PERFECT MEMORY
Life in evidence

Constructing the operability

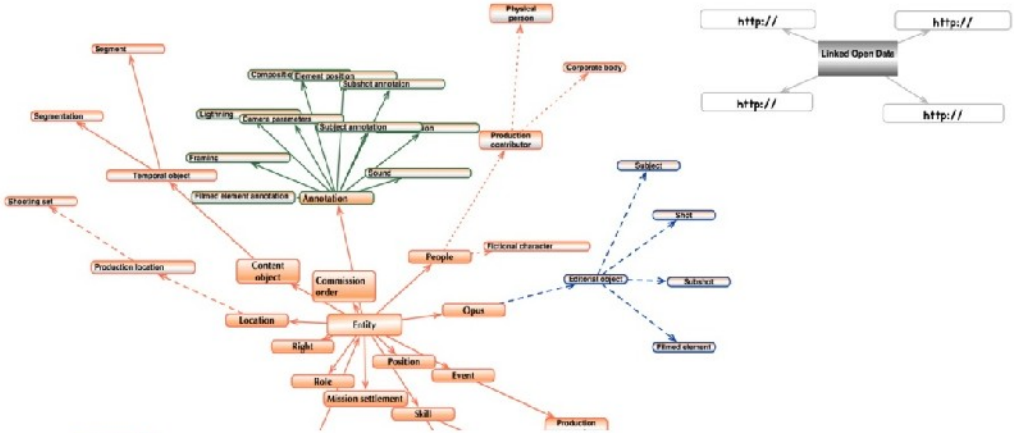
- From the need of semantic to the Mediamap Core,
- the AV annotation Ontology and the USE

Guillaume RACHEZ
R&D Engineer
GSM: +33 675 85 00 59
guillaume.rachez@perfect-memory.com

What does semantic bring us ?

What does semantic bring us ?

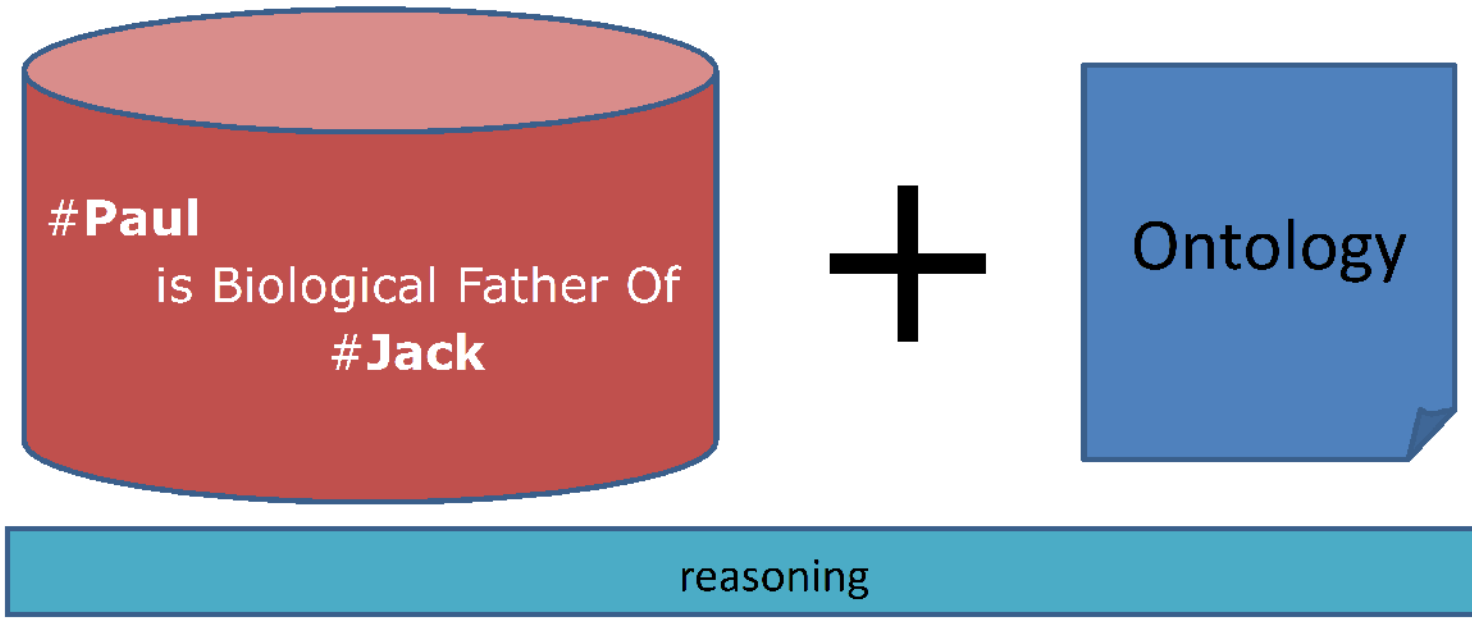
- Modeling approach : Graph



- Graph = a rich model
- A rich model is **semantic** only if it's constructed upon an **ontology**.
- **Ontology** = definition types of **relations**.

What does semantic bring us ?

- Inferences : a « reasoning on knowledge » system



Thanks to semantics, machines and humans will be able to properly **communicate**.

#Paul is a Parent Of #Jack

#Paul is from the Same Family of #Jack

#Paul is not Virgin !

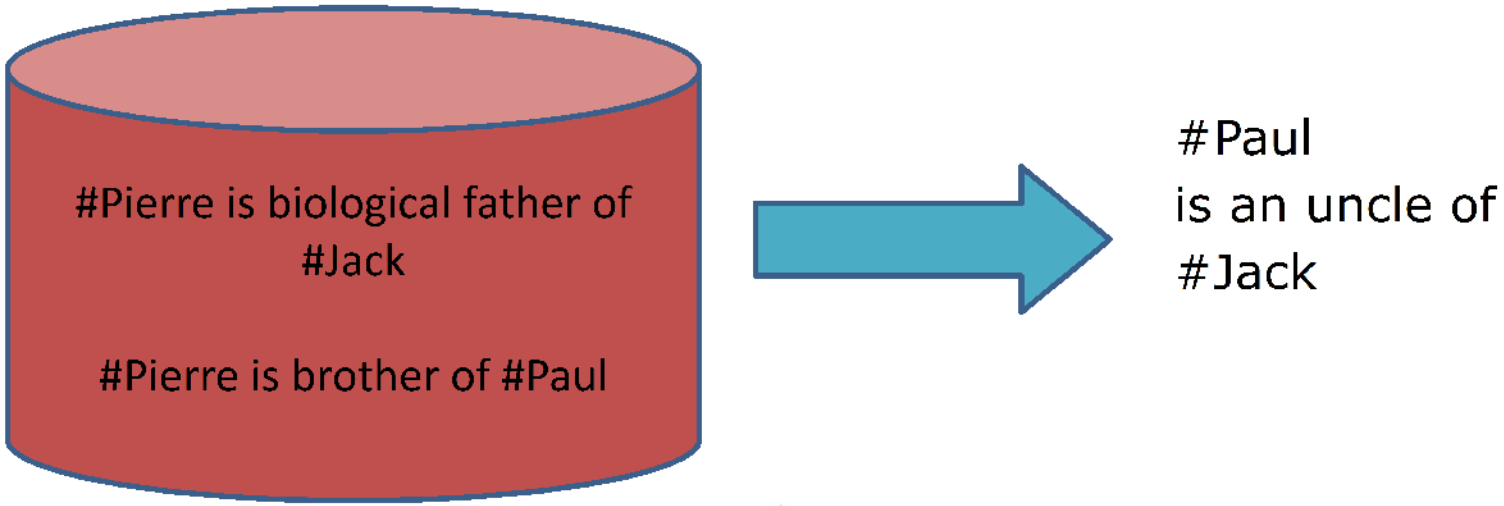
What does semantic bring us ?

- Custom rules

- Ontology defines also **inference rules**, enabling to have control on the deductions.

- Example of an inference rule :

- if you are the brother of my father, you are **my uncle**.

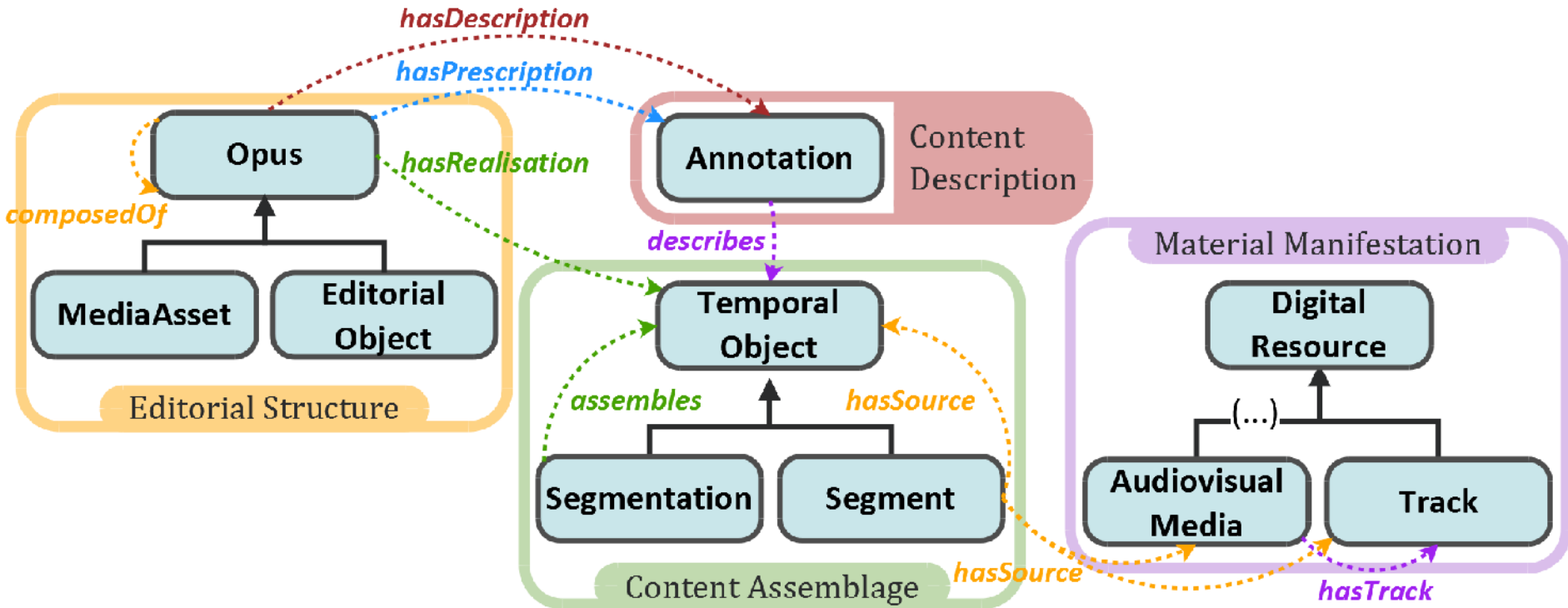


The Mediamap Core

The Mediamap Core

- Core Ontology of the Mediamap Project

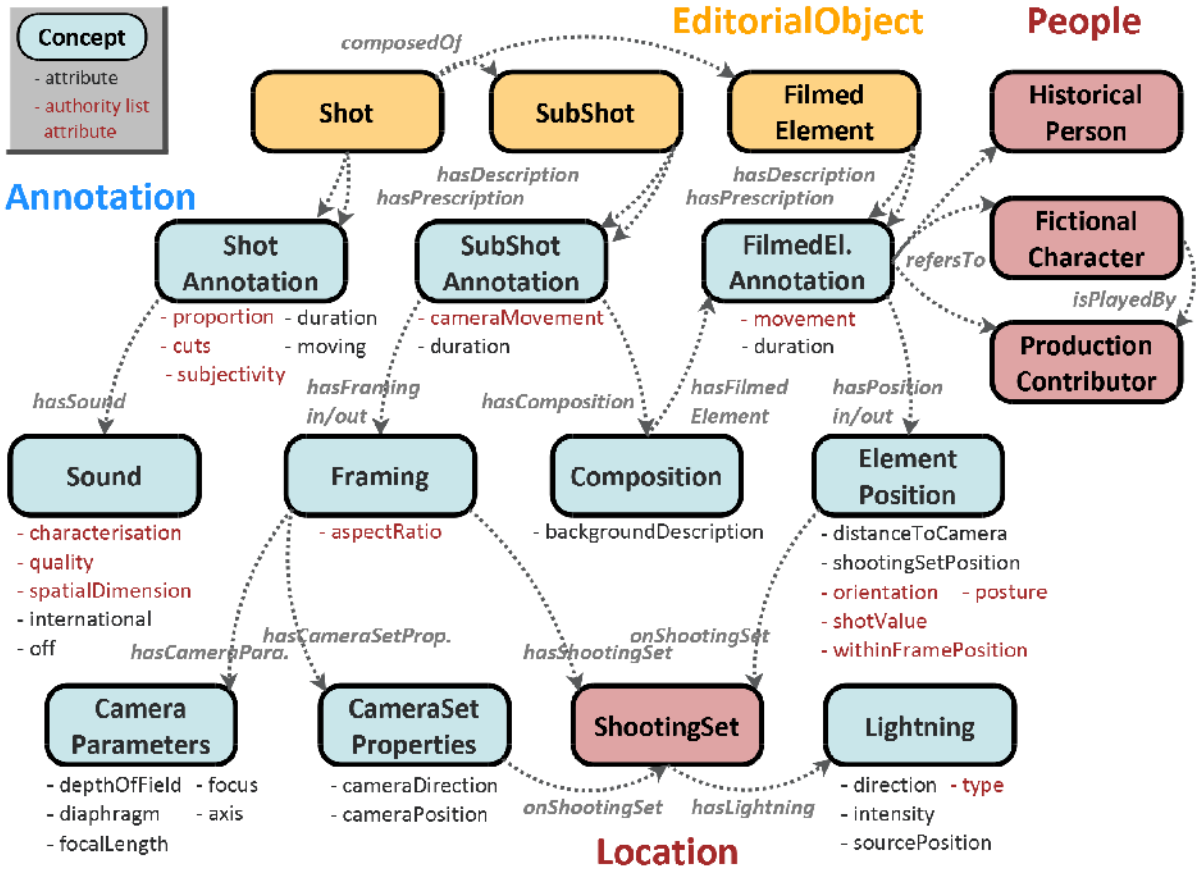
- Define the key concepts and relations of an Audiovisual model



Audiovisual scripting Ontology

- Rich description of the Audiovisual content

- An Audiovisual content is described according to an **Audiovisual Grammar** : shot values, camera movement, composition, framing...



PERFECT MEMORY
Life in evidence

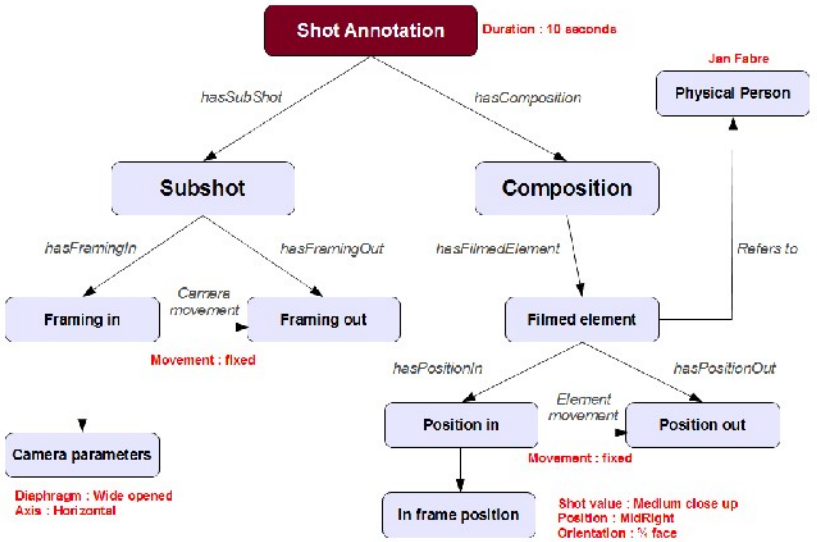
Audiovisual scripting Ontology

- Flat way VS Rich way

Flat way

Shot « Jan Fabre interview »
- Duration : 10 seconds
- Description : Jan Fabre in medium close up, in midright part of the image, ¾ face …

Rich way



Tag by using meaningfull entities

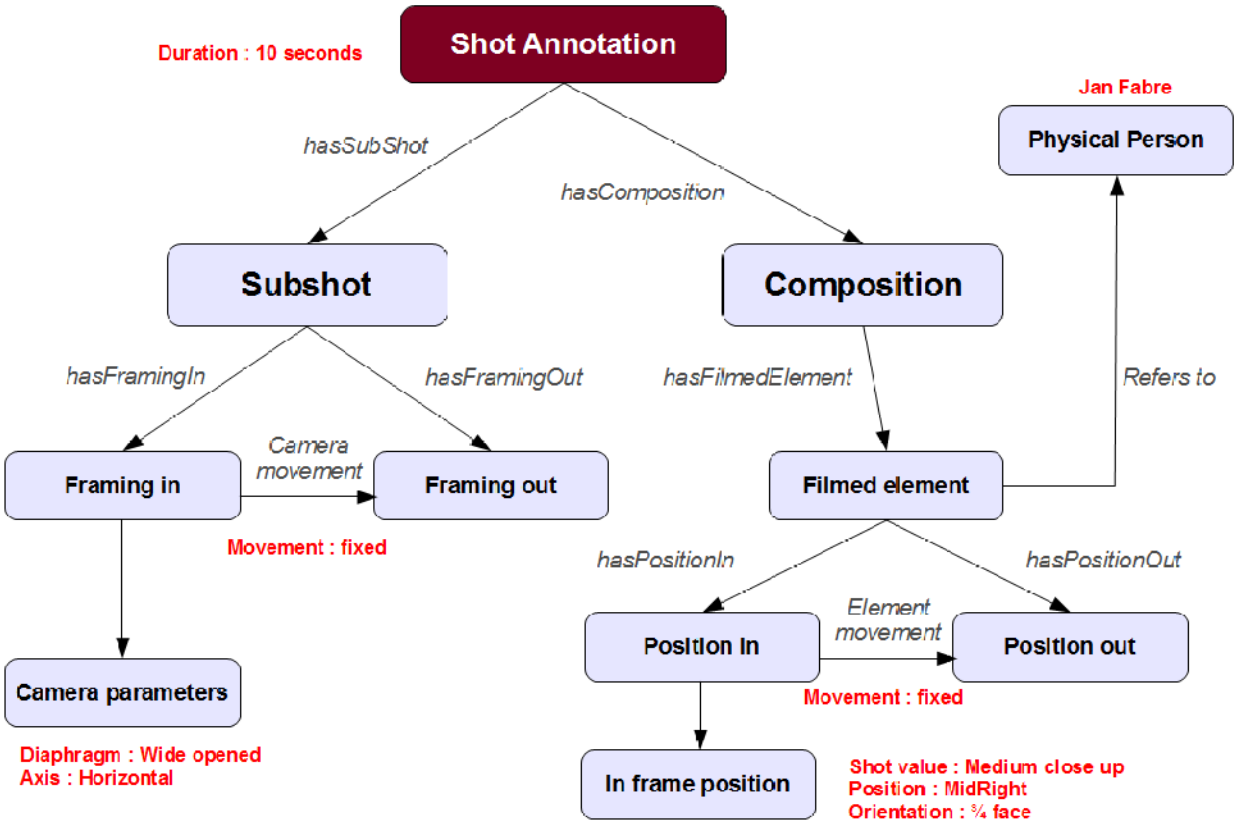
Re-use the defined knowledge

Open the way to semantic inference

PERFECT MEMORY
Life in evidence

Audiovisual scripting Ontology

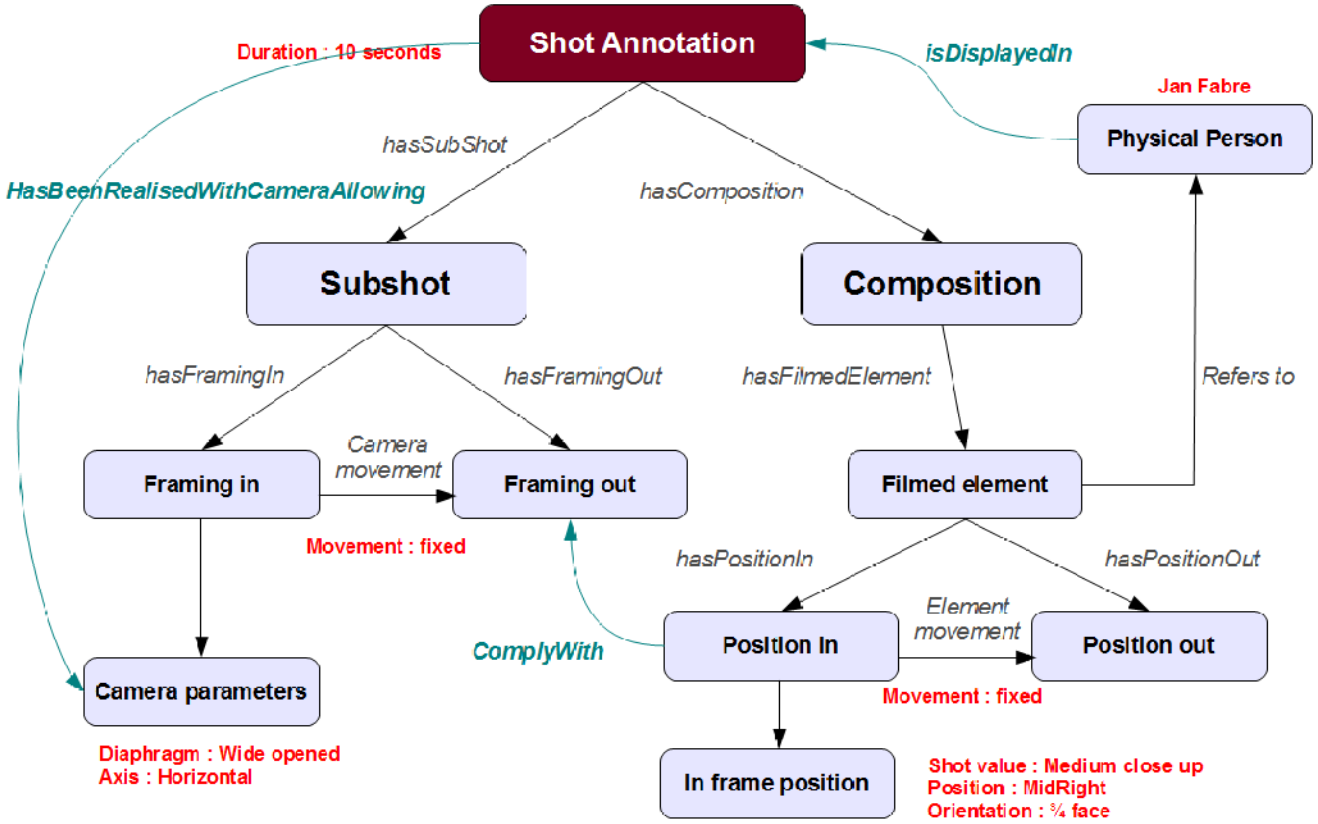
- Inferences



Audiovisual scripting Ontology

- Inferences

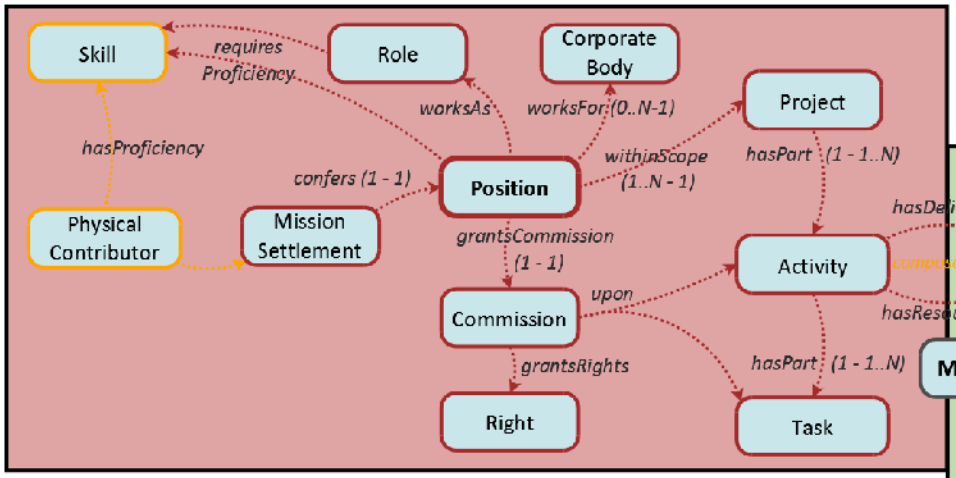
- Get knowledge from the knowledge !



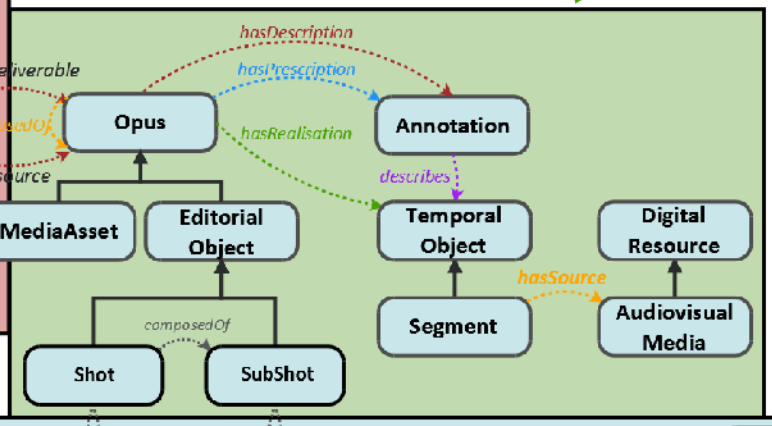
PERFECT MEMORY
Life in evidence

Mediamap Core

- Complete model

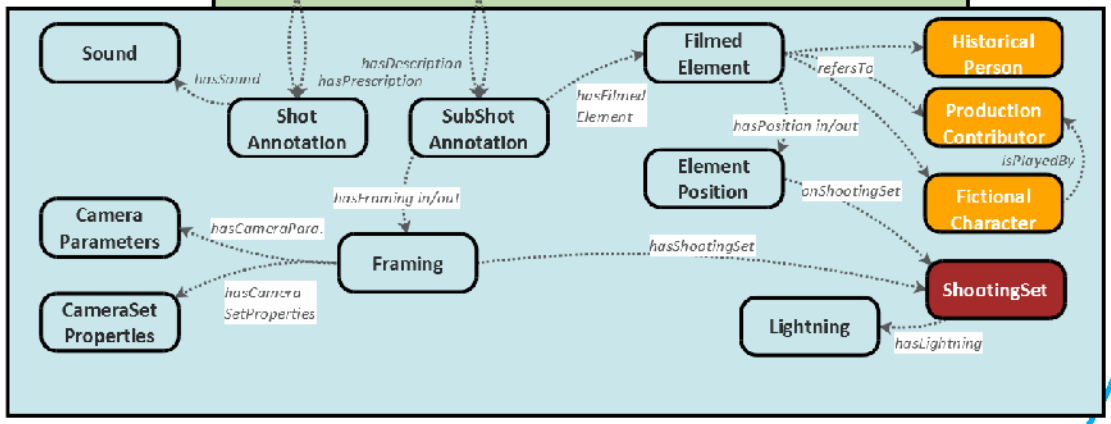


Products & AV Object



Process & Contributors

Semantic Script



The VIEW key concept

The VIEW key concept

- Rationale

- A complex graph will never be **meaningfull** for all human users.

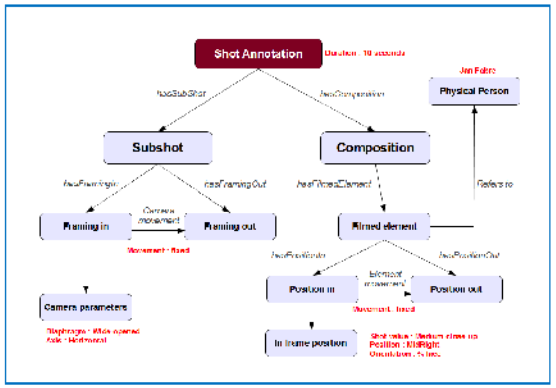
- The **View** brings semantics to the "way to display things"
  => Views have closed relations to **Role & Skills of a User**
  => Introduction of "Display Concepts and Relations", enabling to display only the important Entities... for the User.

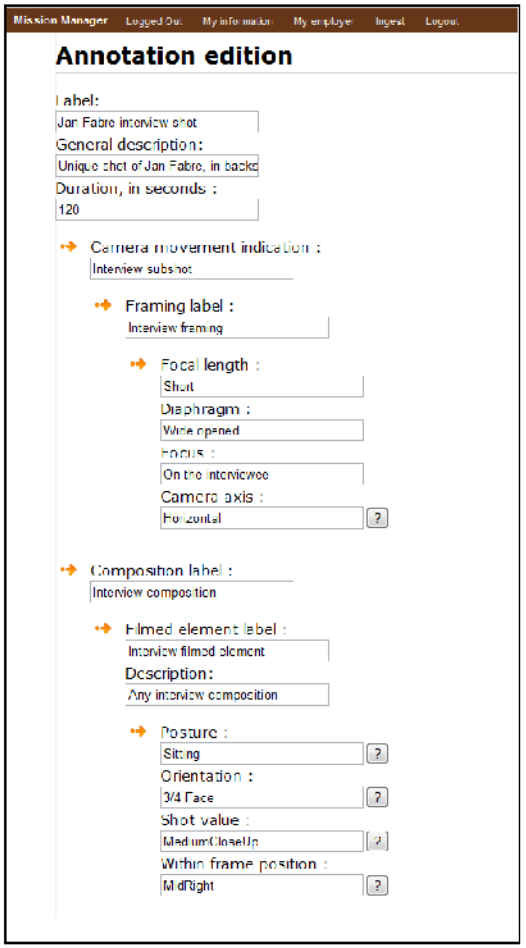
- **Display knowledge from the knowledge !**

The VIEW key concept

- Example

VIEW





The graph edition is **adapted** to the user.

Thanks to the **VIEW** key entity.

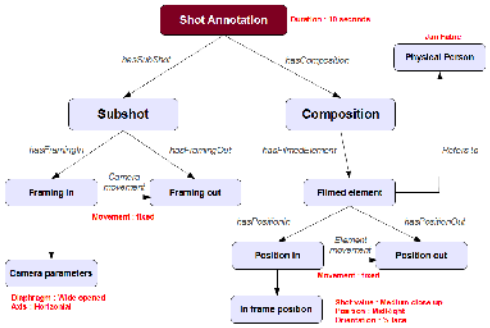
The eventual complexity can always appear **simpler**.

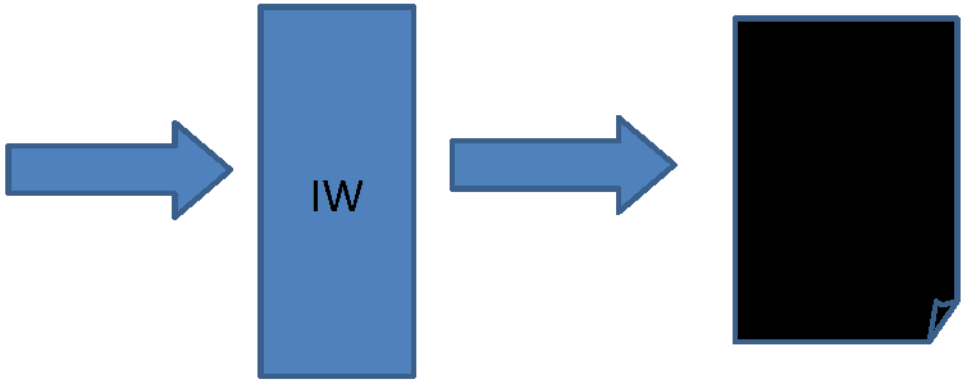
PERFECT MEMORY
Life in evidence

The VIEW key concept

- Interoperability wickets

- Interoperability wickets are a **machine VIEW processor**.





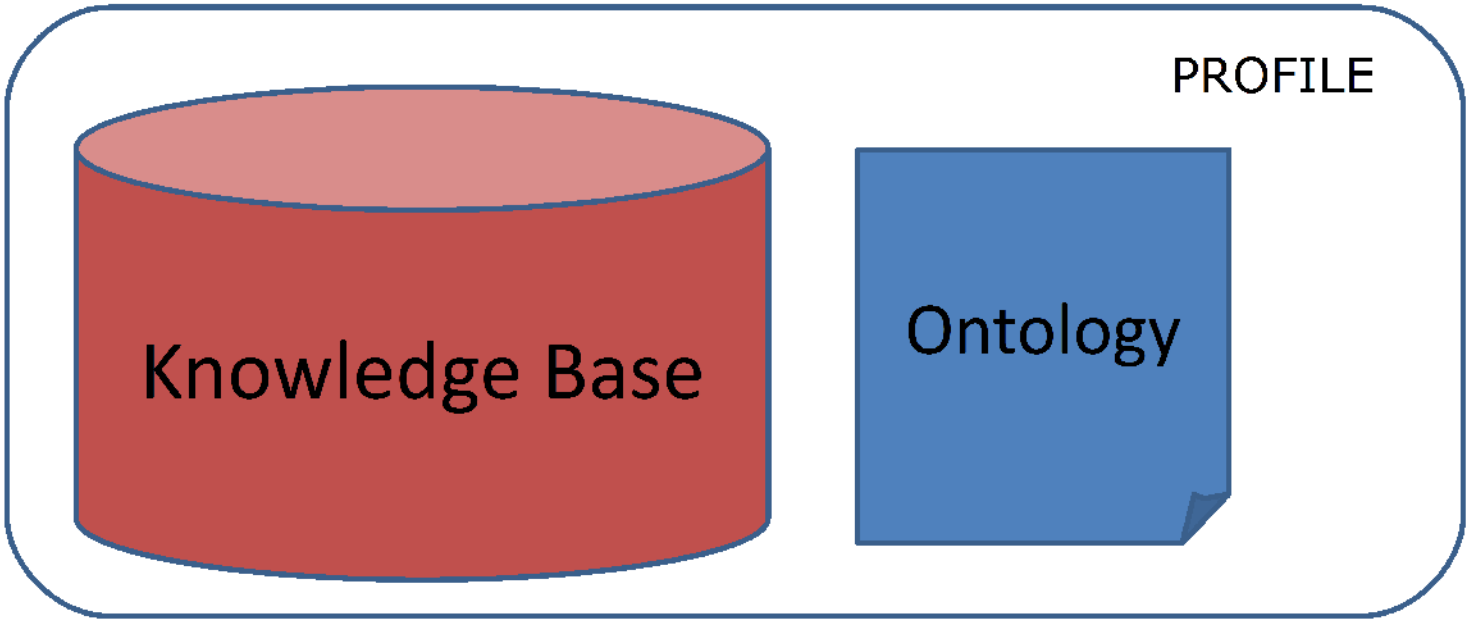
The Profiles

The Profiles

- Knowledge bases

- To use it in an industrial project, ontology is not enough : we need to identify **Knowledge bases**.

- Definition of a Knowledge base : group of Semantic content, identified to be **used by everyone** in a project. For instance, the known shot values.



Unique Semantic Entity

Unique Semantic Entity

- USE

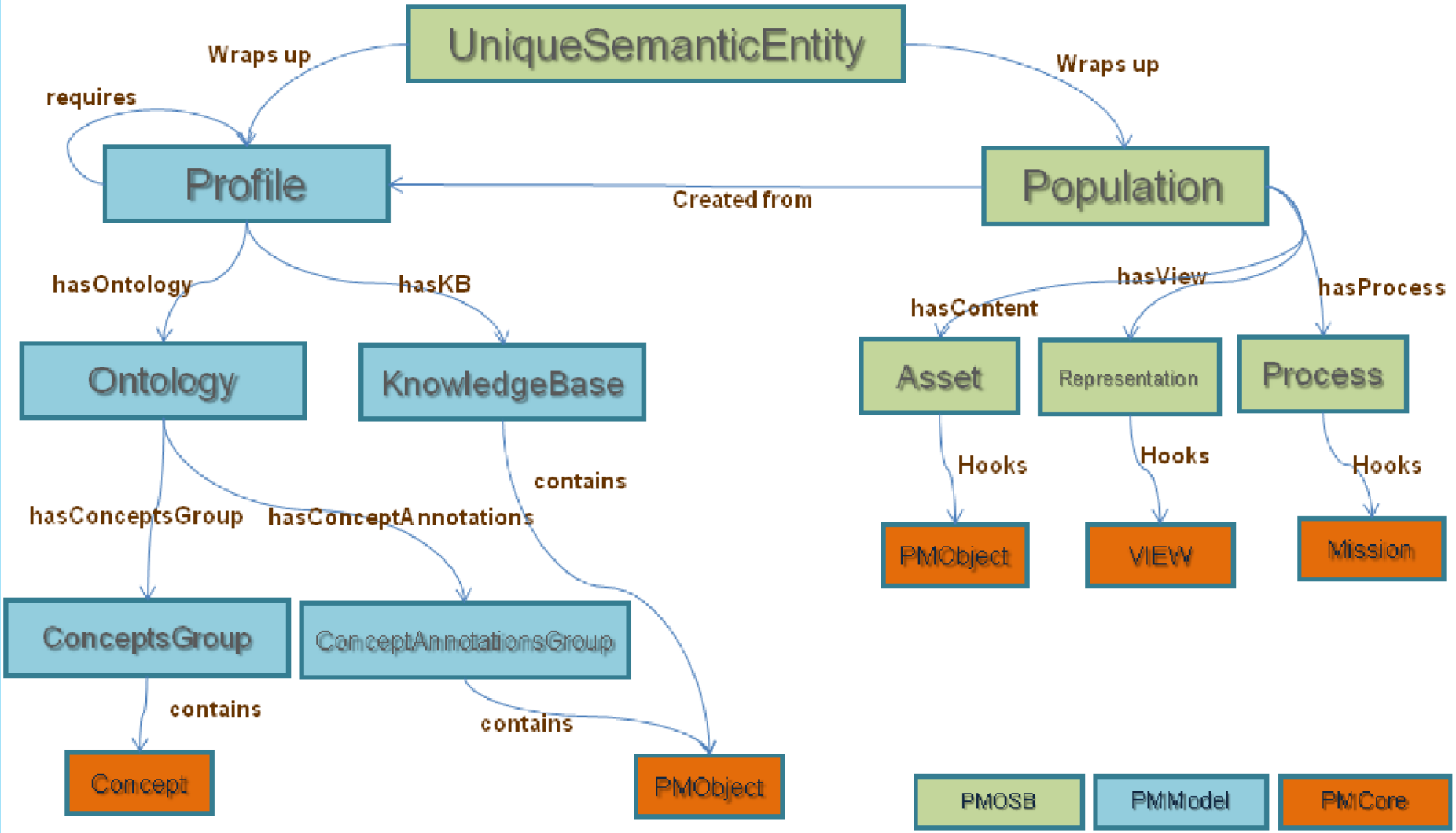
- Group of entities, semantically described thanks to the profile, which allows to be **an autonomous set of semantic knowledge**.

- Wraps the Content and the Profile(s) used to construct it.

- Which enables to **Hook knowledge from the knowledge !**

Unique Semantic Entity

Ontological structure

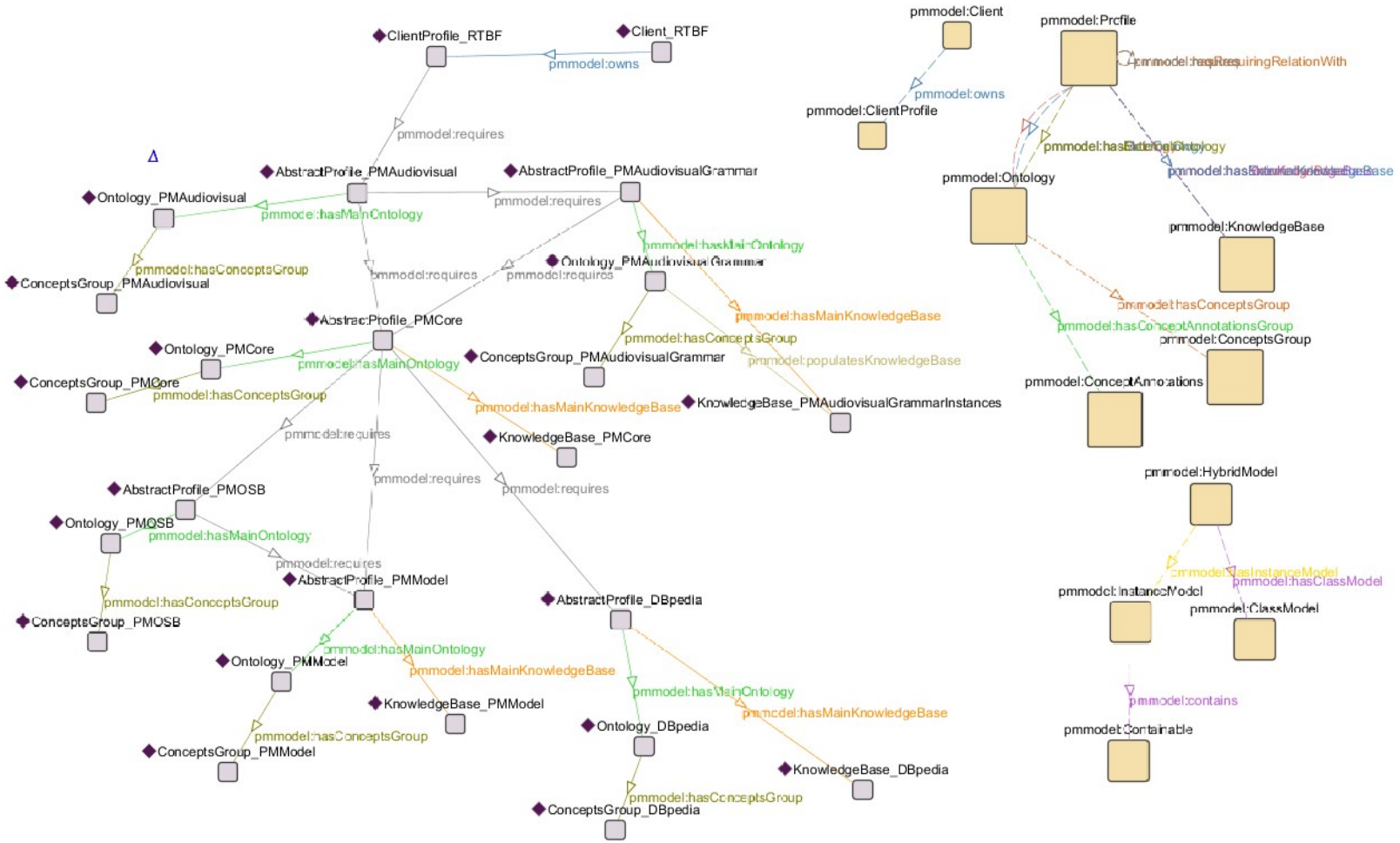


Based on MediaMap & AXIS concepts

Perfect Memory Work : make it real !

Make it real !

- PM-Model



PERFECT MEMORY
Life in evidence

Make it real !

- PM-Model

- Ontology to **manage** the profiles and their relations.

- Make the Linked Open Data **industrializable** !

- Enough **generic and powerfull** to be used for both consumers and professional.

- Pratical cases to be followed…

SAS Perfect Memory
Entreprise labellisée JEI

Contacts: **Guillaume RACHEZ**
R&D Engineer
guillaume.rachez@perfect-memory.com
+33 675 85 00 59

Web : http://perfect-memory.com
http://blog.perfect-memory.com

Adresse: 3 place Saint Antoine, 6200 Compiègne

PERFECT MEMORY
Life in evidence