



EAGLE EUROPEANA NETWORK OF ANCIENT GREEK AND LATIN EPIGRAPHY

EAGLE & WIKI LOVES MONUMENTS

Il Data Model di Europeana

EDM

Europeana Data Model



- ❑ Europeana collects (millions of) “Cultural Objects” from (thousands of) European cultural institutions
- ❑ Actually, Europeana collects *information* (data) about (millions of) “Cultural Objects”
- ❑ Cultural institutions (Content Providers) are free to describe their cultural objects in any way they prefer
- ❑ Europeana needs to transform the collected information (data) about cultural objects into a common “Europeana format”, in order to provide a unified and consistent search and view of all the collected information
- ❑ The Europeana Data Model is the definition (at a conceptual level) of this “Europeana format”

What is a Data Model ?



- ❑ A Data Model is a (formal) way to describe the information of interest about that part of the world that we want to model
- ❑ The most common data model is the entity-relationship model
- ❑ In the Web the objects of interest are called *resources* and the most used data model is RDF (Resource Description Framework)
- ❑ A resource is whatever may be identified by a unique identifier, called URI (Uniform Resource Identifier)
 - e.g. an electronic document, an image, a source of information (e.g., "today's weather report for Rome"), a service (e.g., hotel booking), a collection of other resources
 - a resource is not necessarily accessible via the Internet; e.g., human beings, corporations, and bound books in a library can also be resources
 - abstract concepts can also be resources, such as the operators and operands of a mathematical equation, the types of a relationship (e.g., "parent" or "employee"), or fantasy concepts (e.g. Tolkien's Middle-Earth)

EDM requirements for a Data Model

- ☐ Distinguish between the real world object (painting, book, program) and its digital representation
- ☐ Distinguish between the object and the description (metadata record) of that object
- ☐ Allow multiple descriptions (metadata records) for the same object
- ☐ Support for objects that are composed of other objects
- ☐ Use standard metadata format that can be specialized
- ☐ Use standard vocabulary format that can be specialized
- ☐ Use existing standards
 - Dublin Core for metadata
 - RDF for the entity-relationship model
 - SKOS (Simple Knowledge Organization Schema) for vocabularies, taxonomies, thesauri
 - OAI-ORE (Open Archives Initiative Object Reuse and Exchange) for aggregation of resources

The essence of RDF

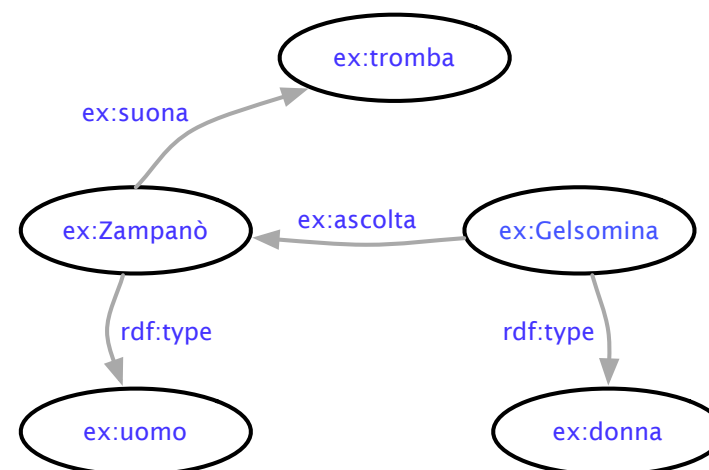


The entity-relationship model

Text representation

```
ex:zampanò rdf:type ex:Uomo .
ex:gelsomina rdf:type ex:Donna .
ex:zampanò ex:suona ex:tromba .
ex:gelsomina ex:ascolta ex:zampanò .
```

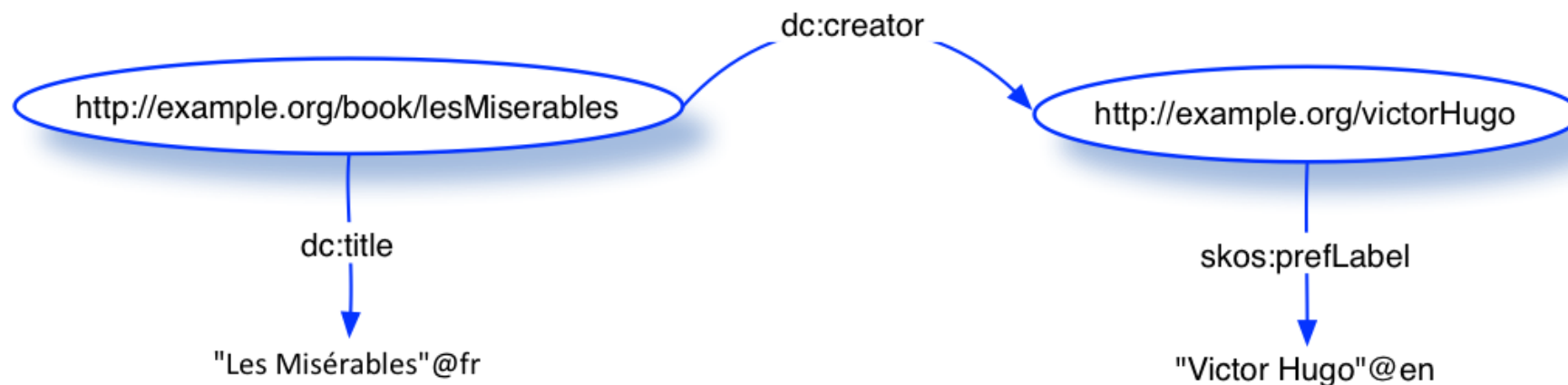
Graph representation



Courtesy of Carlo Meghini

A simple RDF example

"Les Misérables" was written by Victor Hugo

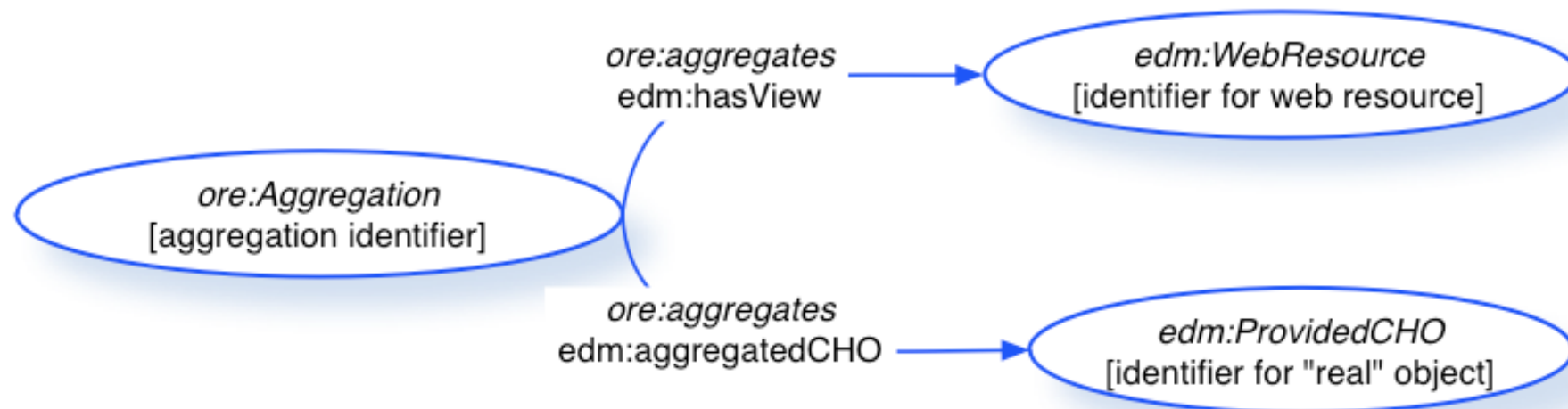


Main Namespaces used in EDM

- ☐ @prefix rdf: <<http://www.w3.org/1999/02/22-rdf-syntax-ns#>>
- ☐ @prefix rdfs: <<http://www.w3.org/2000/01/rdf-schema#>>
- ☐ @prefix owl: <<http://www.w3.org/2002/07/owl#>>
- ☐ @prefix skos: <<http://www.w3.org/2004/02/skos/core#>>
- ☐ @prefix dc: <<http://purl.org/dc/elements/1.1/>>
- ☐ @prefix dcterms: <<http://purl.org/dc/terms/>>
- ☐ @prefix ore: <<http://www.openarchives.org/ore/terms/>>
- ☐ @prefix edm: <<http://www.europeana.eu/schemas/edm/>>
- ☐ @prefix foaf: <<http://xmlns.com/foaf/0.1/>>
- ☐ @prefix viaf: <<http://viaf.org/viaf/>>
- ☐ @prefix rdaGr2: <<http://RDVocab.info/ElementsGr2>>
- ☐ @prefix ex: <<http://www.example.com/>>
- ☐ @prefix ex1: <<http://www.example.com/1/>>

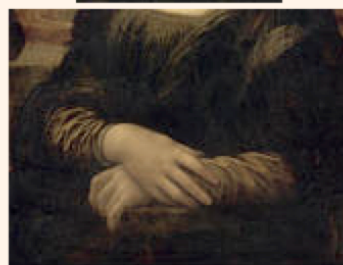
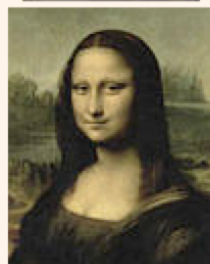
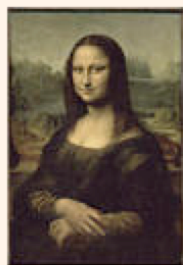
EDM basic pattern

A data provider submits to Europeana a "bundle" of an object and its digital representation(s)



Provider 1 (Direction des Musees de France)

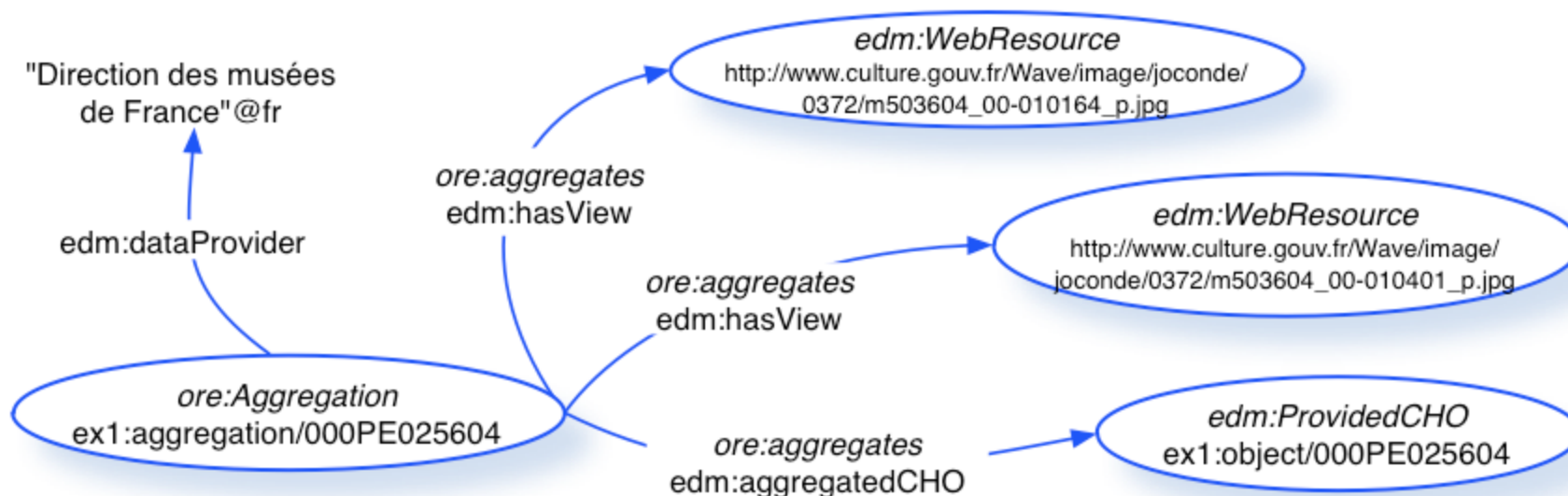
Réponse n° 1



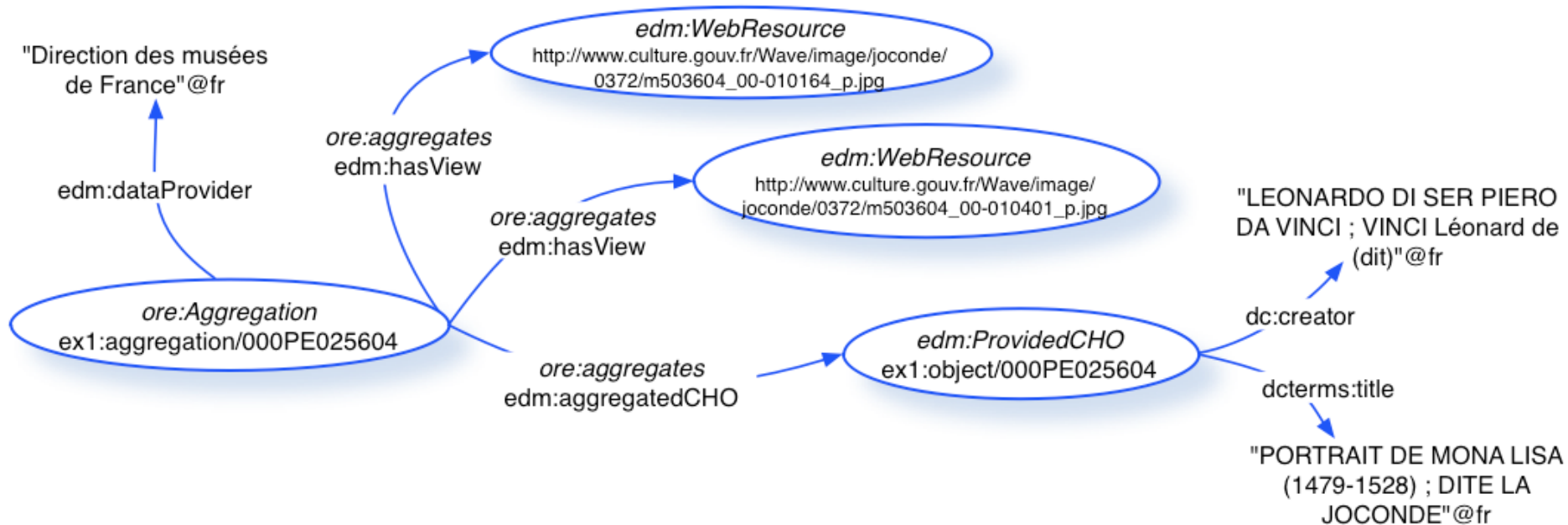
Domaine	peinture
Type d'objet	tableau
Titre	PORTRAIT DE MONA LISA (1479-1528) ; DITE LA JOCONDE
Auteur/exécutant	LEONARDO DI SER PIERO DA VINCI ; VINCI Léonard de (dit)
Précision auteur/exécutant	Vinci, 1452 ; Amboise, 1519
Ecole	Italie
Période création/exécution	1er quart 16e siècle
Millésime création/exécution	1503 entre ; 1506 et
Genèse	oeuvre en rapport ; reproduit en gravure
Historique	commandé par le florentin Francesco del Giocondo, époux de Mona Lisa entre 1503 et 1506 ; nombreuses copies dont une conservée au Louvre ; gravé par Fauchery, par Filhol, par Landon
Matériaux/techniques	peinture à l'huile ; bois
Mesures	77 H ; 53 L
Sujet représenté	portrait (Mona Lisa, femme, à mi-corps, de trois-quarts, assis, accoudé, loggia, Italien) ; fond de paysage (montagne, rocher, cours d'eau, pont, plaine, route)
Date sujet représenté	1479-1528
Lieu de conservation	Paris ; musée du Louvre département des Peintures
	 Musée de France au sens de la loi n°2002-5 du 4 janvier 2002
Statut juridique	propriété de l'Etat ; musée du Louvre département des Peintures
Anciennes appartenances	François Ier ; Couronne de France
Numéro d'inventaire	INV 779
Commentaires	légère diminution du tableau sur les côtés (environ 7 mm) ; acheté vraisemblablement vers 1519, après la mort de l'artiste
Bibliographie	HEYDENRICH 6 ; OTTINO DELLA CHIESA 31 ; VILLOT I 484 ; HAUTECOEUR 1601 ; C.S.I. 1981, P 192
Copyright notice	© Musée du Louvre, © Direction des Musées de France, 1999
Crédits photographiques	© Réunion des musées nationaux ; © Hervé Lewandowski ; © Thierry Le Mage
	 commande reproduction et/ou conditions d'utilisation
	renseignements sur le musée

000PE025604

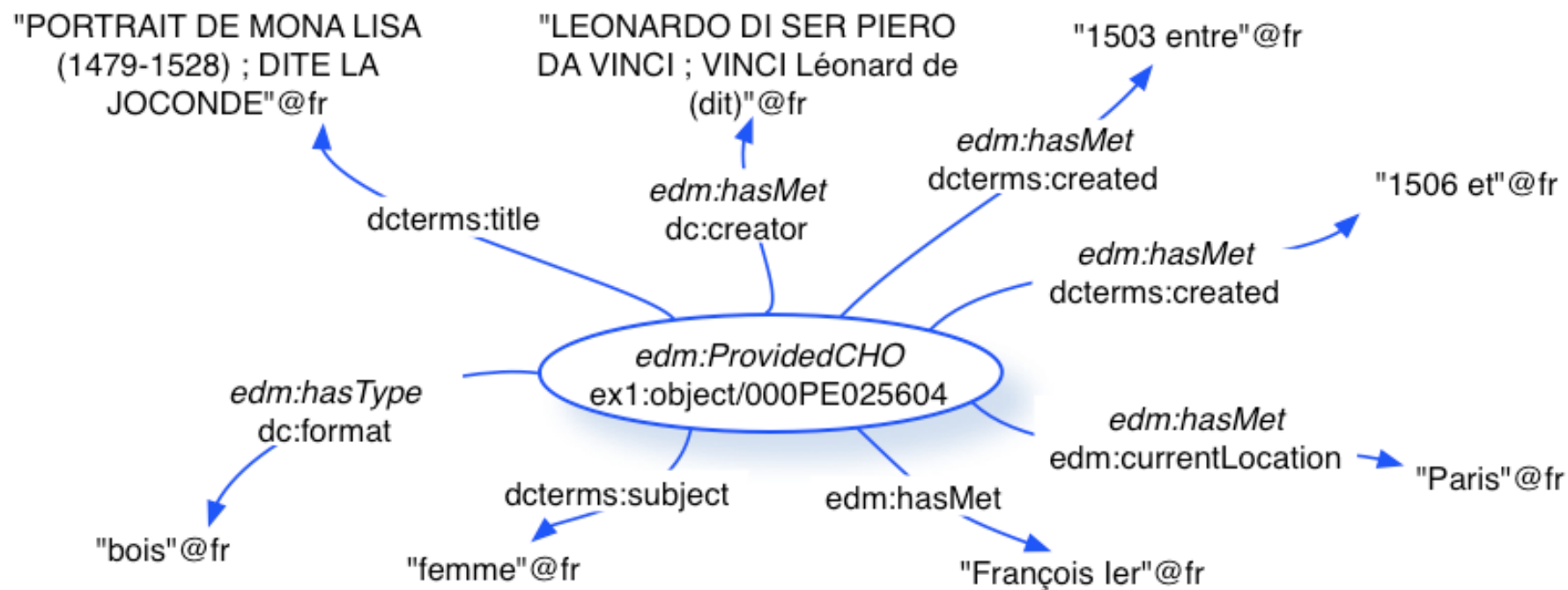
Data provided by DMF



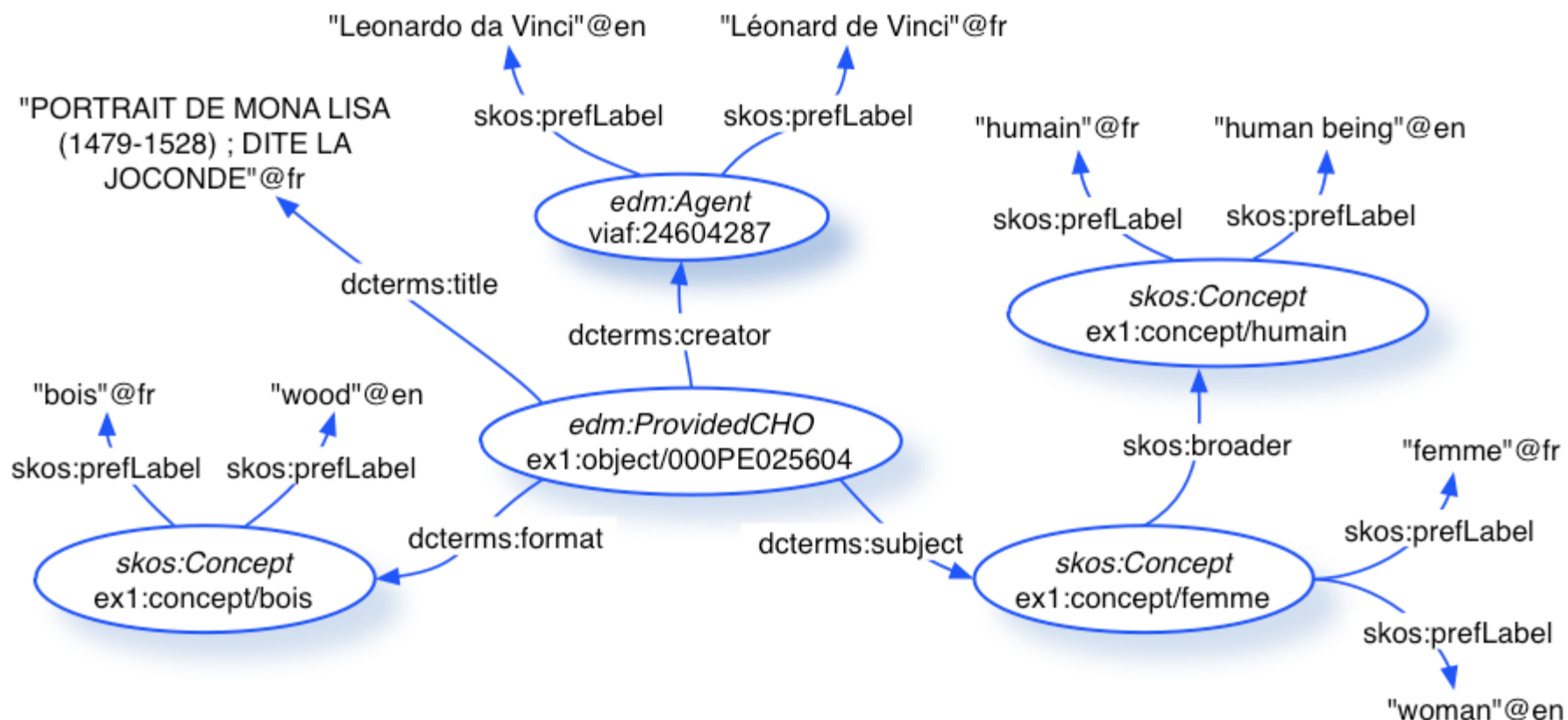
Adding information



Adding more information



Linking to other resources



Provider 2 (Louvre)



© Musée du Louvre/A. Dequier - M. Bard

Denon
1^e étage
Salle de la Joconde
Salle 6



-  détail de la bouche
-  détail des mains
-  détail des yeux
-  détail du buste

Leonardo di ser Piero DA VINCI, dit Léonard de Vinci

Vinci, 1452 - Amboise, 1519

Portrait de Lisa Gherardini, épouse de Francesco del Giocondo, dite Monna Lisa, la Gioconda ou la Joconde

Vers 1503 - 1506

Peint à Florence

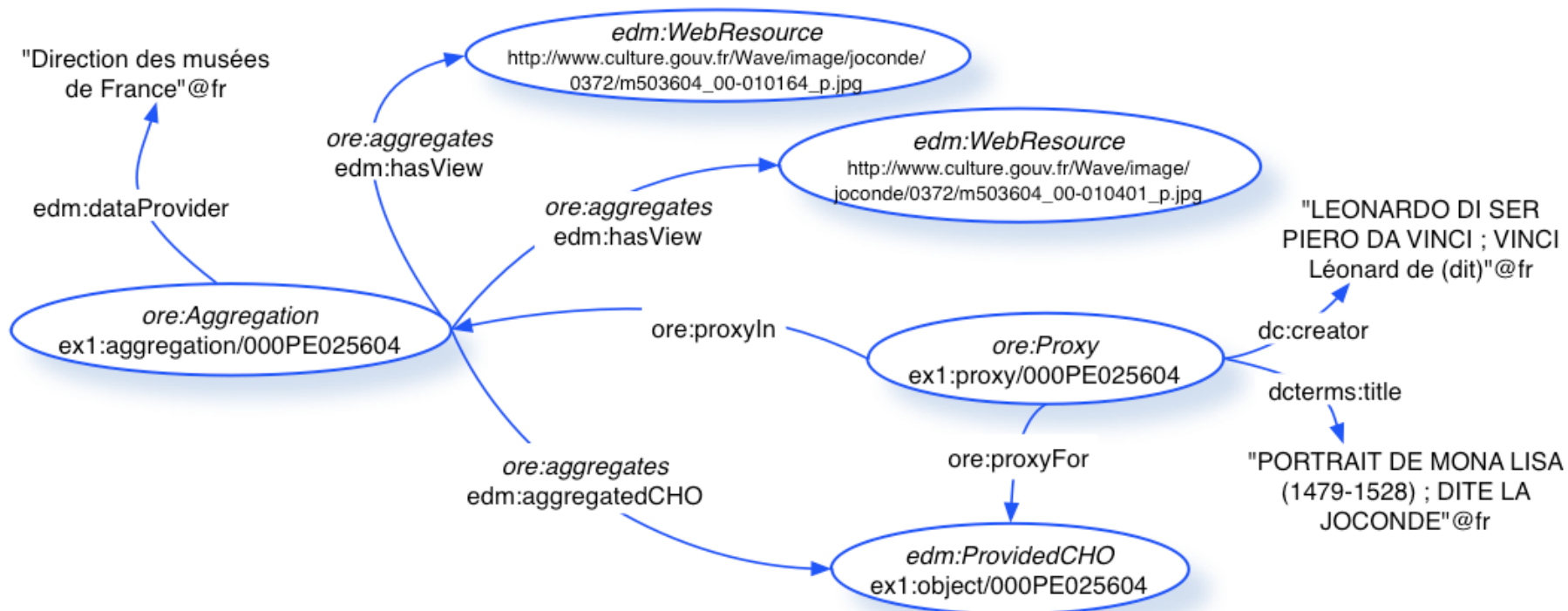
Bois (peuplier)

H. : 0,77 m. ; L. : 0,53 m.

Acquis par François Ier en 1518
Département des Peintures

INV. 779

Use of Proxy in EDM

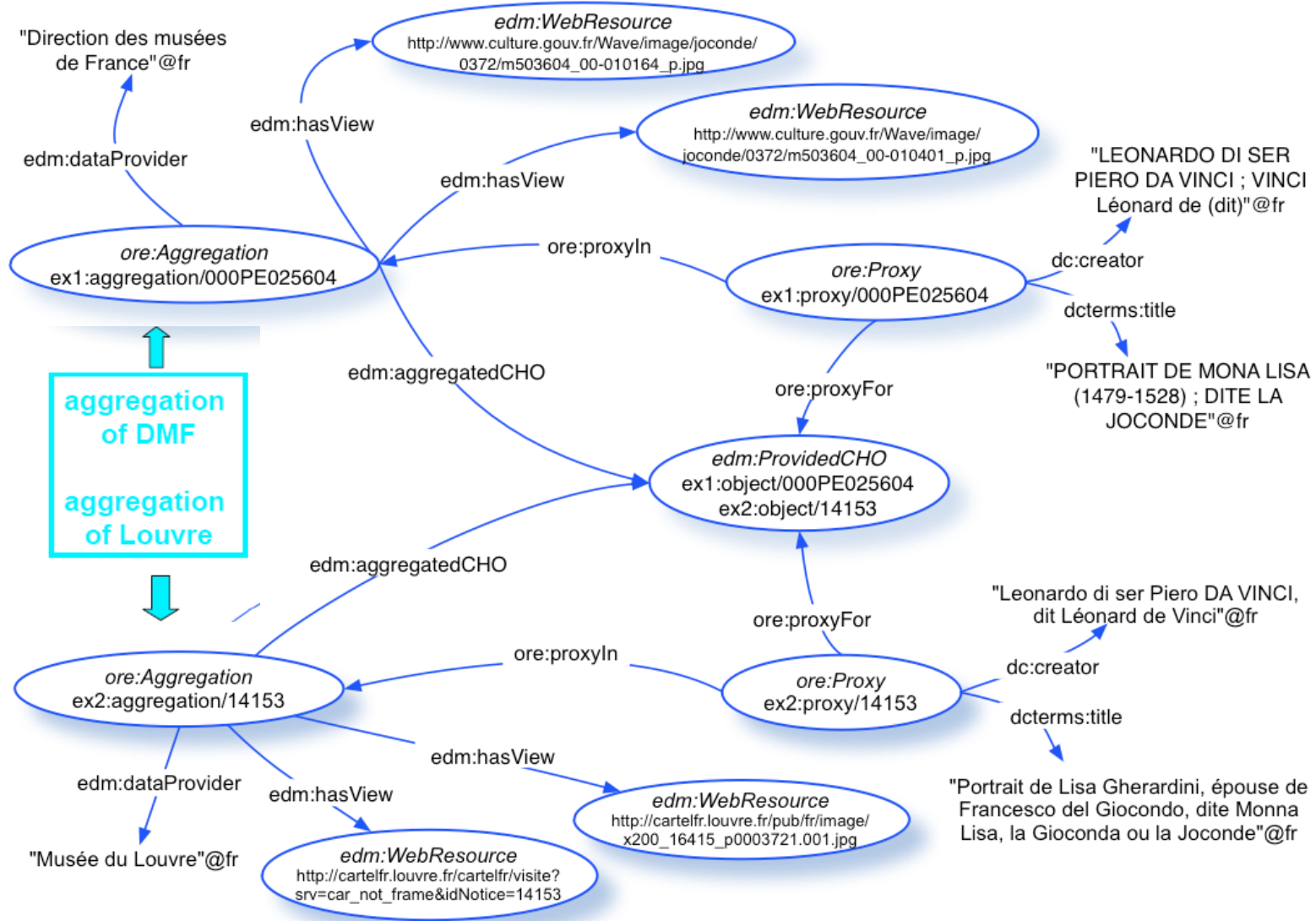


EDM and Proxies

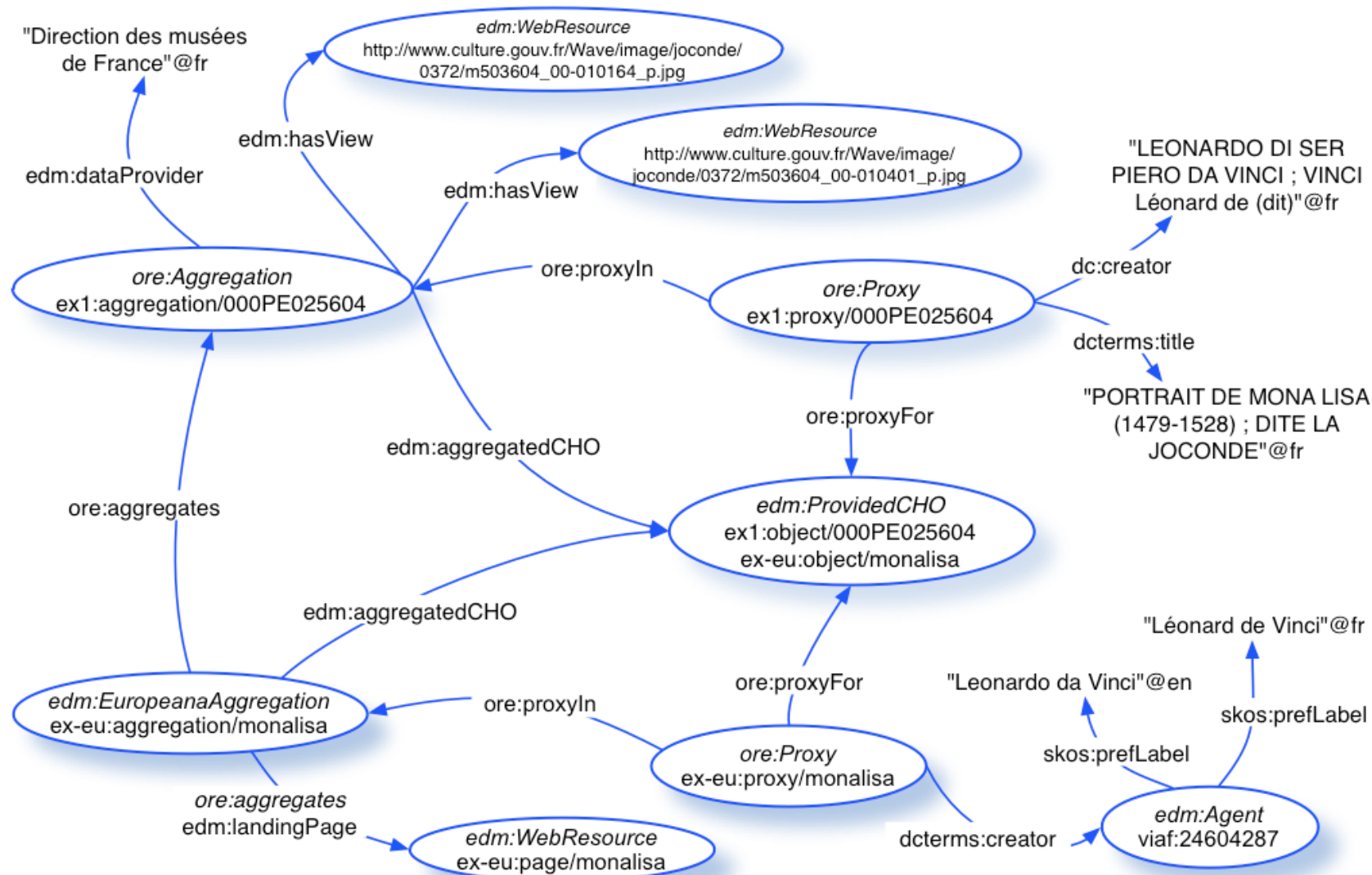


- ❑ Describing the provided object as seen from the perspective of a specific provider.
- ❑ Europeana needs proxies internally in situations where
 - There are duplicate cultural heritage objects, from different providers, each with its own metadata
 - Adding its own data about a resource (enrichment)
 - Linking objects to Europeana vocabularies
 - Linking to external resources
 - Translating metadata and language tagging
 - In order to keep each provider's metadata distinct
 - And keep Europeana metadata distinct from the providers' metadata

Information from two Providers



Enrichment by Europeana



That's the end, folks

Thank you

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