

Promoting Music Sampling by Semantic Web-enhanced DRM tools

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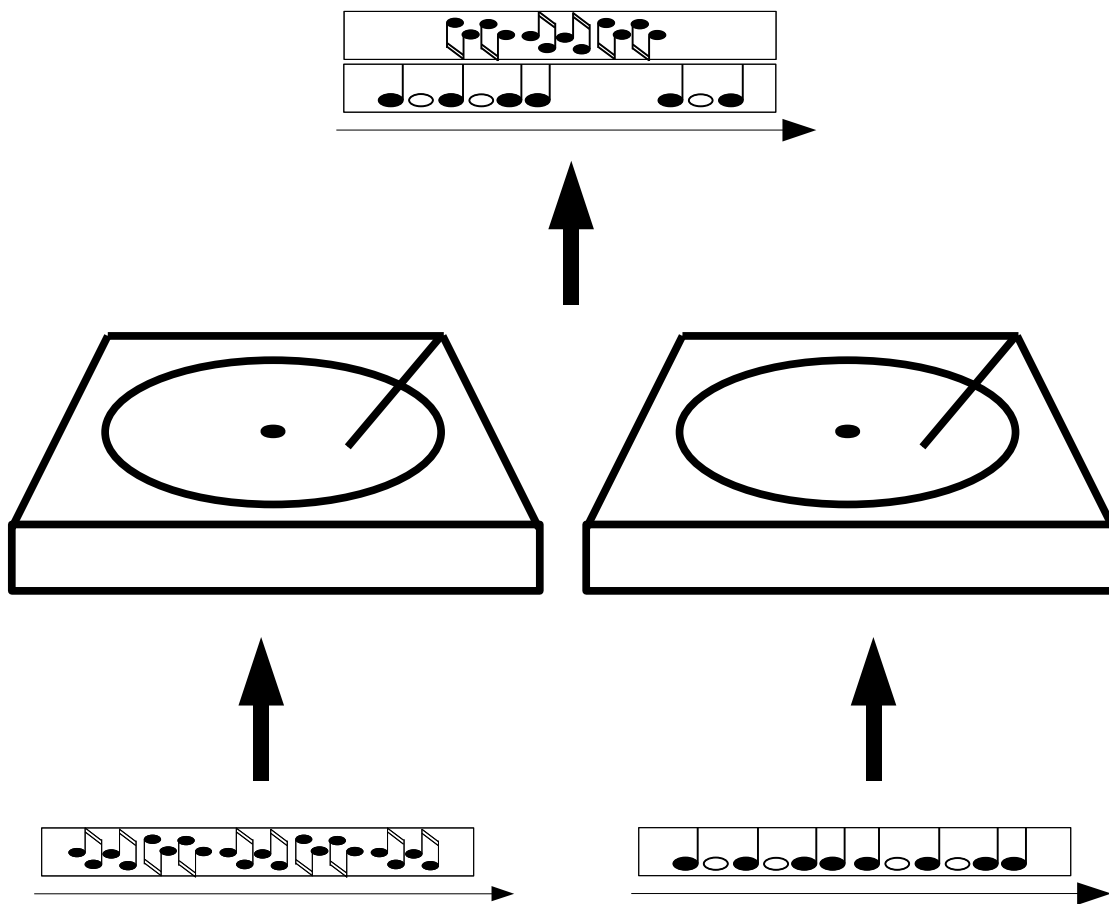
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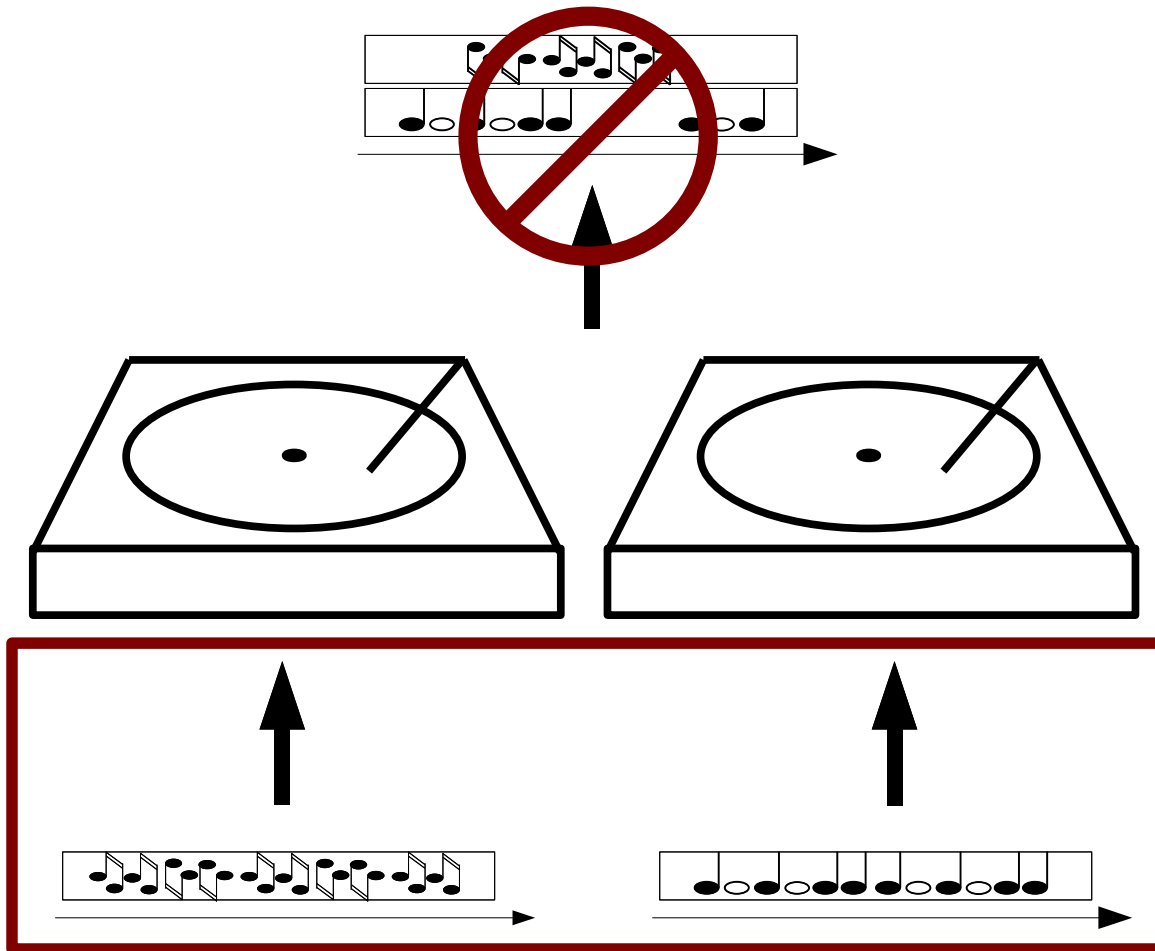


Music Sampling



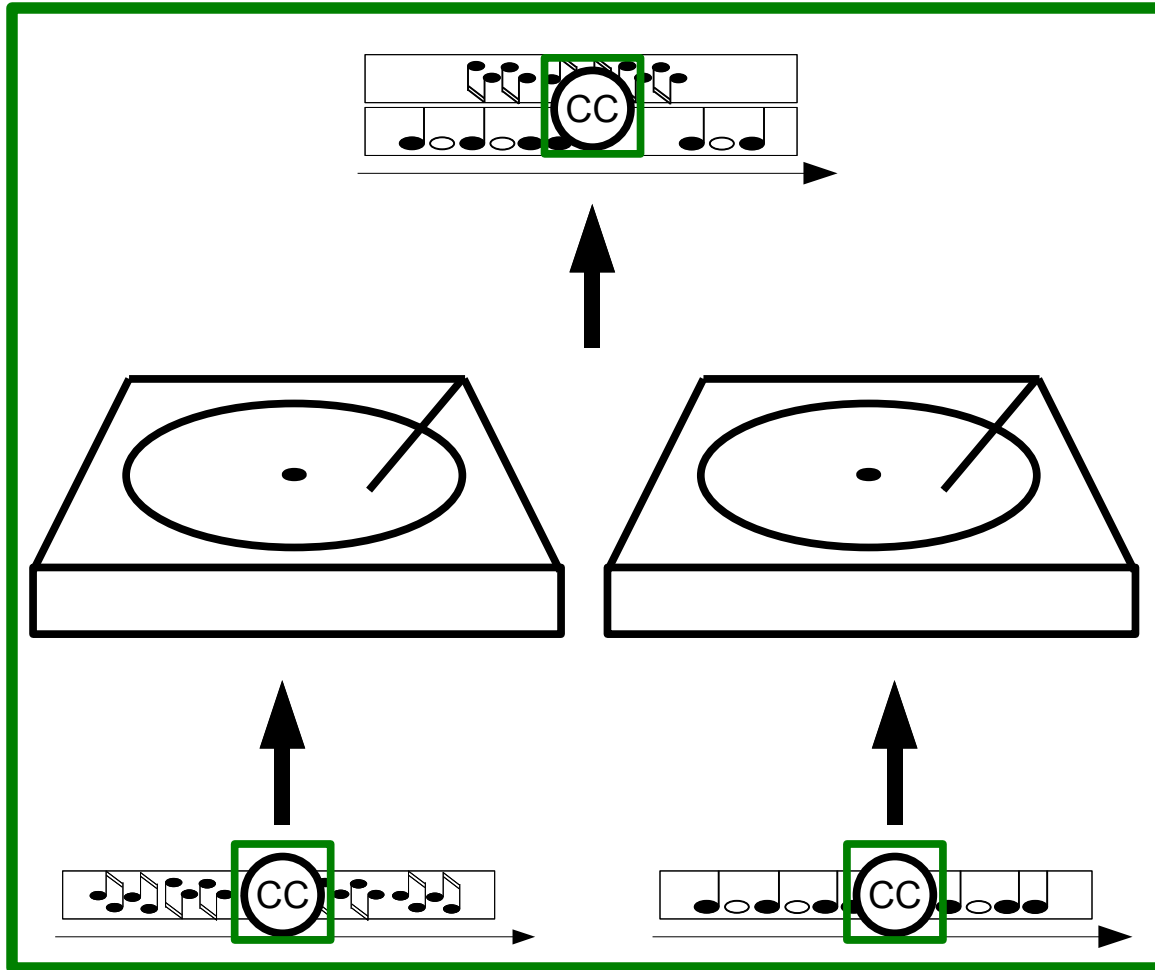
- One Remix
 - new
 - Original Work?
 - Derivative Work?
 - Adaptation?
- Process
 - exploratory
 - creative
 - Copy
 - Adapt
 - Merge
- Different Samples

Music Sampling menaced by DRM



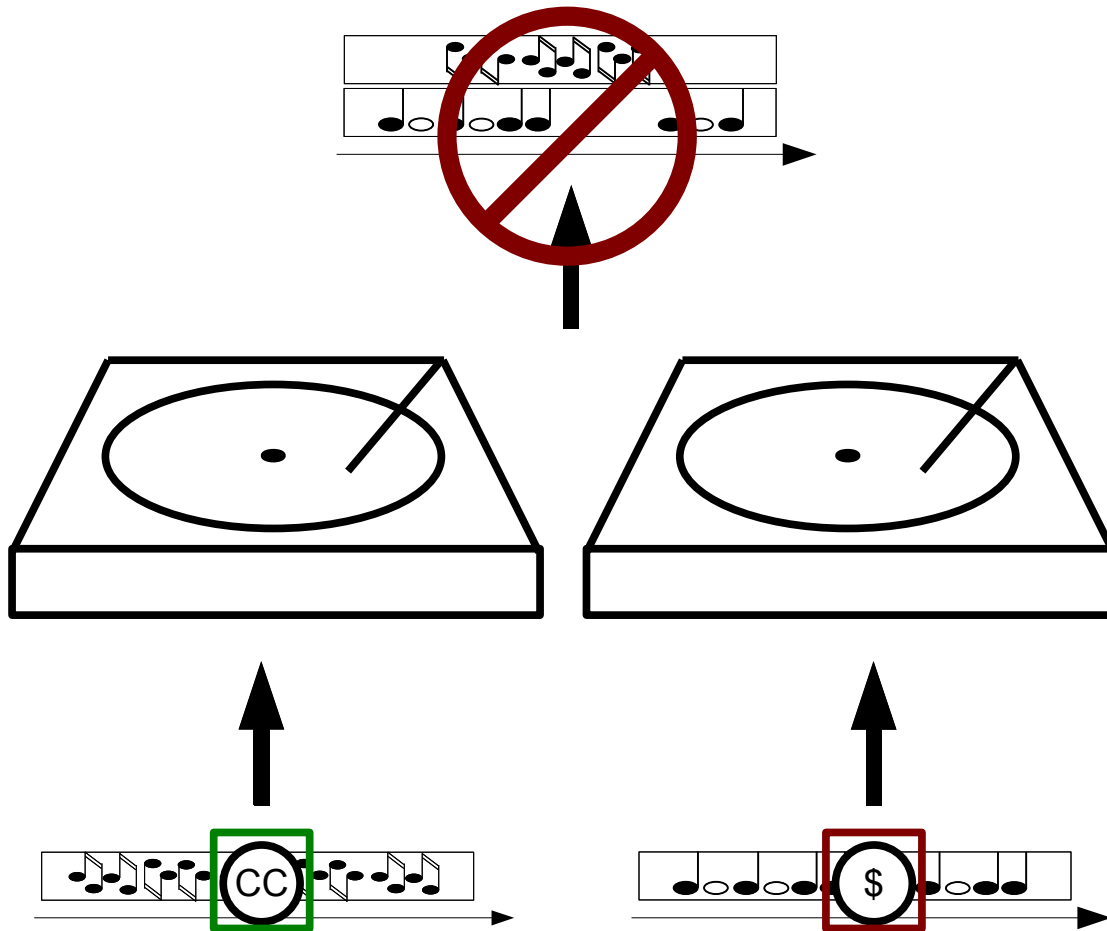
- **No Remix**
- **Process**
 - **Copy**
 - **Adapt**
 - **Merge**
- **No Samples**
- **Legal**
 - for private Use
 - Rights clearance for samples only necessary for public Use

Music Sampling supported by CC



- Creative Commons
 - predefined licenses support sampling
- Legal
 - Rights clearance for samples not required
 - Non-commercial Use only
 - ccMixter
 - Commercial use?

Music Sampling either commercial or not?

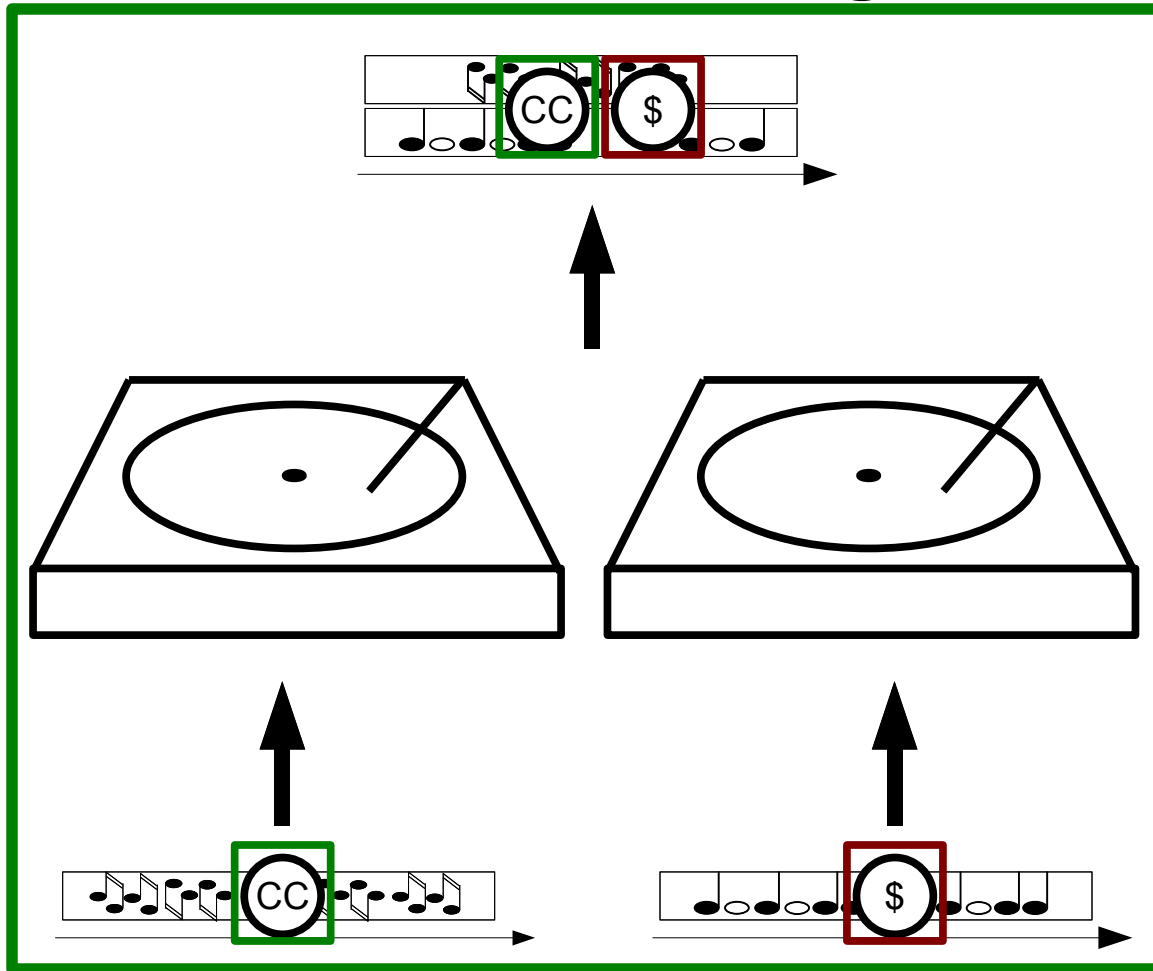


- **No Remix**
 - incompatible licenses
- **Process**
 - exploratory?
 - creative?
- **Legal**
 - for commercial Use Rights clearance for samples required
 - no management system to assist

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Objective Promoting Music Sampling...

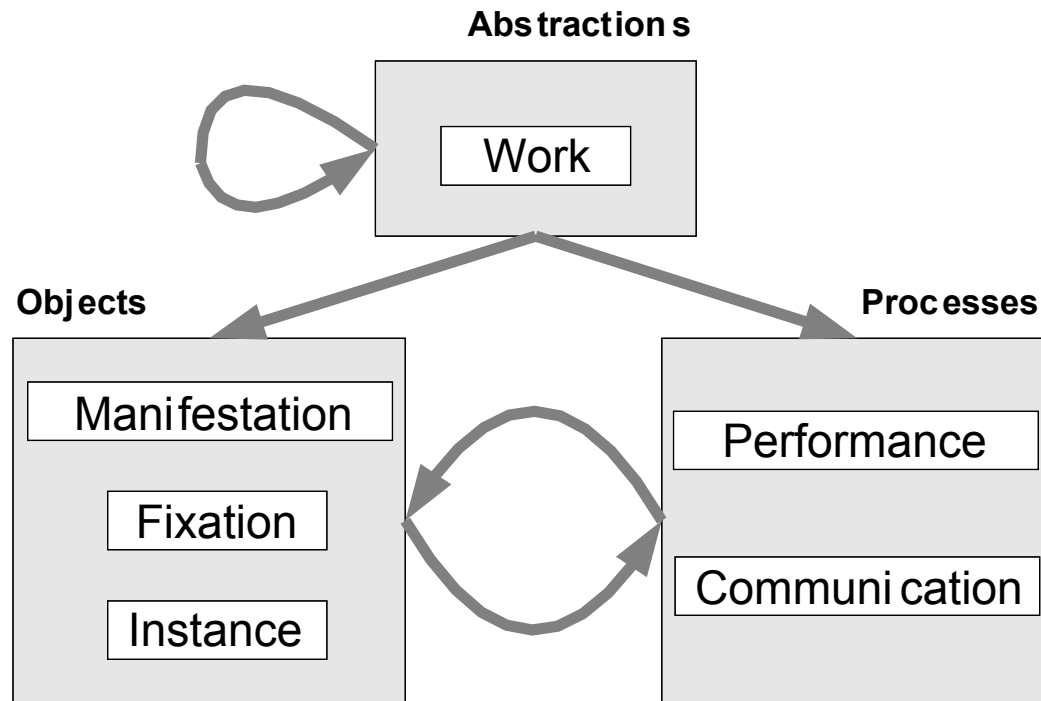


- Remix
 - independent of the Licenses of the Samples
 - independent of the License of the resulting Work (e.g. commercial, non-commercial)
 - **assisted** by a DRM system to pay royalties to authors of original Works - **if necessary**

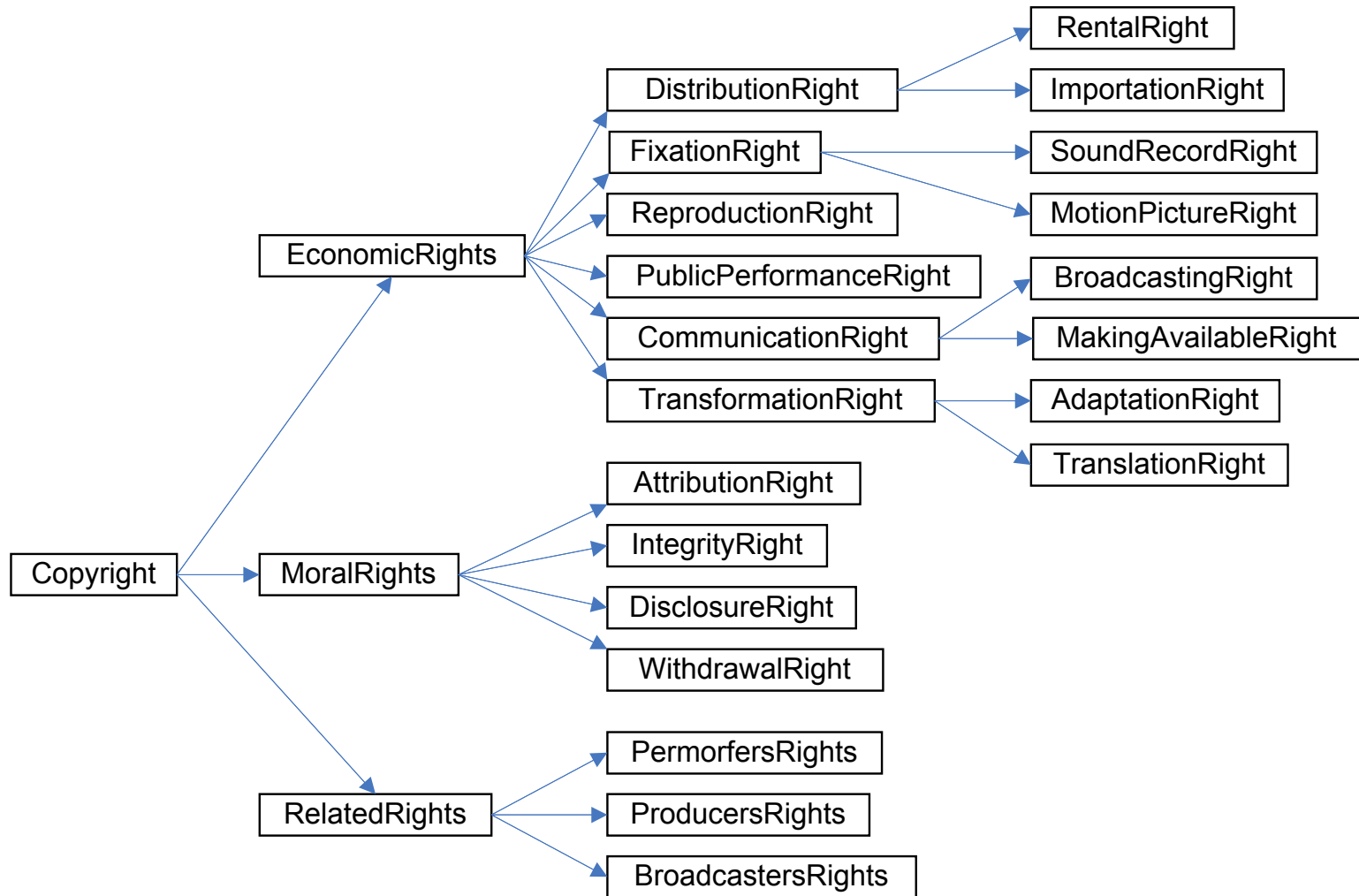
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 - **Creation, Rights and Action Model**
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Conceptualisation Creation Model



Conceptualisation Rights Model

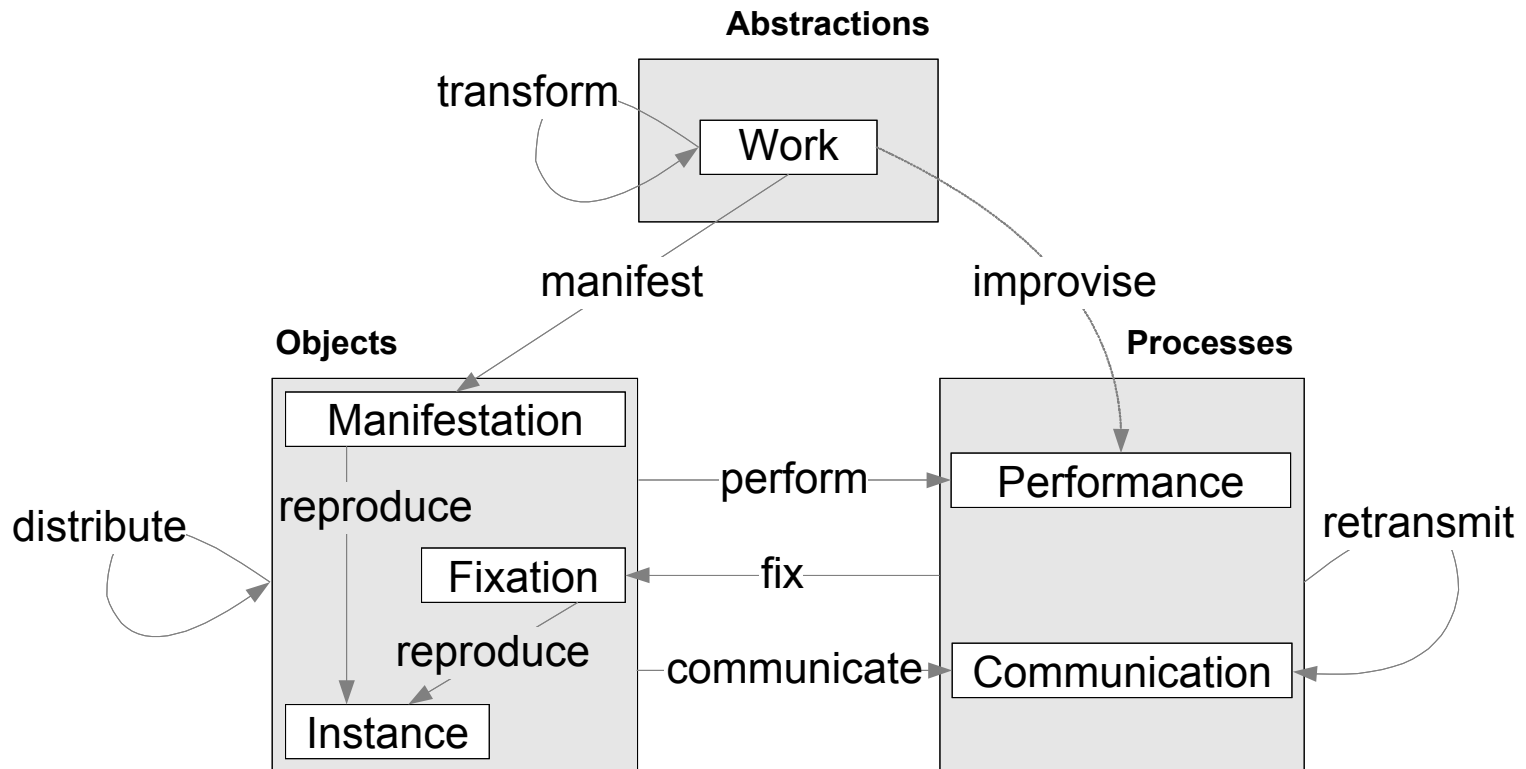


Conceptualisation Rights Model

- End-users do not hold rights
 - Usage licenses
 - Special permissions:
 - Quotation
 - Education
 - Information
 - Official Act
 - **Private Copy**
 - Parody
 - Temporary Reproduction

Conceptualisation Action Model

- Actions, the building blocks



Conceptualisation **Action Model**

- Actions governed by Economic Rights:
 - **Reproduction Right:**
copy
 - **Distribution Right:**
distribute; sell, rent, lend
 - **Public Performance Right:**
perform
 - **Fixation Right:**
record
 - **Communication Right:**
communicate; retransmit, broadcast, make available
 - **Transformation Right:**
transform; adapt, translate

Conceptualisation **Action Model**

- End-user actions, to **use** a...
 - manifestation: **buy** picture, sculpture
 - instance: **buy** book, CD, DVD
 - performance: **attend** projection, recital, exhibition
 - communication: **access**
 - broadcast: **tune** TV channel, radio station
 - something made available: **access** web page, stream

Conceptualisation **Action Model**

- Actions for users' special permissions:
 - **Private Copy Right:**
copy producing a reproduction for private consumption
 - **Quotation Right:**
quote, limited extent *copy*, usually requiring an *attribute* action
 - ...

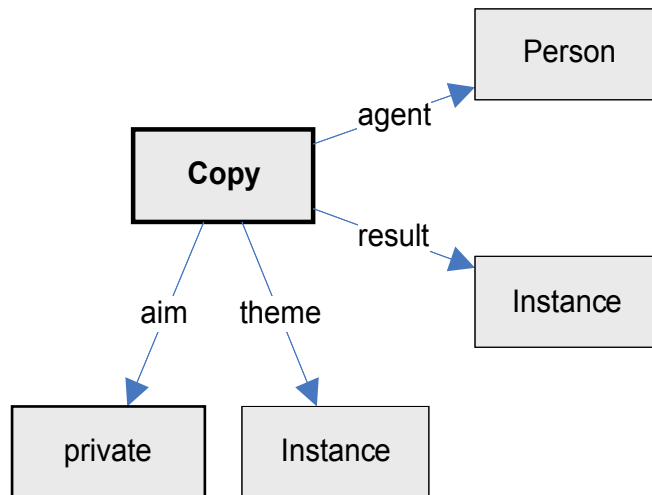
Conceptualisation Action Model

- **Case roles** (linguistics):
relate actions to their participants

	initiator	resource	goal	essence
Action	agent, effector	instrument	result, recipient	patient, theme
Process	agent, origin	matter	result, recipient	patient, theme
Transfer	agent, origin	instrument, medium	experiencer, recipient	theme
Spatial	origin	path	destination	location
Temporal	start	duration	completion	pointInTime
Ambient	reason	manner	aim, consequence	condition

Conceptualisation Action Model

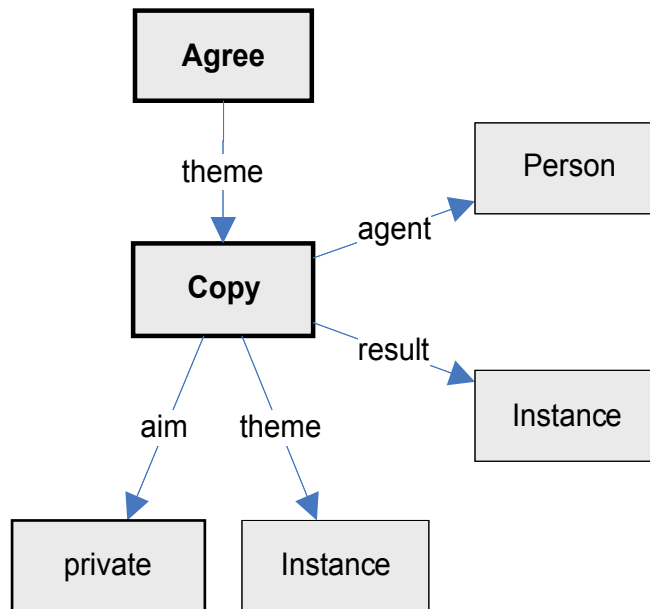
- License building primitives:
 - **Event Patterns:**
to state what is obliged, permitted or prohibited
 - Built from actions and case roles



All copy events performed by any person who copies any instance getting a copy instance and whose aim is private

Conceptualisation Action Model

- License building primitives:
 - **Agree**: model permissions
 - *theme* points to the permitted event pattern



Conceptualisation Private Copy Model

- Music Sampling scenario:
 - Model Private Copy

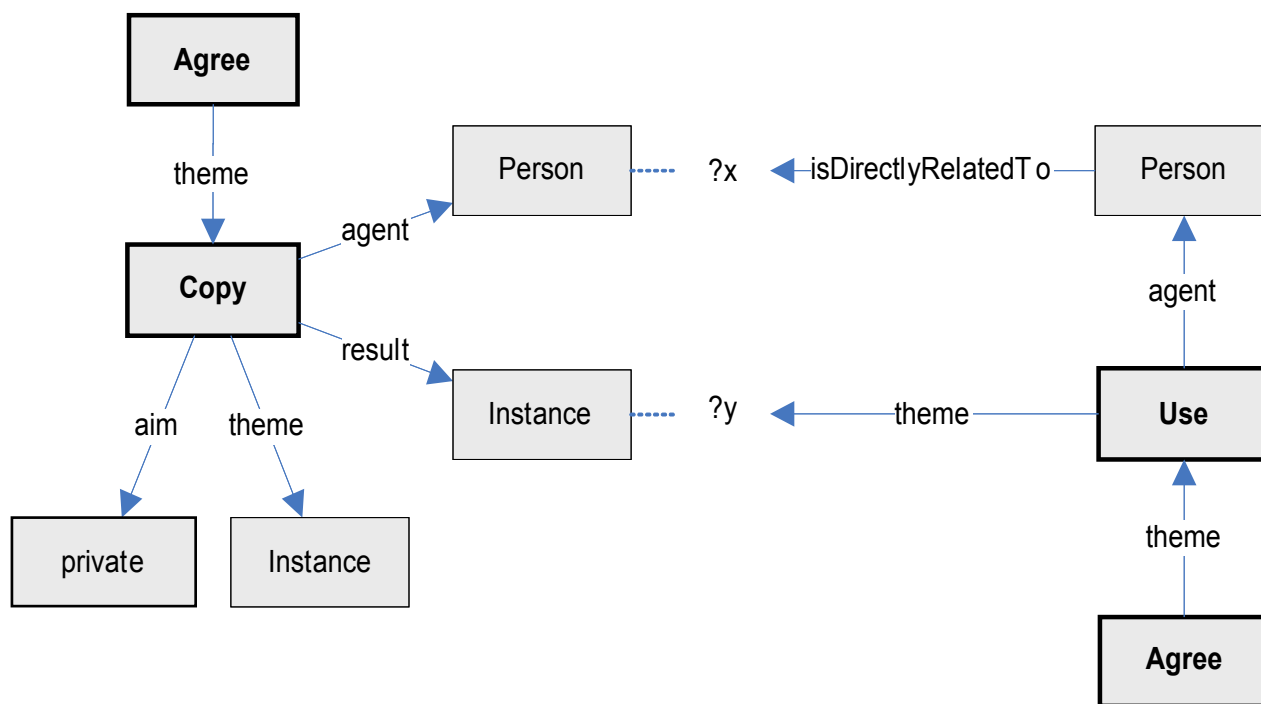


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Implementation

- **OWL-DL**: deal with licenses using Description Logic reasoners
- **Rights and License Patterns** implemented as **Classes**
 - Copyright, Reproduction Right, Copy, CopyPattern,...
- **Uses** implemented as **Instances**
 - u
- *if $u \in \text{Copy Pattern}$ then license pattern authorises u*

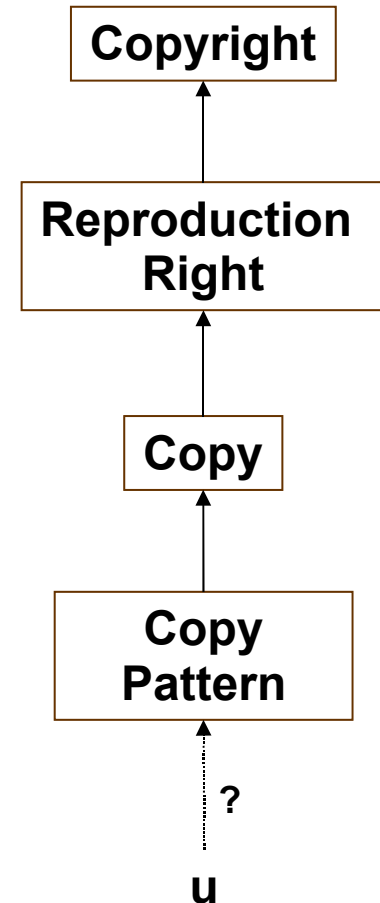
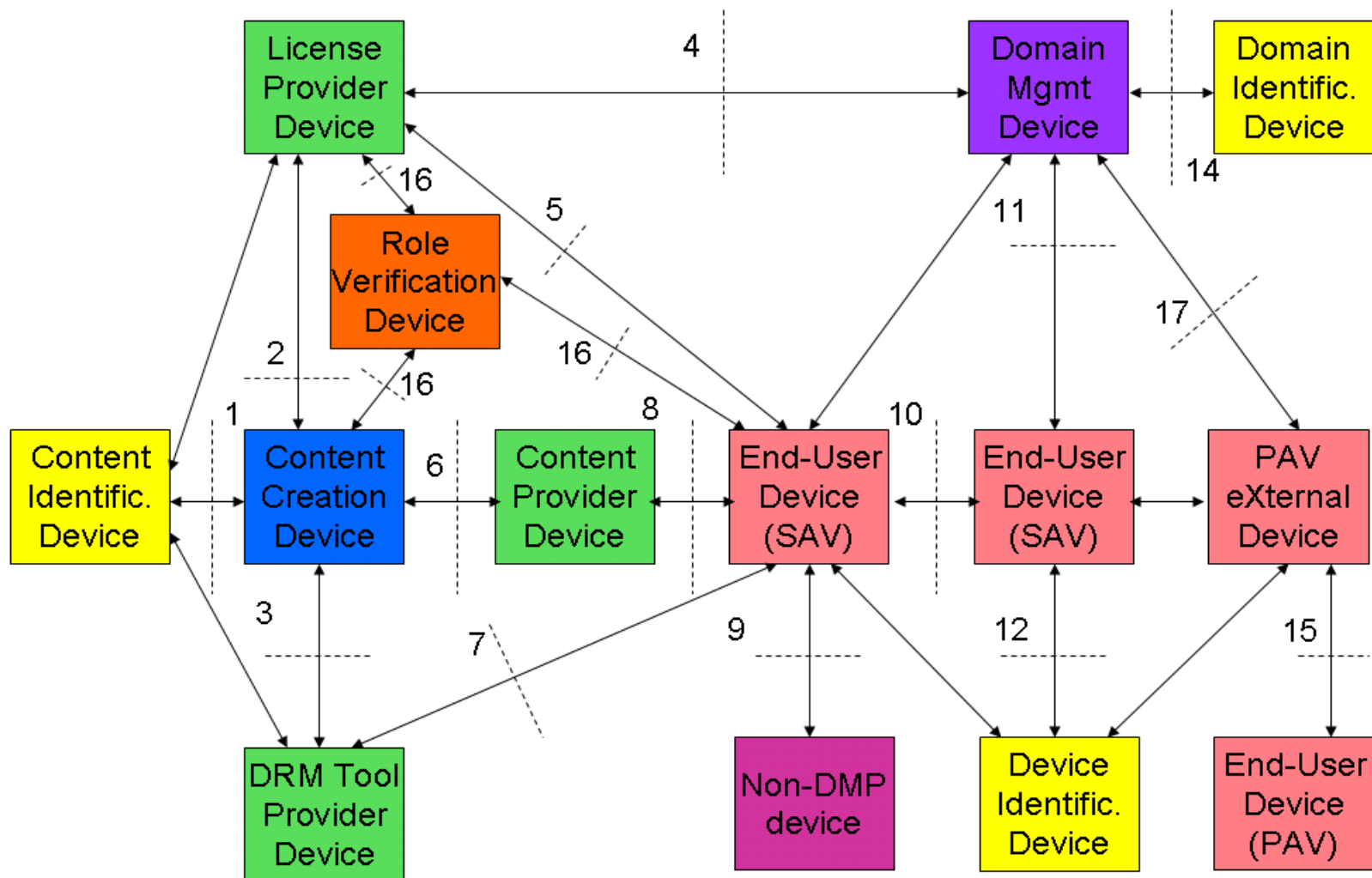


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Conclusion

we contribute to a DRM standard



Thank you for your attention

More details:

<http://rhizomik.net/ontologies/copyrighntonto>

<http://rhizomik.net/semdrms>

<http://rhizomik.net/~roberto/thesis>

<http://www.dmpf.org>

<http://chillout.dmpf.org>

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