

Taiwan *e*-Learning & Digital Archives Program (TELDAP)

Inherit the Past, Usher in a New Phase

Der-Tsai Lee

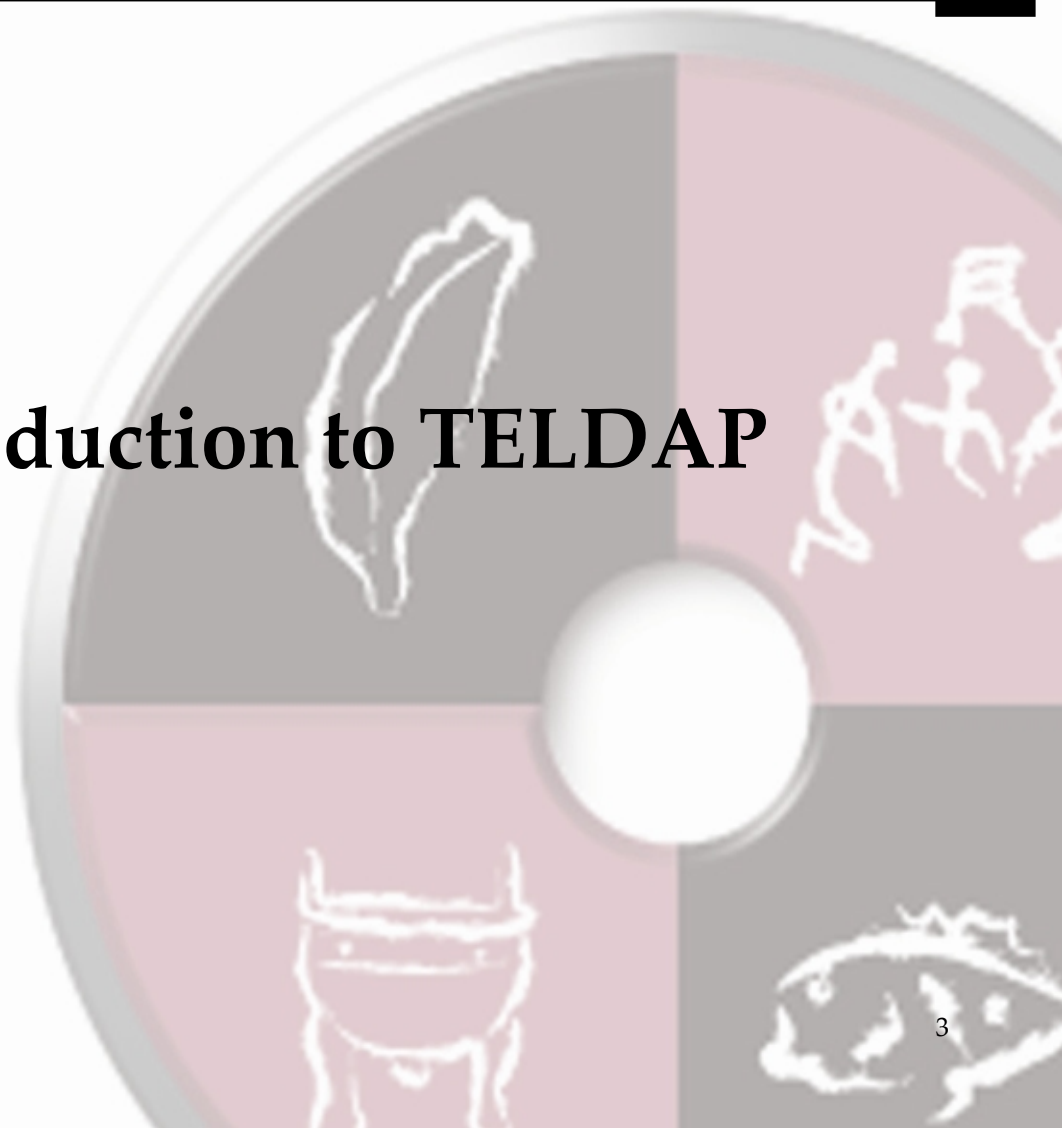
**Deputy Program Director, TELDAP Taiwan
&
Distinguished Research Fellow & Director
Institute of Information Science &
Center for Information Technology Innovation
Academia Sinica
Taipei, Taiwan**

<http://teldap.tw/>

Outlines

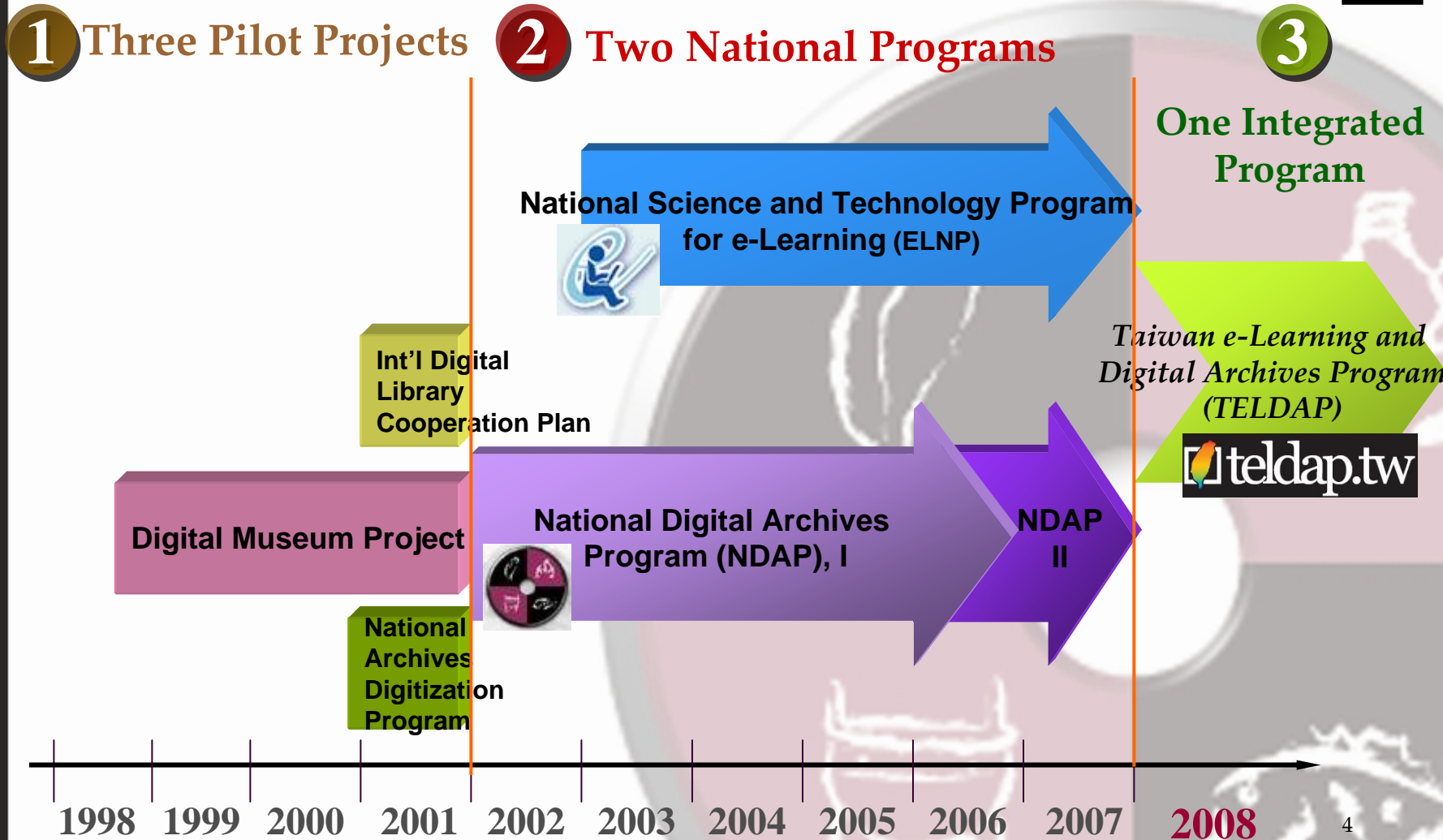
- **Brief introduction to TELDAP**
- **Significant outcomes and impacts of NDAP**
- **Stepping into a new phase: essential tasks for NDAP**
- **Concluding Remark**

Brief Introduction to TELDAP



Timeline of TELDAP History ⁶

Taiwan e-Learning & Digital Archives Program



Before TELDAP..... 5

- National Digital Archives Program (NDAP): Phase I, 2002-2006; Phase II, 2007
 - the **only national science and technology program** that places emphasis on social sciences and the humanities
 - Program Office in Academia Sinica
- National Science and Technology Program for e-Learning (ELNP): 2003-2007
 - Program Office in the National Central University
- In 2007, a resolution was passed to integrate *NDAP* and *ELNP* to become TELDAP

Taiwan e-Learning and Digital Archives Program ⁴ 2008-2012



Program Officers

Program Director: Dr. Ts'ui-jung Liu (VP, Academia Sinica)

Deputy Program Director: Dr. Der-Tsai Lee
(Academia Sinica)

Deputy Program Director: Prof. Shing-Tsaan Huang
(National Central University)

Program Offices

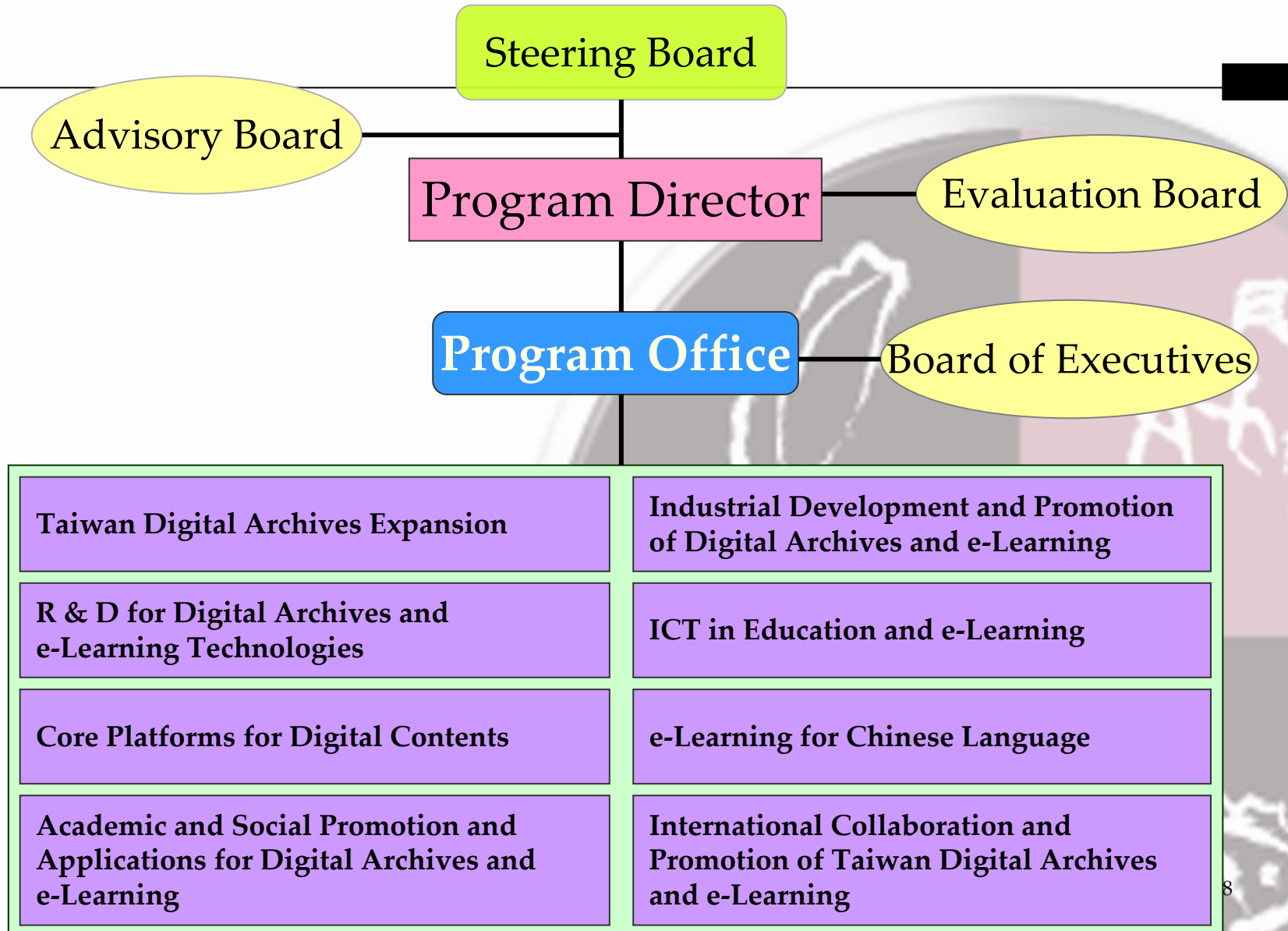
--- Main office: Academia Sinica, Taipei

--- Branch office: National Central University, Chungli

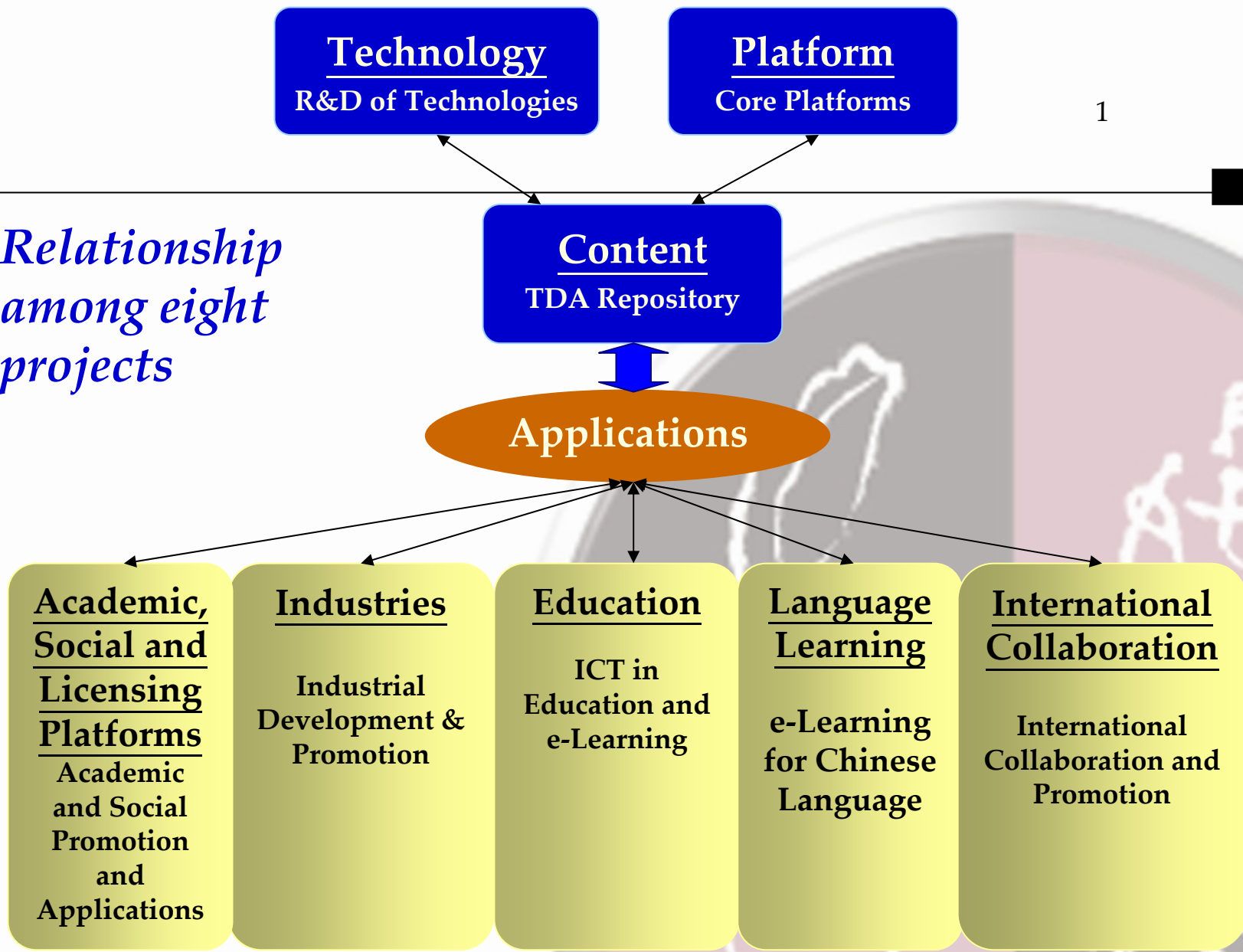
Objectives ³

- Showcase Taiwan's biological, cultural and social diversity
- Stimulate **cultural, academic, socio-economic** and **educational** values derived from Taiwan Digital Archives (TDA)
- Develop digital archives and e-Learning related industries
- Expand the applications of e-Learning to school and life-long education
- Establish Taiwan as a global e-Learning center for Chinese language
- **Promote international cooperative network of Chinese cultural heritage and e-Learning**

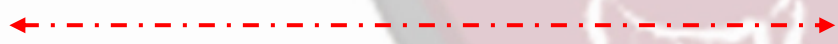
Organization Chart ₂



Relationship among eight projects



Domestic



International

What we have done before TELDAP --- NDAP Aspect



Objectives of NDAP I, II

NDAP Phase I (2002~2006): Content Development

- Taiwan Digital Archives (TDA)

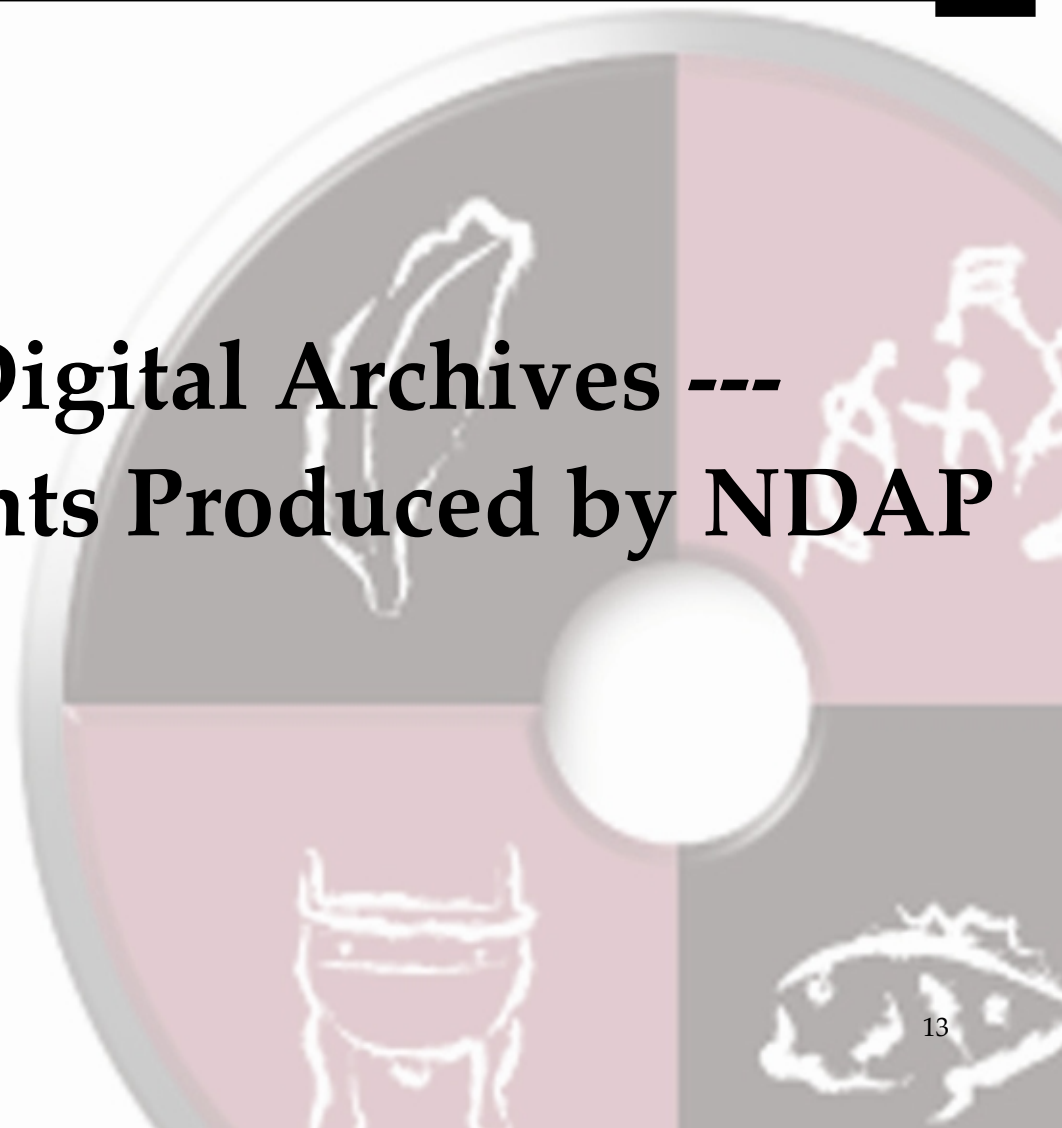
NDAP Phase II (2007~): TDA Expansions

- ↪ To **showcase** Taiwan's biological, cultural, and social **diversity**
- ↪ To promote the **C**ultural, **A**cademic, **S**ocio-economic and **E**ducational (**CASE-**) values engendered by the NDAP
- ↪ To develop an **international cooperation and exchange network**, and promote awareness about Taiwan's cultural heritage

Accomplishments in 6 years

- **Establishment of Taiwan Digital Archives**
 - ⇒ Preserve **over 5 million** items representative of Taiwan's cultural assets from various content holders and providers
 - ⇒ **Standardize digitization workflow** and **metadata** ensuring interoperability among the whole collections
- **Development of advanced digital archive technologies**
 - ⇒ **21+ key technologies** have been developed and applied in NDAP to improve the production and management of digital contents
- **Creation of infrastructure for value-added applications**
 - ⇒ Generate an **output value of 116 million NTD** from participation of N.Y. International Licensing Expo. (2005-2007)
- **Enhancement of international awareness of NDAP**
 - ⇒ **MCN (Museum Computer Network)** Taiwan Chapter
 - ⇒ Associate member of **GBIF (Global Biodiversity Information Facility)**
 - ⇒ Steering Committee member of **Culture.Mondo Network**¹²

Taiwan Digital Archives --- Digital Contents Produced by NDAP



Process of Digital Archiving 6



Collections in museums



Books in libraries



Objects in archaeological sites

Digitization



Database



Scholarly Community

Access

Union Catalog

Access

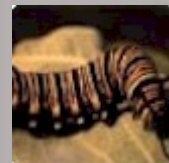
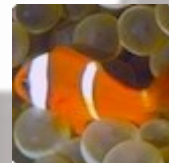
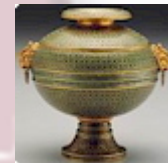
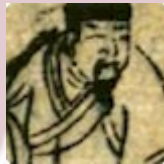


User

Taiwan Digital Archives : Sources I ⁵

14 Major Content Holders (2001~)

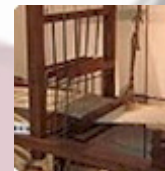
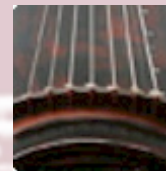
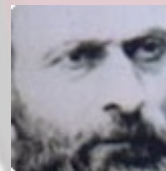
- Academia Historica
- Academia Sinica
- Chinese Taipei Film Archive (2007-)
- Council for Cultural Affairs (2008-)
- Council for Hakka Affairs (2008-)
- Council of Indigenous Peoples (2007-)
- National Archives Administration (2007-)
- National Taiwan University
- National Central Library
- National Palace Museum
- National Museum of History
- National Museum of Natural Science
- Taiwan Historica
- Taiwan Provincial Consultative Council (2004-)



Taiwan Digital Archives : Sources II ⁴

Other Content Holders and Providers

- Colleges and Universities
- Collection Holders, e.g. National Taiwan Museum, National Museum of Prehistory
- Others, e.g. Taiwan Forestry Research Institute



Standardization of Digitization Workflow --- ensuring Quality of TDA₃

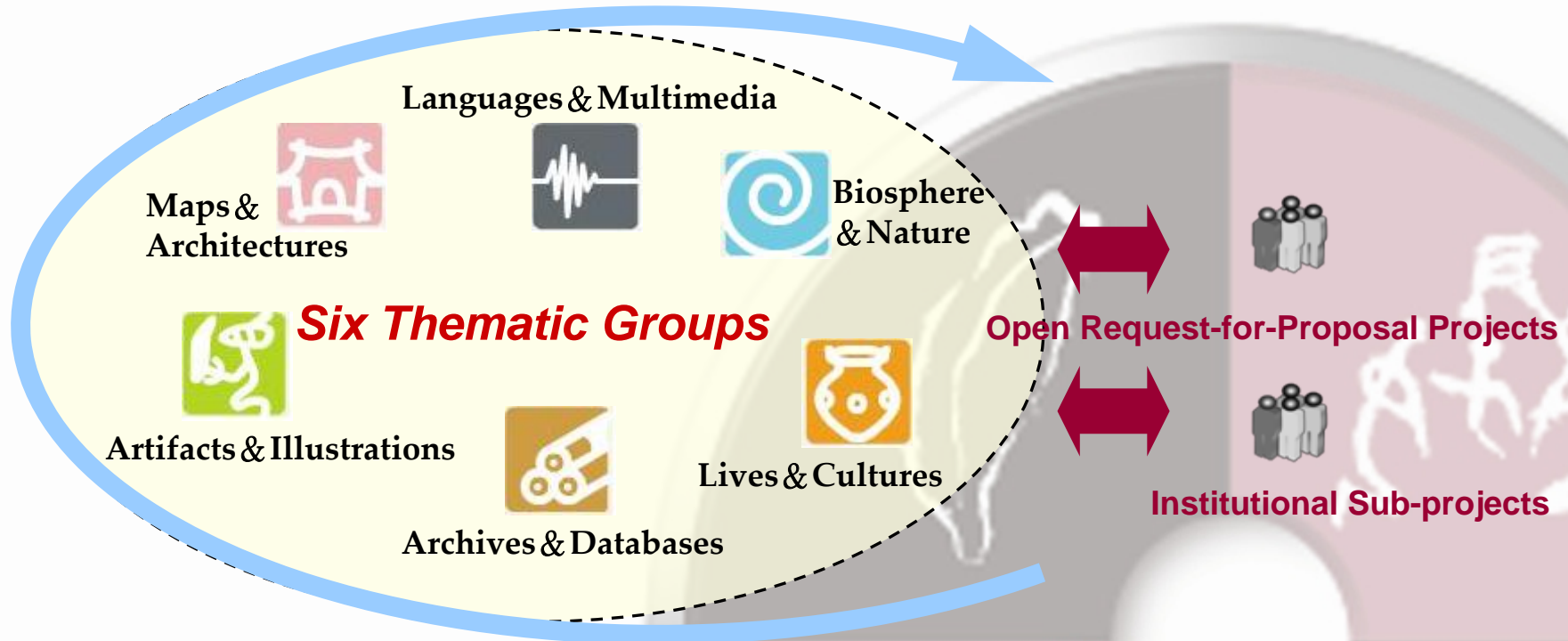
- **15** Guidebooks have been published to share our accumulated “best practices” of digital archives with professionals and general public



Digitization Workflow Guidebooks of 15 major themes

Taiwan Digital Archives: Outputs ⁶

- Categorized into 6 thematic groups



- ~ **370TB** digitization storage (Dec. 2007)
- > **5M** digitized items in **Union Catalog** (March'08)

Union Catalog: an integrated retrieval platform for TDA 5

<http://catalog.ndap.org.tw>

數位典藏 聯合目錄 Catalogs of Digital Archives, Taiwan

首頁 特色藏品 快速導覽 主題分類 典藏機構

▶ 首頁

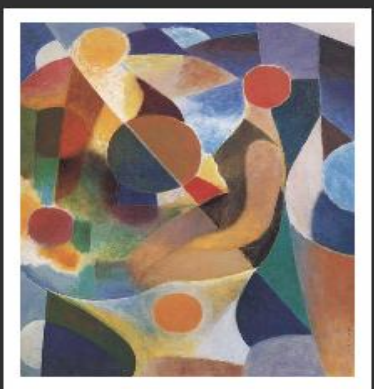
搜尋 搜尋

推薦特藏

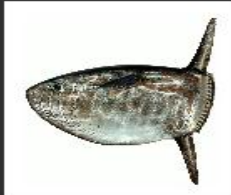
李石樵 數位美術館

李石樵從事藝術創作長達六十餘年，他秉持堅定不移的精神，產生質量俱豐的作品，是今天台灣社會和「李石樵美術館」的文化寶藏。李石樵是台灣第一代西畫家，他誠懇嚴謹的創作態度，及富有思考、哲學、批評的個...

李石樵數位美術館計畫



特色藏品



寶島曼波 一斑點長翻車魚

「寶島曼波，曼波寶島……」，海洋曼波音樂響起，大洋表層洄游性魚類如鮪、鯷、鯖、鬼頭刀、旗魚及翻車魚等駕乘溫暖的黑潮遊來到臺灣東部海域。其中翻車魚為最大的硬骨魚類，體長可達3公尺以上，體重超過達2,3...

快速導覽

Quick Guides

台灣原住民祭典主題

飛魚祭 大船下水典禮 矮靈祭 小米收穫祭 播種祭 打耳祭 西拉雅夜祭 祖靈祭 豐年祭 少年猴祭

臺灣棒球主題

郭泓志 陳義信 王貞治 李居明 金龍少棒隊 亞洲棒球錦標賽 陳金鋒 曹錦輝 王建民 張誌家 郭源治 奧運棒球賽 呂明賜 世界棒賽三冠王 紅葉少棒隊 威廉波特少棒賽 世界棒球錦標賽 亞洲運動會-棒球 郭泰源

近代史主題

中國共產黨 孫中山 國民革命北伐 張作霖抓李 大釗 蔣中正 四一二事件 / 清黨 國際共產主義

書畫主題

鬼神 花卉 橫幅 紀實攝影 駱駝驢馬 可變動物 皴法 大觀 對聯 人物攝影 中堂、條幅與條屏 節氣 寫實 風景 建築攝影 手卷 扇面 國畫技法 山水 景觀 台灣濱海風情

昆蟲主題

竹節蟲 吉丁蟲 台灣特有種 蜻蜓 蝗蟲 蜻蜓 黑點 蟲 天牛 豆娘 金龜子 天蠶蛾 螳螂 燈蛾 尺蠖 螢火 蟲 锹形蟲 粉蝶 小灰蝶 鳳蝶 蚊子 瓢蟲 虎甲蟲 蟬 象鼻蟲 蟋蟀 獨角仙 叩頭蟲 金花蟲 蛭蝶 步行 蟲 椿象 埋葬蟲

Selected Collections

Union Catalogue 4: Categorization by ...

38
Selected collections

12
Content types

The screenshot displays the Union Catalogue 4 website interface. At the top, there are navigation tabs: 首頁 (Home), 特色藏品 (Featured Collections), 快速導覽 (Quick Navigation), 主題分類 (Theme Classification), and 典藏機構 (Collection Institutions). A search bar is located in the center, with the placeholder text '請輸入關鍵字' (Please enter keywords) and a '搜尋' (Search) button. Below the search bar, there are several content sections:

- 推薦特藏 (Recommended Collections):**
 - 蘭嶼原住民媒體資料庫 (Lan Yu Indigenous Media Database):** A section featuring a photograph of a beach with several small boats. The text describes the database's focus on the oral and written media of the indigenous people of Lan Yu.
 - 台灣棒球101 (Taiwan Baseball 101):** A section with a photograph of a baseball field. The text mentions the historical significance of baseball in Taiwan.
 - 漫遊我國花鳥畫的沿革 (The Evolution of Chinese Flower and Bird Painting):** A section with a photograph of a traditional Chinese painting of a red flower.
- 快速導覽 (Quick Navigation):** A list of thematic categories:
 - 臺灣棒球主題 (Taiwan Baseball Theme):** Lists names of players and teams like 郭泓志, 陳義信, etc.
 - 近代史主題 (Modern History Theme):** Lists historical figures and events like 中國共產黨, 孫中山, etc.
 - 昆蟲主題 (Insects Theme):** Lists various insects like 竹節蟲, 吉丁蟲, etc.
 - 生物主題 (Biology Theme):** Lists various biological groups like 植物類, 台灣特有亞種鳥類, etc.
 - 台灣原住民服飾主題 (Taiwan Indigenous Clothing Theme):** Lists clothing items like 服裝, 上半身飾品, etc.
 - 台灣原住民祭典主題 (Taiwan Indigenous Festival Theme):** (Partially visible)
- 特色藏品 (Featured Collections):**
 - 日常生活文化的縮影——台灣原住民的陶製品介紹 (Shrinking Shadow of Daily Life Culture - Introduction to Indigenous Pottery):** Accompanied by a photograph of a traditional clay jar.
 - 寶島曼波——斑點長翻車魚 (Treasure Island Manba - Spotted Long翻車魚):** Accompanied by a photograph of a fish.

16
Content themes

60+
Archive organizations and projects

Union Catalogue ³

Jadeite Cabbage
w/ Insect

Keyword search
"Jadeite Cabbage"

主題分類 典藏機構

搜尋 翠玉白菜

搜尋

Link to the
original site

清 翠玉白菜



Dublin Core Metadata

後設資料

授權與引用資訊

連結到原始資料網站

資料識別：

故玉002103N000000000

資料類型：

玉石器

描述：

此器利用玉之原色施以巧琢，以綠色部份琢為菜葉，白色處施作菜身，酷似實物，葉上並琢二螽斯。為故宮所藏「巧作玉器」中最受人矚目者。

日期：

1644 A.D.-1911 A.D.

格式：

長18.7公分 厚5.07公分 寬9.1公分

關聯：

《國之重寶》

管理權：

國立故宮博物院

首頁

特色藏品

快速導覽

主題分類

典藏機構

內容主題 ▶ 器物 ▶ 玉石器

搜尋 請輸入關鍵字

搜尋

Licensing and Citation

清 翠玉白菜



後設資料

授權與引用資訊

連結到原始資料網站

引用資訊

Citation

作者不詳 (1644 A.D.-1911 A.D.)。[清 翠玉白菜]。《數位典藏聯合目錄》。http://catalog.ndap.org.tw/?URN=835735 (2008/03/05瀏覽)。

複製到剪貼簿

URL citation

引用連結

http://catalog.ndap.org.tw/?URN=835735

複製到剪貼簿 -->

特色藏品



魚中「藝伎」—黑背連鰭虹彩鯛

日本魚類學家Araga和Yoshino於1986年發表了新種的虹彩鯛，由於此魚種黑紅相間的色彩特徵，在濃黑體色中間撲上一條朱紅色帶，像極了日本傳統「藝伎」烏黑頭髮與朱唇的對比，同時具有含蓄的小嘴...



收藏在台灣潮間帶的美麗典藏品

澎湖石滬是一種收藏在台灣澎湖群島間，潮間帶上的大型典藏品，它的歷史悠久，有文獻的紀錄就有近300年的歷史。澎湖石滬的造型典雅，由天空鳥瞰，時而圓滑、時而蜿蜒，像如意、像祥雲、像靈芝。石滬捕魚為一種古老...



國內外各地風光

世界是個美麗的萬花筒，不論到何處都有著許多美麗的景觀，從古至今也累積了許多對於自然風景、人文景觀的畫作，而同樣是山水的景觀，在不同時代名家的手中揮灑，出來的畫作也有著不同的味道，就讓我們仔細的...



超自然力的應許——消災祈福

宗教是人類最深的心靈觸動，也是反映人對自然與環境的一種和諧態度；儀式是歷經長久的生活體驗，也是宗教信仰體系下所累積對超自然的一種共同文化。不同族群對生活體驗及宗教信仰的不同，各自創造或衍生出個別的文化...

更多特色藏品...

丁石江 蔡晉順 趙少印 李博倫 木路 邱靜山 郭玉
席德進 廖繼春 馬白水 劉其偉 歐豪年 傅狷夫 王王
孫 李石樵 符宏征 田啓元 閻鴻亞 張大千 溥心畬
楊英風 齊白石 李澤藩 黃君璧 蘇森墉 陶壽伯 李
泰祥 黎煥雄 魏珠娟

礦物主題

寶石 貴重金屬 造岩礦物 金瓜石礦物 中藥藥用礦物 放射性礦物 夜明珠 顏料礦物 愚人金 澎湖文石 台灣玉

器物主題

酒器 水晶製品 汝窯 明代宣德年間青花瓷 掐絲琺瑯 內填琺瑯 畫琺瑯 甜白瓷 明器 人俑 琥珀 紋飾欣賞 青瓷 青白瓷 唐代長沙窯 釉裡紅 鬥彩 漆金兵器 禮器 瑪瑙 三彩陶 宋瓷 漢玉 商周青銅禮器 清宮藏時繪 漆器 雕竹器 鼻煙壺 銅鏡 多寶格 鐘錶工藝 飾品與修妝匣 茗茶器具 清代仿古玉器 清代畫意玉器 雙連器

近代史主題

國民革命北伐 國際共產主義 孫中山 蔣中正 中國共產黨 張作霖抓李大釗 四一二事件/清黨

Union Catalog currently (3/2008) contains more than **5 million** digitized items

資源統計

- 後設資料：2,026,896 筆
- 數位化影像：1,463,875 筆
- 數位化影音：33,496 筆
- 數位化媒材總計：3,524,267 筆



Virtual Exhibitions ₂

Bird Orchestra in Taiwan



[DEMO]

Courtesy: Digital Archives Project, National Taiwan University

<http://www.museums.ntu.edu.tw/english/index.jsp>

Digital Archive Technologies



Core Technologies

- **Metadata Standards**
- **Object Movie and Panorama**
 - ⇒ 3D Virtual Artworks Display System
- **Augmented panorama**
 - ⇒ Tangible Photo-Realistic Virtual Museum
- **Video Archiving Technology**
 - ⇒ VCenter (<http://vcenter.iis.sinica.edu.tw/>)
- **Digital Image Archiving Technology**
 - ⇒ Multimedia Center (<http://ndmmc2.iis.sinica.edu.tw/>)
- **Chinese Character Encoding**
 - ⇒ Chinese Glyph Structure Database
 - ⇒ Missing Character System (<http://char.ndap.org.tw/>)

Main Tasks of the MAAT⁴

Metadata Architecture and Application Team

<http://www.sinica.edu.tw/~metadata/>

- Identify suitable **international metadata standards**
 - ⇒ Dublin Core, TEI, EAD, CDWA, LOM, etc.
- Implement standards into collection projects/institutions
 - ⇒ More than 80 Collection Projects of the NDAP
 - ⇒ EtoE (Ministry of Education)
 - ⇒ Cultural Affairs School of *e*-Learning
- Develop National Standards
 - ⇒ **TWLOM** has been announced to be a national standard **CNS 15136 LOM (Learning Object Metadata)**
 - ⇒ Dublin Core, OAI, etc.



Projects	Attributes			
	Data Types	Subjects	Communities	Metadata Standards
■ The Digital Archives of Rubbings and Archaic Texts	Rubbings	History	Museum	CDWA
■ Digital archives for the Grand Secretariat Archives	Archives	Politics/History	Archives	EAD
■ Digital Archives of Chinese Archaeological Data	Artifacts	Archaeology	Museum	CDWA, MIDAS
■ Digital Archive for Rare Books of Fu Ssu-Nien Library	Rare Books	History	Archives	TEI
■ Digital Library Project for Official Economic Archives and Diplomatic Archives	Archives	Diplomacy	Archives	EAD
■ Zoological Research of Taiwan: Fish and Mollusks	Specimen	Herbarium	Herbarium	SPECIES 2000 Standard Data
■ Digital Library of Taiwan Herbarium	Specimen	Herbarium	Herbarium	HISPID
■ Linguistics Anchoring and Language Archive of Digital Archives	Corpus	Language	N/A	OLAC
■ GIS Archive for Modern Chinese Historic Atlas and Aerial Photos	Map, Photography	GIS	N/A	FGDC
■ Taiwan Aborigine: Ping-pu	Video, Costume	Race/Aborigine	Museum	DC
■ Digital Archives for Ethnological Specimen, Photo and Archives	Report	Race/Aborigine	Museum	CDWA

Interoperability Strategy ²

Generic
Dublin Core

for cross-domain
interoperability

NDAP
Union Catalogue

Thematic ***Institutional***

**Thematic or Institutional
Union Catalogue**

for discipline-oriented,
professional, in-depth,
and precise search

Domain-specific
**CDWA, EAD, LOM,
TEI Lite...etc.**

**Individual Project
Repository**

Augmented Panorama: Application

The *tangible Photo-Realistic Virtual Museum* integrates augmented panorama and vision-based tracking, letting end users interact with virtual artworks just like the way in a real museum.

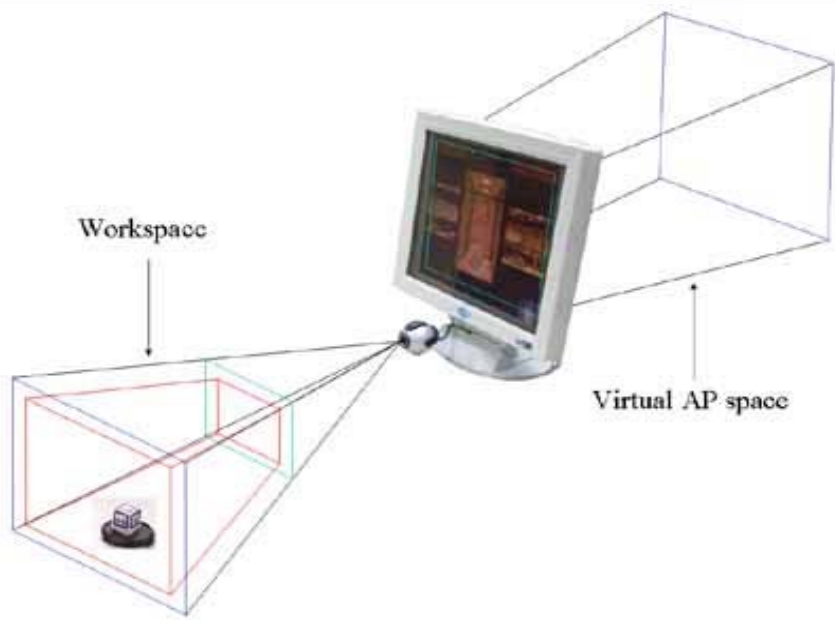
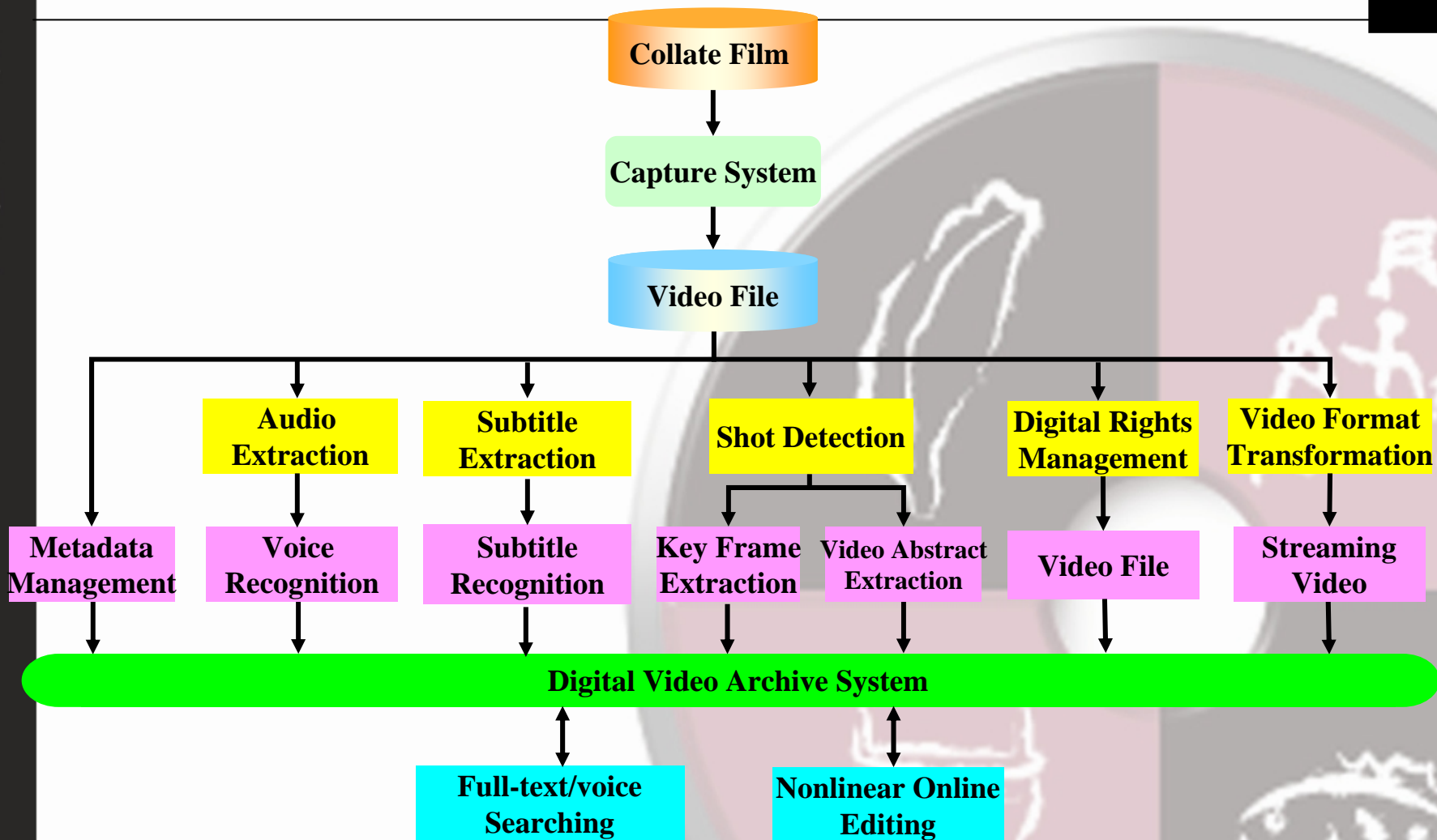


Illustration of physical control cube (PCC) and virtual plate

Demo: [[play](#)] 1:25

Video Archiving Technology ⁴



Workflow for the digital video archive system

Video Archiving Technology : VCenter ³

URL: <http://vcenter.iis.sinica.edu.tw/>

- VCenter : Video Center
 - ⇒ VCenter is a multimedia sharing platform
- For the general public:
 - ⇒ Personal media blog (audio and video blog)
 - Upload / Watch / Share audio and video content
- For museum or archive projects:
 - ⇒ Audio and video archive system
 - Upload / Broadcast / Manage batch audio and video content
- Online video editor
- Video Map

The screenshot displays the VCenter website interface. At the top right, there is a green navigation bar with the text "Guest : Sign Up | Log In | 繁中". Below this is a blue header for "VCenter" with the URL "http://vcenter.iis.sinica.edu.tw". A vertical menu on the left lists navigation options: Home, Browse, NDAP, Vlog, Upload, Sign Up, and About. The main content area features several sections:

- 典藏專區**: A section titled "台灣本土音樂家之影音典藏-李泰祥大師 (藝術與民歌篇)" with a grid of video thumbnails. Below the thumbnails is a text block: "「歌頌」創作素材是 李泰祥 音樂可從 中國音樂創作要從本「答案」在創作的初來自於觀察煙花... 現、融合、新意中... 質上著手... 衷是想表現山歌...". It includes a view count of 102 and a duration of 6:40:30.
- 電視新聞多媒體資料庫**: A section with a grid of video thumbnails. Below the thumbnails is a text block: "生命科學數位博物館-人體奧秘展覽館". It includes a view count of 434 and a duration of 615:22:07.
- 視聽嗅覺**: A section with a grid of video thumbnails. Below the thumbnails is a text block: "台灣現代戲劇表演影音資料庫數位典藏計畫". It includes a view count of 30 and a duration of 16:16.

On the right side, there is a sidebar with a "UP上傳" button and a "相關網站" section listing various digital archive and multimedia-related websites, including "數位典藏內容發展分項計畫", "Digital Archive Architecture Laboratory", and "Digital 101 經典意象 典藏台灣".

The Role of VCenter 2



General Public

Browsing Digital Videos



Website System

Streaming Videos



Requests



VCenter

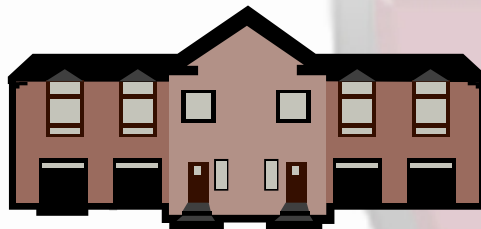
Publishing Data



Uploading Digital Videos



Uploading / Browsing Digital Videos



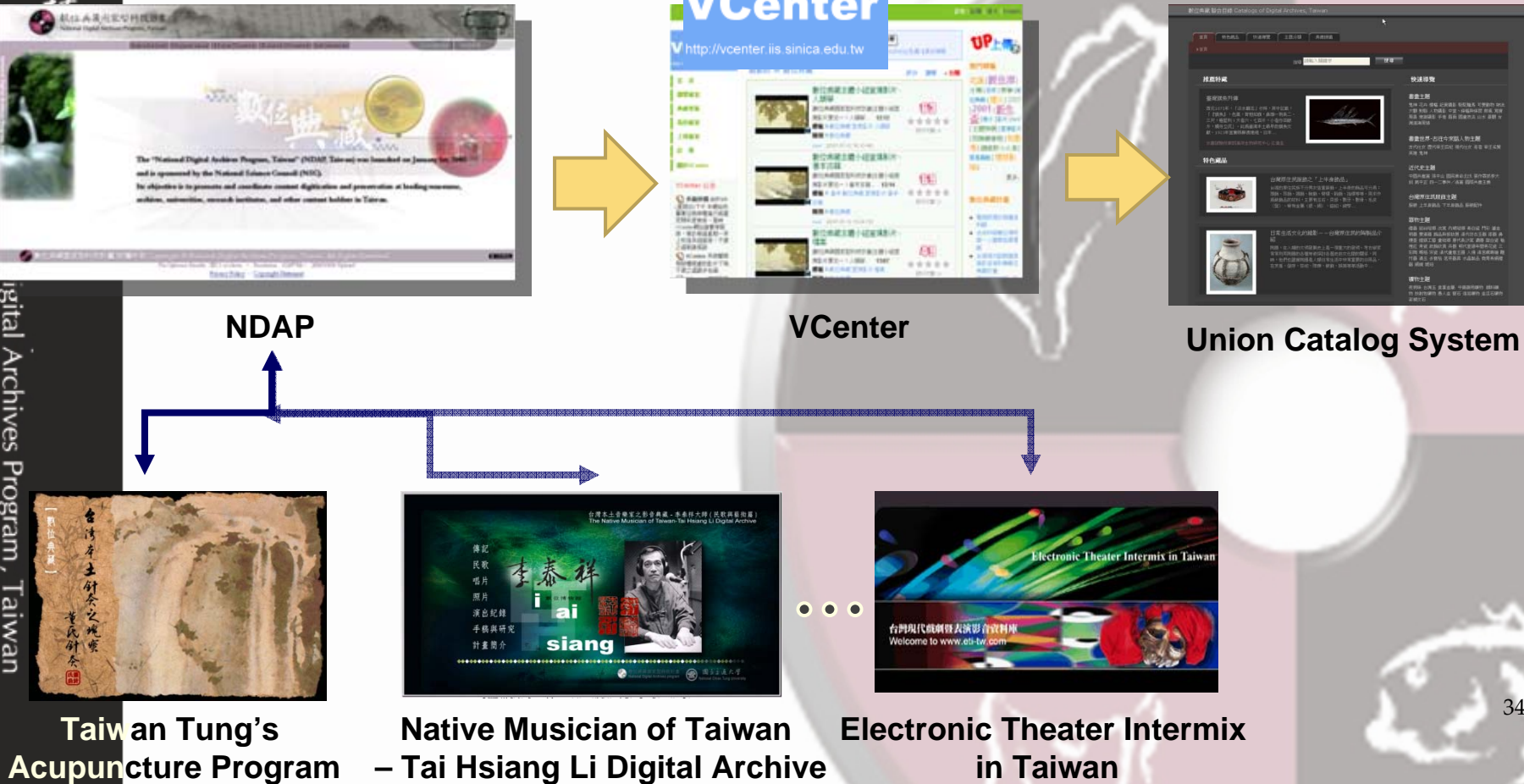
Digital Archive Organization



General Public

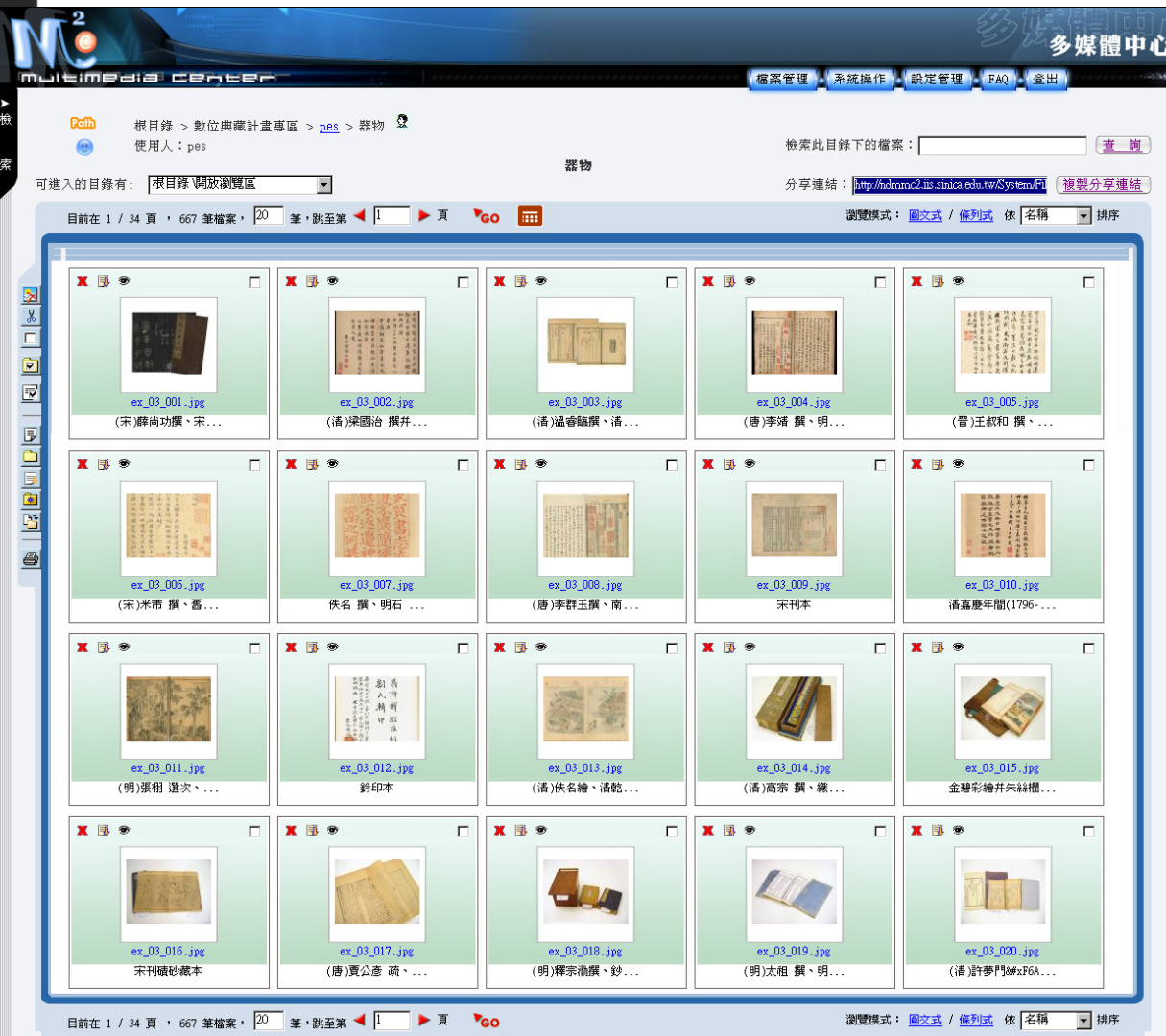
VCenter supports NDAP ¹

- More than 2700 audio and video files from NDAP are published in VCenter <http://vcenter.iis.sinica.edu.tw/>
 - > 760 hours
 - > 100 GB



Digital Image Archiving Technology: 4

Multimedia Center (MMC)



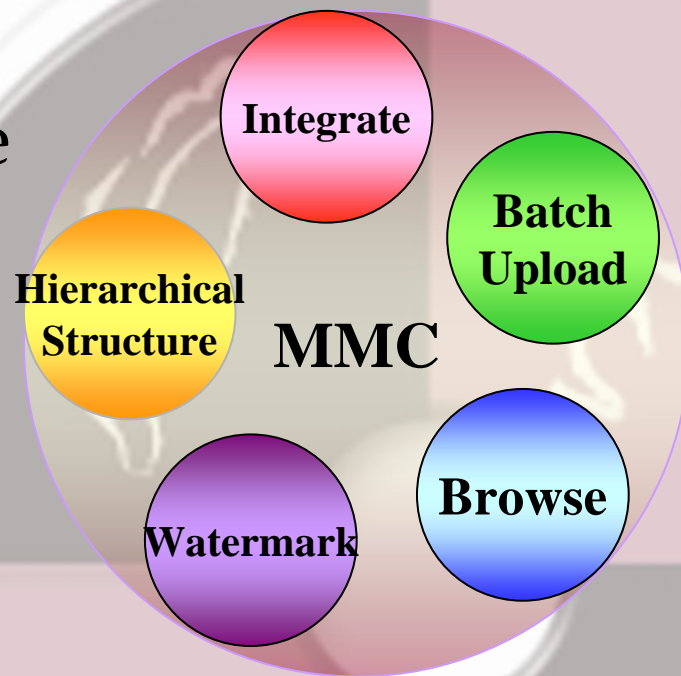
Multimedia Center is a multimedia file management system. Its major purpose is not only to preserve valuable antiques and their relevant information with texts, images and videos, but also to integrate with archiving systems for value-added applications.

URL:
<http://ndmmc2.iis.sinica.edu.tw>

Digital Image Archiving Technology ³:

Features of MMC

- Hierarchical classification structure
- Image batch upload
- High-quality image browsing
- Image watermarking
- System integration



Digital Image Archiving Technology ²

Systems supported

MMC has serviced more than 10 archiving systems.

- ⇒ Digital Archives of Archaeological Data
- ⇒ Digital Archive for Rare Books of the Fu Ssu-Nien Library
- ⇒ Digital Knowledge of Historical and Cultural Heritages developed in the Institute of History & Philology–Rubblings Data
- ⇒ Digital 101

.....

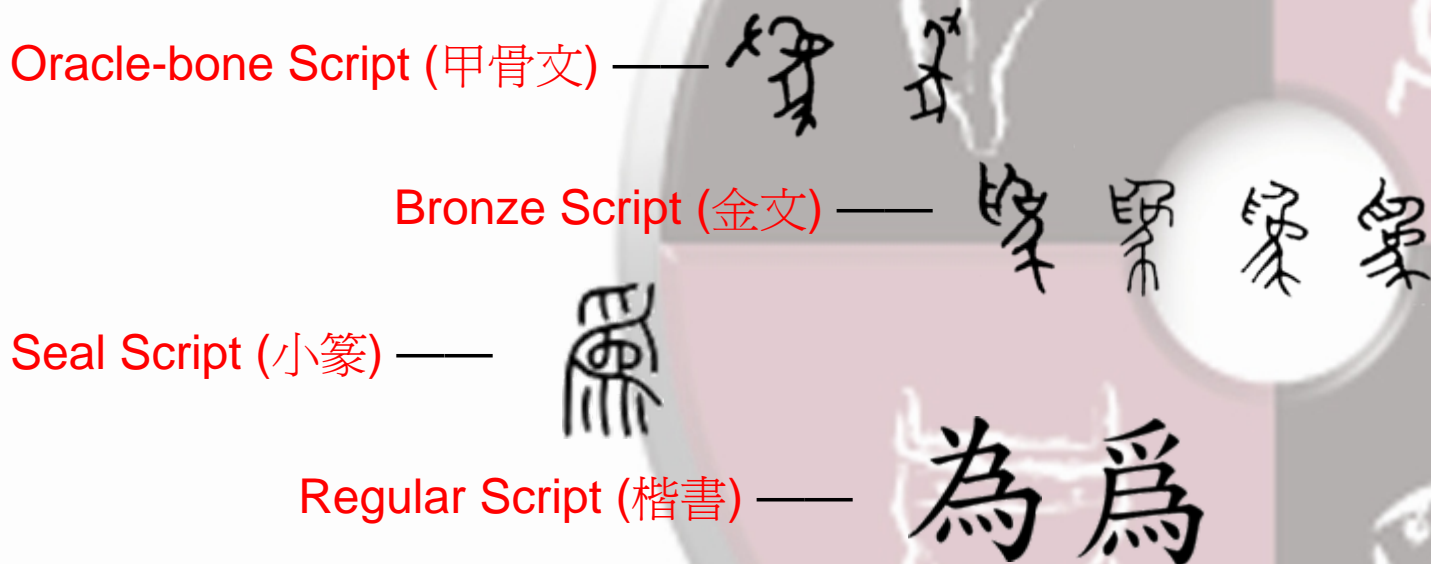
Files and Capacity

Preserved more than **1,370,000** images with a storage capacity of **3TB** and the number of images continues to increase.

Chinese Character Encoding ⁴

Chinese Glyph Structure Database (Version 2.51) (<http://www.sinica.edu.tw/~cdp/cdphanzi/>)

- Contains more than 100,000 Chinese characters, representing the changes of scripts in the Chinese history over times.
- Example: the evolution of “爲” (do)



Example: Search for a **missing character** in the database 3

<http://char.ndap.org.tw/Search/>

The screenshot shows the search interface with the following elements:

- 1. Search:** A search box containing the characters '二女' (two girls) is circled in red. To its right are buttons for '查詢缺字' (Search for missing characters) and '清除' (Clear). A blue arrow points from the search box to the '1. Search' label.
- 2. Results:** A table of search results is shown. The first row contains the character '𡗗' in the '字形' (Character form) column, which is circled in red. A blue arrow points from this character to the '2. Results' label.
- 3. Glyph structure:** The '構字式' (Glyph structure) column shows '二 亼 女', which is circled in red. A blue arrow points from this structure to the '3. Glyph structure' label.
- 4. Copy:** A '複製' (Copy) button in the '快速剪貼' (Quick paste) column is circled in red. A blue arrow points from this button to the '4. Copy' label.

缺字

𡗗

字型大小

100

更改

字型顏色

red

注音

構字式

二 亼 女

檢索符號

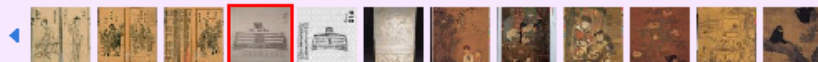
二 亼 女



觀看大图

使用DJVU觀看原圖

下載DJVU看圖程式



井人 𡗗 鐘

中央研究院 珍藏歷史文物數位典藏計畫

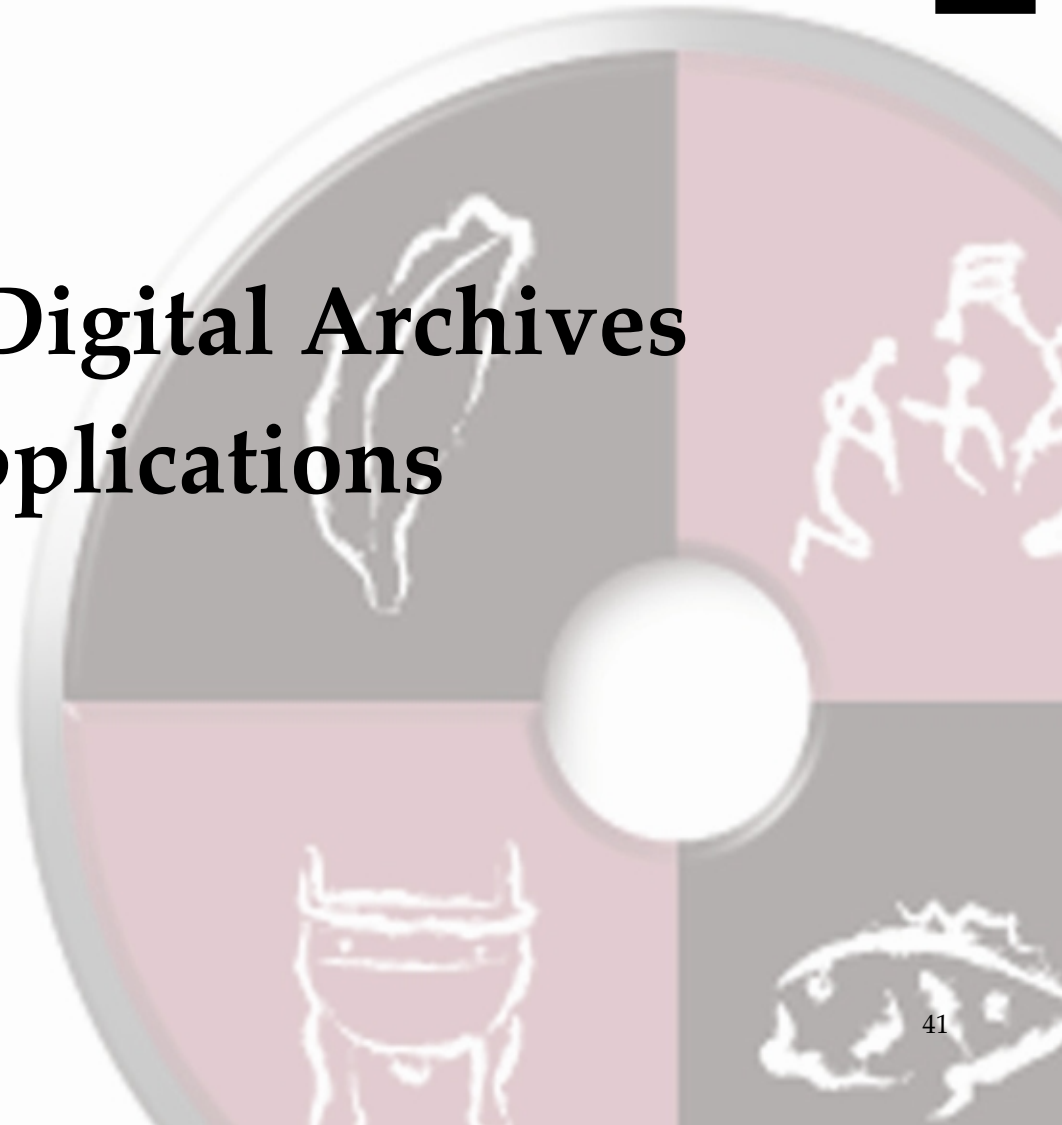
西周晚期 原器現藏日本京都泉屋博古館

Missing Character System ¹

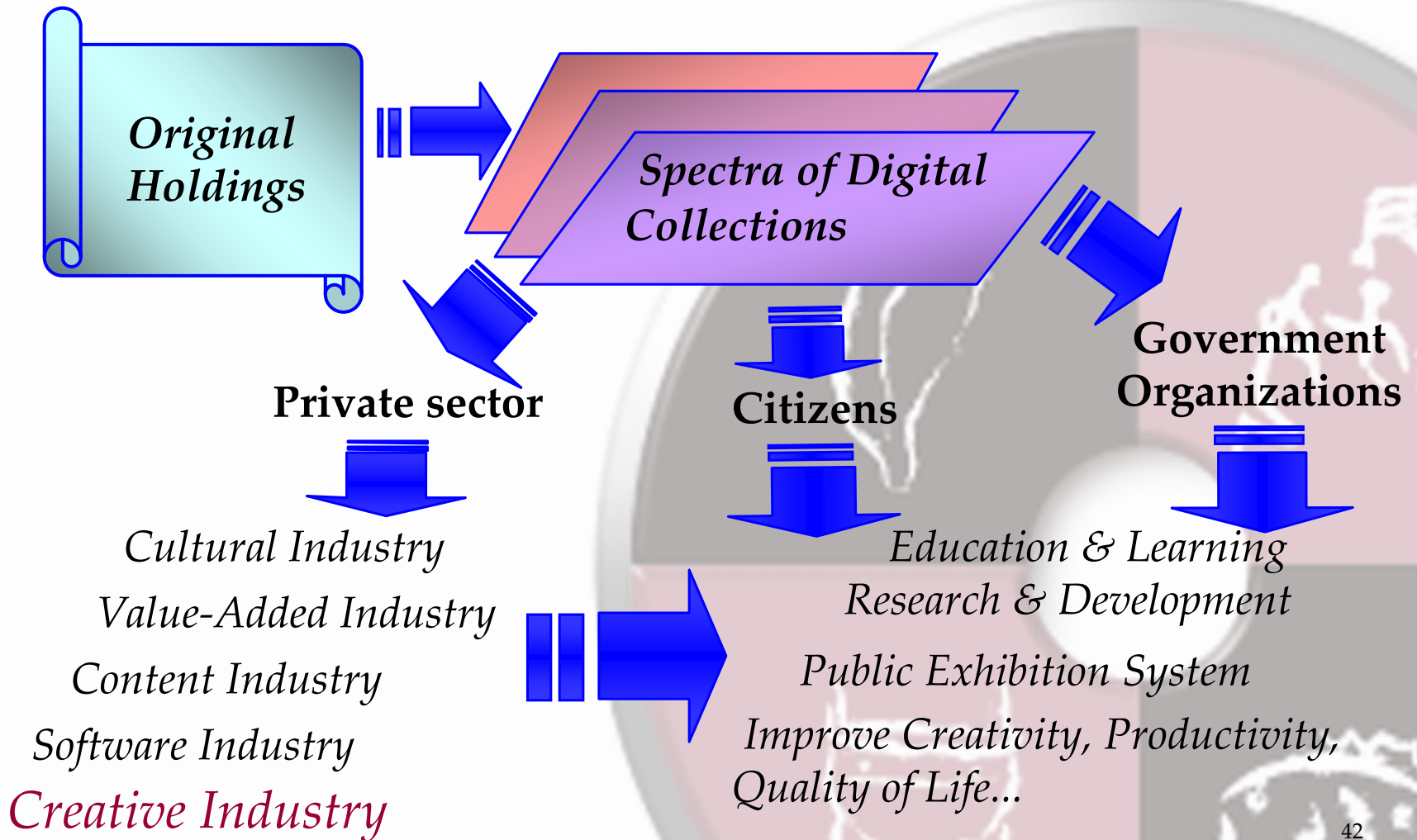
- Missing Character System has been applied in 23 archive databases of NDAP, including **Union Catalog** and **Digital 101 public exhibition system**



Taiwan Digital Archives Applications



Prospects for Digital Archives Application 6



A case of industry-academia collaboration ⁵

Educational website about Taiwan glove puppetry

Puppet King <http://www.puppetking.com.tw> (CCU and EDIT Inc.)

Home Page



History



Souvenir



Playwright



Stage show

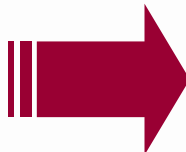
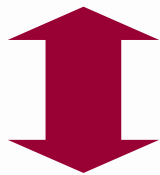
A case of multiple value-added application 4

NTU Insect Museum Digital Archive Project



Products: an educational website, four children's books with a CD, and a puppet

Promotion: sold at an on-line bookstore



Application: As a "Story Time" material in a library

Partner Companies



Tien-Wei Publisher



Offering channels and incentives to promote applications of TDA₃

--- attending Licensing International Expo. New York



Pavilion capacity, participating brands, and estimated output values all increase with years

2005
9 booths
3 brands
22 million NTD

2006
15 booths
8 brands
39 million NTD

2007
20 booths
10 brands
55million NTD

\$1 USD ~ \$30 NTD

Host Digital Archives Commercial Application Contest 2

Q-Dolls of Chinese Emperors (golden prize of the 2007) 2-1

Embody the Imperial Portrait Collection of the Union Catalog

----- into value-added products

(originally stored in the National Palace Museum)



中國時報
96.12.28

Q到不行

▲台藝大學生倪敏把中國歷代皇帝變身為Q版公仔，贏得第二屆數位典藏商業應用大賽人物玩偶設計組冠軍。

(李宗祐攝)

<http://news.chinatimes.com/Chinatimes/Philology/Philology-artnews/0,3409,112007122800018+110513+20071228+news,00.html>

Host Digital Archives Commercial Application Contest 1

⇒ Q-Dolls of Chinese Emperors (golden prize of the 2007) 1-2

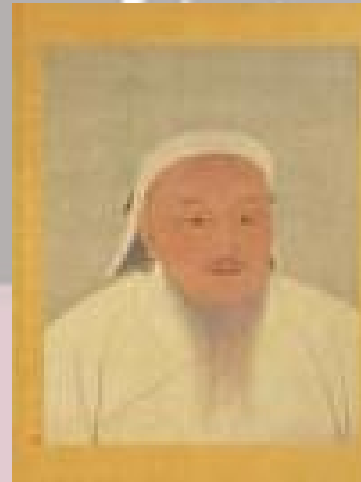
Embody the Imperial Portrait Collection of the Union Catalog
(originally stored in the National Palace Museum)



Emperor T'ai-tsung of Tang
(reigned 627-649 A.D.)



Emperor Huizong of Song
(reigned 1100-1126 A.D.)



Genghis Khan
(reigned 1206-1227 A.D.)



Emperor Chengzu of Ming
(reigned 1402-1424 A.D.)

International Collaboration and Promotion



Active Involvement in International Organizations ³

■ Museum Computer Network (MCN) Taiwan Chapter (from 2007)

MCN, founded in 1967, helps information professionals use technology to serve their institutions.



<http://www.mcn.edu/>

■ Asia-Pacific Secretariat Office of Culture Mondo Network

culture.mondo

<http://www.culturemondo.org/2/>

Culture Mondo is "an informal network of cultural portals from around the world".

International Organizations: MCN Taiwan Chapter 2



Objectives:

- Utilize MCN resources to benefit museum community in Taiwan
- Build international network of museums for closely-coupled collaboration
- Become the headquarters of MCN-Asia, and serve as window to Asian cultural heritage
- More active involvement with MCN HQ by joining MCN Board
- Hold annual meetings (1st one held on March 14, 2008)



MCN President Marla Misunas (left) and NDAP Program Director Tsui-jung Liu (right) signed the agreement on March 15 2007.



International Organizations: Asia-Pacific Secretariat Office of Culture Mondo Network ₁

■ NDAP is a member of the Culture.mondo Steering Committee

■ What's Next---

Asia-Pacific Secretariat Office

- To conduct international cultural portals survey.
- To establish social network of Asia-Pacific and global cultural portals.
- To promote international cultural exchange.
- **To host the 4th International Cultural Portal Roundtable Meeting (2008).**

culture.mondo

Culture.mondo International Steering Committee

CULTURE PARIS & LUTHERS-GERMANY



KULTURNÄT SVERIGE

Canadian Cultural Observatory
Culturescope.ca
Observatoire culturel canadien

can
collections australia network

CultuurNet
NEDERLAND

e-cultura

24
HOUR
MUSEUM

數位典藏國家型科技計畫
National Digital Archives Program, Taiwan

Steering
Committee

International Cooperation ²

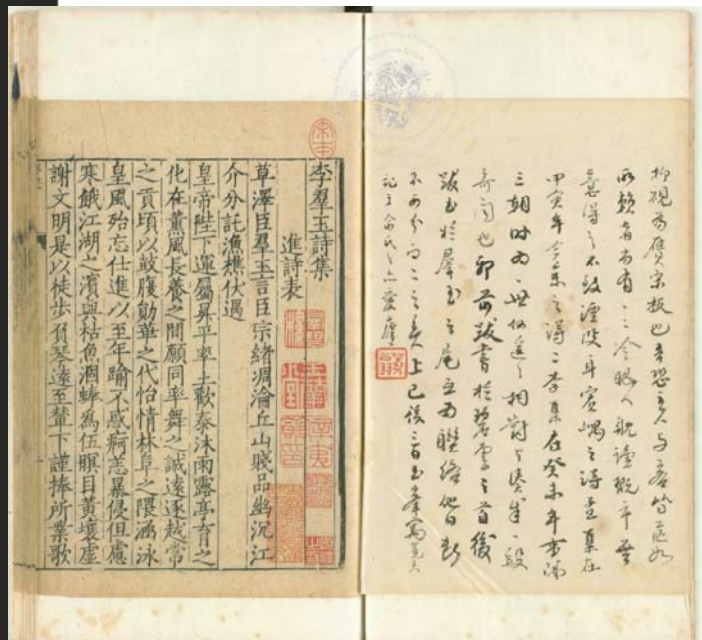
- To locate missing Chinese archival materials scattered throughout the world

Cooperative institutions		Target Collection
Local	Overseas	
Institute of Ecology and Evolutionary Biology, National Taiwan University	Kanagawa Prefectural Museum of Natural History (Japan)	Plant type specimens
Department of Anthropology, National Taiwan University	Department of Ethnography, British Museum	More than 300 pieces of Taiwanese artifacts (Taiwanese Ethnological Collection)
Research Center for Biodiversity, Academia Sinica	Kyoto University Museum, Nishinomiya Shell Museum (Japan)	Shell type specimens
Institute of History and Philology, Academia Sinica	Geography and Map Division, Library of Congress (USA)	Chinese and Taiwanese historical maps

International Cooperation 1-2

Collaborative digitization of the rare-books in four libraries:

Fu Ssu-Nien Library (Academia Sinica),
Harvard-Yenching Library,
Princeton-East Asian Library, and
Library of Congress



Impacts of NDAP: *CASE* value

- **C**ultural Impact: create a new way to preserve cultural heritage and disseminate knowledge
- **A**cademic Impact: create a new environment for innovative research and development
- **S**ocio-economic Impact: create win-win opportunities for content holders and digital content industries
- **E**ducational Impact: build a knowledge repository for life-long learning and abridge the digital divide

**Now, stepping into a new phase:
essential tasks for NDAP**



Essential Tasks for NDAP

- **Open Access (Creative Commons, CC)**
- **Intellectual Property Rights Clearance**
- **Long-Term Preservation**
- **Strengthen Cooperation among Archives Institutions and Content Industry**
- **Web 2.0 Paradigm Shift**

Promotion of CC Concept



- **Objective:** Enhance access to information in academics and government
- **Step 1:** Introduction of CC process to four pilot governmental agencies:
 - ⇒ Ministry of Education
 - ⇒ National Taiwan Museum of Fine Art
 - ⇒ Research, Development and Evaluation Commission
 - ⇒ Intellectual Property Office
- **Step 2:** Gradual dissemination of CC process throughout governmental agencies
- **Step 3:** Extend the concept of CC licensing to the public

Long Term Preservation

Layered Service Framework ₂

■ Customized Application

- ↳ Mediation of heterogeneous Repositories
- ↳ Semantic level information exploration and knowledge discovery

■ Visualization & Presentation

■ Workflow Management

■ Distributed Content Management

- ↳ Standardized digital object with Metadata
- ↳ Information retrieval of integrated heterogeneous content sources
- ↳ Federation of distributed resources

■ Archive: Long-Term Preservation and Efficient Access

- ↳ Replicate three remote copies at different sites automatically
- ↳ Secure Access
- ↳ Integration with distributed storage management
- ↳ Uniform name space

Strengthen Cooperation among Archives Institutions and Content Industry ³

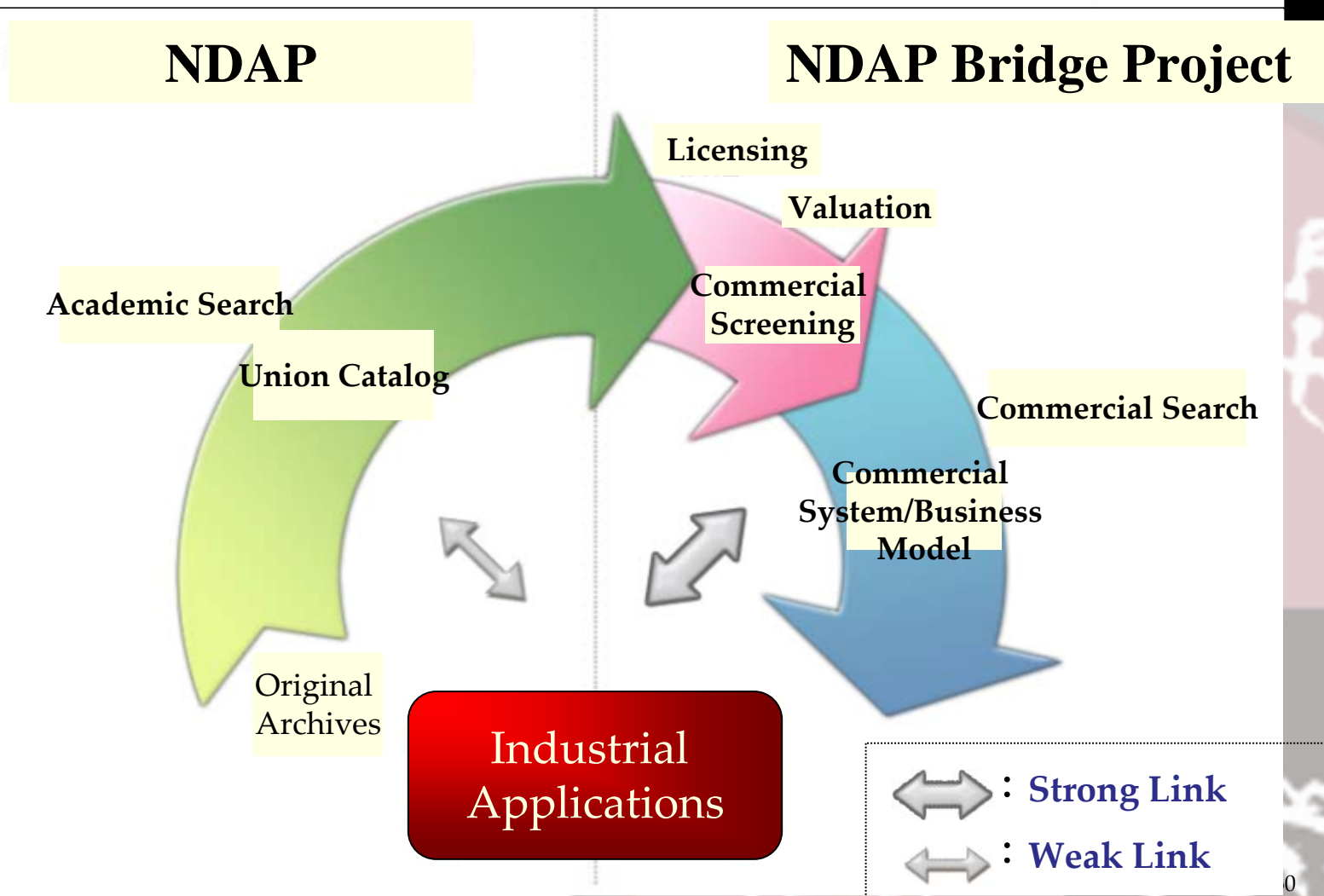
■ Goals:

- Provide content holders access to newly developed, value-added technologies to increase their content values.
- Introduce companies to available digital contents and opportunities for commercialization.

■ Through two channels :

- Non-solicited projects for value-added applications of digital archives
- NDAP Bridge Project

NDAP Bridge Project – Creative, Integrative and Value-added Paradigm Project 2



Web 2.0 Paradigm Shift: NDAP OpenStudio Project ⁵

What is OpenStudio?

- Architecture of participation for remixing
- Platform to discover the “deep web” of cultural heritage
- Facilitation of community building among creative workers & developers
- Promoting cultural innovation in market place
- Social movement & community mobilization through social networking

Summary

■ NDAP Phase I & II:

Establish and Expand TDA featuring Taiwan's **bio-, socio- and cultural diversities**

Cultivate Cultural, Academic, Socio-economic and Educational (CASE) values of NDAP

Build partnership between public and private sectors

Forge international cooperation

■ Key issues: digital rights, IPRs, digital preservation, sustainable management, etc.

■ Integrate digital archives and e-learning programs (2008~) **TELDAP**



Concluding Remark

- **NDAP: A Unique Taiwan Experience**
- Collaboration among **content experts** and **information technologists**.
- Address issues of **easy** and **open** access.
- Emphasize education and skills training for human resource development.
- Opens up new areas of research in ICT, bio-diversity, computational humanities, and social informatics.
- **Long-term governmental commitment (infrastructure).**

Thank you for your attention!

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or dtlee@ieee.org