Diversity in Expression, Diversity in Representation: Automation and Experimentation in Digital Preservation

The Law of Unintended Consequences ACA@UBC 2011 International Symposium Frederic Wood Theatre, UBC





Dr Seamus Ross, Dean and Professor iSchool University of Toronto

# Where we will be going

- A Little Background
- Spreading the News
- Discovering what is there
- Selecting/Appraising
- Automation (an example)
- Designing Repositories
- Measuring and Managing Risk

What next

## Background

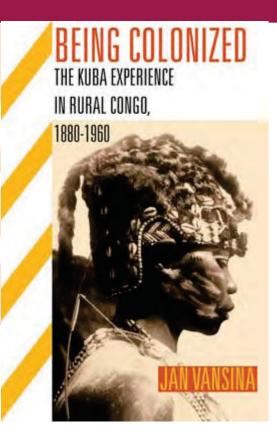
- Archives and Libraries have long played a critical role in the transmission of scientific knowledge and culture.
- As they undergo a metamorphosis from the physical to the virtual they continue to serve this role, although their nature and reach may be very different.



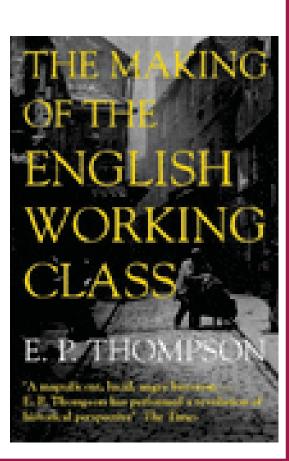
Library at Hadrian's Villa at Tivoli

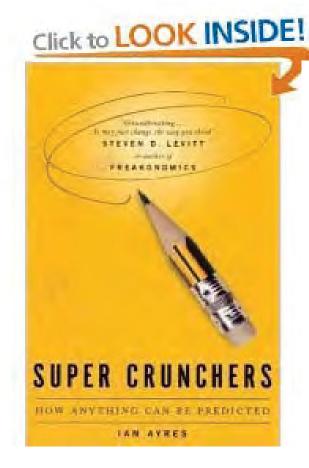


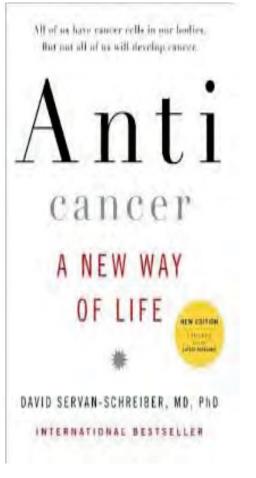
Digital Repository Hardware at Swiss Federal Archives

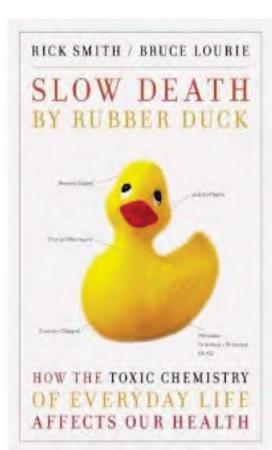


# MONTAILOU Cathars and Catholics in a French village 1294-1324 Emmanuel Le Roy Ladurie









## Digital Objects Break

## Inaccessibility of digital object

- Object becomes lost
- Degradation of storage medium means content can not be read.
- Technological obsolescence
- Syntactical interpretation or representation failures
- Semantic opaqueness
  - Lack of contextual information (e.g. suitable metadata)
  - Loss of Process & dynamic nature
- Legal impediments
- The organisation and its staff
  - Lack of organisational will visible benefits
  - Decentralised and node-based organisation



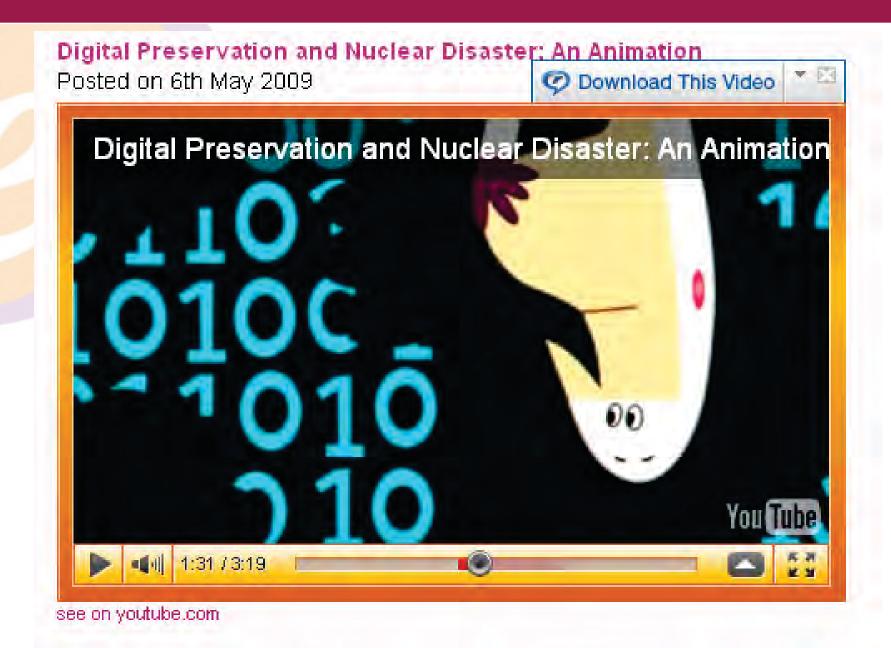
Historic Media on Display at the Launch of the UK Digital Curation Centre (DCC), November 04 http://www.dcc.ac.uk

## Preservation Risk is Actual

- It is technological.
- It is social.
- It is organisational.
- And it is cultural.
- Actual risks can be assessed and measured—actual risks can be managed.

## An Agitating Buzz about Things Digital

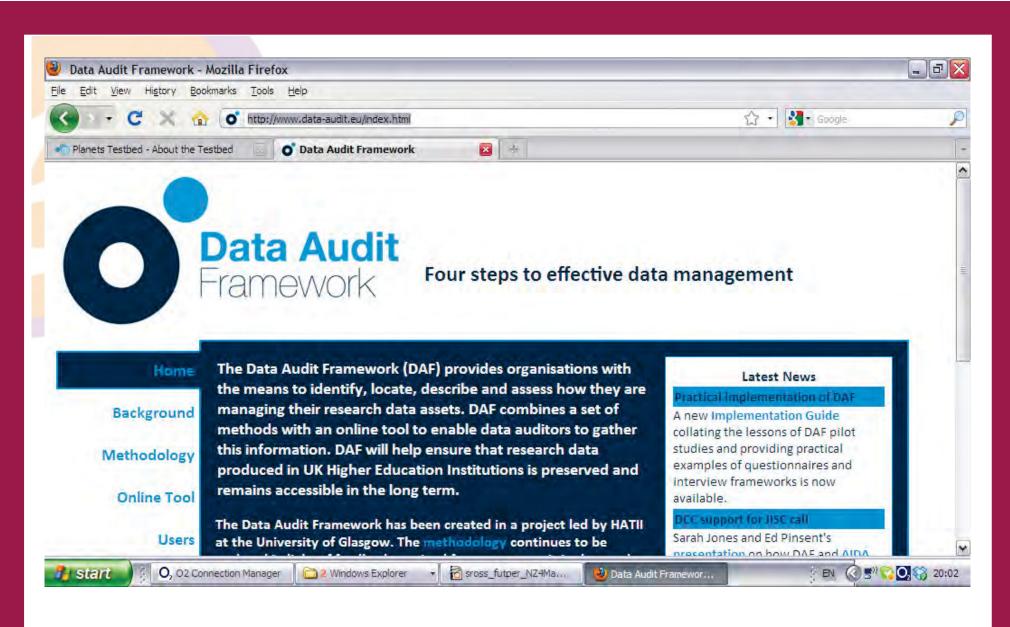
- We have successfully socially amplified the perception of risks associated with digital materials
- While there are 'risk amplifiers' and 'risk attenuators', preceptions of risk arise complex social and cultural processes
- Have we socially constructed our preceptions of preservation risk within a vacuum





# Social Networking & Preservation

Sign Up DigitalPreservationEurope DPE is on Facebook s	Sign up for Facebook to connect with DigitalPreservationEurope DFE.
DigitalPreservationEurope DPE 💐	s >>
Discussion Board Disclaying 3 discussion loops See All "What is Digital Preservation" page - do you like it? 1 post. Updated on 09 January 2009 at 04:59 How do you preserve your old digital photos? 2 posts by 2 people. Updated on 04 December 2008 at 09:18 Digital preservation problems? 1 post. Updated on 24 November 2008 at 01:38 Videos! Look at this sample below and theck allour videos at	Brd DPE The Preservation challenge: basic concepts and practical applications 23-27 March 2009 DPE, Planets, CASPAP and nestor are delighted to ansource that they will be delivering the latest in a series of collaborative training inStatives to introduce the Preservation Challenges. This event will be held in Barcelona, Spain from March 23-27 2009. For more information and to register for this event please with http://www.wepreserve.ed /events/barcelona-2009/ Enjey us in Barcelona, Spani
http://www.digitalpreservationeurope.eu/video-training/prague-2008/	Links
	1 Inie See All
	SideShare # Digitalpreservationeurope's Sideshows (SideShare is the best place to share powerpoin 22 / Howmber Wide
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(NZ)	
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http://www.data-audit.eu/index.html

## **REPORTING AND RECOMMENDATIONS**

A report with recommendations is created. The tool analyses data collected to produce statistics and generate an appendix.

ASSESSING MANAGEMENT OF DATA ASSETS

Vital assets are assessed in detail to investigate data management approaches. The online tool pulls through information already collected.

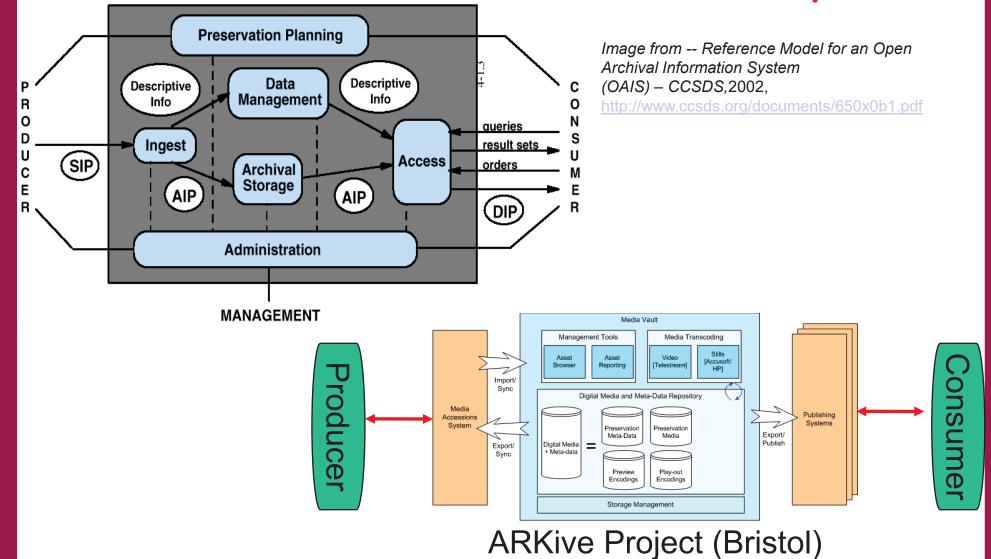
## IDENTIFYING AND CLASSIFYING ASSETS

An inventory of assets is created in this stage. The online tool can generate and circulate a questionnaire to help populate the inventory.

### **PLANNING THE AUDIT**

A business case is developed, meetings scheduled and preliminary research conducted. The online tool has a calendar and address book to schedule meetings and track progress.

# OAIS Model & Example



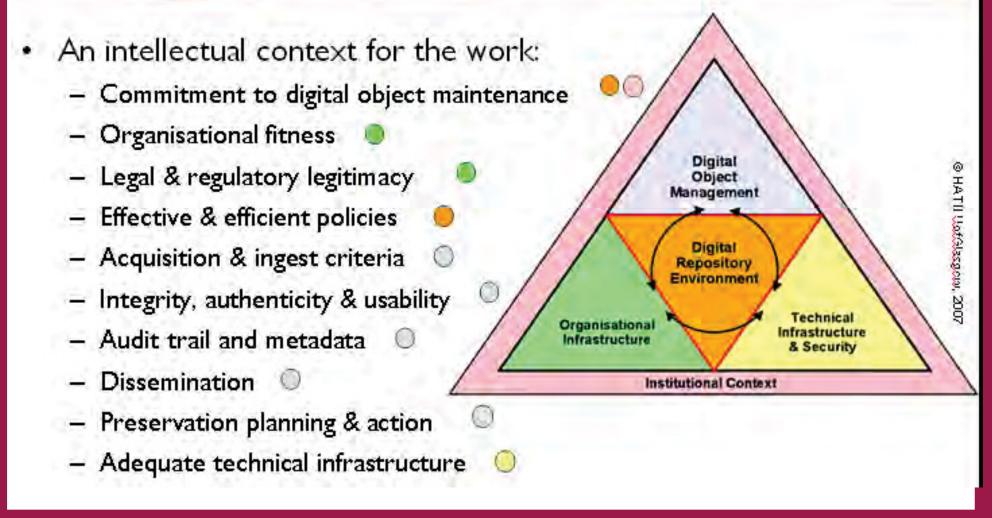
## Repository Design Change will be a feature of repositories

- Storage technologies
- Services, close down of some and initiation of others (preservation action)
- Workflows
- Verification mechanisms
- Policies & Procedures



Digital Repository Infrastructure, Swiss Federal Archives, Berne, October 2004

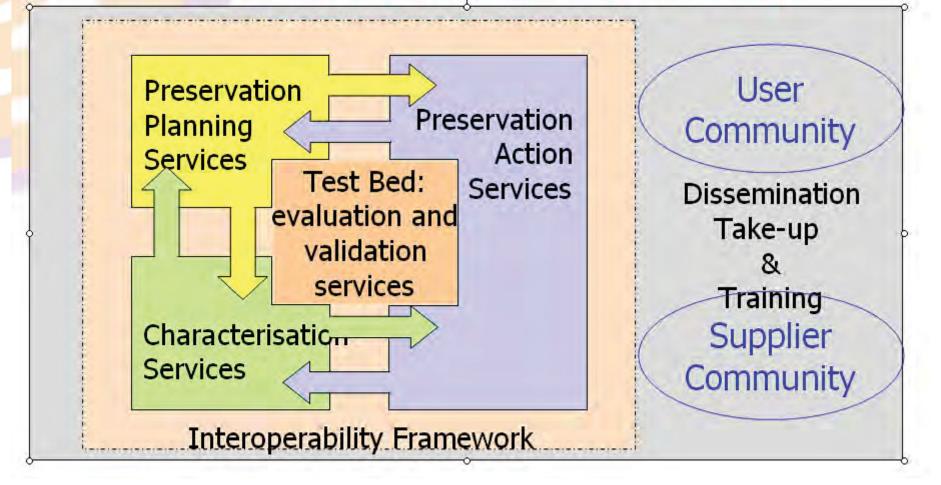
## Digital preservation repository core criteria

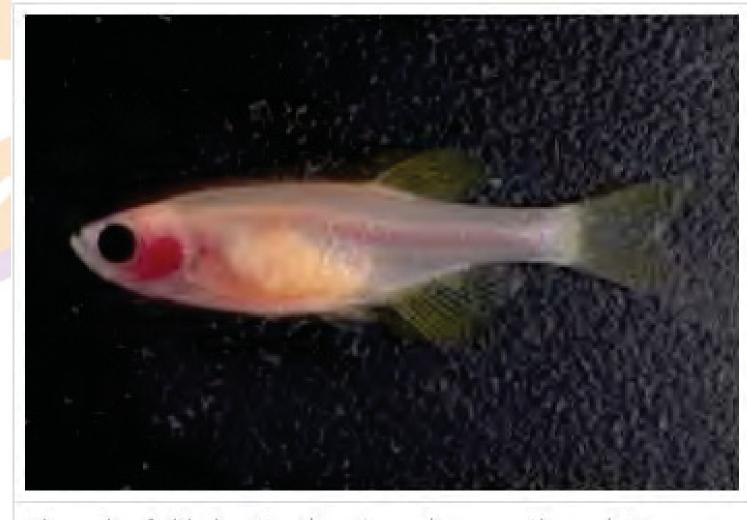




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# PLANETS Architecture





The zebrafish's beating heart can be seen through its transparent skin. Image courtesy of Richard White, MD, PhD

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Planets Testbed - 'preservation	ı plan
Afforme Experiments	Services Evigital Objects @ About @ Help Planets Testbed - 'preservation plan experiment test 2' : Stage 2: Design Experiment
EXPERIMENT PAGES	2. Design Experiment Save Save and submit for approval
New Experiment	At this stage you can specify the design your experiment. This involves selecting an experiment type and one or more preservation services in the top section of the page, and selecting the
My Experiments 👞 Browse Experiments 👞	digital objects you wish to pass through your chosen services in the lower section of the page.
	Experiment Type:
EXPERIMENT PROGRESS	
2. Design Experiment	Migration Load Test Migration Characterisation View in Emulator Execute Preservation Plan
3. Run Experiment	Test how well a service Transform large numbers. Test how effectively a Load digital objects into Perform experiments
4. Experiment Results	transforms digital objects of digital objects and service extracts the an emulated environment on a PLATO to test how accurately the preservation plan
5. Analyse Results 🕤	into another and stability digital objects objects are presented
6. Evaluate Experiment	
	Executable (Plato) Preservation Plan Experiment
TESTBED FTP AREA	This experiment type allows you to upload and execute a pre-defined Planets 'executable preservation plan'. Once you have chosen your workflow configuration you'll be able to
ou may upload data to the Testbed FTP area using the	modify the predefined settings before invoking it.
details provided during egistration.	Upload an executable preservation plan
CONNECTION DETAILS	Please upload an executable preservation plan (xmi-configuration file), which you want to run your experiment upon.
Host name: tp://testbed.planets-project.eu Port number: 11	or select from previously uploaded workflow configurations
	Specified input data:
	The list of Digital Object to experiment upon.
	Add Digital Objects to this Experiment
	Use the buttons below to add more Digital Objects to this experiment. You can select data from the data registry (including data you've uploaded using your FTP account), or you
	can upload files to this experiment one at a time using the "Upload Data" option.
	Select Data from the Data Registry
	Select Data from the Data Registry

Planets Testbed - About the	Testbed - Mozilla Firefox			×
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DOCUMENTATION Testbed User Guide for Experimenters	The Planets Testbed is a freely available and easy- preservation tools and approaches through their W tools available on heterogeneous platforms and in exposes certain aspects of their functionality through	eb browser. The Planets approach of a se well-defined and controlled surroundings.	rvice-oriented architecture makes preserva The tools are given a Web service wrappe	ation
SERVER SPECIFICATION	Testbed's Web-based interface View a list of the organisations involved in the creat	ion of the Teethod		
The PLANETS Testbed is currently hosted on a Dell PE 2950 III server.		stbed Six-Step Exper	Experiment Analysis	

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DigitalPreservationEurope(DPE), building on the earlier successful work of ERPANET, facilitates pooling of the complementary expertise that exists across the academic research, cultural, public administration and industry sectors in Europe.

DPE fosters collaboration and synergies between many existing national and international initiatives across the European Research Area.

DPE addresses the need to improve coordination, cooperation and consistency in current activities to secure effective preservation of digital materials. DPE's success will help to secure a shared knowledge base of the processes, synergy of activity, systems and techniques needed for the long-term management of digital material.

### Latest News:

#### Preserving the British Library's C19 Newspaper Collection: Planets **Film Released**

#### Posted on 28th April 2010

Planets (Preservation and Long-term Access Through Networked Services) has released the first of four filmed and written studies to show how national libraries and archives in Europe are using Planets tools to preserve large and valuable digital collections.

This five minute film documents the challenges the British Library has faced with preserving the 80TB 👘 DPE registries of images and its use of Planets preservation planning tool, Plato, to support the decisions it has taken. More Info

#### Team Digital Preservation and the Aeroplane Disaster: New Animation!

Posted on 9th September 2009



New DPE Briefing Papers Translations available Postad on 21st March 2009 You may now read 5 more BP in Italian:

- Considerazioni sulla conservazione dei blog - Sistemi d'identificazione permanente nel settore della Pubblica Amministrazione - Il modello dati di PrestoSpace

### about DPE ■ what is digital preservation news and events 🤏 exchange programme ○ DPE challenge DPE user community DPE publications DRAMBORA PLATTER ✤ ErpaEprints 💊 unique identifier service

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digital preservation Purope

DPE video training





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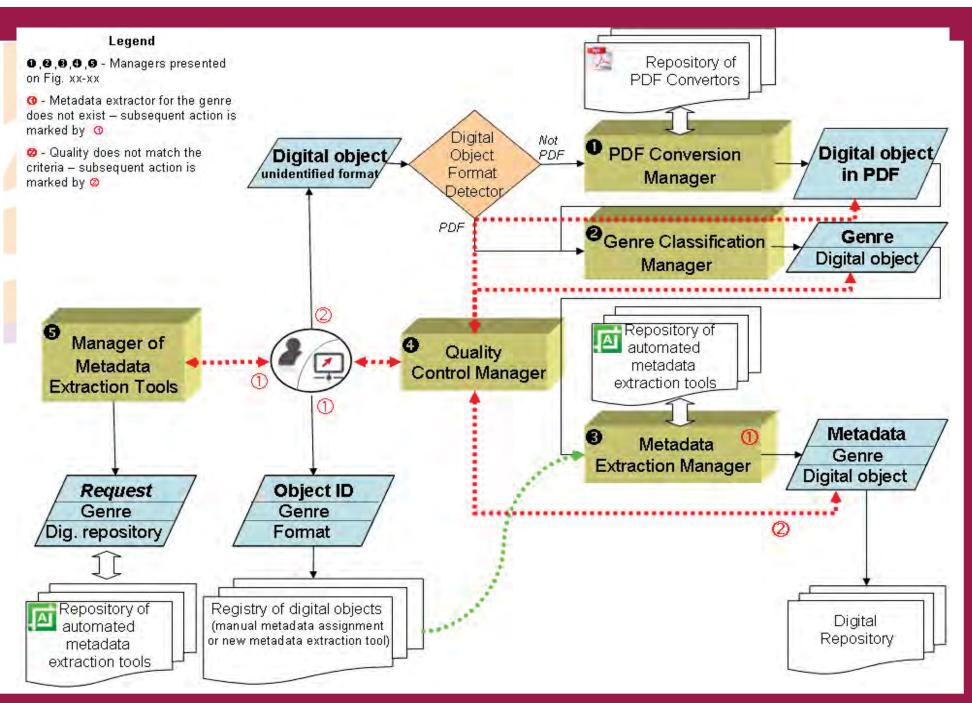


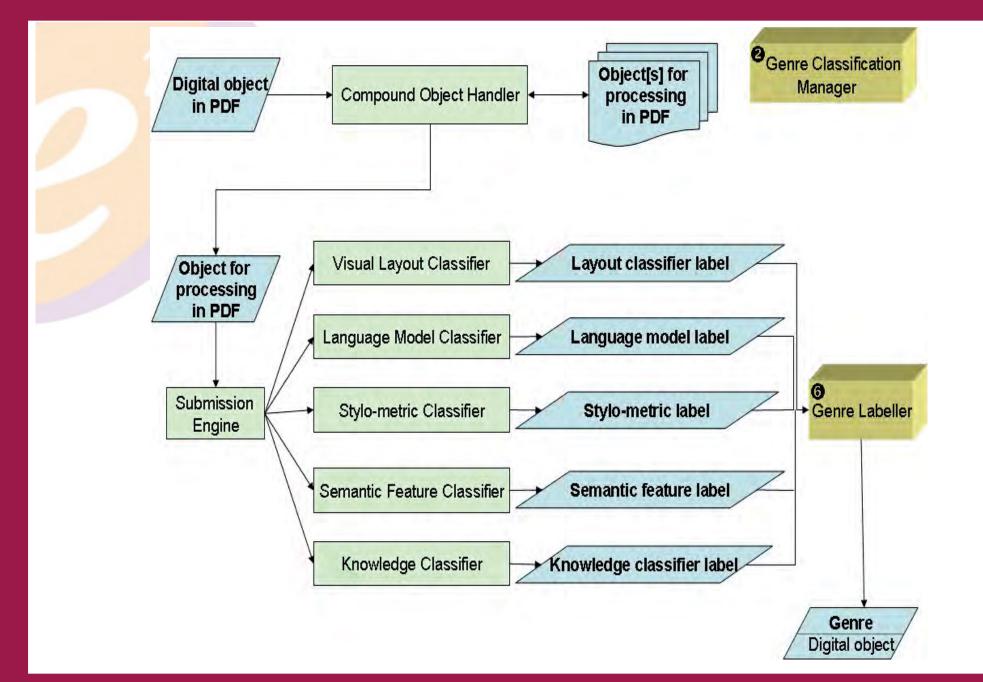


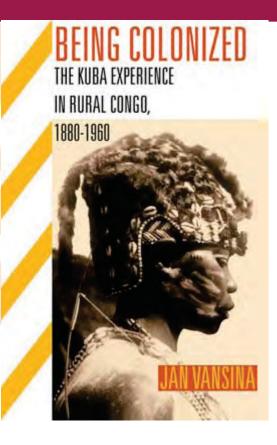


Home Register/Login	The KRYS I corpus is a collection of over 6300 documents labelled with their genre classes. It was constructed as part of a research initiative to automate document genre	
Information	classes. It was constructed as part of a research initiative to automate document genre classification driven by the <u>Digital Curation Centre</u> . It was carried out at the <u>Humanities</u> <u>Advanced Technology and Information Institute (HATII)</u> , <u>University of Glasgow</u> between 2005 and 2008.	
Terms of Use	The notion of genre is deeply embedded in the way humans organise information.	
<u>Contact</u>	Identifying the genre of a document helps to characterise the physical and conceptual structure of the text, helping to capture the style and location of further information within the text. There have been very few genre-labelled corpora available to the	
DCC	research community. Our corpus is made available here to fill this gap and serve as a valuable resource for researchers in:	
		×

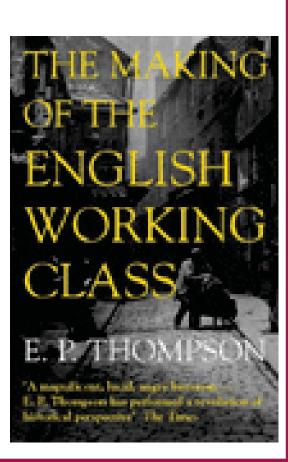
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# Thank you for your attention