

European Media Wrapper Round Table

AXIS

**Acquisition, eXchange,
Indexation and Structuration based on OAIS**





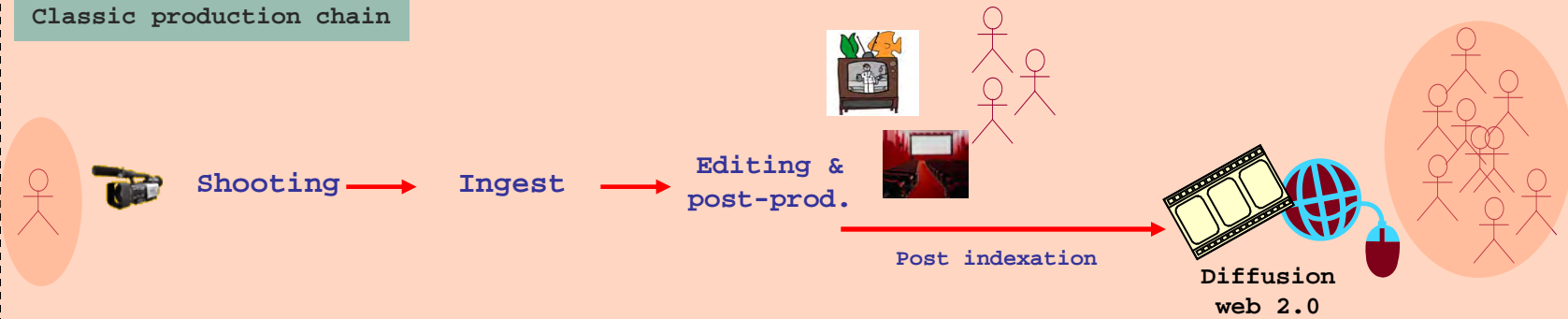
Skema assists early
indexing and industrial
production



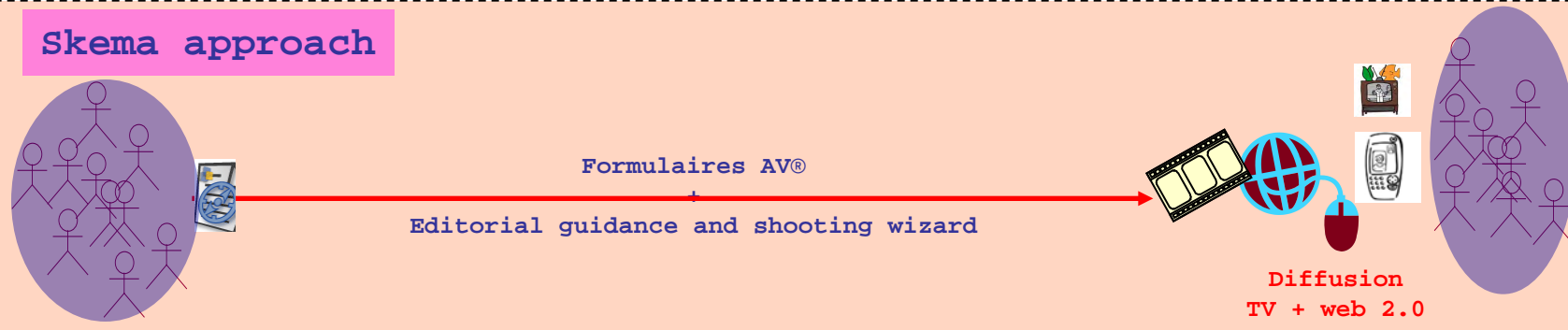
- **Founded in 2003** after 3 years and **€2M of R&D** with the UTC, France Telecom and the Institut National de l'Audiovisuel, present in France and Brazil
- **3 patents**, many prizes and a continuous programme of innovations
- The only offer on the market that covers **the whole audiovisual production chain**, from **design to the broadcasting of content**
- **Leader in self-production**, Skema has been chosen by many media companies for their participative TV and UGC video systems

Automation & industrialisation of production

Classic production chain



Skema approach



Production of **structured and quality** audiovisual contents at **less cost**, in **volume** and by **just-in-time methods**

- **Modelling of production formats**, help with script development and editorial writing (*formulaire audiovisuel*®)
- **Automation** of editing and post-production according to predefined parameters
- **Rich indexing** of contents at source
- **Multi-platform broadcasting** for distribution (TV, Web, IPTV, Mobile)



The skema platform

Modelling of the format to be produced

Design of the Formulaire Audiovisuel®



SKAtelier

Help with script writing and creating the images

Software video shooting and production assistants

SKmobile
SKvideo
musikade



Other means of production

Automation of the video processing

Editing, transcoding and storage of contents



Exploitation & management of audiovisual contents

Moderation, search and reuse of contents



SKAdmin
SKRegie

Multi-format broadcasting & multiple distribution platforms

Aggregation and multi-channel publication





AXIS

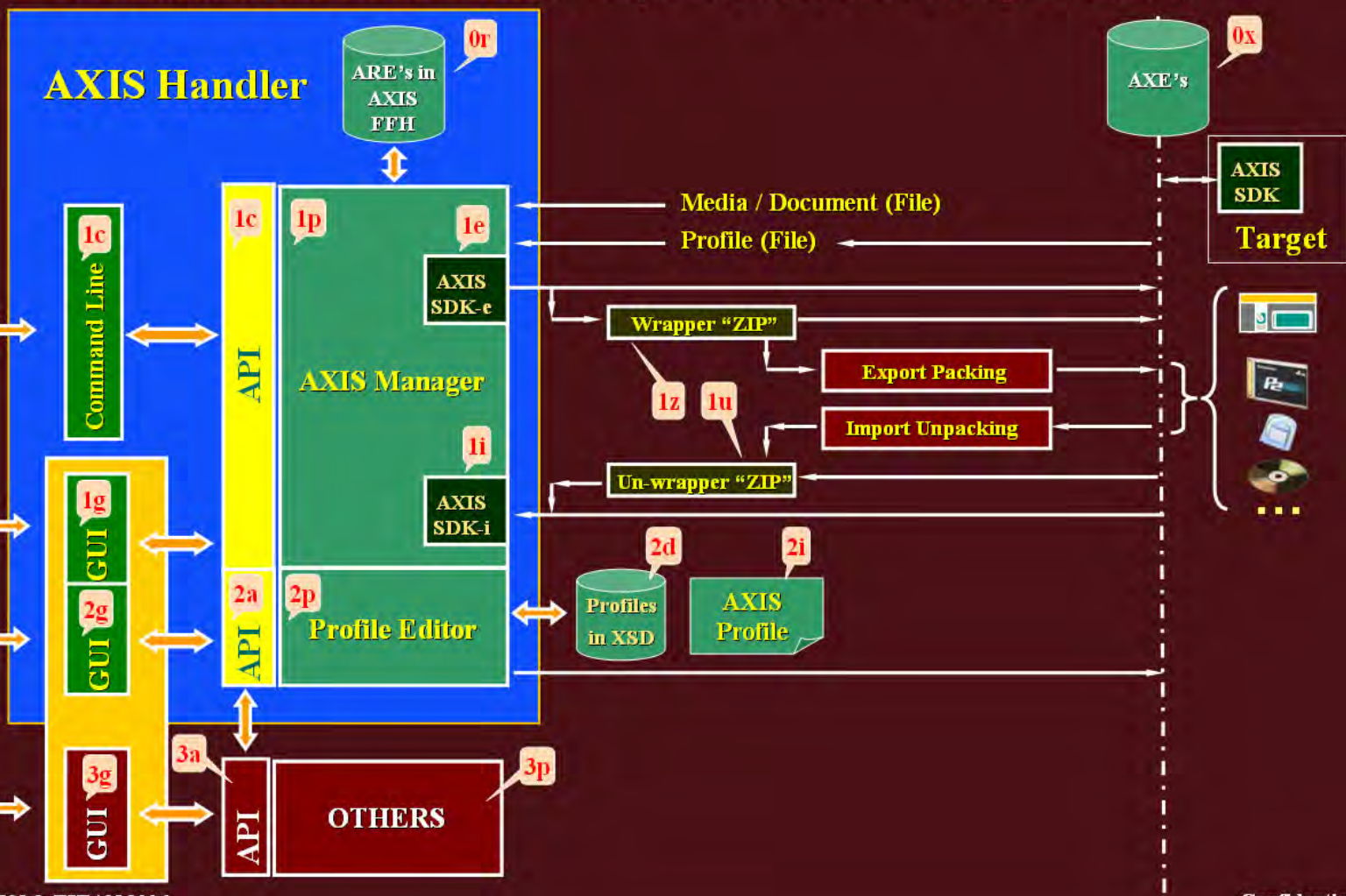
(Acquisition, eXchange, Indexation and
Structuration based on OAIS)





memories

The demonstrator for the X-AXIS compliant ARE / AXE's (target version 1)



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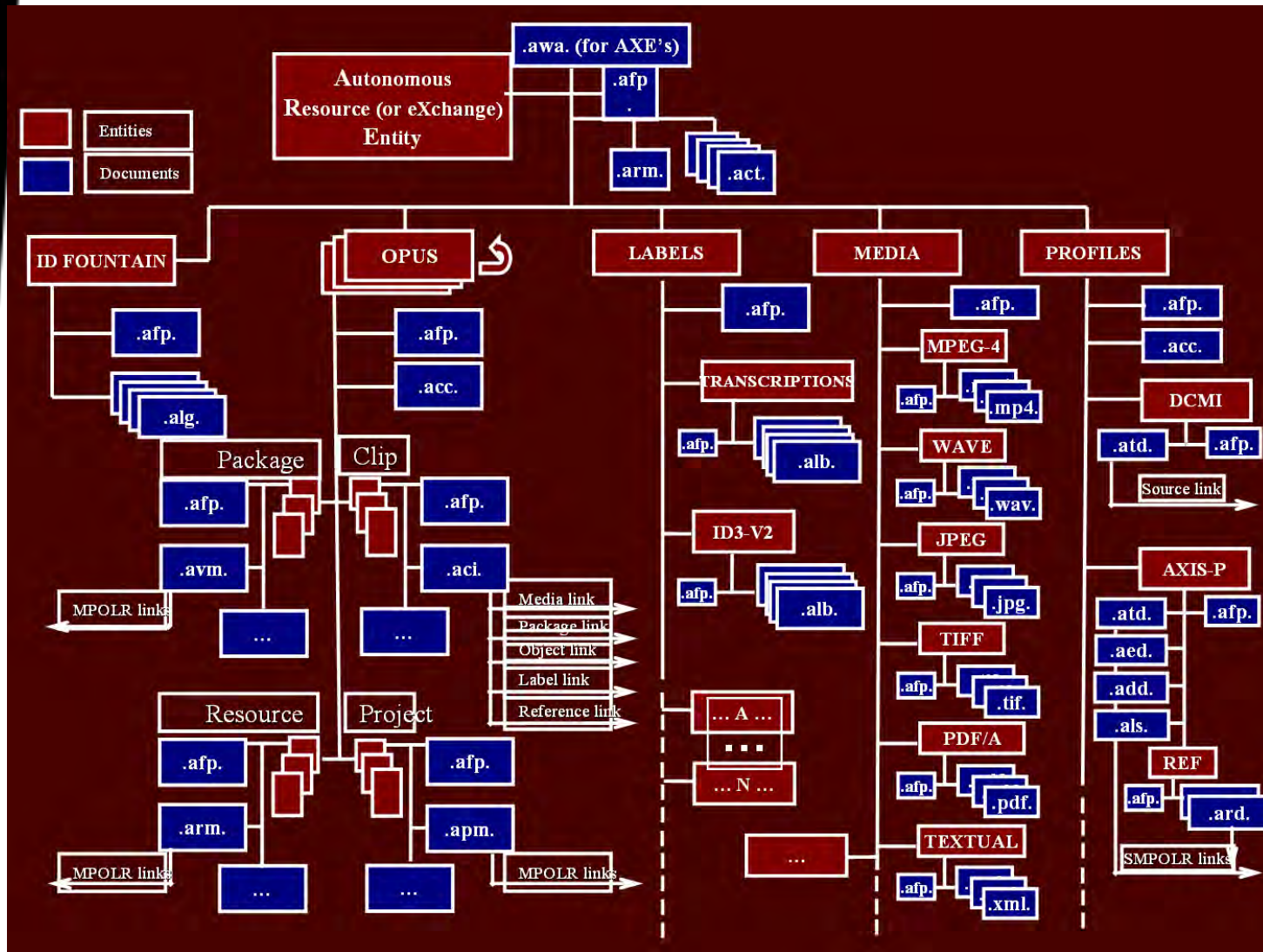
Confidential



DATA MODEL



Axis Framework



The key constructs of AXIS

<ENTITY>

Is defined by

<DOCUMENTS>

<RELATIONS>

Typed link to

- **ENTITIES**
- **DOCUMENTS**
- **Physical OBJECTS**

The key constructs of AXIS

The AXIS-Foot-Print document

<ENTITY>

Is defined by

< .afp. document >

<RELATIONS>

Typed link to

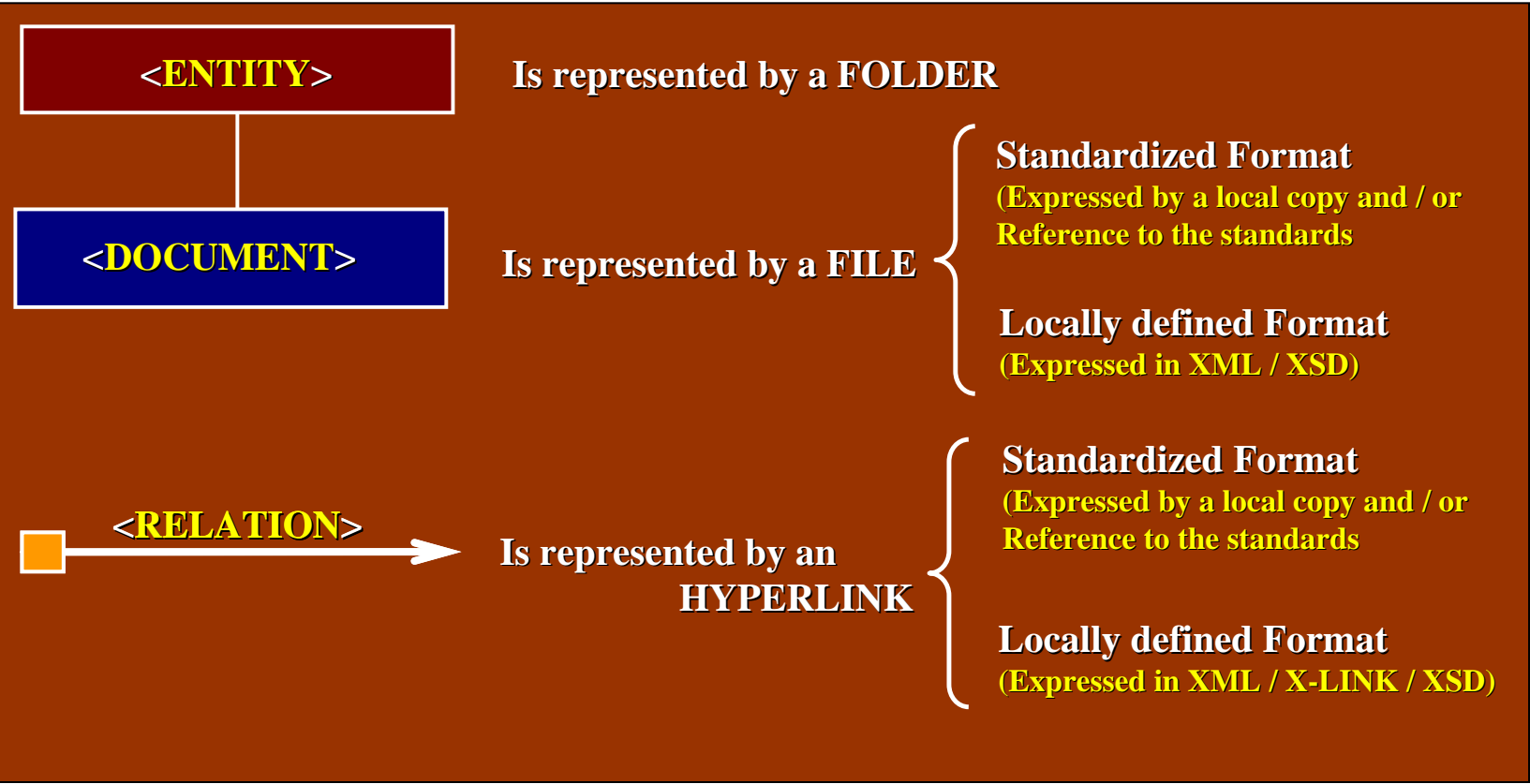
- **ENTITIES**
- **DOCUMENTS**
- **Physical OBJECTS**

The .afp. document is carrying:

- The registration of the ENTITY
- The Unique Resource Identifiers of the ENTITY
- The list of documents 'owned' by the ENTITY

The key constructs of AXIS

Their representation in X-AXIS



The key constructs of AXIS

Their representation in X-AXIS

<ENTITY>

Is defined by

< .afp. document >

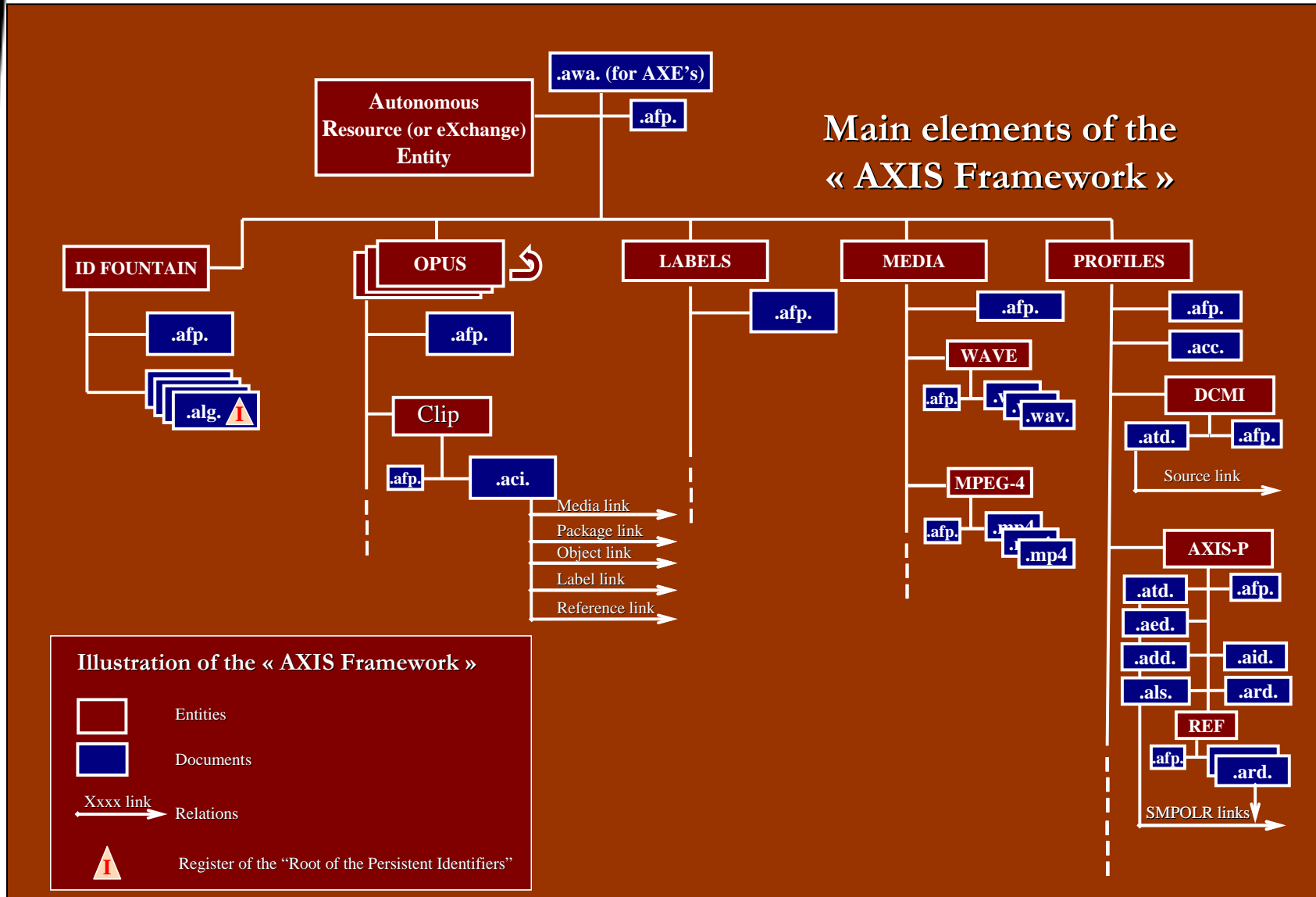
<RELATIONS>

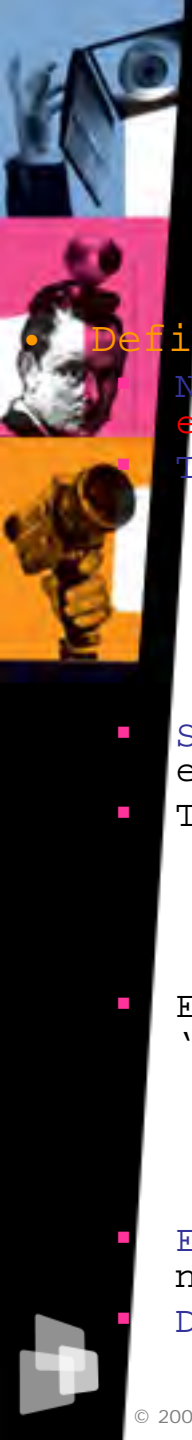
Typed link to

- **ENTITIES**
- **DOCUMENTS**
- **Physical OBJECTS**

The .afp. document is represented according to:

- The RDF standard
- The DCMI methodology
- The OWL standard





- Defining profiles: (using the DCMI terminology)

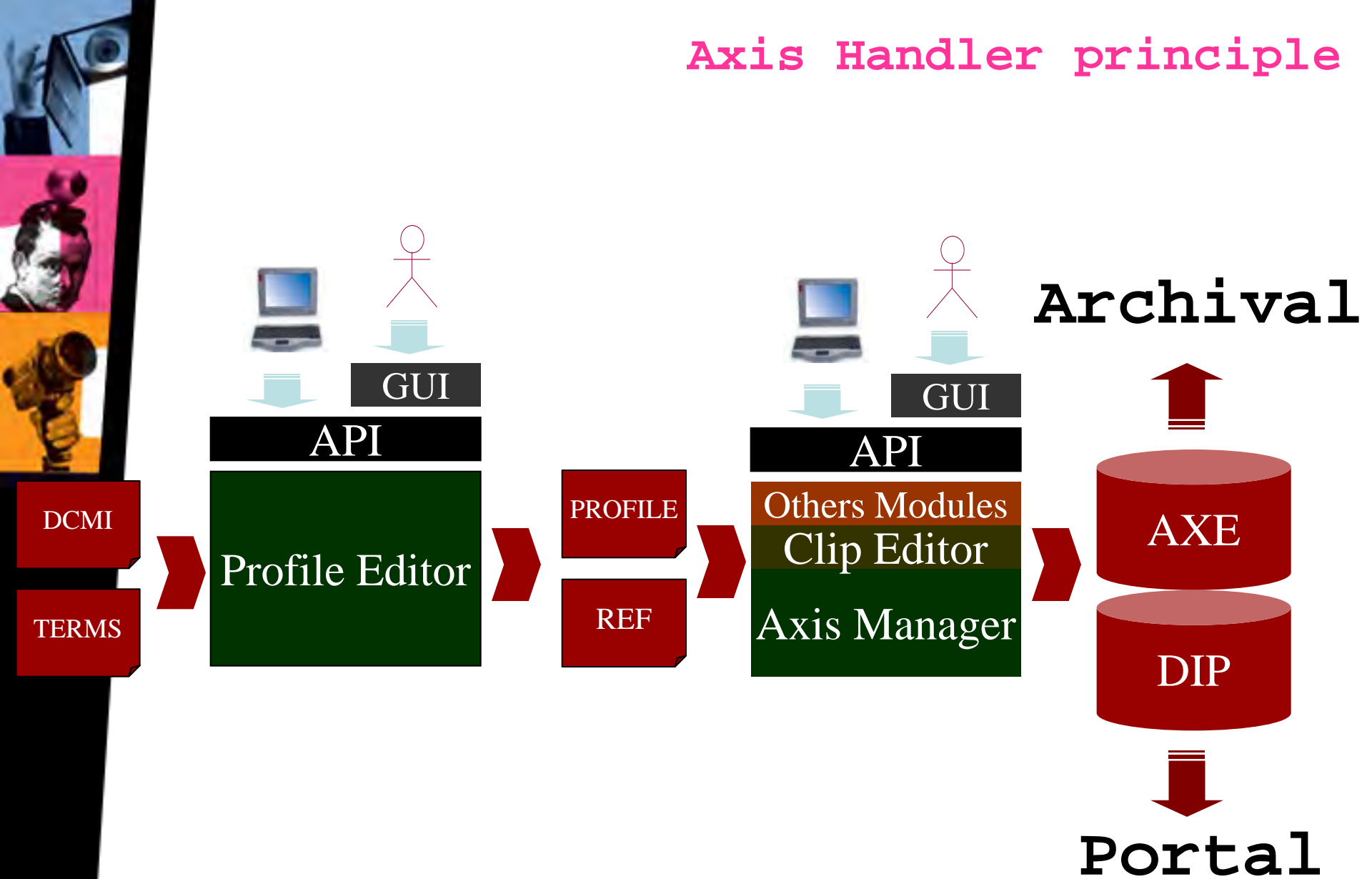
Namespace: One specific to the profile or no profile [only reference(s) to existing namespace(s)]

Terms

- Types of terms: A{[Property] + [Value]} pair declares the existence of a [resource]
- Concepts
- Elements
- Entities
- Sets

- Set of terms A {[Terms] + list of [Values]} pair declares the existence of a [Set]
- Terms in a Name-Space (Data / Control/ Naming)
 - Basic (class of a term)
 - Refinement (sub-class of a term) the "qualification" of classes defines a 'refinement'
 - Alias
- Encoding schemes the "qualification" of a scheme defines the 'encoding'
 - Standards
 - Lists
 - Thesaurus
 - Free text
- Entities A complex [Resource] defined by a set of [Documents] and one (or no) [Namespace]
- Documents
 - Defined by "Standards"
 - Defined locally Usually in a profile, by set terms and rules with its associated semantic

Axis Handler principle

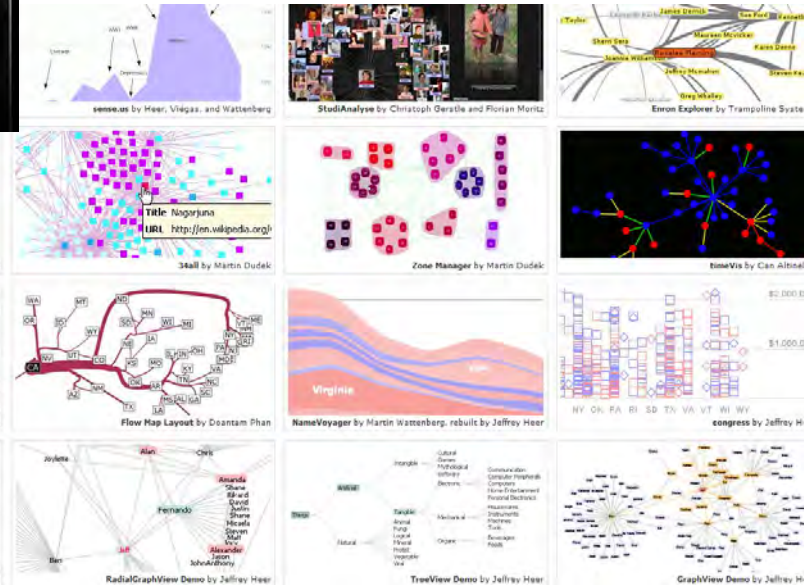


To new way of searching, rendering, and browsing

Studio analyze Example



prefuse.org

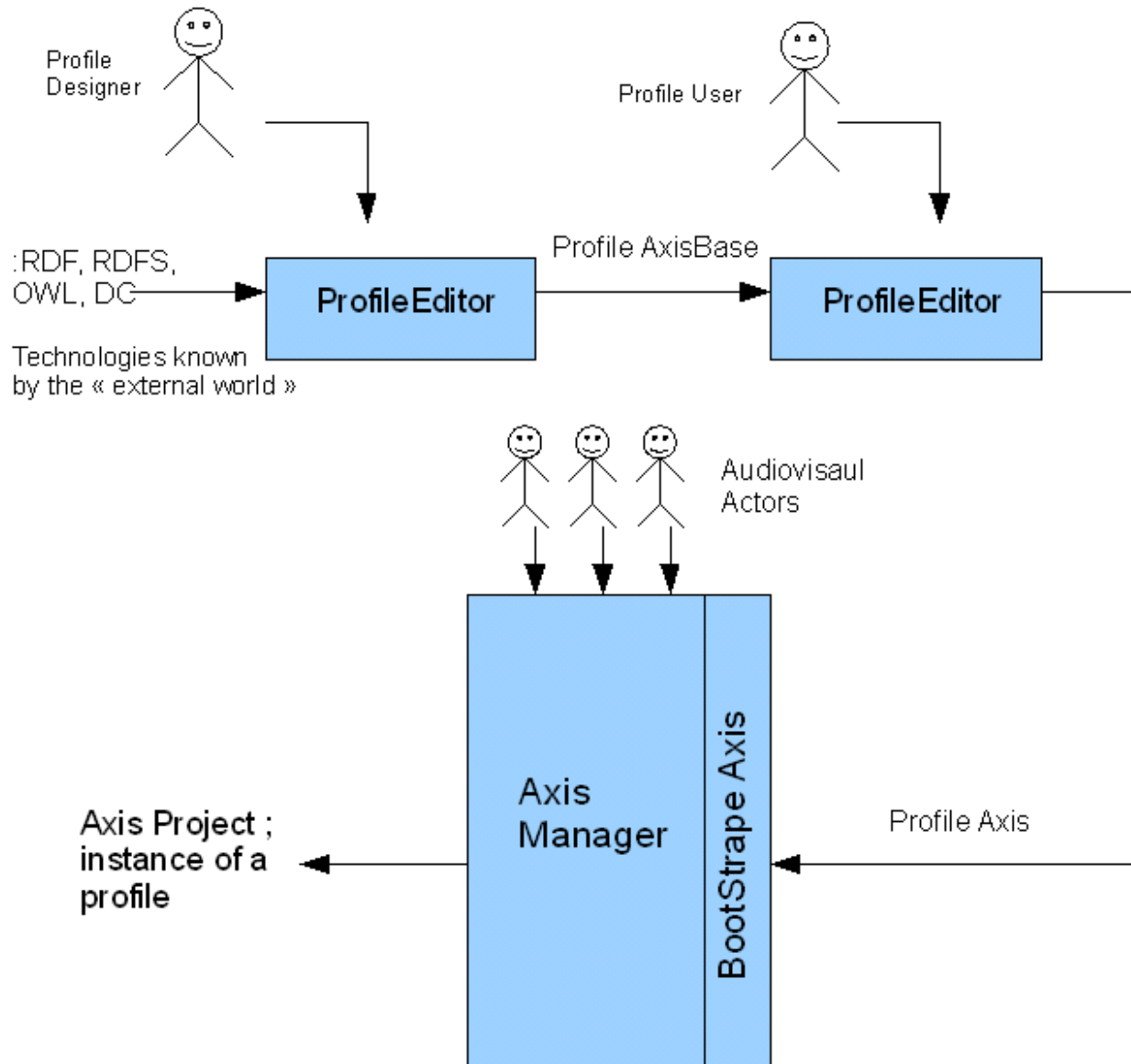


Profile Editor objective

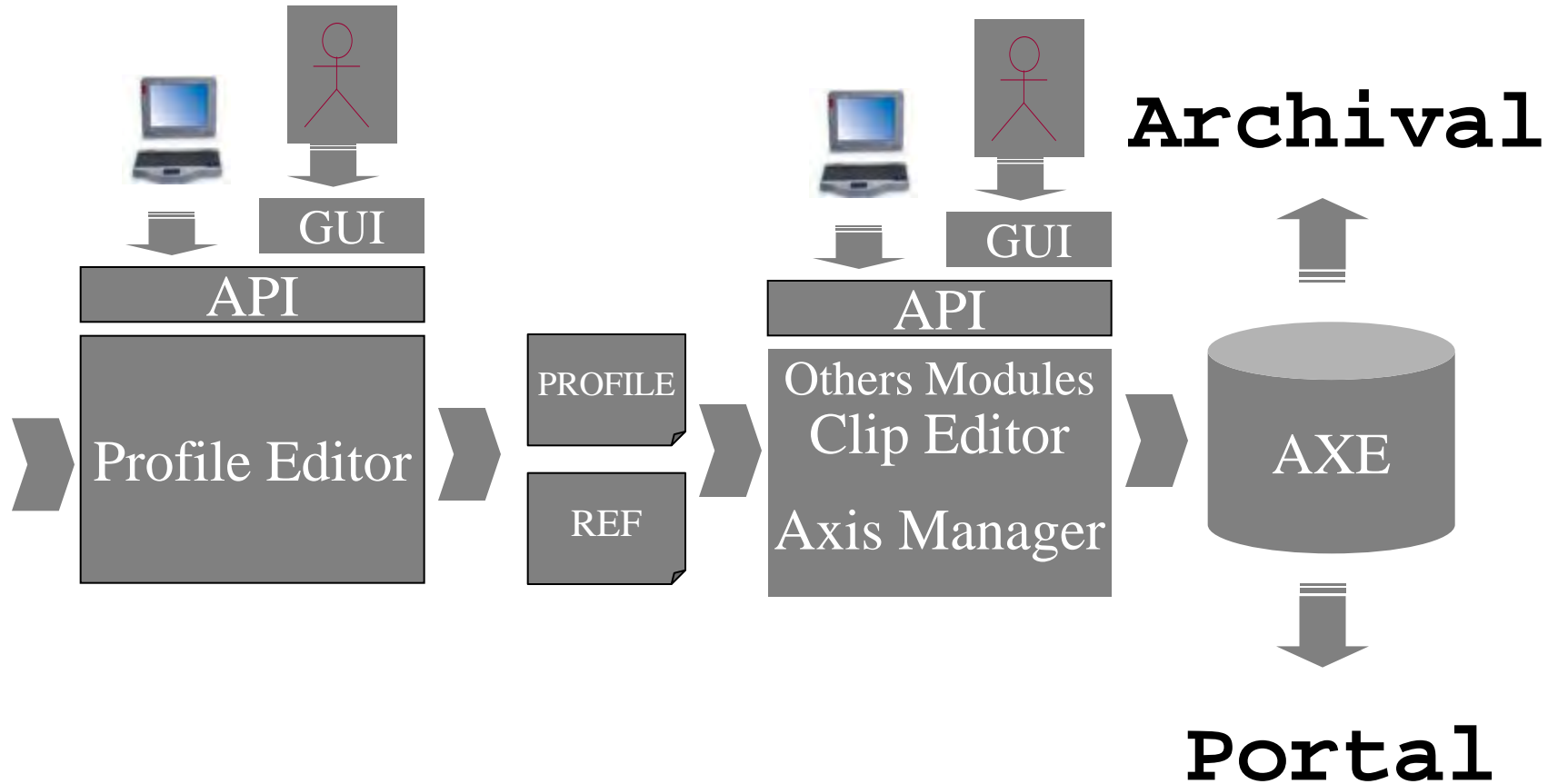
- Create a **backbone** for the Axis Manager
 - Define vocabulary
 - Define metadata
 - Define entities
 - Define relation between entities
 - Specify semantic refinements on the vocabulary
- Enable **open profile**
 - Specialization of profile
 - Extension of profile
- Allow context to be associated to content

- Axis Manager is the heart of a Audiovisual OAIS
 - Create AAE
 - Autonomous as self describe content (profile, link , content)
 - Structural, Semantic and administrative description
 - Define entities
 - Define relation between entities
 - Specify semantic refinements on the vocabulary
 - Create AXE
 - Enable exchange
 - Enable traceability

Profile Editor process flow



Axis Handler principle

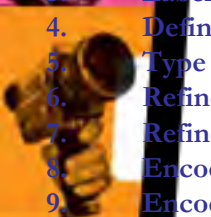


Dublin Core Metadata Initiative: RDF encapsulate the Dublin Cores

The 15 'elements' of the Dublin Core

- Title
- Creator (or Author)
- Subject (and Keywords)
- Description
- Publisher
- Contributors (other)
- Date
- Type (The category of the resource)
- Format (The data representation of the resource)
- Identifier
- Source
- Language
- Relation

Terms extend the DC Core vocabulary



Technical

1. Term URI
2. Namespace
3. Label
4. Defined by
5. Type of term
6. Refines
7. Refined by
8. Encoding type
9. Encoding scheme
10. Example of contents
11. Obligation
12. Occurrence
13. Definition date

XML / XSD

- <http://purl.org/dc/elements/1.1/date>
- dc
- date
- <http://www.w3.org/TR/NOTE-datetime>
- Element
-
- Created, Valid, Available, Issued, Modified, ...
- External Standard
- <http://purl.org/dc/terms/W3CDTF>
- 2006-08-06
- OPT
- NR
- 1999-07-02

Natural language

14. Label H
15. Source definition language
16. Source definition
17. Source comment
18. Profile definition
19. Profile comment
20. Encoding scheme
21. Obligation H
22. Occurrence H
23. Contents H

English

- Date
- +
- A date associated with an event in the life cycle of the resource ...
- ...
- ...
- YYYY-MM-DD where YYYY represents the ISO Year; MM, the ...
- Optional
- Not repeatable unless in refinements
- < Mapping >

Français



- Date
-
- Une date associée à un évènement du cycle de vie de la ressource
- ...
- ...
- AAAA-MM-JJ où AAAA représente l'année ISO ; MM, le ...
- Optionnel
- Non répétable si ce n'est en affinage
- < Mapping >

العربية التاريخ

-
- ...
- ...
- ...
- السنة AAAA ←
- ...
- ...

< Mapping >

Profile Editor: Unique Resource Identifiers

Basic part: issued by the ID fountain at creation

Qualifier: Its presence is defined in the "classOfEntity"

URI of Files

<code><domain></code>	\	<code><file name></code>
-----------------------------	---	--------------------------------

URI of Folder

<code><domain></code>	\	<code><folder name></code>
-----------------------------	---	----------------------------------

URI of Package-Component within a Package-Stream
URI of Opus-Component within an Opus-Stream

<code><domain></code>	\	<code>creationAre</code>	<code>classOfEntity</code>	-	<code>rootId</code>	-	<code>rootIndex</code>	<code>componentId</code>	<code>duplication</code>
-----------------------------	---	--------------------------	----------------------------	---	---------------------	---	------------------------	--------------------------	--------------------------

Naming of Folders

<code>creationAre</code>	<code>classOfEntity</code>	-	<code>rootId</code>	-	<code>rootIndex</code>	<code>componentId</code>
--------------------------	----------------------------	---	---------------------	---	------------------------	--------------------------

Naming of Files

<code>creationAre</code>	<code>classOfEntity</code>	-	<code>rootId</code>	-	<code>rootIndex</code>	<code>componentId</code>	<code>duplication</code>	<code>naturalLanguage</code>	-	<code>version</code>	-	<code>format</code>	-	<code>formatQualifier</code>	.	<code>suffix</code>
--------------------------	----------------------------	---	---------------------	---	------------------------	--------------------------	--------------------------	------------------------------	---	----------------------	---	---------------------	---	------------------------------	---	---------------------

<code>foreignFileName</code>	.	<code>suffix</code>
------------------------------	---	---------------------

URI of Package

<code><domain></code>	\	<code>classOfEntity</code>	-	<code>root Id</code>	-	<code>duplication</code>
-----------------------------	---	----------------------------	---	----------------------	---	--------------------------

URI of Carrier

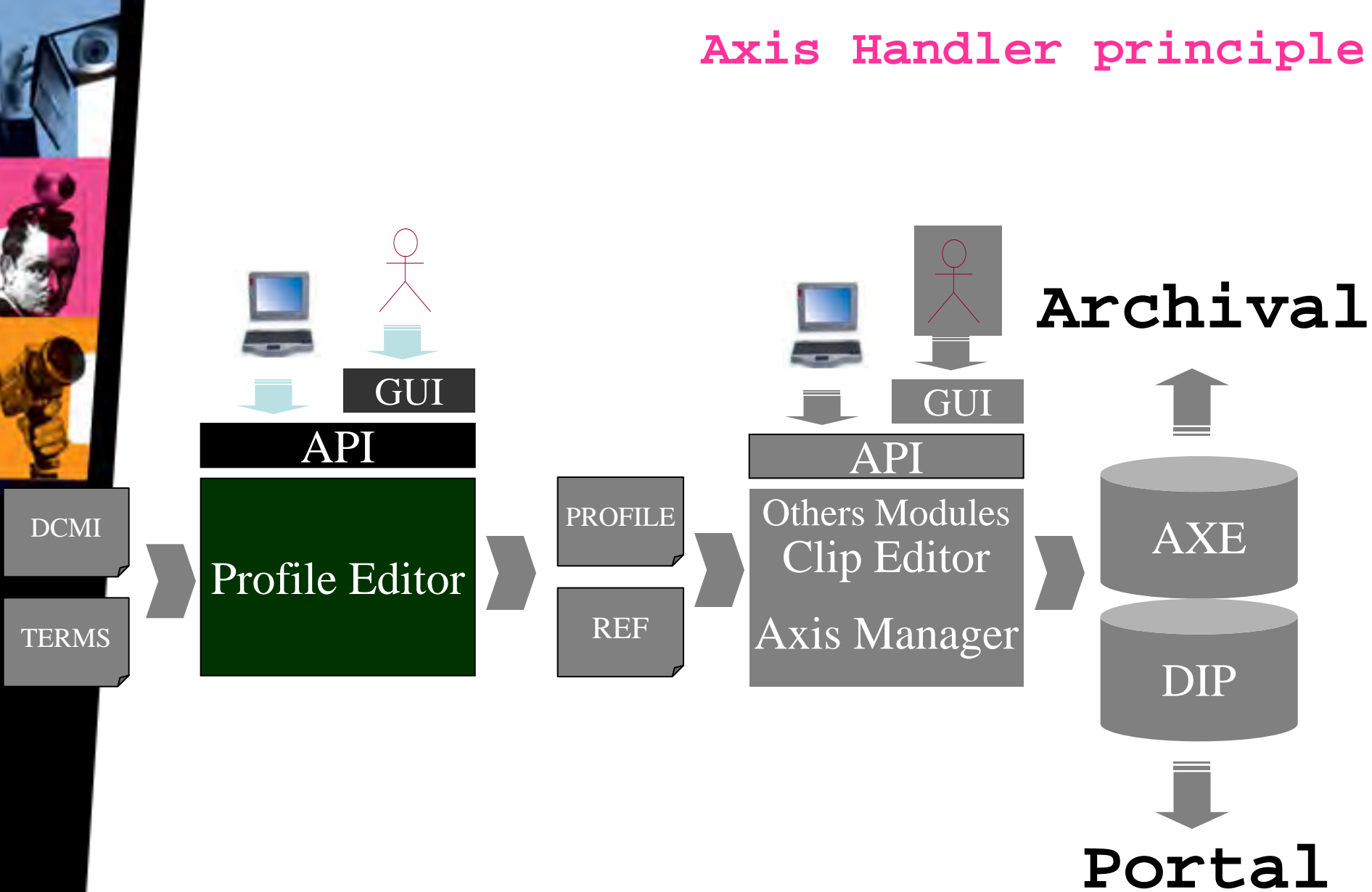
<code><domain></code>	\	<code>classOfEntity</code>	-	<code>root Id</code>	-	<code>serial ID</code>
-----------------------------	---	----------------------------	---	----------------------	---	------------------------

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AXIS Architecture (version B0) 2006-12-19 Page 73

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Axis Handler principle



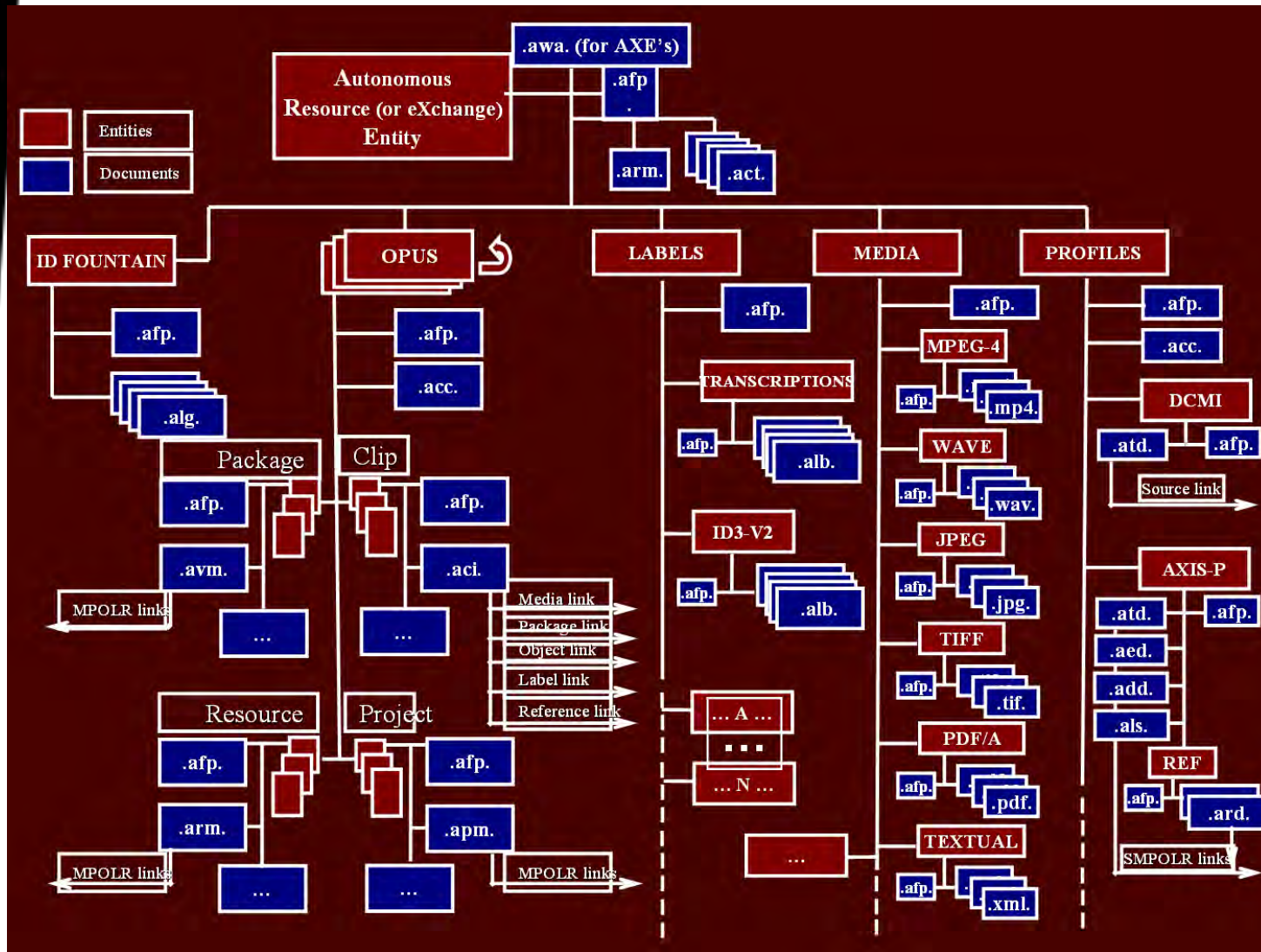
Entities of AXIS Profile

The structure of the "Entities" of the AXIS profile is represented in the "AXIS Framework".

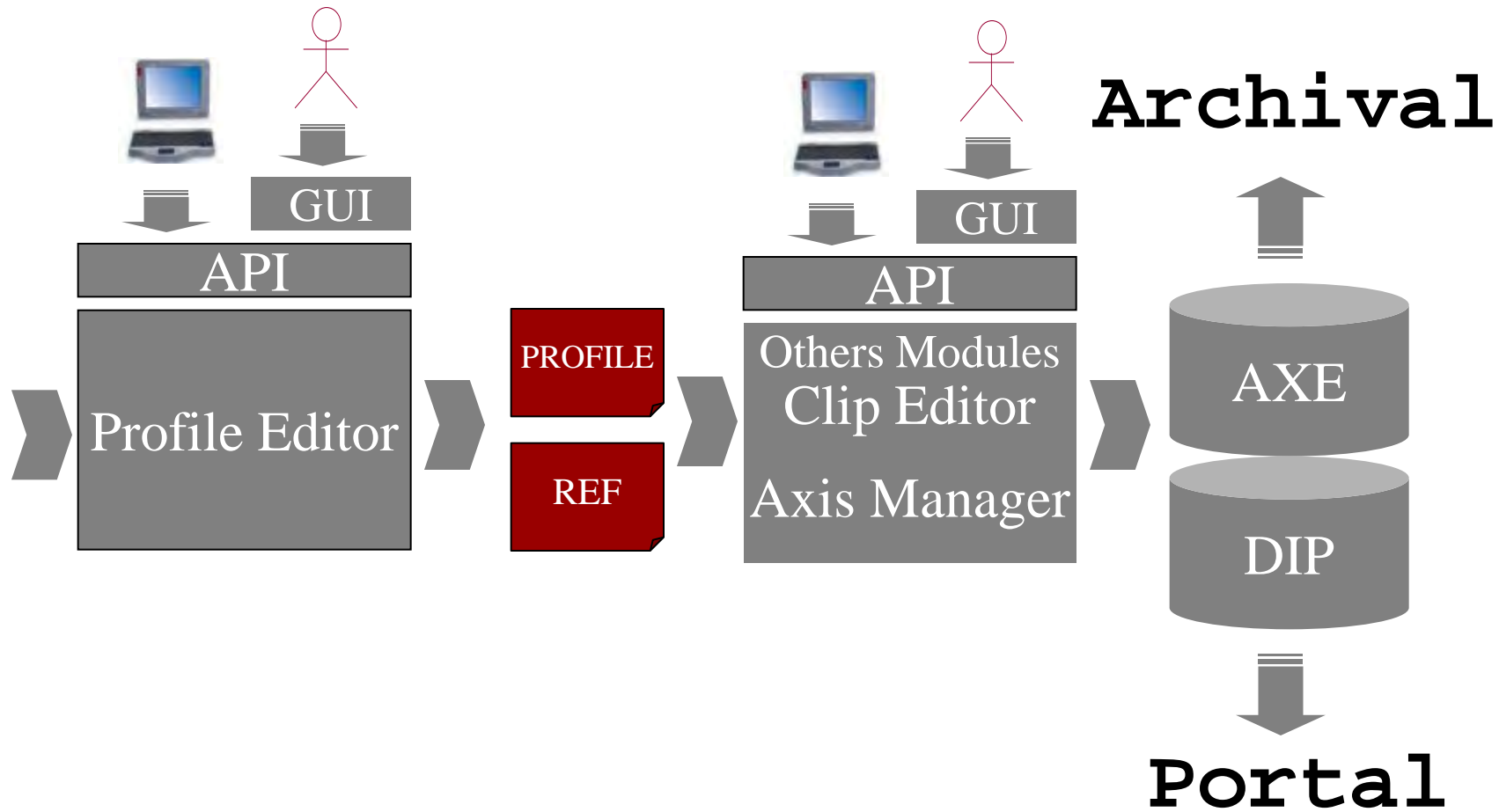
The AXIS "Entities" are:

- ARE Autonomous Resource Entity (The dynamic resource)
- AXE Autonomous eXchange Entity (The static resource issued from an EXPORT)
- ID FOUNTAIN The resource ensuring uniqueness of identification
- OPUS The bundling entity
- CLIP The key entity for annotations and structuration of the MEDIA
- PROJECT The managing resource for the OPUS
- RESOURCE The resource required for the OPUS
- PACKAGE The embodiment of the OPUS and AXES
- LABELS The repository of the labels (like associated with clips, segments and points)
- MEDIA The repository of the representations of the media contents
- PROFILES The repository of the Profiles (in particular the AXIS profile)
- REF The repository of the References required for a specific IT tool (such as 'speech to text')
- TRANSCRIPTIONS The repository of the labels, transcriptions synchronized with spoken sound
- ID3-V2 The repository of the labels, expressed in the format ID3-V2
- MPEG-4 The repository of the full-media represented in the .mp4 format
- WAVE The repository of the audio-media represented in the .wav format
- JPEG The repository of the pictures represented in the .jpg format
- TIFF The repository of the pictures represented in the .tif format
- PDF/A The repository of the textual documents represented in the ISO 19 0005 format
- TEXTUAL The repository of the textual documents expressed in the .xml format

Axis Framework



Axis Handler principle



The AXIS "Documents" are:

.afp.	AXIS Foot Print	Mandatory use for each Entity
.act. and acquisition of Media	AXIS Certificate of traceability	AXE (Export / Import)
.alg. IDs	AXIS LoG	Logging of the management of the
.acc. versions of the Entities, Documents and Hyper links of the OPUS and of the PROFILES	AXIS Configuration Control	Control of all the
.aci. clips and	AXIS Configuration & Indexing	The key document for defining the their links
.alb. annotations attached segment or an entity	AXIS Label	The document giving the to a point, a
.avm.	AXIS Volume Management	
.arm.	AXIS Resource Management	
.apm.	AXIS Project Management	
.atd. <i>definition></i>	<i>AXIS Terms Definition</i>	<i><Definition> / <Link to a</i>
.add. <i>definition></i>	AXIS Document type Definition	<i><Definition> / <Link to a</i>
.aed. <i><Link to a definition></i>	<i>AXIS Entity Type Definition</i>	<i><Definition> /</i>
.als. to a list of Terms or Thesaurus>	AXIS List Set	<List of Terms> / <Link
.ard. <i>definition></i>	AXIS Reference Data	<Definition> / <Link to a
.awa Export and Imports wrapped (f.i. ZIPed)	AXIS Wrapped Assembly	To be used for the

Axis Term Definition

```
<rdf:RDF xmlns:axisCap="http://www.skema.fr/axisCap/" xmlns:terms="http://www.skema.fr/terms/"
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/rootID">
    <terms:naturalLanguage/>
    <terms:definitionDate/>
    <terms:exampleOfContents/>
    <terms:refines>http://purl.org/dc/elements/1.1/identifier</terms:refines>
    <terms:typeOfTerm>Element</terms:typeOfTerm>
    <terms:definedBy/>
    <terms:label>rootID</terms:label>
    <terms:namespace>axisCap</terms:namespace>
    <terms:termURI>http://www.skema.fr/axisCap/rootID</terms:termURI>
  </rdf:Description>
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/classOfEntity">
    <terms:termURI>http://www.skema.fr/axisCap/classOfEntity</terms:termURI>
    <terms:namespace>axisCap</terms:namespace>
    <terms:label>classOfEntity</terms:label>
    <terms:definedBy/>
    <terms:typeOfTerm>Element</terms:typeOfTerm>
    <terms:refines>http://purl.org/dc/elements/1.1/type</terms:refines>
    <terms:exampleOfContents/>
    <terms:definitionDate/>
    <terms:naturalLanguage/>
  </rdf:Description>
</rdf:RDF>
```

Resource

Property

Value

TERMS

Axis Entity Type Definitions

```
<rdf:RDF xmlns:axisCap="http://www.skema.fr/axisCap/" xmlns:terms="http://www.skema.fr/terms/"
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/entity8">
    <axisCap:rootID/>
    <axisCap:classOfEntity>timeCodeOut</axisCap:classOfEntity>
  </rdf:Description>
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/entity1">
    <axisCap:classOfEntity>opus</axisCap:classOfEntity>
    <axisCap:rootID/>
  </rdf:Description>
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/entity5">
    <axisCap:rootID/>
    <axisCap:classOfEntity>project</axisCap:classOfEntity>
  </rdf:Description>
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/entity3">
    <axisCap:rootID/>
    <axisCap:classOfEntity>clip</axisCap:classOfEntity>
  </rdf:Description>
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/entity2">
    <axisCap:rootID/>
    <axisCap:classOfEntity>opusComponent</axisCap:classOfEntity>
  </rdf:Description>
  <rdf:Description rdf:about="http://www.skema.fr/axisCap/entity4">
    <axisCap:rootID/>
    <axisCap:classOfEntity>clip</axisCap:classOfEntity>
  </rdf:Description>
</rdf:RDF>
```

TERMS

>

ENTITIES

Axis Manager Bootstrap

```
!f:RDF xmlns:axisCap="http://www.skema.fr/axisCap/" xmlns:terms="http://www.skema.fr/terms/" xmlns:
ins:rdfs="http://www.w3.org/2000/01/rdf-schema#"
<rdf:Description rdf:about="http://www.skema.fr/axisCap/segment">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://www.skema.fr/axisCap/Choose you refinement"/>
  <rdfs:domain rdf:resource="http://www.skema.fr"/>
  <rdfs:label segment-</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/Objectlink">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://purl.org/dc/elements/1.1/source"/>
  <rdfs:domain rdf:resource="http://www.skema.fr/axisCap"/>
  .....
<rdf:label>opusComponent</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/classOfEntity">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://purl.org/dc/elements/1.1/type"/>
  <rdfs:domain rdf:resource="http://www.skema.fr/axisCap"/>
  <rdfs:label classOfEntity</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/mediaName">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://purl.org/dc/elements/1.1/title"/>
  <rdfs:domain rdf:resource="http://www.skema.fr/axisCap"/>
  <rdfs:label mediaName</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/point">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://www.skema.fr/axisCap/Choose you refinement"/>
  <rdfs:domain rdf:resource="http://www.skema.fr"/>
  <rdfs:label point-</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/timeCodeIn">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://www.skema.fr/axisCap/Choose you refinement"/>
  <rdfs:domain rdf:resource="http://www.skema.fr"/>
  <rdfs:label timeCodeIn</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/physicalSupport">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://purl.org/dc/elements/1.1/type"/>
  <rdfs:domain rdf:resource="http://www.skema.fr/axisCap"/>
  <rdfs:label physicalSupport</rdfs:label>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr">
  <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#Class"/>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap">
  <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#Class"/>
</rdf:Description>
<rdf:Description rdf:about="http://www.skema.fr/axisCap/project">
  <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  <rdfs:subPropertyOf rdf:resource="http://www.skema.fr/axisCap/Choose you refinement"/>
  <rdfs:domain rdf:resource="http://www.skema.fr"/>
  <rdfs:label project</rdfs:label>
</rdf:Description>
rdf:RDF>
```

TERMS

>

ENTITIES

>

PROFILE

Axis Profile layers cake

AXIS SEMANTIC LAYER
Web Ontology Language

AXIS Entities & Hierarchies
RDF Schema

AXIS TERMS
DCMI/RDF

DCMI/TERMS

Profile Editor Main interface

Creating classes

The screenshot displays the Profile Editor main interface, which is divided into several functional areas:

- CLASSES AND PROPERTIES CREATION:** This section is organized into three columns:
 - RELATION CREATION:** Includes a 'TECHNICAL' section with fields for nameOfTerm, termURI, typeOfTerm, termStatus, and termDateIssued, and a 'Refines' dropdown set to 'no refinement'.
 - PROPERTY CREATION:** Similar to relation creation, with a 'Refines' dropdown set to 'no refinement'.
 - CLASS CREATION:** Includes a 'TECHNICAL' section with fields for nameOfTerm (filled with 'idfountain'), termURI, typeOfTerm, termStatus, and termDateIssued, and a 'Refines' dropdown set to 'no refinement'.
- SPECIFIC DEFINITIONS:** Below the creation panels are three sections for defining specific properties or classes:
 - SPECIFIC PROPERTY DEFINITION (left):** Fields for Property Domain (no domain), Property Range (no range), and InverseOf (no inverse), along with checkboxes for transitive, symmetric, functional, and inverse functional.
 - SPECIFIC PROPERTY DEFINITION (middle):** Fields for Property Domain (no domain), Property Range (no...), and checkboxes for functional and inverse functional.
 - CLASS SPECIFIC DEFINITION:** Fields for equivalentClass (no equivalent) and disjointClass (no disjoint), with a 'Create' button at the bottom.
- PROFILE GRAPH VIEWS:** On the right side, there are two tabs: 'Class Graph view' and 'Property Graph view'. The 'Class Graph view' is active, showing a graph with nodes: 'opus' (red), 'media' (yellow), 'entity' (green), 'labels' (yellow), 'idfountain' (yellow), and 'Thing' (red). Edges include 'subClassOf' from 'opus' to 'entity' and 'Thing'. A legend on the right explains the node colors: yellow for OWL class, red for OWL individual, green for selected node, light green for neighbour of selected node, light red for node in search result set, and light blue for default color. A 'Hops control' dropdown is set to '4'. Below the graph is a search bar with the URL 'http://www.skema.fr/myProfile#opus' and a search button.
- PRECISE TERMS INFORMATION:** This section contains two panels: 'PROPERTY VIEW' and 'CLASS VIEW', each with a dropdown menu and a 'View' button.

Profile Editor Main interface

Creating Properties

The screenshot displays the Profile Editor interface, which is divided into several functional areas:

- CLASSES AND PROPERTIES CREATION:** This section is organized into three columns:
 - RELATION CREATION:** Includes fields for nameOfTerm, termURI, typeOfTerm, termStatus, and termDateIssued, along with a 'Refines' dropdown set to 'no refinement'.
 - PROPERTY CREATION:** Similar to relation creation but includes a 'Property Domain' dropdown (set to 'no domain') and a 'Property Range' dropdown (set to 'no range').
 - CLASS CREATION:** Includes fields for nameOfTerm, termURI, typeOfTerm, termStatus, and termDateIssued, with a 'Refines' dropdown set to 'no refinement'.
- SPECIFIC PROPERTY DEFINITION:** Located below the relation and property creation sections, it features checkboxes for 'transitive', 'symmetric', 'functional', and 'inverse functional'. The 'functional' checkbox is checked.
- CLASS SPECIFIC DEFINITION:** Includes an 'equivalentClass' dropdown (set to 'no equivalent') and a 'disjointClass' dropdown (set to 'no disjoint').
- PROFILE GRAPH VIEWS:** Contains two tabs:
 - Class Graph view:** Shows a graph with a node 'rootID' (blue) and a property 'PropertyBase' (red).
 - Property Graph view:** Shows a graph with a node 'entity' (green), a property 'domain' (grey), a node 'rootID' (red), a property 'range' (grey), and a node 'integer' (green).
- PRECISE TERMS INFORMATIONS:** Includes a search bar and two view sections:
 - PROPERTY VIEW:** Shows 'rootID' with a 'View' button.
 - CLASS VIEW:** Shows 'entity' with a 'View' button.
- Infos:** A table-like view showing details for 'rootID':

Infos	
Name	rootID
URI	
Type	
DateIssued	
- Legend:** Defines colors for RDFS property (blue), Selected node (red), Neighbour of selected node (green), and Node in search result set (pink). It also includes a 'Hops control' dropdown set to '4'.

Profile Editor Main interface

Defining relations

The screenshot displays the Profile Editor main interface, which is divided into several panels for defining and visualizing relations.

CLASSES AND PROPERTIES CREATION

- RELATION CREATION - TECHNICAL:** nameOfTerm: isBiggerThan; termURI: ; typeOfTerm: ; termStatus: ; termDateIssued: ; Refines: no refinement.
- PROPERTY CREATION - TECHNICAL:** nameOfTerm: ; termURI: ; typeOfTerm: ; termStatus: ; termDateIssued: ; Refines: no refinement.
- CLASS CREATION - TECHNICAL:** nameOfTerm: entityEx; termURI: ; typeOfTerm: ; termStatus: ; termDateIssued: ; Refines: no refinement.

SPECIFIC PROPERTY DEFINITION

- PROPERTY CREATION:** Property Domain: no domain; Property Range: no range; InverseOf: no inverse; transitive: ; symmetric: ; functional: ; inverse functional: .
- CLASS CREATION:** equivalentClass: no equivalent; disjointClass: no disjoint.

PROFILE GRAPH VIEWS

- Class Graph view:** A graph showing the relation 'isBiggerThan' (blue rounded rectangle) pointing to 'PropertyBase' (red rounded rectangle), which in turn points to 'rootID' (blue rounded rectangle).
- Property Graph view:** A graph showing 'entityEx' (green rounded rectangle) as the domain of 'isBiggerThan' (red rounded rectangle), which has 'entity' (green rounded rectangle) as its range.

PRECISE TERMS INFORMATION

- PROPERTY VIEW:** isBiggerThan (dropdown) View
- CLASS VIEW:** entity (dropdown) View
- Infos:** Name: isBiggerThan; URI: ; Type: ; DateIssued:

Legend: RDFS property (blue), Selected node (red), Neighbour of selected node (green), Node in search result set (pink).

Hops control: Number of hops: 4

URL: <http://www.skema.fr/myProfile#isBiggerThan>

Profile Editor Main interface

Defining relations

The screenshot displays the Profile Editor main interface, which is divided into several panels for defining relations.

CLASSES AND PROPERTIES CREATION

- RELATION CREATION:** The 'nameOfTerm' field is set to 'isSmallerThan'. Other fields like 'termURI', 'typeOfTerm', 'termStatus', and 'termDateIssued' are empty. The 'Refines' dropdown is set to 'no refinement'.
- PROPERTY CREATION:** The 'nameOfTerm' field is empty. Other fields are also empty. The 'Refines' dropdown is set to 'no refinement'.
- CLASS CREATION:** The 'nameOfTerm' field is set to 'entityEx'. Other fields are empty. The 'Refines' dropdown is set to 'no refinement'.

SPECIFIC PROPERTY DEFINITION (for 'isSmallerThan'):

- Property Domain: no domain
- Property Range: no range
- InverseOf: no inverse
- transitive:
- symmetric:
- functional:
- inverse functional:

CLASS SPECIFIC DEFINITION (for 'entityEx'):

- equivalentClass: no equivalent
- disjointClass: no disjoint

PROFILE GRAPH VIEWS:

- Class @graph view:** Shows a graph with nodes 'isBiggerThan', 'isSmallerThan', and 'PropertyBase'. 'PropertyBase' is the parent of both 'isBiggerThan' and 'isSmallerThan'.
- Property Graph view:** Shows a graph with nodes 'entity' and 'entityEx'. 'entity' is the domain of 'isSmallerThan' and 'entityEx' is the range.

PRECISE TERMS INFORMATION:

- PROPERTY VIEW:** Shows 'isSmallerThan' with a 'View' button.
- CLASS VIEW:** Shows 'entity' with a 'View' button.

Infos:

Infos	
Name	isSmallerThan
URI	
Type	
DateIssued	

Legend:

- RDFS property
- Selected node
- Neighbour of selected node
- Node in search result set

Hops control: Number of hops: 4

search >> [input field]

... and its inverse property. Domain and range display are switched.

Profile Editor Main interface

Linguistic labels

We can add linguistic informations...

The screenshot displays the Profile Editor interface, which is divided into several functional areas:

- CLASSES AND PROPERTIES CREATION:**
 - SPECIFIC LANGUAGE FIELDS:** Includes a dropdown menu for 'isBiggerThan'.
 - LANGUAGE SPECIFIC:** Includes a dropdown menu for 'fr-FR'.
 - termToModify:** A text input field.
 - Natural Language:** A dropdown menu.
 - termLabel:** A text input field containing 'estPlusGrandQue'.
 - termDefinition:** A text input field containing 'Designe le fait d'être plus grand que'.
 - Update:** A button to save changes.
- PROFILE GRAPH VIEWS:**
 - Class Graph view:** A graph showing relationships between 'entity', 'media', 'entityEx', and 'Thing'.
 - Property Graph view:** A graph showing the relationship 'isSmallerThan' between 'entity' and 'entityEx'.
 - Legend:** A color-coded legend for graph elements: OWL class (yellow), OWL individual (purple), Selected node (red), Neighbour of selected node (green), Node in search result set (orange), and Default color (blue).
 - Hops control:** A dropdown menu for 'Number of hops' set to '4'.
 - search >>:** A search input field.
- PRECISE TERMS INFORMATION:**
 - PROPERTY VIEW:** A dropdown menu for 'isSmallerThan' and a 'View' button.
 - CLASS VIEW:** A dropdown menu for 'entity' and a 'View' button.
 - Infos:** A table with the following data:

Infos	
Name	isSmaller Than
URI	
Type	
DateIssued	

Profile Editor Main interface

Persistent document

OWL file to wrap the profile



The screenshot shows a Mozilla Firefox browser window with the address bar displaying the file path: file:///C:/Program%20Files/memnon/profileEditor/myProfile.owl. The browser's menu bar includes 'Fichier', 'Édition', 'Affichage', 'Historique', 'Marque-pages', and 'Outils'. The main content area displays the following RDF code:

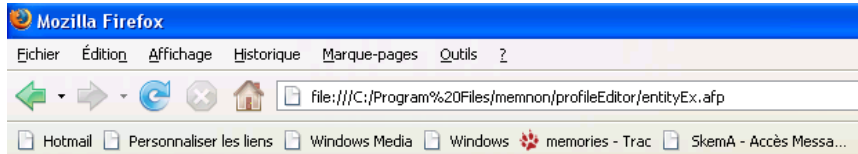
```
<rdf:RDF
  xmlns:dcterms="http://purl.org/dc/terms/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:myProfile="http://www.skema.fr/myProfile#"
  xmlns:daml="http://www.daml.org/2001/03/daml+oil#"
  xmlns:dcns="http://purl.org/dc/elements/1.1/">
  <owl:Class rdf:about="http://www.skema.fr/myProfile#entity">
    <rdfs:subClassOf rdf:resource="http://www.w3.org/2002/07/owl#Thing"/>
  </owl:Class>
  <owl:Class rdf:about="http://www.skema.fr/myProfile#entityEx">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myProfile#entity"/>
  </owl:Class>
  <owl:Class rdf:about="http://www.skema.fr/myProfile#opus">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myProfile#entity"/>
  </owl:Class>
  <owl:Class rdf:about="http://www.skema.fr/myProfile#idgenerator">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myProfile#entity"/>
    <owl:equivalentClass>
      <owl:Class rdf:about="http://www.skema.fr/myProfile#idfountain"/>
    </owl:equivalentClass>
  </owl:Class>
  <owl:Class rdf:about="http://www.skema.fr/myProfile#labels">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myProfile#entity"/>
  </owl:Class>
  <owl:Class rdf:about="http://www.skema.fr/myProfile#idfountain">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myProfile#entity"/>
    <owl:equivalentClass rdf:resource="http://www.skema.fr/myProfile#idgenerator"/>
  </owl:Class>
  <owl:Class rdf:about="http://www.skema.fr/myProfile#media">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myProfile#entity"/>
  </owl:Class>
  <rdf:Property rdf:about="http://www.skema.fr/myProfile#isSmallerThan">
    <rdfs:subPropertyOf>
      <rdf:Property rdf:about="http://www.skema.fr/profileEditor#PropertyBase"/>
    </rdfs:subPropertyOf>
    <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#ObjectProperty"/>
    <owl:inverseOf>
      <rdf:Property rdf:about="http://www.skema.fr/myProfile#isBiggerThan"/>
    </owl:inverseOf>
    <rdfs:range rdf:resource="http://www.skema.fr/myProfile#entityEx"/>
    <rdfs:domain rdf:resource="http://www.skema.fr/myProfile#entity"/>
  </rdf:Property>
  <rdf:Property rdf:about="http://www.skema.fr/myProfile#isBiggerThan">
    <owl:inverseOf rdf:resource="http://www.skema.fr/myProfile#isSmallerThan"/>
    <rdfs:subPropertyOf>
      <rdf:Property rdf:about="http://www.skema.fr/profileEditor#PropertyBase"/>
    </rdfs:subPropertyOf>
    <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#ObjectProperty"/>
    <rdfs:domain rdf:resource="http://www.skema.fr/myProfile#entityEx"/>
    <rdfs:range rdf:resource="http://www.skema.fr/myProfile#entity"/>
  </rdf:Property>
  <rdf:Property rdf:about="http://www.skema.fr/myProfile#rootID">
    <rdfs:subPropertyOf>
```

Terminé

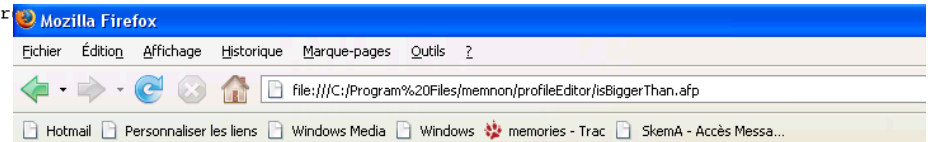
Profile Editor Main interface

Persistent document

And each class and property created has its persistent document



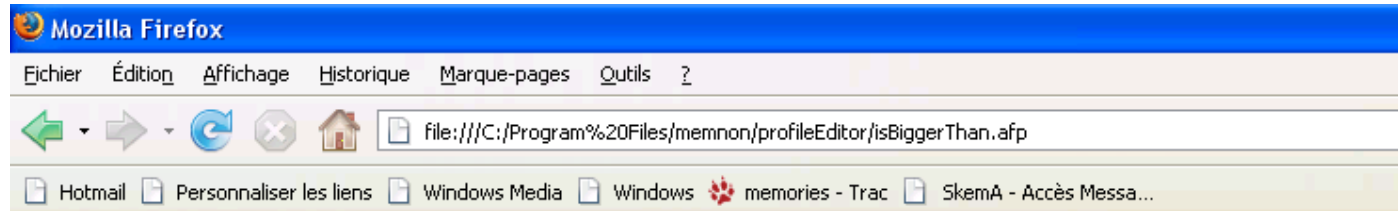
```
<rdf:RDF
  xmlns:dcterms="http://purl.org/dc/terms/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:myProfile="http://www.skema.fr/myProfile#"
  xmlns:daml="http://www.daml.org/2001/03/daml+oil#"
  xmlns:dcns="http://purl.org/dc/elements/1.1/">
  <owl:Class rdf:about="http://www.skema.fr/myProfile#entityEx">
    <rdfs:subClassOf rdf:resource="http://www.skema.fr/myPr
  </owl:Class>
</rdf:RDF>
```



```
<rdf:RDF
  xmlns:dcterms="http://purl.org/dc/terms/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:myProfile="http://www.skema.fr/myProfile#"
  xmlns:daml="http://www.daml.org/2001/03/daml+oil#"
  xmlns:dcns="http://purl.org/dc/elements/1.1/">
  <owl:ObjectProperty rdf:about="http://www.skema.fr/myProfile#isBiggerThan">
    <owl:inverseOf rdf:resource="http://www.skema.fr/myProfile#isSmallerThan"/>
    <rdfs:range rdf:resource="http://www.skema.fr/myProfile#entity"/>
    <rdfs:domain rdf:resource="http://www.skema.fr/myProfile#entityEx"/>
    <rdfs:subPropertyOf>
      <rdf:Property rdf:about="http://www.skema.fr/profileEditor#PropertyBase"/>
    </rdfs:subPropertyOf>
    <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  </owl:ObjectProperty>
  <rdf:Property rdf:about="http://www.skema.fr/profileEditor#PropertyBase">
    <rdfs:subPropertyOf rdf:resource="http://www.skema.fr/profileEditor#PropertyBase"/>
  </rdf:Property>
</rdf:RDF>
```


Profile Editor Main interface

Persistent document



```
<rdf:RDF
  xmlns:dcterms="http://purl.org/dc/terms/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:myProfile="http://www.skema.fr/myProfile#"
  xmlns:daml="http://www.daml.org/2001/03/daml+oil#"
  xmlns:dcns="http://purl.org/dc/elements/1.1/">
  <owl:ObjectProperty rdf:about="http://www.skema.fr/myProfile#isBiggerThan">
    <rdfs:comment xml:lang="fr-FR">Designe le fait d' tre plus grand que</rdfs:comment>
    <rdfs:label xml:lang="fr-FR">estPlusGrandQue</rdfs:label>
    <owl:inverseOf rdf:resource="http://www.skema.fr/myProfile#isSmallerThan"/>
    <rdfs:range rdf:resource="http://www.skema.fr/myProfile#entity"/>
    <rdfs:domain rdf:resource="http://www.skema.fr/myProfile#entityEx"/>
    <rdfs:subPropertyOf>
      <rdf:Property rdf:about="http://www.skema.fr/profileEditor#PropertyBase"/>
    </rdfs:subPropertyOf>
    <rdf:type rdf:resource="http://www.w3.org/1999/02/22-rdf-syntax-ns#Property"/>
  </owl:ObjectProperty>
  <rdf:Property rdf:about="http://www.skema.fr/profileEditor#PropertyBase">
    <rdfs:subPropertyOf rdf:resource="http://www.skema.fr/profileEditor#PropertyBase"/>
  </rdf:Property>
</rdf:RDF>
```

And verify it in the persistent document.

• The AXIS "Documents" are:

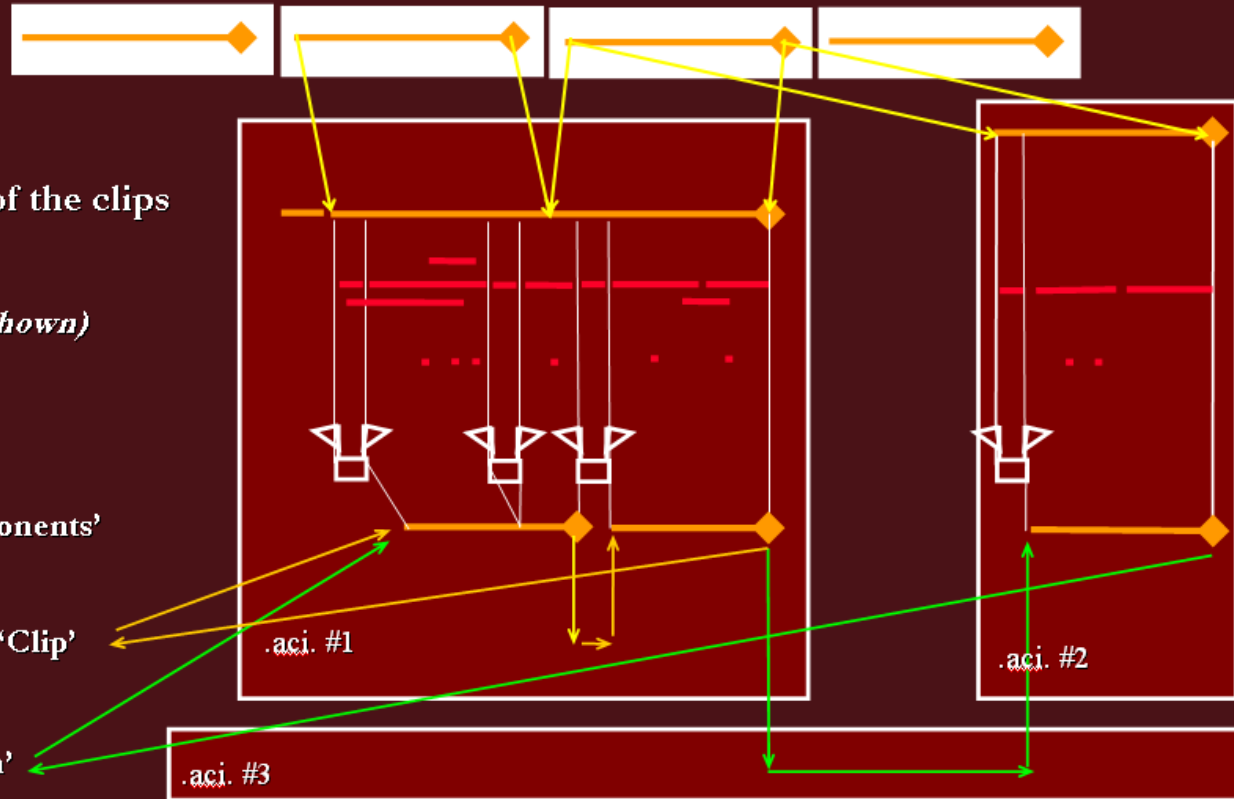
.app.	AXIS Foot Print	Mandatory use for each Entity
.act.	AXIS Certificate of traceability	AXE (Export / Import) and acquisition of Media
.actg.	AXIS Certificate of traceability management of the IDs	AXE (Export / Import) and acquisition of Media
.acc.	AXIS Configuration Control	Control of the versions of the Entities of Documents and Hyperlinks of the OPUS and of the DOCUMENTS and Hyperlinks of the OPUS
.aci.	AXIS Configuration & Indexing	The key document defining the clips and their links
.alb.	AXIS Label	The document giving the annotations attached to a point, a segment or an entity
.alb.	AXIS Label	The document giving the annotations attached to a point, a segment or an entity
.avm.	AXIS Volume Management	
.arm.	AXIS Resource Management	
.arm:	AXIS Project Management	
.ard:	AXIS Resource Management	
.apm:	AXIS Project Management	
.add:	AXIS Document type Definition	<Definition> / <Link to a definition>
.atd:	AXIS Terms Definition	<Definition> / <Link to a definition>
.aed:	AXIS Entity Type Definition	<Definition> / <Link to a definition>
.add:	AXIS Document type Definition	<Definition> / <Link to a definition>
.als:	AXIS List Set	<List of Terms> / <Link to a list of Terms or Thesaurus>
.aed:	AXIS Entity Type Definition	<Definition> / <Link to a definition>
.ard:	AXIS Reference Data	<Definition> / <Link to a definition>
.ard:	AXIS Reference Data	<Definition> / <Link to a definition>
.awa.	AXIS Wrapped Assembly	To be used for the Export and Imports wrapped (i.e. ZIPed)
.ard:	AXIS Reference Data	<Definition> / <Link to a definition>
.awa	AXIS Wrapped Assembly	To be used for the Export and Imports wrapped (i.e. ZIPed)

Clip & Axis Configuration and Indexing

« Axis Configuration & Indexing » for the audio and/or video streams

MEDIA >>>>

- Selecting the clips
- Sequencing the clips
- Opus offset & fusion of the clips
- Segmentation
- Synchronization (*not shown*)
- Punctuation
- Pruning
- Partition in 'Clip-Components'
- Chaining of 'Clip-components' → 'Clip'
- 'Clips' → 'Clip-Stream'



Labeling of 'Clip-Stream', 'Clip', 'Clip-Component', 'Segment', 'Point.'

Clip & Axis Configuration and Indexing

➔ Axis Manager

module outils ?

● Reportages Canal + (Module) >> 📁 Collection Roland Garros (opus) >> 📺 Les plus beaux services (clip)

▶ Interview André ...


▶ Match ...

▶ Roland...

▶ Interview Jimmy Connors

▶ Match ...

▶ Compi...



▶ Interview André ...

▶ Match ...

▶ Roland...

▶ Interview Jimmy Connors

▶ Match ...

▶ Compi...

⏪ 00:03 | 📺 | 00:00 ⏩

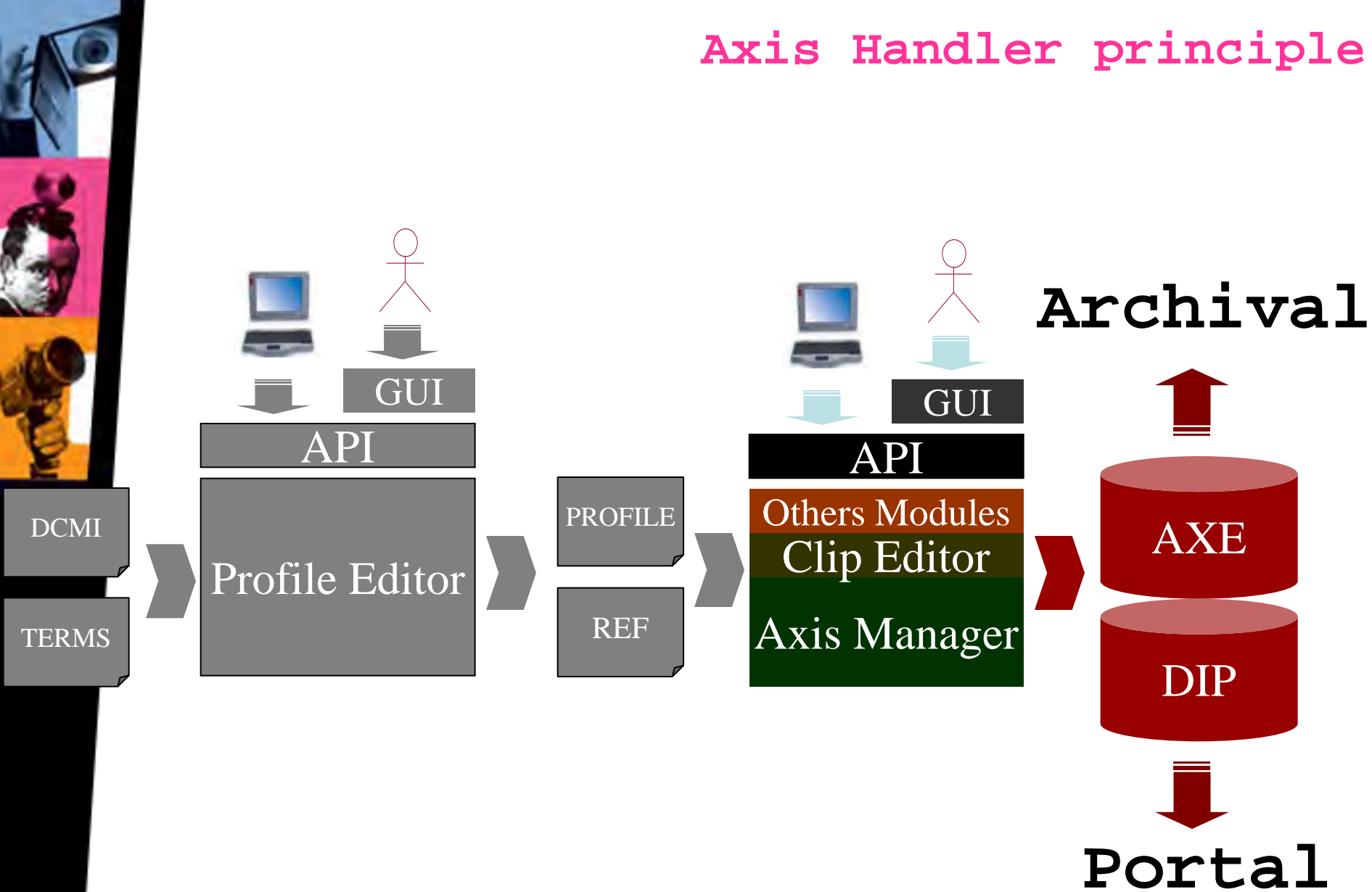
⏪ Déplacer	📺 Nouvel élagage	📺 Appliquer partition	📺 Bord de segmentation
▶ 00:03 Offset	[Poignée d'élagage	⏪ Poignée de partition	● Nouvelle ponctuation
📺 Fusion	✗ Appliquer élagage		▼ Poignée pour indexation



DEMONSTRATION



Axis Handler principle



AXIS Manager principle













- Associate profile to content
 - AIP, SIP, DIP wrap both content and profile
 - Create, save, handle content according to its profile
- Enable Knowledge layer rendering
 - Semantic, logic and structural segmentation of content
 - Enable semantics links between AAE



The end



Clip □ □

-    Toutes les balles de matchs 
-   Les plus beaux services 
-   Prises de tête avec l'arbitre 
-   Finale de l'édition 2000

46 Go occupés
87% de clips validés

Titre : Les plus beaux services
Profil : axis core
Résumé : Reportage sur les services légendaires dans tous les tournois de Roland Garros de 1974 à 2005
Statistiques : 18 segments et 44 points



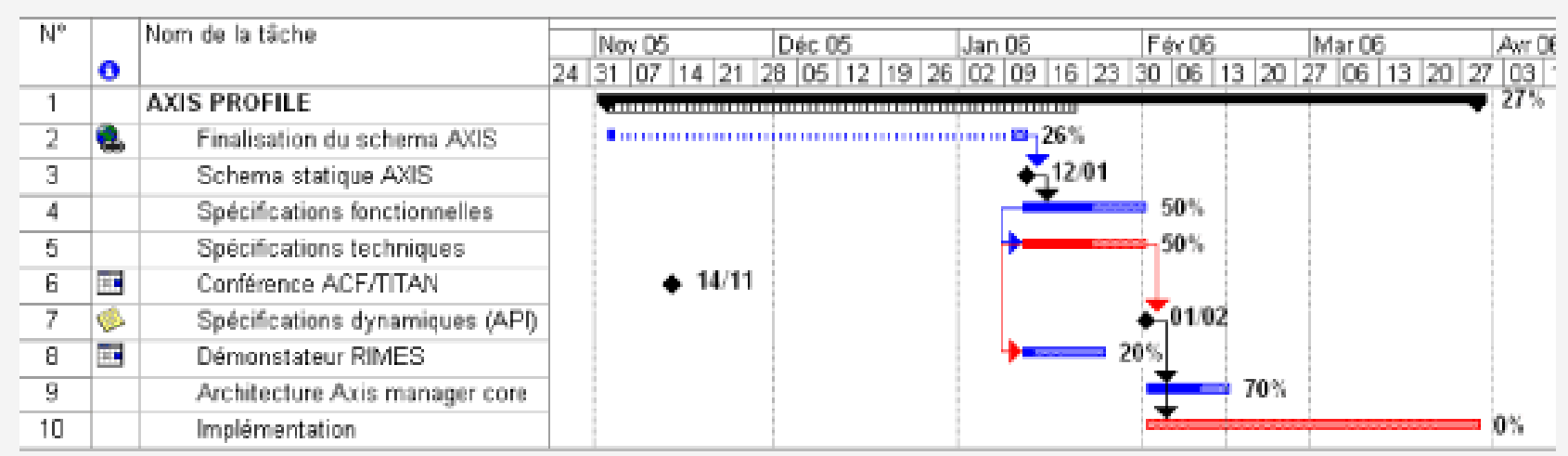
Project

45 % des taches engagées
65 % d'avancement

Éditer le formulaire processus

Editer le planning

Titre : planning de tournage du reportage sur les plus beaux services de Roland Garros
Profil : axis core
Résumé : Planning de gestion de projet des plus beaux services de Roland Garros



Package

- +
 - Toutes les balles de matchs
 - Les plus beaux services
 - Prises de tête avec l'arbitre
 - Finale de l'édition 2000

3 packages importés
1 package défini pour l'export

Titre : Les plus beaux services
Profil : axis core
Résumé : package dvd pour la distribution commerciale du sujet « Les plus beaux services de Roland Garros »

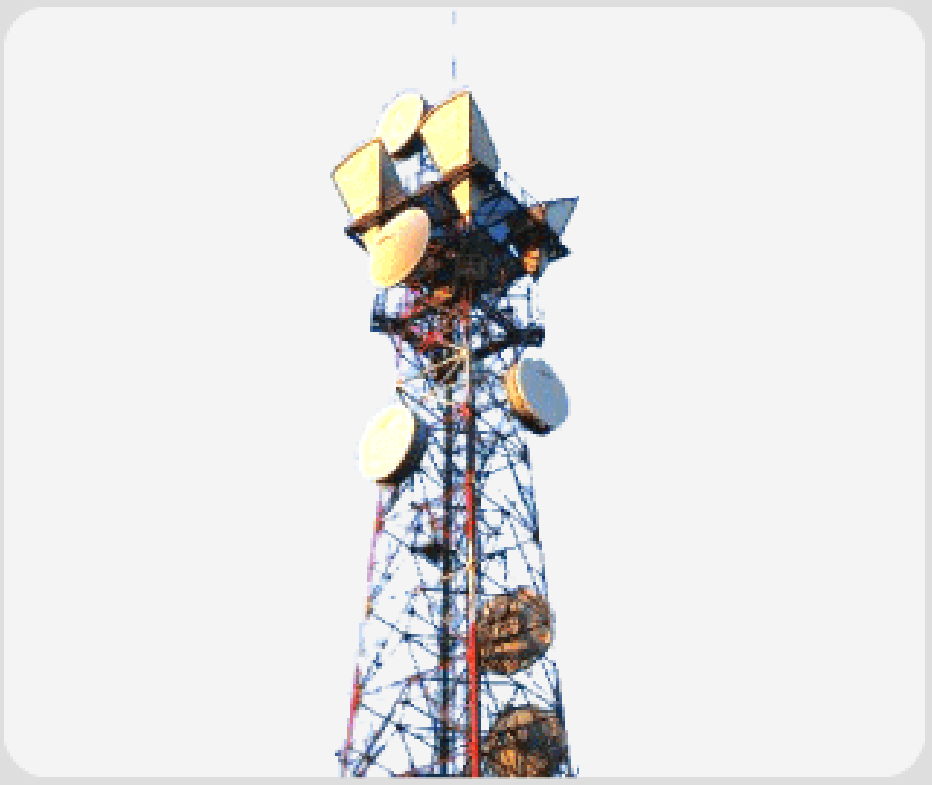


Package

- +
 - Toutes les balles de matchs
 - Les plus beaux services
 - Prises de tête avec l'arbitre
 - Finale de l'édition 2000









3 packages importés
1 package défini pour l'export

Titre : Prises de tête avec l'arbitre
Profil : axis core
Résumé : 52 minues pour diffusion antenne de « Les plus grosses prises de tête avec l'arbitre de l'histoire du tennis »



Resource



-  Cameraman badge 4767
-  Cameraman badge 2865
-  Producteur badge 2424
-  Documentaliste badge 123
-  Documentaliste badge 5985
-  Panasonic P2 badge 34
-  PD150 sony badge 545
-  Betacam badge 980

Au 24 03 2006 taux d'occupation
des ressources humaines : 87%

30% des ressources matérielles non
verrouillées

Titre : Cameraman Badge 4767

Profil : axis core

Résumé : Jean-Pierre Courot, spécialiste steadycam et sport

Statistiques : mobilisé sur 8 projets

