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Specification of digital video authoring processes and publishing genres.

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LOGOS: Knowledge-on-Demand for Ubiquitous Learning

Work package 2.2 Generation of Learning Scenarios.

**Specification of digital video authoring processes and
publishing genres**

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ESCoM/Logos report *03-Logos-06*

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1. Introduction

The 4 digital video authoring scenarios defined in *ESCoM/Logos report-02-Logos-06* presuppose rather complex (re-)authoring processes of available source corpuses (defined in *ESCoM/Logos report-01-Logos-06*).

Figure 1 identifies in a nutshell the principal types of products – the principal publishing genres – which are implied in the four MSH/ESCoM scenarios.

All steps and tasks following which a specific (video, hypermedia,...) product is elaborated belong to what we call an **authoring process** (or again, a re-authoring process). The basic anatomy of an authoring process is shown in **figure 2**. Given our main interest in audiovisual corpuses, a special emphasize is given to video content processing.

It has to be emphasized that there are a huge diversity of such publishing genres but it seems that at least a subset of the above quoted authoring steps and tasks are more or less always implied in the republishing of a given (audiovisual, visual, sound, textual, ...) source corpus.

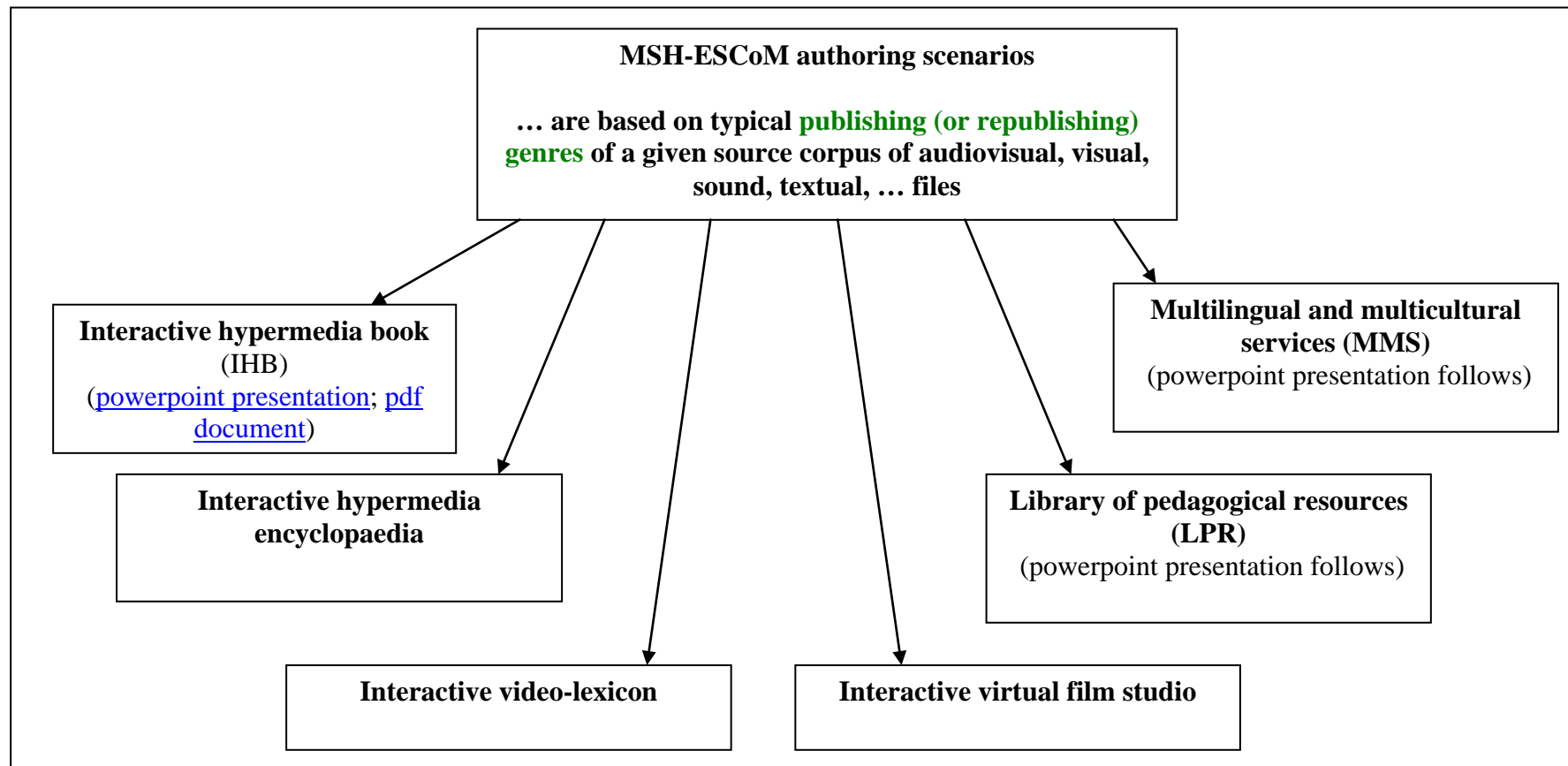
It also has to be emphasized that the concrete products of these genres (i.e. a concrete Interactive hypermedia book, a translated version of a French source corpus in German, a concrete virtual film,...) can be conceived as *static* or as *dynamic* (i.e. “**personalisable**”) products (it is the “*pragmatic description*” task, cf. infra, which produces the necessary input for this ...).

In the following, we will detail the authoring process of one specific publishing genre – the interactive hypermedia (or also: video) book (IHB). This genre is explained in this online course ([powerpoint presentation](#); [pdf document](#)).

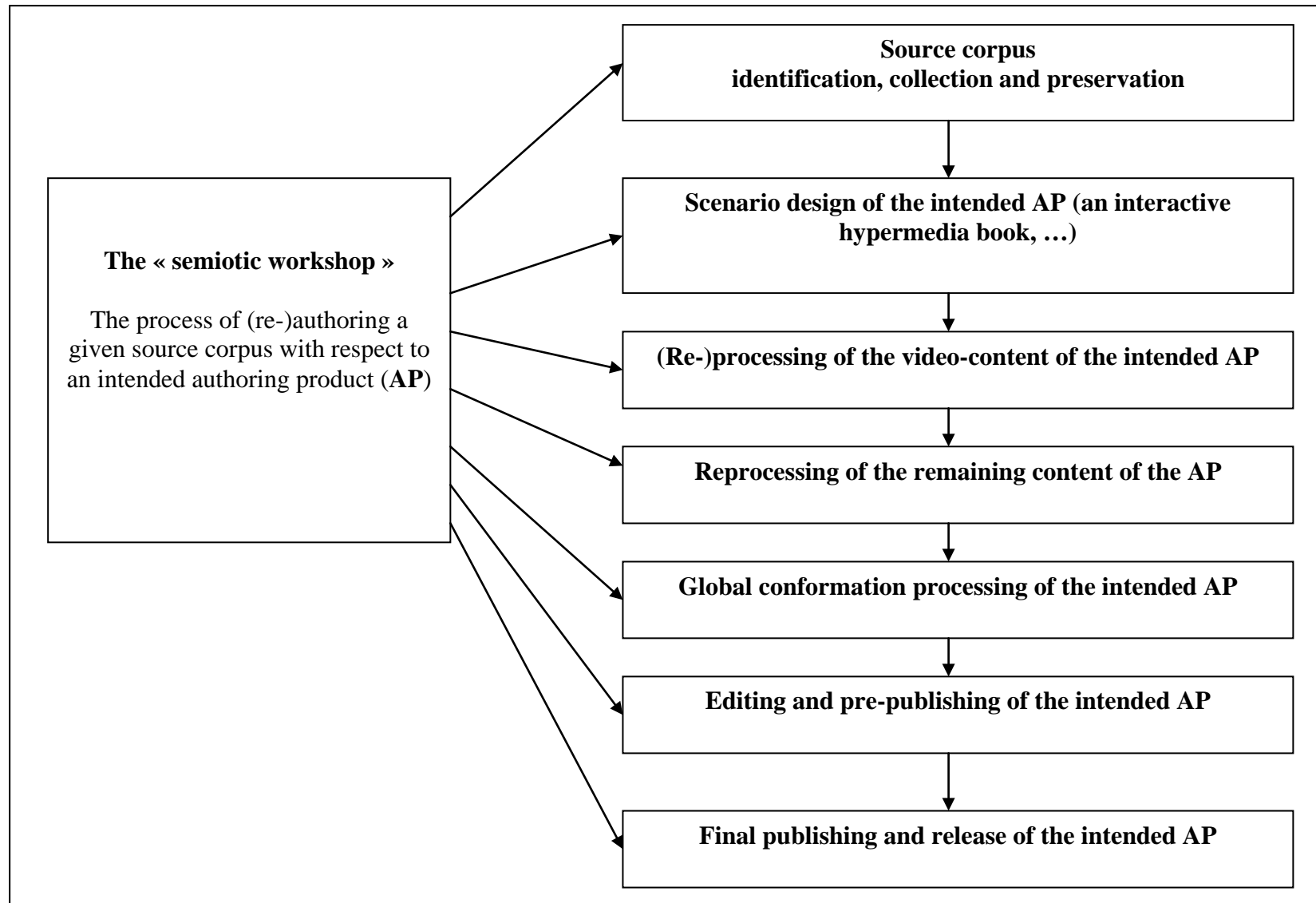
Later on, the specification for the other publishing genres will be sent, but the principal authoring steps will not change drastically ...

Concrete examples of IHBs are, for us, the publishing of interviews with researchers on the audiovisual portal “[Patrimoine culturel des minorités et des peuples indigènes](#)” (PCI) which belongs to the “[Archives audiovisuelles de la recherche](#)”. We especially refer to the interviews with the Argentinean writer Gregorio Manzur on the [huarpe croppers living in Mendoza in Argentina](#) – interviews which are published on the PCI as an interactive hypermedia book.

2. The publishing genres and the anatomy of the authoring process



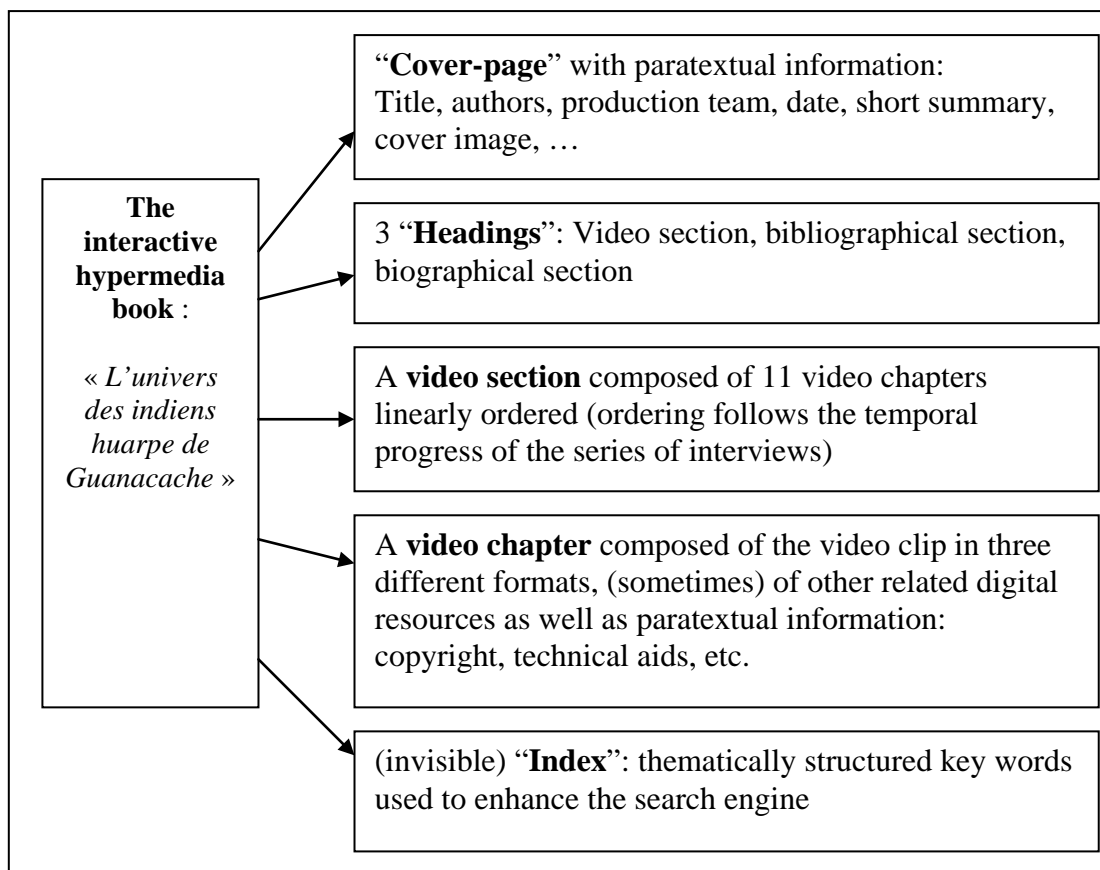
(figure 1: list of publishing genres that underly the four scenarios defined by MSH-ESCoM)



(figure 2: principal steps of re-authoring a source corpus with respect to an intended authoring product

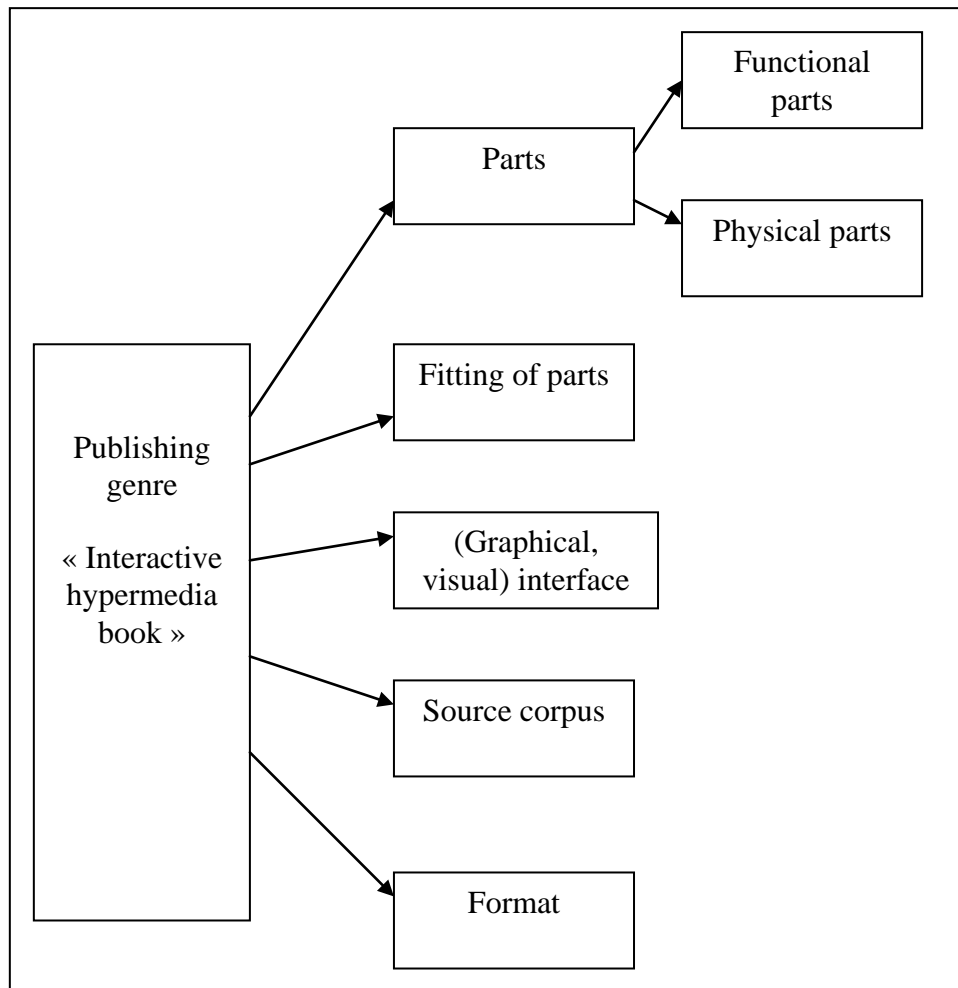
3. The elements of an interactive hypermedia book (IHB)

As explained in the Powerpoint presentation, the IHB by the means of which the series of interviews with Gregorio Manzur have been published is, structurally speaking, a very simple one. Its principal elements are resumed in figure 3



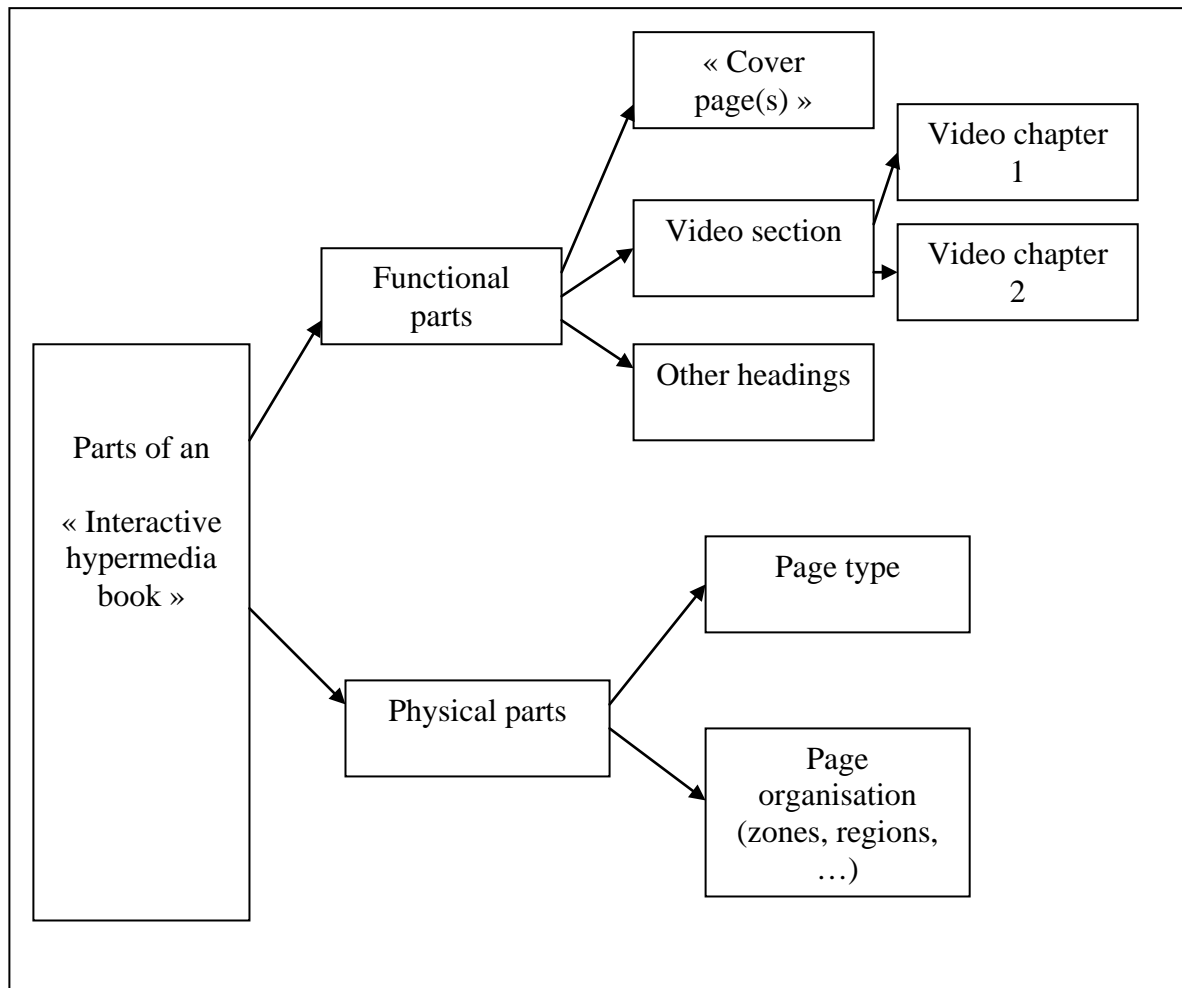
(figure 3: the scenario underlying the huarpe IHB)

In abstracting from figure 3 the main elements, we obtain a generic structure of IHB like applications or products presented in figure 4.



(figure 4: the central elements of an IHB)

Figure 5 develops the main element of IHB architecture – the functional and physical parts, i.e. the headings (“chapters”). Within which the two most important are the cover page and the video section composed by n video chapters.



(figure 5: the recurrent types of parts in an IHB scenario)

Short explanations:

- ❑ **Parts**: the elements that compose an interactive hypermedia book
 - ✓ Functional parts are, for example, the different “chapters”, especially the video chapters (composing one or more “headings”), the “cover page” (“home page”), an introduction, etc.
 - ✓ Physical parts are mainly the “page” itself and the different regions or zones that compose its interface (menu, text zone, image zone, ...)

- ❑ **Fitting of parts** means the ordering:
 - ✓ between the different chapters (and sub-chapters, ...);
 - ✓ among the different regions and zones organising a physical page.

- ❑ **Graphical interface** :
 - ✓ recovers all (figurative – eidetic -, topographical, chromatic, textual, ...) elements
 - ✓ that compose the zones and regions of a page and that is mainly responsible of what is called the “visual chart” or identity of an IHB

- ❑ **“Source corpus”** recovers all content data that are used for the authoring of an IHB:
 - ✓ “brute” video files (in our case, dominant), image files, sound files, textual files
 - ✓ “structured information”
 - ✓ and also already authored but reusable products (already existing, IHB, video-lexica, hypermedia encyclopaedias, multilingual versions, etc.); etc.

- ❑ **“Format”** means that an IHB is a publishing type or genre
 - ✓ that can be “materialised”, physically transported and “consumed” for instance as a web site, a cderom, an ipod service, a psp service, a service for mobile phones or again a service of i-TV, etc.

- ❑ The “authoring” of IHB can be technically represented as a set of activities that apply to the above quoted elements in order to produce a concrete IHB.

4. The authoring of an IHB

The whole authoring process of a hypermedia book can be decomposed in routine steps and tasks which are:

1. Synopsis writing.
2. Source corpus collection and constitution.
3. Critical working through the source corpus and scenario design of the hypermedia book.
4. Processing (working on) the video content (for the “video heading”) -
5. as well as on other content for previously in the scenario identified headings.
6. Editing of the processed (video and other content) via publishing templates or models.
7. Publishing of the hypermedia book as a web site, a cdrom, a product for mobile devices, etc.

Hereafter the detailed “anatomy” of the whole authoring process of an IHB.

	Phases of (re-)authoring an IHB	Tasks	Description	Output
0.1	Production of a synopsis	Identify the general « look » of the IHB	a hypermedia book about what, for whom, for which uses, ...	Report + general outline of IHB (in narrative and eventually graphical mode)
0.2		Study specific constraints of the authoring of IHB	Possible specific constraints are already existing similar products, economic constraints, time constraints, ...)	
1.1	Constitution of the source corpus	Identify all existing relevant data (video, text, images, ...) or, eventually, produce new, original ones;		Collection of digital data
1.2		Archive them physically on the PC or somewhere else where an access for authors is possible		“Folder” (“Corpus library”) where the digital data are stored and which can be accessed by the author(s)
2.1	IHB scenario design	“Appropriation” of the content, get a precise idea of the corpus		Work sheets, notes, organised in a specific folder (a “work library”)
2.2		Produce an IHB scenario	Identification, naming and definition of	A graphical design or: a chosen (selected and adapted) model

			functional parts (cover page, Video heading, IHB presentation heading, image heading, thematic index heading, ...); Global ordering of functional parts (?)	of hypermedia books
2.3		Revise/produce domain ontology	If domain ontology already exists, eventually revise it; If not – produce an “ad hoc” classification of themes for the source corpus	Adapted classification of themes (available for task 4.3)
3.1	Re-processing the video content material (IHB video heading processing) [TUC/MUSIC: “segmentation and annotation”]	Textual description	Video segmentation, segment tiles, segment summary	List of segments where each one will constitute a video-chapter in the IHB
3.2		Peritextual description	Enriching of a segment: 1/ annotation via commentaries 2/ complements via linked resources	Enriched segments (by comments, links to relevant resources) Comments and links to resources are accessible only in the concerned video-chapter
3.3		Thematic index production	With the help of the revised/newly produced ontology in task 3.3	Thematically indexed videos whereas the themes can be used as a separate heading in the IHB
3.4		Translation/versioning	(literal, more or less free) translation of segment	“Fixed” on the timeline of the segment: literal translation or summary or free and interpretative version in a given target language
4.1	Re-processing of other content material (IHB headings other than the video heading defined previously in the IHB scenario)	IHB Presentation/introduction heading	Production of a small introductory text completed, eventually, by a commented list of linked resources	A pre-publishable version of this heading
4.2		IHB visual gallery heading	Production of a gallery of related still images	A pre-publishable version of this heading
4.3		IHB thematic index heading	Production of the interactive thematic index whereas each theme (from the ontology) sticks to one or more related video segments	A pre-publishable version of this heading
4.4		IHB bibliographical heading	Production of bibliographical material for the IHB	A pre-publishable version of this heading
4.5		IHB biographical heading	Produce a biographical sketch of the author(s)	A pre-publishable version of this heading
4.6		Other generic IHB heading	Production of the content of other in the scenario defined and named headings ...	A pre-publishable version of these headingw

5.1	General IHB adaptation and conformation processes	IHB paratextual description	Title of the whole IHB, authors, summaries, date, place, copyright, links and other information	Will appear typically on the “cover page” heading as well as on specific headings such as “copyright” or “contact”, etc.
5.2		IHB educational description	For French IHB – LOM.fr	Metadata of LOM used in France
5.3		IHB pragmatic description	For “personalising” the IHB (segments which can be dropped, segments which are the highlights, ...)	Personalised or “dynamic” versions of the same IHB
5.4		IHB meta-description	Version, date, ...	
6.1	Editing reprocessed content with the help of publishing templates or models	Pre-publishing of all headings and chapters following the chosen scenario		
6.2		Graphical, ... modifications of the interfaces	Possible modifications of the pre-published version with the help of an (integrated) html editor	
7	Publishing of the hypermedia book			

5. Detailed features and functionalities for specific tasks within the authoring of an IHB

Hereafter the detailed “features and functionalities determining the different steps and tasks in the (re-)authoring of an IHB.

Detailed features of specific tasks (cf. tasks above, chapter 4, in green)		
1.1	Textual description of corpus of video or audio files (= segmentation)	1/ time code : start moment; end moment; duration
		2/ title and – eventually : subtitle - of the segment
		3/ author(s) of segment
		4/ summary of the segment
		5/ language(s) (used in the segment)
		6/ date and place of realisation
		7/ people implied in realisation
		8/ copyright
1.2	Textual description of corpus of static visual – image - files (= segmentation)	1/ 2D –zone within the image
		2/ title of the selected zone
		3/ summary of the content of the zone
		4/ date and place of realisation
		5/ people implied in realisation
		6/ copyright
2.	Peritextual description of a segment of a video, audio or static image segment (= enriching annotating a segment)	1/ one or more links to relevant external” resources 1.1/ pragmatic type of link (hint; complement of information; for discussion; ...) 1.2/ title 1.3/ address 1.4/ commentary
		2/ production of one or more commentaries 2.1/ type of comment (for discussion; a personal point of view; ...) 2.2/ comment (text) 2.3/ author of the comment + address 2.4/ eventually: possibility to create one or two links to relevant “external” resources
3.	Thematic indexing of a segment	1/ on the time line of the segment: attach one or more interactive themes or whole conceptual graphs defined in the ontology (“interactive” here: in clicking on the theme, the reader will have a view of all – with respect to this theme - related segments)
		2/ eventually : comment (text + author)
4.	Translation/versioning	1/ choice of target language
		2/ Translation of the (enriched, annotated) video segments: 2.1/ literal translation (word to word translation) of the content in using the time line 2.2/ summarized translation of the content in using the time line 2.3/ free version (interpretation) of the content in using the time line 2.4/ dubbing of the streamed audio line in producing a second one in the target language
		3/ Translation of the contents of the other headings of IHB in target language
5.	Paratextual description of IHB	1/ IHB title and subtitle
		2/ IHB authors and contributors
		3/ IHB summary presentation
		4/ IHB date and place of publishing
		5/ one or more links to relevant external resources

		5.1/ pragmatic type of link (hint; complement of information; for discussion; ...) 5.2/ title 5.3/ address 5.4/ commentary 6/ illustration
6.	Educational description of IHB (LOM; French adaptation of LOM)	1/ General information of IHB (title,) 2/ Pedagogical profil of IHB 3/ Associated resources (« relation ») 4/ Life cycle 5/ Technical aspects 6/ Copyright 7/ Description (« meta-metadata »)
7/	Pragmatic description	1/ <i>Short version of full IHB</i> 1.1/ video segment – in short version/not in short version 1.2/ heading – in short version/not in short version 2/ <i>Video in linear/interactive version</i> 2.1/ video segment – only for interactive or for both versions 2.2/ if linear version: first position or last position or position just after which video segment 3/ <i>“Most appealing version” of full IHB</i> 3.1/ video segment – for appealing version or not 3.2/ if video segment in “appealing version” – position (first, last or after which segment) 3.3/ “appealing version” in interactive and/or linear form 3.4/ Heading H1, H2, ... necessary for “appealing version” or not
8/	Meta-description	8.1/ Title 8.2/ Author(s) 8.3/ Status 8.4/ Language 8.5/ Date and place 8.6/ Comments

6. The phase of scenario design – features and functionalities

The scenario design is, in our opinion, a key step in the authoring process of an IHB in particular and of any “content application” in general. It determines, indeed, the whole description, indexing and re-processing of specific content objects (videos, images, etc.).

For this, we emphasize to localise it BEFORE the principal activities and tasks of re-authoring such as segmentation of videos, annotation of videos, enrichment of videos, translation, etc.

The scenario design phase recovers, in the case of IHB authoring, two principal sub-tasks:

A/ the overall IHB scenario:

- 1/ propose the user a “default model” of an IHB (some headings are necessary and the user cannot “vote” against: cover head; in the case of video books : video heading and chapters, ...; but most of the headings are optional);
- 2/ the user chooses his/her headings (functional parts) and/or identifies new ones ;
- 3/ he/she chooses also the fitting (the overall functional organisation) of the headings and the chapters;
- 4/ concerning the video chapters, he/she already may want to opt for an internal organisation of a video chapter (as in AAR or more complex).

Following his/her choices, the subsequent content processing have to be adapted.

B/ the ontology scenario:

- 1/ if an ontology is already available, the user may want to check it and to adapt it;
- 2/ if indexing templates are already available, the user may want to check and adapt it;
- 3/ if no ontology and no templates are available, the user may want to create his “ad hoc” domain ontology and his templates (if yes, he will create especially a “vocabulary” for representing his domain; a small default relational ontology is “a priori” available);
- 4/ if the user doesn’t want to use or produce an ontology, no thematic index will be created and also no heading containing a thematic index.

Other sub-tasks of scenario design may be defined for other publishing genres. For instance, a specific sub task for exercise definition may appear here in the case of the authoring of scholar content applications.