

The Getty Vocabularies' Localization and LOD Applications: Status Report from AAT-Taiwan

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The Getty Research Institute

藝術與建築索引典
Art & Architecture Thesaurus Taiwan



中央研究院數位文化中心

Summary of AAT-Taiwan @ 2016 ITWG



From English to Chinese

- Update on Translation Status
- AAT-Taiwan Principle for Disambiguation



From Chinese to English/ Localization

- Suggestion: Topics on Festivals of Taiwanese Indigenous People



Applications & Future Plans

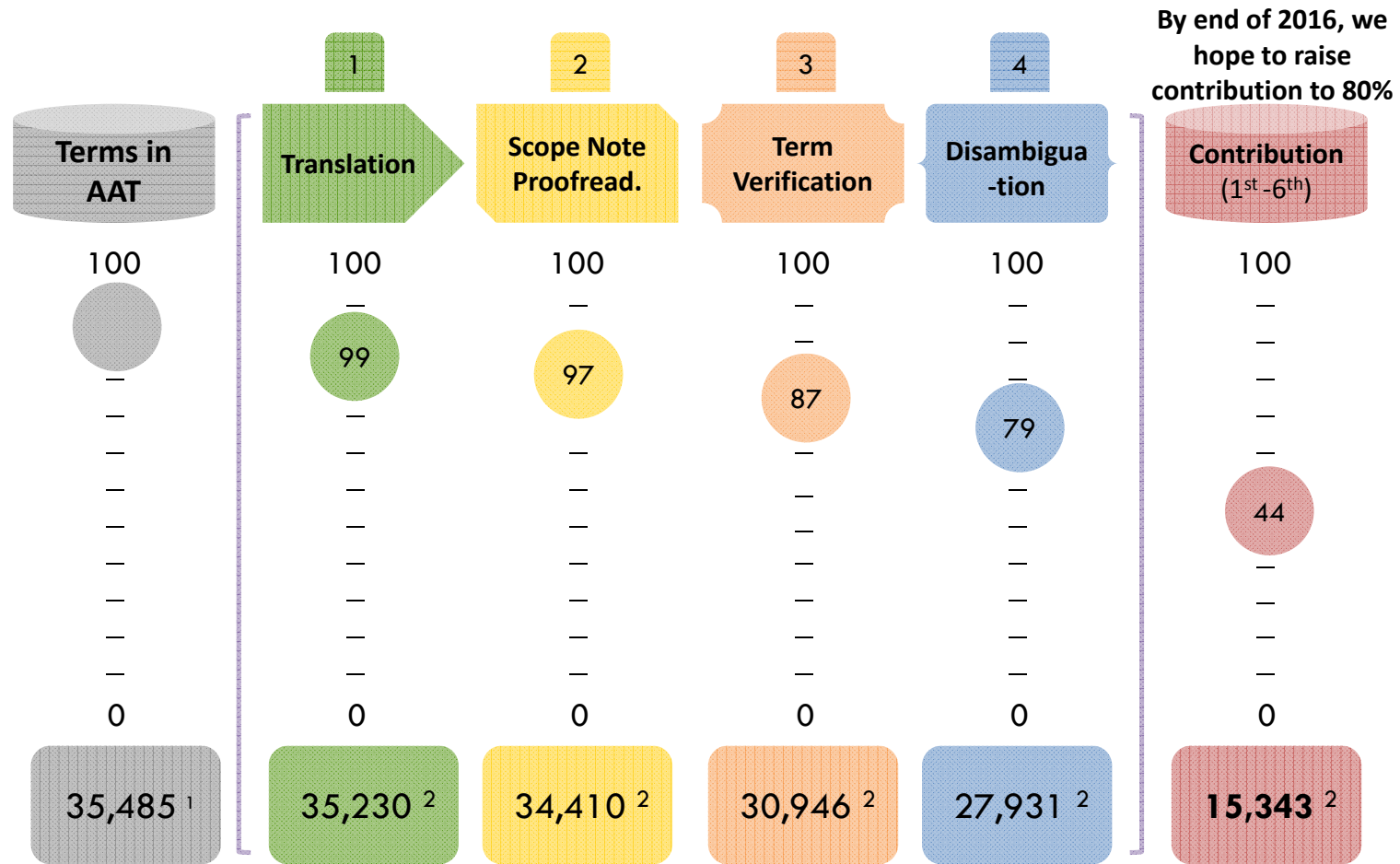
- Linked Taiwan Artists (LTA)
- Union Catalog LOD Program (UC-LOD)
- DigiMuse: Digital Indigenous Museum with AAT
- Early Chinese Periodicals Online (ECPO)



From English to Chinese

- Update on Translation Status
- AAT-Taiwan Principle for Disambiguation

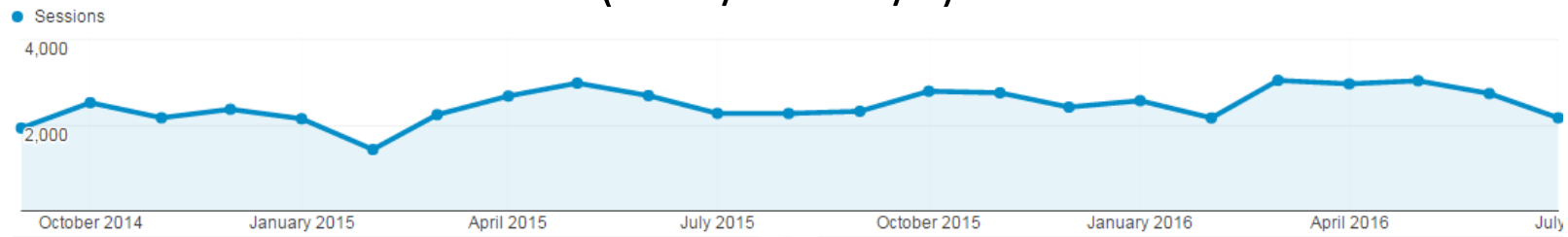
Update on translation status of AAT-Taiwan



¹AAT Data Version: Getty 35485 records in May 2012

²AAT-Taiwan Database (updated: 2016/06/06)

AAT-Taiwan Website on Google Analytics (2014/9-2016/7)

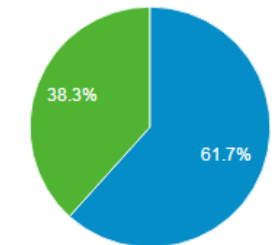


Sessions: 56,684 | Users: 25,000 | Pageviews: 451,000 | Pages / Session: 7.97

AAT-Taiwan in statistics
<http://aat.teldap.tw/>

General session :	56,684 sessions
Avg. Session duration :	00:07:51 seconds
Users mostly from :	<ol style="list-style-type: none"> Taiwan/ ROC Hong Kong China
Avg. pages per session:	7.97 pages
Source of Acquisition :	<ol style="list-style-type: none"> via web search engine : 71.7% direct indexing : 21.4% redirecting : 5% via social media : 1.9%

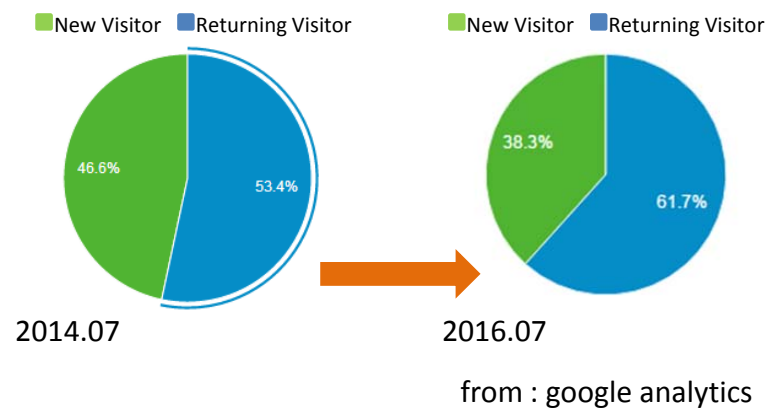
■ New Visitor ■ Returning Visitor



Sessions	% Sessions
42,277	74.58%
4,059	7.16%
2,492	4.40%
2,108	3.72%
930	1.64%
930	1.64%
488	0.86%
367	0.65%
337	0.59%
305	0.54%

Trends in statistics

- Compared to the last statistics at ITWG 2014, numbers of users have increased (722→2,464 p. month), however pages per session have decreased (11.97→7.97 p. session). It reveals most of our current users are generally returning visitors who know the AAT structure well, and could estimate the possible place that a given concept should be located
- Phenomena can be verified that percentage of AAT-Taiwan's returning visitors are increase from 53.4% to 61.7%. The statistics show that gaining new users might be a topic to the future. The application of AAT datasets with diverse LOD projects is a possible way to gain new users.



Problems in AAT translation

- **AAT translation is essentially to make a coherent and understandable lingual transformation of concepts across languages and cultures. Problems occur especially in the stage of disambiguation.**

Reasons:

- Most AAT concepts originate from the Western cultures; it is hard to make a proper disambiguation for persons of other cultures, due to incoherent expressional ability between languages.
- In certain cases, meanings and texts of AAT's scope notes are quite similar, without field knowledge, it is difficult to make right disambiguation .

As a result
lower rate for disambiguation and
slower contribution to AAT



- **Example:** light yellow green vs. light yellowish green
- In this case, both terms' scope notes are identical and differentiating between the two can be difficult.

淺黃綠色 (ID: 300129329) light yellow green	
AAT-Taiwan	「通用色彩語言」中的標準色彩名稱之一，指一特定範圍的黃綠色色彩。
AAT	UCL (Universal Color Language) standard color name identifying a range of yellowish green colors.
淺黃綠色 (ID: 300128408) light yellowish green	
AAT-Taiwan	「通用色彩語言」中的標準色彩名稱之一，指一特定範圍的黃綠色色彩。
AAT	UCL (Universal Color Language) standard color name identifying a range of yellowish green colors.

same scope notes in both concepts

- **Example:** light yellow green vs. light yellowish green
- In AAT-TW, light yellow green (ID300129329) and light yellowish green (ID300128408) share the same Chinese translation as “qian huang lü se”(淺黃綠色).
- Concepts on color in AAT are structured using the classification of Universal Colors of Language-system issued by Inter-Society Color Council in the 1960s, which is fixed according to Western color theories and unfamiliar in Chinese concepts.
- According to UCL system, each color represents collections of diverse values and chroma, which makes disambiguation harder.

119 light yellow green	5GY 8/4 #C9CE9E	2.5GY 8/6 #CECE7F	7.5GY 8/6 #B4D492	5GY 9/4 #E5E9B4	2.5GY 9/6 #EAEA96	7.5GY 9/6 #CFF0A7
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6 kinds of
light yellow
green

135 light yellowish green	10GY 7/4 #99B796	10GY 7/6 #8DBB87	10GY 8/4 #B4D2AF	10GY 8/6 #A6D69E
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4 kinds of light
yellowish
green

Solution:

AAT-Taiwan Principles for Disambiguation

- Principles created according to rules of Getty's *Art & Architecture Thesaurus: Editorial Guidelines*.
- Main concerns for differentiation between the homographs: referring to broader context or implying significant distinguishing characteristics between terms.
- 5 major types of AAT-Taiwan Principles for Disambiguation
 - Adopting keywords in reference to Chinese scope notes
 - Adopting Chinese broader terms as qualifier
 - Using the Chinese preferred term as qualifier, especially for non-preferred term
 - Translating original English qualifier into Chinese
 - Applying original English term as qualifier



AAT-Taiwan Principles for Disambiguation

1. Adopting keywords in reference to Chinese scope notes

編號：300042366 詞彙類型：概念

低音號(圓錐形) tubas

(conical)



編號：300042755 詞彙類型：概念

低音號(蛇形) bass horn

(snake-shaped)



subject_id	Terms in Chinese	Qualifiers	Chinese scope notes	Rules
300042366	tubas 低音號	conical 圓錐形	有活塞之銅管氣鳴樂器，內徑為寬圓錐形，末端為喇叭狀號口，以杯狀吹嘴吹奏；在樂隊或管弦樂團中作為銅管部門的低音或特低音成員。	Referring Chinese scope note
300042755	bass horn 低音號	snake-shaped 蛇形	晚期的蛇形號，出現於十九世紀初，由圓錐形管所組成，長度約為230公分，一般以銅製成，有著6個指洞、3或4個鍵、天鵝頸項似的變音管，末端則為喇叭形的寬號口。	Referring Chinese scope note

same Chinese characters

AAT-Taiwan Principles for Disambiguation

2. Adopting Chinese broader term as qualifier

編號：300056279 詞彙類型：概念

線(幾何概念) line (geometric concept)

範圍註：
數學上是指移動點的軌跡；一般用法則是指繪製或投射出之狹窄瘦長的記號。

- 藝術與建築詞典根目錄
- 關聯概念層面
- 關聯概念
- <科學概念>
- <數學概念>
- <幾何概念>
- 線 (幾何概念)



編號：300014250 詞彙類型：概念

線(紡織材料) thread (textile materials)

範圍註：
將單一的纖維細絲緊密搓捻在一起形成的線組，或以紡線和搓捻短纖維形成連續

- 藝術與建築詞典根目錄
- 材料層面
- 材料
- 材料
- <依形式區分之材料>
- <依物理形式區分之材料>
- <纖維和纖維製品>
- <纖維製品>
- <紡織材料>
- <依形式區分之紡織材料>
- 線 (紡織材料)



subject_id	Terms in Chinese	qualifiers	rules
300056279	line 線	geometric concept 幾何概念	Adopting Chinese broader term
300014250	thread 線	textile materials 紡織材料	Adopting Chinese broader term

AAT-Taiwan Principles for Disambiguation

3. Using the Chinese preferred term as qualifier

Applied majorly to distinguish the non-preferred Chinese terms

編號：300008903 詞彙類型：概念

草澤 marshes

詞彙：

草澤 (P,,U,繁體中文-偏好,D,U,U)

沼澤 (草澤) (,U,繁體中文-非偏好,UF,U,U)

草澤地 (,U,繁體中文-非偏好,UF,U,U)

沼地 (草澤) (,U,繁體中文-非偏好,UF,U,U)

沼原 (,U,繁體中文-非偏好,UF,,)

編號：300343521 詞彙類型：概念

沼澤地 slews

詞彙：

沼澤地 (P,,U,繁體中文-偏好,UF,U,U)

沼地 (沼澤地) (,U,繁體中文-非偏好,UF,,)

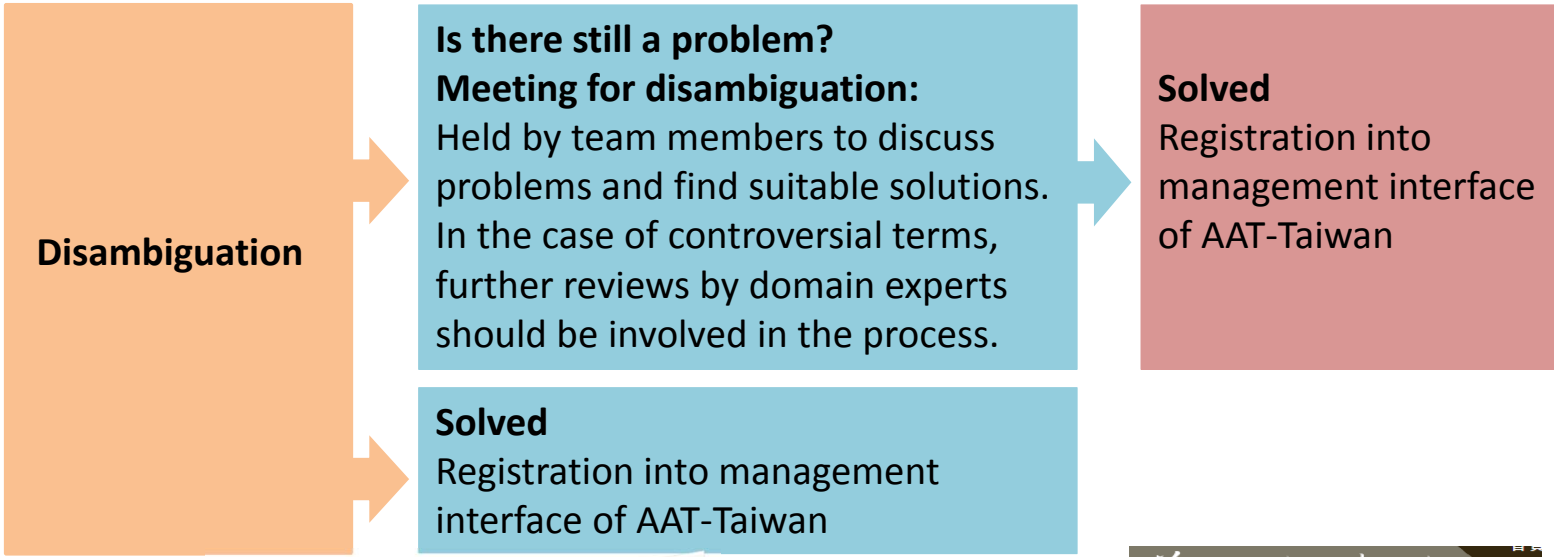
泥坑 (沼澤地) (,U,繁體中文-非偏好,UF,,)

- 物件層面
- 建築環境 (層級名)
- 聚落與景觀
-(中間略)
- 自然景觀
- 濕地
- 沼澤地
- 草澤

Non-preferred terms under the same facet and hierarchy

subject_id	Terms in Chinese	qualifier	Chinese scope notes	Rules
300008903	沼地/zhao di (non-preferred)	marshes 草澤	沒有林木生長的低窪溼地，通常雜草、香蒲及燈心草叢生。	Chinese preferred term
300343521	沼地/zhao di (non-preferred)	slews 沼澤地	充滿泥濘或長滿蘆葦的水池、池塘、小湖泊、水窪或水灣地區。	Chinese preferred term

AAT-Taiwan Principles for Disambiguation



No.	P	H	T	V	Term	Qualifier	Display Order
0	P	C	U	U	鐘塔	towers	1
1	N	C	U	U	鐘塔	tower	2
2	N	C	U	U	鐘塔	towers	3
3	N	C	U	U	鐘塔	towers	4
4	N	C	U	U	鐘塔	towers	5
5	N	C	U	U	鐘塔	towers	6
6	N	C	U	U	鐘塔	towers	7
7	N	C	U	U	鐘塔	towers	8
8	N	C	U	U	鐘塔	towers	9
9	N	C	U	U	鐘塔	towers	10
10	N	C	U	U	鐘塔	towers	11
11	N	C	U	U	鐘塔	towers	12
12	N	C	U	U	鐘塔	towers	13
13	N	C	U	U	鐘塔	towers	14
14	N	C	U	U	鐘塔	towers	15
15	N	C	U	U	鐘塔	towers	16
16	N	C	U	U	鐘塔	towers	17
17	N	C	U	U	鐘塔	towers	18
18	N	C	U	U	鐘塔	towers	19
19	N	C	U	U	鐘塔	towers	20

藝術與建築索引典
Art & Architecture Thesaurus Taiwan
編號: 300004857 詞彙類型: 概念

鐘塔(塔) clock towers(towers)

鐘塔 (塔) (P.,U.繁體中文-偏好,D,U,U)

鐘樓 (.,U.繁體中文-非偏好,U,U,U)

Term Language 語系

TERM_TYPE	QUALIFIER	Language	Preferred
D	塔	正體中文	偏好

修改 刪除 清空 隱藏

序號	TERM_TYPE	QUALIFIER	Language	Preferred
1.	D	塔	正體中文	偏好

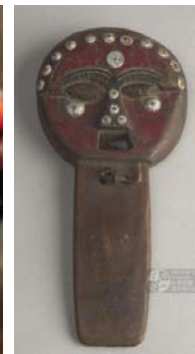


From Chinese to English/ Localization

- Suggestion: Topics on Festivals of Taiwanese Indigenous People

New Terms Suggestion: Festivals of Taiwanese Indigenous People

- Taiwan is a multi-cultural island enriched by Chinese and local indigenous cultures; also homeland of the Austroneasian people.
- Since AAT has terms about Chinese Festivals (8 records), as initial idea we suggest 16 candidate concepts for the Festivals of Taiwanese indigenous people, as 16 different tribes of indigenous people are existed in Taiwan.



Tribes in Taiwan		Festivals	
Amis	阿美族	Malalikit (Harvest Festival)	豐年祭
Atayal	泰雅族	Ps I kautas (Ancestor Worship Festival)	祖靈祭
Paiwan	排灣族	Maleveq (Five-Year Worship)	五年祭
Bunun	布農族	Ma-naq-tainga (Shoot The Ear Festival)	射耳祭
Puyuma	卑南族	Mangamangayau (Monkey Ritual)	猴祭
Rukai	魯凱族	Tsatsapiplanu (Millet Harvest Ritual)	小米收穫祭
Tsou	鄒族	Mayasvi (Victory Ceremony)	戰祭
Saisiat	賽夏族	Pas-taai (Dwarf Spirit Ceremony)	矮靈祭
Tao	達悟族	Do rayon (Flying Fish Ceremony)	飛魚祭
Thao	邵族	Lus'an (Animist Worship)	祖靈祭
Kavalan	葛瑪蘭族	Palilin (Ancestor Rite)	歲末祭祖
Truku	太魯閣族	Mgay Bari (Ancestor Rite)	感恩祭
Sakizaya	撒奇萊雅族	Palamal (Worship of the Fire God)	火神祭
Seediq	賽德克族	Kmetui macu (Millet Sowing Festival)	小米播種祭
Hla'alua	拉阿魯哇族	Takiaru (Sacred Shell Rite)	貝神祭
Kanakanavu	卡那卡那富族	Mikong (Appreciation for Harvest Ceremony)	米貢祭

16 Festivals of Taiwanese indigenous people



Malalikit festival of Amis



Do rayon festival of Tao

Source:

<http://www.apc.gov.tw/portal/index.html>



Applications & Future Plans

- Linked Taiwan Artists (LTA)
- Union Catalog LOD Program (UC-LOD)
- DigiMuse: Digital Indigenous Museum with AAT
- Early Chinese Periodicals Online (ECPO)

AAT-Taiwan application program 1

Linked Taiwan Artists (LTA) project with AAT



<http://linkedart.ascdc.tw/index.php>

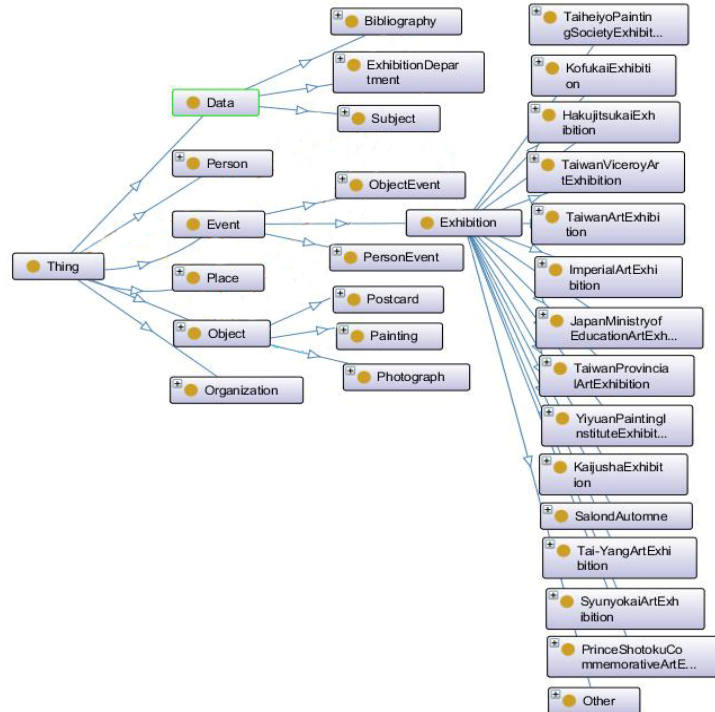
Project Purpose

- Promoted by the Getty Research Institute in recent years, development and application of Linked Open Data (LOD) are becoming central issue in research. Since 2014, AAT, TGN and ULAN are published as LOD and provide worldwide users an important reference in the study field of KOS.
- Since LOD is the current trend in the research of digital humanities, AAT-Taiwan initiated the project “Linked Taiwan Artists (LTA)” based on the database of previous project “Starting out from 23.5° N: Chen Cheng-Po” and KOS structured by Getty.

Ontology of LTA

LTA-ontology: describing datasets of Taiwanese artists in semantic models:

- 30 classes are organized under 6 main categories: date, person, event, place, object, organization.
- LTA datasets reuse 57 diverse properties from 7 RDF vocabularies ([gvp](#), [schema](#), [cidoc-crm](#), [rdfs](#), [skos](#), [dc](#), [dbpprop](#)) to structure the triples.



Classes of LTA ontology

Properties (57)

[ObjectProperties (39)]

[crm:P2_has_type](#) ; [crm:P11_had_participant](#) ; [crm:P12_was_present_at](#) ;
[crm:P12i_occurred_in_the_presence_of](#) ; [crm:P14_carried_out_by](#) ;
[crm:P15_was_influenced_by](#) ; [crm:P45_consists_of](#) ; [crm:P55_has_current_location](#) ;
[crm:P62_depicts](#) ; [crm:P70_is_documented_in](#) ; [crm:P71_is_listed_in](#) ; [crm:P108_has_produced](#) ;
[crm:P130_features_are_also_found_on](#) ; [gvp:ulan1313_partner_in](#) ; [gvp:ulan1501_sibling_of](#) ;
[gvp:ulan1511_child_of](#) ; [gvp:ulan1512_parent_of](#) ; [gvp:ulan1541_spouse_of](#) ;
[gvp:ulan1550_relative_by_marriage](#) ; [gvp:ulan2550_friend_of](#) ; [gvp:ulan2828_student_at](#) ;
[schema.org:homeLocation](#) ; [schema.org:nationality](#) ; [schema.org:about](#) ; [schema.org:attendee](#) ;
[schema.org:birthPlace](#) ; [schema.org:contentLocation](#) ; [schema.org:creator](#) ;
[schema.org:deathPlace](#) ; [schema.org:foundingLocation](#) ; [schema.org:genre](#) ;
[schema.org:hasMap](#) ; [schema.org:location](#) ; [schema.org:organizer](#) ; [schema.org:recordedIn](#) ;
[schema.org:replacee](#) ; [schema.org:replacer](#) ; [schema.org:subEvent](#) ; [schema.org:worksFor](#)

[DataProperties (14)]

[crm:P1_is_identified_by](#) ; [crm:P3_has_note](#) ; [dbpprop:years](#) ; [dc:format](#) ; [schema.org:award](#) ;
[schema.org:birthDate](#) ; [schema.org:dateCreated](#) ; [schema.org:deathDate](#) ;
[schema.org:dissolutionDate](#) ; [schema.org:endDate](#) ; [schema.org:foundingDate](#) ;
[schema.org:startDate](#) ; [schema.org:latitude](#) ; [schema.org:longitude](#)

[AnnotationProperties (4)]

[rdfs:label](#) ; [rdfs:comment](#) ; [rdfs:seeAlso](#) ; [skos:altLabel](#)

Properties of LTA ontology

LTA ontology with Getty vocabularies

- GVP vocabularies (especially properties from `gvp:ulan`) are adopted to give correct description of personal relationships between artists.
- `rdfs:seeAlso`: property linking LTA datasets with Getty terms of AAT, ULAN, GVP

Domain	gvp vocabularies	Range
person	<code>gvp:ulan1313_partner_in</code>	organization
person	<code>gvp:ulan1501_sibling_of</code>	person
person	<code>gvp:ulan1511_child_of</code>	person
person	<code>gvp:ulan1512_parent_of</code>	person
person	<code>gvp:ulan1541_spouse_of</code>	person
person	<code>gvp:ulan1550_relative_by_marriage</code>	person
person	<code>gvp:ulan2550_friend_of</code>	person
person	<code>gvp:ulan2828_student_at</code>	organization



Chen Cheng-po



Tai-Yang Art Society



son in law, Pu Tian-sheng



friend, Li-Shih-chiao

`gvp:ulan1313`

`gvp:ulan1550`

`gvp:ulan2550`

Triple Examples of Objects in LTA

	Subject	Predicate	Object	Example
1	Object	crm:P1_is_identified_by	ID	Stream - crm:P1_is_identified_by - A17
2		rdfs:label	(文字) string literal	Stream - rdfs:label - Steam
3		skos:altLabel	(文字) string literal	Stream – skos:alLabel – 清流
4		crm:P3_has_note	(文字) string literal	Stream - crm:P3_has_note -In early 1929, Chen Cheng-po took another trip...(畫作簡介·後略)
5		rdfs:seeAlso	URI	Stream – rdfs:seeAlso - http://chenchengpo.asdc.sinica.edu.tw/treasures?id=A17&pid=0701
6		crm:P2_has_type	AATDisplayi ngItem	Stream - crm:P2_has_type - http://aat.teldap.tw/AATFullDisplay/300015636
7	ObjectEvent	schema.org:startDate	Time	“Chen Cheng-po painting Stream “–schema.org:startDate - ?
8		schema.org:endDate		“Chen Cheng-po painting Stream “– schema.org:endDate -1929
9		crm:P14_carried_out_by	Person	“Chen Cheng-po painting Stream “– crm:P14_carried_out_by – Chen Cheng-po
10		crm:P108_has_produced	Object	“Chen Cheng-po painting Stream “–crm:P108_has_produced – Stream
11		crm:P15_was_influenced_by	Object	“Chen Cheng-po painting SpringAtWestLake_2”- crm:P15_was_influenced_by – Hangzhou-SB19 : 34

* column in orange refers to predicate shared by different types of things.

**Major ontologies in use: CIDOC-CRM(12)
schema.org (4)**

Triple Examples of Events in LTA

	Subject	Predicate	Object	Example
1	Event_ Exhibition	crm:P1_is_identified_by	ID	The1 st TaiwanArtExhibition - crm:P1_is_identified_by - EA001
2		rdfs:label	string literal	The1 st TaiwanArtExhibition - rdfs:label - The1 st TaiwanArtExhibition
3		skos:altLabel	string literal	The1 st TaiwanArtExhibition – skos:altLabel - The 1 st Taiten
4		crm:P3_has_note	string literal	The1 st TaiwanArtExhibition – crm:P3_has_note - The new art form gradually took shape after the launch of the Taiwan Art Exhibition (Taiten) in 1927.(展覽簡介 · 後略)
5		rdfs:seeAlso	URI	Chicago World's Fair - rdfs:seeAlso - http://en.wikipedia.org/wiki/Century_of_Progress#/media/File:Chicago_world%27s_fair,_a_century_of_progress,_expo_poster,_1933,_2.jpg
6		schema.org:startDate	Time	The1 st TaiwanArtExhibition – schema.org:startDate – 1927-10-27
7		schema.org:endDate	Time	The1 st TaiwanArtExhibition – schema.org:startDate – 1927-11-06
8		schema.org:location	Place	The1 st TaiwanArtExhibition – schema.org:location – Kabayama Elementary School Taipei
9		crm:P2_has_type	Data	The1 st TaiwanArtExhibition - crm:P2_has_type - http://aat.teldap.tw/AATFullDisplay/300033799 (AAT oil painting)
10		crm:P11_had_participant	Person	The1 st TaiwanArtExhibition – crm:P3_has_note – Chen Cheng-po

* column in orange refers to predicate shared by different types of things.

Major ontologies in use: **schema.org (7)**
CIDOC-CRM (6)

Characteristics of LTA

Linked Taiwan Artist (LTA): an open datasets of Taiwanese artists in the Japanese colonial period (1895-1945). LTA has following characteristics:

1. Open Data: allow others to reuse the data
2. Supporting Faceted Search/ Semantic Browsers
3. Expose the Context of Research Materials
4. Integrate Heterogeneous Data into a Unified Linked



1. Open Data: allow others to reuse the data

Linked Taiwan Artists

PERSON OBJECT ORGANIZATION EXHIBITION PLACE

Chen Cheng-po

* *Italics* represent possible personal relationships of each relation.

Also known as
陳澄波 · Chen Cheng Po · Chen Chengbo · Chen Qingla · 陳慶瀾

Date
1895-02-02~1947-03-25

Description
Chen Cheng-po was born in Chiayi City. He enrolled in the Language School in 1913, where he studied Western-style painting from Ishikawa. In 1924, he went to Japan to receive formal academic training.

Work
[A Distant View of Guanyin Mountain](#) (selected for exhibition) · [A Distant View of the Monopoly Bureau](#) · [A Postcard from Chen Cheng-po to Chen Bi-nu_2](#) · [Afternoon at the Silk Shop](#) (selected for exhibition) · [Air Raid Drills](#) (selected for exhibition) · [Ali Mountain](#)

Exhibition
[1930 Society Exhibition_3rd](#) · [Central Art Exhibition_8th](#) · [Fujian Provincial Art Exhibition](#) · [Hakujitsukai Exhibition_2nd](#) · [Hakujitsukai Exhibition_3rd](#) · [Hakujitsukai Exhibition_4th](#) · [Hakujitsukai Exhibition_5th](#) · [Hongo Art Exhibition_4th](#) · [Imperial Art Exhibition_10th](#)

General SPARQL query : input query and press 'Get Results'

Get Results

Map data ©2016 Google, SK telecom, ZENRIN | Terms of Use

For best experience we recommend using a modern web browser such as IE 10 (and above), Google Chrome, Firefox or Safari. The best way to view our website is at 1600*900 pixel

1. LTA is published now under the Creative Commons Attribution License (CC-BY) 3.0 and available as LOD. Entire datasets can be explored, accessed and downloaded.
2. We provide a SPARQL endpoint through which to access the relationship and authority data we store. This includes all of the relationship triples and different types of metadata about the artists.
3. SPARQL endpoint provides free downloads in owl file.

2. Supporting Faceted Search/ Semantic Browsers

Linked Taiwan Artists

PERSON OBJECT ORGANIZATION EXHIBITION PLACE TIME

Chen Cheng-po

* *Italics* represent possible personal relationships

Also known as
陳澄波、Chen Cheng Po、Chen Cheng-po、陳慶瀾

Work
[A Distant View of Guanyin Mountain](#) (selected for exhibition) · [A Distant View of the Monopoly Bureau](#)
 · [A Postcard from Chen Cheng-po to Chen Bi-nou 2](#) · [Afternoon at the Silk Shop](#) (selected for exhibition)
 · [Air Raid Drills](#) (selected for exhibition) · [Ali Mountain](#) (selected for exhibition) · [Ancient Houses in](#)

Exhibition
[1930 Society Exhibition_3rd](#) · [Central Art Exhibition_8th](#) · [Fujian Provincial Art Exhibition](#) · [Hakujitsukai Exhibition_2nd](#) · [Hakujitsukai Exhibition_3rd](#) · [Hakujitsukai Exhibition_4th](#) · [Hakujitsukai Exhibition_5th](#)
 · [Hongo Art Exhibition_4th](#) · [Imperial Art Exhibition_10th](#) · [Imperial Art Exhibition_15th](#) · [Imperial Art](#)

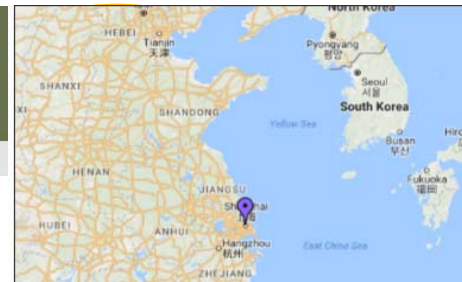
Education
[Chiayi Public School](#) · [Hongo Painting Institute](#) · [Taiwan Governor-Generals National Language School](#)
 · [Tokyo School of Fine Arts](#)

Alumnus
[Chen Zhi-qi](#) · [Fan Hong-jia](#) · [He De-lai](#) · [Huang Tu-shui](#) · [Itaru Tanabe](#) · [Li Mei-shu](#) · [Li Ze-fan](#) · [Liao Chi-chun](#) · [Lin Yu-shan](#) · [Ni Chiang-huai](#) · [Ran In-ting](#) · [Shigehiko Ishikawa](#) · [Toho Shiotzuki](#) · [Usaburo Ihara](#) · [Wang Bai-yuan](#) · [Yan Shui-long](#) · [Zhang Qiu-hai](#)

Teacher
[Chū Asai](#) · [Itaru Tanabe](#) · [Keiichiro Kume](#) · [Kinichiro Ishikawa](#) · [Mango Kobayashi](#) · [Saburosuke Okada](#) · [Seiki Kuroda](#) · [Takeji Fujishima](#)

Digital Cultures
 國立中正大學
 For best experience we recommend using a modern web browser such as IE 10 (and above), Google Chrome

connect to painter's works, exhibitions, educational information and personal relations



Ali Mountain

Creator

World's Fair (Chicago)

Also known as
 世界博覽會 (芝加哥) · A Century of Progress Exposition · Expo · Universal Exposition · 世博 · 博覽會 · 萬博 · 萬國博覽會

Date
 1933-05-27-1933-11-01

Tokyo School of Fine Arts

Location
 100-0001

Date
 1887-1949

Next:
 Tokyo University of the Arts (1949-)

Liao Chi-chun

* Italics represent possible personal relationships of each related artist.

Also known as
 廖繼春 · Liao Jichun · 秋永繼春

Date
 1902-01-04-1976-02-13

Description
 Liao Chi-chun was born into a rural family of limited means in Fengyuan, Taichung, in 1918, he entered the Taiwan Governor-General's National Language School. By 1922, he graduated and began teaching at Fengyuan Public School (Fengyuan Kōgakkō). In 1924, he was accepted by the Normal Education Division



2. Supporting Faceted Search/ Semantic Browsers

The search results show different types of relationship between Chen Cheng-po and Liao Chi-chun by system's inductive reasoning.

Artist	Title	Relationship
Chen Cheng-po	Taiwan Art Exhibition_9th	Participant
Liao Chi-chun	Chih-Yang Western Painting Society ... 赤島社 ...	Member
Chen Cheng-po	Taiwan Art Exhibition_9th	Participant
Liao Chi-chun	Taiwan Art Exhibition_9th	Participant
Chen Cheng-po	Chih-Yang Western Painting Society ... 赤島社 ...	Member
Liao Chi-chun	Chih-Yang Western Painting Society ... 赤島社 ...	Member
Chen Cheng-po	Tokyo School of Fine Arts 東京美術學校	Alumnus
Liao Chi-chun	Tokyo School of Fine Arts 東京美術學校	Alumnus

Chen Cheng-po - crm:P11_had_participant - 9th Taiwan Art Exhibition

Liao Chi-chun - crm:P11_had_participant - 9th Taiwan Art Exhibition

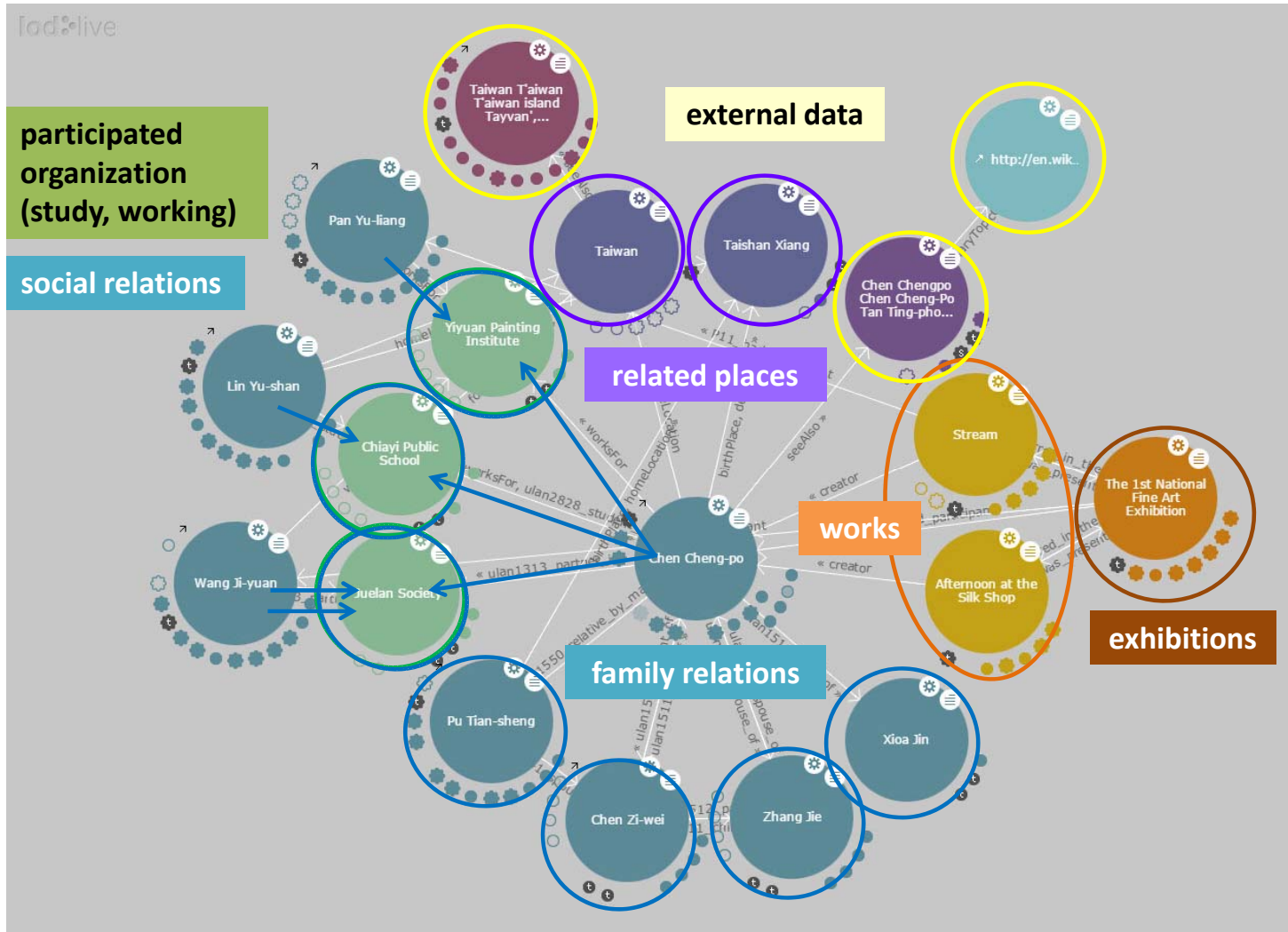
Chih-Yang Western Painting Society ... 赤島社 ...

Member


Tokyo School of Fine Arts 東京美術學校

Diverse interactive relationship or potential relevance between artists can be revealed and inferred at the same time, such as members or alumni at the same organization.

3. Expose the Context of Research Materials increases their discoverability




4. Integrate Heterogeneous Data into a Unified Linked Link with AAT, TGN, ULAN (Example: *Stream* by Chen Cheng-po in LTA)



Linked Taiwan Artists

PERSON OBJECT ORGANIZATION EXHIBITION PLACE TIME



SPARQL endpoint 中文

Research Home Tools Thesaurus of Geographic Names Full Record Display

Getty Thesaurus of Geographic Names® Online Full Record Display

Click the icon to view the hierarchy.

Semantic View (JSON, JSONLD, RDF, N3/Turtle, N-Triples)

ID: 7001806

Hangzhou (inhabited place)

杭州 Hangzhou
TGN ID 7001806

Union List of Artist Names® Online Full Record Display

Click the icon to view the hierarchy.

Semantic View (JSON, JSONLD, RDF, N3/Turtle, N-Triples)

ID: 500124946

Fujishima Takeji (Japanese painter, 1867-1943)

Names:
Fujishima Takeji (preferred, V, index)
Fujishima, Takeji (V, display)
Takeji, Fujishima (V, index)

藤島武二 Takeji Fujishima
ULAN ID 500124964

Art & Architecture Thesaurus® Online Full Record Display

Click the icon to view the hierarchy.

Semantic View (JSON, JSONLD, RDF, N3/Turtle, N-Triples)

ID: 300178749

boats (<watercraft by general type>, watercraft, ... Furnishings and Eq

Note: Watercraft generally smaller and less seaworthy than ships and genera

Terms:

船舶 boats
AAT ID 300178749

Art & Architecture Thesaurus® Online Full Record Display

Click the icon to view the hierarchy.

Semantic View (JSON, JSONLD, RDF, N3/Turtle, N-Triples)

ID: 300014078

canvas (<textile materials by process or technique>, textile materials, ...

Note: Closely woven textile made in various weights, usually of flax, hemp, ju tarpaulins, awnings, upholstery, and as a support for oil painting. Also used for similar material, used as a needpoint foundation.

Terms:

畫布 canvas
AAT ID 300014078

AAT-Taiwan application program 2

Union Catalog-LOD program with AAT

The screenshot displays the AAT-Taiwan application program interface. The main content area is a grid of digital artifacts, each with a thumbnail and a brief description:

- 青花蓮枝花貓繪大盤**: 畫作十二瓣蓮花形，盤內繪蓮枝花卉，有牡丹、蓮花、荷花、葵花等六朵。
- 藍蔭鼎**: 著名水彩畫家，此照片由彭騰攝，通用了高超的畫內打光技巧。
- 合歡山台灣冷杉林**: 臺灣冷杉為臺灣特有種，生長於臺灣高山地區，常形成森林。
- 水竹草**: 鴨跖草目鴨跖草科水竹草。
- 過山香**: 芸香目芸香科過山香。
- 樂譜手抄稿**: 張維昌先生樂譜手抄作品《The End Of The World》。
- 速度感**: 林壽益攝影，表現享受機車高速帶來的快感。
- 仿古玉璫**: 琢作雙龍首璫形，龍頭仿龍鬚而更僵化，龍身上琢乳丁紋。
- 蘭聖**: 臺灣文學家張運修手稿。

The sidebar on the right contains a search bar and a list of subject categories:

- 主題分類
- 依內容主題瀏覽
- 生物主題
- 考古主題
- 地質主題
- 人類學主題
- 檔案主題
- 拓片主題
- 器物主題
- 書畫主題
- 地圖與遙測主題
- 善本古籍主題
- 新聞主題
- 漢籍全文主題
- 影音主題
- 建築主題
- 數位加值資源整合平台主題
- 語言主題
- 典藏機構
- 依典藏機構瀏覽
- 中央研究院
- 國史館
- 國立自然科學博物館
- 國家圖書館
- 國立臺灣大學
- 國立故宮博物院
- 國史館臺灣文獻館
- 國立歷史博物館
- 財團法人國家電影資料館
- 行政院國史館

At the bottom right, there is a section for the '廣韻上平聲卷第' (Guangyun Shangping Sheng Volume 1) with a grid of characters and their phonetic notations:

一	東	獨用	一	冬	鍾同
二	支	脂之通用	二	冬	鍾同
三	佳	皆通	三	虞	模同
四	真	諄臻通用	四	諄	諄
五	寒	桓同	五	桓	桓
六	殷	獨用	六	元	魂痕同
七	真	諄臻通用	七	諄	諄
八	佳	皆通	八	虞	模同
九	魚	獨用	九	虞	模同
十	支	脂之通用	十	冬	鍾同
十一	東	獨用	十一	冬	鍾同
十二	支	脂之通用	十二	冬	鍾同
十三	佳	皆通	十三	虞	模同
十四	真	諄臻通用	十四	諄	諄
十五	寒	桓同	十五	桓	桓
十六	殷	獨用	十六	元	魂痕同
十七	真	諄臻通用	十七	諄	諄
十八	佳	皆通	十八	虞	模同
十九	魚	獨用	十九	虞	模同
二十	支	脂之通用	二十	冬	鍾同
二十一	東	獨用	二十一	冬	鍾同

<http://catalog.digitalarchives.tw/>

Project purposes

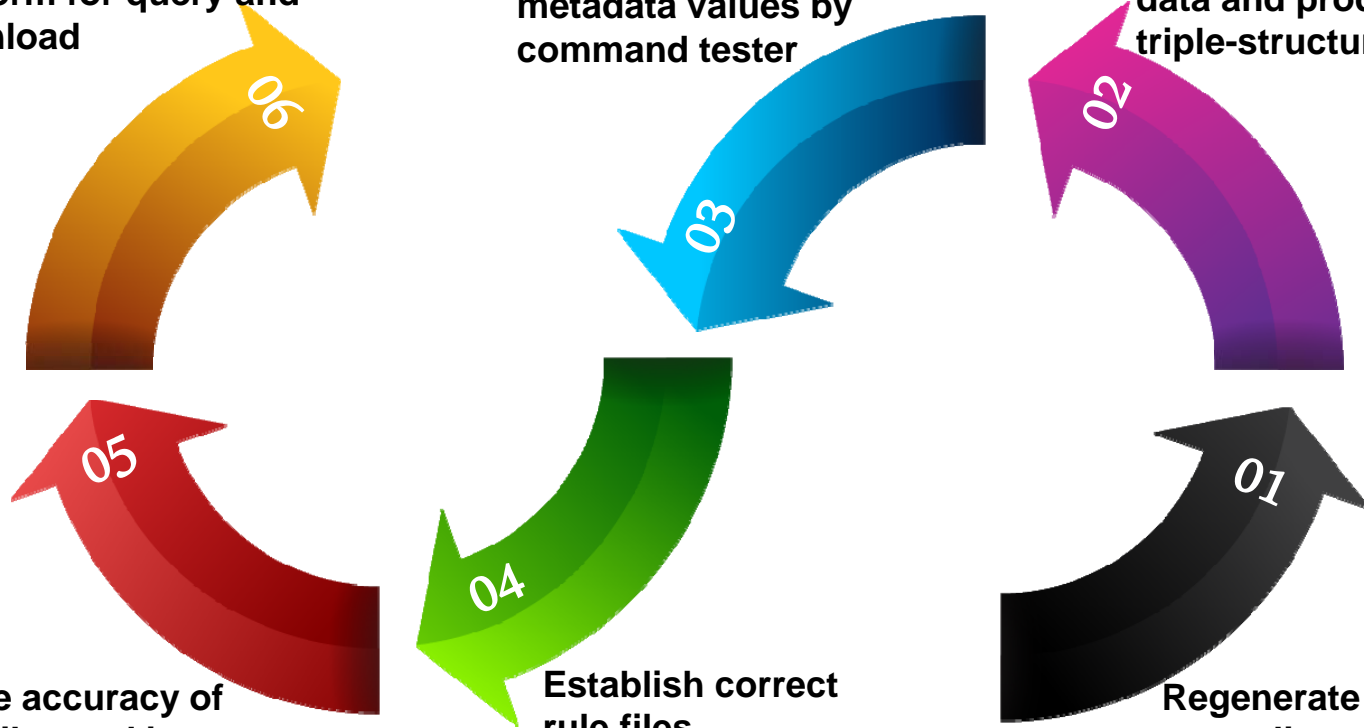
- The Taiwan Digital Archives Union Catalogue (UC) (<http://catalog.digitalarchives.tw/>) : an online portal for the digital preservation of cultural heritages with over 5 million Dublin Core(DC)-based metadata records.
- The project aims to reconstruct the whole system as semantic LOD datasets and link with Getty vocabularies. A pilot study has been conducted with 850,000 data from 72 collections across 16 categories licensed under attribution of Common Creatives.
- The UC-LOD datasets use a variety of RDF vocabularies and ontologies as fellows:
 - **DC**: vocabulary of basic metadata terms (15 properties)
 - **dcterms**: terms for describing advanced metadata (46 properties)
 - **DWC**: terms for specifying biological metadata (10 properties)
 - **Schema**: describing measurement or video resources (15 properties)
 - **WGS84**: for geographic info (3 properties)
 - **RDFS**: terms for directing title of resource (1 property)

Making UC-LOD: a working procedure

UC-LOD SPARQL endpoint-
platform for query and
download

Clean and reconcile
metadata values by
command tester

Parse normalized xml
data and produce
triple-structures



Prove accuracy of
rule files and import
in UC-LOD triplestore

Establish correct
rule files

Regenerate and
normalize original
inhomogeneous
xml data

Regenerate and normalize original xml data

- UC as a long-term project, nearly 100 organizations are involved. Metadata and contents are set up by different staff. However, incoherence in metadata fields and values between sub-projects are always problem. Metadata of all projects should be checked and cleaned at first.
- Check metadata structures in original xml files; normalized by UC-LOD Attribute Field Normalizer, a tool programmed by team AAT-Taiwan.

Normalizing incoherent, original metadata by UC Field Normalizer

Parse normalized data and produce triple-structures

- Original UC metadata fields are structured after Dublin Core, to apply it as triple-structured semantic data for LOD, recheck and proof their accuracy or make an adjustment by adopting other semantic vocabularies are necessary.
- For this purpose, we develop another tool UC-LOD XML Parser, to
 - parse and convert normalized xml data into json files;
 - import json files in open refine to produce triple-structure.

The image illustrates the workflow for parsing normalized data and producing triple-structures. It consists of two main parts: the UC-LOD XML Parser and the OpenRefine interface.

UC-LOD XML Parser - 1.4.0

Settings:

- Settings filepath: C:\Users\user\Desktop\聯合目錄LOD計畫\... Parsing XML\p...
- Rule filepath: C:\Users\user\Desktop\聯合目錄LOD計畫\... Parsing XML\p...
- XMLs direcotry: 物類_文書類_文物類_磚拓類18項計畫_XML檔_履歷_農業試驗
- Output file name: C:\Users\user\Desktop\Biology_TARI-2_RAW.json

100% progress bar and Start button.

Log output:

```

parse and write 5982798.xml...
parse and write 5982789.xml...
parse and write 5982790.xml...
parse and write 5982791.xml...
process finished...
  
```

Message box: Parsing finished.

Red arrow points from the parser to a **Json file** icon.

OpenRefine interface showing 179723 rows.

Facet / Filter	Value	Count	Extension
1. Title-學名	4854125		Bracon adoxophyei Minamikawa
2. Subject-界	4854125		動物界
3. Subject-界 (英文)	4854125		Animalia
4. Subject-門	4854125		節肢動物門
5. Subject-門 (英文)	4854125		Arthropoda
6. Subject-綱	4854125		昆蟲綱
7. Subject-綱 (英文)	4854125		Insecta
8. Subject-亞綱	4854125		有翅亞綱
9. Subject-亞綱 (英文)	4854125		Pterygota
10. Subject-目	4854125		膜翅目
11. Subject-目 (英文)	4854125		Hymenoptera
12. Subject-亞目	4854125		姬蜂亞目
13. Subject-亞目 (英文)	4854125		Apocrita
14. Subject-科	4854125		小蜂科
15. Subject-科 (英文)	4854125		Braconidae
16. Subject-超科	4854125		姬蜂超科
17. Subject-超科 (英文)	4854125		Ichneumonoidea
18. Subject-亞科	4854125		蟻蜂亞科

Red arrow points from the **Json file** icon to the OpenRefine interface.

Green box text: **Parsing and converting xml into json; importing to open refine to produce and check triple-structure**

Reconcile metadata values by command tester

- In open refine, we check accuracy of metadata or make data cleaning if necessary. Hence, UC-LOD command tester is designed to clean and reconcile metadata values by giving them with standardized rules in tester.
- UC-LOD command tester: In general
 - 11 different rules are programmed to satisfy different needs
 - Rules can be used in an additive way. Basic rule norms are included to make convenience to general users.

The screenshot shows the UC-LOD Command Tester window. The 'Commands' dropdown is set to 'between'. The command area contains the following XML-like rule: `<characters>chinese</characters><split>|| </split>`. The 'Input Area' contains a list of insect names: 條斑螟小繭蜂, 姬蔗龜, 小蔗龜, 稻蟲, 黑腳煙仔, 稻泥蟲, 稻葉蟲, and Zigzag striped leafhopper. The 'Output Area' shows the result after applying the rule: 條斑螟小繭蜂, 姬蔗龜, 小蔗龜, 稻蟲, 黑腳煙仔, 稻泥蟲, and 稻葉蟲. Red boxes highlight the input and output lists, with arrows pointing to the command area.

Testing rules for data cleaning by UC-LOD command tester

11 different rules in Command Tester

Rules	Rule Example	Before	After
between	<code><between after="(" before=")"></between></code>	(Hawaii)	Hawaii
contains	<code><contains all="true" opposite="false">A B</contains></code>	ABC	AB
Characters	<code><characters>chinese</characters></code>	臺灣 Taiwan	臺灣
detect	<code><detect>chinese</detect></code>	足球 soccer football	足球 soccer
Length	<code><length larger="true">4</length></code>	Getty GRI	Getty
Insert	<code><insert position="begin">Note:</insert></code>	Good	Note: Good
remove	<code><remove>&lt;i>g</i> &lt;/i></remove></code>	Thlaspid a	Thlaspida
remove_between	<code><remove_between after="(" before=")" include="false"></remove_between></code>	Hello , (test) how are you	Hello , () how are you
replace	<code><replace new=" " "></replace></code>	Tigre	Tiger
Split	<code><split> \ </split></code>	TAIWAN \ USA	TAIWAN USA
Value	<code><value>fixed words</value></code>	台北 高雄	fixed words fixed words

Establish correct rule files

- Establish and rewrite rules for each sub-project to produce correct triple structures for UC-LOD project
- Give accurate language value, type value, rules for data cleaning and predicates in files to structure metadata triples

```

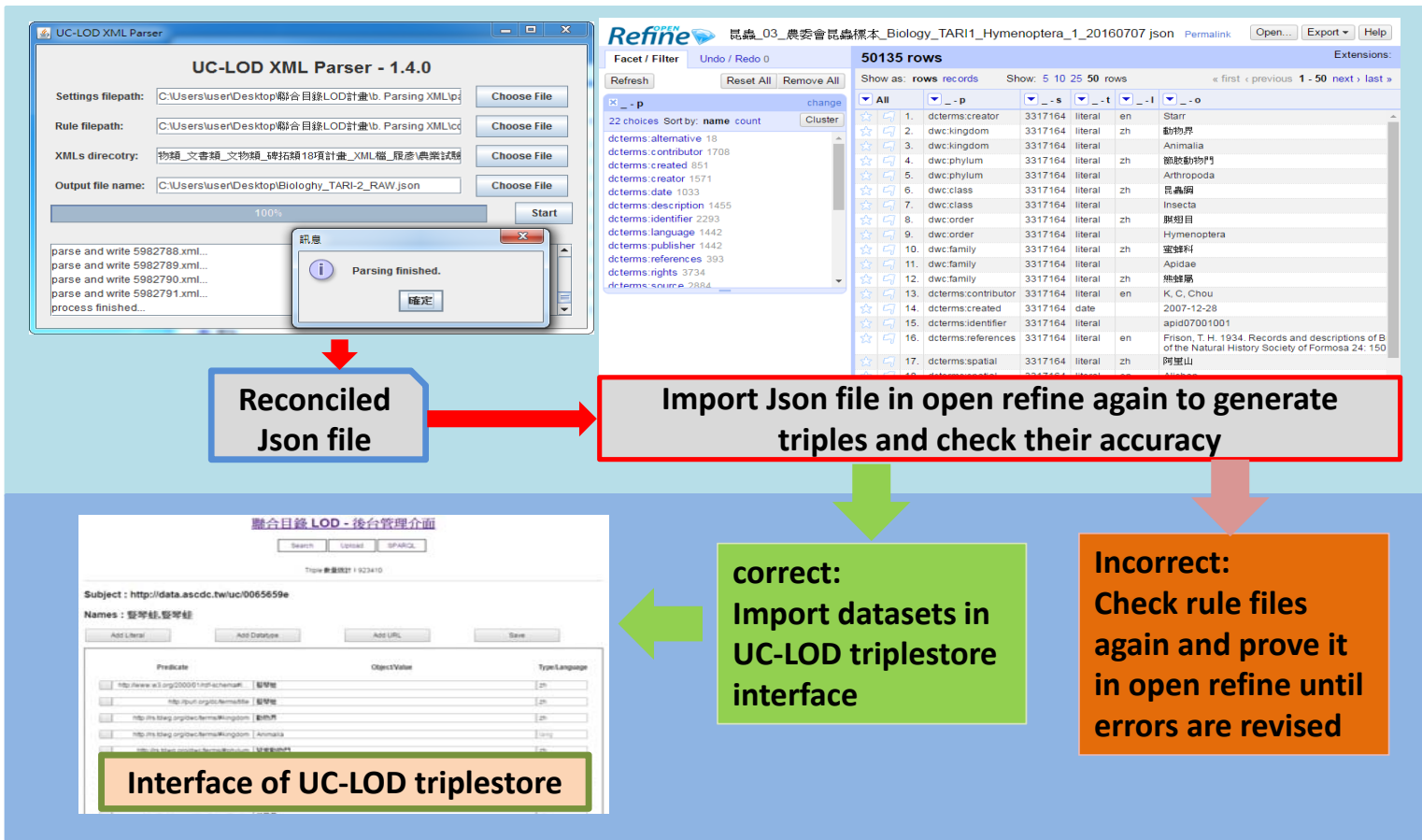
1|<project>
2|
3| <rule predicate="dcterms:title|rdfs:label" lang="zh" type="literal">
4|   <source path="DACatalog/MetaDesc/Title[field=中文種名]" type="text">
5|     </source>
6| </rule>
7|
8| <rule predicate="dwc:scientificName" lang="zh" type="literal">
9|   <source path="DACatalog/MetaDesc/Title[field=中文種名]" type="text">
10|     </source>
11| </rule>
12|
13| <rule predicate="dwc:vernacularName" lang="en" type="literal">
14|   <source path="DACatalog/MetaDesc/Title[field=俗名(英文)]" type="text">
15|     </source>
16| </rule>
17|
18| <rule predicate="dwc:vernacularName" lang="zh" type="literal">
19|   <source path="DACatalog/MetaDesc/Title[field=俗名]" type="text">
20|     <characters>chinese</characters>
21|     <split>|,|·</split>
22|   </source>
23| </rule>
24|
25| <rule predicate="dwc:vernacularName" lang="en" type="literal">
26|   <source path="DACatalog/MetaDesc/Title[field=俗名]" type="text">
27|     <characters>english</characters>
28|     <remove>|,</remove>
29|   </source>
30| </rule>
31|

```

Reconciled rules after data cleaning
made by UC-LOD command tester

Prove accuracy of rule files and import in triplestore

- Generate reconciled triple structure by open refine and prove its accuracy
- Import datasets into UC-LOD triple store



UC-LOD SPARQL endpoint- platform for query and download

Taiwan 典藏臺灣 Digitalarchives

- **Data visualization: UC-LOD provides SPARQL endpoint with user-friendly interface to query, search and download the wished LOD data.**
- **Functions provided in SPARQL endpoint:**
 - offer diverse selectable query models
 - convenient insertion of Prefix/ Predicate
 - free downloads of data in json, XML, TTL or CSV file

DISCOVER

Taiwan 典藏臺灣 Digitalarchives

SPARQL

EXAMPLES: List all Classes (biology) **Find AAT terms**

PREFIXES: select all dc dcterms dwc owl rdfs schema

PREDICATES

Selectable query models and predicates

```

1 PREFIX dcterms: <http://purl.org/dc/terms/>
2 PREFIX aat: <http://vocab.getty.edu/aat/>
3
4 SELECT *
5 WHERE {
6   ?subject dcterms:subject ?link.
7   FILTER STRSTARTS(STR(?link), STR(aat:)).
8 }
    
```

Diverse forms for download

RESULTS: JSON XML TTL CSV **Results**


subject	link
http://data.ascdc.tw/uc/005e35b6	http://vocab.getty.edu/aat/300028051
http://data.ascdc.tw/uc/005e3587	http://vocab.getty.edu/aat/300053623
http://data.ascdc.tw/uc/005e3599	http://vocab.getty.edu/aat/300053623
http://data.ascdc.tw/uc/005e35b0	http://vocab.getty.edu/aat/300053623
http://data.ascdc.tw/uc/005e35b4	http://vocab.getty.edu/aat/300053623
http://data.ascdc.tw/uc/005e35b6	http://vocab.getty.edu/aat/300053623
http://data.ascdc.tw/uc/005e3586	http://vocab.getty.edu/aat/300053623
http://data.ascdc.tw/uc/005e35ae	http://vocab.getty.edu/aat/300053623

<http://data.ascdc.tw/uc/>

Query in UC-LOD SPARQL

Question: In which UC-LOD datasets can we find information on insects of lepidoptera order?

SPARQL



Eurema blanda arsakia
臺灣黃蝶

EXAMPLES Find Lepidoptera Select query example

PREFIXES select all

dc dcterms **dwc** owl rdfs schema

PREDICATES

class family genus kingdom order phylum

```

1 PREFIX dwc: <http://rs.tdwg.org/dwc/terms/#>
2 PREFIX dcterms: <http://purl.org/dc/terms/>
3
4 SELECT ?subject ?title
5 WHERE {
6   ?subject dwc:order ?o; dcterms:title ?title.
7   FILTER (STR(?o) = '鱗翅目').
8 }
          
```


Query language describing
searching paths

SUBMIT

RESULTS JSON XML TTL CSV

subject	title
http://data.ascdc.tw/uc/002613d0	後夜蛾
http://data.ascdc.tw/uc/002613d2	蝶夜蛾
http://data.ascdc.tw/uc/002613d4	縵縵夜蛾
http://data.ascdc.tw/uc/002613d5	雅美縵夜蛾
http://data.ascdc.tw/uc/002613de	條盲夜蛾
http://data.ascdc.tw/uc/002613e0	新交蘭紋夜蛾
http://data.ascdc.tw/uc/002613e2	球葉夜蛾

Results: title and URI
of matched data



Eterusia aedeia formosana
蓬萊茶斑蛾



Linking UC-LOD with AAT

In this project we plan to link UC-LOD datasets with AAT vocabularies to increase their discoverability and extend applicability through structured LOD model!
An example from UC metadata: Handloom

	Subject	Type	Coverage	Holding location
value	紡織機	實體物件	卑南 (臺東)	中央研究院
Getty vocab.	AAT 300023505 handlooms	AAT 300117127 artifacts (object genre)	TGN 7491221 Taidong (county)	ULAN 500309388 Academia Sinica

Art & Architecture Thesaurus® Online Full Record Display

ID: 300023505

handlooms (looms (textile tools), <textile fabric (hierarchy name))

Terms:

- handlooms (preferred,C,U,I,C,English-P,D,U)
- handloom (C,U,English,AD,U,SN)
- hand looms (C,U,English,UF,U,N)
- loom, hand (C,U,English,UF,U,N)
- looms, hand (C,U,English,UF,U,N)
- hand-loom (C,U,English,UF,U,N)
- 手工織機 (C,U,Chinese (traditional)-P,D,U,U)
- 手織機 (C,U,Chinese (traditional),UF,U,U)

Art & Architecture Thesaurus® Online Full Record Display

ID: 300117127

artifacts (object genre) (object genres (object genres))

Notes: Generally, objects made or modified by humans such as tools, utensils, objects for personal adornment, archaeology, an artifact is an object made by a human in the context of museum objects, use "cultural artifact." In that is a product or effect resulting from the experience

Terms:

- artifacts (object genre) (preferred,C,U,English,AD,U,SN)
- artifact (object genre) (C,U,English,UF,U,SN)
- artefact (object genre) (C,U,English,UF,U,SN)
- artefact (object genre) (British English,AD,U,SN)
- artefact (object genre) (French,AD,U,SN)

Getty Thesaurus of Geographic Names® Online Full Record Display

ID: 7491221

Taidong (county)

Coordinates: Lat: 22 53 01 N degree minutes Lat: 22.8836 decimal degrees Long: 121 02 54 E degree minutes Long: 121.0483 decimal degrees

Names:

- Taidong (preferred,NA,V,Chinese (transliterated Pinyin without tones),U)
- Taidong Xian (NA,V,Chinese (transliterated Pinyin without tones),U)
- Taidong (NA,O,Chinese (transliterated),U)
- Taidong County (NA,O,Chinese (transliterated),U)
- Taidong Xian (NA,V,Chinese (transliterated),U)
- T'ai-tung (NA,V,Chinese (transliterated),U)
- T'ai-tung Hsien (NA,V,Chinese (transliterated),U)
- 臺東縣 (NA,V,Chinese),U)

Union List of Artist Names® Online Full Record Display

ID: 500309388

Academia Sinica (Taiwanese repository, contemporary)

Names:

- Academia Sinica (preferred,U,display)

Nationalities:

- Taiwanese (preferred)

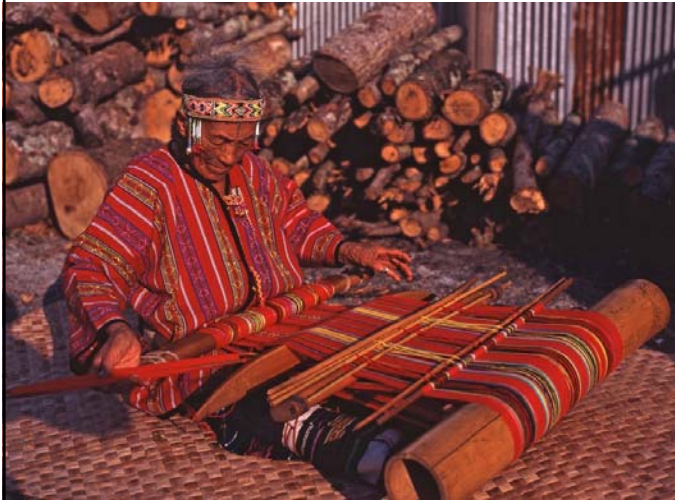
Roles:

- repository (preferred)

Gender: unknown

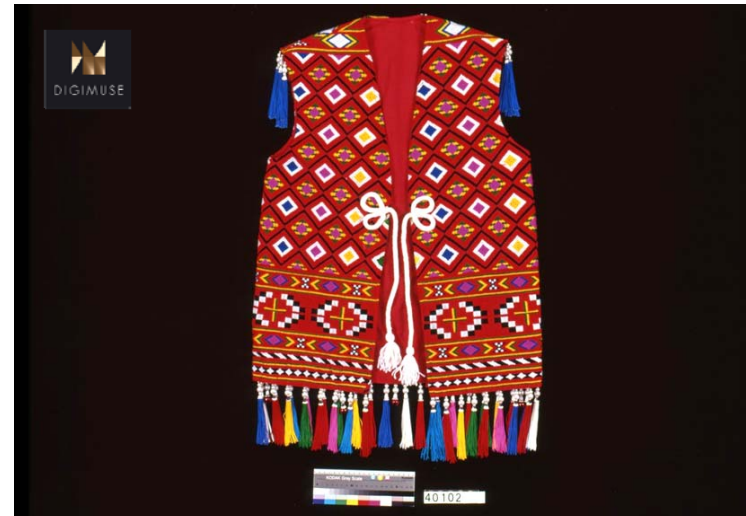
AAT-Taiwan application program 3



DigiMuse: Digital Indigenous Museum with AAT



Project purposes

- “Digital Indigenous Museum”, a Pilot project of DigiMuse program organized by ASCDC
- Interactive platform for digital preservation and reuse of digital cultural resources in Taiwan for collection, research, demonstration and authorization for users.
- Museums, content holders, and the general public can upload its resources for integration and reproduction, continue knowledge sharing in public.
- As initial stage we focus on cultures of Taiwanese indigenous people with ca. 300 selected items:
 - Parsing metadata from selected fields (objects, materials) and mapping to AAT
 - Displaying by knowledge graph



後設資料 Metadata	Tags
<p>藏品類型 影像</p> <p>族別 卑南族</p> <p>著作權 高春月/陳文德</p> <p>時間分佈 2003</p> <p>空間分佈 台東縣台東市南王里</p> <p>典藏單位 中央研究院民族學研究所</p> <p>資料識別 16341</p> <p>來源 http://c.ianthro.tw/16341</p>	<p>卑南族 服飾 長衫心</p> <p>相關展覽 Related exhibition</p> <p>成年的守護—大獵祭</p> <p>夢幻衣櫥</p> <p> </p>

A vest of Puyuma tribe displayed in DigiMuse

Structure of knowledge graph

Mapped AAT concepts

1. Mapping metadata fields, such as object, material, of each item with AAT-Taiwan.
2. Present info of concept's preferred term, scope note, facet and hierarchy of each mapped AAT terms.

Related collections in UC

1. Parse metadata fields as title, subject, object type, coverage, material and rights of related item in SPARQL endpoint of UC-LOD



背心(服裝) AAT 300209904

物件層面/ 服飾

長至腰部或更長的貼身無袖服裝，通常無領，常有鈕釦或口袋。至於長度至腰圍下方、前襟通常有鈕釦的貼身服裝則稱「馬甲」，其可能有衣袖，通常穿在襯衫之外、外套或夾克之內。

聯合目錄相關藏品

[賽夏族 矮靈祭 迎靈中族人-2](#)

賽夏族男性族人傳統服飾(背面)，包含頭帶及長背心，賽夏族女性……

[珠長衣](#)

全件以白色麻線平織為底，背部及袖口以棕色麻線縫合為一對襟無……

[男上衣](#)

對襟無領無袖長背心，上半段為亞麻原色，下半段間以紅色條紋夾織。

[珠長衣](#)

全件以白色麻線平織為底，背部及袖口以棕色麻線縫合為一對襟無……

[泰雅串鈴衣](#)

由二塊夾織麻布，於長邊對摺，背部以白色麻線於內面縫合，再以……



地點



Geographic info

1. Parse metadata field of coverage in TGN SPARQL endpoint
2. Visualization: adoption of google map to reveal related geographic info

所屬族群：卑南
原住民族委員會

傳統名稱：Pinuyumaya

區域：卑南族主要的生活區域主要分布在台東平原、平原西側淺山山麓與花蓮縱谷南端的沖積平原。

婚俗：母系

傳統經濟：農耕、打獵

傳統服飾：卑南族的服飾和其他原住民族相比，較活潑多彩，不論男女都喜以鮮花蕾頭飾。服裝最大特色，是以鮮艷的紅、黃、綠夾雜黑、白色，突顯出多層菱形紋，並搭配細緻的十字繡花紋。

傳統美食：主食粟、旱稻、甘薯、芋頭，副食醃漬肉

Link with external LOD resource

1. Link to LOD datasets of Taiwan's Council of Indigenous Peoples (CIP)
2. Parse info of related indigenous tribes in SPARQL endpoint of CIP's LOD datasets

Knowledge graph: a vest of Puyuma tribe

AAT-Taiwan application program 4

Early Chinese Periodicals Online (ECPO) Program with AAT



<http://kjc-sv013.kjc.uni-heidelberg.de/ecpo/>

Project purposes

- Early Chinese Periodicals Online (ECPO): a joint program between Academia Sinica and Centre for Transcultural Studies of Heidelberg University (HCTS).
- In ECPO system, 230 kinds of periodicals, published between 1904 and 1937, with focus on women, gender issues, arts, literature or entertainment are digitalized. 879 keywords are set up to structure textual and image topics in ECPO.
- Current study: mapping 105 keywords from 238 images collected in “The Crystal”, a boulevard magazine issued between 1919 and 1940 in Shanghai, with AAT or TGN concepts.

Early Chinese Periodicals Online

Home Search Browse About

< 230 PUBLICATIONS

The Crystal 晶報 JINGBAO "THE CRYSTAL"

Volume No. Issue No.

ALL PAGES | ALL ITEMS | ARTICLES | IMAGES | ADVERTISEMENTS

22-04-15 Next

Painting exhibited at Chinese and Japanese painting exhibition
Published: 9. April, 1922
Issue: No. 371, 2nd page

Assigned Keywords on Image search keyword

English: paintings arts and crafts exhibition

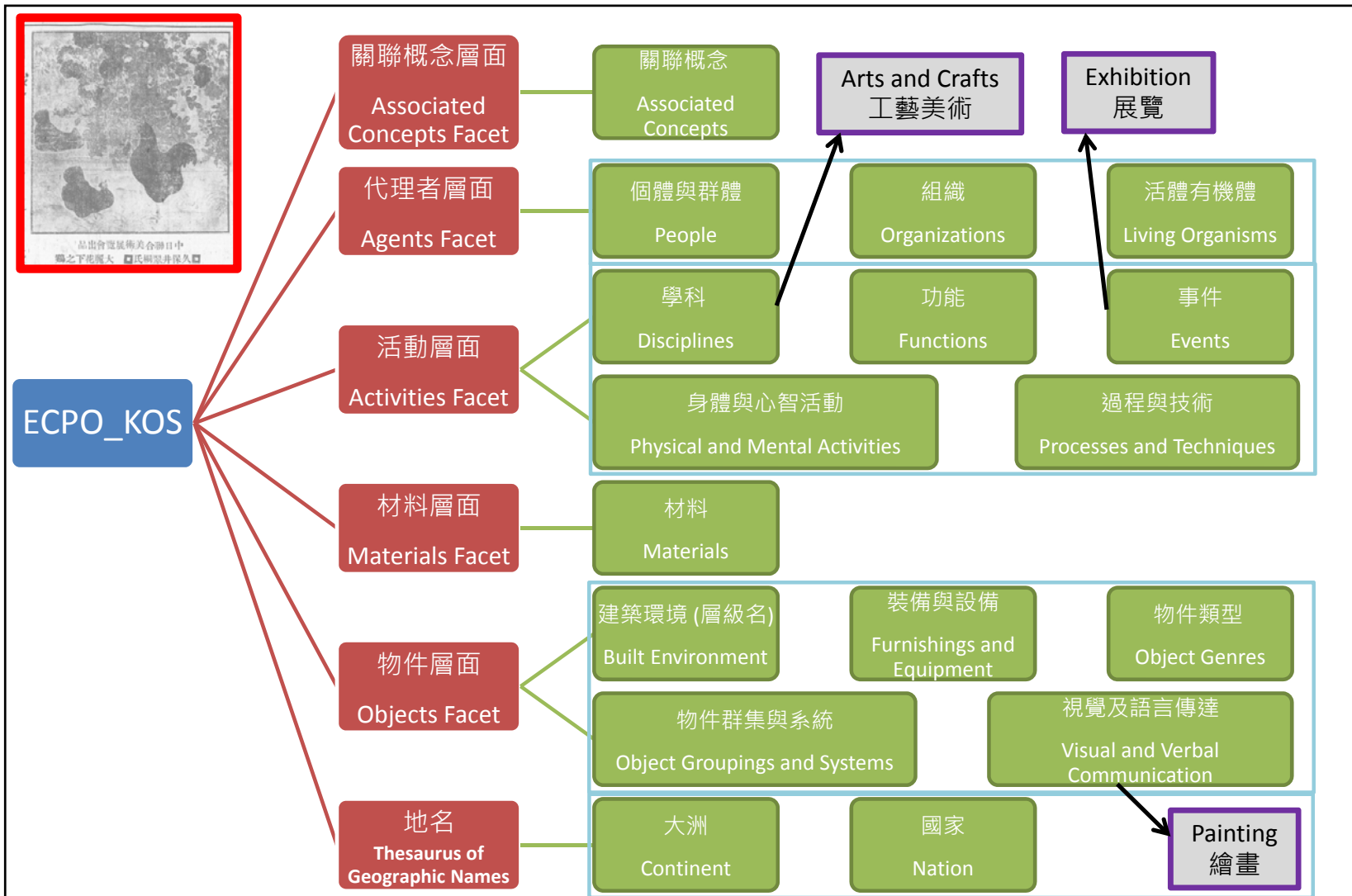
Chinese: 繪畫 工藝美術 展覽

Pinyin: hui hua gong yi mei shu zhan lan

ECPO Keywords	Tagging in AAT concepts	facet	hierarchy
Painting 繪畫	paintings(visual works) AAT 300033618	Objects	Visual and Verbal Communication
Arts and Crafts 工藝美術	industrial arts AAT 300250482	Activities	Disciplines
Exhibition 展覽	exhibitions(events) AAT 300054766	Activities	Events

Mapping Results of ECPO Keywords to AAT/ TGN

Facet	Hierarchy	Keywords	Term Frequency
Associated Concepts Facet (Type 19; Value 111)	Associated Concepts	19	111
Agents Facet (Type 15; Value 72)	People	11	61
	Organizations	2	3
	Living Organisms	2	8
Activities Facet (Type 25; Value 116)	Disciplines	9	55
	Functions	3	21
	Events	7	22
	Physical and Mental Activities	2	3
	Processes and Techniques	4	15
Materials Facet (Type 9; Value 15)	Materials	9	15
Objects Facet (Type 31; Value 89)	Built Environment	6	8
	Furnishings and Equipment	10	22
	Object Genres	5	37
	Object Groupings and Systems	1	2
	Visual and Verbal Communication	9	20
Geographic Names (TGN) (Type 6; Value 12)	Continent	1	1
	Nation	5	11
Total		105	415



- After mapping ECPO keywords to AAT or TGN, we suggest a hierarchical micro-KOS for the study of images in "The Crystal." (e. g. 3 keywords from "Roosters under Dahlias")



以視覺化呈現資料之間的脈絡(巨觀與微觀) 並提供進一步的探索

The Open Graph Viz Platform

Gephi is the leading visualization and exploration software for all kinds of graphs and networks. Gephi is open-source and free.

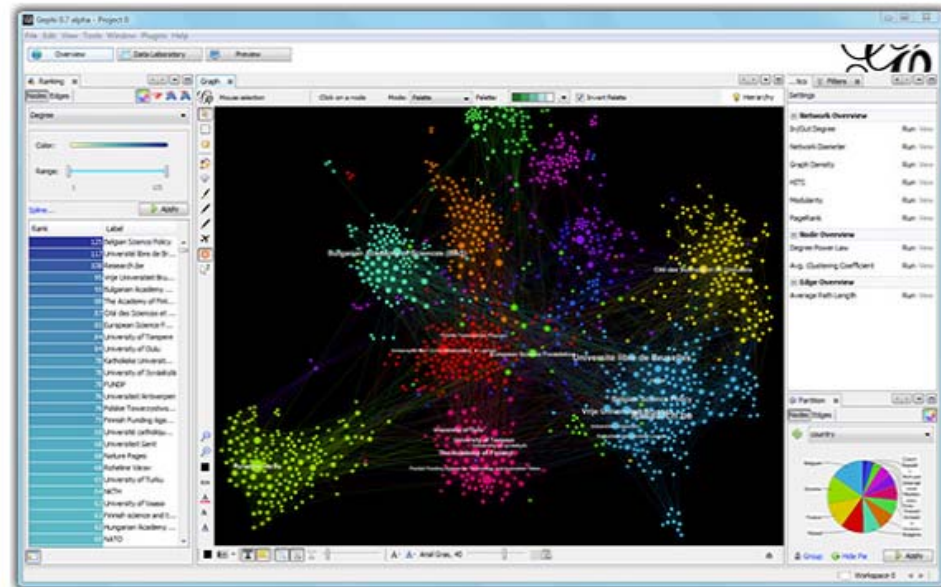
Runs on Windows, Mac OS X and Linux.

[Learn More on Gephi Platform »](#)



[Release Notes](#) | [System Requirements](#)

- ▶ [Features](#)
- ▶ [Screenshots](#)
- ▶ [Quick start](#)
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APPLICATIONS

- ✔ **Exploratory Data Analysis:** intuition-oriented analysis by networks manipulations in real time.
- ✔ **Link Analysis:** revealing the underlying structures of associations between objects.

Like Photoshop™ for graphs.

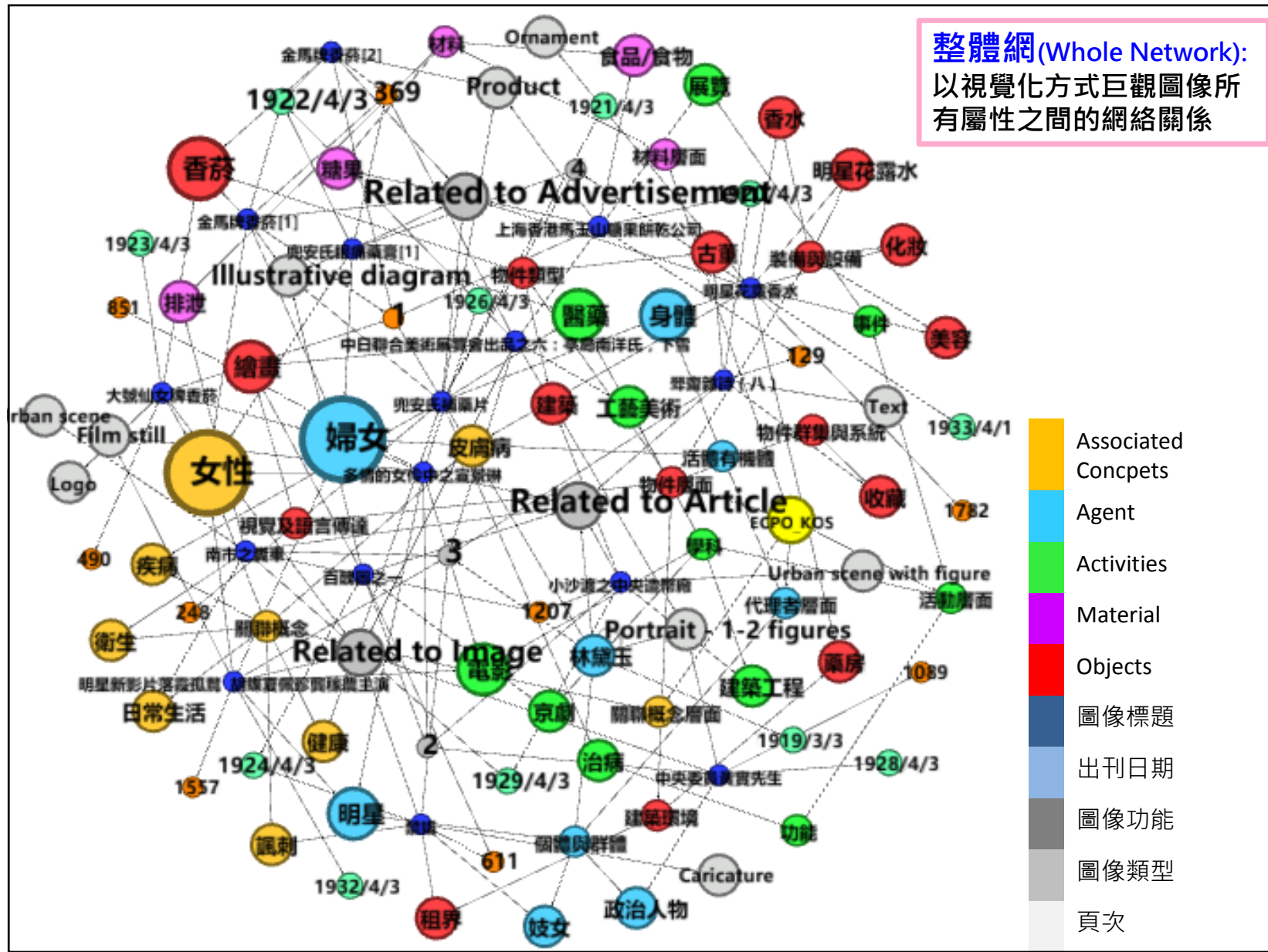
— the Community

LATEST NEWS

- ▶ [Gephi updates with 0.9.1 version](#)

PAPERS





Thanks for your listening



The Getty Research Institute

藝術建築索引典
Art & Architecture Thesaurus Taiwan

Digital
Cultures
Archives
Center for
Digital
Cultures
中央研究院數位文化中心