

VIRTUAL GOODS + ODRL 2011

9th International Workshop for Technical, Economic and Legal Aspects of Business Models for Virtual Goods incorporating the 7th International ODRL Workshop & Community Group Meeting

28 - 30 September 2011 + Barcelona + Spain

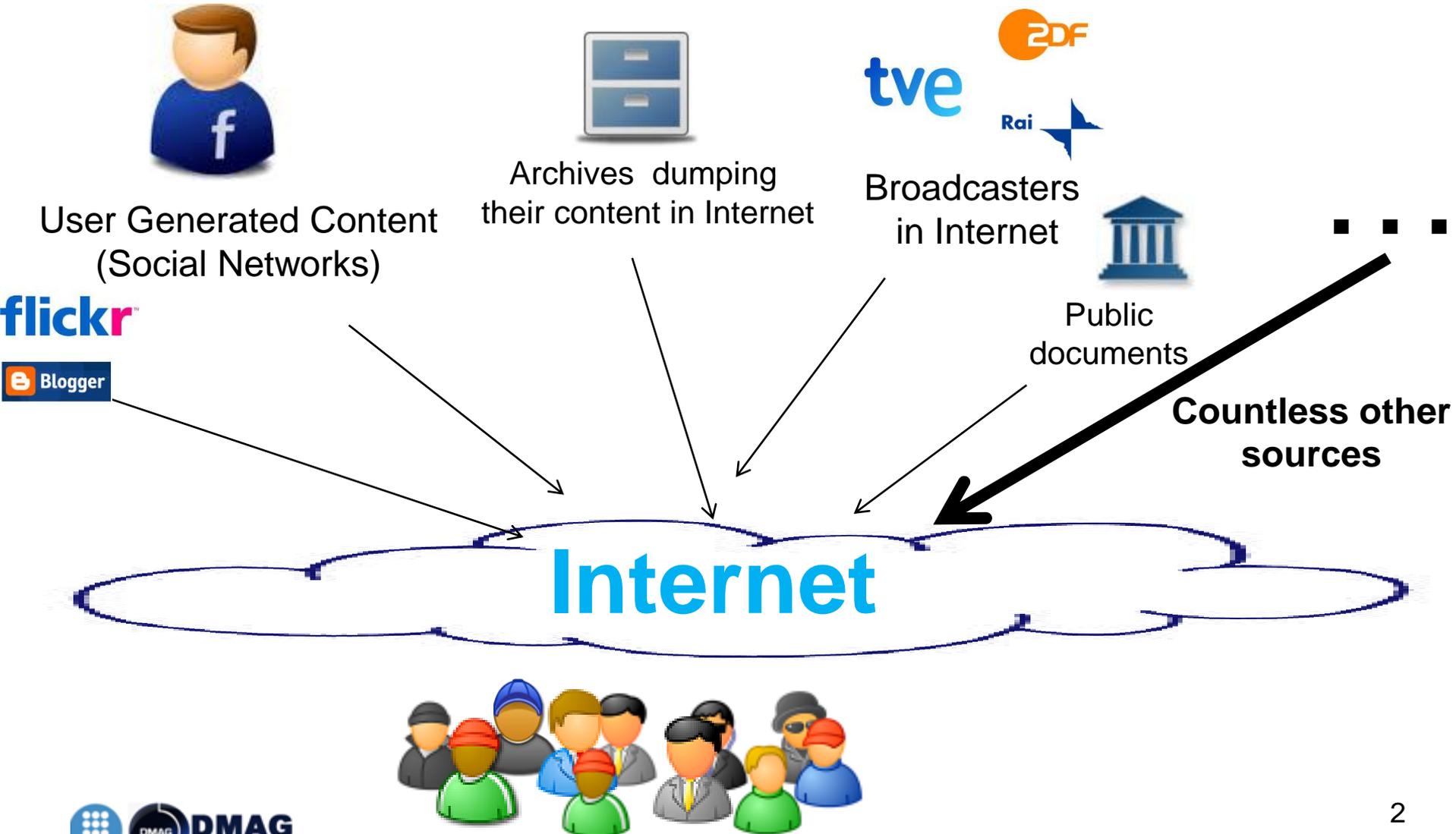
Towards an Expression Language for Licensing Content in the Connected Semantic Web

Víctor Rodríguez, Jaime Delgado

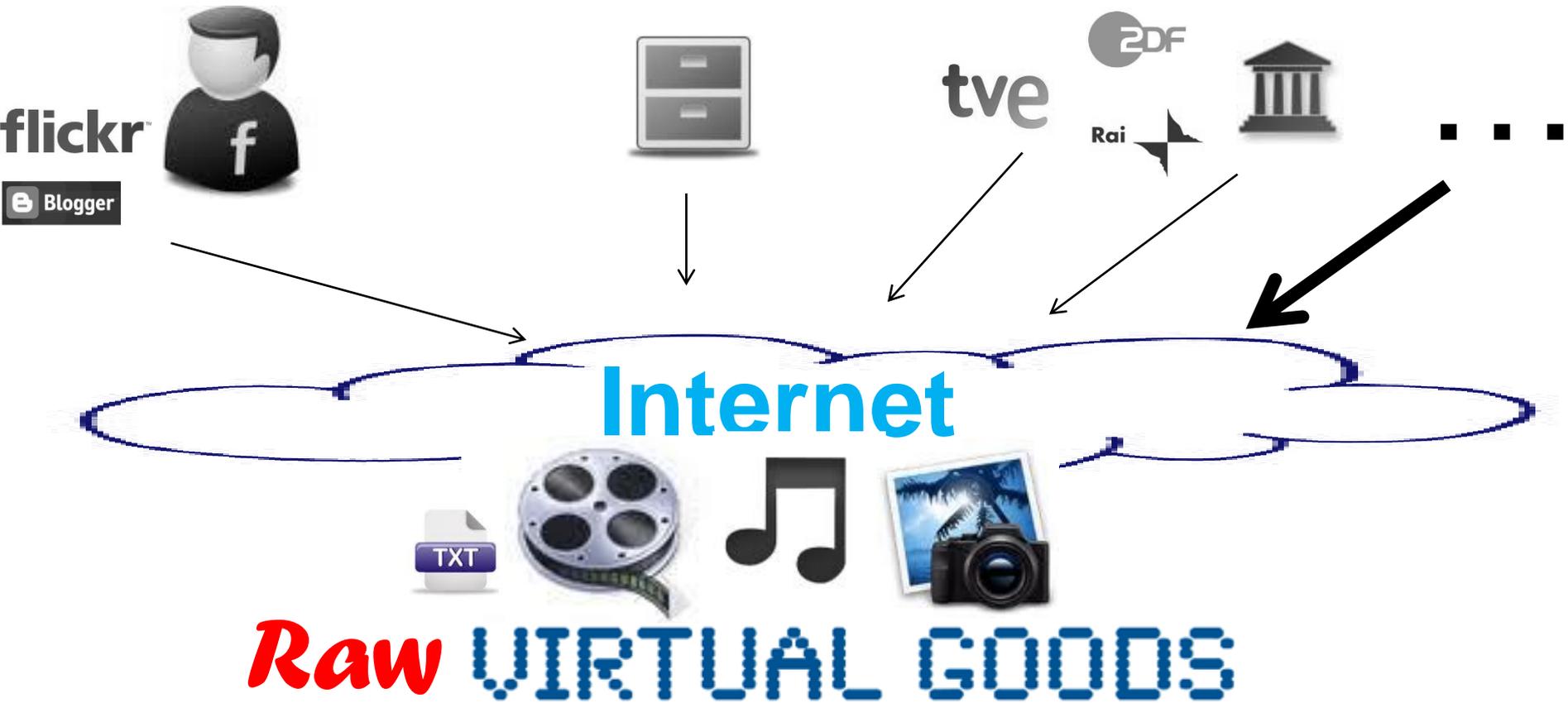
Distributed Multimedia Applications Group (DMAG)

Universitat Politècnica de Catalunya

From raw content sources...



From raw content sources...

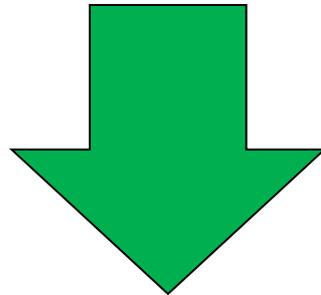


...to aggregated audiovisual assets

Internet



Raw VIRTUAL GOODS



Edit, transform, translate
Aggregate into organized channels
Mix, synchronize

Added value VIRTUAL GOODS



Legal affairs (theory...)



The author(s) initially has all the exploitation rights

Upon agreement, they can be transferred to others

Including:

- Distribution
- Create (and exploit) derivative works
- Public communication
- Broadcasting

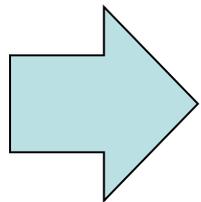
Legal affairs (...and practice)



Physical distribution is actively prosecuted

Publishing in Internet copyrighted is largely tolerated

Created derivative works are seldom prosecuted



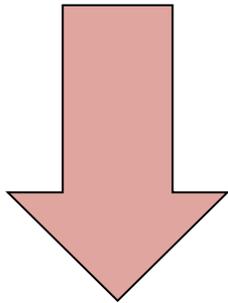
Amateur infringements are massive and tolerated

Lucrative infringements are somewhat prosecuted

Uncertainty is not desirable

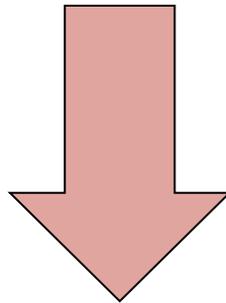
There is the need for something else

I want to create a composed Virtual Good using existing material in the Internet



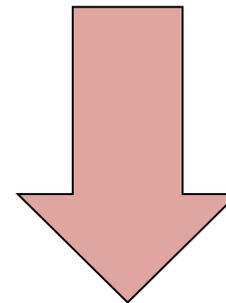
Traditional way

Find the owner, negotiate, get consent, physical signature

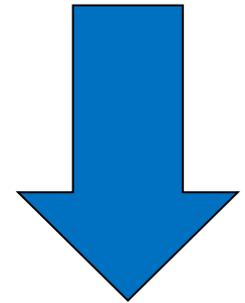


Creative Commons

Limit the material you use



Steal it



Something else!



Also: search and find proper content...

It is not easy to find content with the proper license

It is not easy to identify who is the author of each video

Google videos **Advanced Video Search**

Find Results	with all of the words	<input type="text"/>	Search Videos
	with the exact phrase	<input type="text"/>	
	with at least one of the words	<input type="text"/>	
	without the words	<input type="text"/>	
Language	Return videos in	<input type="text" value="Any Language"/>	
Duration	Return videos within the duration	<input type="text" value="All durations"/>	
Date	Return videos posted within the timeframe	<input type="text" value="Any time"/>	
Quality	Return videos with the quality	<input type="text" value="Any quality"/>	
Domain	<input type="text" value="Only"/> return videos from the site or domain	<input type="text"/>	e.g. youtube.com
Subtitles	Search only closed captioned videos	<input type="checkbox"/>	
Sort results by		<input type="text" value="Relevance"/>	
Results per page		<input type="text" value="10"/>	

Searches like ...
“which works of this author can I find at a cost fewer than X?”
 should be possible and purchases easy to be executed

Current situation

- Authoring information
 - In external repositories (Author Society, Ministry etc.)
 - As embedded metadata
 - In attached text license
- Licensing information
 - As attached CreativeCommons license
 - As textual comment (“forbidden to...”)
 - In independent REL license offers (not used in the public domain but within a platform)
- Exceptions
 - StockPhotos market and other markets alike

The current situation is not desirable



End users have markets to buy end-use music, but not to reuse in their creations (transform, aggregate etc.)



Authors make no profit



Reuse of existing material is either sluggish and expensive or illegal.

Problem statement

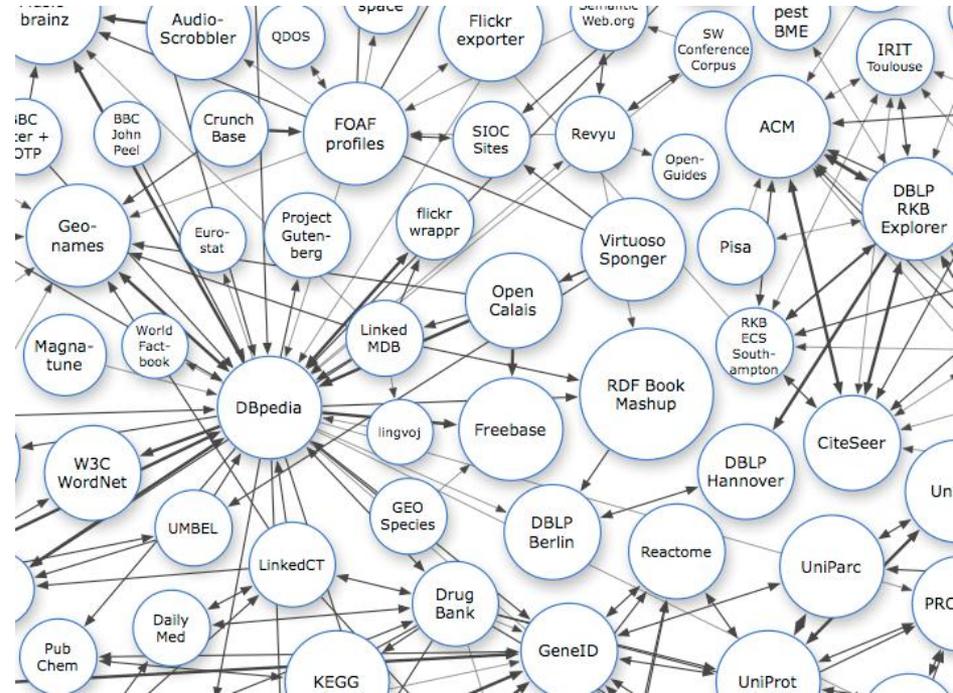
- **Situation:** zettabytes of images and video online, but poorly labeled, with authorship seldom attributed, hardly marketed, and often used against the law.
(one exception: CreativeCommons, famous among the masses but not really expressive, not really for commercial licensing and not really computer readable)
- **This stalemate needs to be broken**

Do play RELs any role here?

Features of the new generation authoring and licensing languages

Authorship Expression Languages in an Interlinked Web

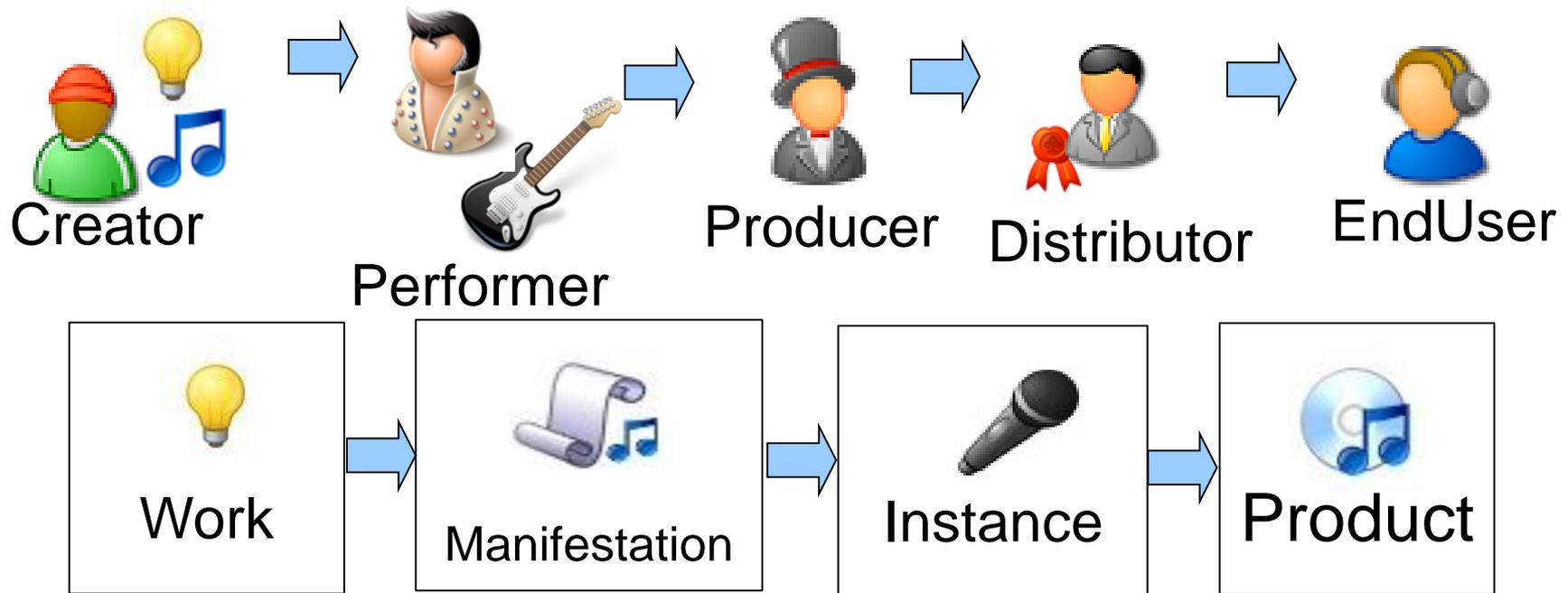
- Connected to already existing dataset repositories:
LinkedMDB for movies, MusicBrainz for music etc.
- Authors have a *de facto* universal identity and contact point
- Decentralized data, opposed to existing central repositories
- Both authors and users with a single URL
(e.g. for users, that of social networks)



Authorship Expression Languages in an Interlinked Web

- **Linked Open Data:** A virtual data cloud where anyone can access any data they are authorized to see and may also add to any data without disturbing the original data source. T
- Open environment where data can be created, connected and consumed on internet scale.
- **Data has more value if connectable to other data.**

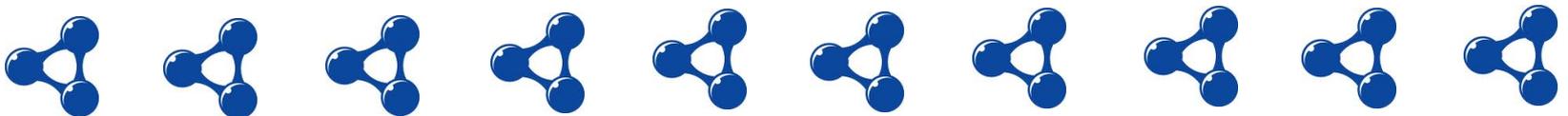
Authorship Expression Languages aware of the Value Chain



- MPEG-21 Media Value Chain Ontology
- To recognize the different categories of Intellectual Property
- When licensing, to be possible to make reference to all the intermediate links in the chain.

Expressing authoring info and licensing with Semantic Web Languages

- Use the stack of technologies XML-RDF-OWL-SWRL
- The natural way to interlink with other datasets
- **Advantages**
 - Logical elements are an intrinsic part of the language
 - Clear semantics, as the XML elements need an external interpretation to understand their meaning
 - Transparency, as the reasoning logic does not remain in a authoriser application whose code is unknown



Expressions allocable in the multimedia metadata fields

- Current metadata standards are many and their placeholders for authorship and licensing information is sometimes unprecise
 - for example DublinCore includes elements for creator, contributor, publisher and rights but it does not go much further than their enumeration
- Interoperability hope: **W3C Ontology for Media**

Resources

- *Copyright*: A tuple containing the copyright statement associated with the resource and optionally, the identifier of the copyright holder.
- *Creator, contributor etc.*, with role. {dbpedia:Shakespeare, playwright}, {imdb:nm0000318, director}.

Licensing information for both commercial and non-commercial use

- Advantages:
 - Searches can be made on licensing information. *“look for images to be sold for less than 1€”*
 - User Generated Content can be massively traded (e.g. *with micropayments through Facebook credits or others*)
 - New business models



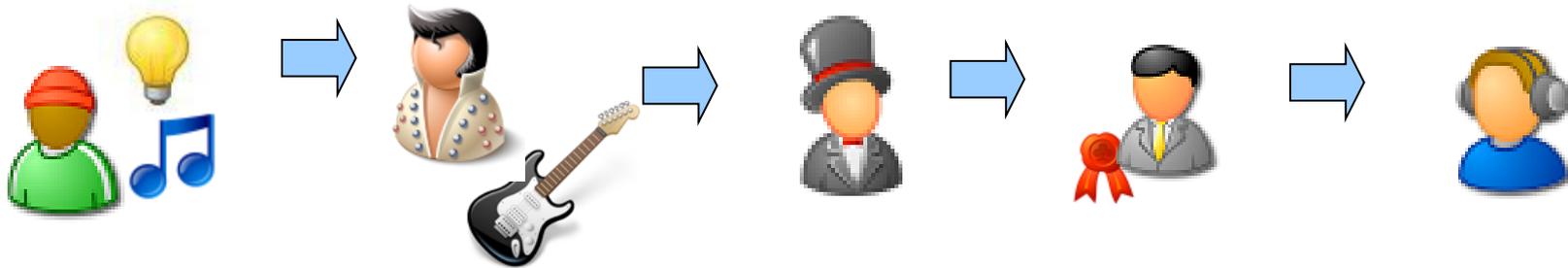
A call to the RELs community

- To lean ODRL towards meetings some of the requirements
 - Some of them are almost satisfied
 - A joint push of all the requirements could boost ODRL beyond the individual benefits of each of the features
- What is the current state? What is exactly missing?

Authorship Expression Languages in an Interlinked Web **in ODRL**

- ODRL is intended mostly for licensing
 - ... but it could also be used for expressing authoring information
 - In addition to the `permission`, `prohibition` and `duty` elements, a simple `claim` element would be highly useful per se
- *Interlinkability* feature:
 - ODRL neither prevents representing users with any linkable URL, nor provides support mechanisms
 - In the interlinked space, specific terms should be given for the links, and for their features.
- Social networks
 - Note ODRL2.0 has vocabulary like `allConnections`, `all2ndConnection` etc.

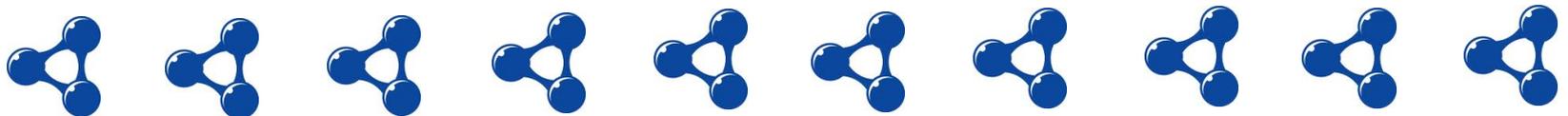
Authorship Expression Languages aware of the Value Chain in ODRL



- Managing downstream rights through the value chain, i.e. being able to grant rights and impose conditions at different levels in the value chain is explicitly expressed in the requirements of ODRL 2.0, and the `o:nextpolicy` element has been added. Also, `outputID` in ODRL 2.0 has come to allow expressing duties, permissions etc., on the output Asset.
- However, no special acknowledgement is given to the different kinds of Intellectual Property Objects nor actors

Expressing authoring info and licensing with Semantic Web Languages **in ODRL**

- XML/RDF encoding has been planned in ODRL.
- To fully interoperate with the semantic cloud of triples, ODRL should reinforce these efforts and finish the RDF version of its language.

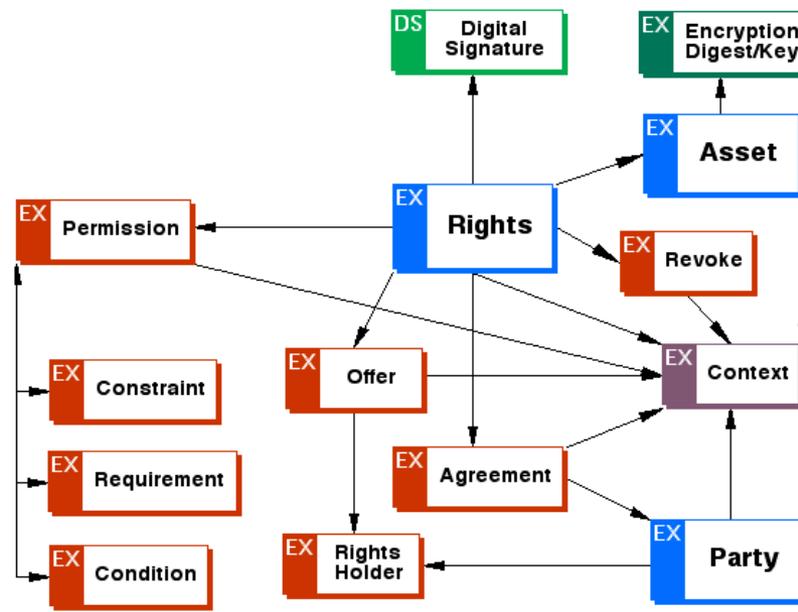


Expressions allocable in the multimedia metadata fields **in ODRL**

- The Open Digital Rights Initiative and the Dublin Core Metadata Initiative formed in 2005 a working group to develop a joint ODRL/DCMI profile (something shown possible in), but they failed to gather attention and the group was closed down soon after.
 - *Maybe this effort should be retaken in the framework of W3C Ontology for Media Resources*
- Microdata, RDFa.

Licensing information for both commercial and non-commercial use **in ODRL**

- ODRL is great for both!
 - ODRL CC Profile since July 2005 (!!)
 - ... and of course non-commercial use



Final conclusions

... and questions

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