The European Library: opportunities for new services

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Overview

- Introduction
- Overview of architecture
- Services
- TEL metadata
- Collections
- TEL and LEAF: name authorities
- Conclusions

Introduction

- An "accompanying measure" created under auspices of CENL

- Collaboration of national libraries of Finland, Germany, Italy, Netherlands, Portugal, Slovenia, Switzerland, United Kingdom and ICCU and CENL

- Part funded by the European Commission for 30 months to test feasibility

- If successful it is anticipated that other CENL members will participate

What TEL is aiming at

- **User perspective**
  - integrated access with central index
  - multi-lingual subject terms and name authorities
  - links to local services

- **Provider perspective**
  - lower barrier to participate
  - simple protocols
  - facilitate conversions and addition of collections

- **Library perspective**
  - common vocabulary with ongoing development
  - machine readable metadata sharing

The work packages

1   Publisher relations

2   Business models

3   **Metadata**

4   **Interoperability testbeds**

5   Dissemination and use

6   Management

Potential TEL services

- Interlinking national resources
- Registry of all European heritage collections
- Memory of T...
- Virtual ... e)
- Automa... a, abstracts and pu...
- Timelines and geographical traveling though heritage collections
- Name authority services (using LEAF)

> Create TEL metadata infrastructure that makes it easy to add new services !

How to create the infrastructure?

- **Finding the right balance between:**
  - –Central indexing of distributed metadata by OAI-harvesting
  - –Distributed searching by SRU/Z39.50
  - –Dynamic linking
- **Understanding each others metadata to facilitate automated linking between services**

TEL overview
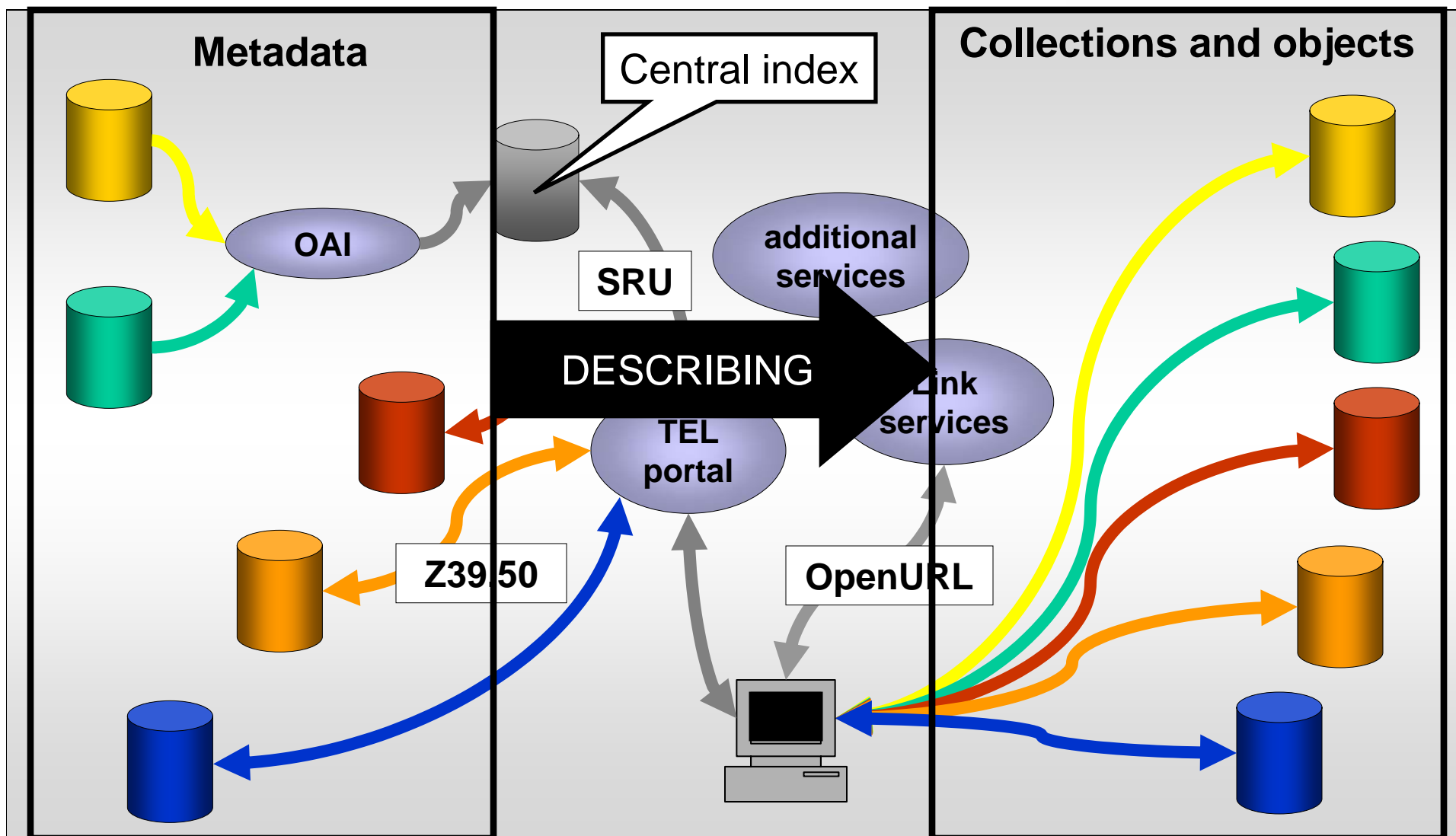
Highlights

- Combination of distributed searching via Z39.50 and central indexing using:
  - The Open Archives Initiative protocol for metadata harvesting (OAI-PMH)
  - Search and Retrieve via URLs (SRU)
- Integration with collection level descriptions
- Metadata registry for controlled evolution of TEL application profile
- User and context specific link services (OpenURL,URN)
- Extra services: multilingual subject service (MACS project), name authorities service (LEAF project) and authentication

Search and Retrieve via URLs (SRU)

- Initiative from Z39.50 implementers group
- Low barrier implementation of server and client
- Search via simple standard URL syntax
- Human readable query language (CQL)
- XML response conform standard schema in standard XML envelope
- TEL test interface for SRU written as XSL stylesheet with some additional javascript giving it very powerful portal functionality
- Allows linking by automatic generated searches.

Search and Retrieve via URLs (SRU)

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- Initiative from Z39.50 implementers group to offer a low-level alternative to Z39.50

- Search

  base-U ...yntax

- Response ...chema

- Example URL:

  With SRU clients/portals can be written as a simple HTML page with javascript and XSL.

  http//krait.kb.nl/cgi-zoek/srw.pl?query=porbase&maximumRecords=1

Demo

Central indexing - distributed searching

Central indexing	Distributed search
Uniform search options	Search options may differ per target
Predictable performance	Performance determined by slowest target
Easy integration of search results	More difficult to integrate of search results
Centrally controlled index	No control on distributed indexes
Less overall system load: one search is one request	System load is multiplied by number of requested systems

Metadata and TEL services
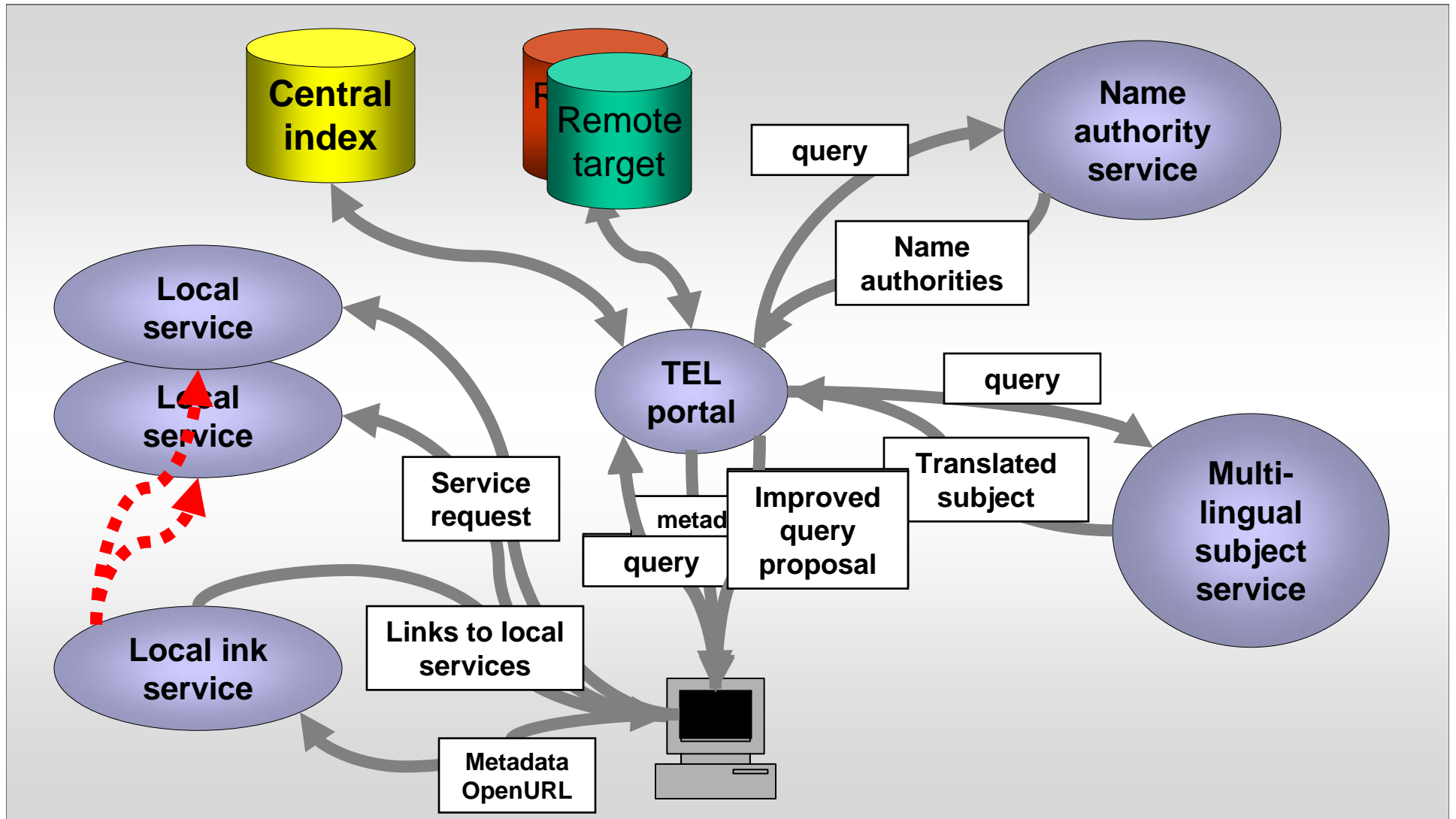
TEL realisation
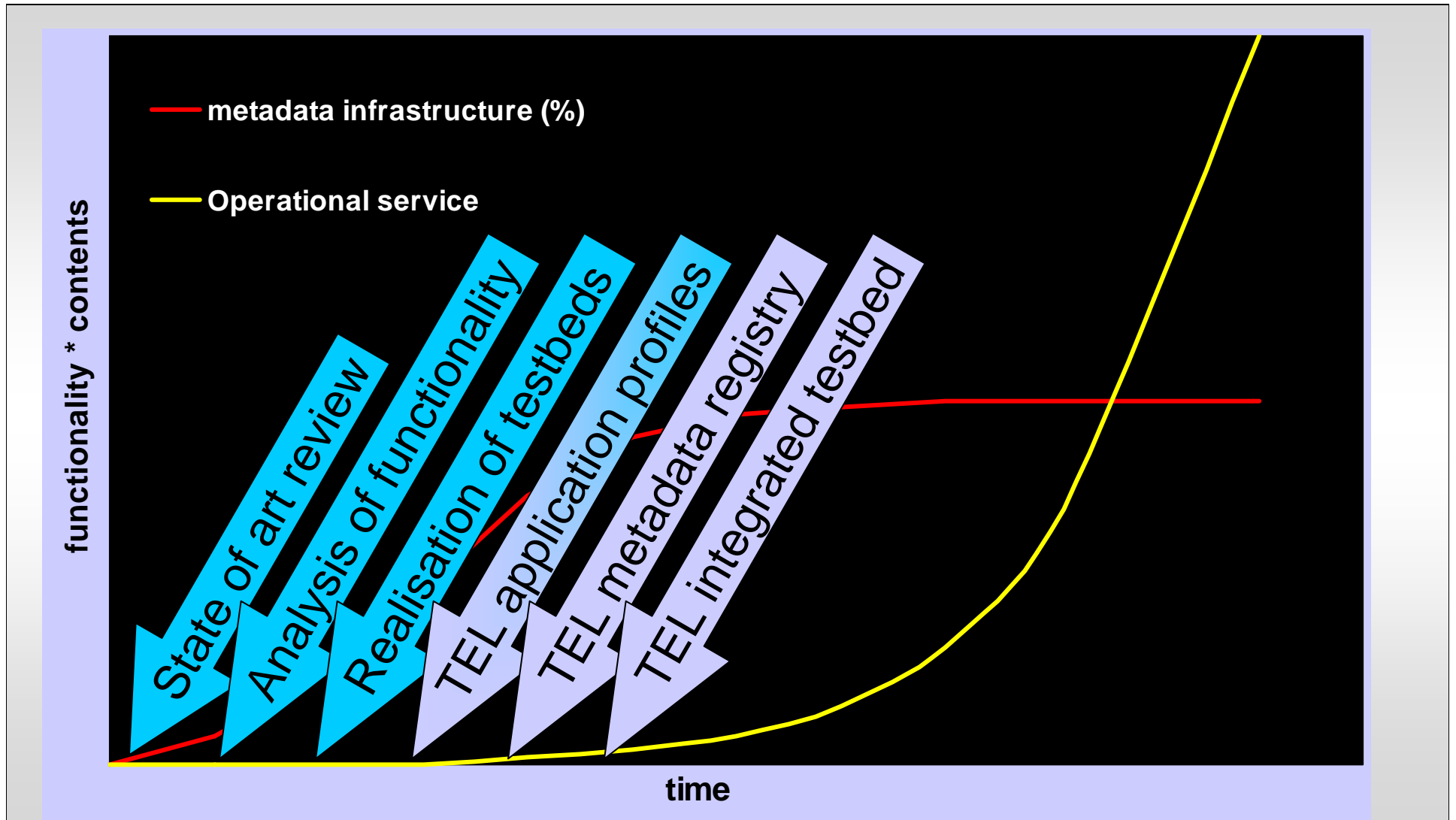
Mapping metadata against functions

- List all metadata elements in DC-Lib

- List (all) possible functions

- Check for each combination whether metadata are usable, needed or not relevant

- Identify metadata elements that are missing or need special attention

functions

DC-Lib elements

Qualifier/ scheme/ Role	Search/resource dicovery	Retrieval of metadata	Identification	Description	Link service	Multilingual ity	Thesaurus service	Collecton level	Authorisation	Administration	Hard and softw.	Navigation	Copy cataloguing	Miscellaneous	Comment
y		X	X		X				X					X	Identifies the metadata record
se-URL		X	?	X			X				X			X	Encoding scheme for a URL with variable query
RN			X	X		X						X		X	Encoding scheme for URN's
RL			X	X		X						X		X	Encoding schema for persistant URL's
enURL			X	X		X						X		X	Encoding scheme for queries with a variable base-URL
		X			X				X	X	X		X	?	?	

Functions and services

- search
- record ...
- identi...
- descr...
- linking
- multilingual service
- authority service
- copy cataloguing
- document ordering

Identification of original record (harvesting, linking by reference)

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A TEL application profile allows harmonisation and common understanding of metadata to enable these functions.

TEL application profile

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- **Specification of elements, definitions, rules, and namespaces**

- **Specifications of characteristics like:**
  - T
  - V

- **Ele**   **paces:**
  - D
  - D
  - DC
  - DC-ED (DC Educational AP elements)
  - MODS (LC MODS)
  - Collection Level Description elements
  - TEL (TEL specific elements)

But we need a TEL Metadata Registry for the controlled evolution of the Application Profile!

demo

Usage of the registry/profile

Enter new collection

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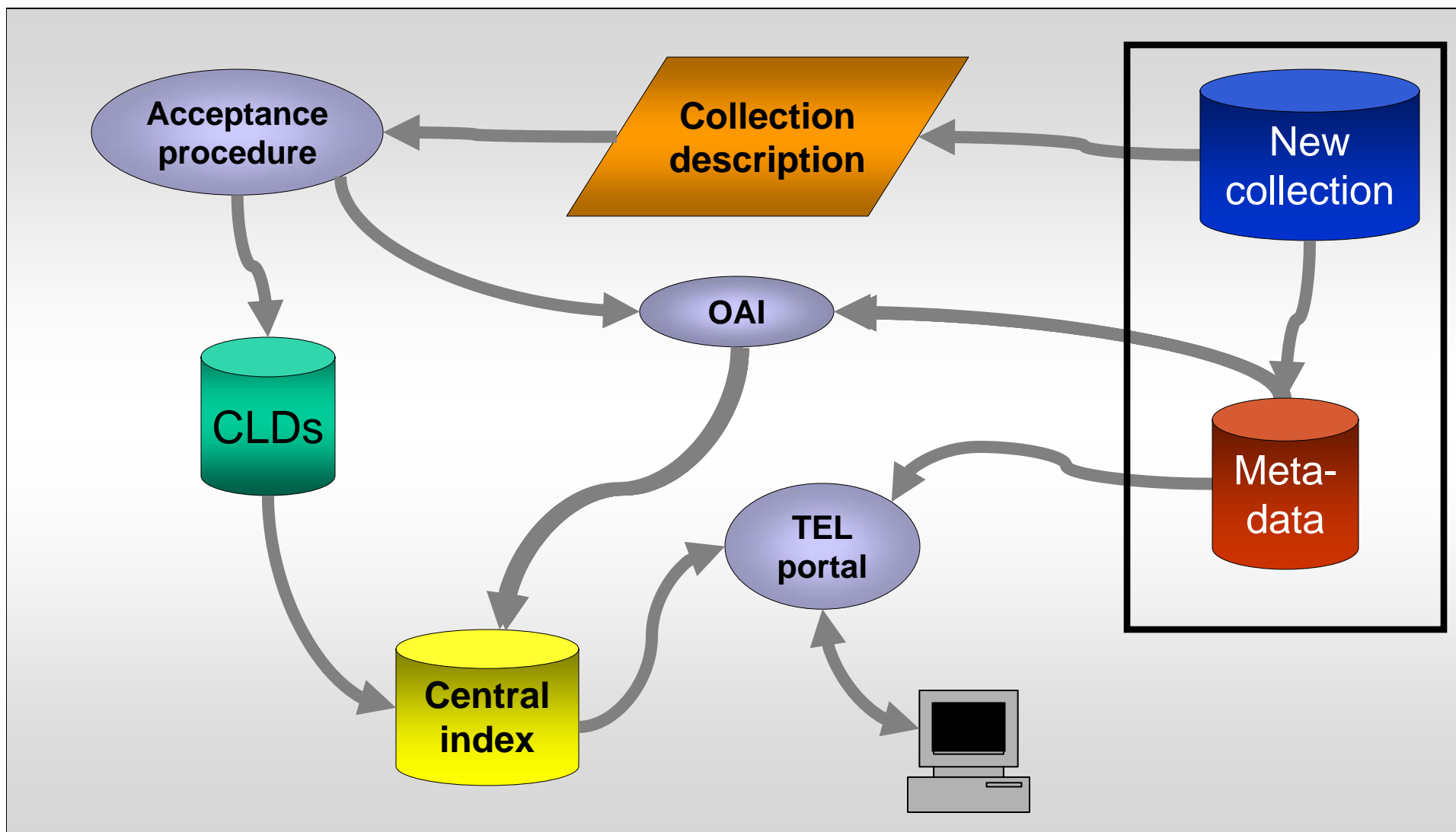
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Object is target
for new

collection

object

Confusing?

But suppose your query matches collections.

Do you want to miss those collections in your result list?

Distributed search

object object object
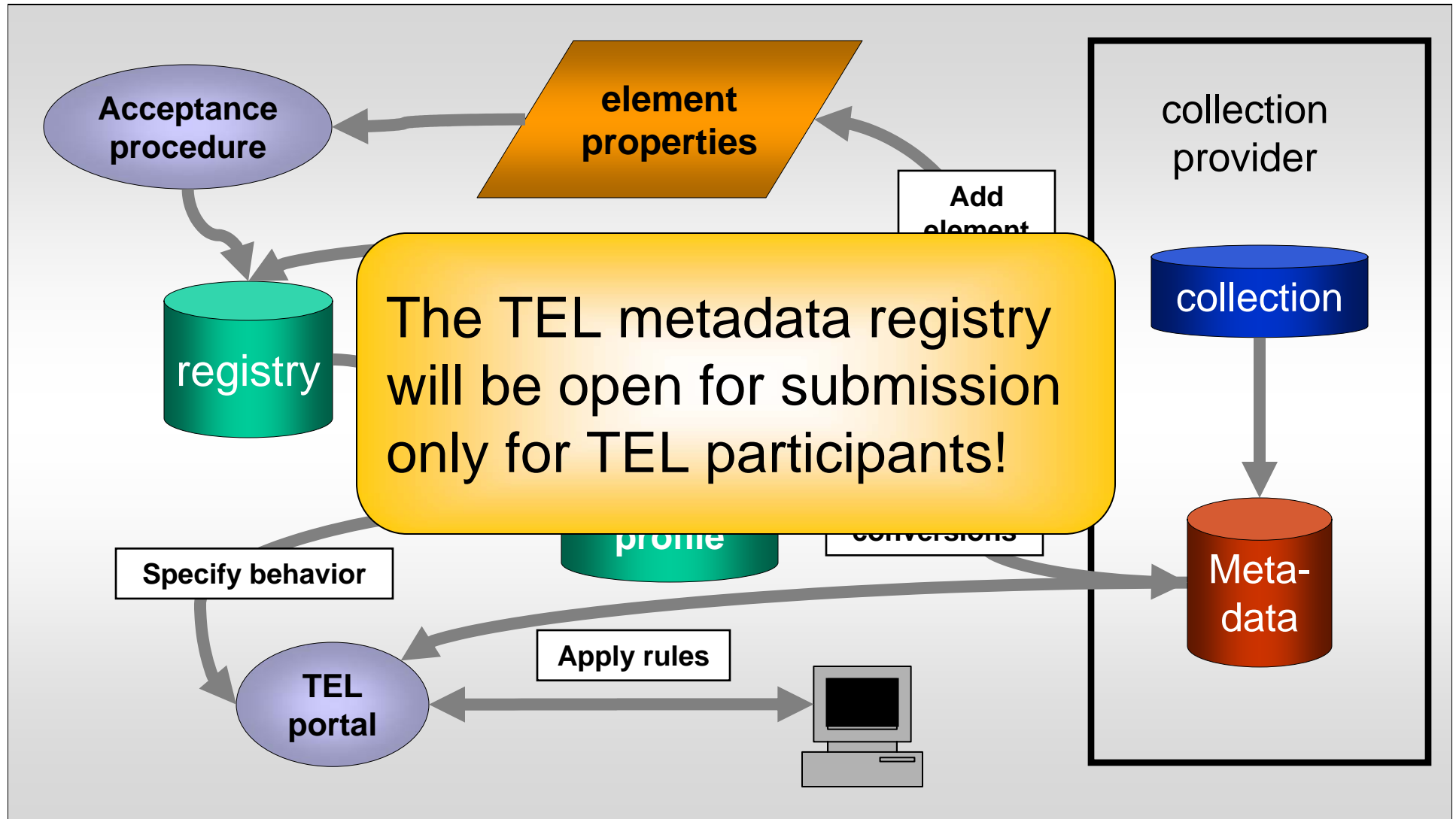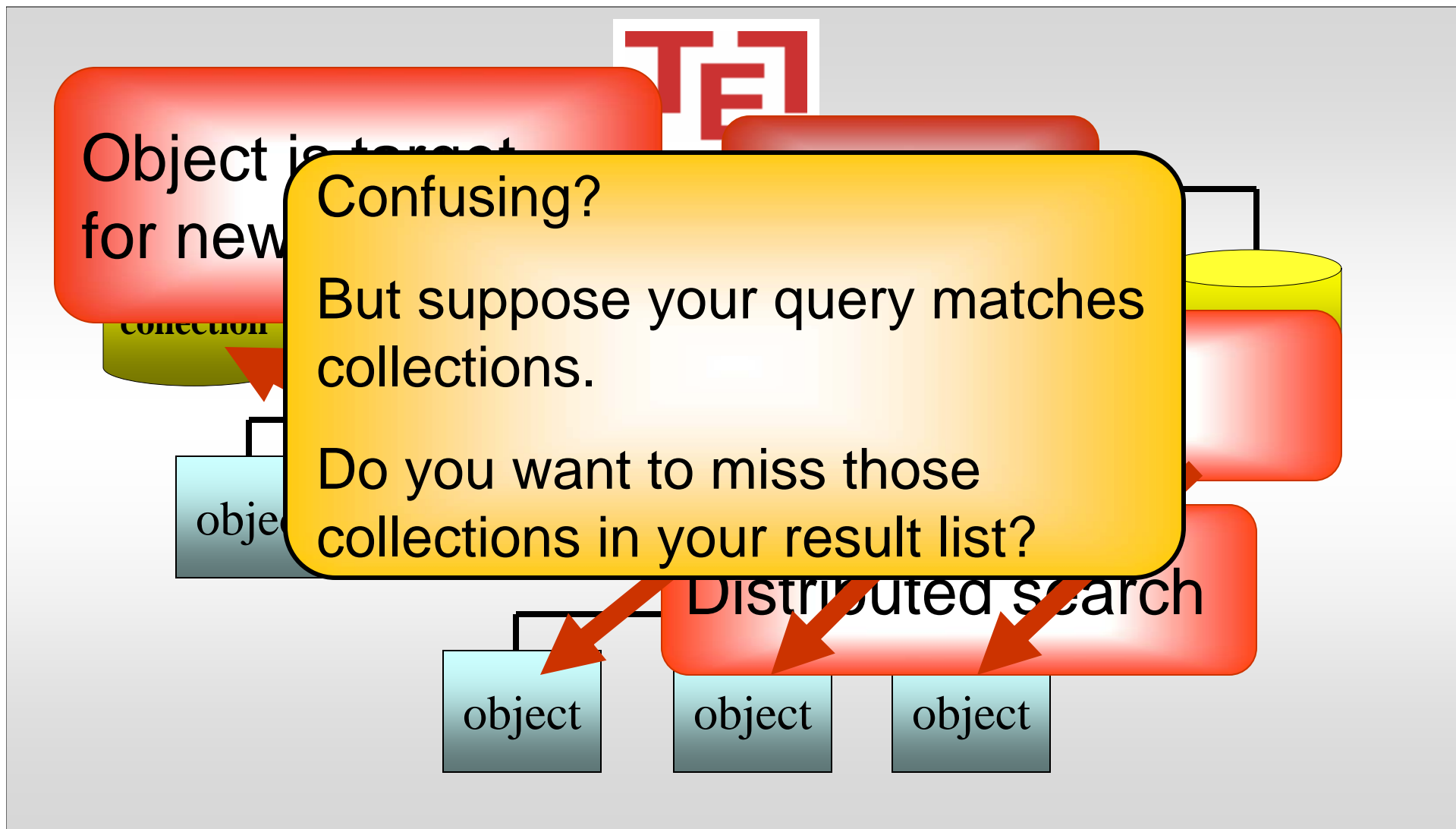
Name authorities in TEL: Different scenenario's

1. Complete integration with bibliographic records in single index

2. Separate bibliographic and authority services (use on request only).

3. Linking by index terms (independent bibliographic and authority databases)

4. Linking by authority record-id (coupled bibliographic and authority databases)

1.Complete integration

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uthorities

title	author	type
xxxxxxxxxxxxx	Andrade	book
aaaaaaaaaaa	Andrade	book
Link to authority record	Andrade	name authority
zzzzzzzzzzzz	Andrade	book

Single search in single index

2. Separate bibliographic and authority databases

Database	#hits
TEL collections	0
Porbase	0
Other collections	0
LEAF authority database	1

ossible

al

Distributed search in more indexes

orities?

3. Linking by index terms

- Index term authority = index

query generated from previous search result

	Name authority record
Main entry:	xxxxxxxx (used for new search)
Pseudonym:	yyyyyyyy (searched)

New query proposal

Original query

4.Linking by authority record-id

Authority record	database	id
Smith, J (		DBA001
		DBY001
Smith, J (1	X	DBX123
Smith, J (1950-	DB ZZZ	DBZ456
Smith, J (1946-		Y678

Metadata elements to be put in TEL application profile.

Link to original authorities by unique id.

Search results from LEAF in TEL?

4.Linking by authority record-id

- Need mutual knowledge on authorities
- Less duplication and more uniformity by sharing authorities
- Difficult to realise (different languages, organisations, formats etc.)
- Very powerful tool in multi-cultural and multi-lingual environment
- Useful in one central index: OAI-PMH harvesting of authority records

demo

Window 1 (back): http://krait.kb.nl/coop/tel/test/teldbs.xml - Microsoft Internet Explorer

THI...

Window 2: http://krait.kb.nl/coop/tel/test/teldbs.xml - Microsoft Internet Explorer

| 966 | $l BN, $m AG, $s L. 1497 P., |
| 966 | $l BN, $m AG, $s L. 1586 P. |

link 107...

100	$a
101	$a
102	$a
105	$a
106	$a
200	$a
463	$b 252...
606	$a
675	$a
700	$a
801	$a

link 107...

| 100 | $a |
| 101 | $a |

Window 3: http://krait.kb.nl/coop/tel/test/teldbs.xml - Microsoft Internet Explorer

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BACK

Query: ide...
Number of...

| nr | title |
| 1 | Ensaio... palavra... |

Tran...

Enter...

Window 4: http://krait.kb.nl/coop/tel/test/teldbs.xml - Microsoft Internet Explorer

SRU test interface

(work in progress)

BACK   PRE...

Query:
Number of hits: 163
Number in set: 1

rdf:RDF
rdf:Description
dc:title
dc:title
dc:title
dc:creator
dc:subject
dc:subject
dc:subject
dc:subject
dc:publisher
dc:contributor
dc:contributor
dc:date
dc:identifier
dc:identifier
dc:identifier (URL)
dc:language

Window 5 (front): Ficha bibliográfica - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help   Links TEL   Intranet   lijstbeheer

Back   →   Search   Favorites

Address   http://bnd.bn.pt/ed/pedro-nunes/ficha.html   Go

Ficha bibliográfica

PORTUGAL. Biblioteca Nacional. Gabinete de Edições Electrónicas

Pedro Nunes, 1502-1578 [Documento electrónico] : nouas terras, nouos mares, e o que mays he : nouo ceo e nouas estrellas / comissário científico Henrique de Sousa Leitão ; coord. técnica Lígia de Azevedo Martins ; Web design e produção Gabinete de Edições Electrónicas da Biblioteca Nacional

Multimédia interactivo. - Lisboa : B.N., 2002. - Tít. do ecrã de apresentação. - Descrição baseada na data de consulta de: 03 Junho

Internet

Conclusions

- Although the current TEL project will not result in a fully operational European Library system, the results of the project will constitute the groundwork on which TEL's ambitious vision can be realised.

- TEL is is following the newest open standards like Dublin Core in XML, Application Profiles, OAI, SRU and OpenURL.

- Integration of the TEL Application Profile, Search and Retrieve via URL's and OAI-PMH facilitates co-operation with other services as offered by LEAF.