The Collaborative Research Platform
for Data Curation and Repositories:
CKAN For ANGIS Data Portal

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Outline

- Open Access & Open Data
- CKAN introduction
- ANGIS data portal
- New developed features
- Future works

Open Access & Open Data

- Open Access means unrestricted online access to peer-reviewed scholarly research.
- Open Data means research data that can be freely used, reused and redistributed by anyone
- Open Access and Open Data provide an open environment of academic research

Data Repository

- Publishing data to facilitate multidisciplinary research
- No more duplicate data entry!

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CKAN introduction

- An open source project of Open Knowledge Foundation (OKFN)
- A powerful data manage system
- Python based develop environment

http://demo.ckan.org/

CKAN introduction

116 instances around the world (2015/3/7)

Over 30 plugins have been released
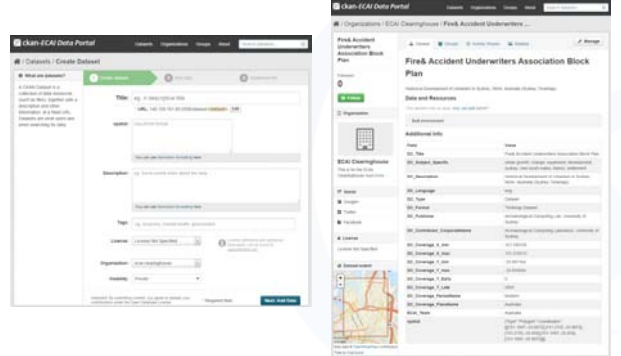
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CKAN introduction
- Publish and Manage Dataset

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CKAN introduction
- Publish and Manage Dataset

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CKAN introduction
- Search Dataset

9

CKAN introduction
- View Dataset – basic image and text

10

CKAN introduction
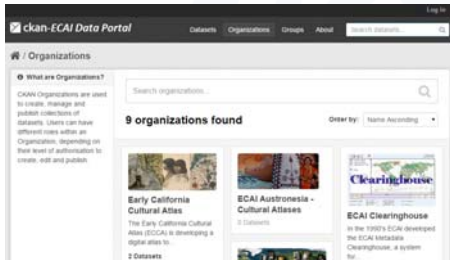- View Dataset – Spreadsheet

CKAN introduction
- View Dataset – PDF and Spatial data
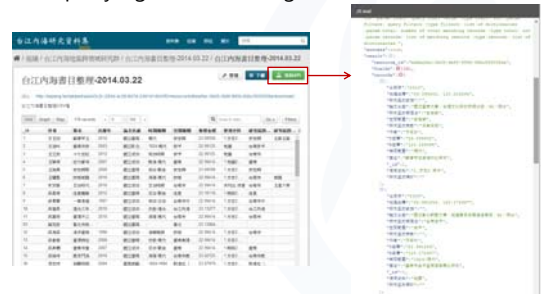

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CKAN introduction

- **Organization**
  - ➤ Datasets can be public or private. If they are private they are only visible to the logged in members of their owning publishing Organization
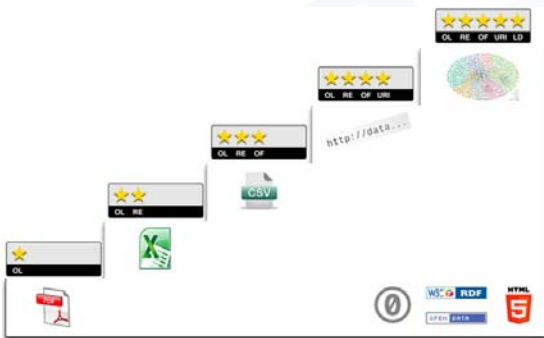

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CKAN introduction

- **CKAN API**
  - ➤ CKAN provides a rich RESTful JSON API for querying and accessing dataset information
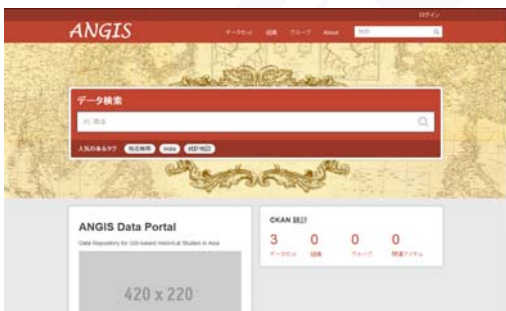

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CKAN Support Linked Open Data (LOD)

Tim Berners-Lee's five stars of openness   15

ANGIS Data Portal

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CKAN-ANGIS Data Portal

- http://angisdata.org (http://140.109.161.58:8989)
- **Data Repository for GIS-based Historical Studies in Asia**

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Test Accounts

http://140.109.161.58:8989

ID：angis1 (angis2~ angis30)
Password：angispwd1 (angispwd2 ~ angispwd30)
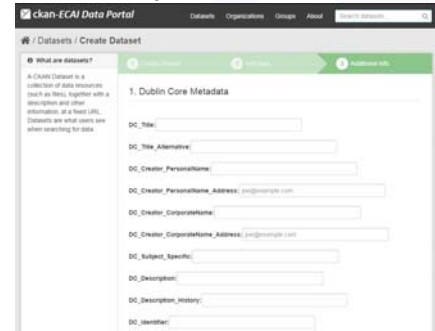
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CKAN-ANGIS Data Portal

- **Use the Organization to distinguish the dataset from different project**
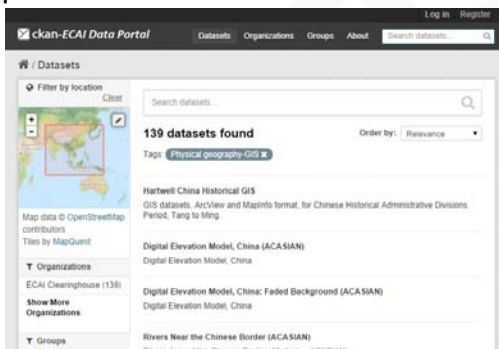

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CKAN-ANGIS Data Portal

- **Editing interface with Dublin Core metadata specification compatible**

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CKAN-ANGIS Data Portal

- **Spatial search function**

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CKAN-ANGIS Data Portal

- **More search capabilities are already extended**
  - Temporal Search
  - Customized filters

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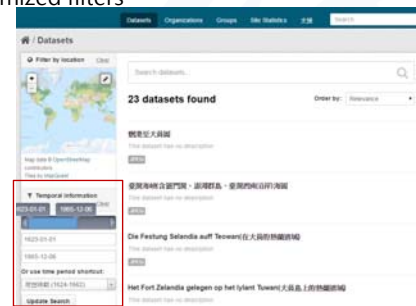
CKAN-ANGIS Data Portal

- **More spatial data format can be previewed**

WMTS

Esri Shape file
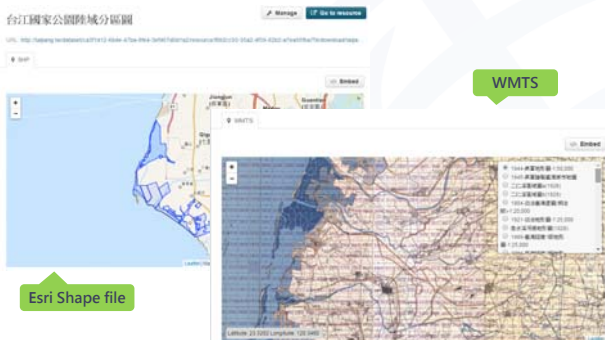
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Future work for CKAN-ANGIS

- **Embedded CKAN with CSW service**
- **CSW: Catalogue Service for the Web,**
  - A standard for exposing a catalogue of geospatial records in XML on the Internet

Query data and access dataset via web service

CSW Server

CSW Client

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Future work for CKAN-ANGIS

- Linking Data Curation System with Data Catalog System

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Formats supported in CKAN-ANGIS

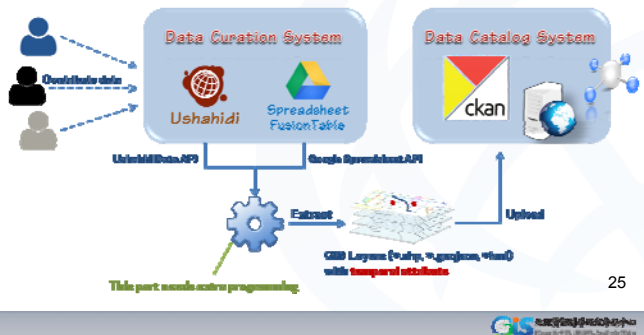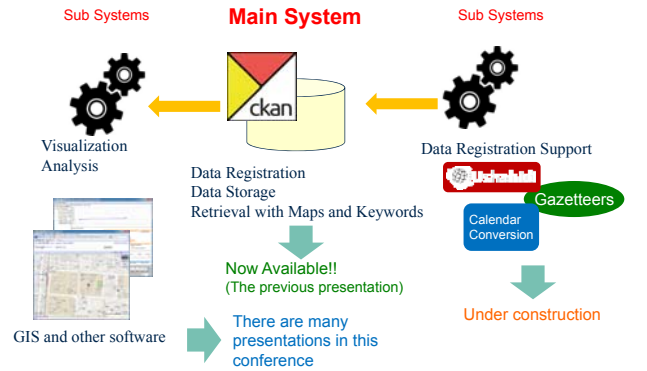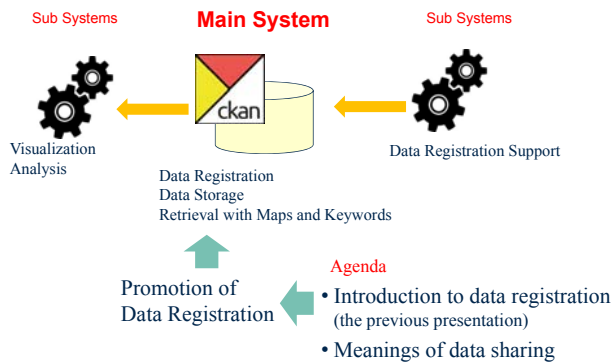| Data Type	Commercial Software	Free Software	Format
2D GI	ArcGIS 10.x	QGIS *http://www.qgis.org*	shapefile
3D GI	Skyline TerraExplorer	Google Earth Pro *http://www.google.com/earth*	kml, kmz
Time Information		HuTime *http://www.hutime.jp*	gtm
2D GI + t	Esri Story Maps *http://storymaps.arcgis.com*	TimeMapper *http://timemapper.okfnlabs.org* Excel2Earth *http://excel2earth.blogspot.com*	Google Spreadsheet Excel
3D GI + t		SinicaOView *http://3dgis.rchss.sinica.edu.tw*	

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Slide 1

Workshop

Research Institute for Humanity and Nature, Japan
Tatsuki Sekino

GIS Center, RCHSS, Academia Sinica, Taiwan
Hsiug-Ming Liao

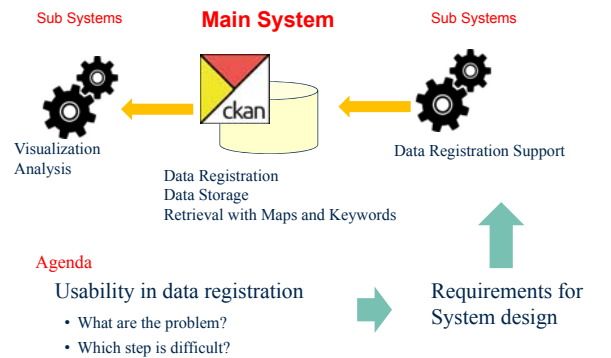www.hutime.org — 1 — HuTime

Slide 2

Strategy for Collecting Historical GIS Data

Sub Systems — **Main System** — Sub Systems

Visualization Analysis

ckan
Data Registration
Data Storage
Retrieval with Maps and Keywords

Data Registration Support

Gazetteers
Calendar Conversion

Now Available!!
(The previous presentation)

GIS and other software

There are many presentations in this conference

Under construction

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Slide 3

Objective of the Workshop : Promotion of Data Registration

Sub Systems — **Main System** — Sub Systems

Visualization Analysis

ckan
Data Registration
Data Storage
Retrieval with Maps and Keywords

Data Registration Support

Promotion of Data Registration

Agenda
• Introduction to data registration (the previous presentation)
• Meanings of data sharing

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Slide 4

Objective of the Workshop : Collection of requirements for System Design

Sub Systems — **Main System** — Sub Systems

Visualization Analysis

ckan
Data Registration
Data Storage
Retrieval with Maps and Keywords

Data Registration Support

Agenda
Usability in data registration
• What are the problem?
• Which step is difficult?

Requirements for System design

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Slide 5

Meanings of Data Sharing
from the Informatics Point of View

www.hutime.org — 5 — HuTime

Slide 6

Role of Database (Repository) in a Research Process

Prapers & Books
Output
Presentations
Webpages

Analysis
Visualization
Data Construction

Acumulation of Analysis Results
Search
Acumulation of Constructed Data

Database
for Temporal Information

www.hutime.org — 6 — HuTime
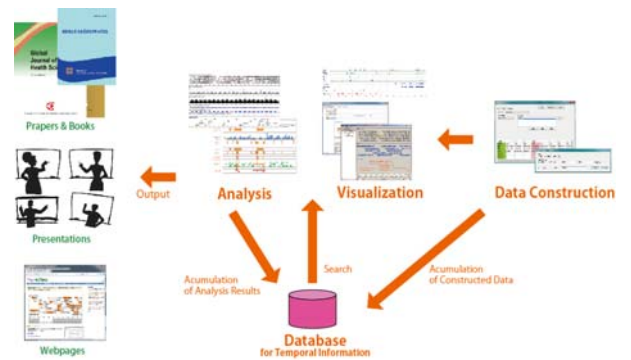
Network of Research Resources

Linked Open Data

Linked Open Data(LOD)
Institutes, Universities, Museums,
Libraries, Local Governments…
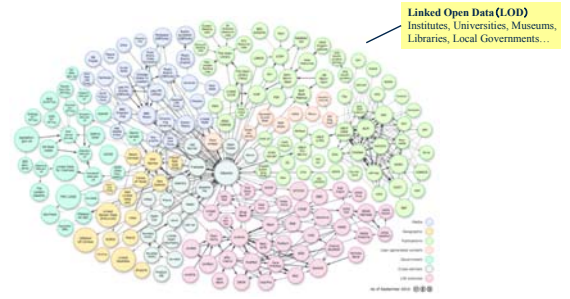
Database of Databases (Integrated Retrieval)
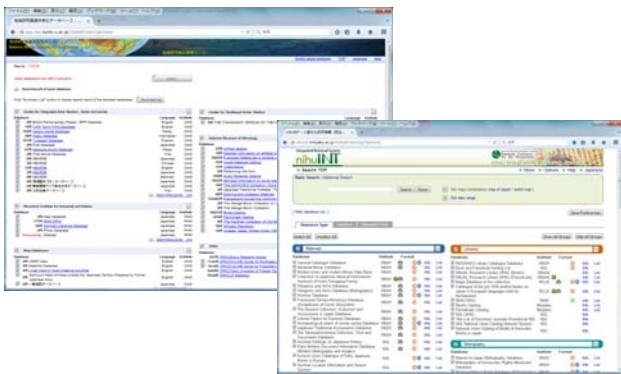
Three Axes to Link Different Kinds of Data

Location
(Geographic Axis)

Maps

Chronological
Tables

Keywords
(Subject Axis)
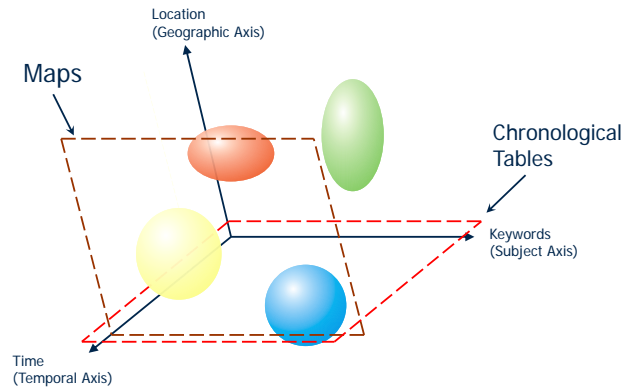
Time
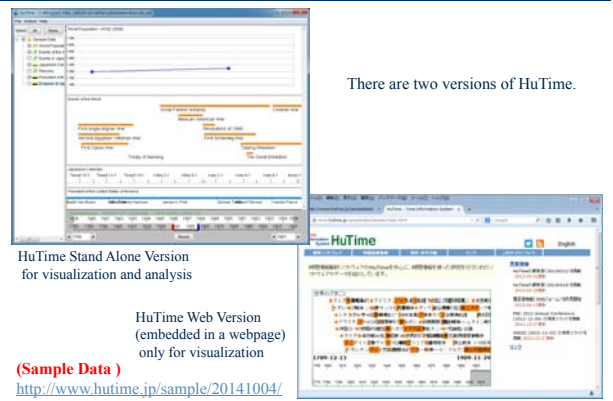(Temporal Axis)

Geographic Axis vs Subject Axis - Geographic Information System (GIS)
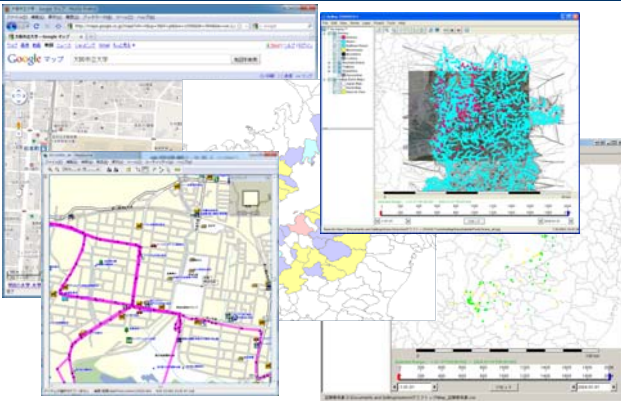
Temporal Axis vs Subject Axis - Temporal Information System

There are two versions of HuTime.

HuTime Stand Alone Version
for visualization and analysis

HuTime Web Version
(embedded in a webpage)
only for visualization

(Sample Data)
http://www.hutime.jp/sample/20141004/

Agenda 1: Meaning of Data Sharing

- Linked Open Data, Database of Database (Integrated Retrieval)
- Visualization and Analysis using Geographic and Temporal Information System

These are merit of data sharing thought
by researchers in information science.

How do historians think the merit of data sharing?
What is incentives to register their own data into the repository?

No one has such opinion ???
- I don't agree to open my data.
- There is no merit for me.

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Agenda 2: Usability in Data Registration

- What are the problem?
- Which step is difficult?

- Data construction (Table, data cleaning)
- Metadata construction
- Complicated process to data registration

- Conversion into values
  e.g. Latitude and longitude of a place name

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