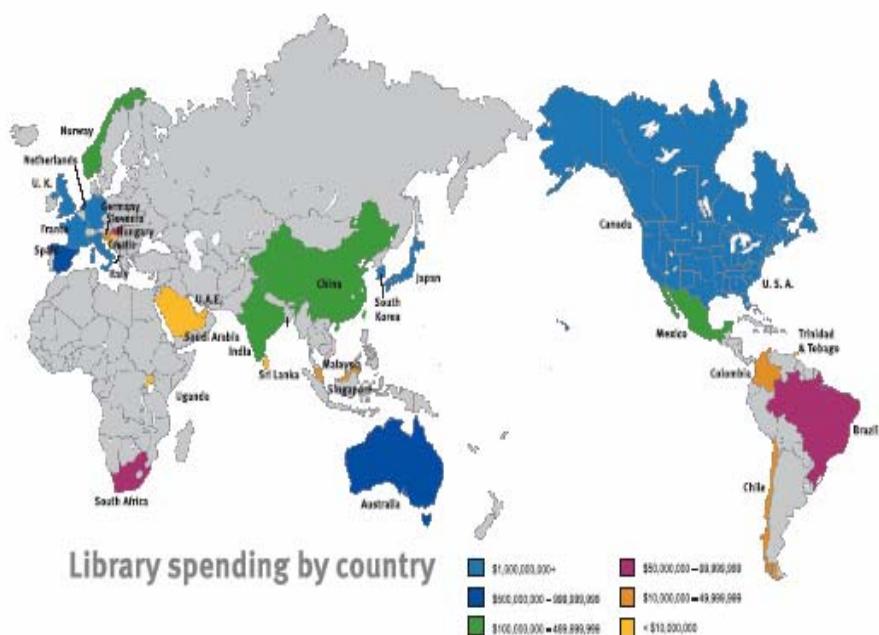


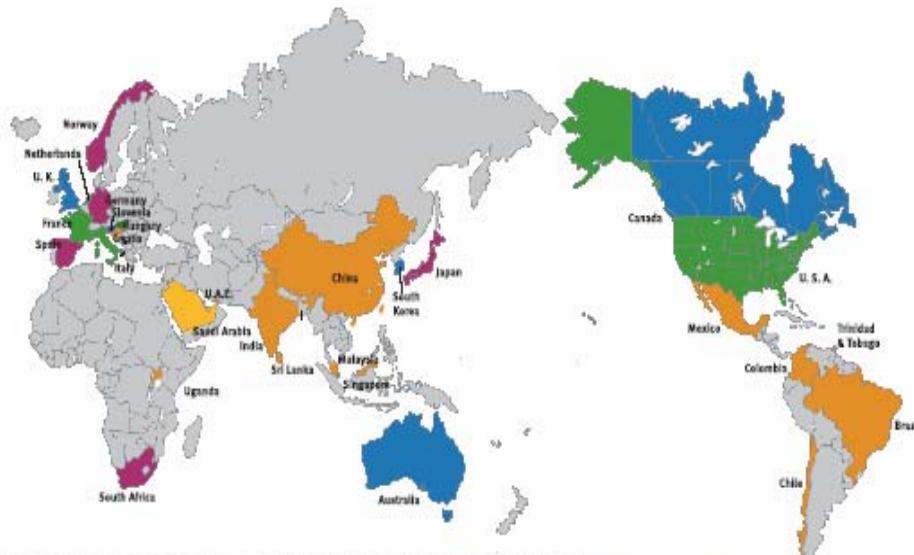
資訊時代編目員面臨的衝擊

陳昭珍

國立臺灣師範大學圖書資訊學研究所

2004/7/12





Country library spending

Country	Library Spending (Millions)	% GDP Libraries	Country	Library Spending (Millions)	% GDP Libraries	Country	Library Spending (Millions)	% GDP Libraries
United States	\$ 11,951	0.11%	Spain	\$ 531	0.08%	Malaysia	\$ 28	0.03%
Japan	\$ 3,247	0.08%	China	\$ 218	0.02%	Colombia	\$ 16	0.02%
United Kingdom	\$ 3,221	0.21%	Norway	\$ 179	0.09%	Chile	\$ 13	0.02%
Italy	\$ 1,599	0.14%	Mexico	\$ 104	0.02%	Croatia	\$ 8	0.04%
France	\$ 1,591	0.11%	India	\$ 103	0.02%	Saudi Arabia	\$ 7	0.00%
South Korea	\$ 1,507	0.32%	Brazil	\$ 90	0.02%	Sri Lanka	\$ 3	0.02%
Canada	\$ 1,447	0.20%	Singapore	\$ 70	0.08%	Trinidad & Tobago	\$ 3	0.03%
Germany	\$ 1,353	0.07%	South Africa	\$ 68	0.06%	U.A.E.	\$ 3	0.00%
Australia	\$ 834	0.20%	Hungary	\$ 64	0.10%	Uganda	\$ 1	0.01%
Netherlands	\$ 536	0.13%	Slovenia	\$ 35	0.17%			

Source: Various including LibEcon, UNESCO, World Encyclopedia of Library and Information Services and estimates for certain countries.

一些新的編目實例

- FRBR 的實際應用：IU Digital Music Library
- Metadata的串連及視覺化呈現
- 知識分類體系：分類表、索引典及 topic maps

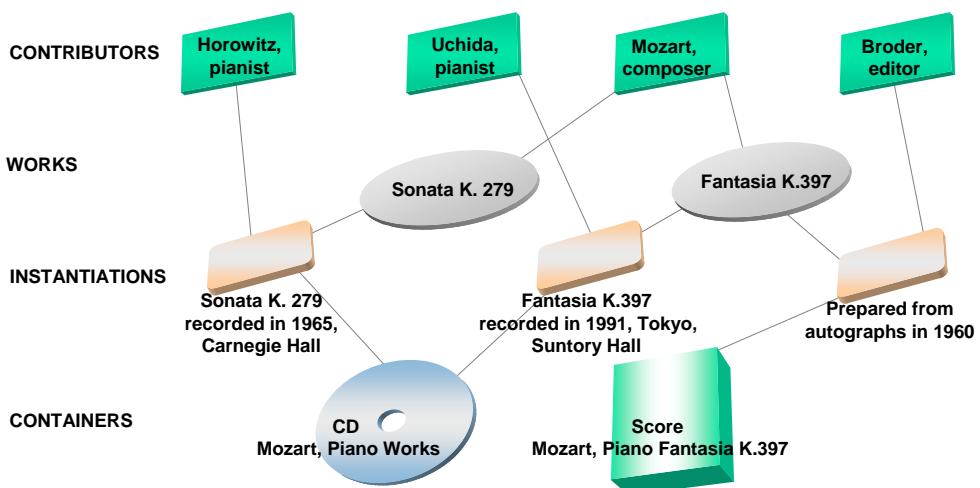
Variations 1

- Variations
 - Production DL of sound recordings (~8000 titles) and scores (~200 titles) in IU Cook Music Library
 - Used for course reserves and general collection access
- Variations = production service
- Variations2 = R&D system

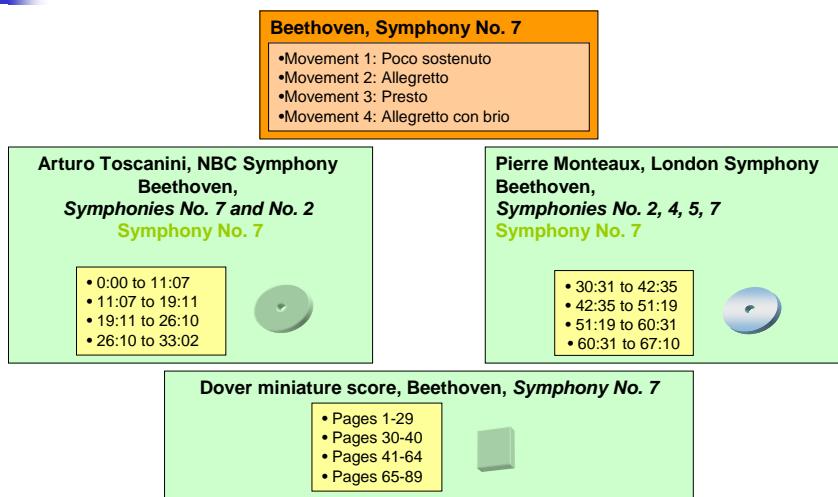
Variations2 system

- Integrated access to music in all formats
 - Digital audio recordings
 - Score images
 - Score notation
 - Video
- Delivery to wide range of users
 - Faculty: teaching, course design, research
 - Students: coursework, independent study
 - Music librarians, other library users
 - Extensible
- Multiple user interfaces
- Staged development

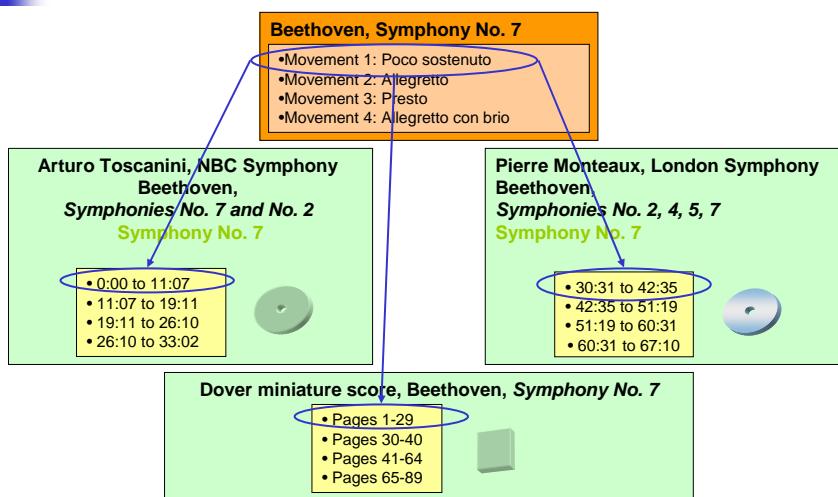
Variations2 Data Model: Example



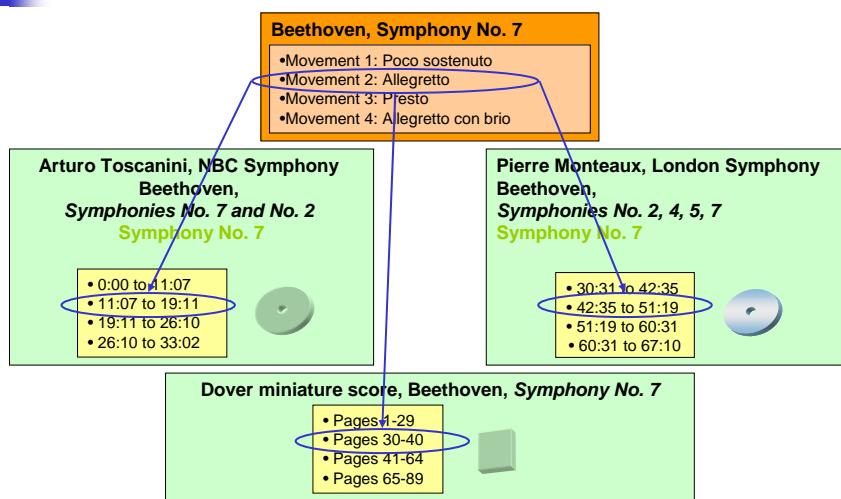
Work Structure: Example



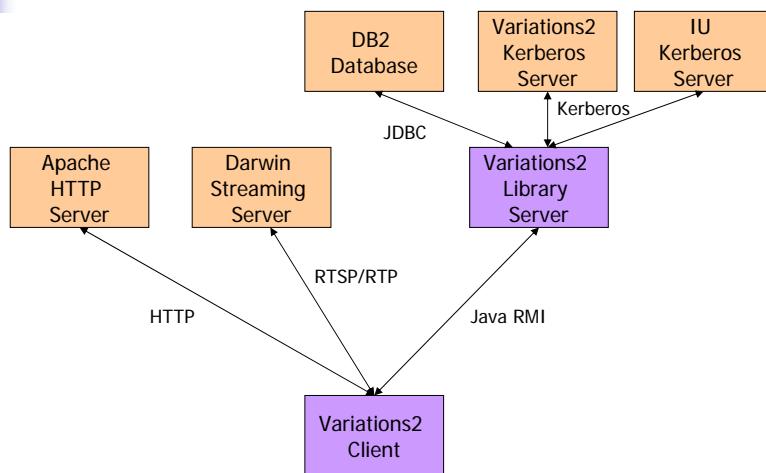
Work Structure: Example



Work Structure: Example



Variations2 1.0 Communications



	Orchestral	Sonata	Variations	Other
Beethoven				Sonata for cello and piano ... Variations on a theme ...
Brahms				Cello sonata no.1 ... Variations in E flat ... 3 pieces, op. 8 ...
Martinu	 			Trio sonata in G major Cello Concerto no. 1 ... Sonata no. 1 for piano and ... 3 pieces, op. 10 ... Variations on a theme ...

Figure 3. Visualization of Search Results

Cello Concerto no.1
 Composer: [Bohuslav Martinu](#)
 Composed: 1930
 First Performed: 28 January 1931

Online Media

- [Published](#)
- [Recordings](#)
- [Scores](#)

1955
1959
1978
1992
1996

Concerto No. 1 for Cello and Orchestra, performed by Janos Starker in 1955

Related Resources

[New Grove Dictionary of Music and Musicians](#)
 Online list of chamber works by Martinu is available

[Bohuslav Martinu Foundation website](#)
 Offers list of works (in Czech) and many other resources

Figure 4. Work Window



Bohuslav Martinu

Born: 8 December 1890, in Policka, Bohemia

Died: 28 August, 1959

Works by Martinu

Composed	Chamber Operas	Orchestral
----------	----------------	------------

1928

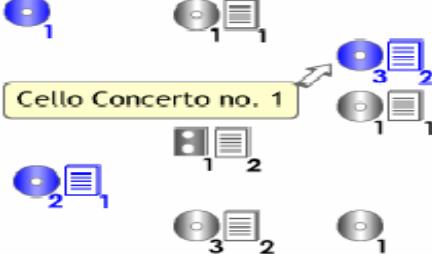
1930

1936

1938

1942

1953



Cello Concerto no. 1

Related Resources

[New Grove Dictionary of Music and Musicians](#)
Online article on Bohuslav Martinu is available

[Bohuslav Martinu Foundation website](#)
Offers list of works (in Czech) and many other resources

Figure 5. Composer Window
 the digital library holdings provide a syllabus, either

Beethoven Fidelio

Op. 72

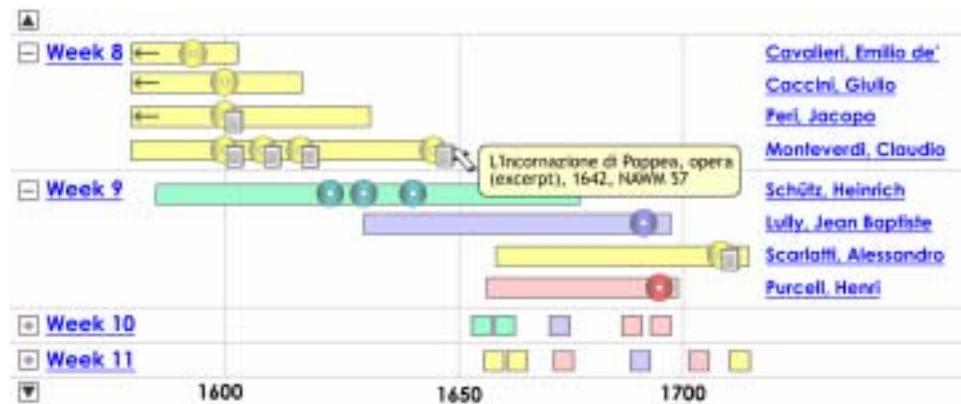
Ouverture

to the Opera Fidelio

Op. 72.



Visual Reserve List



Franz Joseph Haydn
Menuet from Divertimento in C, Hob. XVI, I

Media Player

Phrases

Timeline

Score

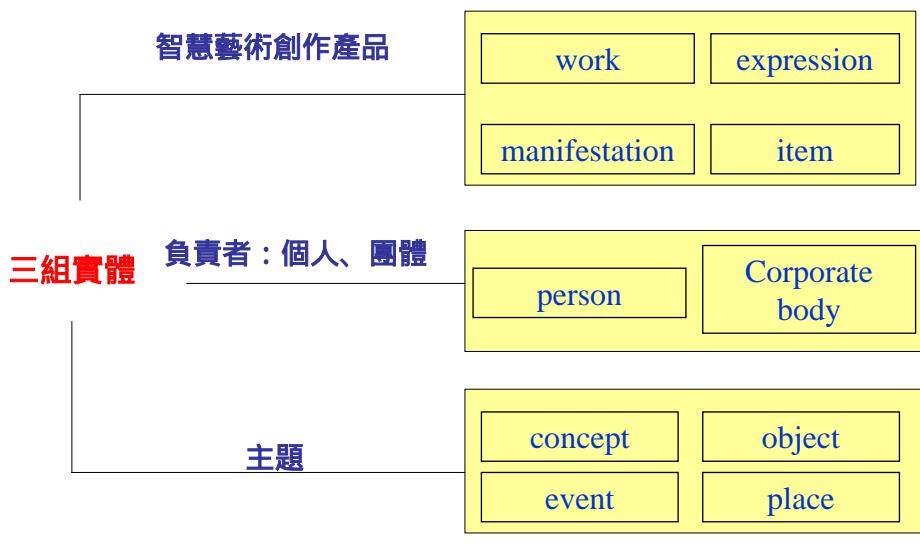
Left-Right: Click and drag on the marker to scroll left-right

Roman Numerals

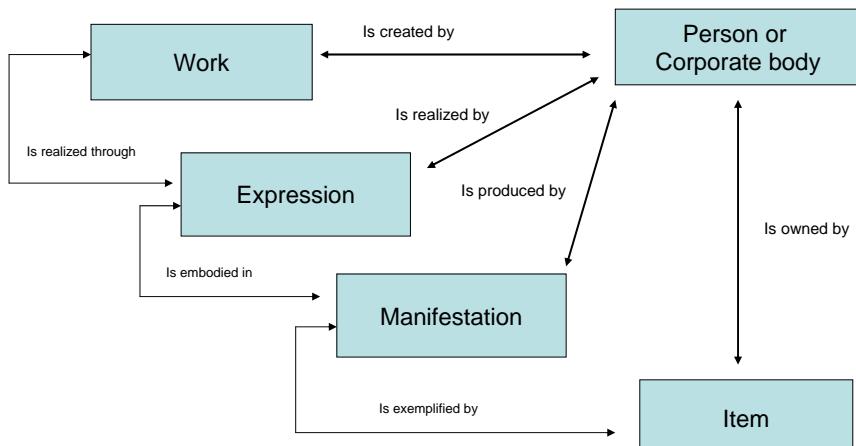
Form Diagram Roman Numerals Non-chord tones Sight Reading

1. Create a tree diagram showing the phrase structure of this piece. Double-click on the score to start the creation of each new phrase. You may reposition the marker by dragging it to the left or right. You may delete a marker by double-clicking on it.
2. Once you have created your tree diagram, indicate the phrase form by selecting the correct phrase label from each drop-down list in the "Phrases" row.
3. Which term best describes the form of this piece?
 - Atonal
 - Homophony
 - Balanced binary
 - Ostinato

第一層架構—實體(Entities)表現圖

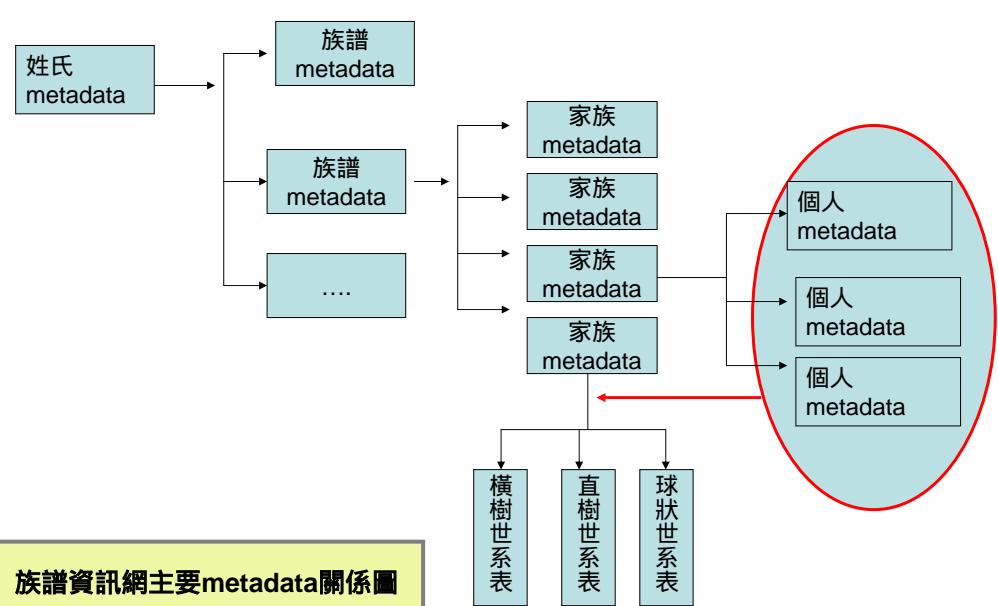


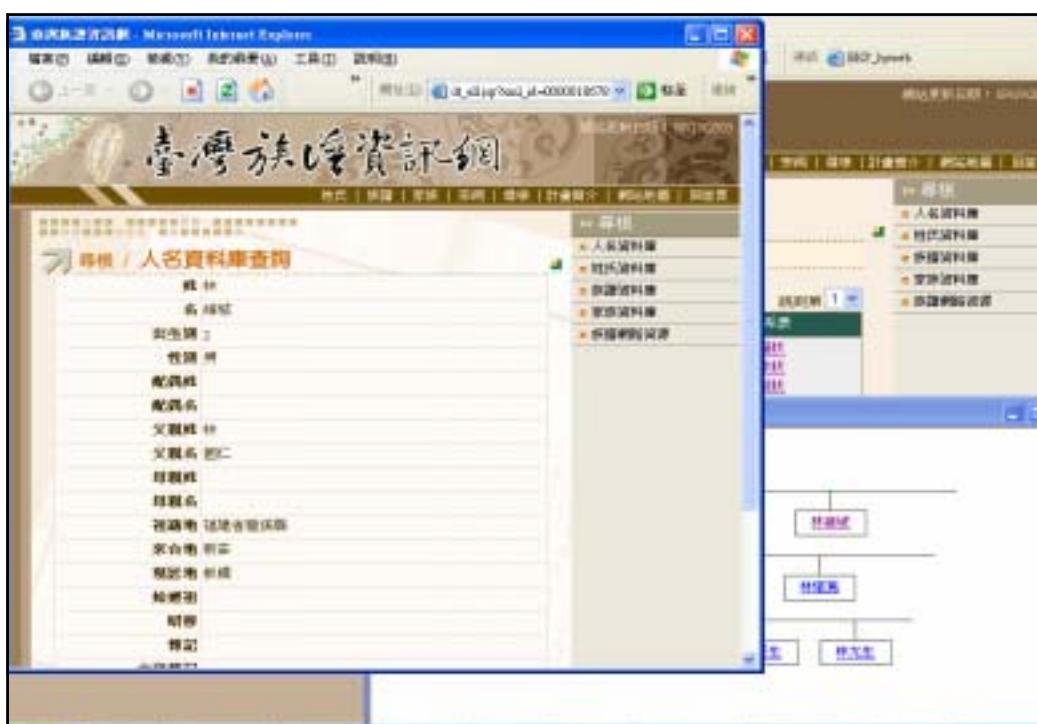
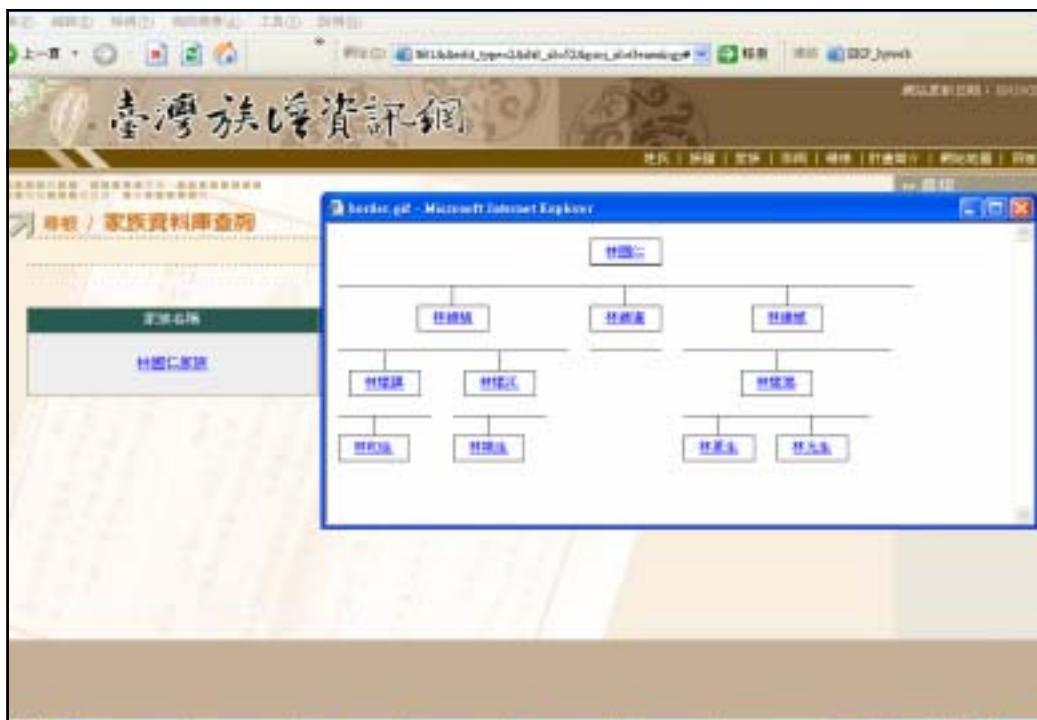
IFLA FRBR Entities

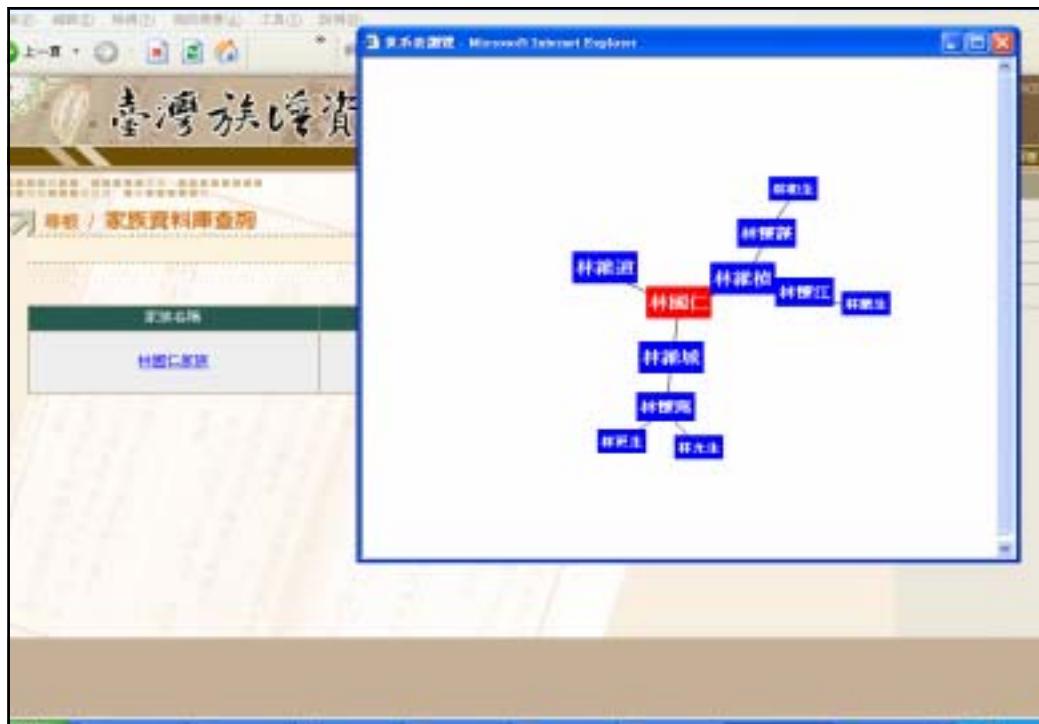


一些新的編目實例

- FRBR 的實際應用：IU Digital Music Library
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 - 知識分類體系：分類表、索引典及 topic maps





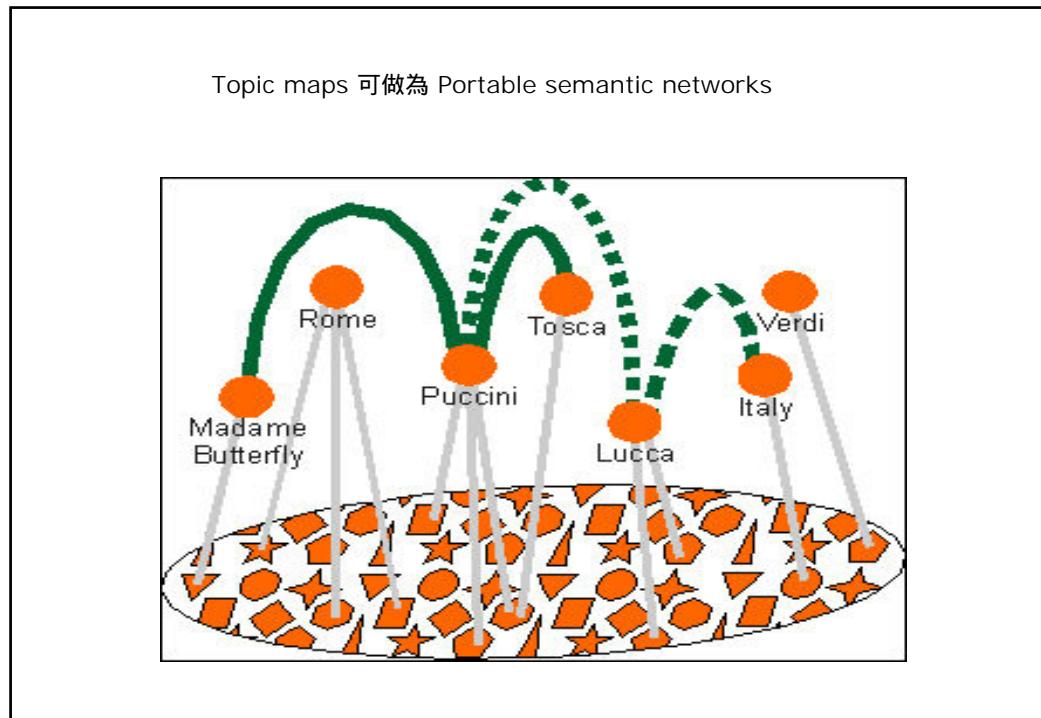
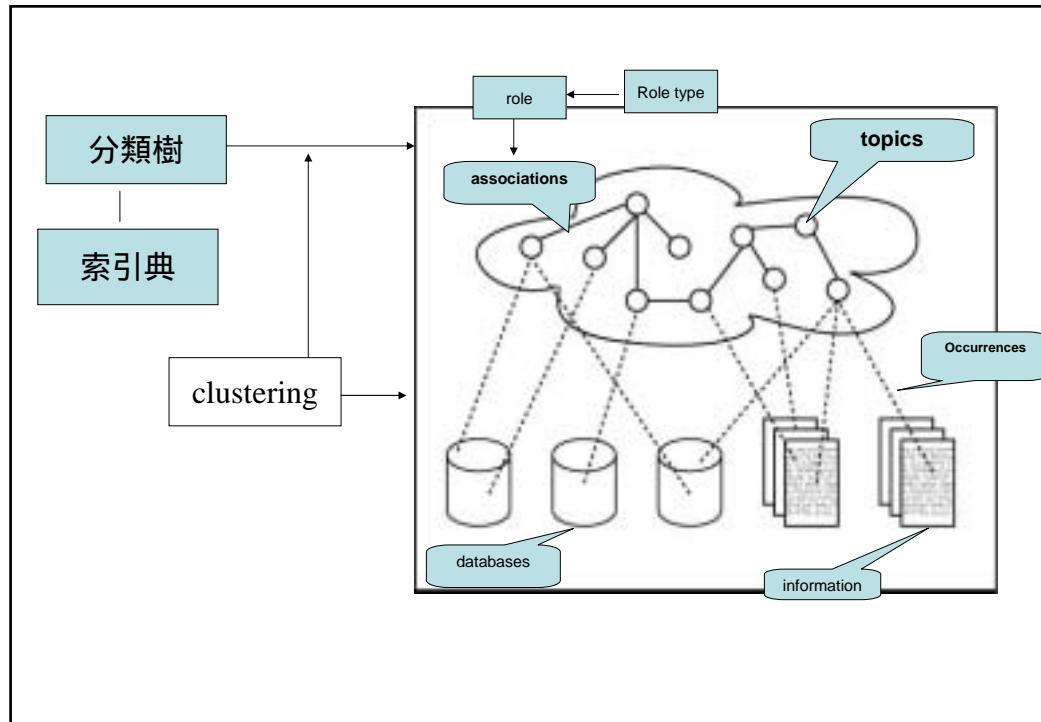




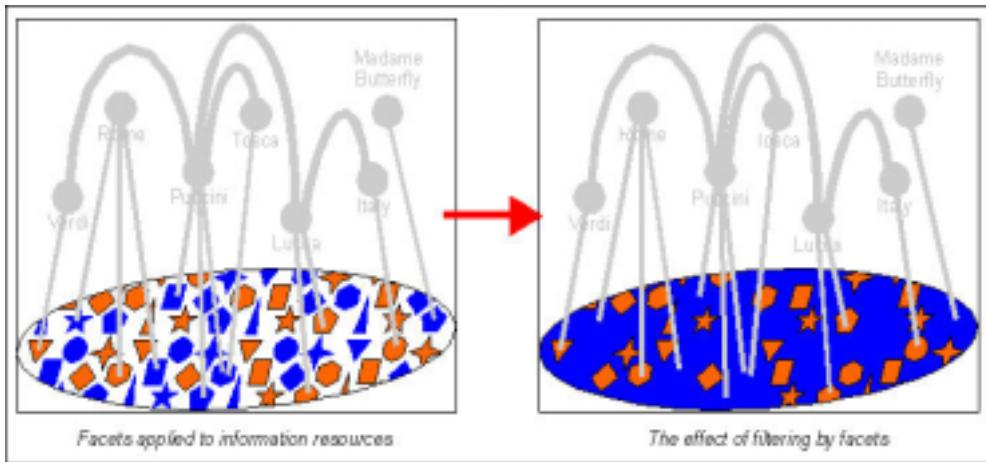


一些新的編目實例

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利用topic maps 做資訊過濾



利用topic maps建立網站資料的階層式分群(Hierarchical Clustering)

- 資料之間有從屬關係
- 形成樹狀結構



行政院知識分類體系

位置：首頁 > 索引與查詢 > 主題目錄查詢 > 主題查詢結果

● 知識分類體系

類別頭文字	主題名稱	說明
TREE 1	Business & Economy	B2B, Finance, Shopping, Jobs...
TREE 2	Business & Economy	B2B, Finance, Shopping, Jobs...
TREE 3	Business & Economy	B2B, Finance, Shopping, Jobs...
	Business & Economy	B2B, Finance, Shopping, Jobs...
	Business & Economy	B2B, Finance, Shopping, Jobs...
	Business & Economy	B2B, Finance, Shopping, Jobs...

SUBSYSTEM: CMITA.CDR

行政院知識分類體系 - Microsoft Internet Explorer

位置：首頁 > 索引與查詢 > 主題目錄查詢 > 主題查詢結果

APPLET

Category: Furniture

Sub-categories:

- classifications by form or function
 - furniture
 - furniture by form or functions
 - accesses (furniture)
 - bedding furniture
 - sleeping and reclining furniture
- general categories
 - furniture
- specialized
 - cabinet
 - chest
 - chest of drawers**
 - cupboards
 - wardrobes (case furniture)
 - sideboards (furniture)
 - desk
 - exhibit cases
 - counters
 - kiosks
 - bookcases
 - corner shelves
 - dispensaries (furniture)
 - etagères
 - carries (storage furniture)
 - bookshelves
 - china shelves

APPLET

Properties:

Name	Class	Range
chest of drawers	Meta Class	ALLClass
Concurrent	Type of case furniture usually having six drawers but sometimes made with three or more, generally supported on feet and sometimes resting directly on the floor, a "concurrent (chests of drawers)" for instance pieces generally supported on short legs.	onomy shopping
business		onomy shopping
dressers		onomy shopping
beaux		onomy shopping
bausse (chests of drawers)		onomy shopping
bure		onomy shopping
chests, dressing		onomy shopping
drawers, chests of		onomy shopping
dressers (chests of drawer)		onomy shopping
dressing chests		onomy shopping

The Library Landscape

- The Social Landscape
- The Technology Landscape

Source: The landscape, OCLC

The Social Landscape

- Staffing
- New roles
- Accommodating users
- Traditional versus nontraditional content
- Preservation and persistence
- Funding and accountability
- collaboration

Staffing: key points interviewed by OCLC

- 很多年長者要退休，新進者必需熟知 e-material and virtual services
- 我們需要組織免費的網路資源嗎
- 要讓年長的館員徵集未出版的資料，相當困難
- 圖書館員需重新分配工作，處理digital scholarship, open-source projects等事務
- 有很多館長並非圖書館專業
- 年輕的館員希望設計的系統是meet users where they are
- 圖書館員無冒險精神
- 並無繼續教育
- We're well aware of trends and issues但是很多館員並不想改變現狀



Anatomy of a Gen X librarian: "Energized and excited"



Profile:

Female, age 28

Librarian, Communications Studies

Education:

B.A. History—University of Idaho,
MLIS University of Washington

Learning style:

Learns by doing, not by "seat" learning

Favorite pastimes:

Antiquing
Reading

Staffing

- Collectively, we feel we need to do everything ourselves – we need to get over this
- Working collaboratively with people to make things happen

New roles: key points interviewed by OCLC

- The library should serve as a community/civic center
- 公共圖書館應匯集社區資訊並與其他地方性組織合作
- Retail expectations
- Access is a form of sustainability
- 館藏發展難在new formats and delivery mechanisms
- 由於讀者自web上self-service，圖書館典藏使用降低，一般民眾使用之資料，大量降低其傳統通路-如圖書館
- 圖書館應該成為其他社群之資訊管理資源
- 圖書館應與更多元的機構一起工作
- 圖書館要積極推動e-learning, 而非成為他人的partner

Accommodating users

- 避免由圖書館員的角度看事情，應由讀者的角度看事情
- 使用者不太在意資料是web pages, a book or a serial
- Personalization and categorization真的很重要
- 圖書館員低估使用者查尋 web的能力
- 使用者在圖書館中satisfaction with self-service的比例很高
- 圖書館員不可能change user behavior
- 對使用者而言，“方便”非常重要

Traditional versus nontraditional content

- Collection-centric is old-fashioned, context is the king
- Context means adding intellectual value to content
- 以POD方式買書應較為便宜
- We need a way to bring together all content on a topic, not just what's in the catalog
- 圖書館應將一般已出版書的館藏留給Amazons
- 圖書館的特藏應該liberated and desegregated

Preservation and persistence

- 數位保存是國家層次的問題
- 目前的目錄無法建立主題性的瀏覽方式
- 數位化的目的在流通而非典藏

Funding and accountability

- 技術不是問題，經費才是
- 圖書館對內容的價格有不實際的期望 –因為他們對出版經濟不了解
- 數位內容對經費控制一點幫助都沒有
- 我們需要更有彈性的數位內容電子商務模式

collaboration



*Sustainability
is only possible
through
collaboration.*

The Technology Landscape

- An increasingly interconnected environment
- Network services and architecture
- New standards
- Universal access to information

An increasingly interconnected environment

- 為何環境有越來越多的連結需求
 - 數位時代圖書館需有更多的系統支援
 - 聯盟的成立及其他的合作計畫迫使系統需連結
 - 需與非圖書館單位連結，如校園入口網站或教學系統
 - 跨應用系統的單一授權服務

An increasingly interconnected environment

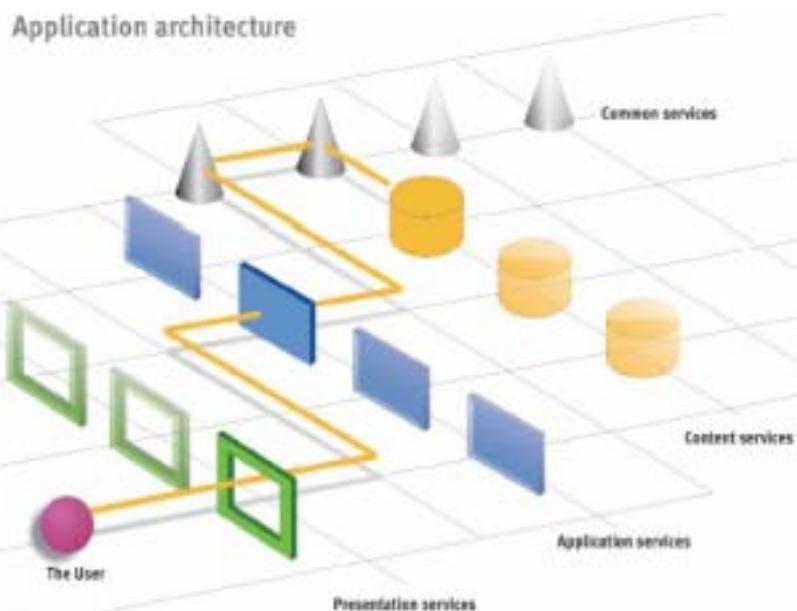
- System support
 - Library management system
 - Digital object management system
 - Portal or metasearch system
 - Resolver/Linker
 - ILL/resource sharing system
- Growth of formalized sharing
- Interconnecting and interoperability

The Technology Landscape

- An increasingly interconnected environment
- **Network services and architecture**
- New standards
- Universal access to information

Network services and architecture

- Presentation services
- Application
- Content services
- Common services





Content services

Content management services:
repository architectures, preservation, knowledge organization, retrieval ... e.g., OAIS, DSpace, Fedora, LCSH, Dewey ...

Packaging:

OAIS SIP/AIP/DIP, METS, RSS, SCORM, IMS-CPS

Information resources:

text, static images, moving images, audio, multimedia ... HTML, PDF, JPEG, GIF, MPG ...

Metadata:

discovery, technical, administrative, structural
DCMI, MARC, MODS, MIX, EAD, LOM ...



Application services

Generic Web services:
UDDI, WSDL, SOAP, XSLT ...

Discovery services:

Xquery, SRW/SRU, Z39.50 ...

Aggregation Services:

OAI, RSS, Web services, Semantic Web ...

Transaction services:

exchange, billing, delivery
NCIP (circulation,
ISO-ILL)...



Common services

Terminology services

Metadata schema registries

Directories

rights, people, organizations, collections ...

Identity management:
Shibboleth

Resolution Services:
OpenURL, identifiers
(PURL, DOI)



Presentation

Rendering:
browser, database interfaces, media players ...

Content views:
personalization, visualization ...

End-user support:
searching, ordering and delivery, technical support ...

The Technology Landscape

- An increasingly interconnected environment
- Network services and architecture
- **New standards**
- Universal access to information

New standards

- Repository and content standards
 - OAIS
 - Preservation
 - Content packaging
 - Content exchange
 - Metadata
- Application
 - Cross searching: Z39.50
 - Harvesting: OAI
 - Resolution: OpenURL
 - Niche library transaction application: NCIP and ILL

The Technology Landscape

- An increasingly interconnected environment
- Network services and architecture
- New standards
- Universal access to information

Universal access to information

- Semantic web
- Web services
- Grid computing
- Wireless technology

資訊時代編目員面臨的衝擊

- 我們不是唯一做資訊組織的人
- Metadata格式多元，MARC只是其中的一種
- 過去的資訊組織方法無法滿足主題瀏覽的需求
- 彈性的主題知識體系的呈現
- 更視覺化的目錄介面
- 有太多新科技、新標準需要澈底了解及實作
- 我們需要重新考慮圖書館的經營型態，當然包括分類編目模式