[Script] Documenting Cultural Landscapes: Tools and Issues for Collaboration Across Boundaries

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Hi, I am Tyng-Ruey Chuang.

I will be presenting on behalf of my colleagues Cheng-Jen Lee, Yu-Chia Monica Mu, and Chia-Hsun Ally Wang.

We are from the Institute of Information Science, Academia Sinica.

Dr. Yu-Huang Wang, an independent scholar and a long-time research collaborator, also join us online today.

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Cultural Landscapes, for me, are imprints of human activities in unwinding terrains, and they are embedded, over time, with diverse cultural artifacts.

Documenting cultural landscapes is extremely challenging.

First, we come to face the heterogeneity of the materials.

They are audiovisual recordings, aerial and panoramic images, photos and prints, historical records and maps, field notes, chorographies, lab results, among others.

There is a constant need to collate new and old documentations for research.

There is also the pressing need to use spatial, temporal, and domain vocabularies that can link across documentation collections and communities.

Our position in this panel is to advocate the use of research data repositories for collaborative cultural landscape documentation.

The repositories are used not only for archiving digital materials but also for managing active datasets.

We will use the depositar, a research data repository developed at Academia Sinica, to exemplify such an approach.

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But first, let us present a few cultural landscapes and how they are documented.

This is Nanshan Gravesite in Tainan.

It is the oldest and largest public cemetery in Taiwan.

A part of it was documented by the use of panoramic cameras.

This image was taken in March this year by Dr. Yu-Huang Wang.

It has been put on Google Street View.

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This is year 2014, at the Nangang train station, nearby central Taipei.

An artist purposely painted on a warehouse that would soon be demolished.

A photo was taken just before the landscape would change forever.

The photo has been shared on Facebook but not easily findable.

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I took this picture in Tainan when COVID-19 started in early 2020.

That was a very interesting mural, and I wrote a short story about my feeling at the time.

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I shared it on the "COVID-19 Images and Stories" website.

We built this site for people to upload and share pictures of everyday life during the pandemic, about the changing landscapes in their neighborhood.

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There are many COVID-19 memory websites around the world.

At the left is the "COVID-19 memories" website from Luxembourg.

At the right is the "Corona Memory" website from Switzerland.

At the bottom is our website from Taiwan.

One can see that wearing masks is a universal human experience in this pandemic.

These are community memory websites and I consider them cultural landscape websites as well.

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We will show how the depositar（研究資料寄存所）, a research data repository, can be used for collaborative cultural landscape documentation.

The depositar is built on top of the open source software package CKAN.

We extend the software to support research data management.

The depositar supports nice file preview so that CSV file, Shapefile, WMTS links can be visualized in browsers without being downloaded.

It uses Wikidata keywords as the source vocabulary for tagging datasets.

It has built-in PID support; we use ARK (Archival Resource Keys).

It publishes data catalogs in DCAT and there are machine-actionable data endpoints, and so on.

We will use it to demonstrate how a guided tour to the Nanshan gravesite can be documented and shared.

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The guided tour was part of the DRGPA 2021 Conference.

DRGPA stands for Documenting and Researching Gravesites in Pacific Asia.

As we can see from this slide, documents about the visit to the Nanshan Gravesite come from many sources, with each source producing materials on its own.

There is conference website that provides contextual information about the gravesite.

There are photos taken by the conference organizers.

There is an online virtual tour of the site that is reconstructed from panoramic images taken on that day.

There are also writings produced after the event.

Of course the above materials can be collated to existing documentation collections about the gravesite.

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Using a data repository, we can set up a focal point where materials from these sources are collected, deposited, and annotated with the necessary metadata.

I created a project on the depositar a few months after the tour in order to collect these materials.

I created four datasets, each a set of documentation materials of a certain nature.

So that files in a dataset are coherent and can be annotated with the same metadata.

The depositar has a bilingual user interface; it can switch between
the Traditional Chinese interface and the English interface.

Here I am showing you both interfaces.

The yellow box indicates there are four datasets in this project.

The red box shows the Wikidata keywords I have used to tag the
datasets.

As you can see, the English interface displays the Wikidata
keywords in English, while the Traditional Chinese labels of the
same Wikidata keywords are shown in the Traditional Chinese
interface.

For example, "cultural landscape", which is an English term,
automatically maps to「文化地景」in the Traditional Chinese interface.

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In this dataset, we collect all the source materials we have used
to reconstruct an online tour to the Nanshan Gravesite.

The reconstruction is based on the panoramic images captured during
the guided tour.

We use Marzipano, a tool to create a web-based navigable 360° view
about a site from multiple panoramic images.

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The first link in the dataset leads to the website we built for the
virtual tour.

Deposited in this dataset are a zipped archive of all the raw
images we used, as well as a zipped archive of the entire website
itself.

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This dataset collects writings related to the guided tour to
Nanshan Gravesite.

Several articles had been written about the Nanshan Gravesite after
the tour.

I listed four of them.

These are links to the article web pages.

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The first link leads to an article "In Search of Ancestors",
written by Linda Gail Arrigo, that was published in the Taipei
Times in December last year.

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What I just showed you is a personal project using a data repository to document a one-day visit to a cultural site.

I would like to advocate the use of data repositories for collaborative cultural landscape documentation, especially on active management of datasets.

These are the key points I shall raise.

First, form documentation teams that come across different communities.

Each documentation team can work on multiple projects.

And a documentation project can draw members from different teams.

These arrangements are easy to set up in a repository, like the depositar, where people can freely sign up and work on projects together.

A documentation project shall agree on and strive to maintain good metadata, so that multi-faceted search to the project's collections is possible.

One shall leverage external resources and services as well.

I will show some examples in a few minutes.

The documentation collections shall be actively curated, and given persistent identifiers to be cited and used by the broader communities.

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Here I show an example of multi-faceted search to documentation collections.

I search the entire repository by using the Wikidata keyword "cultural landscape".

The search returns 10 datasets.

As I am logged into the depositar when I do the search, I am able to find datasets that are private to the projects of which I am a member.

As such, I can locate the set of panoramic images taken at the Nanshan Gravesite by Dr. Wang.

The dataset includes a zipped archive of the raw images captured on that day, as well as several links to sample images.

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The depositar is yet to support preview of panoramic images.

Therefore, these links lead to panoramic streetview on the Google Map, also uploaded by Dr. Wang.

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This is the last slide I want to show your today about Nanshan Gravesite.

It is a recently acquired high resolution orthoimagery of a part of the site.

I want to point out the imagery is deposited at the Open Aerial Map website by Dr. Wang and served from there by WMTS (Web Map Tile Service).

Imageries from WMTS can be previewed on the depositar.

Here we are leveraging external resources and services.

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There is an increasing demand for research data to be FAIR: Findable, Accessible, Interoperable, and Reusable.

Using a data repository to manage and release your research data make you aware of these FAIR data principles.

There is also the TRUST Principles for digital repositories: Transparency, Responsibility, User focus, Sustainability and Technology.

Documentations about cultural landscapes can be FAIR data, and they shall look into TRUSTy data repositories for active data management and long-term data archiving.

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Thank you!

This is the end of my presentation.

I encourage you to visit the depositar, an open repository for all.

Please take a look at the documentation too.

謝謝！