

Unleashing Research Data Into the Future

at the Ollscoil na Gaillimhe / University of Galway

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2025-03-03

Guiding Questions

- ▶ How do you cite *your* research data?
- ▶ How do you lookup cited data *now*?
- ▶ How do you lookup cited research data *40 years from now*?

Research Data In the Wild

While walking the land, I am the pen on the paper; while drawing this map, my pen is myself walking the land. I wanted to short circuit the polarities of objectivity and subjectivity, and try keep faith with reality. – Tim Robinson

There's a Map on the Internet. . .



Tim Robinson's townland index for Connemara and the Aran Islands, Map of the Aran Islands, Oileán Árann, Folding Landscapes, 1980. Published by NUI Galway's Digital Collections.

I came to it from a fine arts background and used it as an art form. I wasn't remotely interested in what the standard way of representing limestone was, for example. I was much more interested in using some sort of graphic texture on a map that would represent my own experience of the place.
– Robinson

Figure 1: Retrieved from <https://drawingmatter.org/folding-landscapes-the-maps-of-tim-robinson/> on 2025-03-02.

There's a Map on the Internet. . .

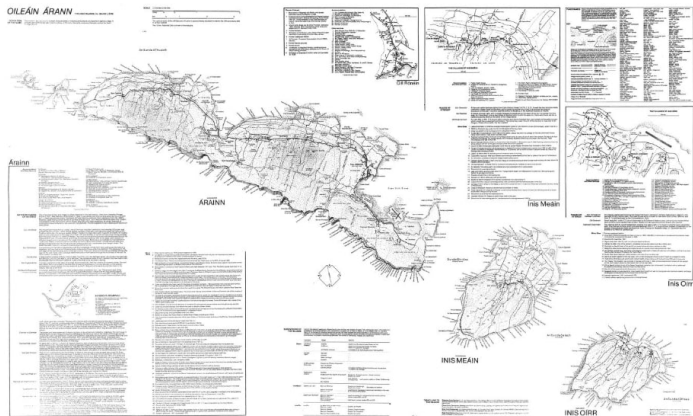


Figure 2: Tim Robinson's townland index for Connemara and the Aran Islands, Detail, Map of the Aran Islands, Oileáin Árann, Folding Landscapes, 1980. Published by NUI Galway's Digital Collections.

But, Where is the Original?

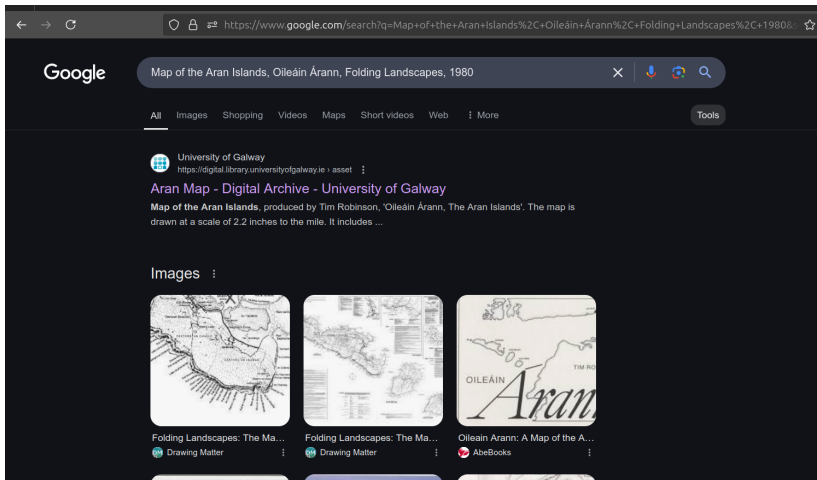


Figure 3: Internet search results for “Tim Robinson’s townland index for Connemara and the Aran Islands, Detail, Map of the Aran Islands, Oileáin Árann, Folding Landscapes, 1980.” on 2025-03-02

This One?

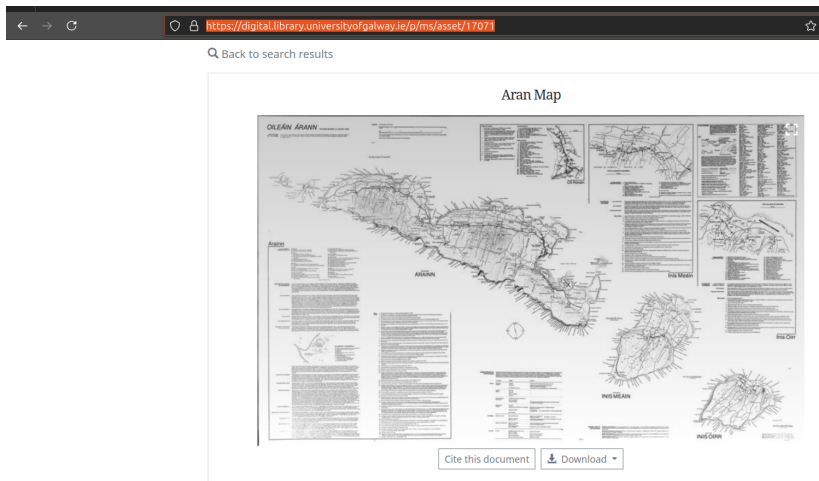


Figure 4: webpage at <https://digital.library.universityofgalway.ie/p/ms/asset/17071> accessed on 2025-03-02

With Preferred Citation

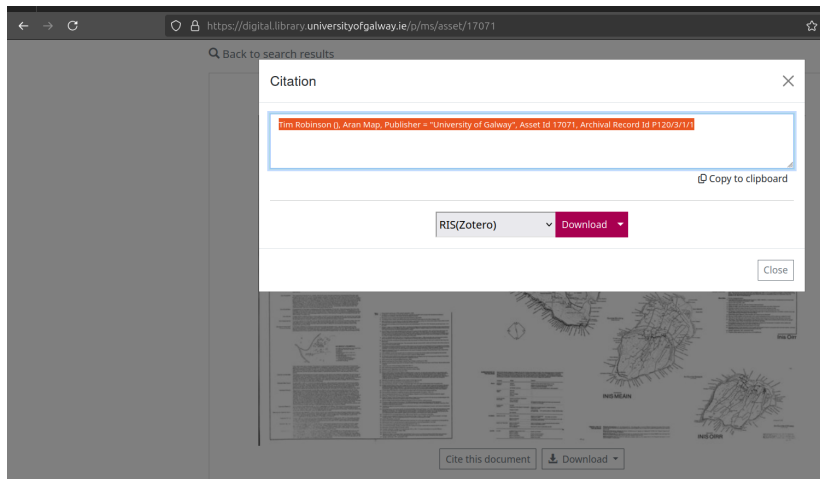


Figure 5: Preferred citation - Tim Robinson (), Aran Map, Publisher = "University of Galway", Asset Id 17071, Archival Record Id P120/3/1/1

But . . . Which One are We Citing?

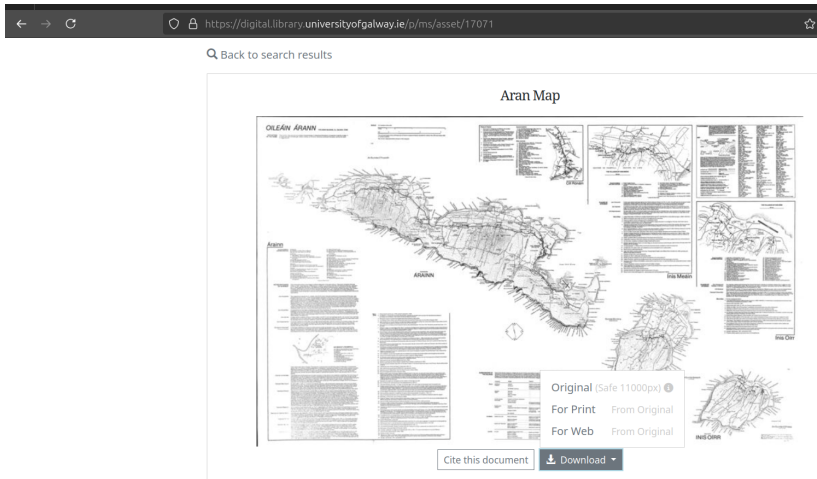


Figure 6: Variants of Robinson's Aran Map: Print, Web, Original

Trying NUI Galway's Digital Library ...

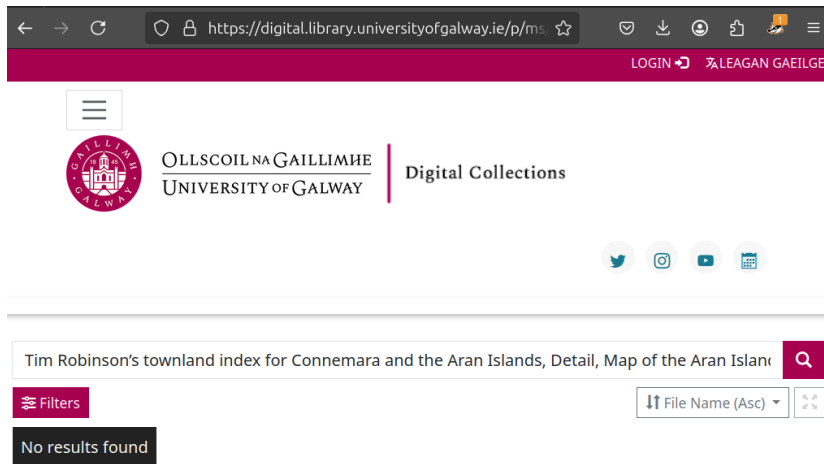


Figure 7: <https://digital.library.universityofgalway.ie> search results for “Tim Robinson’s townland index for Connemara and the Aran Islands, Detail, Map of the Aran Islands, Oileáin Árann, Folding Landscapes, 1980.” on 2025-03-02

Trying Zenodo . . .

The screenshot shows the Zenodo search interface. At the top, the Zenodo logo is on the left, followed by a search bar containing 'Tim Robinson's townland inde' and a magnifying glass icon. To the right of the search bar are links for 'Communities' and 'My dashboard', and a user profile dropdown for 'jhpoeien...'. Below the search bar, the results section shows '3,773,486 result(s) found' and a 'Sort by' dropdown set to 'Best match'. On the left side, there are filters for 'Versions' (a toggle for 'View all versions'), 'Access status' (checkboxes for 'Open', 'Restricted', and 'Embargoed'), and 'Resource types' (a dropdown for 'Publication'). The main content area displays two search results. The first result is 'Aran Map (Original) P120/3/1/1 hash://md5/c6329b14a9542c216010646dfe7d56d5' by Robinson, Tim, dated December 31, 1980 (v1). It includes an 'Image' icon and an 'Open' button. The description states: 'Map of the Aran Islands, produced by Tim Robinson, 'Oileáin Árann, The Aran Islands'. The map is drawn at a scale of 2.2 inches to the mile. It includes additional information on the sub-division of the townlands in the islands, notes on places of interest, and information on accommodation...'. It shows 3,628,736 views and was uploaded on March 3, 2025. The second result is 'Aran Map (Web Version) hash://md5/9401abef940bbb961b8b05ba76aa247d' by Robinson, Tim, also dated December 31, 1980 (v1). It includes an 'Image' icon and an 'Open' button. The description states: 'Map of the Aran Islands, produced by Tim Robinson, 'Oileáin Árann, The Aran Islands'. The map is drawn at a scale of 2.2 inches to the mile. It includes additional information on the sub-division of the townlands in the islands, notes on places of interest, and information on accommodation...'. It shows 3,981 views and was uploaded on March 3, 2025.

zenodo

Tim Robinson's townland inde

Communities My dashboard

3,773,486 result(s) found

Sort by Best match

Versions

View all versions

Access status

Open 3,628,736

Restricted 140,769

Embargoed 3,981

Resource types

Publication 2,092,238

December 31, 1980 (v1) Image Open

Aran Map (Original) P120/3/1/1 hash://md5/c6329b14a9542c216010646dfe7d56d5

Robinson, Tim

Map of the Aran Islands, produced by Tim Robinson, 'Oileáin Árann, The Aran Islands'. The map is drawn at a scale of 2.2 inches to the mile. It includes additional information on the sub-division of the townlands in the islands, notes on places of interest, and information on accommodation...

Uploaded on March 3, 2025

December 31, 1980 (v1) Image Open

Aran Map (Web Version) hash://md5/9401abef940bbb961b8b05ba76aa247d

Robinson, Tim

Map of the Aran Islands, produced by Tim Robinson, 'Oileáin Árann, The Aran Islands'. The map is drawn at a scale of 2.2 inches to the mile. It includes additional information on the sub-division of the townlands in the islands, notes on places of interest, and information on accommodation...

Uploaded on March 3, 2025

Figure 8: Zenodo search for “Tim Robinson’s townland index for Connemara and the Aran Islands, Detail, Map of the Aran Islands, Oileáin Árann, Folding Landscapes, 1980.”

How To Retrieve Robinson's Map Today?

- ▶ turn on the internet
- ▶ open a web browser
- ▶ search the internet for keywords
 - ▶ and rely on a delicate and complex socio-technical network
- ▶ inspect result pages
- ▶ use mouse to click on a link that looks like Robinson's map
- ▶ download image and **trust** its authenticity

How To Retrieve Robinson's Map 40 Years From Now?

- ▶ turn on the internet (***Still there?***)
- ▶ open a web browser (***Grandma, what is a browser?***)
- ▶ search the internet for keywords (***Internet search? Huh?***)
 - ▶ and rely on a delicate and complex socio-technical network
- ▶ inspect result pages
- ▶ use mouse to click on a link that looks like Robinson's map
- ▶ download image and **trust** its authenticity

How To Retrieve Robinson's Map 40 Years From Now?

- ▶ turn on the internet
- ▶ open a web browser
- ▶ search the internet for keywords
 - ▶ **and rely on a delicate and complex socio-technical network**
- ▶ inspect result pages
- ▶ use mouse to click on a link that looks like Robinson's map
- ▶ download image and **trust** its authenticity

Likely will not work due to intricate network of dependencies.

How To Retrieve Robinson's 40 Years From Now?

My (Crazy?) Proposal: Sign the citation ¹

Robinson, T. (1980). Aran Map (Print Version) P120/3/1/1
hash://md5/9027bb8d372e4ffb9fabe74cab6a3434. University of
Galway. <https://doi.org/10.5281/zenodo.14958167>

¹Elliott M.J., Poelen, J.H. & Fortes, J.A.B. (2023) Signing data citations enables data verification and citation persistence. *Sci Data*.

<https://doi.org/10.1038/s41597-023-02230-y>

hash://sha256/f849c870565f608899f183ca261365dce9c9f1c5441b1c779e0db49df9c2a19d

How To Retrieve Robinson's Map 40 Years From Now?

... by searching the universe (in, and beyond, the internet) for the content with the unique fingerprint

hash://md5/9027bb8d372e4ffb9fabe74cab6a3434 .

... in addition to searching by keywords

Zenodo Search, Take 2.

The screenshot shows the Zenodo search interface. At the top is a blue header with the Zenodo logo, a search bar containing the hash `*hash://md5/9027bb8d372e4ff`, and navigation links for 'Communities' and 'My dashboard'. A user profile dropdown for 'jhpoeien...' is on the right. Below the header, the search results show '2 result(s) found'. On the left sidebar, there are filters for 'Versions' (with a 'View all versions' toggle), 'Access status' (with an 'Open' checkbox), 'Resource types' (with 'Dataset' and 'Image' checkboxes), and 'Subjects'. The main content area displays two results. The first result is 'Arán Map (Print Version) P120/3/1/1' with hash `hash://md5/9027bb8d372e4ff9fabe74cab6a3434` by Robinson, Tim. It is labeled as an 'Image' and 'Open'. The description states it is a map of the Aran Islands produced by Tim Robinson, drawn at a scale of 2.2 inches to the mile, including information on townlands, places of interest, and accommodation. It was uploaded on March 3, 2025. The second result is 'Arán Map P120/3/1/1' with hash `hash://md5/19681c723aee31c4ad24d4ae5f805ad8` by Robinson, Tim. It is labeled as a 'Dataset' and 'Open'. The description is similar but mentions 'sub-division of the townlands'. It was also uploaded on March 3, 2025. Both results show 1 download and 1 user icon.

zenodo

*hash://md5/9027bb8d372e4ff

Communities My dashboard

Sort by Best match

2 result(s) found

Versions

View all versions

Access status

Open

Resource types

Dataset Image

Subjects

December 31, 1980 (v1) Image Open

Arán Map (Print Version) P120/3/1/1 hash://md5/9027bb8d372e4ff9fabe74cab6a3434

Robinson, Tim

Map of the Aran Islands, produced by Tim Robinson, 'Oileáin Árann, The Aran Islands'. The map is drawn at a scale of 2.2 inches to the mile. It includes additional information on the sub-division of the townlands in the islands, notes on places of interest, and information on accommodation...

Uploaded on March 3, 2025

1 1

December 31, 1980 (v1) Dataset Open

Arán Map P120/3/1/1 hash://md5/19681c723aee31c4ad24d4ae5f805ad8

Robinson, Tim

Map of the Aran Islands, produced by Tim Robinson, 'Oileáin Árann, The Aran Islands'. The map is drawn at a scale of 2.2 inches to the mile. It includes additional information on the sub-division of the townlands in the islands, notes on places of interest, and information on accommodation...

Uploaded on March 3, 2025

1 1

Figure 9: Searching Zenodo for
“hash://md5/9027bb8d372e4ff9fabe74cab6a3434” on 2025-03-03

How Would *You* Carry Robinson's Maps Into The Future?

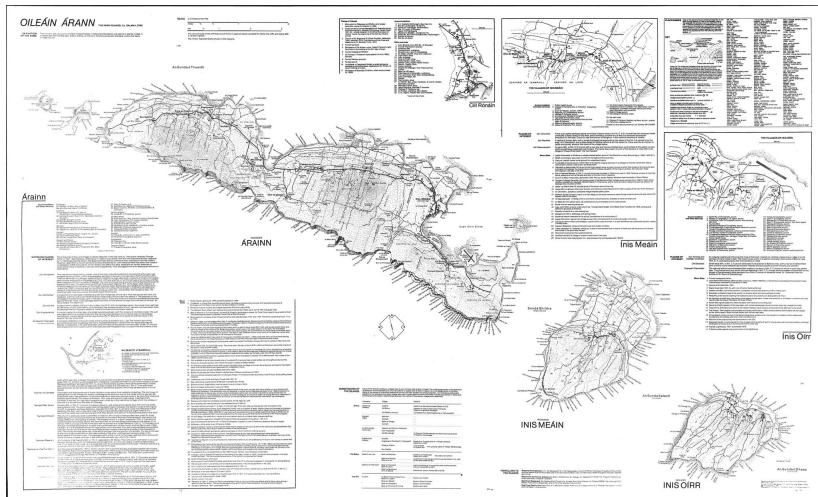


Figure 10: Tim Robinson (), Aran Map, Publisher = "University of Galway", Asset Id 17071, Archival Record Id P120/3/1/1.

Guiding Questions

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Extra

Internet Is Designed For *Exchanging* Information

The internet is a powerful tool for exchanging digital information. But the Internet's contents changes constantly: websites are launched and taken down, webpages change, and content gets archived or lost.²

²Jorrit Poelen. 2024. Unleashing Digital Knowledge Into The Future.

Accessed on 2024-02-06 at <https://linker.bio>

line:hash://sha256/8ac18eb75ff20d40d1d60bb6ad5a745eb528093d1ffbe373e3847c131460

Internet Is *Location-based*

By design, a web address, or Uniform Resource Locator (URL), points to a specific internet location from which a resource, like a webpage, can be retrieved. However, a URL does not provide a way to verify that a retrieved webpage was the one we asked for. ³

³Jorrit Poelen. 2024. Unleashing Digital Knowledge Into The Future.

Accessed on 2024-02-06 at <https://linker.bio>

line:hash://sha256/8ac18eb75ff20d40d1d60bb6ad5a745eb528093d1ffbe373e3847c131460

Finding Content By Their Location Is ... Tricky

Imagine using a URL-like reference to find a book at a library: instead of locating a book by what it is (e.g., title, author), you refer to a book by its location (e.g., third shelf on the second row next to the window). With this, a book becomes unfindable if moved to another shelf. And, if you do manage to find a book at the referenced location, how would you know you've found the book you are looking for? ⁴

⁴Jorrit Poelen. 2024. Unleashing Digital Knowledge Into The Future.

Accessed on 2024-02-06 at <https://linker.bio>

line:hash://sha256/8ac18eb75ff20d40d1d60bb6ad5a745eb528093d1ffbe373e3847c131460

Finding Content By Their (Summarized) Content Is ... What Librarians Do

*Instead of pointing to where books are located, librarians point to them using a bibliographic reference. For practical reasons, only a few identifying clues are included in such a reference (e.g., author, year of publication, title, and publisher). **So, librarians refer to content by what it is, and knowing where it may be located is secondary.***⁵

A bibliographic citation:

Darwin, C. 1859. On the Origin of Species. John Murray.

⁵Jorrit Poelen. 2024. Unleashing Digital Knowledge Into The Future.

Accessed on 2024-02-06 at <https://linker.bio>

line:hash://sha256/8ac18eb75ff20d40d1d60bb6ad5a745eb528093d1ffbe373e3847c131460

