



Presentation

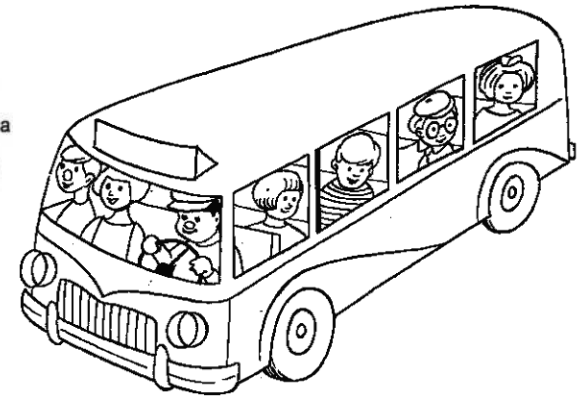
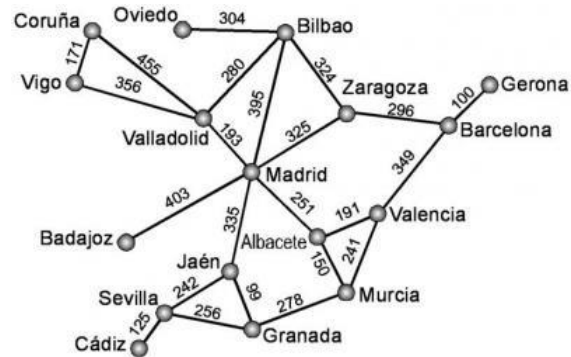
"Charla" at OEG 21.06.2012

- **Víctor Rodríguez Doncel** (Salamanca, 1978)
 - Ingeniero de Telecomunicación, Universidad de **Valladolid**, 1996-2001





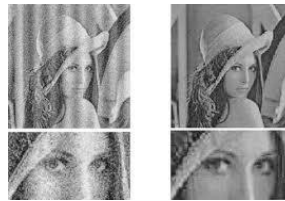
(2002 – 2004)



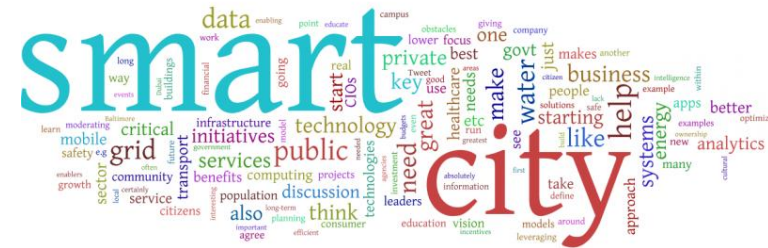
Optimizacion, Operational Research, Transportation, Heuristics, TSP, Constraint programming ilog



(2004 – 2005)



Digital watermarking in vector images



Artificial Intelligence for the Smart City. Transportation.



(2006 – 2011)

Ph. D. in 2010

“Semantic Representation and Enforcement of Electronic Contracts on Multimedia Content”



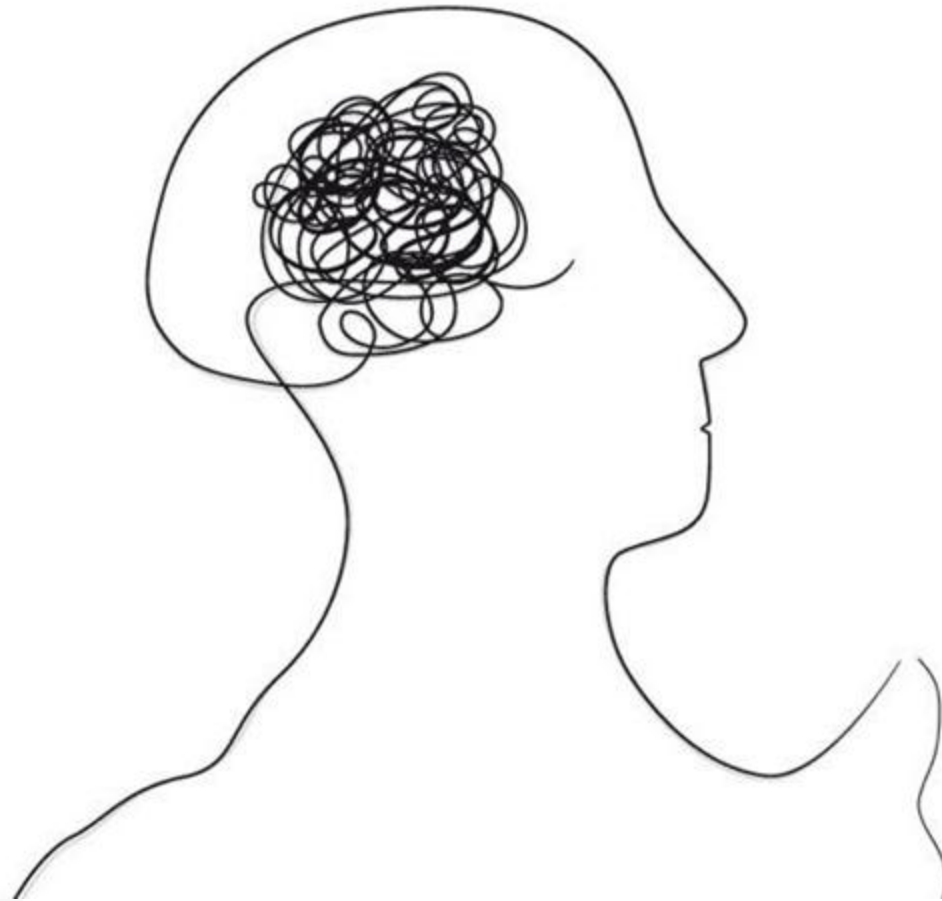
POLITÉCNICA

(2012 – ...)

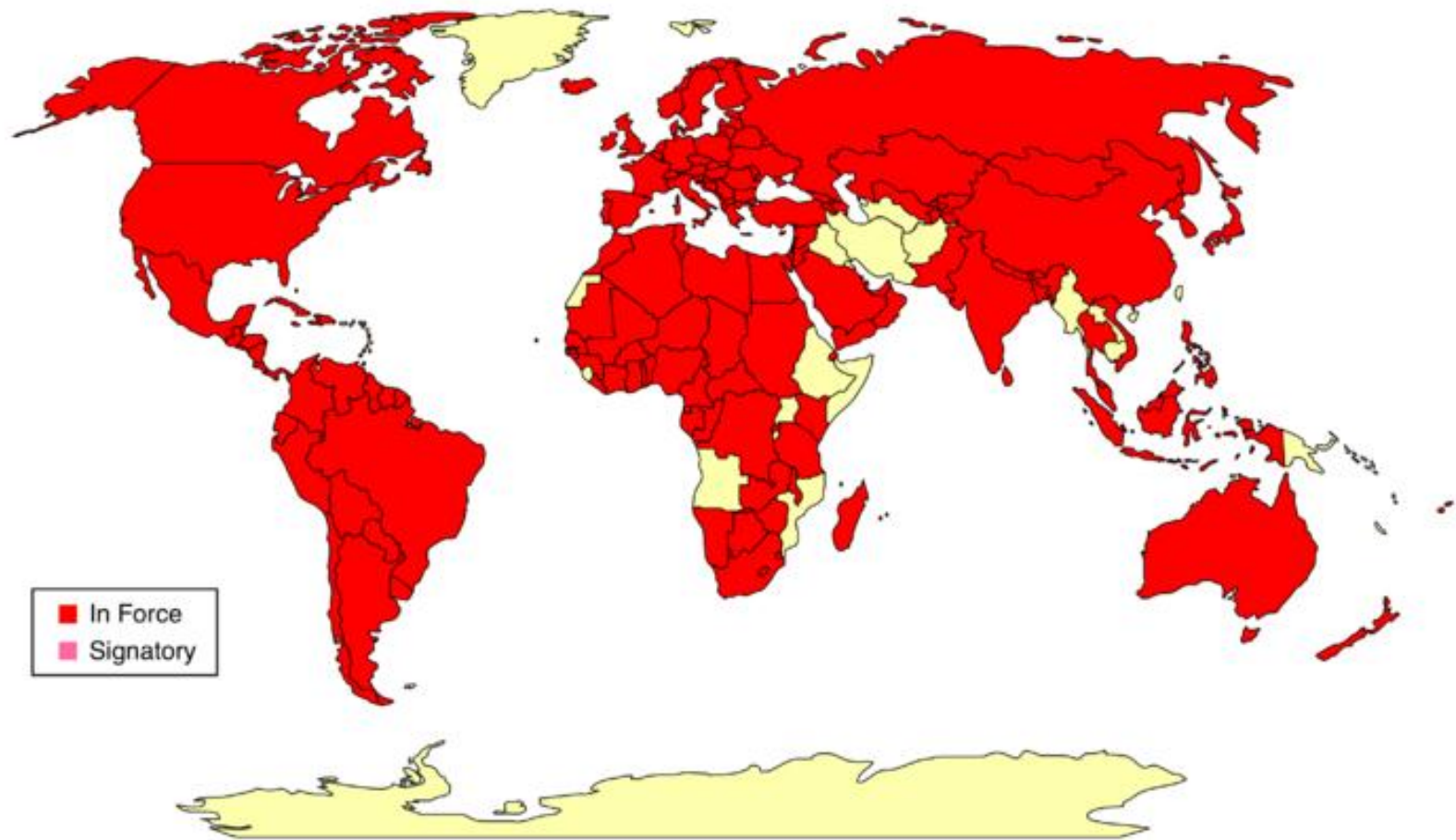
Problem statement

(i had to face)

Intellectual Property



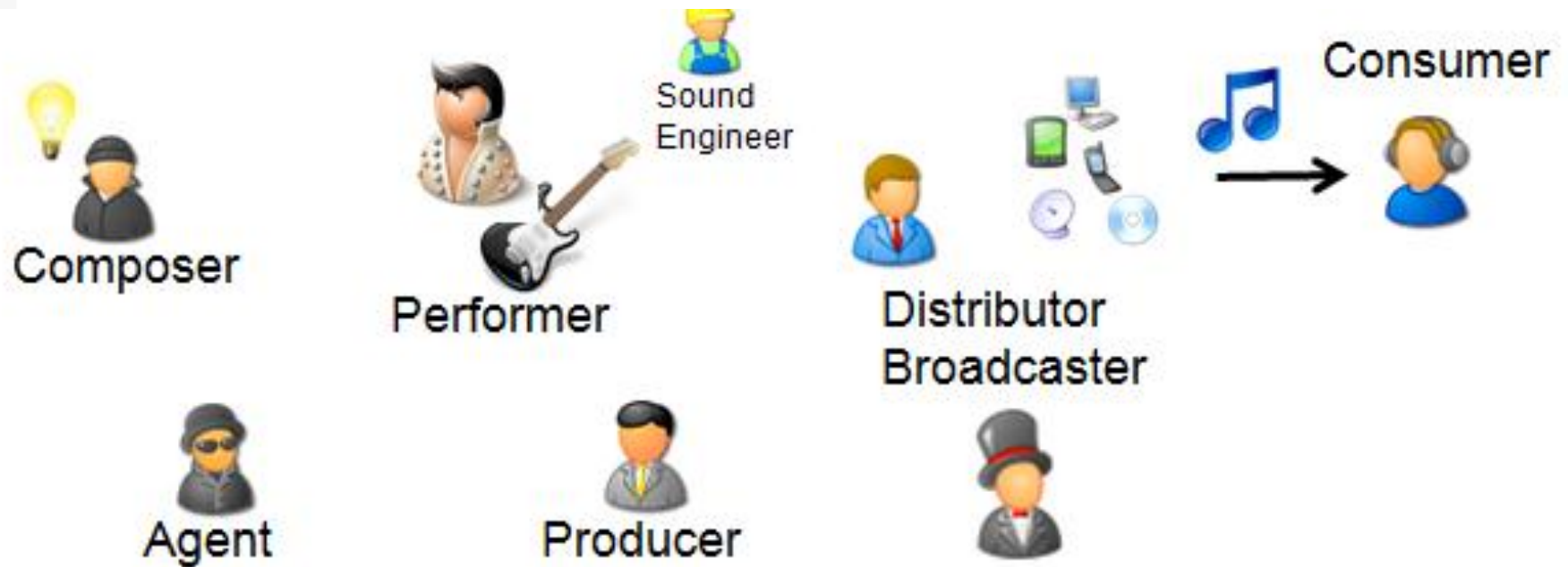
STATEMENT. The Intellectual Property as a Universal concept



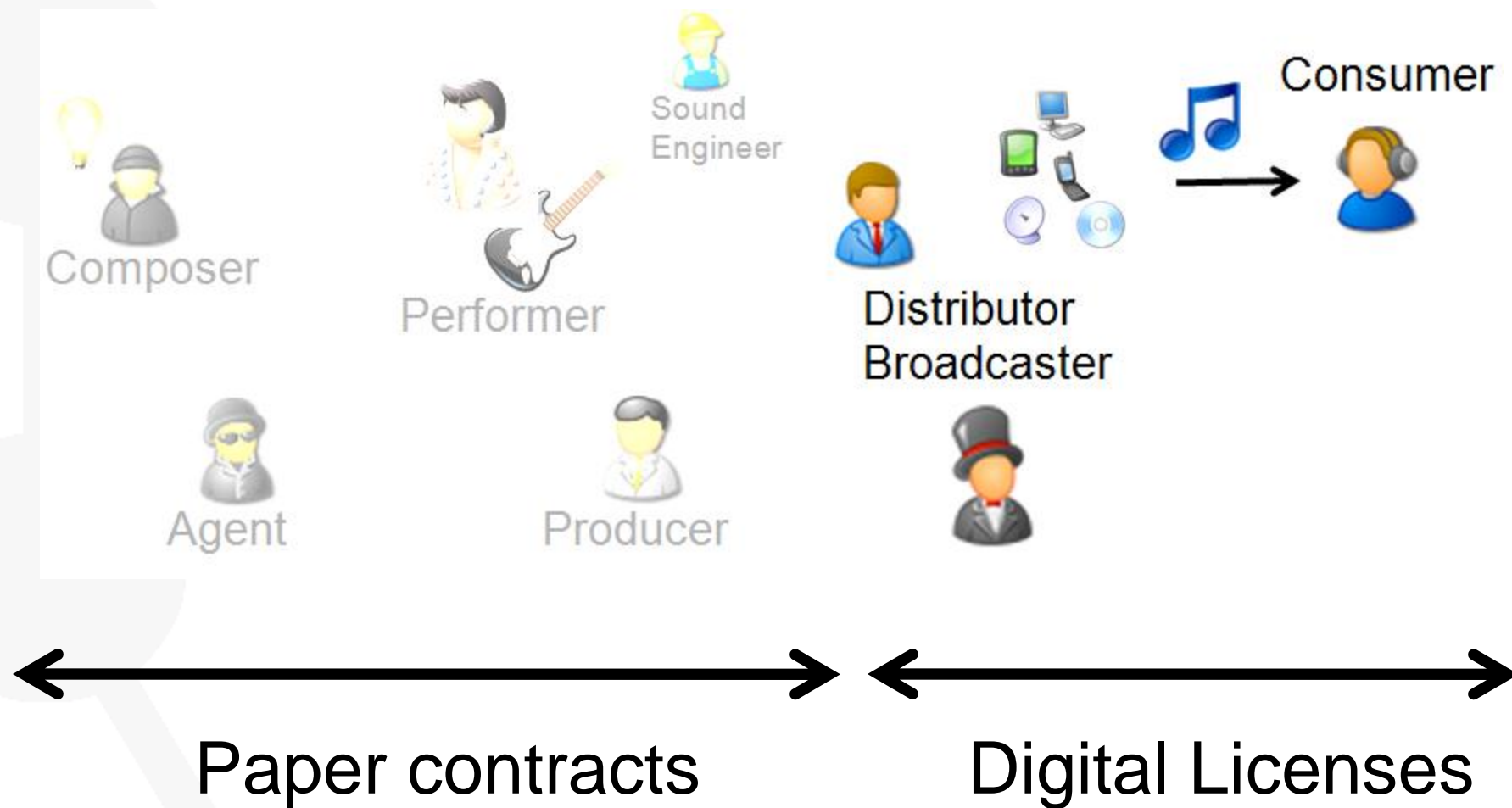
Berne Convention Membership, February 2010

- **Postulate:** An author is owner of the rights on the created work
- **Types of Intellectual Property (IP) rights:**
 - Moral rights.
 - Exploitation rights. They can be freely traded (→ agreements)

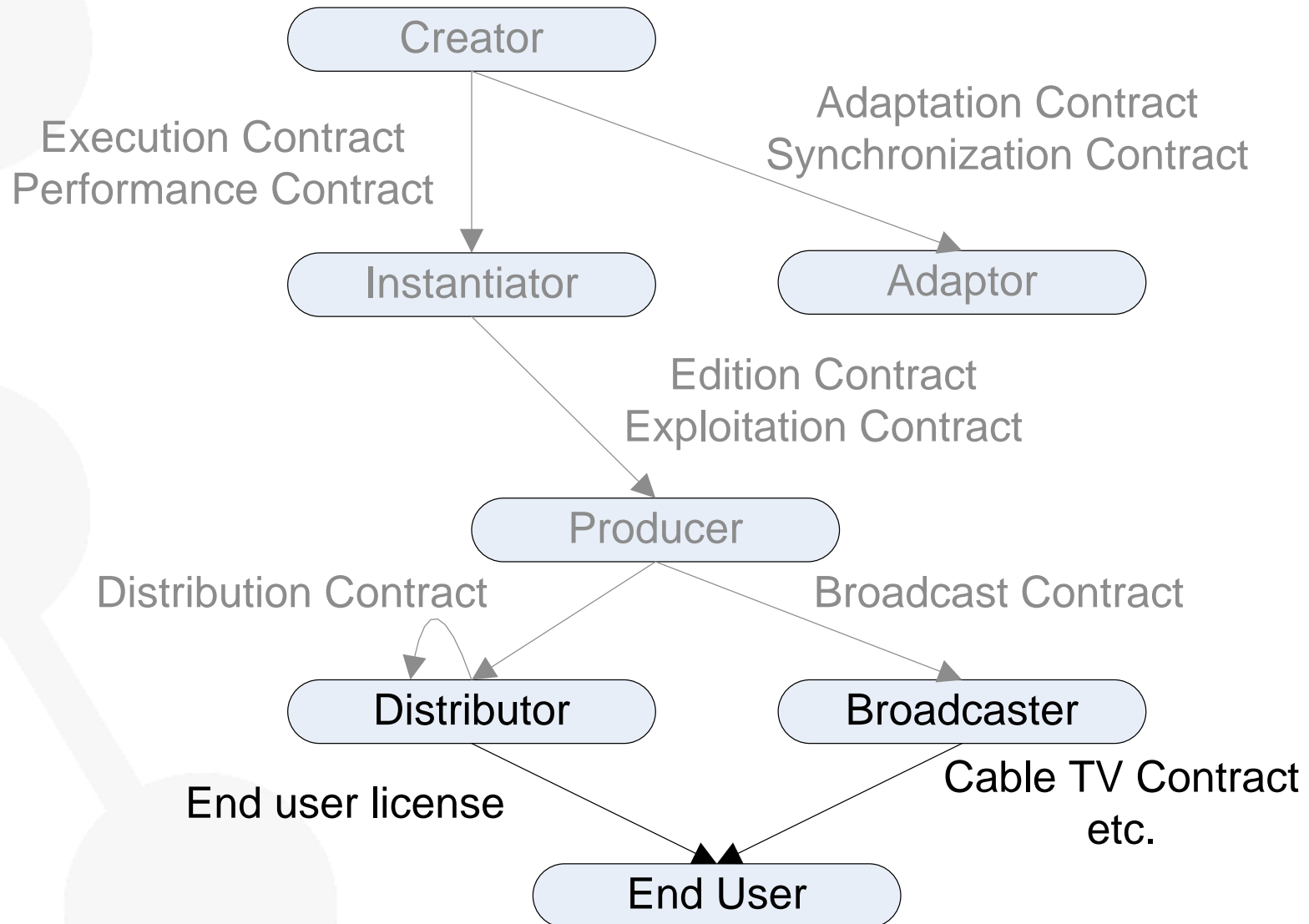
STATEMENT. The Stakeholders



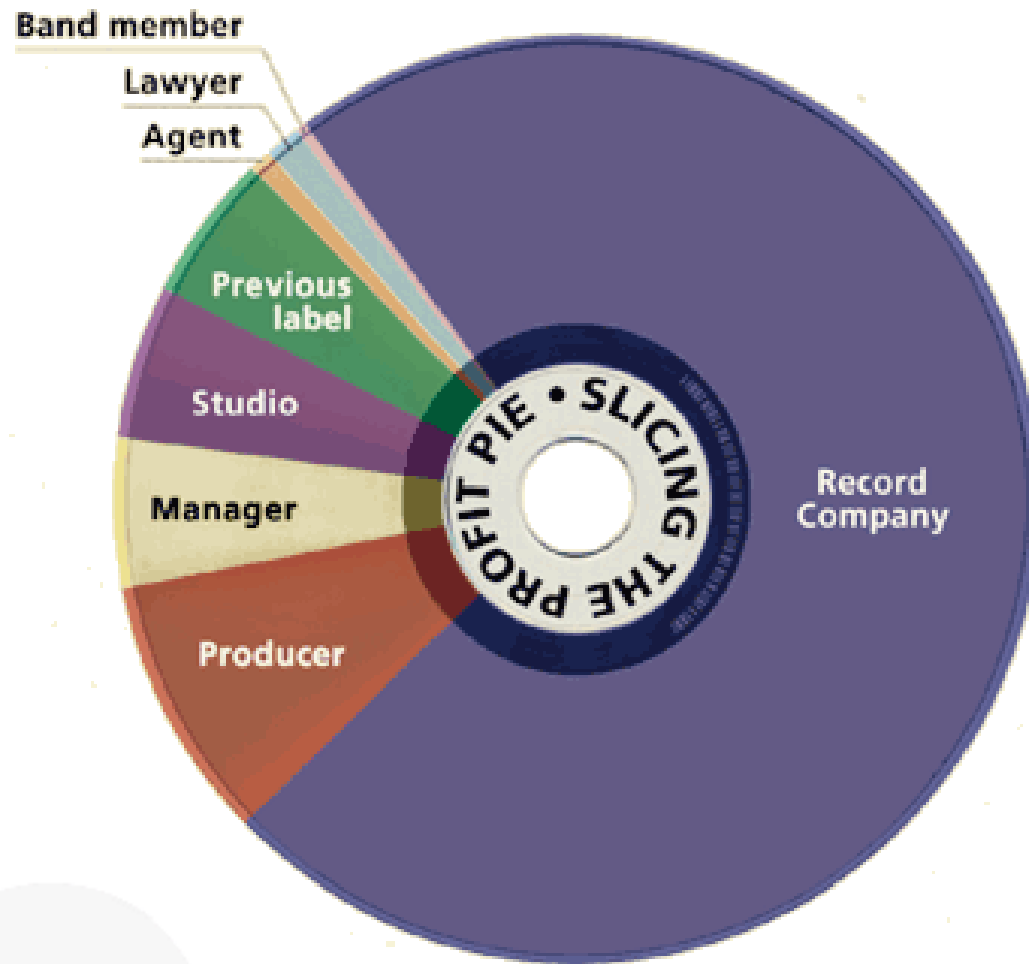
STATEMENT. Problem #1: Value Chain not fully digital



STATEMENT. Problem #1: Value Chain not fully digital (II)



STATEMENT. Problem #2. The business model perceived as unfair



STATEMENT. Problem #2. The business model perceived as unfair (II)

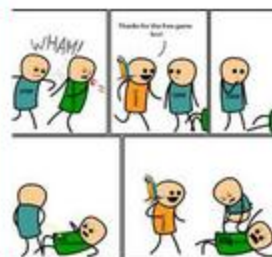
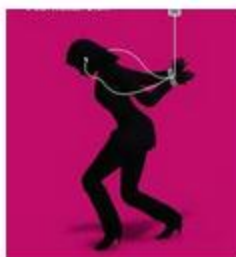
drm



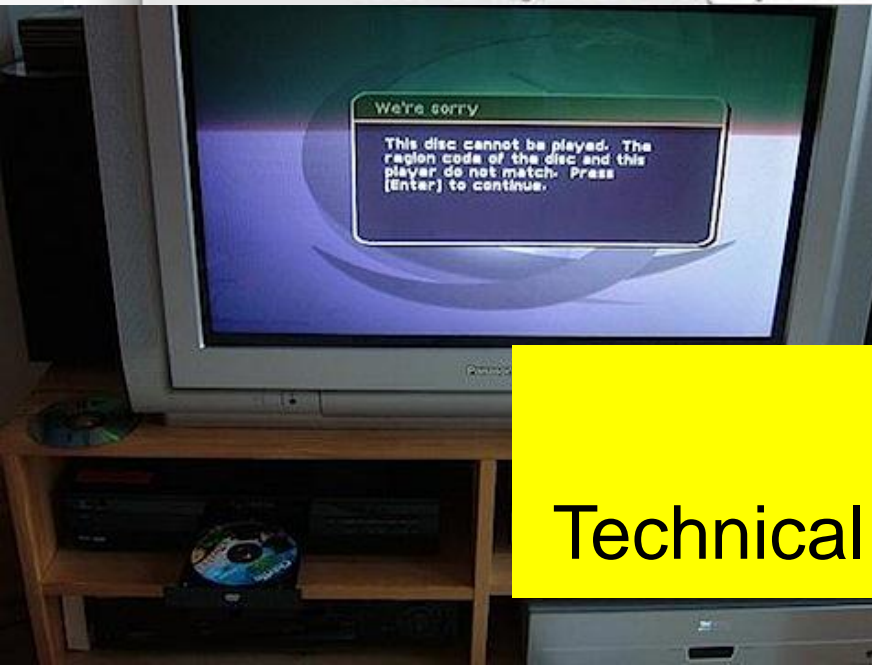
Victor Rodriguez Doncel

Aproximadamente 34.900.000 resultados (0,18 segundos)

Filtro Safe



STATEMENT. Problem #2. The business model perceived as unfair (III)



Misconception:
Technical Protection Measures \neq DRM

STATEMENT. Problem #2. The business model perceived as unfair (IV)



Solution

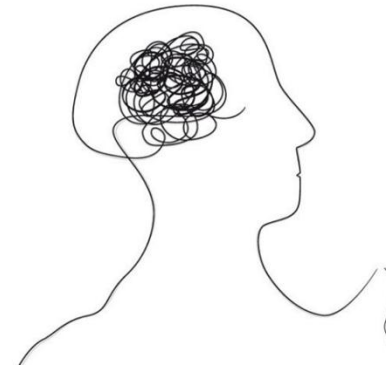
(I proposed)

Intellectual Property



An **idea** we would like to agree upon

Intellectual Property

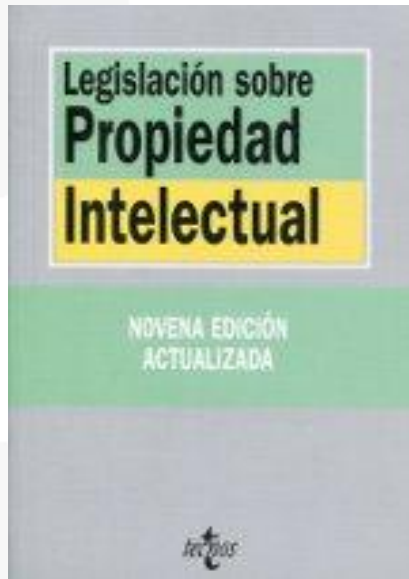


An business subject to be empowered by **technology**



PROPOSAL. Methodology to build this ontology

The law



Contracts

This International Video Distribution Agreement ("Agreement") is made as of _____ between the following Licensor and Distributor:

Licensor:
Address: _____
Tel: _____ Fax: _____
E-Mail: _____

Distributor / Licensee:
Address: _____
Tel: +39 _____ Fax: + _____
E-Mail: _____
Type of Entity: _____ Domicile: _____

Subject to timely payment of all monies due Licensor and Distributor's full performance under this Agreement, Licensor licenses exclusively to Distributor, and Distributor accepts from Licensor, the Licensed Rights in the Picture throughout the Territory for the Agreement Term in the Authorized Languages subject to the Holdbacks identified below on all the terms and conditions of this Agreement.

This Agreement has the following parts: this Cover Page; Table Of Contents; Deal Terms; International Standard Terms ("Standard Terms"); Schedule Of Definitions, and the following indicated Attachment(s):

#	Standard Attachments
no	International Access Letter
no	International Delivery Manifest
no	International Consignment Rider
no	Other:

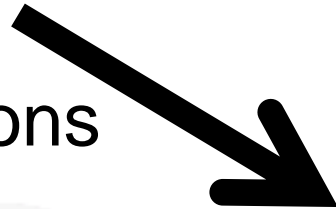
This Agreement has been drafted based on the version V: 2000 ("Form"). If the heading of this Agreement used the *trademark, then Licensor represents that, except where terms are to be included in such form, no change has been made to pre-printed elements of the Form unless conspicuously indicated in double underlining, strike-out or similar formatting to designate changes. All parts of this Agreement will be interpreted together to form one contract, but in the event of a direct conflict, any terms inserted in the Deal Terms as part of completing the contract will prevail over pre-printed elements of the Form.

Licensor and Distributor have executed this Agreement as of the date written above to constitute a binding contract between them.

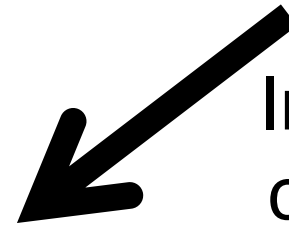
LICENSOR: _____
By: _____

DISTRIBUTOR / LICENSEE:
By: _____
Its: _____

Restrictions

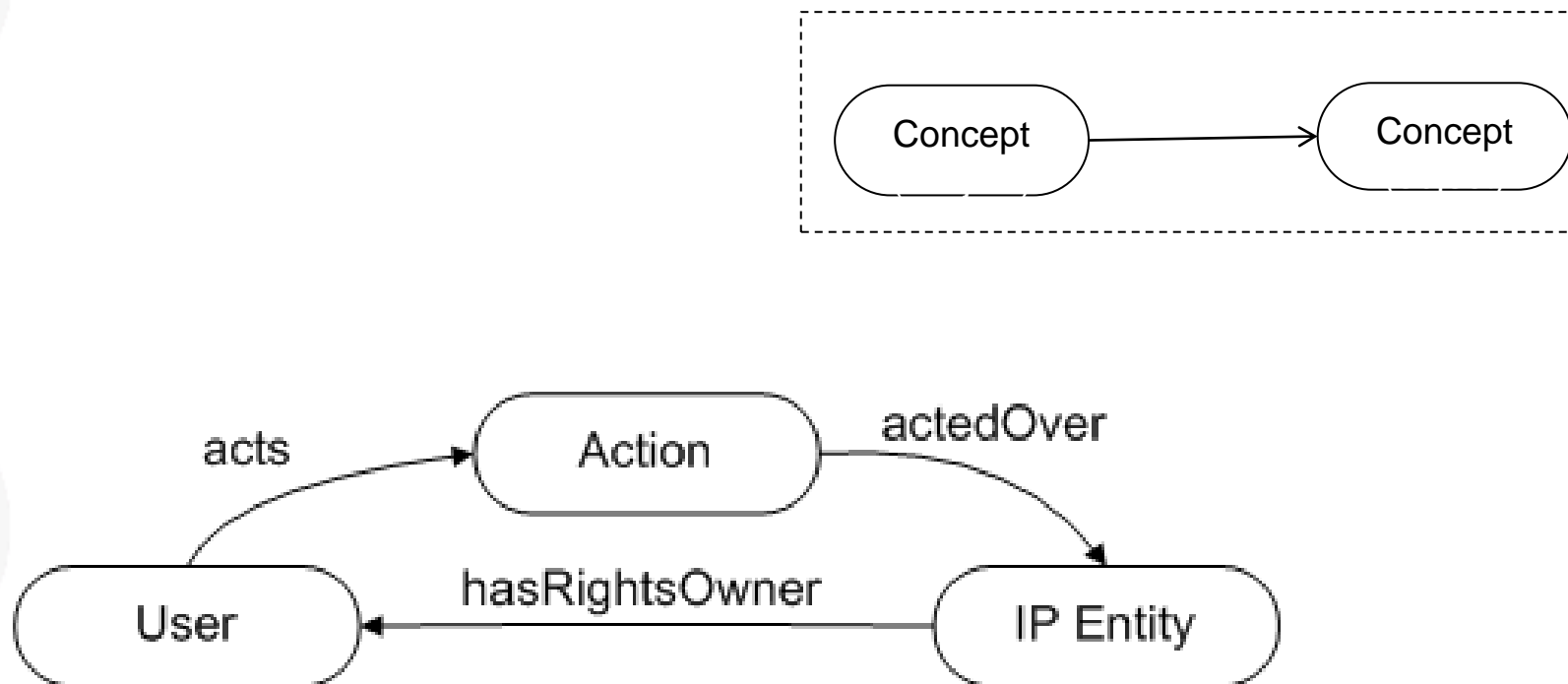


Important
concepts

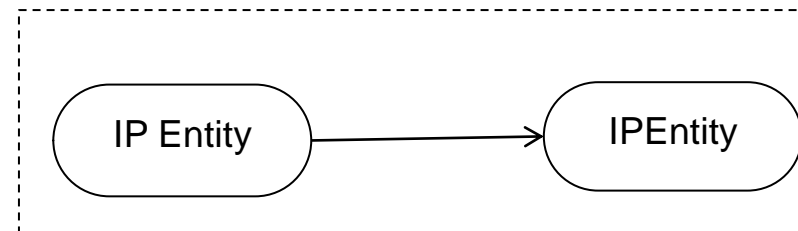
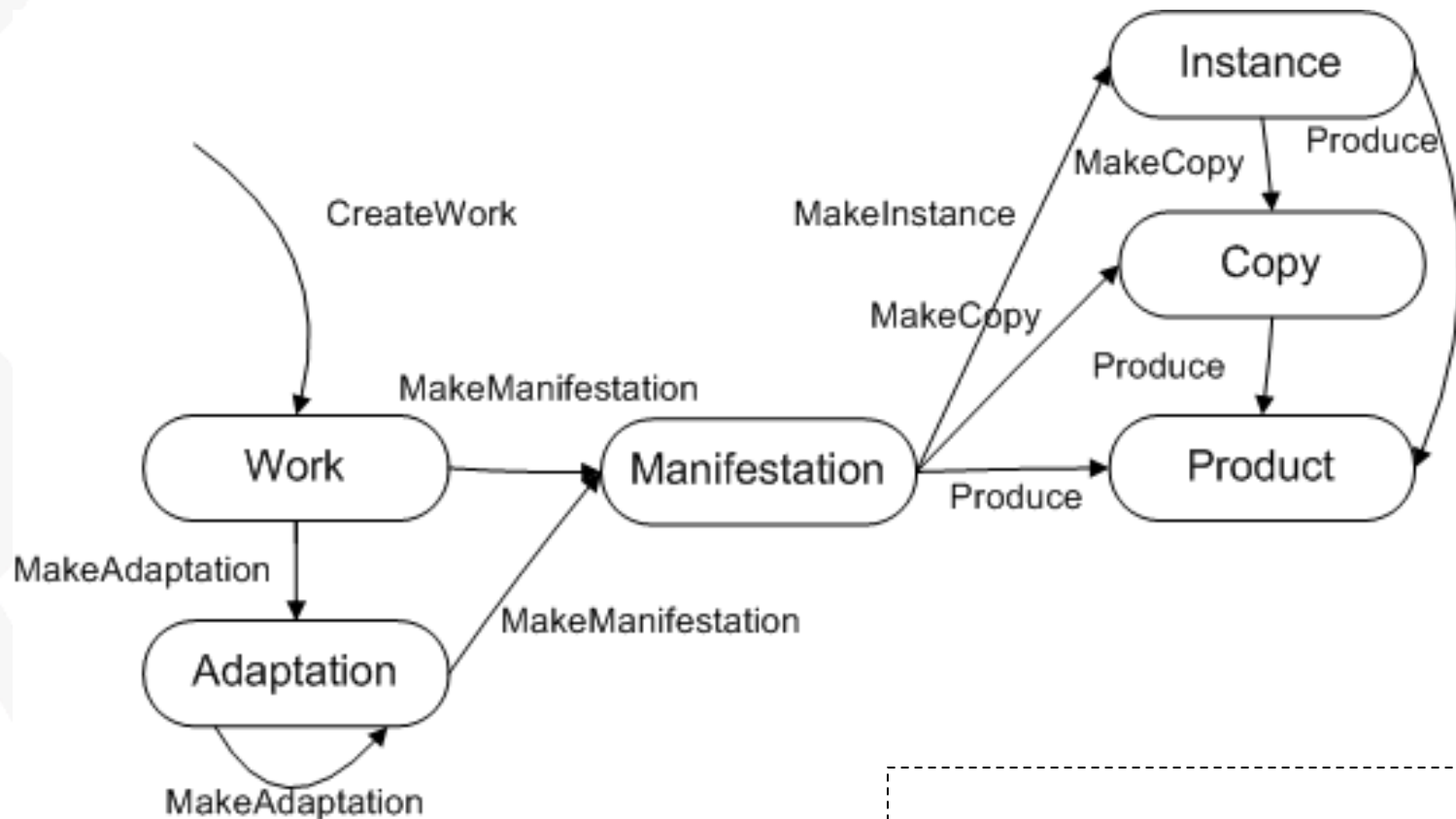


Ontology (MVCO)

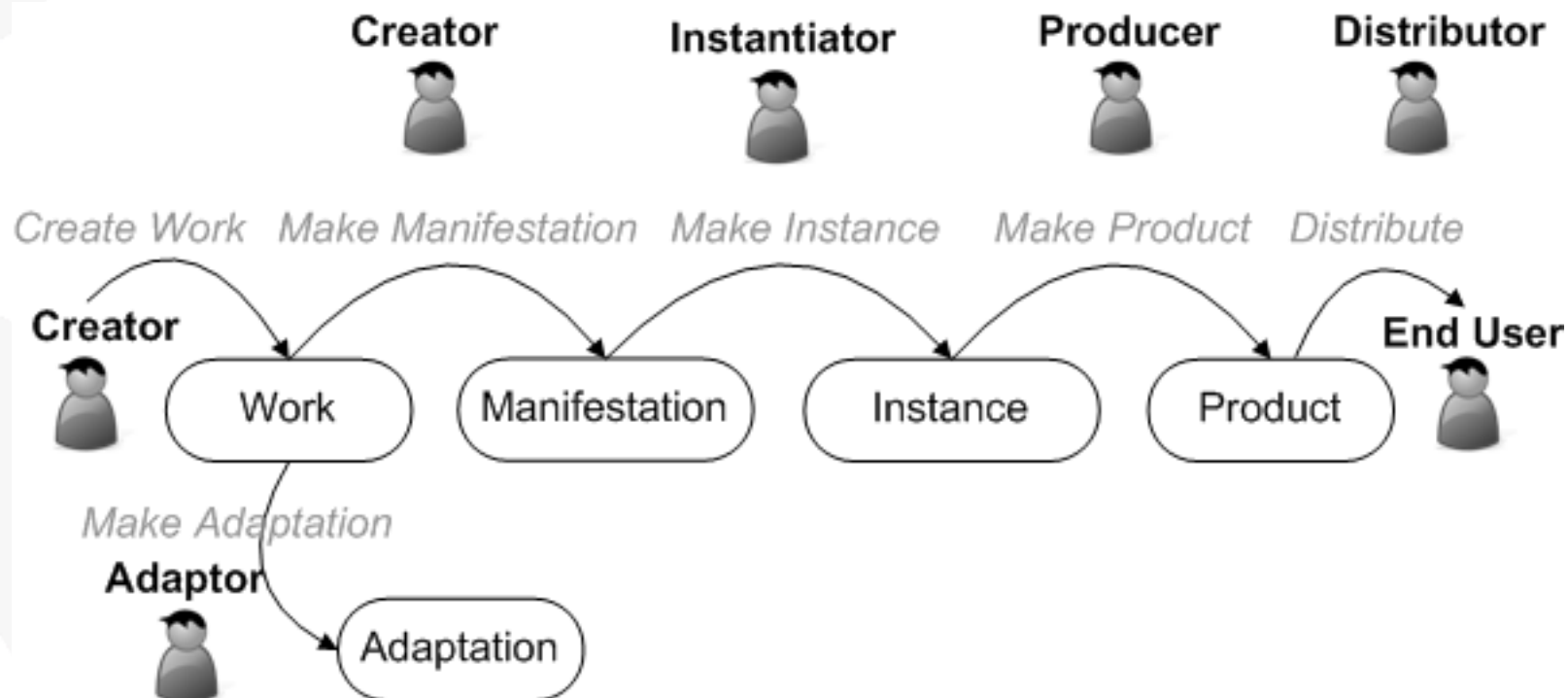
PROPOSAL. MVCO Description. Scope: IP Entities, actions, users



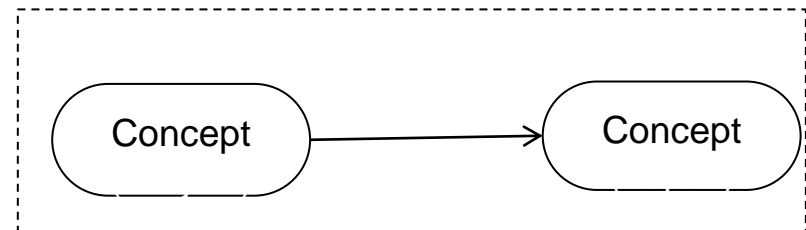
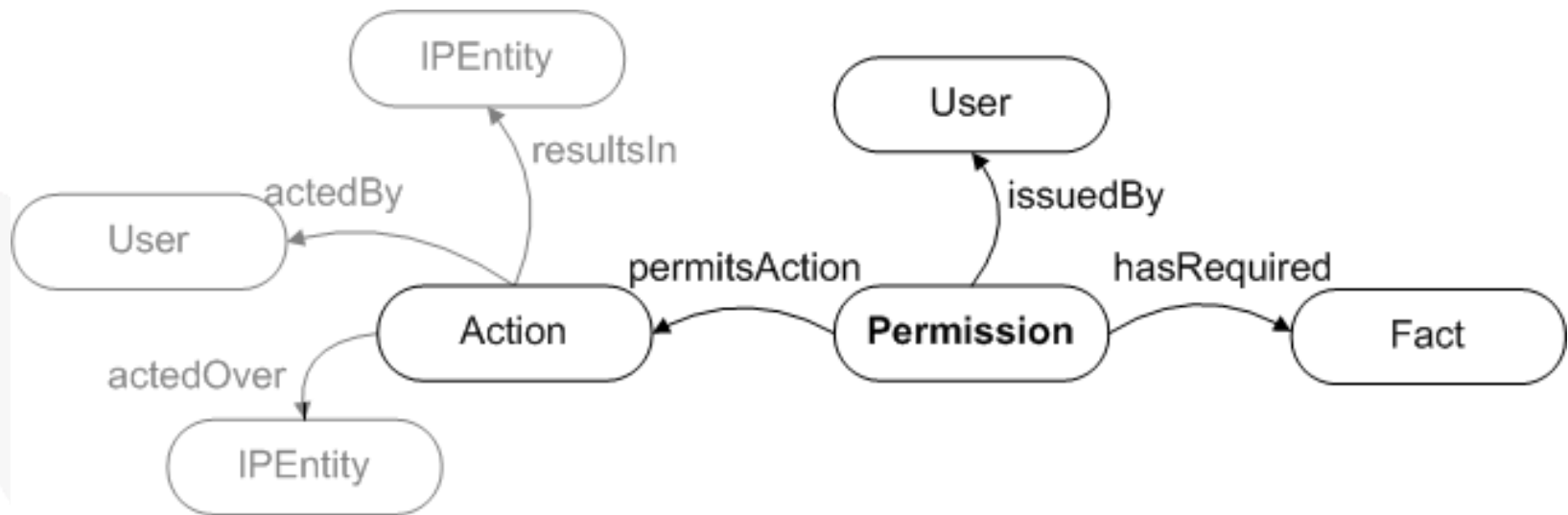
PROPOSAL. MVCO Description. Scope 1: IP entities, actions



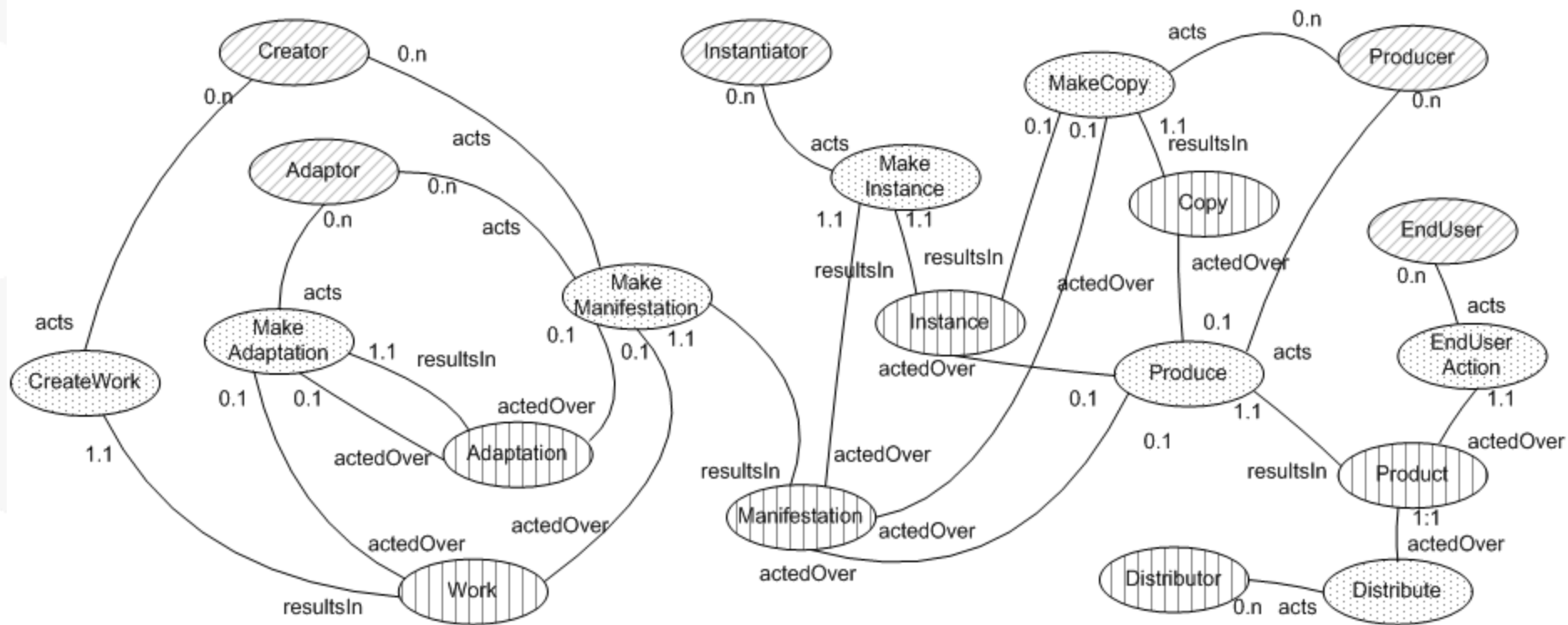
PROPOSAL. MVCO Description. Scope 2: User roles



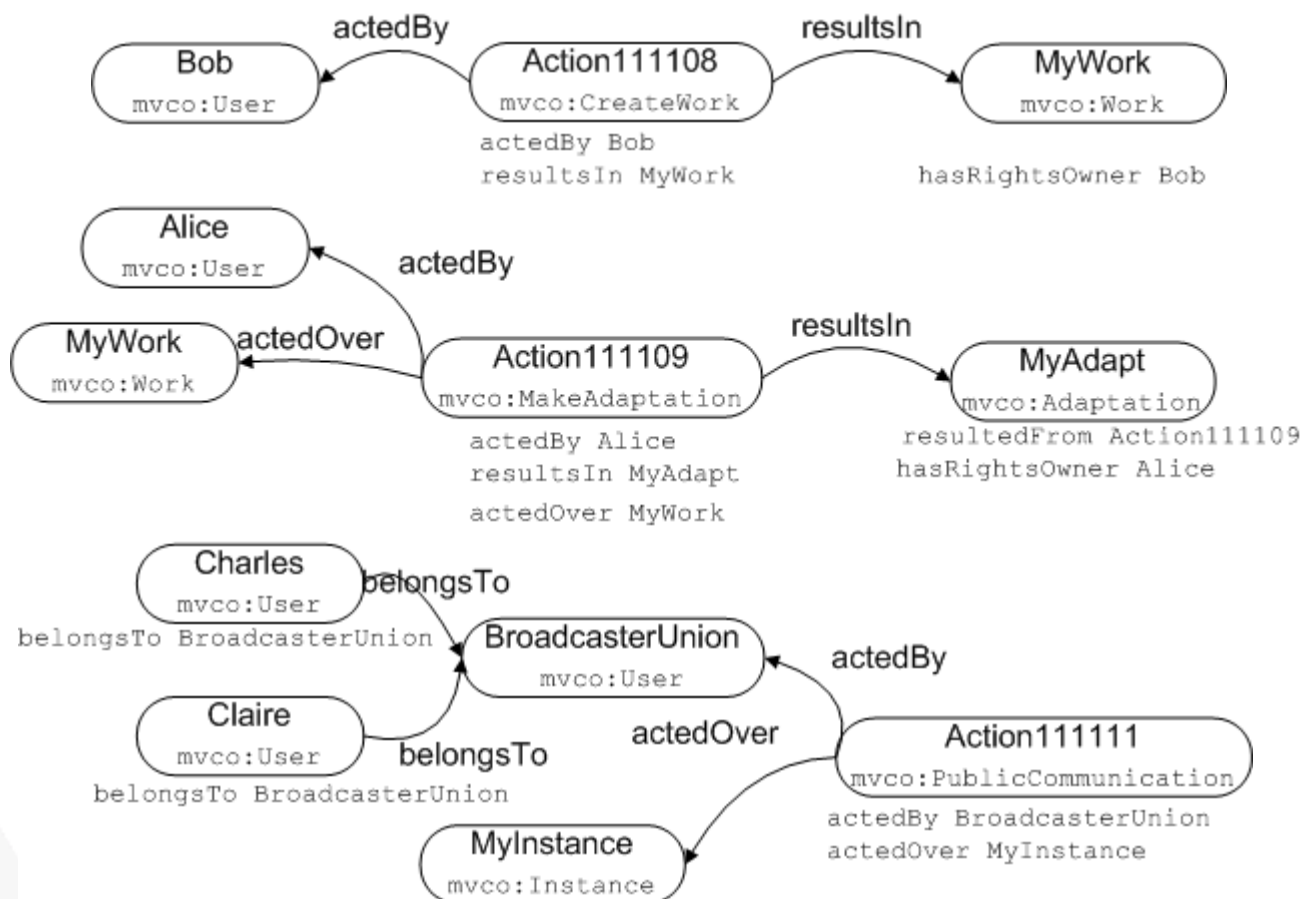
PROPOSAL. MVCO Description. Scope: Intellectual property transfers



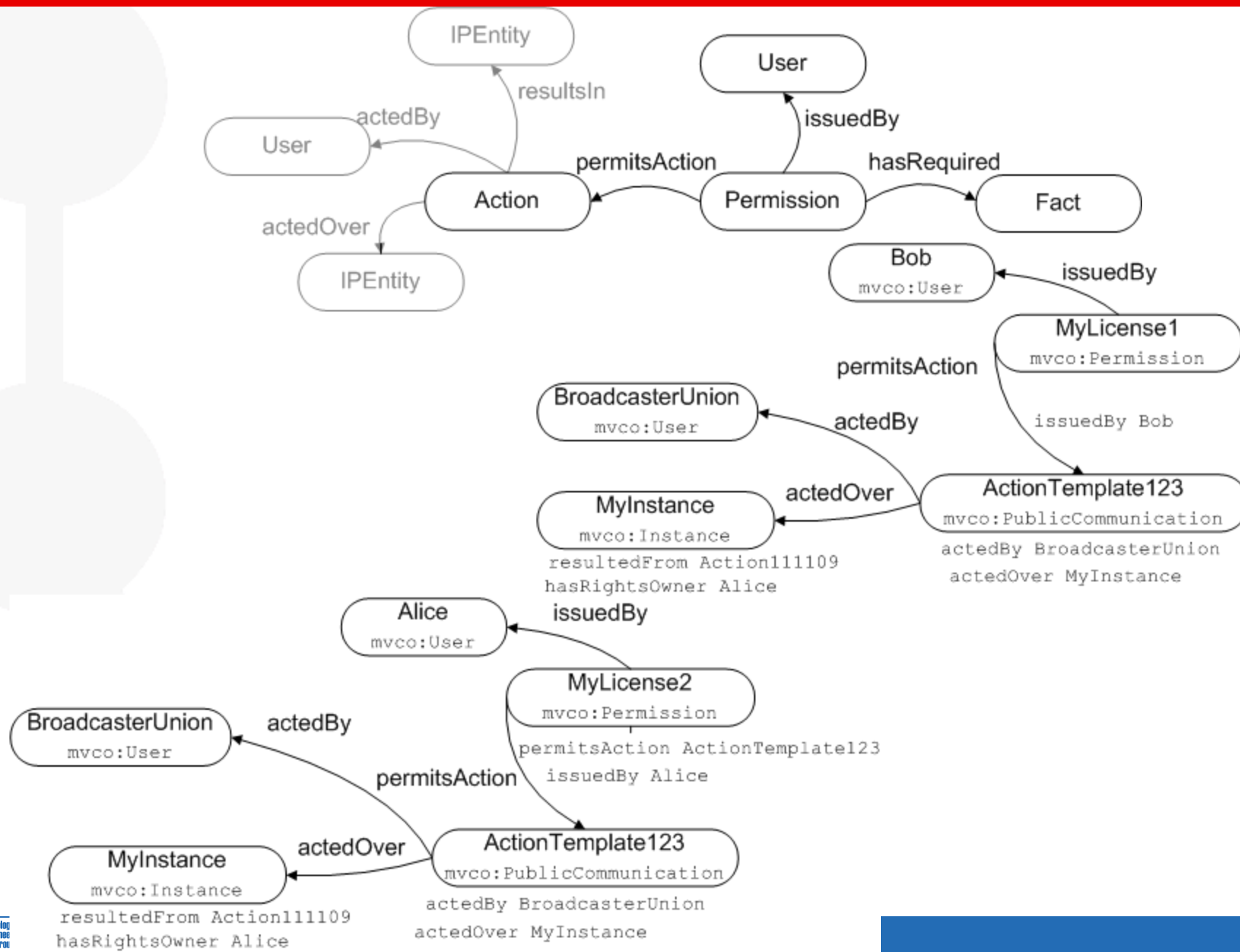
PROPOSAL. MVCO Description. (quasi-) Complete diagram



PROPOSAL. MVCO Description. Class instances example

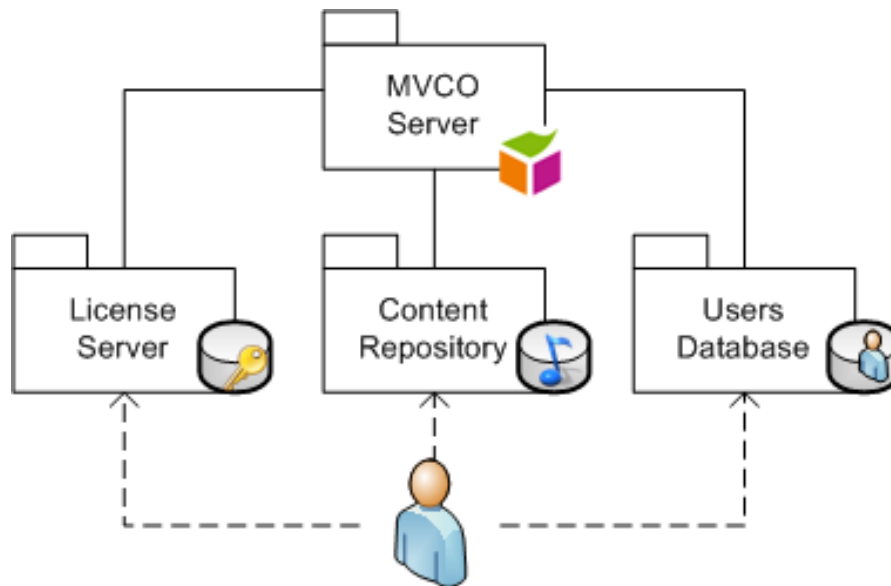


PROPOSAL. MVCO Description. Class instances example (II)



PROPOSAL. Use of MVCO. Architecture of a generic platform

- The MVCO acting as a triple store and authorisation resolver, in contact with the other elements in a typical DRM platform.

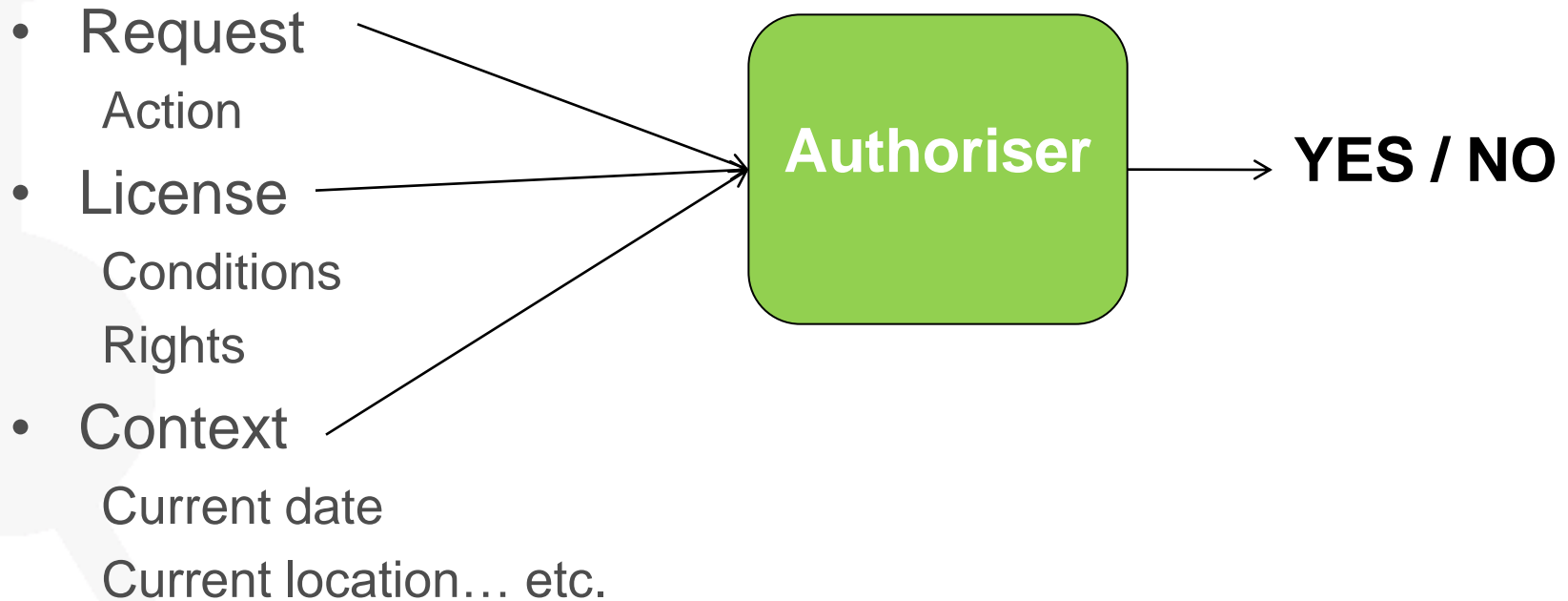


Note that this schema (without the MVCO) is the essential one of the so called *Digital Rights Management* system. Note, too, that licenses are usually written in the so called *Rights Expression Language*

What it pretends to replace: authorisation



- You can PLAY the song MYSONG provided that:
 - You have paid 1€ for it
 - You are in the Territory of UK
 - You are before 2015





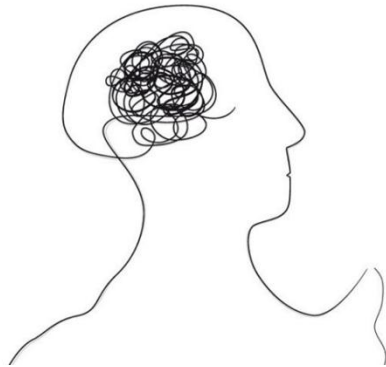


- **By Subsumption.**
 - Each permission is an individual of a Permission class.
 - Subclasses of Permission: AuthorisedPermission / DeniedPermission
 - AuthorisedPermission is a *Defined class* (variable with the context)
 - DeniedPermission as each Permission not belonging to AuthorisedPer.
 - **Authorisation: a subsumption to classify the individual.**
- **By Rule Execution**
 - Each permission is an individual of a Permission class
 - A “bAuthorised” boolean datatype property is given to the permission
 - A SWRL rule contains the authorisation criterium
 - **Authorisation: the execution of a the rule (a Horn clause)**

Evaluation

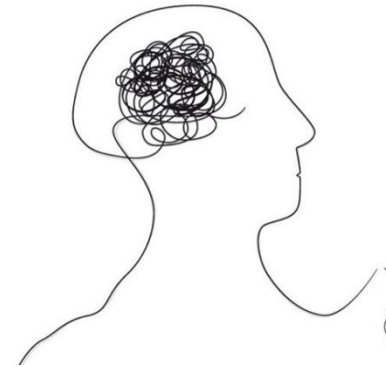
(made as of today 19.06.2012)

Intellectual Property



An **idea** we would like to agree upon

Intellectual Property



An business subject to be empowered by **technology**



EVALUATION. Result. The MEDIA VALUE CHAIN ONTOLOGY

<http://purl.oclc.org/NET/mvco.owl#>

- Written between 2006 and 2010.
- Written in OWL DL (already outdated!)
- Small ontology, with no upper ontology (<100 classes)

EVALUATION. Result. MPEG - ISO/IEC 21000 (MPEG-21)

Part 1: Vision, Technologies and Strategy

Part 2: Digital Item Declaration

Part 3: Digital Item Identification

Part 4: Intellectual Property Management and Protection Components

Part 5: Rights Expression Language

Part 6: Rights Data Dictionary

Part 7: Digital Item Adaptation and Session Mobility

Part 8: Reference Software

Part 9: File Format (.m21 or .mp21)

Part 10: Digital Item Processing and C++ bindings

Part 11: Evaluation Tools for Persistent Association

Part 15: Event Reporting

Part 17: Fragment Identification for MPEG Resources

Part 18: Digital Item Streaming

Part 19: Media Value Chain Ontology

Part 20: Contract Expression Language

Intellectual Property



An **idea** we would like to agree upon

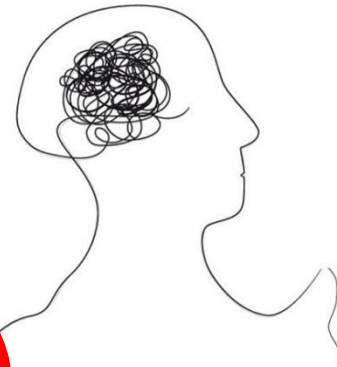
The Ontology has achieved the status of **International Standard** amidst reasonable consensus

ISO/IEC JTC 1/SC 29: ISO/IEC 21000-19:2010,
Information technology – Multimedia Framework
(MPEG-21) – Part 19: Media Value Chain Ontology



International
Organization for
Standardization

Intellectual Property



An business subject to be empowered by **technology**

☺ Technology successfully tested

☹ Technology hardly used



New challenges

New problem statements

(as of today 19.06.2012)

(Still collecting ideas! Your help is wanted)

Challenge #1

Represent contracts in the linked world

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Address: _____
Tel: _____
E-Mail: _____

Distributor / Licensee:
Address: _____
Tel: +39 _____
E-Mail: _____

Type of Entity: _____ **Domicile:** _____

Subject to timely payment of all monies due, Licensor and Distributor's full performance under this Agreement, Licensor licenses exclusively to Distributor, and Distributor accepts from Licensor, the Licensed Rights in the Picture throughout the Territory for the Agreement Term in the Authorized Languages subject to the Holdbacks identified below on all the terms and conditions of this Agreement.

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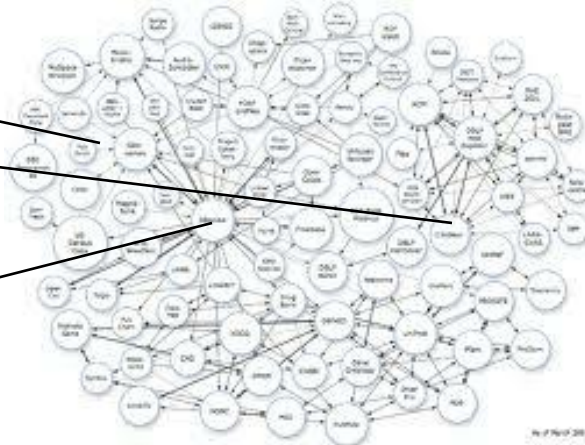
<input checked="" type="checkbox"/>	Standard Attachments
<input type="checkbox"/>	International Access Letter
<input type="checkbox"/>	International Delivery Manifest
<input type="checkbox"/>	International Copyright Rider
<input type="checkbox"/>	Other:

This Agreement has been drafted based on the version V. 2000 ("Form"). If the heading of this Agreement used the trademark, then Licensor represents that, except where terms are to be included in such form, no change has been made to pre-printed elements of the Form unless conspicuously indicated in double underlining, strike-out or similar formatting to designate changes. All parts of this Agreement will be interpreted together to form one contract, but in the event of a direct conflict, any terms inserted in the Deal Terms as part of completing the contract will prevail over pre-printed elements of the Form.

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LICENSOR:
By: _____
Dsc: _____
In: _____

DISTRIBUTOR / LICENSEE:
By: _____
Dsc: _____
In: _____



Challenge #2

Can new licensing bring
new business models?



Creator



EndUser

Challenge #3

Model for data instead of Intellectual Property

how to write permissions? how to write conditions? How to assure provenance? how?

