

KB



Institutional Repositories, Long Term Preservation and the changing nature of Scholarly Publications

Paul Doorenbosch
KB, National Library of the Netherlands

Open Repositories 2010, Madrid, 2010-07-07



driver



DRIVER II (2007-2009)

Current State of repository infrastructure in Europe

Roll out of Driver I repository infrastructure over the rest of Europe and make it more sustainable

Research into nature, technique and preservation of Enhanced Publications as a new expression of (scholarly) publishing

Project under FP7

Participants from: GB, DU, BE, NL, GR

Coordination for NL:



1. The Dutch LTP and Repository Landscape
2. Enhanced Publications
3. Enhanced Publications and Long Term Preservation: an experiment
4. Challenges, Issues



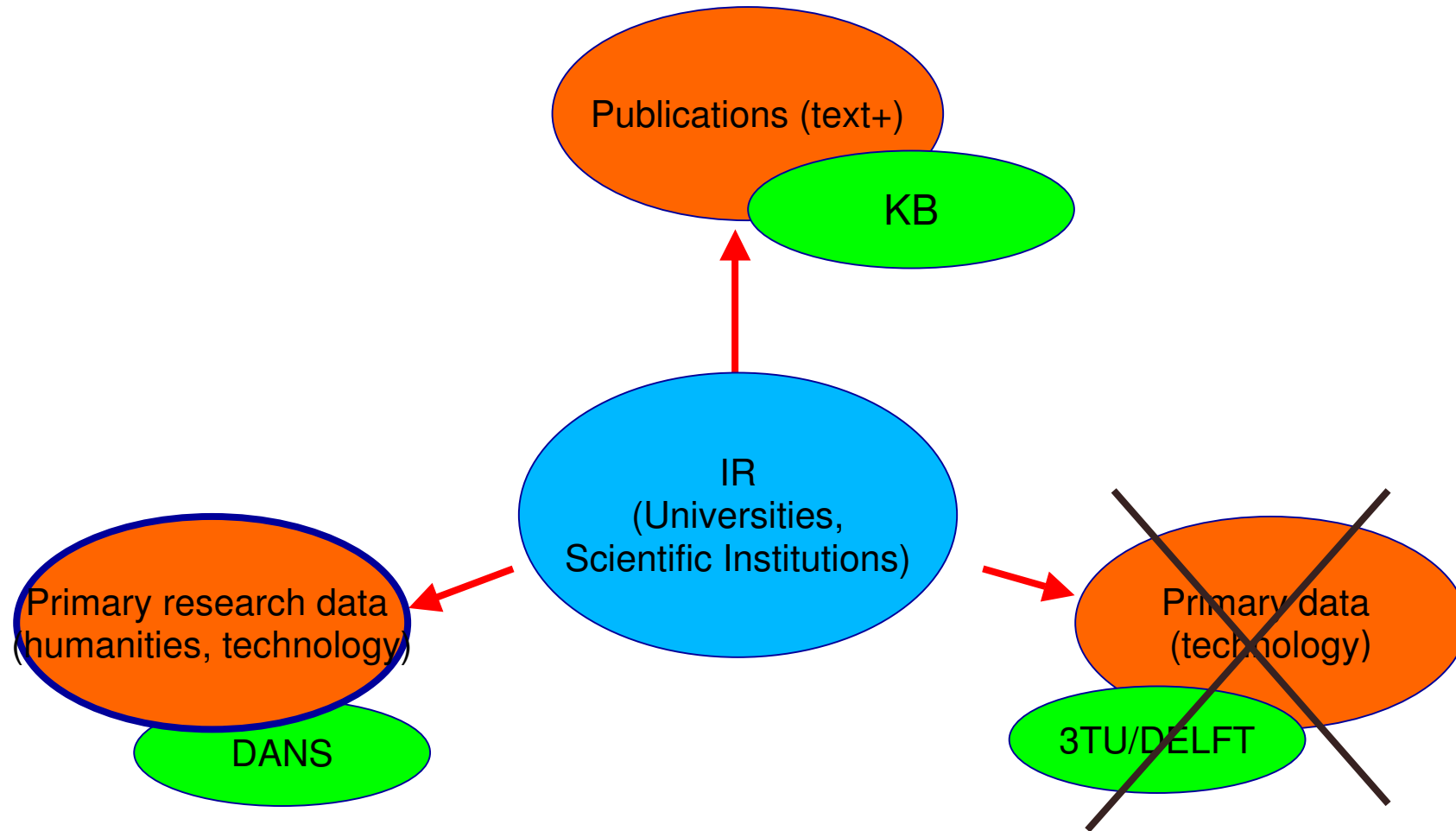
1. The Dutch LTP and Repository Landscape
2. Enhanced Publications
3. Enhanced Publications and Long Term Preservation: an experiment
4. Challenges, Issues



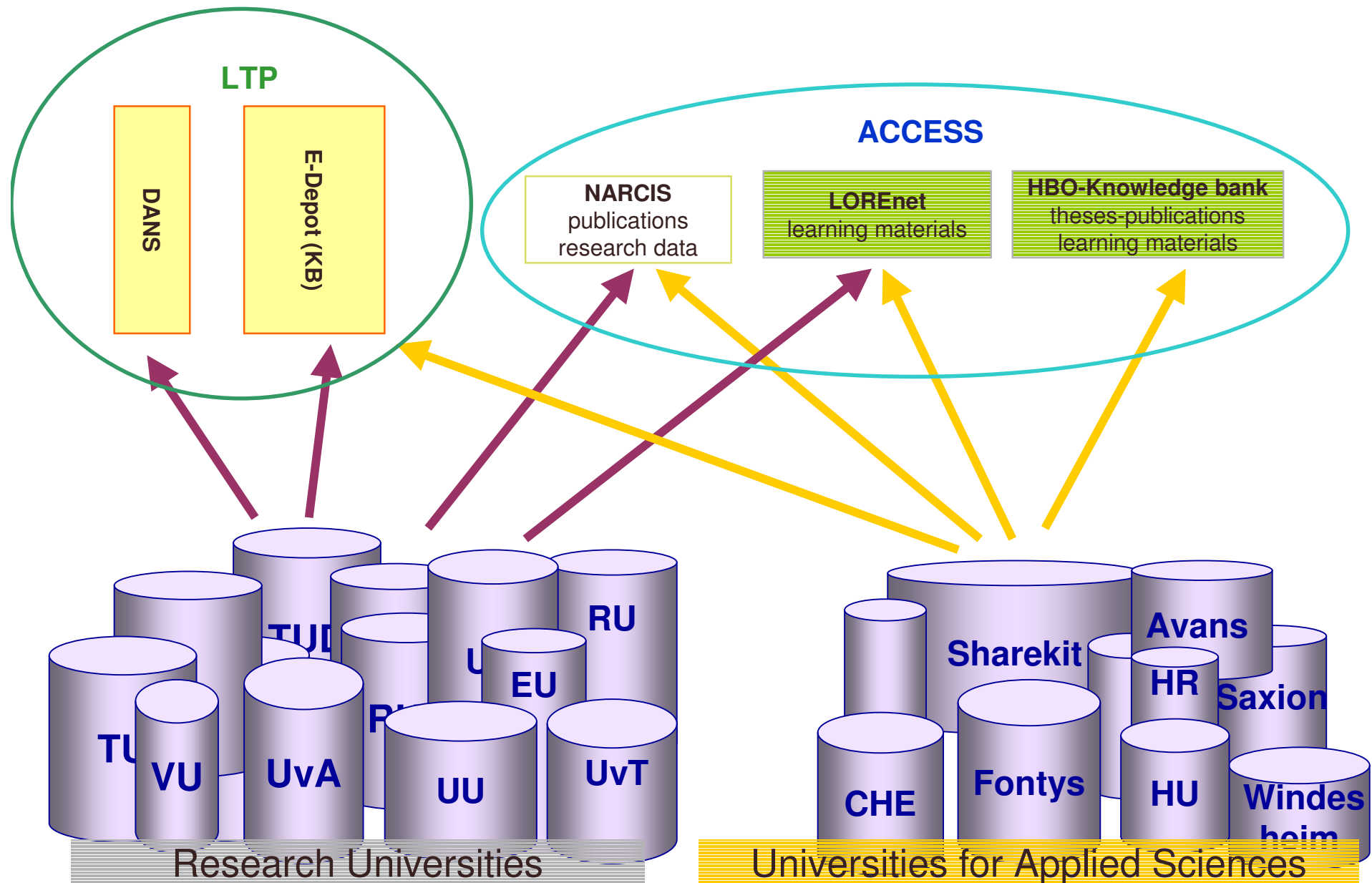
National Coalition for Digital Preservation



Dutch research LTP stakeholders



Dutch Academic OA Landscape



Overview

KB

1. The Dutch LTP and Repository Landscape
2. **Enhanced Publications**
3. Enhanced Publications and Long Term Preservation: an experiment
4. Challenges, Issues



Publication (e-print) combined with research data

- ⊙ Improve interpretation and verification
- ⊙ Promote available data
- ⊙ Browsable network of related items

...demonstrate their results and helps their peers to verify these results. It also makes other researchers aware of the availability of these resources, which may lead to their reuse, saving other researchers the work of e.g. recollecting research data. They also enable creating indirect links between different publications that are possibly related. The Internet provides an infrastructure to publish text with visualizations, animations, research data, etc. Weutersen-Windhovwer and Brandsma (2008) indicated several initiatives for publishing enhanced publications on the web, but showed that these initiatives are not easily applicable; they don't fit into existing repository systems, there is little scientific awarding for the additional efforts required for this type of publication and archives do not know how to ingest this material. More generic solutions are needed to overcome these issues.

Data Archiving and Networked Services (DANS) is an institute of both the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organization for Scientific Research (NWO). DANS is responsible for archiving research data from the humanities and social sciences, keeping these data accessible and

	C	D	E	F	G	H		
06/23/05	21.02.05	Lot: 0960052.00	Loc: IAMR 0000	Ch				
Operator: 389932								
E_THK_TMAX	THK_TK	THK_T	CHORD_T	LE_THK_NMAX	T			
0.0096	0.0096	0.0096	0.0161	0.0096	0.0			
0.0091	0.0091	0.0091	0.0156	0.0091	0.0			
-0.0001	-0.0001	-0.0001	-0.0156	-0.0001	-0.0			
-0.0001	-0.0001	-0.0001	-0.0161	-0.0001	-0.0			
0.0045	-0.0024	0.0036	0.0078	0.0059	-0.0			
8	6/27/2005	0:07:13	0.0036	-0.003	0.0036	0.0047	0.0029	-0.0
9	6/27/2005	0:07:22	0.0014	-0.0034	0.0033	0.0055	0.0116	-0.0
10	6/27/2005	0:07:32	0.0032	-0.0038	0.0016	-0.0018	0.0032	-0.0
11	6/27/2005	0:07:39	0.0027	-0.0029	0.0039	0.0019	0.004	-0.0
12	6/27/2005	0:07:59	0.0028	-0.0038	0.0022	0.0012	0.003	-0.0
13	6/27/2005	0:08:08	0.0012	-0.0045	0.0022	0.0021	0.0025	-0.0
14	6/27/2005	0:08:15	-0.004	-0.0019	0.0036	0.0103	0.0053	-0.0
15	6/27/2005	0:08:24	0.0031	-0.0029	0.0034	0.0038	0.0033	-0.0
16	6/27/2005	0:08:30	0.0031	-0.0028	0.0036	0.0092	0.004	-0.0
17	6/27/2005	0:08:39	0.0032	-0.0031	0.0033	0.0092	0.004	-0.0



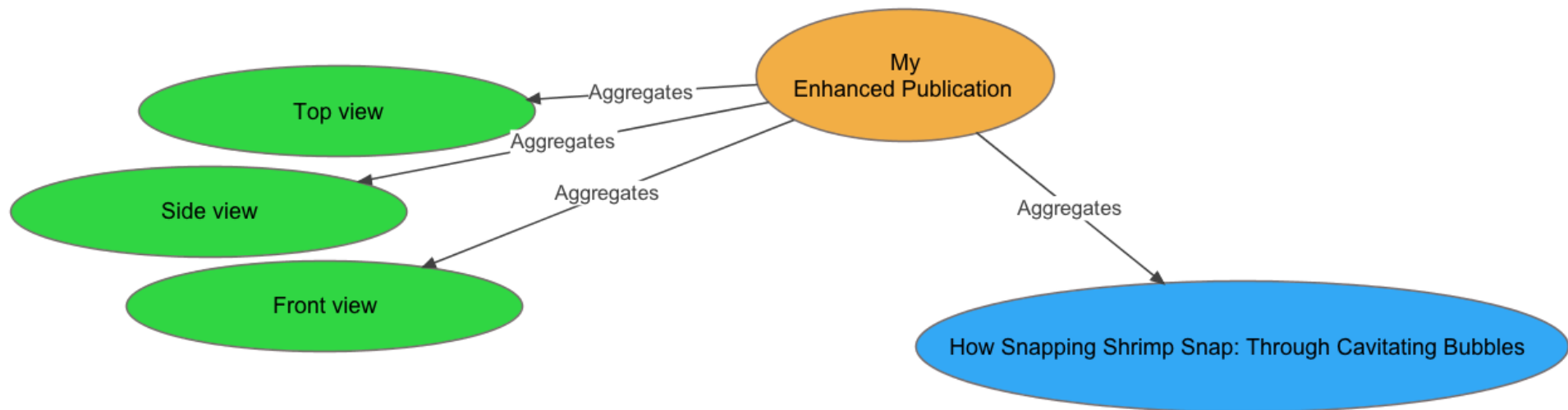
Demonstrator EP - goals

- Suggest the ~~perfect~~ solution
- Trigger researchers
- Trigger repository community



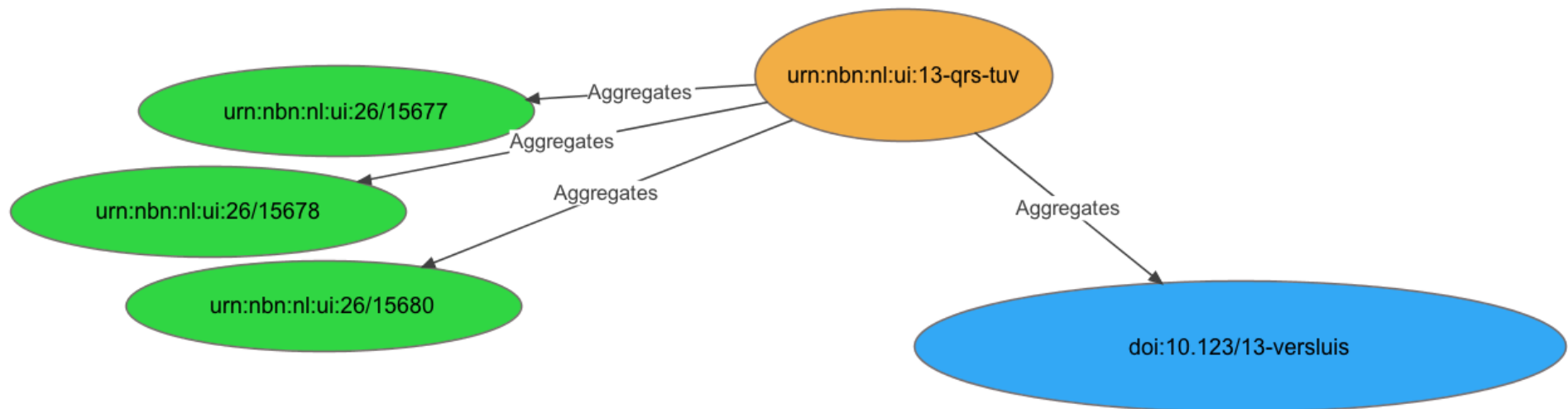
Collect publication, data and metadata

- ⊙ define and identify aggregations of (web) resources using OAI-ORE



... in a durable way

- ⦿ using persistent identifiers, digital author identifiers, ontologies, etc.



... in an exchangeable format

- © describe aggregations as triple-relations using RDF

```
<!-- SIMPLIFIED ORE FOR DEMO ONLY -->>
<rdf:Description rdf:about="urn:nbn:nl:ui:13-qrs-tuv">
  <rdf:type rdf:resource="http://www.openarchives.org/ore/terms/Aggregation"/>
  <dans:eptype dans:resource="info:eu-repo/semantics/enhanced_publication"/>
  <ore:aggregates rdf:resource="doi:10.123/13-versluis"/>
  <ore:aggregates rdf:resource="urn:nbn:nl:ui:26/15677"/>
  <ore:aggregates rdf:resource="urn:nbn:nl:ui:26/15678"/>
  <ore:aggregates rdf:resource="urn:nbn:nl:ui:26/15680"/>
  <dc:title>How Snapping Shrimp Snap: Through Cavitating Bubbles</dc:title>
  <dcterms:creator rdf:parseType="Resource">
    <foaf:name>M. Versluis</foaf:name>
    <dai:identifier>info:eu-repo/dai/nl/298870398</dai:identifier>
  </dcterms:creator>
  <!-- etc -->
</rdf:Description>
```

Demonstrator EP - approach

...visualise in browser

⦿ translate RDF to HTML using XSLT

Resource Map for ./pof-science.xml#aggregation

http://driver2.dans.knaw.nl/demonstrator/eps/pof-science.xml#aggregation

thinking

Content Relations Comments Source DRIVER 2 - Demonstrator Parents: aggregated by pof-ep.xml

How Snapping Shrimp Snap: Through Cavitating Bubbles

The snapping shrimp (*Alpheus heterochaelis*) produces a loud snapping sound by an extremely rapid closure of its snapper claw. One of the effects of the snapping is to stun or kill prey animals. During the rapid snapper claw closure, a high-velocity water jet is emitted from the claw with a speed exceeding cavitation conditions. Hydrophone measurements in conjunction with time-controlled high-speed imaging of the claw closure demonstrate that the sound is emitted at the cavitation bubble collapse and not on claw closure. A model for the bubble dynamics based on a Rayleigh-Plesset-type equation quantitatively accounts for the time dependence of the bubble radius and for the emitted sound.

Author	M. Versluis (298870398)
Persistent ID	urn:x-driver:709004
Created	2008-10-27
Modified	2008-10-27
Rights	RestrictedAccess

PDF at Science Magazine

Persistent ID	urn:x-driver:709014
Type	article
Modified	2000-09-22

Open Preview

PDF at Twente University

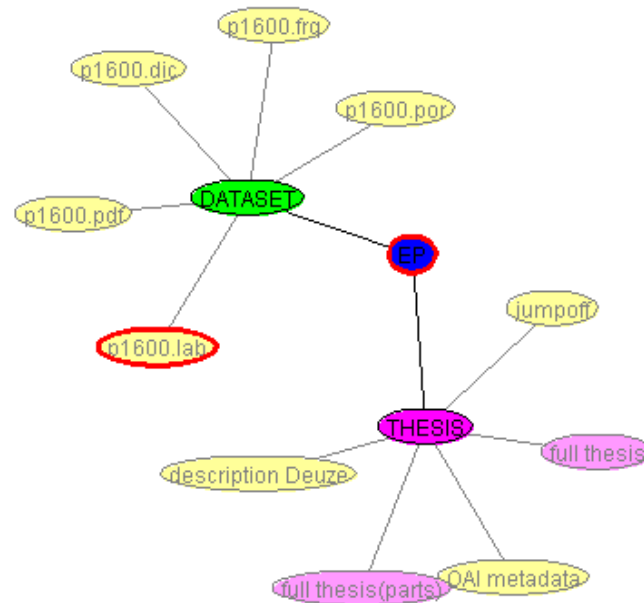
Persistent ID	urn:x-driver:709016
Type	article

Resources

- Startpage at Science Magazine +
- Startpage at Twente University +
- Top view (video) +
- Side view 1 (video) +
- Side view 2 (video) +
- Frontal view 1 (video) +
- Frontal view 2 (video) +



Visualisation of an EP



- Enhanced Publication
- Publication
- Dataset

- Nodes can be clicked to center them.
- Nodes can be dragged to arrange them.
- When moving over a node, its description will appear (if available)



demo:

<http://driver2.dans.knaw.nl/demonstrator/html/index.html> (firefox required!)



Challenges

- Optimal generic presentation
- Feedback & annotations
- Identification
- Resource consistency
- Availability of resources
- Creation/Ownership/Responsibilities
- Long Term Preservation



Overview

KB

1. The Dutch LTP and Repository Landscape
2. Enhanced Publications
3. Enhanced Publications and Long Term Preservation: an experiment
4. Challenges, Issues



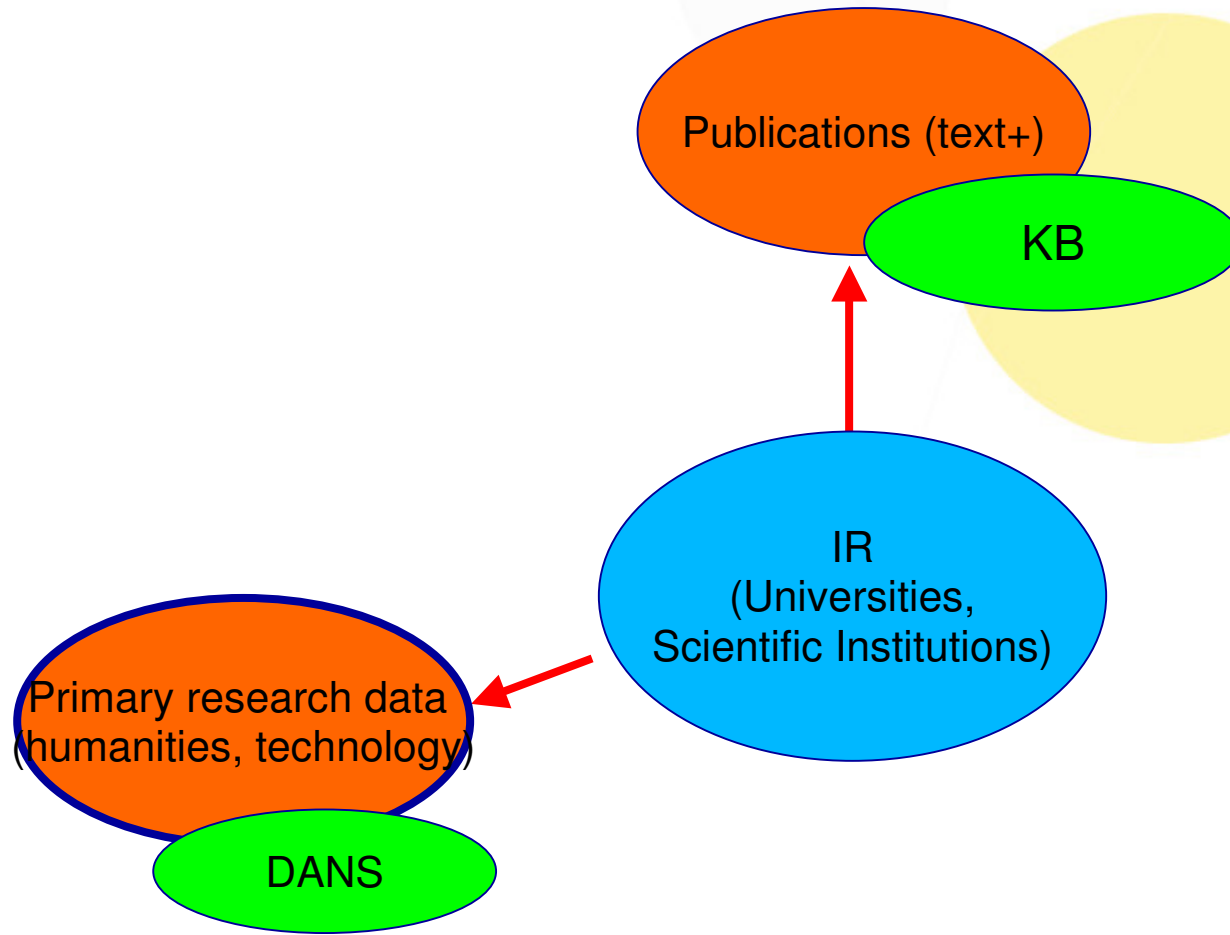
Long Term Preservation

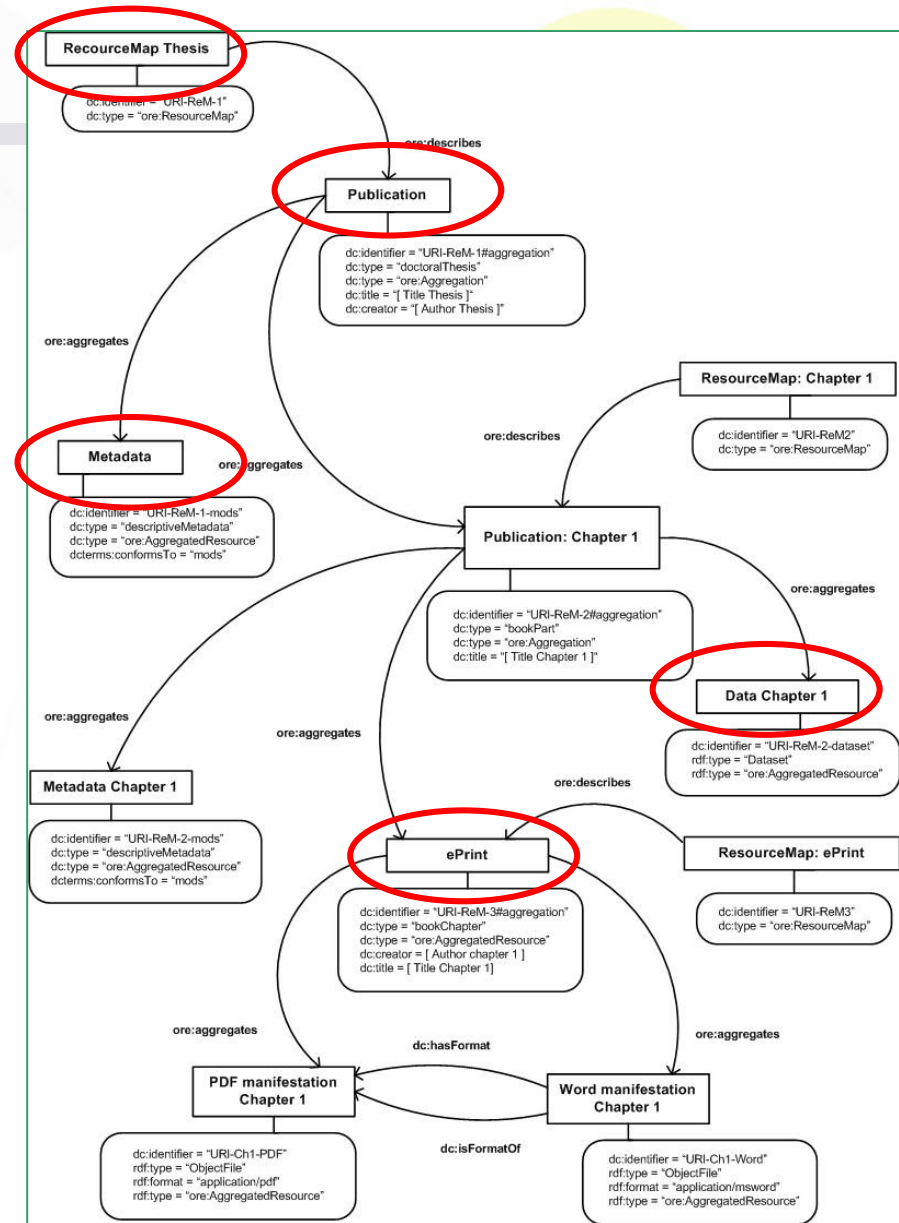
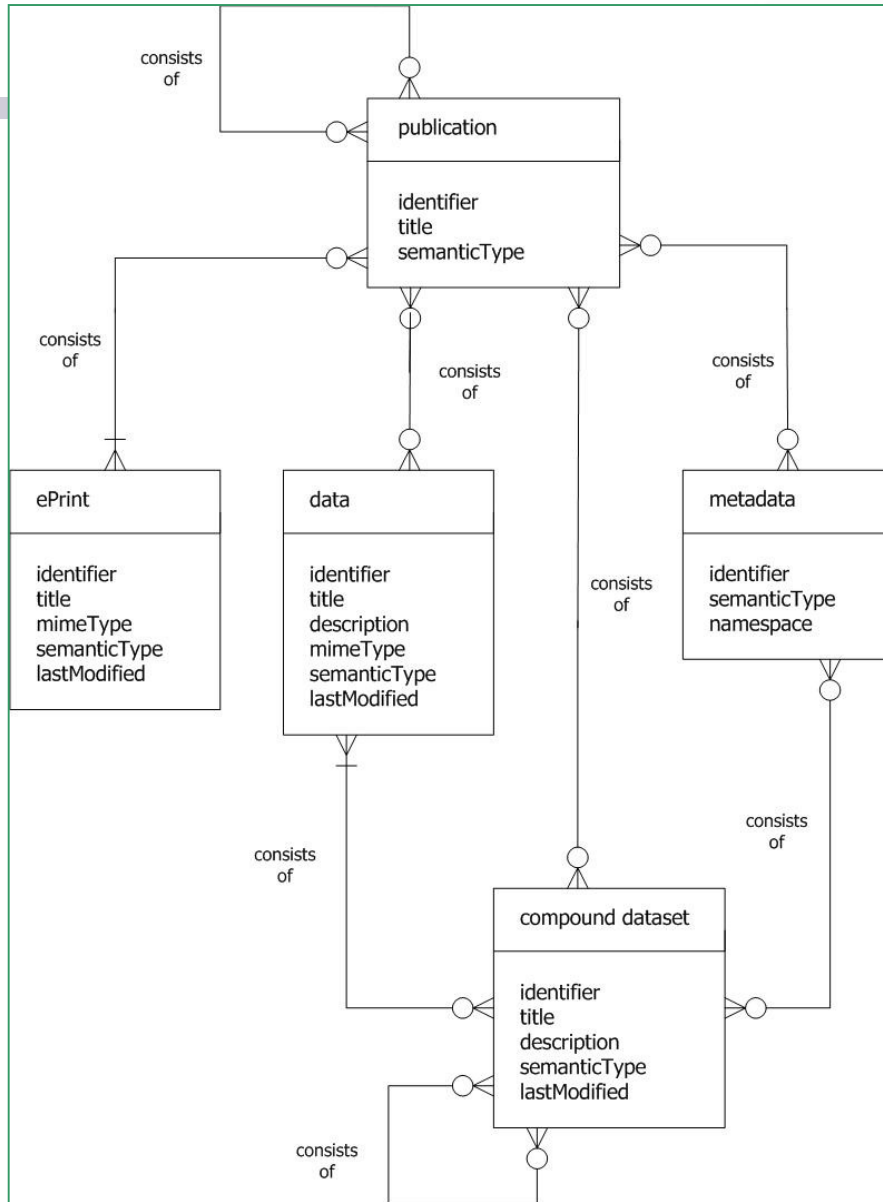
- Demonstrator
- Visualisation
- Report

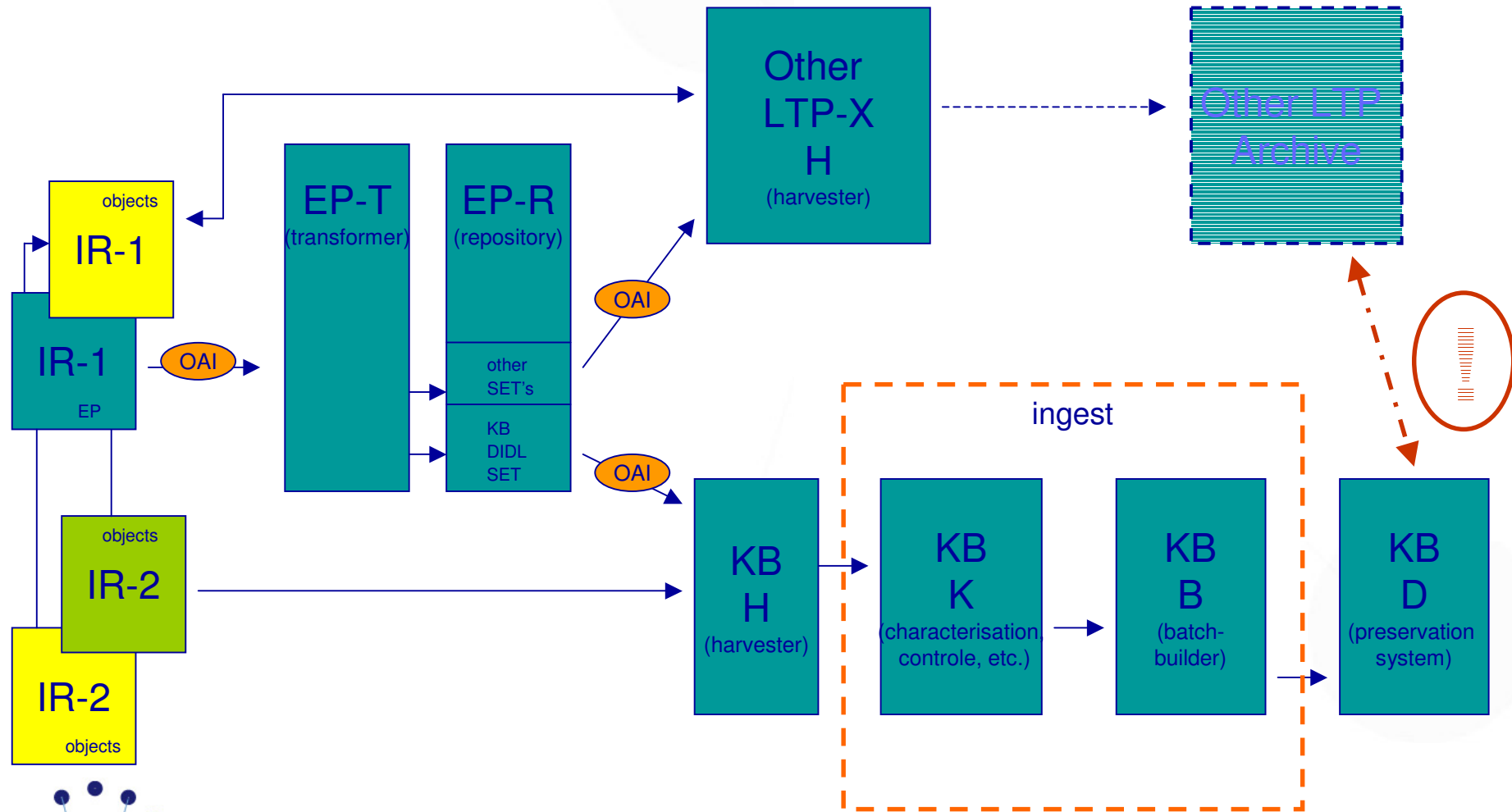
- Not the solution
- Simplified
- Research and Experiment
- Identifying Issues
- Dutch situation as a test case



Dutch research LTP stakeholders





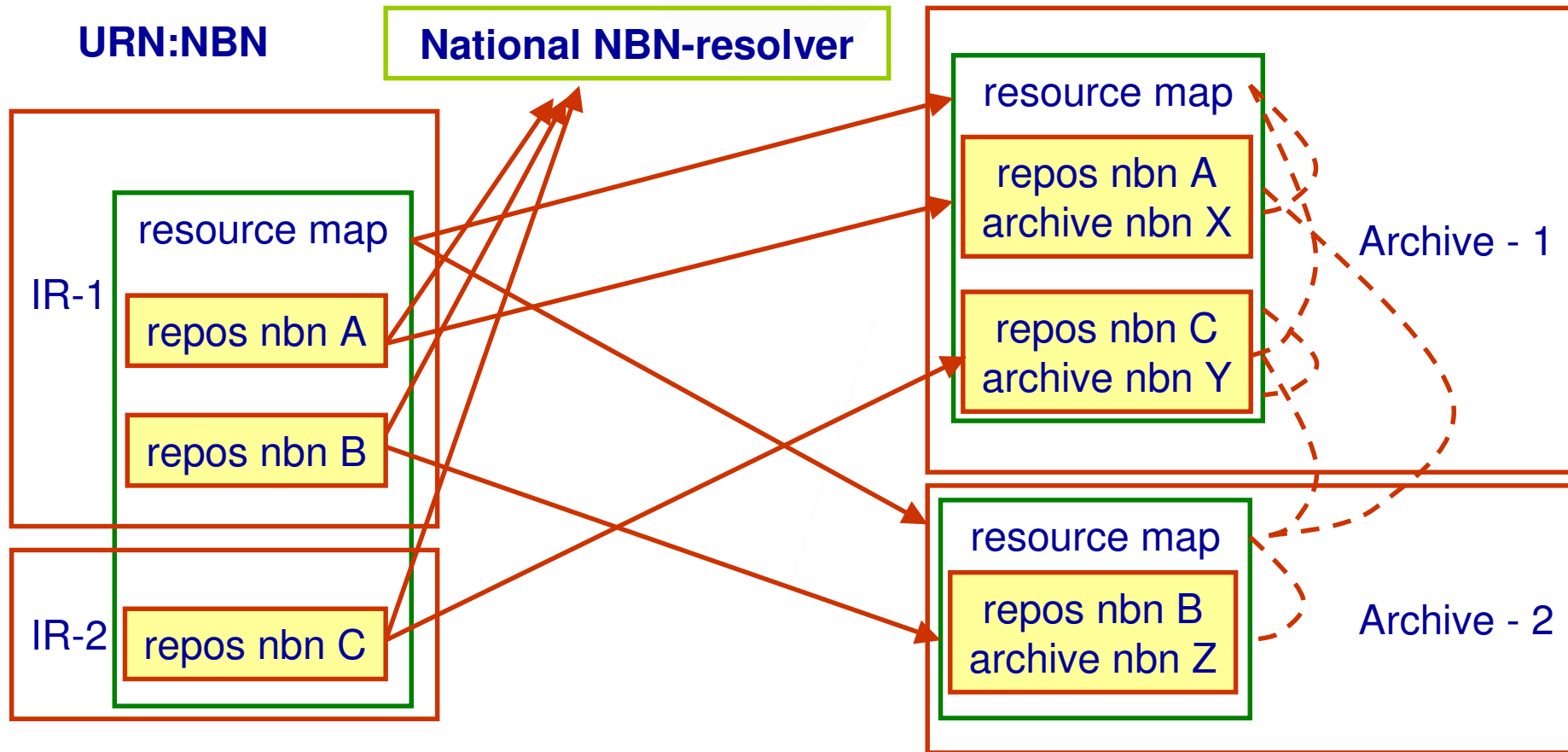


demo:

(<http://www.surfmedia.nl/medialibrary/item.html?id=D5CHvHq2d27nAnHDhOrbxaOo>)



Relations between PID



For future use:

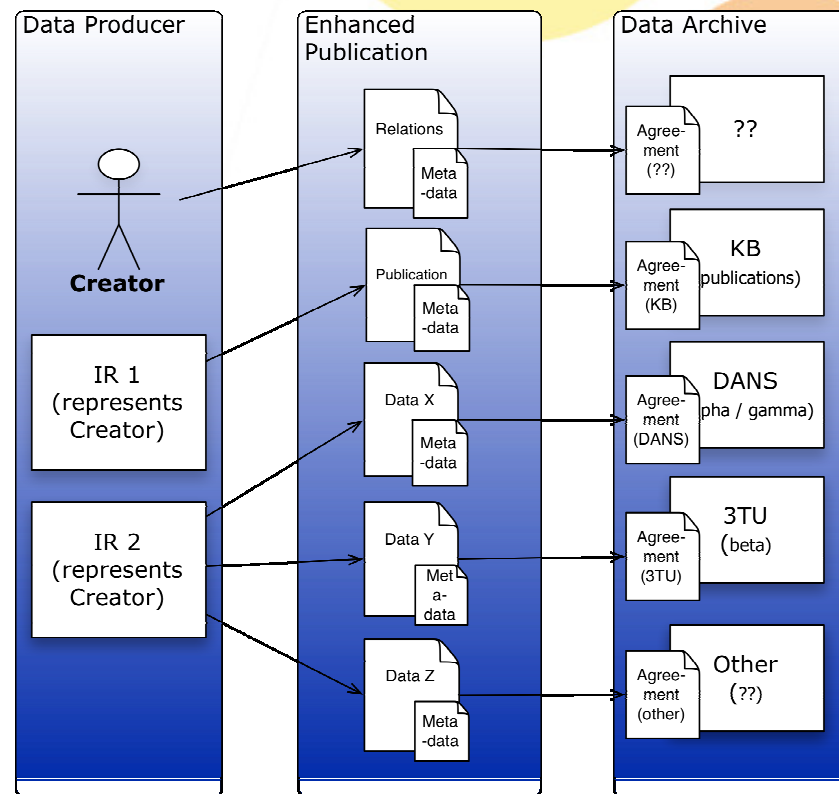
Expansion of the national resolver?:

Constructing a new resource map?



Archiving Agreement and EPs

- Known technical challenges: “business as usual”
- Organisational challenges need to be solved



Overview

KB

1. The Dutch LTP and Repository Landscape
2. Enhanced Publications
3. Enhanced Publications and Long Term Preservation: an experiment
4. Challenges, Issues.



- Organisation, preservation policies, archival agreement
- Ownership, responsibilities
- Rights (national, international)
- Authenticity and integrity; look and feel
- Versioning/updates
- Nature of consisting files
- Persistency (files, authors, identification, citation)
- Future use, usability and access
- Implementation

Developments

- Evolving forms of scholarly publication (EP, enhanced journals, VRE, e-books, databases, linked data, websites, twitter, triples)
- Growing diversity of file formats
- Changing ways of organising research
-

Nevertheless:

There are a lot of technical challenges in preserving and giving long term access to new kinds of scholarly ‘publications’, but still the organisational one looks the most challenging.



KB



3TU.



Paul Doorenbosch
Eugène Dürr
Arjan Hogenaar
Maarten Hoogerwerff
Jens Ludwig
Birgit Schmidt
Barbara Sierman
Maurice Vanderfeesten

Thank you

Paul Doorenbosch
Koninklijke Bibliotheek
paul.doorenbosch@kb.nl

