



Outline

Access to Knowledge is key point to combate hunger and poverty

Complex Information Needs!!

More links on the web: RDF, Linked Data, openCalais, Drupal....

AOS - Vocabularies for linked data

The CIARD Web RING

More than 1.02 billion hungry people

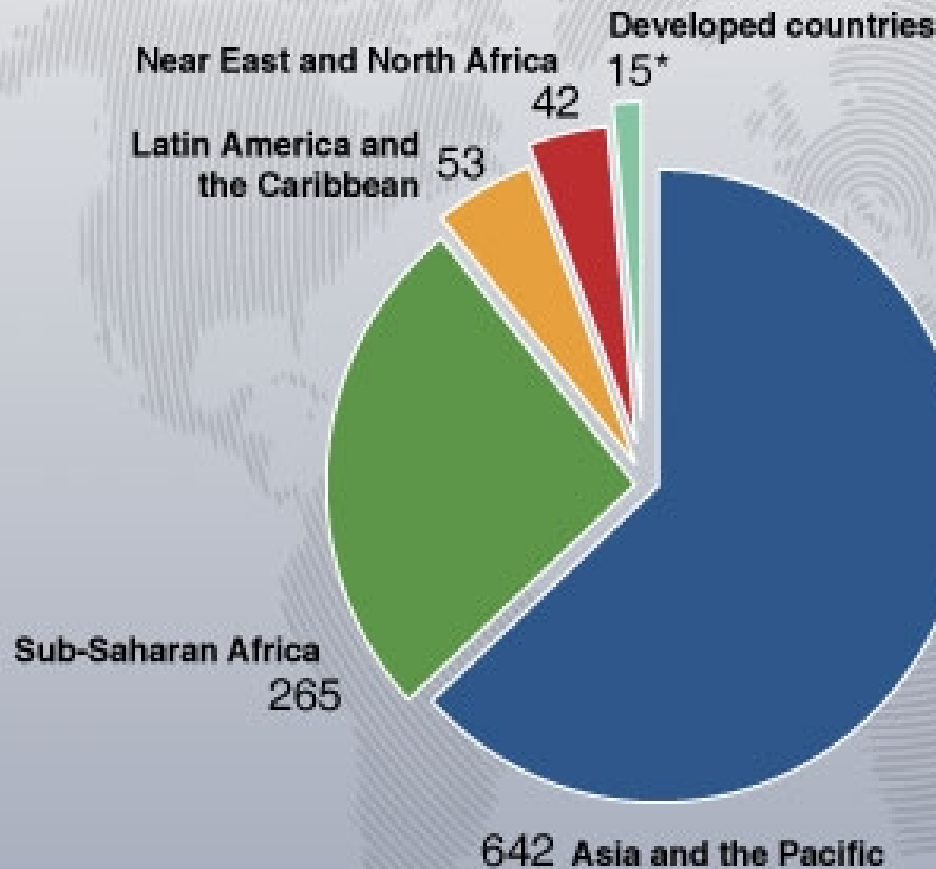


FAO estimates that 1.02 billion people are undernourished worldwide in 2009. These are more hungry people than at any time since 1970, the earliest year for which comparable statistics are available.

Hunger has increased not as a result of poor harvests but because of high domestic food prices, lower incomes and increasing unemployment due to the global economic crisis. Many poor people cannot afford to buy the food they need.

The chart on the left shows where the world's hungry people live.

- ▶ [Hunger at a glance](#)
- ▶ [Policy brief](#)
- ▶ [More graphs](#)



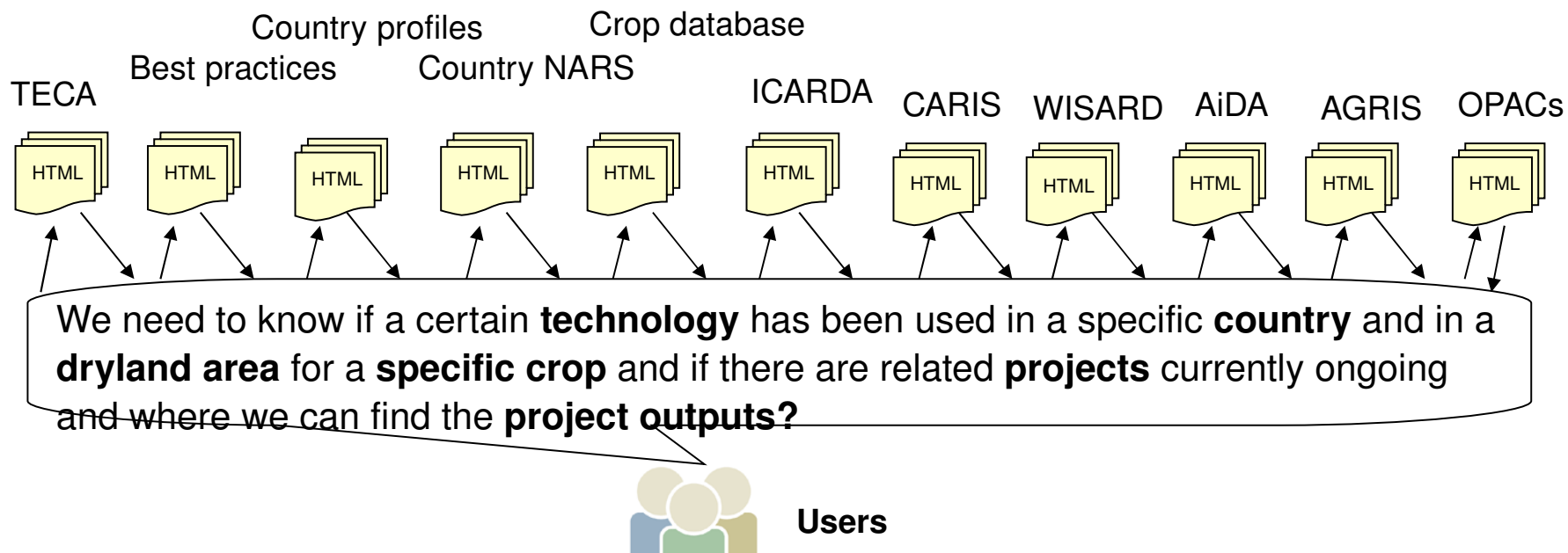
*Millions of people



Availability is not enough!!

Complex information needs for agricultural development through research and innovation cannot be met by simply making information available.

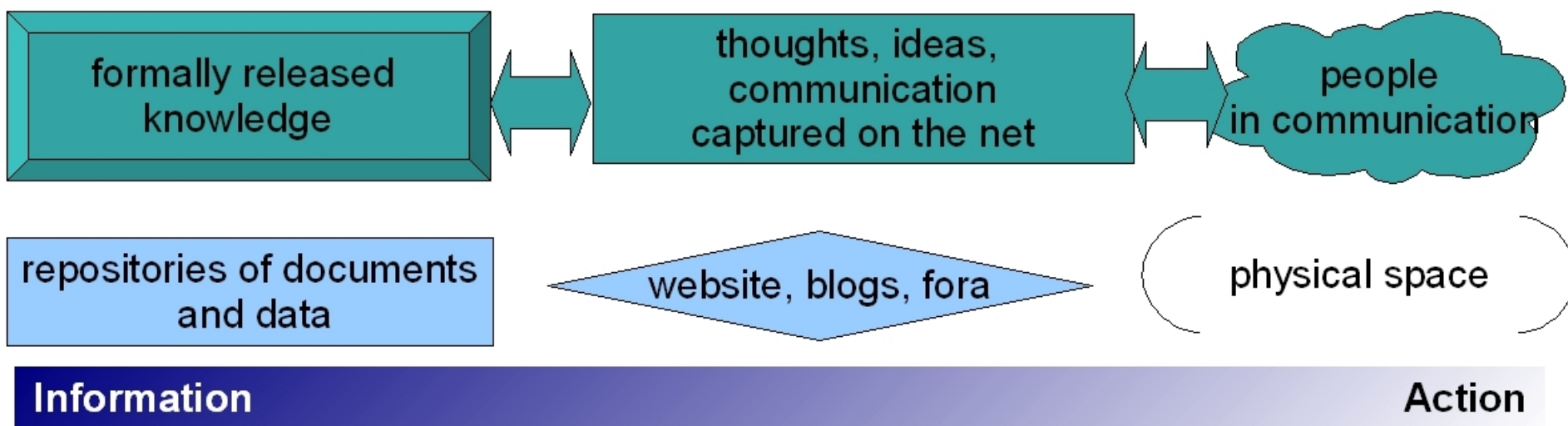
Disconnected repositories





States of Knowledge

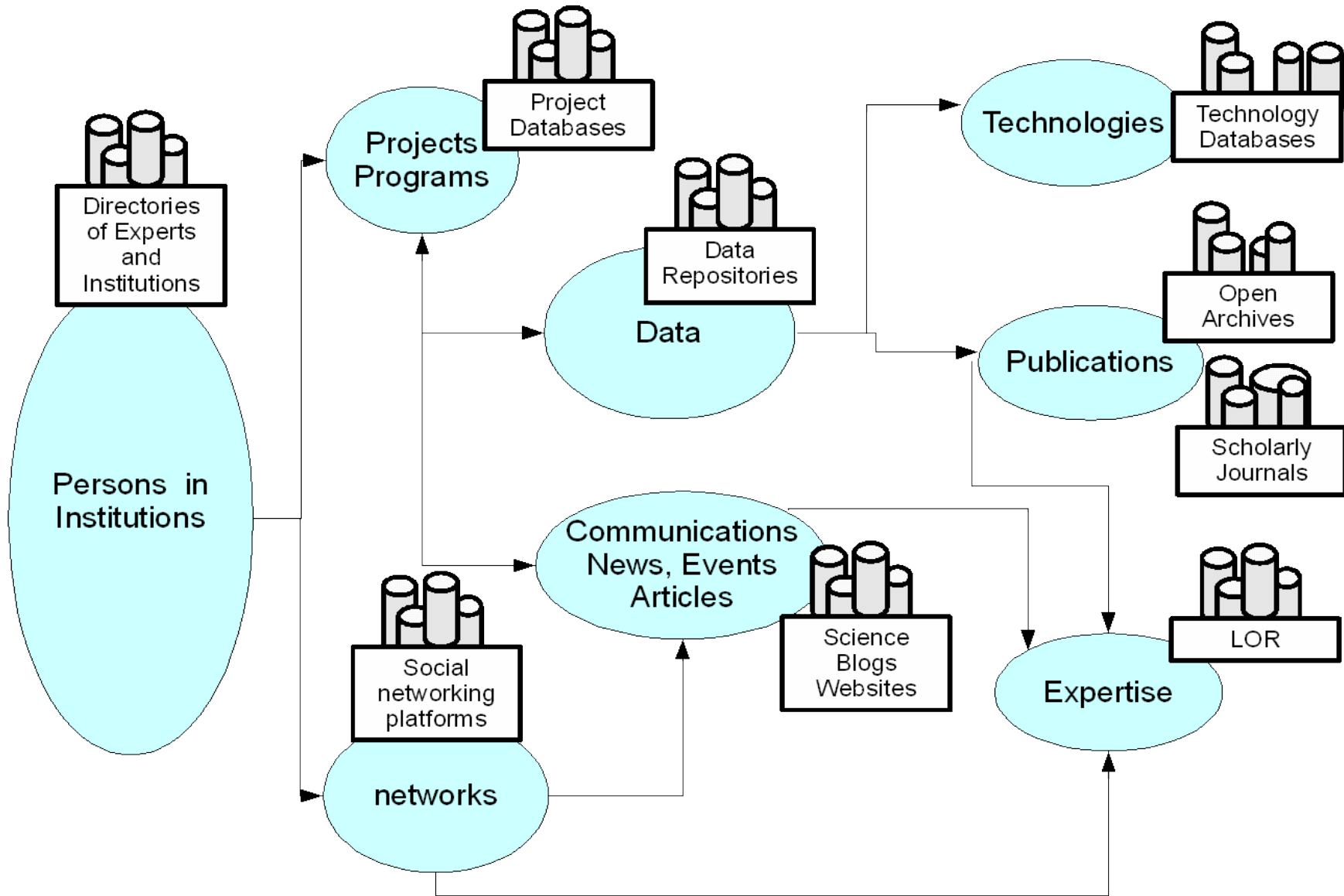
State of knowledge in the research process



This refers to the "Munich Model" (<http://blog.semantic-web.at/2008/10/09/which-flavour-does-knowledge-have-on-the-web/>, http://www.wissensmanagement.net/download/muenchener_modell.pdf)

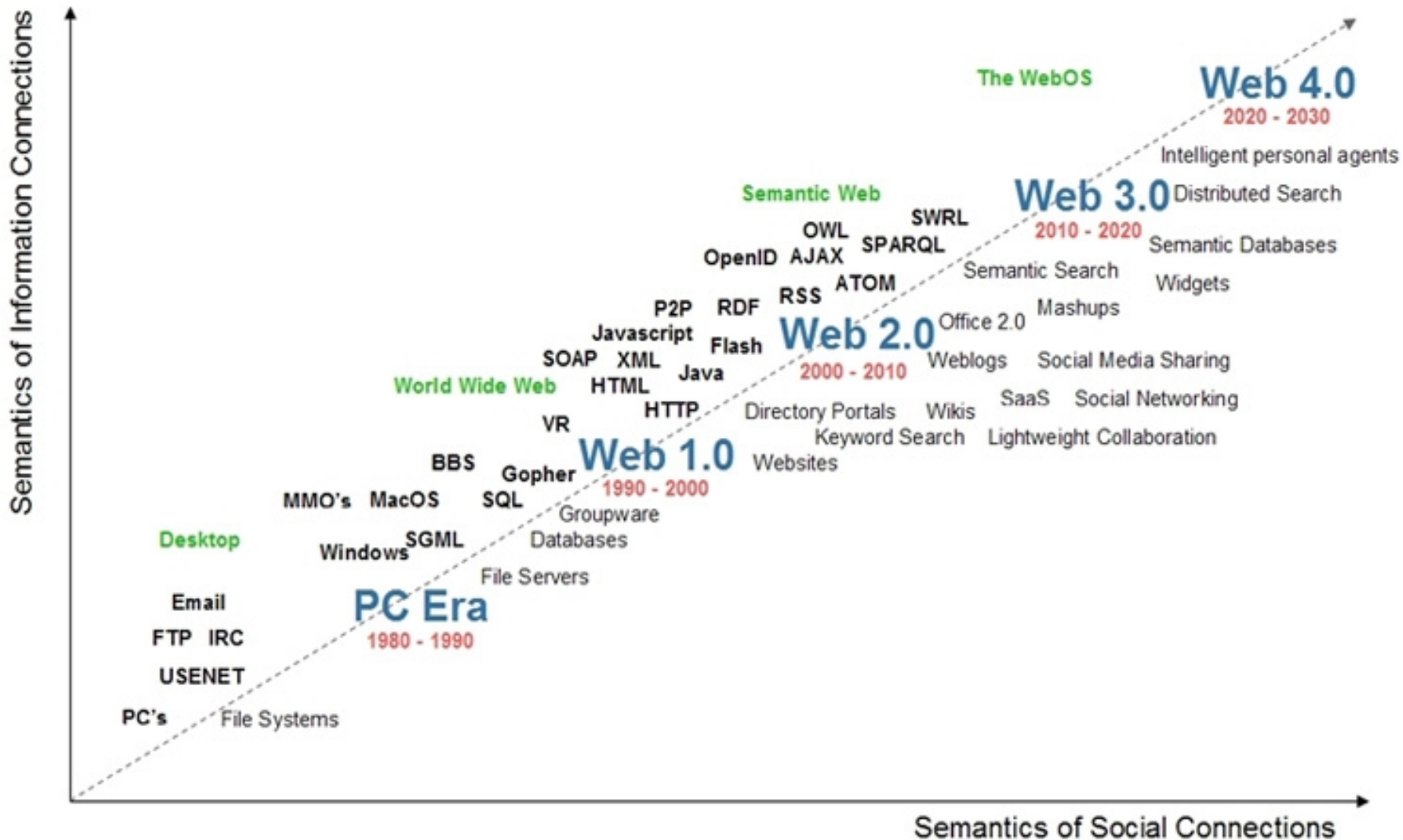


Knowledge Processes and Repositories





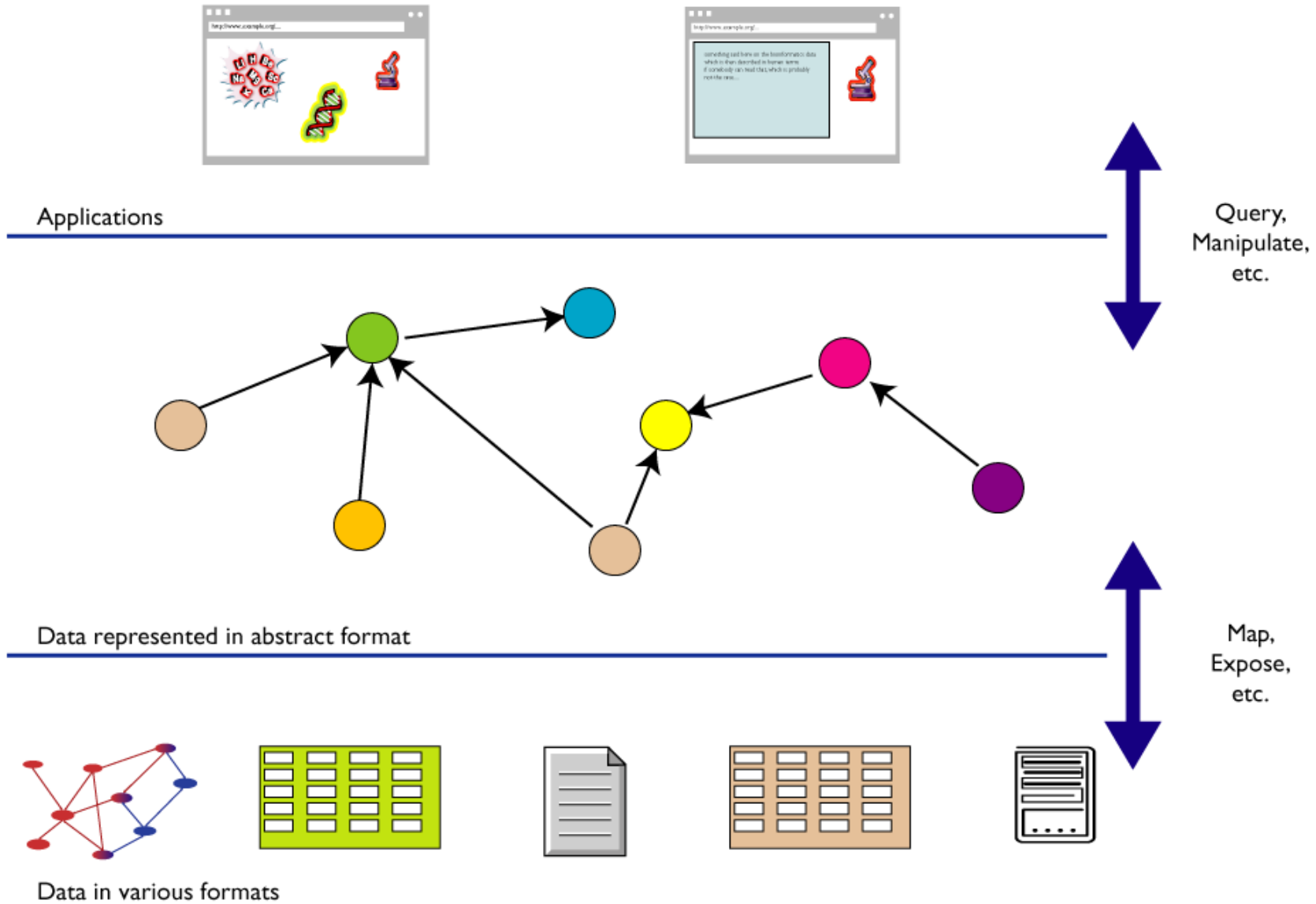
Where are we on the Web?



Credits: various sources



RDF as a common format for merging data



• <http://www.w3.org/2007/Talks/0221-Bangalore-IH/>



....and the code

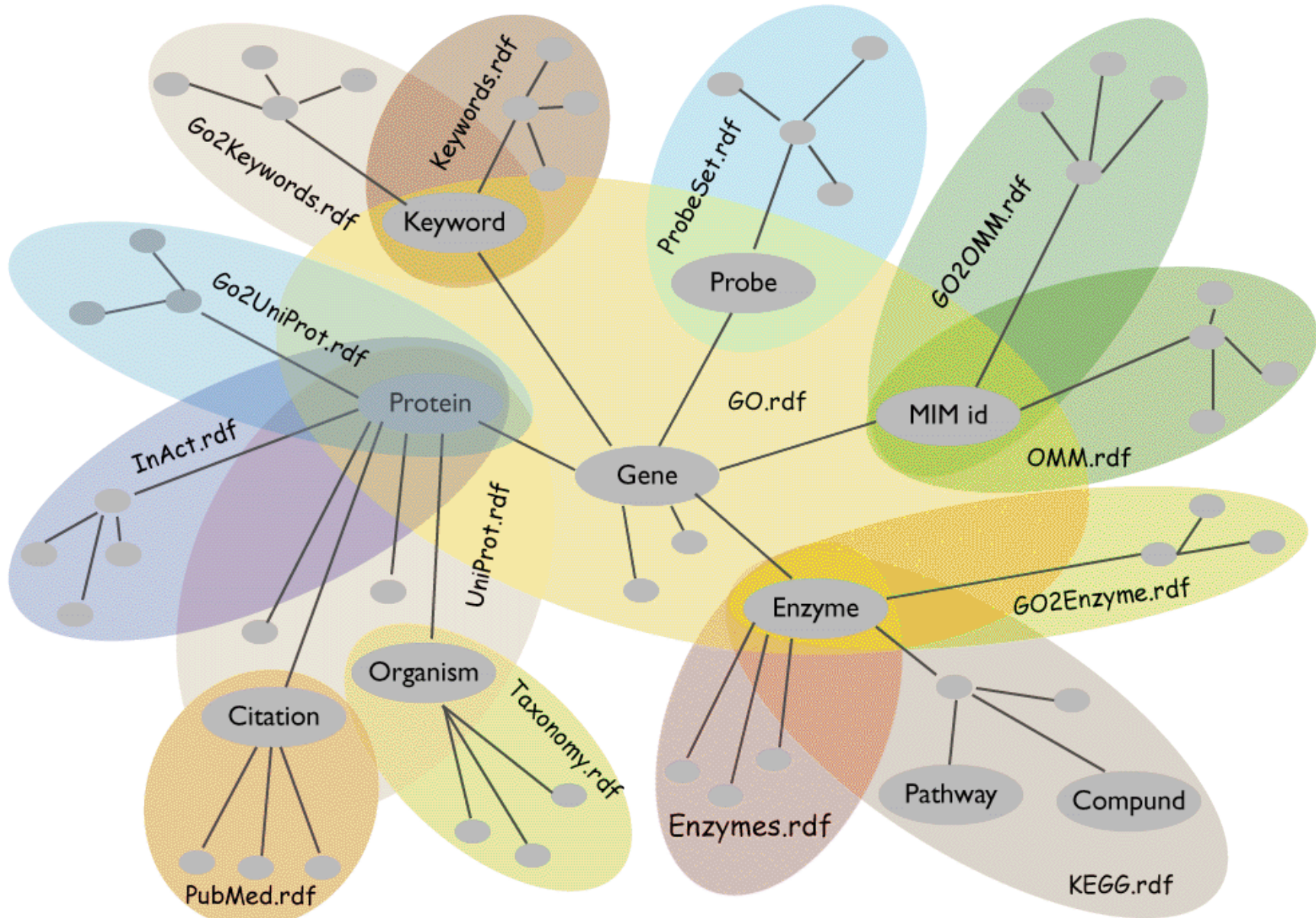
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Finding things related to “genes” across databases





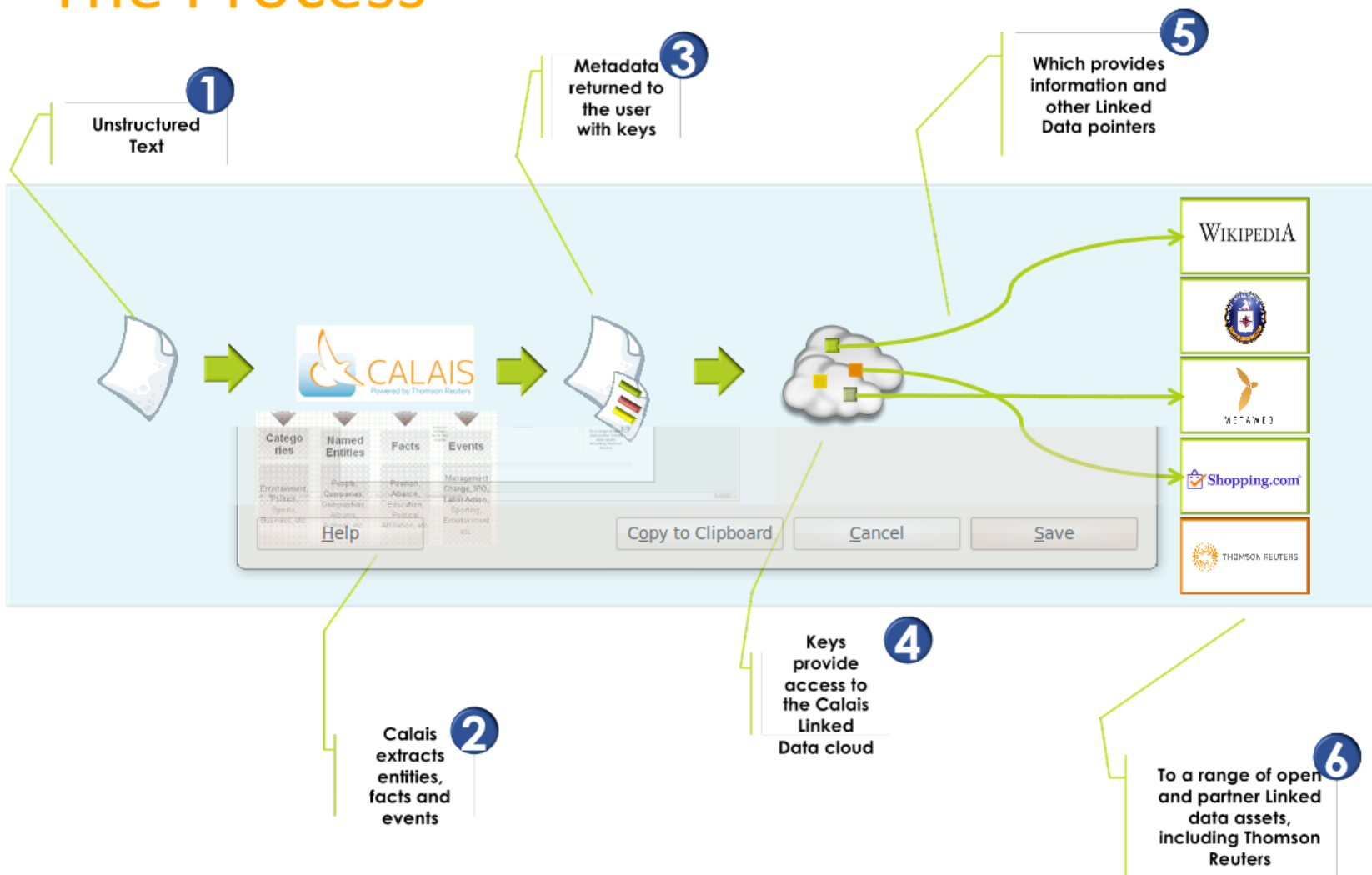
The Linked Data Principles

1. Use URIs as names for things
2. Use HTTP URIs so that people can look up those names
3. When someone looks up a URI, provide useful RDF information
4. Include RDF statements that link to other URIs so that they can discover related things

Automatic RDF mark up

phase://technology
* open source. open minds.

The Process





A missing ingredient: Building on Main Stream CMS



More Like This

Geo

Topic Hubs



Linked Data



Calais for Drupal



Drupal

Linked Data



AGRIS: from bibliographical data to the web using linked data

Food and Agriculture Organization of the United Nations
for a world without hunger

AGRIS home

How to participate

The AGRIS Network

News

Related News

from Agrifeeds:

Media advisory - High quality local foods in Asia aiming to become house-hold names around the world ...

Philippines asks aid agencies to limit food rations ...

WFP concerned over threat to food security ... [see all..]

Related links

from Google:

Acquaculture principles and practices

Inundated rice fields always have a small population of fish which gain access with the water ...

from Google books:

FAO Fisheries & Aquaculture Ricepaddies

Fish culture in rice fields ProjectIntegrating ...

Contact us

compose and refine your research ▾

All terms Exact phrase Reset

Terms: Acquaculture Rice Aquaculture

Rice Aquaculture Search

[Development of sustainable aquaculture project \(DSAP\): mid-term review report](#)

Record number	QW2000000113
Titles	Development of sustainable aquaculture project (DSAP): mid-term review report
Personal Authors	Mandal, M.A.S.; Chowhan
Publisher	WorldFish Center
Publisher Place	Dhaka, Bangladesh
Publication Date	2004
Other subjects	Aquaculture
	Rice field aquaculture
Language	en
Type	Text
Collation	iii, 34 pp.
Availability	WorldFish (M)
Availability number	SH206 P2511
For document availability, please contact:	
<i>Jalan Batu Maung, Batu Maung, 11960 Be</i>	
Contact:	<i>Sambandamurthy, Prasanna</i>
Fax:	+60-4 626 5530
Email:	worldfish-library@cgiar.org
URL:	http://www.worldfishcenter.org
Authors:	Mandal M.A.S.
Date:	2004 Country: Bangladesh

Acquaculture from Linked data

Published by Springer. ISSN (printed): 0967-6120. ISSN (electronic): 1573-143X.

Aquaculture International is a bimonthly journal publishing research papers short communications technical notes and review papers on all aspects of aquaculture. The Journal covers topics such as:

- the biology physiology pathology and genetics of cultured fish crustaceans molluscs and plants water quality development of economically sound and sustainable production techniques.

Further information

Aquaculture International website (full article available online)

Category Links

- Medicine - Nutrition and Metabolism
- Medicine - Pathology and Forensics

from flickr - youtube

Semantic history

- gris) (+)
- sustainable project...
- Journal (Agris) (+)
- Acquaculture
- is)(+)
- e of npur



Vocabularies to encode Application Knowledge- AgMes

Document like Objects (Publications)

Events

News

Experts

Organizations

Projects

Learning Objects

Research Data

Section 1: Elements	Section 2: Refinements	Section 3: Schemes
(DC) Title	(DCTERMS) Alternative (AGS) titleSupplement	-
(DC) Creator	(AGS) creatorCorporate (AGS) creatorPersonal (AGS) creatorConference	-
(DC) Subject	(AGS) subjectClassification	(AGS) ASC (AGS) CABC (AGS) GFDC (DCTERMS) DDC (DCTERMS) LCC (DCTERMS) UDC
	(AGS) subjectThesaurus	(AGS) AGROVOG (AGS) CABT (AGS) ASFAT (AGS) NALT (AGS) BT (DCTERMS) MeSH (DCTERMS) LCSH
(DC) Description	(DCTERMS) Abstract (AGS) descriptionNotes (AGS) descriptionEdition	-
(DC) Publisher	(AGS) publisherName (AGS) publisherPlace	-
(DC) Date	(DCTERMS) Created (DCTERMS) Valid (DCTERMS) Available (DCTERMS) Modified (DCTERMS) Issued	(DCTERMS) W3CDTF
(DC) Type	-	(DCTERMS) DCMIType
(DC) Format	(DCTERMS) Extent	-



Vocabularies to encode Application Knowledge- AgMes

Document like Objects
(Publications)

Events

News

Experts

Organizations

Projects

Learning Objects

Research Data

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Organization</ags:organizer>
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Vocabularies to encode Domain Knowledge

AGROVOC concept server

more than 28,000
concepts,

200,000 terms,

18 languages

Geopolitical Ontology

Fishery Ontologies

Crop Wild Relatives

Concepts (the abstract meaning)

Ex: 'rice' in the sense of a plant,

Terms (language-specific lexical forms)

Ex: 'Rice', 'Riz', 'Arroz', ' 稻米 ', or 'Paddy'

Term variants (the range of forms that can occur for each term)

Ex: 'O. sativa' or 'Oryza Sativa', 'Organization' or 'Organisation'



Domain Vocabularies

AGROVOC concept server

more than 28,000
 concepts,
 200,000 terms,
 18 languages

Geopolitical Ontology

Fishery Ontologies

Crop Wild Relatives

Concept to Concept	isA (hierarchy), isPestOf, hasPest
Concept to Term	has_lexicalization (links concepts to their lexical realizations)
Term to Term	isSynonymOf, isTranslationOf, hasAcronym, hasAbbreviation
Term to String	hasSpellingVariant, hasSingular

Standard Vocabularies can be mapped

Agrovoc

NAL -T

CAB -T

AGMes – AGRIS AP

MARC

MODS

AGROVOC Termcode	Mapping Relationship	CABT identifier
253	exactMatch	TN02825
92837	narrowMatch	TN22005
83763	exactMatch	TN53245
4422	similar	TN98264
34	broadMatch	TN20938
1134	exactMatch	TN55325
4556	broadMatch	TN03825
453	similar	TN46325
21	narrowMatch	TN99856



Agricultural Ontology Service: <http://aims.fao.org>



**Food and Agriculture
Organization of the
United Nations**

for a world without hunger

Google™ Custom Search



[FAO Home](#)

[AIMS Home](#)

[News](#)

[Events](#)

[AOS : Registries](#)

[AGROVOC Concept Server](#)

[AgMes Application Profiles and Ontologies](#)

[Domain Ontologies](#)

[Knowledge Organization Systems \(KOS\)](#)

[KOS and Ontology Mappings](#)

[Projects](#)

[Publications](#)

[Tools](#)

[Community](#)

Agricultural Information Management Standards

The main objectives of the AIMS initiative are:

- to facilitate collaboration, partnership and networking among partners by promoting information exchange and knowledge sharing;
- to harmonize the decentralized efforts currently taking place in the development of methodologies, standards and applications for management of agricultural information systems;
- to provide a 'one-stop' access to system designers and implementers.

Anything to share? Please register to the '**Community**' section and contribute to this initiative!

LATEST NEWS

New release of the AGROVOC Web Services

Posted on: 06/11/2009

DC-2009 in Seoul: FAO presentation on "Designing AGRIS 2010"

Posted on: 06/11/2009

Special Issue on Agricultural Metadata & Semantics

Posted on: 02/11/2009

[New Publication] The AGROVOC Concept Server: rationale, goals and usage

Posted on: 29/10/2009

LATEST EVENTS

IAALD XIIIth World Congress

26/04/2010 - 29/04/2010

D4Science World User Meeting

25/11/2009 - 26/11/2009

Technical Course on Federation of Learning Repositories for Agriculture, Food & Environment (AgLRs)

02/11/2009 - 05/11/2009

Special Track on Metadata and Semantics for Agriculture, Food & Environment 3rd International Conference on Metadata and Semantics Research (MTSR'09)

30/09/2009 - 02/10/2009

“ Interoperability, Reusability, and Cooperation ”

FLYERS

[ONTOLOGIES](#)

[METADATA](#)

[AGROVOC](#)

[AGROVOC Concept Server](#)

SHORTCUTS

- Registry of KOS
- Registry of metadata sets
- Registry of tools

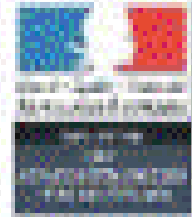
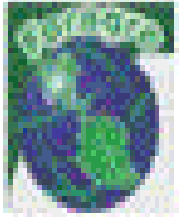
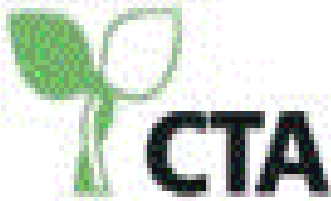
RELATED LINKS

- AGRIS search engine
- AgriFeeds

PARTNERSHIPS

- CIARD

Community Building: CIARD



Under the umbrella of





The CIARD RING: <http://www.ciardring.net>

A Routemap to Information Nodes and Gateways (RING) for Agricultural Research for Development (ARD)



RING

- Home
- Registered services
 - Advanced search
 - Summary table
 - Geographic
 - By KOS
 - By metadata set
 - By technology

How to Standards

About

- About the RING
- News
- Help & FAQ
- Members

Member

- Login
- Register

Welcome to the CIARD R.I.N.G. Portal

A Routemap to Information Nodes and Gateways (RING) for Agricultural Research for Development (ARD)

This portal offers a fully informative and interlinked **registry of existing information services in agriculture**.

The services registered to this portal are described in details and categorized according to criteria that are relevant to the use of the service and its interoperability.

Those who need contents for their information services may find here information sources into which they can tap, or they may find it useful to explain how to contribute data to their own service: other professionals might want to.

Those who are looking for other services through which better disseminating their contents may find them here, or they may find it useful to explain how their own contents can be made available so that others can re-use them in their services.

All providers of ARD information services are invited to register their services to this portal

The locations of the information services in the map are identified with the location where they are maintained, independent of their physical hosting or their actual geographic scope / coverage.



Latest additions

[GFAR document repository](#)

[AGRIS search engine](#)

[AgriFeeds](#)

Flows...

[AGRIS search engine](#)



[AgriFeeds](#)
[GFAR document repository](#)

[GFAR document repository](#)



[AGRIS search engine](#)
[more](#)

Information types

[Document / DLIO \(2\)](#)

[Event \(1\)](#)

[Geospatial \(0\)](#)

[News \(1\)](#)

[Organization \(0\)](#)

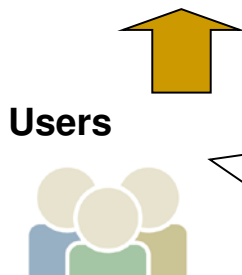
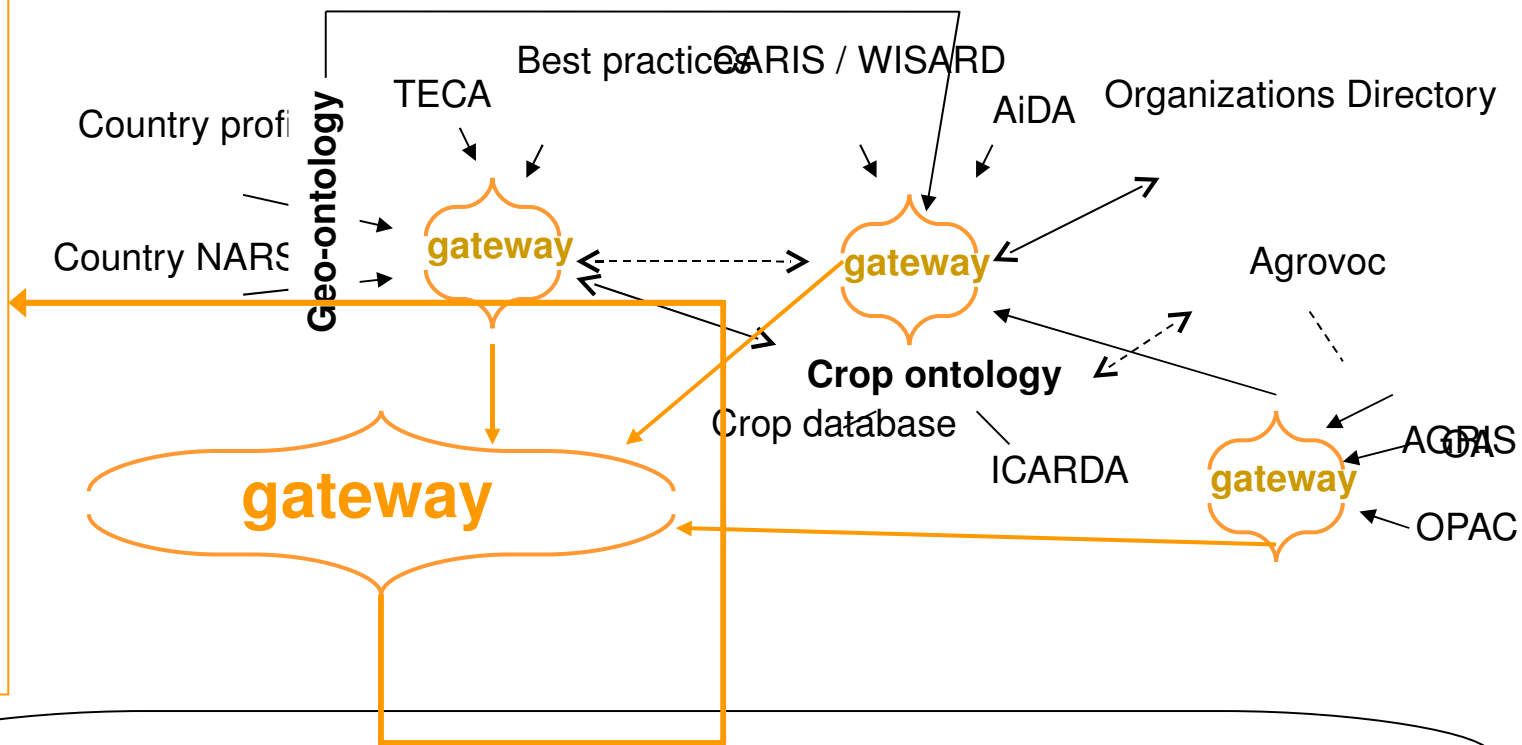
CIARD RING: value added services

Crop

Type of technology

Country

Technologies / best practices
 Organizations
 Projects
 Project outputs (documents)



We need to know if a certain **technology** has been used in a specific **country** and in a **dryland area** for a **specific crop** and if there are related **projects** currently ongoing and where we can find the **project outputs**?