CLARIN
Common Language Resources and Technology Infrastructure

CMDI: a Component Metadata Infrastructure

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Why CMDI

Problems with existing solutions:

- Inflexible: too many (IMDI) or too few (OLAC) metadata elements
- Problematic & unfamiliar terminology for some communities
- Limited interoperability (both semantic and functional)

CMDI Origins

CLARIN project – one of its goals is a joint metadata domain for LRs

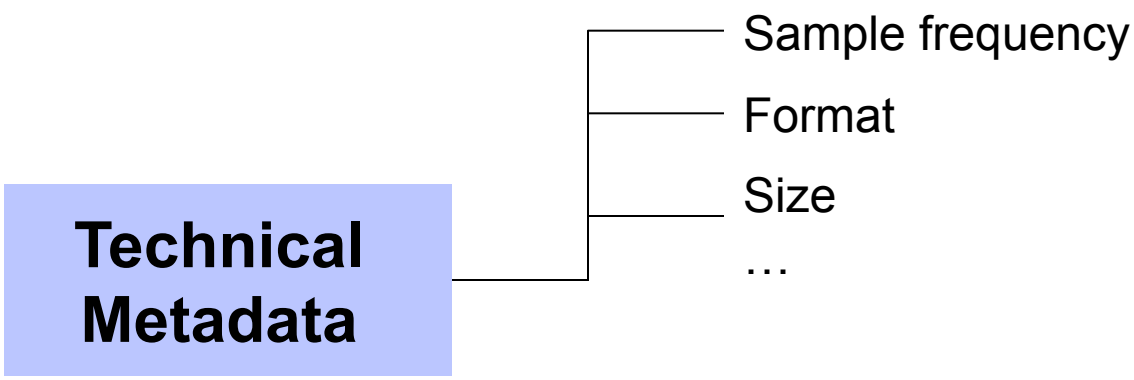
- Not a new metadata set that should supersede all others
- … but rather an environment supporting different metadata sets
- where new interoperable metadata schema can be created to describe new data types (or old data types for new purposes)

How to do this?

- Use reusable Metadata Components
- with well defined syntax
- … and explicit semantics

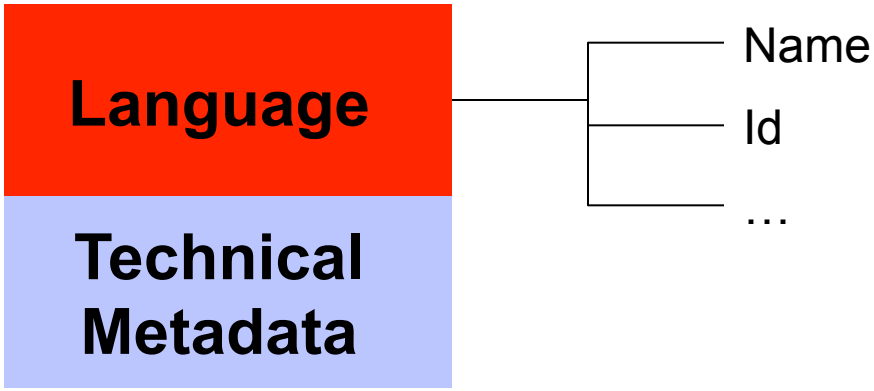
Metadata Components

Let's describe a speech recording



Metadata Components

Let's describe a speech recording



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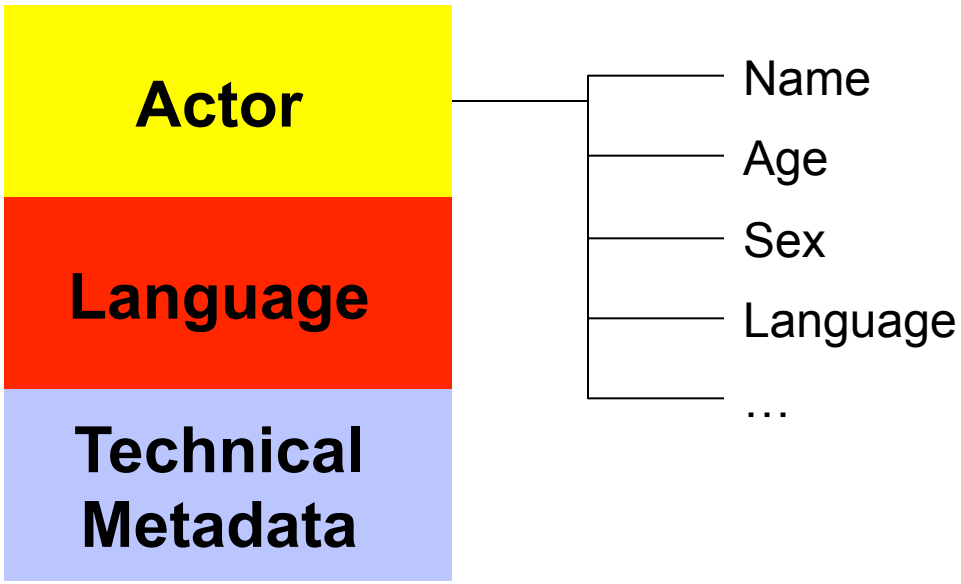

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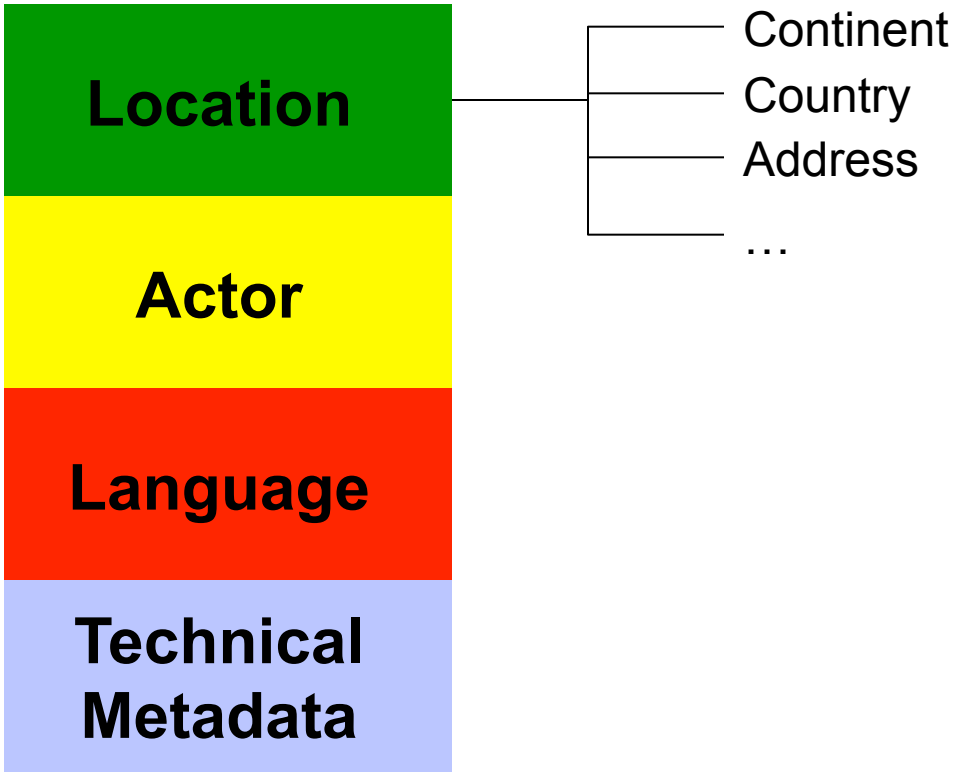

Let's describe a speech recording

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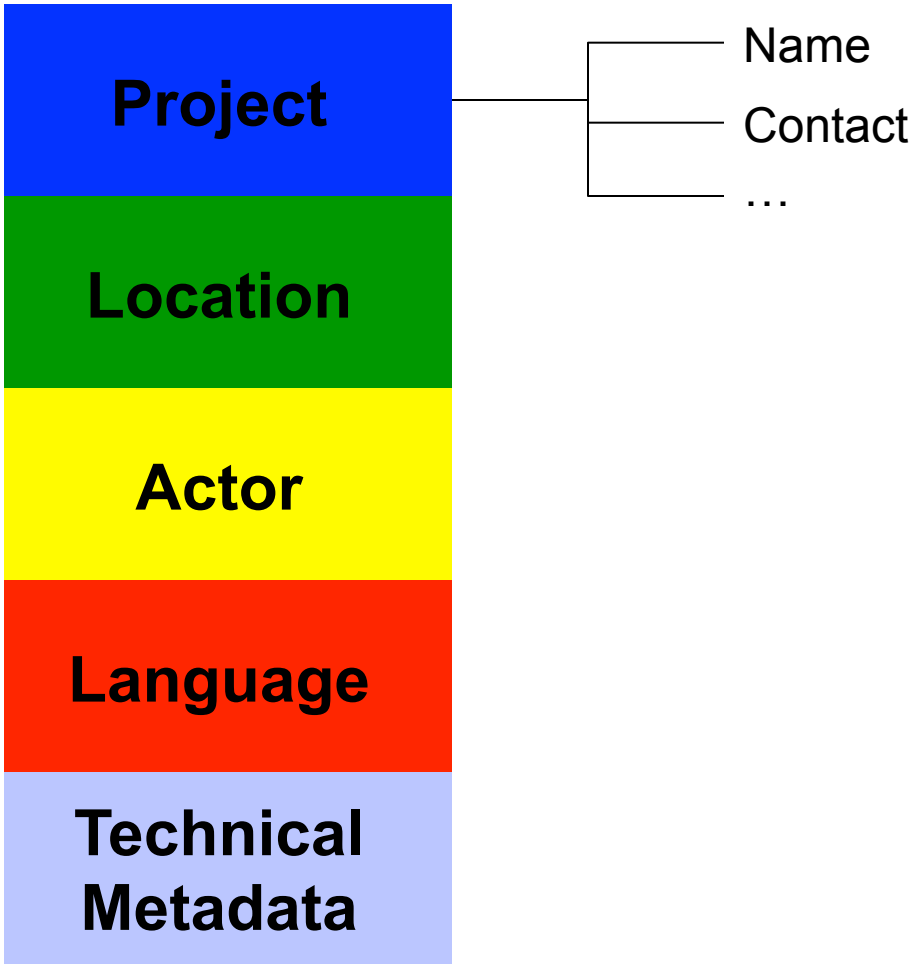
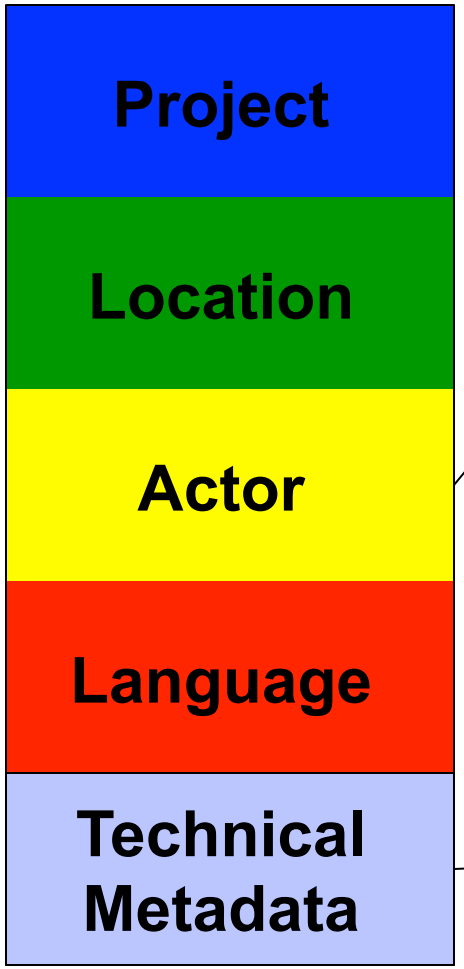


Let's describe a speech recording

Metadata Components



Metadata profile

Profile definition XML

Component definition XML

Let's describe a speech recording

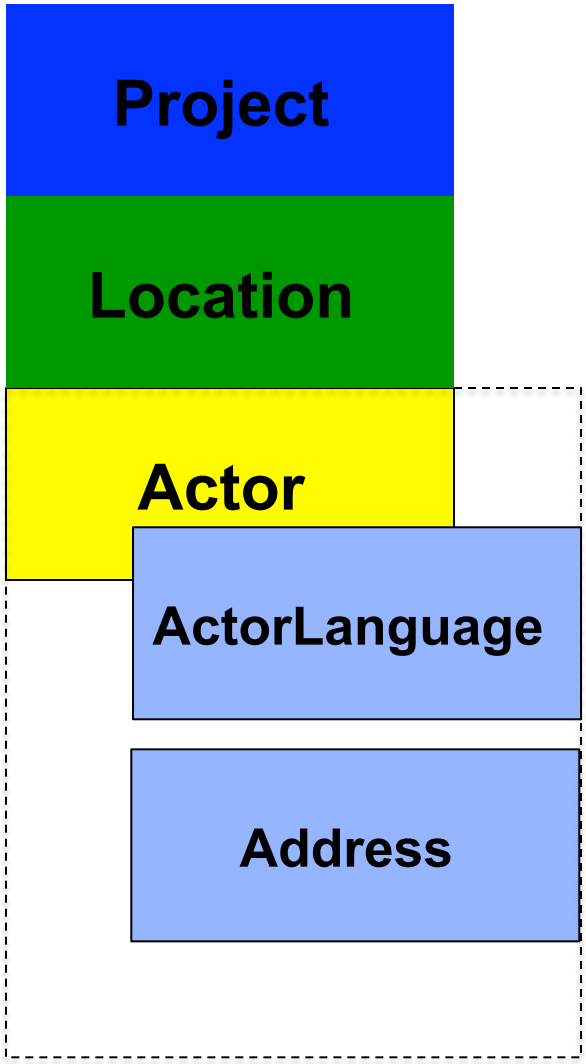
Metadata schema

W3C XML Schema

Metadata description

XML File

Recursive model



- Recursive Component model
- Components can contain other components
- Enhances reusability

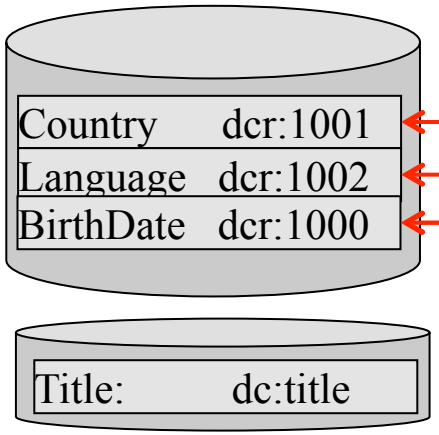
Reusability & Explicit Semantics

metadata modeler

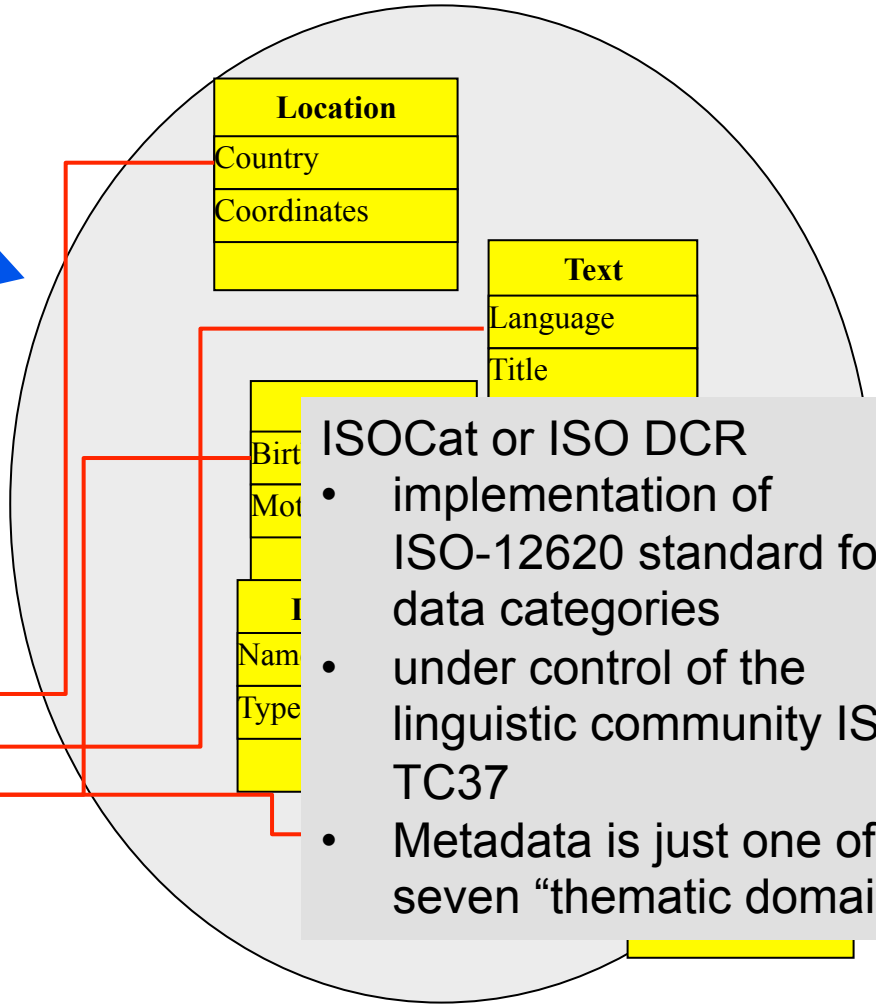
Semantic interoperability **partly** solved via references to ISO DCR or other concept registry

ISOcat concept registry

DCMI concept registry



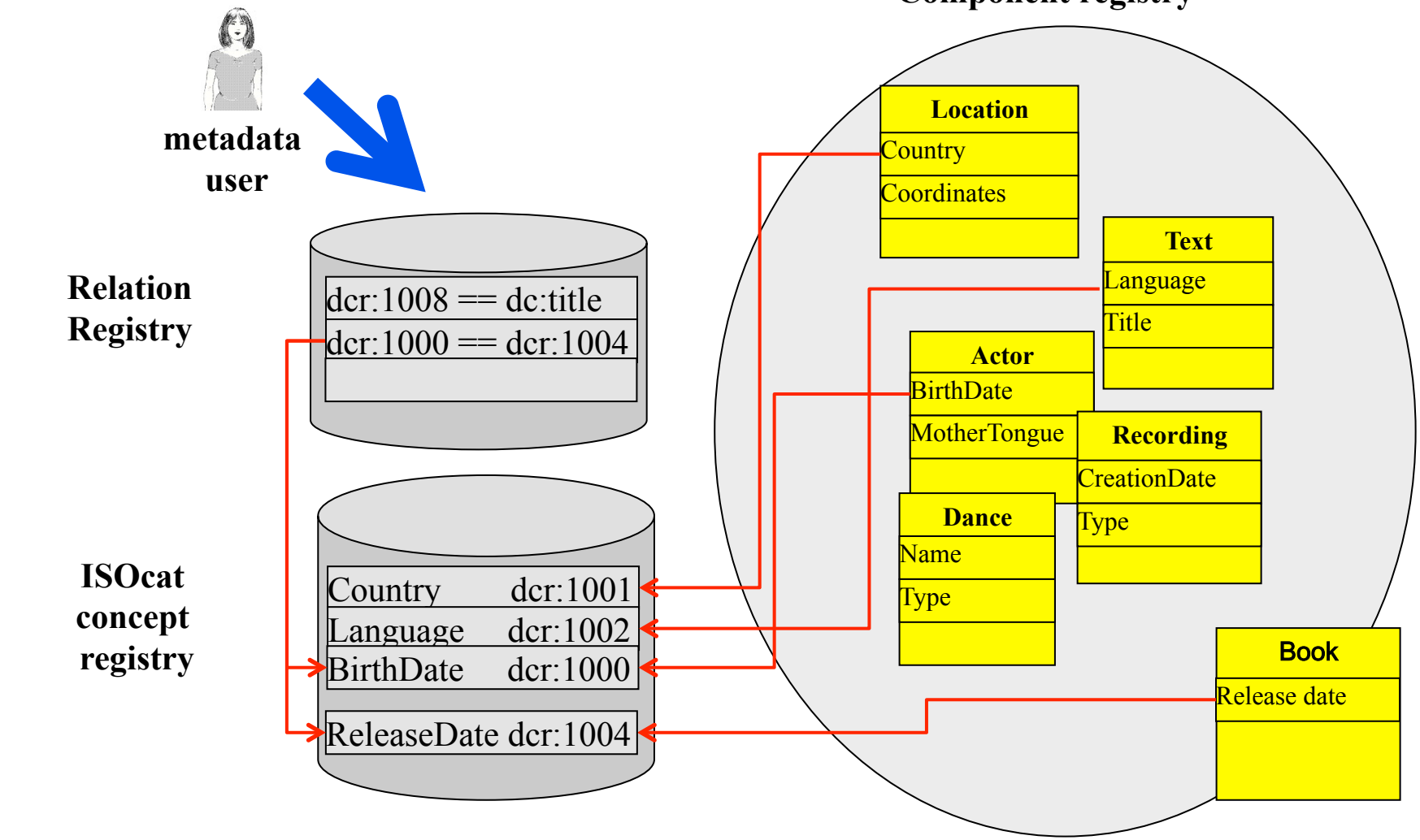
Component registry



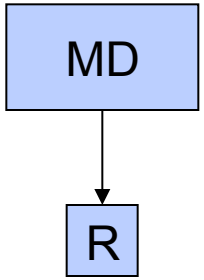
ISOCat or ISO DCR

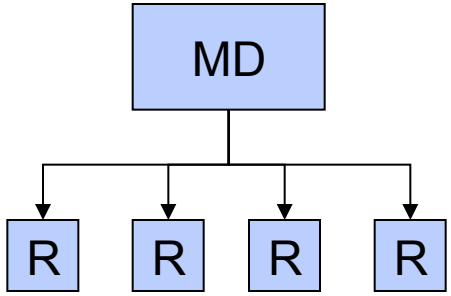
- implementation of ISO-12620 standard for data categories
- under control of the linguistic community ISO TC37
- Metadata is just one of the seven “thematic domains”

Reusability & Explicit Semantics

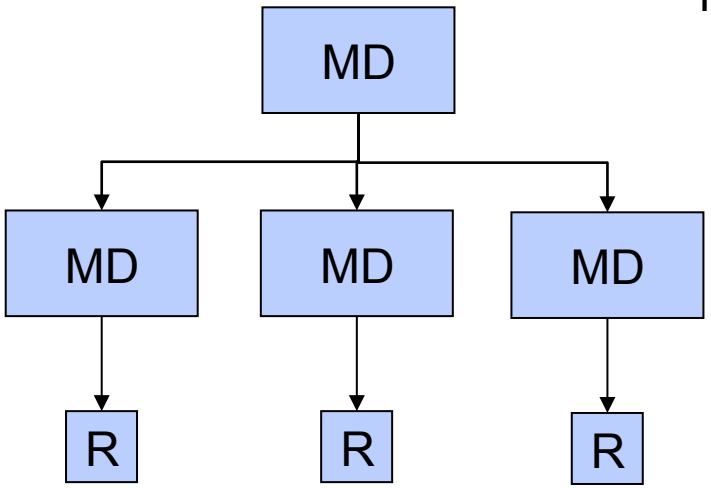


Collections & metadata

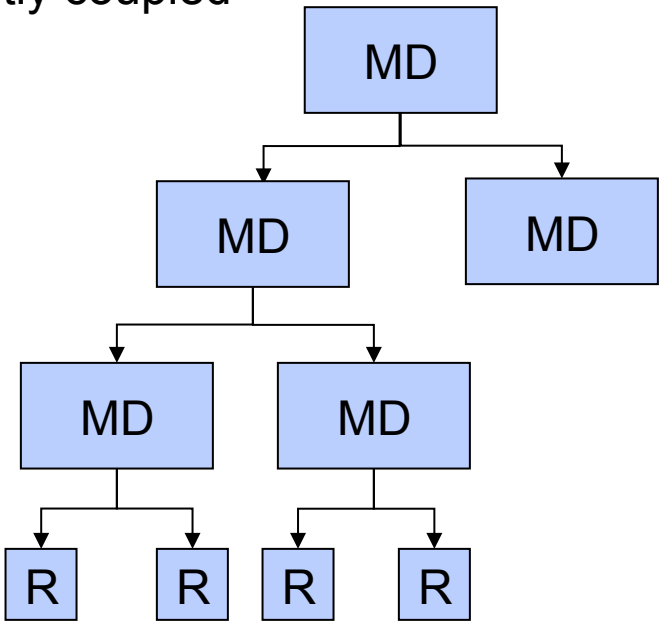




Collection of tightly coupled resources



Collection of resources



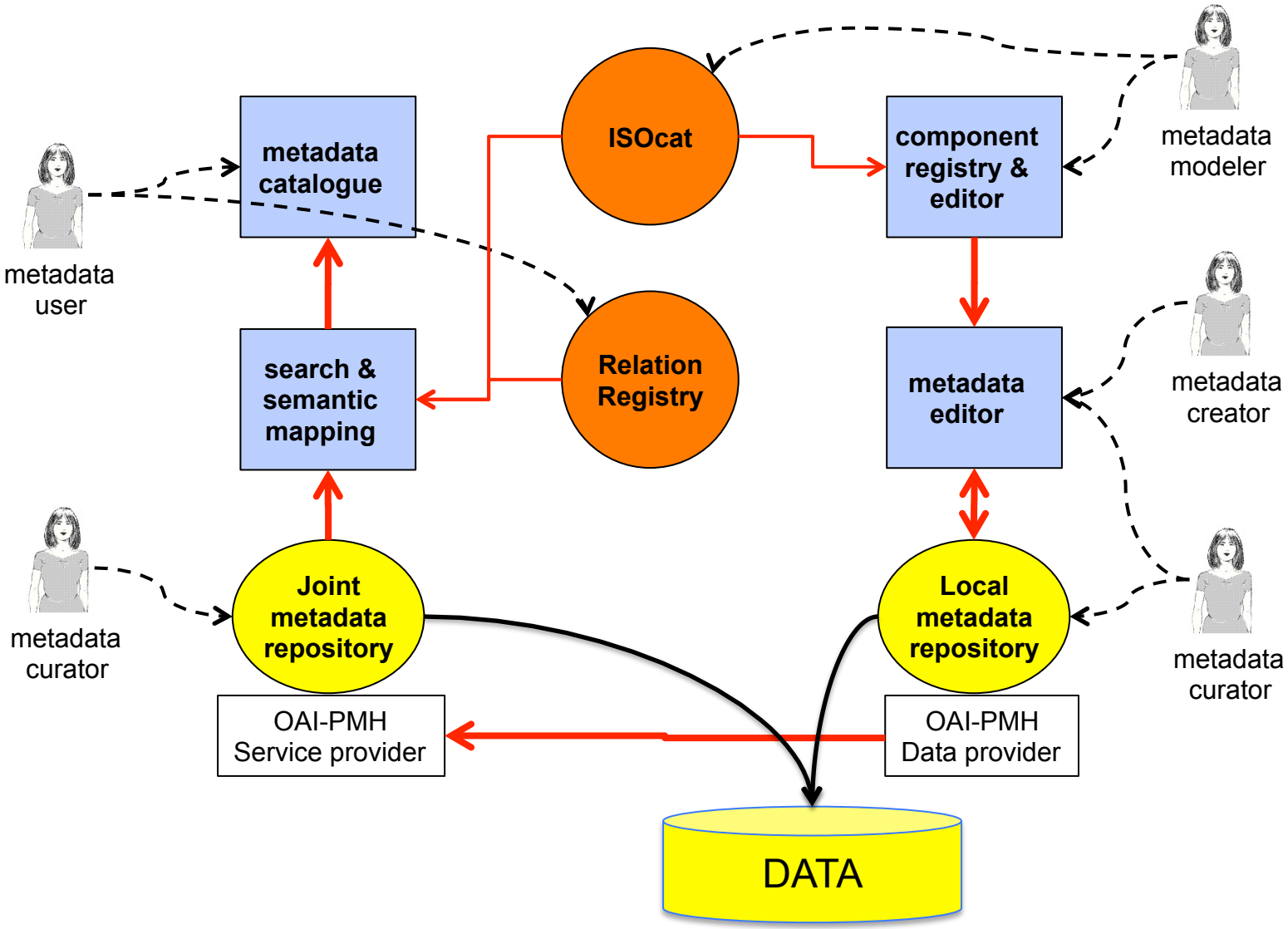
hierarchy of sub-collections

Metadata Actors & Entities

- **Metadata Users** use metadata to find or resources
  - Product: suitable resource
- **Metadata Creators** create metadata to describe resources
  - Product: metadata description of a resource
- **Metadata Curator** Updates metadata description for maintenance
  - Product: metadata description of a resource
- **Metadata modelers** create metadata schema and/or terminology
  - Product: metadata schema with explicit terminology

- **Metadata repository** facility that for managing metadata descriptions
- **Metadata catalogue** software that allows users to search & browse in metadata

CMDI Metadata life-cycle



CMDI backward compatibility

- There is a ‘huge’ installed base of metadata records available for harvesting: OLAC, IMDI, DC
- CMDI component registry was seeded with:
  - IMDI profile
  - DC/OLAC profile
- Specialist IMDI profiles for SignLanguage, Bilingualism, ... will be developed within some CLARIN NL projects
- Those communities used to these schemas can work
- Others may need assistance to convert their metadata schema

CMDI Status

CMDI Usage

- Different national CLARIN projects: NL, D, DK, …; other national projects: NaLiDa
- Public components: 218, profiles: 49
- Metadata records: 180,000
- Component registry & editor 62 registered users (15 overall active)

Tools

- Production: Component registry & editor, ISOcat, ARBIL, VLO
- Prototypes: Relation Registry, complex metadata search

CMDI contributors

Collaboration on the CMDI implementation

CLARIN EU preparatory phase

- MPI for Psycholinguistics: metadata modeling and editing facilities
- Språkbanken, University of Gothenburg: Joint CLARIN metadata repository
- Austrian Academy: Metadata catalog, metadata & semantic mapping services
- IDS: Virtual Collection Registry

National CLARIN projects: CLARIN NL, CLARIN D,

Thank you for your attention

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Thank you for your attention