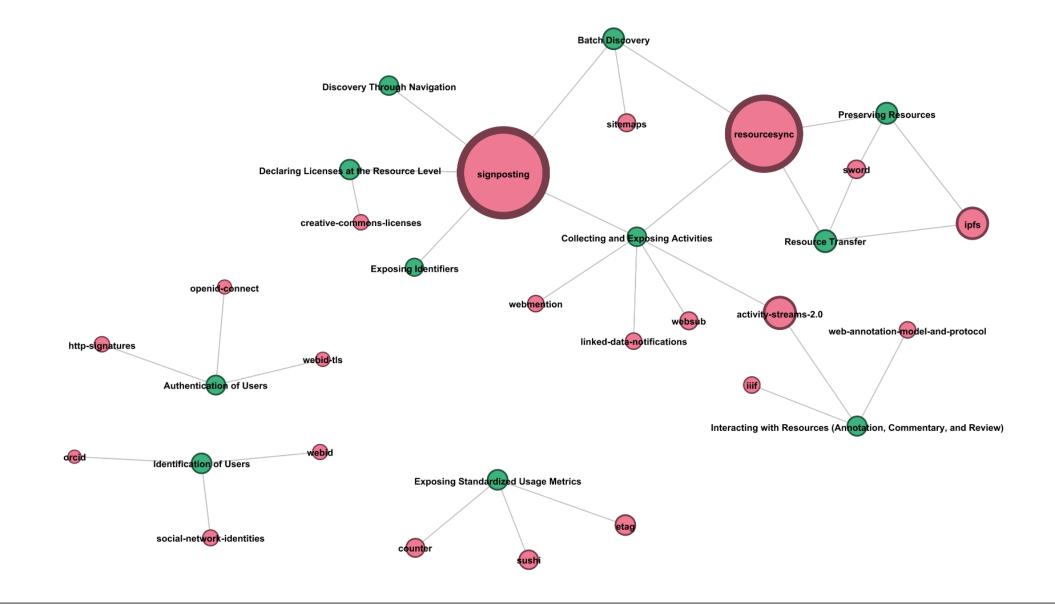
Three vertical discovery mechanisms

»Batch – Transferring bulk data

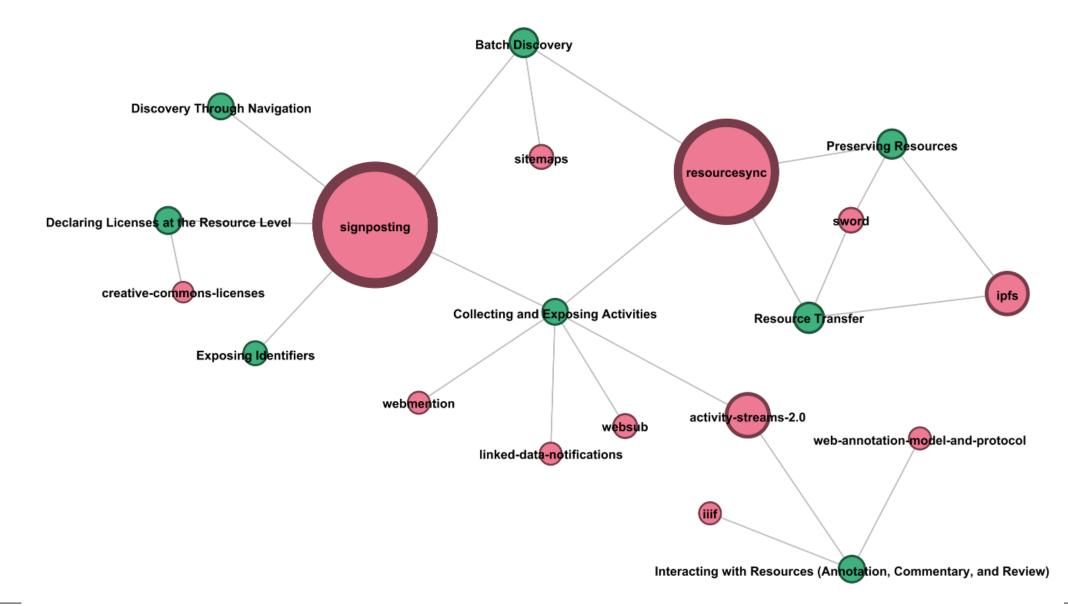
»Navigation – Helping robots to find resources in repositories by means of navigation

»Notification – Enabling robots to subscribe to changes in repositories

Visualize technologies and behaviour



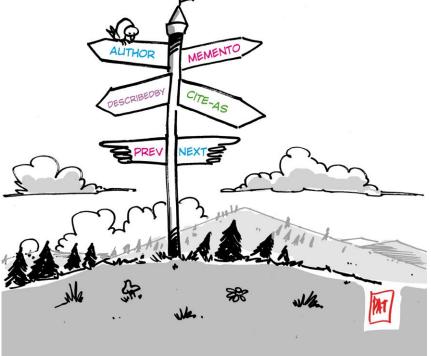
Priority technologies: Signposting & ResourceSync



Signposting - http://signposting.org/

»Signposting is an approach to make the scholarly web more friendly to machines by exposing relations as Typed Links in HTTP Link headers

»Signposting is now implemented in DSpace-CRIS and OJS. DSpace 7 plans to provide Signposting support





л Influência da garantia institucional sobre o risco de crédito 👌

Nascimento, Marcos Aurélio (2009) Publisher: Contabilidade, Gestão e Governança

Journal: Contabilidade, Gestão e Governança

Languages: Portuguese

Types: Unknown

Subjects:

O presente artigo discute a análise do crédito ao consumidor sob os aspectos pessoais - caráter e capacidade -, passando pelos demais "cs" do crédito - capital, condições e colateral - como complemento da análise. Com base em uma pesquisa de campo, buscou-se identificar fatores que justifiquem um tratamento diferenciado para consumidores que dispõem de garantias institucionais. Este tratamento diferenciado poderia ser materializado por taxas de juros menores ou linhas de crédito mais atraentes para o cliente de menor risco. Trata-se de uma pesquisa sob a ótica do tomador de recursos que, invariavelmente, vai de encontro ao interesses das instituições financeiras. A política de crédito das instituições financeiras deve ser estabelecida de forma a recompensar, também, a garantia institucional, na medida em que esta concorre para a redução do risco de crédito. Admitindo-se que há uma relação direta entre a taxa de juro e risco de crédito, pode-se inferir que quanto menor o risco menor a taxa de juro, portanto, a recompensa esperada pelo menor risco é aplicação de uma taxa menor.

> LINK TO RESEARCH DATA LINK TO PROJECT

▲ ∞ SHARE - BOOKMARK 💟 🔂 🛅 🚭 💭 🐼 🚯 🚍 🛟 P DOWNLOAD FROM Contabilidade, Gestão e Governanca a D CITE THIS ARTICLE re BibTeX D 0 @misc{Nascimento, Marcos d

Aurélio 2009, title={Influência da garantia institucional sobre o risco de crédito}, publisher={Contabilidade, Gestão e Governança}, author= {Nascimento, Marcos Aurélio}, year= {2009}, month={Sep}}

COLLECTED FROM Contabilidade, Gestão e Governança

Search	
Publications, data, projects,	
all	
publications	
research data	
projects	
organizations	
data providers	
Data Providers	
General information	



FONTES DE INDEXAÇÃO

Capa > v. 4, n. 2 (2001) > Nascimento

NOMINATA DE AVALIADORES

IDIOMA Selecione o idioma Português (Brasil) V Submeter

USUÁRIO					
Login					
Senha					

Lembrar usuário

Acesso

INFLUÊNCIA DA GARANTIA INSTITUCIONAL SOBRE O RISCO DE CRÉDITO Marcos Aurélio Nascimento

RESUMO

O presente artigo discute a análise do crédito ao consumidor sob os aspectos pessoais - caráter e capacidade -, passando pelos demais "cs" do crédito – capital, condições e colateral - como complemento da análise. Com base em uma pesquisa de campo, buscou-se identificar fatores que justifiquem um tratamento diferenciado para consumidores que dispõem de garantias institucionais. Este tratamento diferenciado poderia ser materializado por taxas de juros menores ou linhas de crédito mais atraentes para o cliente de menor risco. Trata-se de uma pesquisa sob a ótica do tomador de recursos que, invariavelmente, vai de encontro ao interesses das instituições financeiras. A política de crédito das instituções financeiras deve ser estabelecida de forma a recompensar, também, a garantia institucional, na medida em que esta concorre para a redução do risco de crédito. Admitindo-se que há uma relação direta entre a taxa de juro e risco de oriedito, pode-se inferir que ounto menor o risco menor a taxa de juro, portanto, a recompensa esperada pelo menor risco é aplicação de uma taxa menor.



REGULAMENTO

A license link type has been proposed to drive this information

CENGAGE

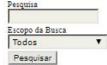
Learning

Este trabalho está licenciado cor Indexadores e Diretórios:





CONTEÚDO DA REVISTA



Procurar Por Edição Por Autor Por título Outras revistas

SOBRE O AUTOR

Marcos Aurélio Nascimento AEUDF Brasil

ITENS RELACIONADOS



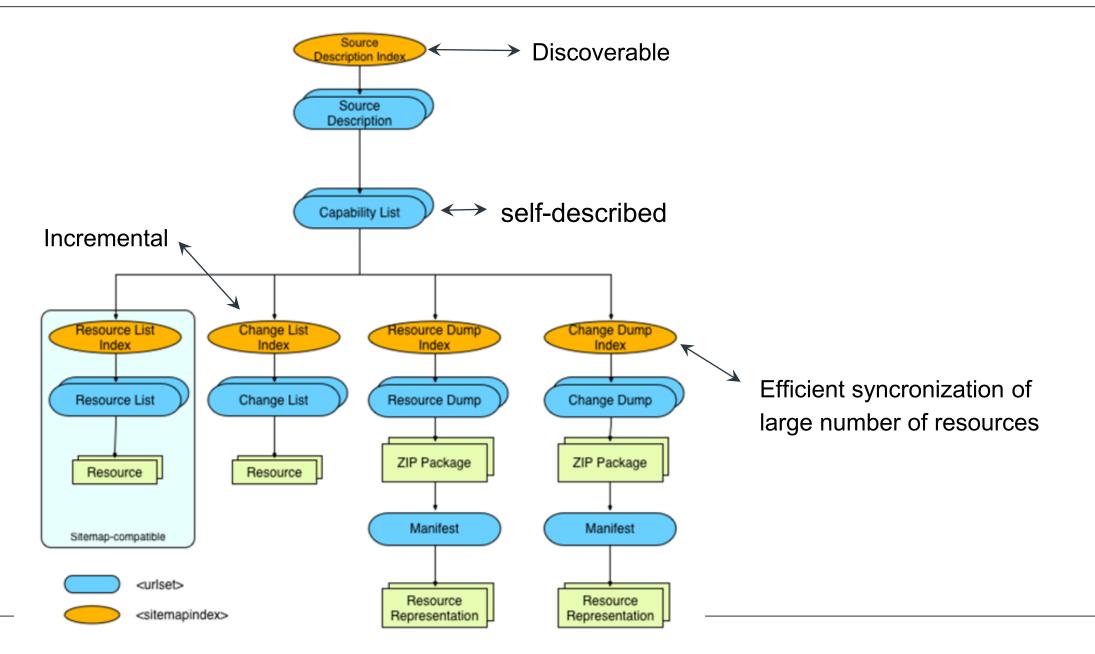
PALAVRAS-CHAVE

Adoção de Tecnologius da Informação Alto Escalão Ativos complementares Companhilidade Contabilidade Desempenho Organizacional Dividend Policy Dividend Relevance Theory Escolhas Contabeis Estratégia Estrutura de capital Fortune 500 Gestão estratégica Governança Corporativa.

ResourceSync - http://www.openarchives.org/rs/toc

- »Successor of the OAI-PMH protocol and much more...
- »Faster, reliable and scalable
- »Allows real-time notification (and recovering of missed messages)
- »Drives **resource synchronization**: content and metadata are both managed

ResourceSync Framework Specification (ANSI/NISO Z39.99-2017)



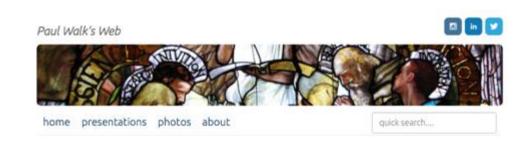
» manages and provides access to a wide diversity of resources

- » is resource-centric
- » is a networked repository
- >> is machine-friendly

» is active (notify other systems, allow local active interaction)

Active Repository Pattern

- Repositories as pro-active components in an event-driven scholarly system
- Publishing 'events' (e.g. adding a new item) to one or more notification hubs
- Third-party systems 'subscribe' to these notifications
- Modest software development



The Active Repository Pattern

Monday, October 19, 2015 (This is the first of two posts forming my contribution to <u>Open Access Week 2015</u>.)

Context

Institutional repositories

It is easy to overlook, or take for granted, the way in which the drive towards open-access (over the last decade or more) has succeeded not only in creating several viable <u>"institutional-repository"</u> <u>software packages</u>, but also in encouraging libraries and IT departments in universities to deploy them. It should be recognised that individual universities have shown, and continue to show commitment to maintaining their repositories in spite of shrinking budgets.

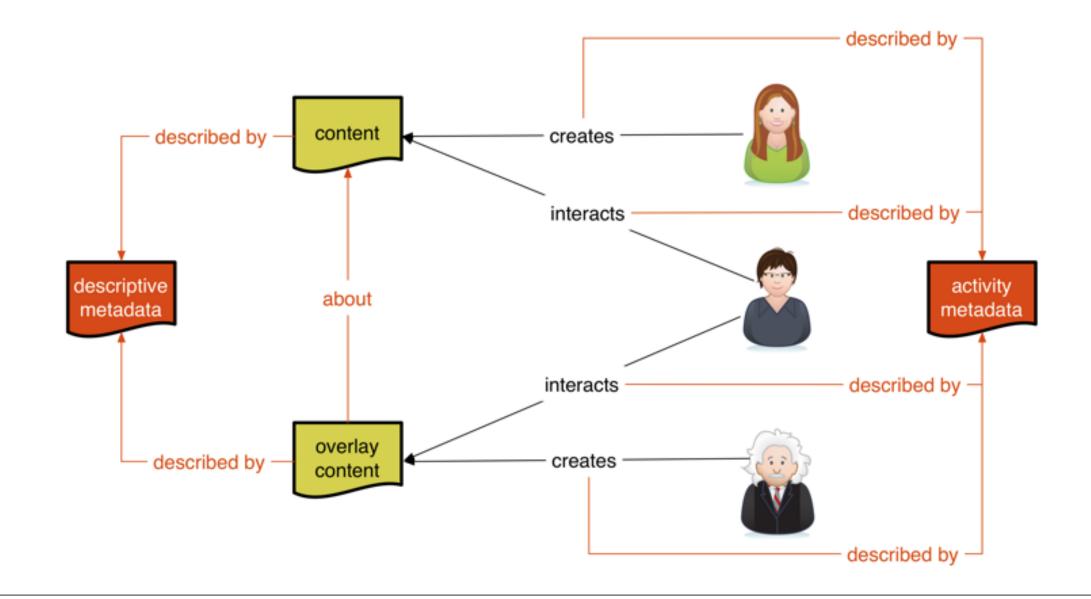
While these repository systems are various, they mostly adhere to certain standard protocols, common metadata formats and conventions, allowing for a degree of potential interoperability. It is this potential for interoperation which elevates the institutional repository from a local system, to a networked system.

This achievement should be celebrated!

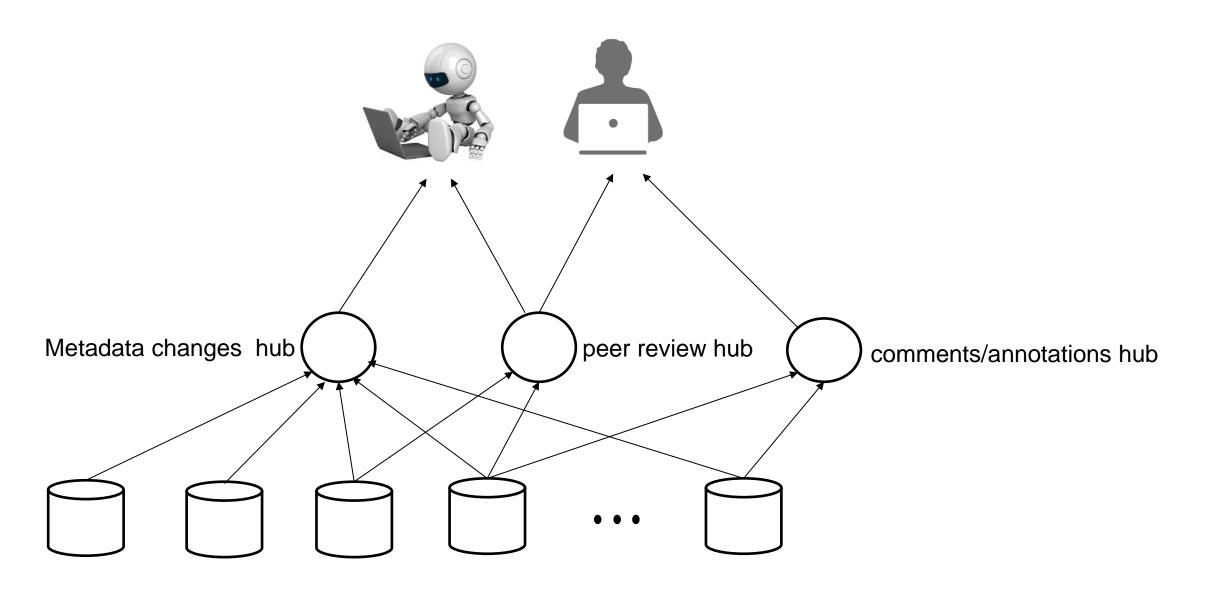
Repositories as infrastructure

http://www.paulwalk.net/2015/10/19/the-active-repository-pattern/

Notification services



Repositories and notification hubs



Ongoing work and next steps

- 1. Implementation of technologies in repository platforms
- 2. Development of network or hub services
- 3. Ongoing monitoring of new technologies, standards and protocols



1.Implementation of technologies in repository platforms

- Already progress several platforms are implementing NGR recommendations
 - **OpenAIRE** Europe
 - National Institute of Informatics (NII) Japan
 - US Next Generation Repositories Implementers Group
 - CARL Open Repositories Working Group Canada
- Meeting of repository platforms at Open Repositories 2018



2. Support the development of network or hub services

 2 days of meeting of Repository Networks, May 14 & 15, 2018 in Hamburg, Germany to discuss NGR functionality and international alignment



 Pilot Projects 2nd half 2018 (Open Peer Review, Common Standards for Usage Statistics, Recommender Systems)



3. Monitoring of new technologies, standards and protocols

COAR Next Generation Repositories Editorial Group

Andrea Bollini Rick Johnson Petr Knoth Paolo Manghi Eloy Rodrigues Kathleen Shearer Herbert Van Paul Walk de Sompel David Wilcox Kazu Yamaji



Support the implementation of the identified behaviours and technologies in your community (DSpace, Eprints, Fedora, Dataverse, Samvera, etc., etc.)

Join the conversation on GitHub https://github.com/coar-repositories/ngr

