Terminology for new media art

James M Turner, professeur

Université de Montréal

Faculté des arts et des sciences
École de bibliothéconomie
et des sciences de l'information

1

Outline

- Introduction
- The DOCAM terminology committee
- Glossary
- Thesaurus
- Ontology?
- Some thoughts

2

Introduction

- The general problem of terminology
- Past and present
- DOCAM's terminology committee

3

The general problem

- The nature of languages
- Waltz, Markey, Panofsky
- Representation and management

4

The nature of languages

- Tool for human communication
- Basic instrument for thinking
- National, regional, artificial, slang, secret
- Organic : evolves over time
- The need to manage all this
- Things to think about :

5

Waltz, Markey, Panofsky

- David Waltz : language is like a game of charades
  - We use a simplified version to represent the world, something like shorthand
  - But each world is like an indexing term, which refers to a much broader reality

6

Markey

- The Gombrich fallacy:
  - The message received is the same as the message transmitted (Markey 1981, 20)
  - For each person, any word can have particular meaning, for example:
    - mother, dog, coriander, métro

7

Panofsky

- Another level of translation, of representation, the expression of a deeper reality:
  - when a man lifts his hat upon greeting a lady, a social interaction is taking place

8

And so on

- Terminology, indexing, representation, communication, it's all semiotics
- The essential problem in information science: how to represent things so they can best be managed

9

Representation and management

- With the information explosion (early 20th century) came the need to manage all this information
- This is done by representation: extract the essential reality, which then points to a much broader universe
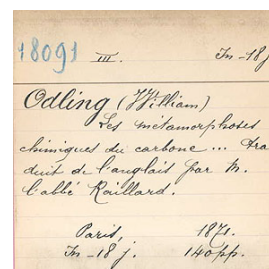- Tools that developed: cataloguing, indexing, classification

10

Past and present

- Cataloguing, indexing, classification
- Thesauruses
- Cuts, deterioration
- The new world of information

11

Cataloguing, indexing, classification

- The catalogue record represents the object at hand:

12

Introduction
Past and present
Cataloguing, indexing, classification

Once upon a time...

- The library in miniature

- Authors, titles, subjects

Introduction
Past and present
Cataloguing, indexing, classification

Indexing

- Quickly now: what's this finger called?

Introduction
Past and present
Cataloguing, indexing, classification

Book indexes

- Many more indexes in English-language books than in French-language books -- the tradition is much stronger

- A piece of intellectual work, a kind of synthesis of the contents

- In the 1960s : KWIC, KWOC, KWAC

- In the 1980s : emphasis on generating automatically, a kind of concordance

---

Introduction
Past and present
Cataloguing, indexing, classification

KWIC

Introduction
Past and present
Cataloguing, indexing, classification

KWOC

```
                      frequency
       very high      frequency radiation
                      frequent flier miles

                      high altitude
            very      high frequency
            very      high frequency radiation
                      high hat

                      radiation
very high frequency   radiation
                      radiation therapy

            high      velocity
                      very high frequency radiation
                      very large scale integration
       pressure       vessels
```

Introduction
Past and present
Cataloguing, indexing, classification

Picture indexing

- Pre-iconographic : woman, wheel, sword, cushion, palm leaf
- Iconographic : Saint Catherine of Alexandria, Christian martyr, 4th C., Caravaggio
- Iconological : the wheel: an instrument of torture; the palm: sacrifice, victory; the sword: the fight for truth; the cushion: nobility
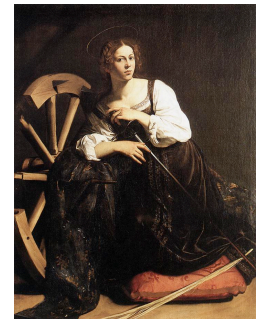
Introduction
   Past and present
      Cataloguing, indexing, classification

Classification

- Emerged from the information explosion, the industrial revolution, compulsory education
- Development of book classifications (Cutter, Dewey, CDU, Ranganathan, Bliss)
- An attempt to find a place for each concept in the world of knowledge
- A classification for art: Iconclass (van de Waal, 1950s, <http://www.iconclass.nl/>)

19

Introduction
   Past and present
      Cataloguing, indexing, classification

An example (Brunet-Parguez)

144 Ouvrages des Saints Pères latins et de quelques autres écrivains ecclésiastiques
  144A Pères latins proprement dits (jusqu'à 604, Grégoire de Tours)
  144B Théologiens médiévaux de l'église latine (voir aussi 15)

145 Ouvrages des Saints Pères arméniens

15 THEOLOGIENS
  151 Théologie scolastique et dogmatique
    151A Introduction, dictionnaires et recueils
    151B Cours et traités généraux
    151C Ouvrages des théologiens scolastiques et controversistes
    151D Traités particuliers de théologie dogmatique, de diverses confessions
      151D1 Dieu et les personnes divines ; incarnation, passion, mort et résurrection de Jésus - Christ
      151D2 La Création et les créatures
        151D2A La vierge
        151D2B Les saints
        151D2C Les anges
        151D2D Les démons, l'enfer
        151D2E L'homme
        151D2F L'âme
        151D2G Les quatre fins de l'homme, purgatoire, résurrection des morts
        151D2H La grâce
        151D2I La prédestination
        151D2J Le libre-arbitre

      151D3 Traités touchant l'église
        151D3A Les sacrements
        151D3B Le culte religieux
        151D3C Les indulgences
        151D3D Les miracles

  152 Théologie morale
    152A Traités généraux
    152B Traités moraux particuliers
      152B1 sur les sacrements
      152B2 Instructions pour les confesseurs et les curés
      152B3 Cas de conscience (dictionnaires)
      152B4 Casuistique, probabilité

20

Introduction
   Past and present
      Cataloguing, indexing, classification

Stabilising, education

- With time, methods developed for cataloguing, indexing, classification become stable
- Libraries, archives, and museums are the storehouses of knowledge, and they play an important role in education

21

Thesauruses (thesauri)

- "Controlled vocabulary" is a way to manage synonyms and multiple meanings
- Another vocabulary management tool: the thesaurus
- From a long tradition (Roget 1852), development of a tool for managing specialised vocabulary
- In information science, usually specific to an area of knowledge

22

Introduction
   Past and present
      Thesauruses

Tool for management

Chaise berçante

Note d'application : Chaise munie de patins courbes que l'on peut faire osciller d'avant en arrière par un mouvement du corps

EP	Berçante
	Berceuse (chaise)
	Bergère (chaise)
	Chaise à bascule
	Chaise-berceur
	Chaise à berçoir
	Chaise berceuse
	Chaise grand-mère
TG	Chaise
TS	Berçante à Brunswick
	Chaise berçante d'enfant
	Chaise berceuse à Brunswick
TR	Siège à bascule

Notes: Lorsqu'une chaise berçante est utilisée comme élément d'une installation, elle peut aussi porter d'autres noms, lesquels on peut appliquer librement

TA	Rocking chair

23

Introduction
   Passé et présent
      Thésauruses

Art, images

- *Art & Architecture Thesaurus* (Getty Research Institute, <http://www.getty.edu/research/conducting_research/vocabularies/aat/>)
- *Thesaurus for Graphic Materials* (Library of Congress, <http://www.loc.gov/rr/print/tgm1/>)
- *Thésaurus iconographique* (France. Ministère de la Culture. Thésaurus iconographique : système descriptif des représentations / François Garnier et Véronique Labbé. Paris: Le Léopard d'or, 1984.)

24

Cuts, deterioration

- In the 1990s, lots of budget cuts

- Many collections bought and sold

- This sometimes involves important changes (e.g. Corbis buying the Bettman Archive)

- Often, "simplifying" tools built with much care

- Deterioration of practices, cutting positions, cheaper but untrained personnel

The new world of information

- Meanwhile, the World Wide Web arrives on the scene (November 1994)

- Suddenly, connectivity (online access to many collections)

- Anarchy reigns: each collection has its own cataloguing policy, indexing vocabulary

Introduction
    Passé et présent
        The new world

What now ?

- A great mass of documentation on the web

- Norms, layers of software to make it work, e.g. search engines, Z39.50

- Some attempts to classify web pages

- "Indexing" done by search engines

- The semantic web, Web 2.0

Introduction
    Passé et présent
        The new world

The semantic web

- An attempt to impose order

- Elaborate metadata, layers of metadata, metadata wrappers

- Dublin Core (DC), Resource Description Framework (RDF)

- Long-term, large-scale development

- In the long term, we can hope for information structured as it is created

Introduction
    Passé et présent
        The new world

Web 2.0

- Web services like YouTube, MySpace, flickr, del.icio.us, Facebook, blogs, and so on, have created a new environment

- This involves indexing (tagging) by users, uncontrolled vocabulary, multiple indexers

- Folksonomy : collaboratively creating and managing tags to annotate and categorise content (Wikipedia)

Introduction
    Passé et présent
        The new world

Interesting facts

- Inter-indexer consistency only reaches about 50%

- The huge mass of documentation available requires automated techniques, it's a question of economics

- Systems don't necessarily perform very well, but some of them are are no worse than what was there before

The DOCAM terminology committee

- Why a new tool?

- Some plans

Why a new tool?

- Tools already exist for media art, variable media, unstable media

- So why create another one?

- Because of all these things we've looked at (synonyms, multiple meanings, semiotics, representation)

Context

- An emerging discipline

- All work is experimental

- Each project has particular needs

- DOCAM does too

Some plans

- Some of the work we hope to accomplish:
  - build a glossary
  - build a thesaurus
  - build an ontology
- Adopting SKOS (Simple Knowledge Organization System)
- Many discussions later ...

Glossary

- Description
- Characteristics
- Work to date
- Structure
- Take [two]

Description

- A tool for managing terminology

- By definition, only offers definitions (one or many) for terms

- Support DOCAM researchers, the professional community

- A complement to existing tools and projects

Characteristics

- Bilingual
- Useful
- Easy access

Bilingual

- French and English
- Finding sources in each language, not translating the definitions
- Transcreation: establish an equivalent in the other language, without translating necessarily

Useful

- Current
- Rapid revisions possible, if necessary
- Respond to user needs+

User needs

- A call out to DOCAM committees to send terms
- If necessary, multiple definitions:
  - For example, maybe the definition of a piece of technology is not the same for a cataloguer as for a preserver

Easy access

- Available on the web
- So the most current version is the one online
- Using World Wide Web Consortium (W3C) standards to foster longevity
  - XHTML, CSS2, SKOS
- XHTML version online, new version uses PHP

Work to date

- Search for existing tools
- Search for terminology
- Studying data structures
- Organising, coding the data
- Always some hesitation about the structure, because of interoperability concerns (thesaurus, ontology, systems elsewhere)

Structure

- Term in French
  Equivalent in English
  See also (other names for this term)
  Context (area: film, preservation,)
  Definition 1, 2, 3...
  Reference (source for each definition)
  Source of the request
  Creation, modification date of the record

43

DOCUMENTATION ET CONSERVATION DU PATRIMOINE DES **ARTS** MÉDIATIQUES

DOC**A**M

*la fondation Daniel Langlois
pour l'art, la science et la technologie*

Retour à la liste alphabétique * English Version

Copie de référence

Terme en anglais : Reference print

Voir aussi :

Copie étalon
Copie mère
Copie originale

Catégorie

Contexte : Films

Définition :

Copie noir et blanc ou couleur (sonore), tirée dans des conditions optimales d'étalonnage et à laquelle doivent être conformes les copies d'exploitation.
Référence : Grand dictionnaire terminologique, Office québécois de la langue française. http://www.granddictionnaire.ca .

Définition :

Copie dont les performances sont prises en référence pour effectuer des comparaisons avec d'autres copies.
Référence : Calas, Marie-France et Jean-Marc Fontaine (dir.). La conservation des documents sonores. Paris : CNRS Éditions, 1996.

Provenance de la demande : Comité de Conservation et de Préservation.

Date de création de la fiche : 2006/09/29.

Example of a record

44

DOCUMENTATION ET CONSERVATION DU PATRIMOINE DES **ARTS** MÉDIATIQUES

DOC**A**M

*la fondation Daniel Langlois
pour l'art, la science et la technologie*

Glossaire des termes français pour le projet DOCAM (>Glossaire anglais)

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

analogique
authenticité
bande maîtresse
bande mère
bande originale
bande sous-maîtresse
copie d'essai
copie d'exploitation
copie de référence
copie de série
copie étalon
copie mère
copie originale
copie standard
dubmaster
électrique (adj.)
électronique (n.f.)
électronique (adj.)
intermédiaire positif
internégatif
interpositif
master
positif intermédiaire couleur
robotique (n.f.)
robotique (adj.)
robotique intelligente
robotique mobile
souche
technologie

Index

45

Take [two]

- Decision: database, or XHTML pages?

- Old version: XHTML pages

- New version: a database, using PHP

- An important decision, because the glossary is the basis for the thesaurus

46

Thesaurus

- Semantic networks

- Bilingual

- Online

- Intellectual work

- Partnering

- Plans

47

Semantic networks

- For each term, identify other terms in the glossary that are somehow related

- What is the relationship?

- Decide which term to use

- Identify equivalent in the other language

Chaise berçante

Note d'application : Chaise munie de patins courbes que l'on peut faire osciller d'avant en arrière par un mouvement du corps

EP	Berçante
	Berceuse (chaise)
	Bergère (chaise)
	Chaise à bascule
	Chaise-berceur
	Chaise à berçoir
	Chaise berceuse
	Chaise grand-mère
TG	Chaise
TS	Berçante à Brunswick
	Chaise berçante d'enfant
	Chaise berceuse à Brunswick
TR	Siège à bascule

Notes: Lorsqu'une chaise berçante est utilisée comme élément d'une installation, elle peut aussi porter d'autres noms, lesquels on peut appliquer librement

TA	Rocking chair

48

Bilingual

- Bilingual = unilingual twice

- For many terms, no direct equivalent

- In this example, these equivalents (EP) don't exist in English

Chaise berçante

Note d'application : Chaise munie de patins courbes que l'on peut faire osciller d'avant en arrière par un mouvement du corps

| EP | Berçante |
	Berceuse (chaise)
	Bergère (chaise)
	Chaise à bascule
	Chaise-berceur
	Chaise à berçoir
	Chaise berceuse
	Chaise grand-mère
TG	Chaise
TS	Berçante à Brunswick
	Chaise berçante d'enfant
	Chaise berceuse à Brunswick
TR	Siège à bascule

Notes: Lorsqu'une chaise berçante est utilisée comme élément d'une installation, elle peut aussi porter d'autres noms, lesquels on peut appliquer librement

| TA | Rocking chair |

Other aspects

- In general, parallel bilingual thesauruses only work well in specialised situations (e.g. medecine, sciences), otherwise they are messy

- This is for the same reason automatic translation doesn't work very well

- Different contexts, different cultures, different realities -- there isn't necessarily an exact equivalent

---

A few examples

Fleuve
Rivière → River

Boulangerie
Pâtisserie → Bakery
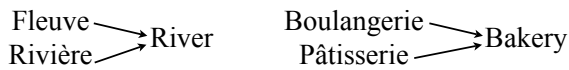
Different reality
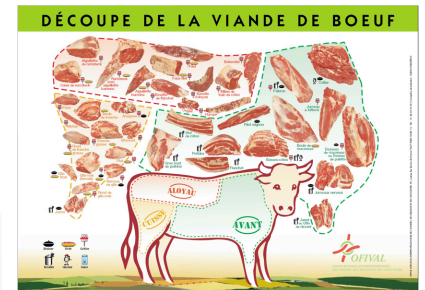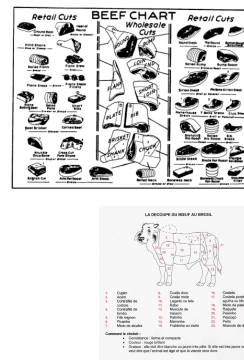
Online

- A hypertext version is desirable, so users can visit the nodes of the semantic network

- Of course, accessibility from anywhere is also a consideration

---

Intellectual work

- As with building an index, building a thesaurus is an intellectual task

- Humans need to do this work, at least for the moment

- There is lots of work going on, but computers can't yet determine relationships very well

Partnering

- Insofar as it's possible, we'd like to avoid reinventing the wheel

- The need to study existing thesauruses and develop partnerships

- Some work with V2, Institute for Unstable Media, Rotterdam (<http://www.v2.nl/>)

- Their thesaurus: >V2_Archive

Other possibilities

- Rhizome (<http://rhizome.org>) >Archives >TextBase (or >ArtBase to get artists' names)

- National Library of Australia, Preserving Access to Digital Information (PADI, < http://www.nla.gov.au/padi/>) >Browse Topics

- Of course, there are limits to the type of collaboration

- Furthermore, nobody else is using SKOS yet

Ontology?

- A nice dream, we'll see how we do

- If we get that far, the glossary and thesaurus will certainly contribute

- Maybe a structure like V2, PADI

- Perhaps a longterm project for DOCAM, the FDL, or...

Some thoughts

- User needs vary greatly

- It's intellectual work, but ultimately, all tools for organising knowledge need to be practical

- Our goal: offer tools that will help users find their way in the sea of available terminology

- Artists, curators, researchers, preservationists can use the tools as they see fit

References

Markey, Karen. 1981. Computer-assisted construction of a guide to themes and concepts in medieval art and their essential attributes. PhD diss., Syracuse University.

Panofsky, Erwin. 1955. *Meaning in the visual arts : papers in and on art history*. Garden City, N.Y.: Doubleday Anchor Books.

Waltz, David L. 1988. The prospects for building truly intelligent machines. *Dædalus* (winter): 191–212.

That's it

james.turner@umontreal.ca

http://mapageweb.umontreal.ca/turner