

# Digital Humanities in Taiwan

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# Outline

1. National Digital Archives Project in Taiwan
2. Research Center for Digital Humanities in National Taiwan University

# Digital Archives Project in Taiwan

- Three earlier projects sponsored by the National Science Council during late 1990s:
  - Digital Museum Project
  - National Archive Digitization Program
  - International Digital Library Cooperation Plan

# Digital Archives Project in Taiwan

- National Digital Archives Program (NDAP) (2002)
- National Science and Technology Program for e-Learning (2003)
- Taiwan e-Learning and Digital Archives Program(TELDAP) (2008)

# Digital Archives Project in Taiwan

- Objectives:

- (1) To showcase Taiwan's biological, cultural, and social diversity
- (2) To promote the cultural, academic, socio-economic and educational values engendered by the NDAP.
- (3) To develop an international cooperation and exchange network, and promote awareness about Taiwan's cultural heritage

# Digital Archives Project in Taiwan

- Academia Sinica
  - *Scripta Sinica*: Twenty-five Histories(二十五史), Thirteen Classics (十三經) , Essays of Statecrafts in Qing Period (清代經世文編) ...
  - GIS platforms (directed by Fan I-chun): Taiwan history and culture in Time and Space, Chinese Civilization in Time and Space
- Digital Museums and Libraries:
  - National Palace Museum, National Museum of Natural Sciences, National Taiwan University, Academia Historica, Taiwan Historia...



# Digital Archive Project in NTU

- Funded by National Science Council, Digital Archives Project of National Taiwan University has been initiated since 2002.
- The digitalization of the collections in NTU involves a wide variety of content and data types.

# A Glimpse of DARC

- DARC: Digital Archives Resource Center in NTU
  - Taiwan Historical Collections (National Taiwan University Library)
  - Herbarium (Institute of Ecology and Evolutionary Biology)
  - Insect (Department of Entomology)
  - Geosciences (Department of Geosciences)
  - Anthropological Collections (Department of Anthropology )
  - Zoology (The Institute of Ecology and Evolutionary Biology)
- <http://www.darc.ntu.edu.tw/>





Japanese anthropologist Miyamoto Nobuto (宮本延人) with his assistants in the field studies

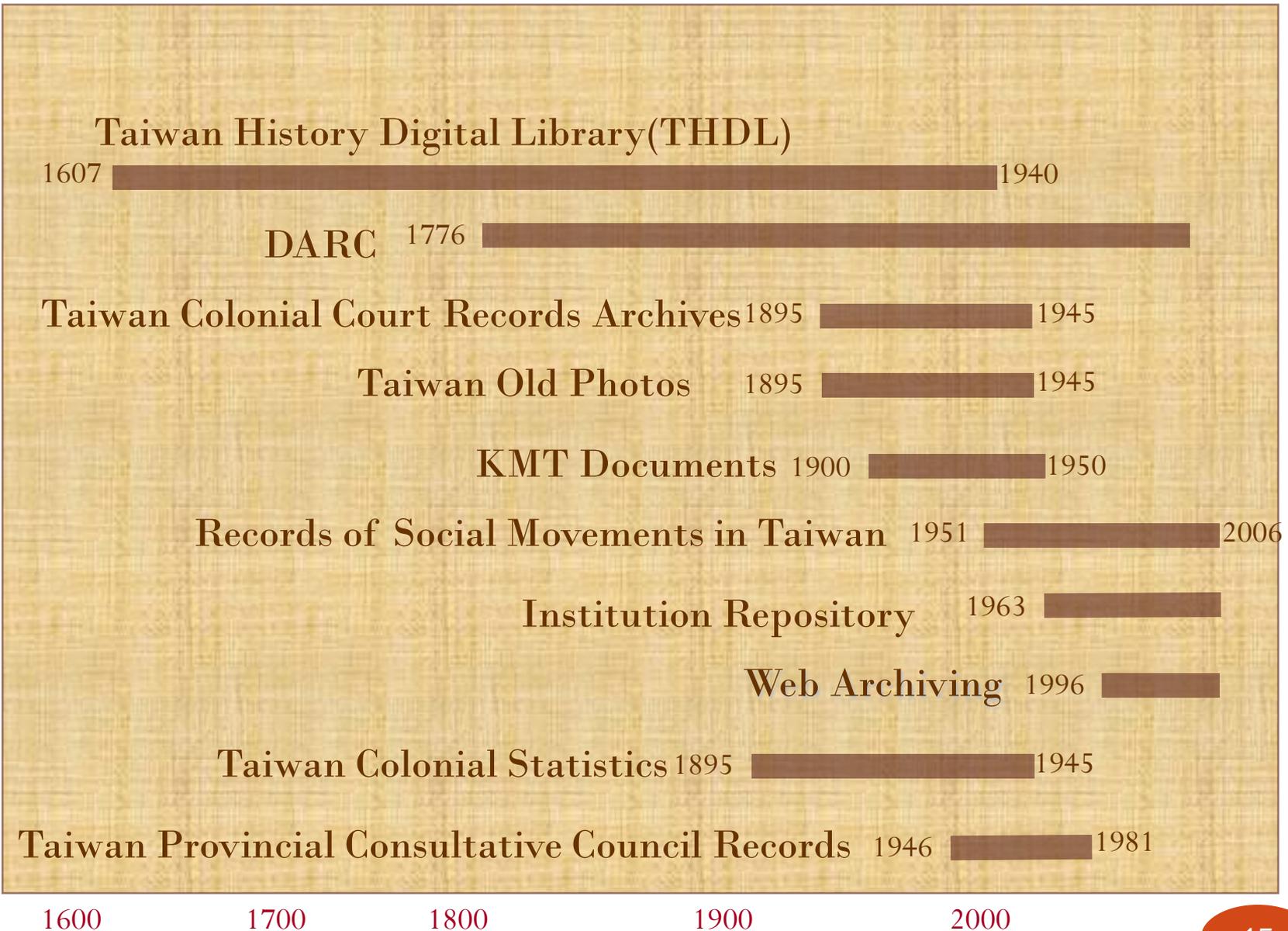


# Research Center for *Digital Humanities*

- Founded in 2006
- Aims:
  - To integrate resources for the digital archives project in NTU
  - To build up infrastructures for humanities
  - To enhance interactions between the humanities and IT
  - To promote the studies of digital humanities

# Research Center for *Digital Humanities*

- Over 2,000,000 images and 160,000,000 words of original texts.
- Taiwan History Digital Library (THDL): Documents related to Taiwan from the Ming and the Qing government, Land deeds
- Statistical reports and court archives of the Japanese colonial period
- Archives of KMT, Taiwan Consultative Council
- Records of social movements in Taiwan



# From Digital Archives to Digital Humanities

- What we want to provide are not just some databases, but the digital environments for scholarly studies.
- We believe that IT can offer more to humanities research than just storage, search and retrieval.

# What is a digital environment?

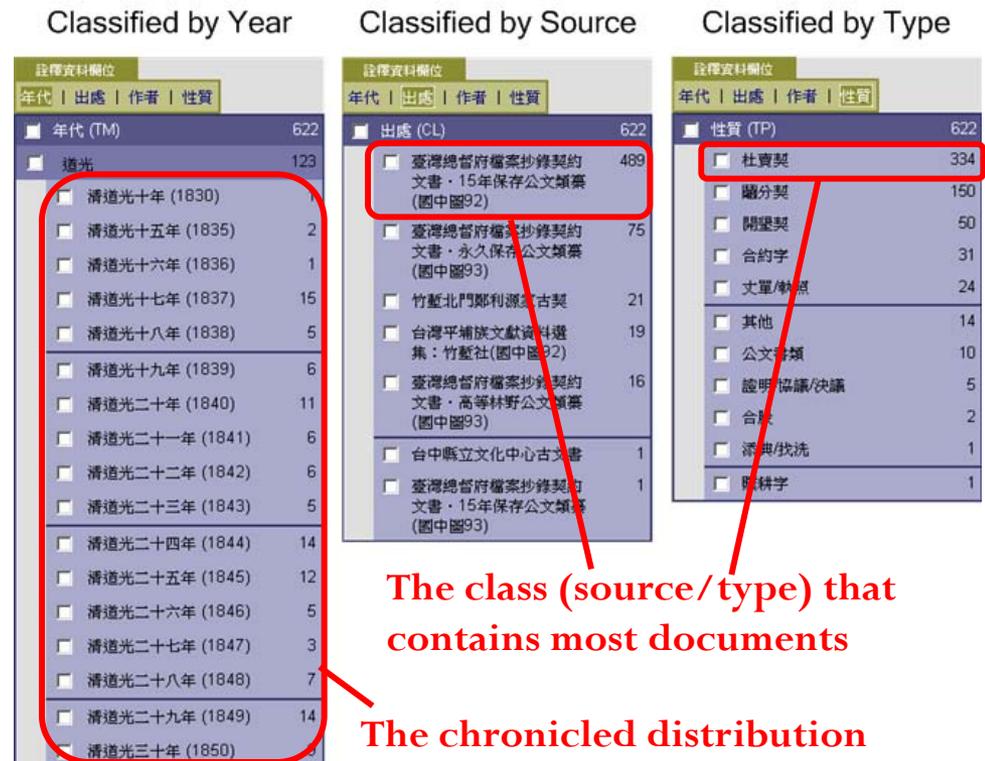
- It should **not** be a storehouse that simply contains digital contents.
- It should provide various **tools to help researchers investigate** interesting documents
  1. Retrieval Tools
    - Help users **find what they want**
  2. Mining Tools
    - Help users **observe and analyze what they have found**
    - Help users **explore and discover what they might not know**

# Example: Post-Query Classifications

- This tool emphasizes the idea that the distribution of classes within a facet can be a useful collective property about the query result.
- In addition to returning a ranked list of documents, all of our systems classify a query result by different facets (such as year, source and document type)

# Post-Query Classifications

- By observing **distributions of the query result**, one can easily find the class that contains most documents. One may check the distribution patterns to see if there is anything more than what one expects.
- It is often interesting to ask “why the resulting distribution looks like this?”



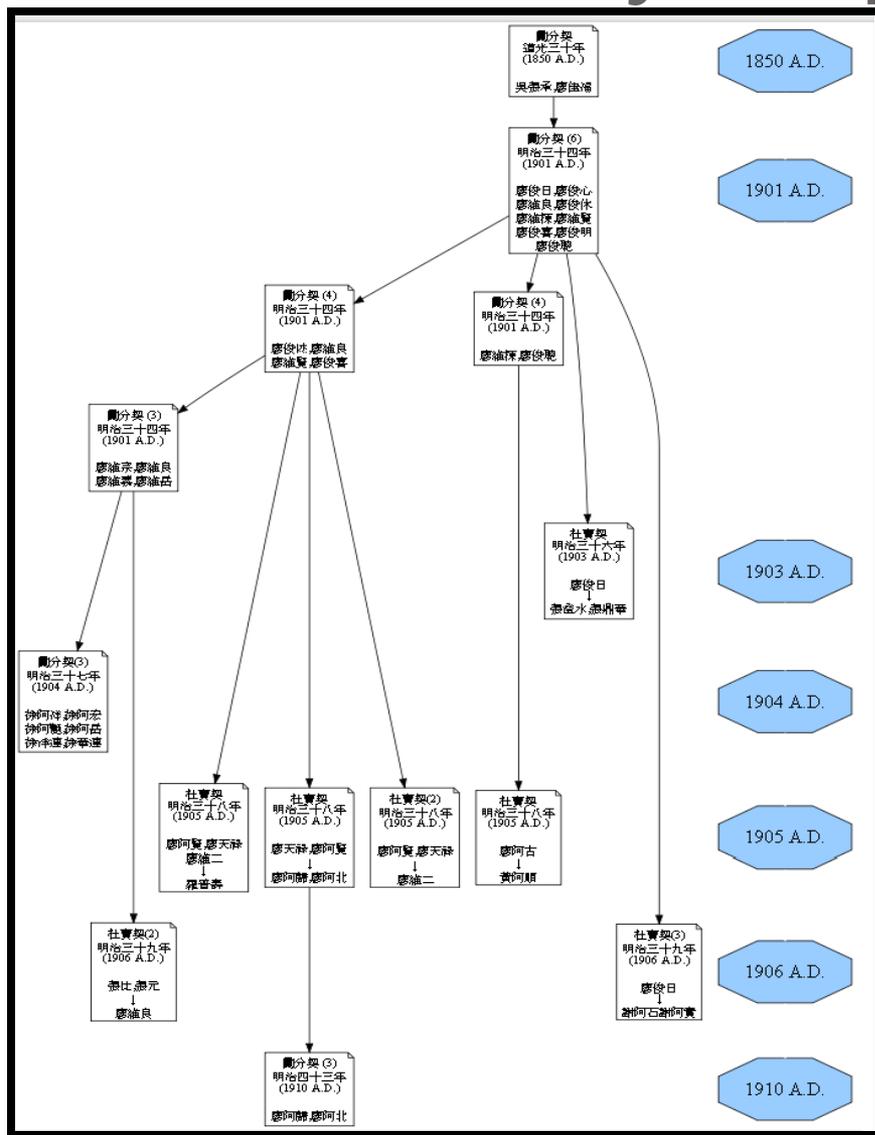
The class (source/type) that contains most documents

The chronicled distribution of “year” facet

# Relationship and Collective meaning

- We also developed a method to automatically discover relations among the land deeds (such as successive transaction pairs, allotment agreements).
- More than 30,000 land deeds came from 72 sources; virtually impossible to find relationships by hand
- Based on the outcome of the previous work, we can further link several transactions about one particular land into a graph. We call it *land transitivity graph*.

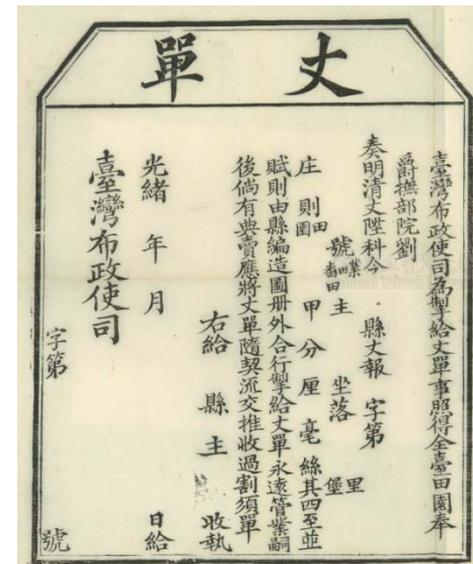
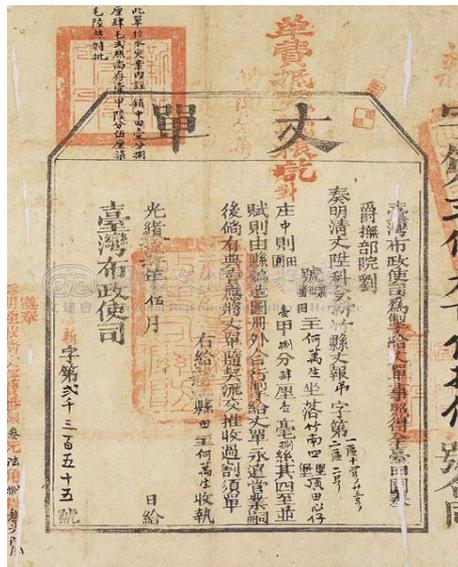
# Land Transitivity Graphs



- Each graph leads to an intriguing story of a particular land
- A surprising outcome: there are some relationships that have never been rigorously studied, or even noticed, by historians

# Ongoing Projects (1/4)

- 1) The discovery of templates used in writing certain type of documents, such as land measurement records or certificates of land sales and tax receipts.
- According to the contemporary result, while some of the templates are expected, some templates provide surprising insight into patterns of activities of the time.

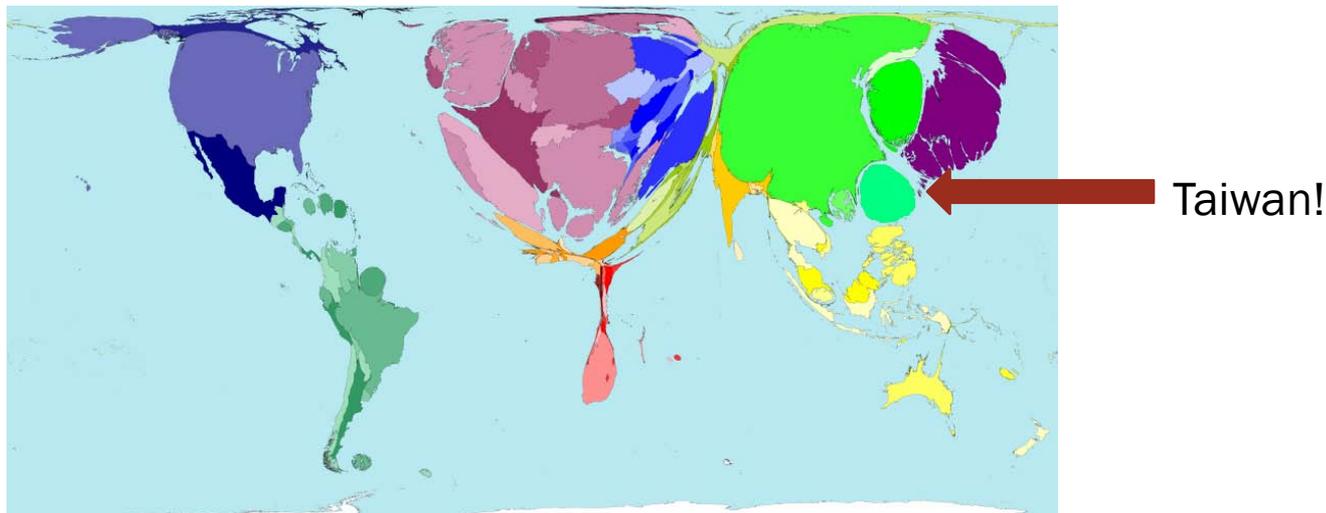


# Ongoing Projects (2/4)

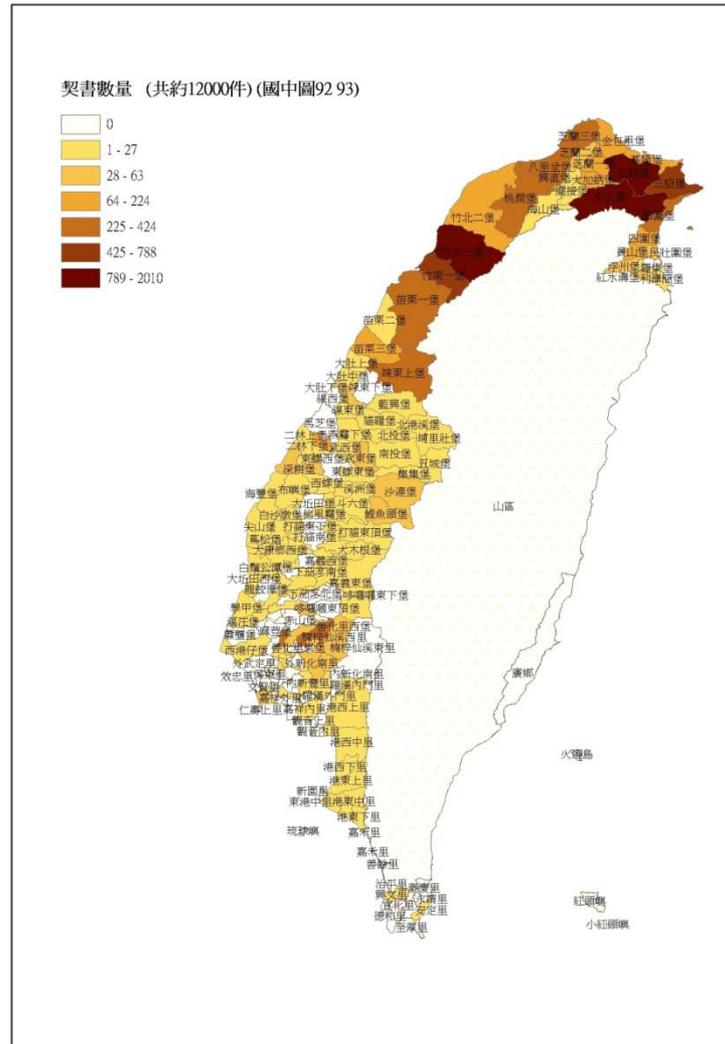
- 2) Land deeds puzzle
  - To reconstruct adjacent relationships of the land deeds, automatically
  - Extract the descriptions of the location from the land deeds and scrape them together (again, automatically)
- A research that has never been approached and can hardly be done without IT

# Ongoing Projects (3/4)

- 3) Perspective GIS of Taiwan.
- To create cartograms based on the data sources in Taiwan. The cartograms could effectively present and visualize some aspects of the characters and evolutions of the Taiwanese history and culture.



# Ongoing Projects (4/4)



- 4) The spatial distribution of the land deeds from the Japanese Taiwan Governor-Generals
- How to interpret the graph?
- Why do certain areas contain so many deeds?
- What is the **CONTEXT**?

# Digital Humanities in Taiwan

- Huang, Yi-long (黃一農)
  - e-Evidential Research: Based on large quantities of digitalized materials, the aim of e-Evidential Research is to find a specific document as an evidence for a particular historical problem that cannot be solved without databases
- Lo, Feng-ju (羅鳳珠)
  - Put Chinese classical literatures (e.g. the works of Su Shi 蘇軾) on the Web.
  - With assistance from specialists of IT and GIS, to make new ways of presenting the classics to both scholars and non-experts. (multimedia, spatial perspective, etc.)

# Concluding Remarks

- With the information technology, can we develop a **new methodology** for historical studies? What kind of questions can we ask and answer? Will there be a **conceptual leap**, instead of some small changes, in the studies of humanities?
- We hope to enhance interactions between historians and IT researchers, open new doors to the research of history and other disciplines, and build models for digital humanities in Taiwan.

# Concluding Remarks

- With more and more digital resources created in past a few years, we expect the studies of digital humanities will emerge as an exciting and bustling field in Taiwan and make impacts on contemporary scholarship.

# Thank you

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<http://www.digital.ntu.edu.tw>