DIGITAL SCHOLARS' WORKSHOPS 2019



Planning & Building Digital Projects David Kelly, G010, 12-1pm Thursday, 31st January

Introduction to Research Data Management Trish Finnan, G010, 12-1pm Wednesday 27th February

Creating Digital Exhibitions with Omeka Cillian Joy, G011, 12-1pm Thursday 28th March

Archives in the Digital Age Aisling Keane, G010, 12-1pm Tuesday, 30th April

Building Digital Projects

Digital Scholars' Workshop Series 31st January, 2019

David Kelly – Digital Humanities Manager david.d.kelly@nuigalway.ie





- Case Study Approach:
 - Mainly ELMSS (<u>https://elmss.nuigalway.ie</u>)
- Managing a project
- Project development process
 - What stages are involved?
 - Tools / tech used at each step

There is a focus here on my workflows – there are other approaches!

Earlier Latin Manuscripts

Catalogue

Home

Collections



Earlier Latin Manuscripts PI – Dr Mark Stansbury (Classics)



Earlier Latin Manuscripts

Bibliography

About the Project

Tools for studying the scripts of the oldest Latin manuscripts

Our database is founded on E. A. Lowe's *Codices Latini Antiquiores* and thus focuses on non-documentary texts written before the year 800. All of the manuscripts in Lowe's corpus and its supplements will be found in our database, along with corrections by Lowe and later scholars.

In addition to the research tools provided by the catalogue, you will also find collections of manuscripts organised around origin, provenance, script, and text. These databases can be interrogated in several ways: filtering by keyword, which searches the text of the entire database, by library, by script, or by date (or any combination of those filters). The results can then be sorted by clicking on any of the column headings.

For further information on the project, please see the About page.

• Catalogue of Manuscripts Explore the full database

Collections
 View Manuscript Groups



Project Management



Asana, Trello, Github (Projects section)





Asana, Trello, Github (Projects section)

POMODORO

SHORT BREAK

25:00

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Turn your team on to productivity with Toggl the time tracker Find out more



SIGN UP .

CUSTOM TI

LONG BREAK

+

+

+ Grouped by Project / Time Entry

Sorted by Duration (Desc.)

4:00:00

1:00:00

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| + | Project title | • | 20:30 :00 |
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Get 100s of design features to create your next website. Check it out. ADS VIA CARBON



| <pre> ELMSS </pre> <pre> </pre> | Dave Kelly / ELMSS Commits | | |
|---------------------------------|------------------------------|---|----------|
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| ያ Branches | Author Commit Mess | ssage Date | |
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Project Development Process

Digital Project Development Process?



Digital Project Development Process?





- Initial meeting request: March, 2014
- 1 block of 9 10 months on data-related work by researchers
- Multiple iterations of wireframes & functional prototyping
- Multiple iterations of data validation, cleaning, re-formatting
- 1 re-write of (a completed) codebase to use a different language and technical architecture
- * Approx. 20 project meetings, > 180 code commits, > 600 emails related to project
- PI, DH Manager, 6 Research Assistants, approx. 9 external contributors
- Public launch: November, 2016 (v1.0)
- Currently v1.4.5 with development still ongoing

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| Jncial | | V | 1. p.34 =(5.503) | Regin. Lat. 1709 A (foll. 34-35) | Origin presur | mably |

- What are we trying to do?
 - Why do we want to do that, and not something else?
 - Who's going to use it, and how?

- In-person meeting(s)
- Document everything
- Assign deliverables / actions
- Personas & User Stories
- Job Stories

 (https://www.intercom.com/blog/usingjob-stories-design-features-ui-ux/)
- Talk to potential users

- What are we trying to do?
 - Why do we want to do that?
 - Who's going to use it, and how?
- Break system into individual requirements
 - Does each part add value? How?
 - Which can be removed / held for later versions?
 - Rank them (MoSCoW) which requirements are:
 - Must have
 - Should have
 - Could have
 - Won't have (this time)
 - MVP approach

- Specification documents
- "Product Spec"
 - "App should have a listing of manuscripts"
- "Functional Spec"
 - "App will save a manuscript using fields for: Title (120 characters), Latitude (decimal; 6 places), Category (from list)

- What are we trying to do?
 - Why do we want to do that?
 - Who's going to use it, and how?
- Break it into individual requirements
 - Does each part add value? How?
 - Which can be removed / held for later versions?
 - Rank them (e.g MoSCoW) which requirements are:
 - Must have
 - Should have
 - Could have
 - Won't have (this time)
 - MVP approach
- Identify deadlines & any other known constraints

- Is there a launch date /event already planned?
- Technical / financial / external stakeholder constraints?



Data

| Date | CLA | Shelfmark | Provenance |
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| VIII ex | 3.**5b | Florence, Biblioteca Medicea Laurenziana lat. XXXIX (codex M) + Rome, Vatican, Biblioteca del Vaticano Lat. 3225 (codex mediceus) (fol. 76) | Written in some centre w |
| v | 1.**p. 34 | Rome, Vatican, Biblioteca del Vaticano Regin. Lat 1283 B + Orléans, Bibliothèque Municipale 192 (169) (foll. 15-18, 20) + Berlin Lat. Q. 364. | Written probably in Italy. |
| VI ex | 1.**p. 34 = (6.809) | Orléans, Bibliothèque Municipale 19 (16) (fol. 1-10) + Rome, Vatican, Biblioteca del Vaticano Regin. Lat. 1462 (fol. 1) | Origin uncertain, probabl strengthen the bindings o |
| IV–V | 1.**p.18 =(4.458) | Milan, Biblioteca Ambrosiana D 159 inf. + Rome, Vatican, Biblioteca del Vaticano Lat. 10959 + Turin, Biblioteca Nazionale F.IV.27 | Written presumably in Af script to that of the Codex of which has affinities wit |
| VI | 1.**p.19 = (10.1507) | Rome, Vatican, Biblioteca del Vaticano Barberini Lat. 9916 (one leaf) + Sankt Florian, Stiftsbibliothek III.15.B (1 leaf) + Vienna, Nationalbibliothek L 2160 (101 leaves) | Written probably in South identifiable probably with |
| VII ² | 1.**p.32 = (6.708) | Amiens, Bibliothèque Municipale 12 (fol. 1) + Paris, Bibliothèque Nationale Lat. 10399 (foll. 1-2) + Paris, Bibliothèque Nationale Lat. 12190 (binding) + Paris, Bibliothèque Nationale Lat. 13043 + Paris, Bibliothèque Nationale Lat. 13386 + Rome, Vatican, Biblioteca del Vaticano Regin. Lat. 329 (foll. 1-2) | Written presumably in Fra |
| | | Leiden, | |

Lessons

- Data cleaning takes a lot of time, particularly if there isn't any up-front planning
- Figure out your data management plan before <u>any</u> data collection takes place
- Working with different character encodings is difficult.

Understanding the data you're working with, and its structure, is important.

Talk to someone comfortable with data modelling **before** you start collecting your data

Design

Stages

- Paper
- Low fidelity wireframes
- Functional prototyping
- Visual design

You should:

- 1. use real data
- 2. involve users
- 3. iterate

• Balsamiq / online tools

- HTML / CSS / JavaScript; Origami (Facebook)
- Sketch / Affinity Designer / Adobe Illustrator

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People - Individual Profile





2 Geography Show a map

Show a map of places where reception source works connected to this person are found

3 Timeline

Ξ

Column chart displays count of reception source works for each time period (TBC month / year / decade?)

| | | 10 | | | _ | | | | | |
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| Data from ex Library of Congr <u>Percy Mary</u> Sources Foun richt Foun Anne conve | ternal sources ess Name Authority File .ady, 1570-1642 d: Gagliardi, A. An abridgement of Christian perfection, 1626: t.p. (the nonourable, & religious Lady, the La. M. P.) d: DNE: p. 880 (Thomas Percy, 7th Earl of Northumberland, his widow and their 4 daughters: Elizabeth, Mary, Lucy, Jane: Mary, Prioress of a ent of English Benedictine dames at Brussels) | Number of Link | 1 | Named Rec. | eiver an h | Author Role within Link ave more than o | Letter Ar ed Reception ne role, per | ddress ons recep | ee Lette | r Sender |
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Home | RECIRC

People - Individual Profile



 Project:
 RECIRC Public UI

 Author:
 David Kelly

 Last Modified:
 10/01/19

Time & Place Navigation option displays is time/location data is assocated with the person. Can also display as either "Time" or "Place", if only one set of data is present.

Geography Show a map of places where reception source works connected to this person are found

Timeline Column chart displays count of reception source works for each time period (TBC month / year / decade?)

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a computer.

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Earlier Latin Manuscripts

Home Catalogue Collections About the Pr

Manuscript Catalogue

List Map Chart Scripts

| Displaying: 2050 items | | | Save list as: | CSV |
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| Script | Date | CLA Vol. | CLA | Support |
| Half-Uncial | V-VI (ante 509-510) | 1 | 1a | Parchmen |
| Uncial | VI in (post 509-510) | 1 | 1b | Parchmen |
| Pre-Caroline Minuscule | VIII | 1 | 1c | Parchmen |
| Uncial | VIII | 1 | 2 | Parchmen |
| Uncial | VIII–IX | 1 | 3 | Parchmen |
| Anglo-Saxon Minuscule | VIII–IX | 1 | 4 | Parchmen |
| insular Minuscule | VIII | 1 | 5a | Parchmen |
| Insular Minuscule | VIII ex | 1 | 5b | Parchmen |
| German Pre-Caroline Minuscule | VIII–IX | 1 | 6 | Parchmen |
| German Pre-Caroline Minuscule | VIII–IX | 1 | 7 | Parchmen |
| Half-Uncial | VI ex | 1 | 8 | Parchmen |
| Uncial | VIII | 1 | 9 | Parchmen |
| Minuscule | VIII ex | 1 | 10 | Parchmen |
| Rustic Capital | IV | 1 | 11 | Parchmen |
| Rustic Capital | V | 1 | ** (p. 5) | Parchmen |
| Rustic Capital | IV med-V med | 1 | 12 | Parchmen |
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| Uncial | V2 | 1 | 14 | Parchmen |
| Uncial | VIII | 1 | 15 | Parchmen |
| Half-Uncial | VI | 1 | 16 | Parchmen |
| Uncial | VII–VIII | 1 | 17 | Parchmen |
| Uncial | VIII | 1 | 18a | Parchmen |
| Uncial | VIII–IX | 1 | 18b | Parchmen |
| Rustic Capital | V ² | 1 | 19 | Parchmen |
| Uncial | VII–VIII | 1 | 20 | Parchmen |
| Uncial | VIII | 1 | 21 | Parchmen |
| Uncial | VIII ex-IX in | 1 | 22 | Parchmen |
| Uncial and Half-Uncial | VII–VIII | 1 | 23 | Parchmen |
| Uncial | VIII–IX | 1 | 24a | Parchmen |
| Early Minuscule | VIII–IX | 1 | 24b | Parchmen |
| Uncial | VI2 | 1 | 25 | Parchmen |
| Half-Uncial | VII | 1 | 26a | Parchmen |
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Earlier Latin Manuscripts

Catalogue Collections

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Manuscript Catalogue

List Map Chart Scripts

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| Script | Date | CLA Vol. | CLA | Support | |
| Half-Uncial | V-VI (ante 509-510) | 1 | 1a | Parchme | |
| Uncial | VI in (post 509-510) | 1 | 1b | Parchme | |
| Pre-Caroline Minuscule | VIII | 1 | 1c | Parchme | |
| Uncial | VIII | 1 | 2 | Parchme | |
| Uncial | VIII-IX | 1 | 3 | Parchme | |
| Anglo-Saxon Minuscule | VIII-IX | 1 | 4 | Parchme | |
| Insular Minuscule | VIII | 1 | 5a | Parchme | |
| Insular Minuscule | VIII ex | 1 | 5b | Parchme | |
| German Pre-Caroline Minuscule | VIII–IX | 1 | 6 | Parchme | |
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| Uncial | V2 | 1 | 14 | Parchme | |
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| Early Minuscule | VIII–IX | 1 | 24b | Parchme | |
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Earlier Latin Manuscripts



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| Home | Catalogue | Collections | Bibliography | About the | Project | |
| An explanation / of interactive parts. I Visualise Results | Groups overview of what this pa Learn more about Script Manuscript List | ge is showing, and what Groups. | people can do with the | | | |
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NUI Galway Earlier Latin Manuscripts OÉ Gaillimh Home Catalogue Collections Bibliography About the Project Script Groups An explanation / overview of what this page is showing, and what people can do with the interactive parts. Learn more about Script Groups. Visualise Results Manuscript List Filter Script G ...test with users Fluidity Each square represents one Manuscript. 0 Your filtered results match 109 of the 2,047 **Base Script** manuscripts in the database, or 5% of the Uncial manuscripts. Miniscule Half-Uncial Majuscule Capital Cursive Quarter-Uncial ? Time

Extra Small Screen (Phone)



The Plays

The Lighthouse (1855) The Red Vial (1858) The Frozen Deep (1866) Man and Wife (1873)

Each play title will eventuelly take you to a 'resource page' listing extant manuscripts for that play. At present, however, while the digital archive is in the process of development, the play title will take you to a key annotated text.

About the Project The Project has four main goals:

 to produce accurate texts of all of Collins' plays based on manuscript and primed copies

 to trace Collins' processes of composition of the play texts
 to enable comparisons between printed, manuscript and prompt copies of the plays

 to provide a scholarly resource to promote further work on Colline as a physiolity?
 The Project started in 2005 and has covered extensively the collections of Collino Joys in many UK and American Ibranies, Including maniengia tokens the British Library (the Lord

> any and New York Public Library in New k, Princeton University Library, Yale versity Library, the Harry Ransom Centre, versity of Teast & Austin, and the stington Library, California. Discussions of holdings at these and other Ibraries will knowl in the Princement of the

Project Team

Professor Richard Pearson, NUE Galway, editor and project director, is at present the sole member of the team.

The Project wishes to thank Dr. Mariaconcetta Costantini for her initial contributions. Two assistants have worked on the Project in earlier days: Laura Tansley and Rachel

and proof-read copies of the plays and Professor Pearson's notes. The Project has been funded for the assistants and visits to libraries in the States

division research funds, and the National University of Ireland Galway triannual travel grant funds



Small Screen (Tablet)

Large Screen (PC)



(c) Richard Pearson and the Victorian Plays Project





Find your focus

Introducing Dark Mode in Sketch. Hit the lights, lose the distractions and watch your designs come to life, letting you focus on what matters most — your work.





Development

Deciding Technical Architecture

Driven by requirements

- ...and skills
- ...and resources
- ...and time
- ...and performance
- ...and infrastructure
- ...and security
- ...and...



Required for any path



Legends



https://github.com/kamranahmedse/developer-roadmap





https://github.com/kamranahmedse/developer-roadmap

ELMSS: Technologies Used

Server Side / Back-end

- Data Storage
 - Database: MySQL
 - File Storage: Server & Amazon Web Services S3
- Web Application: PHP (Laravel Framework)
 - Includes RESTful API
 - Testing: PHPUnit
 - Package Manager: Composer
- Web Server Infrastructure

External Services

- Error Reporting: Sentry (<u>https://sentry.io</u>)
- Email: MailGun (<u>https://mailgun.com</u>)
- Analytics: Google Analytics

Client Side / Front-end

- HTML
- CSS
 - CSS Preprocessor: LESS
 - Framework: Bootstrap (https://getbootstrap.com)
- JavaScript
 - Underscore.js: Utilities for data manipulation
 - Leaflet.js: Mapping
 - Handlebars.js: Templating
 - Bootstrap.js: UI components
 - Highcharts.js: Charts
 - Sortable.js: Table sorting
- Build & Dependency Management
 - Grunt.js: Task runner / build tool
 - NPM / Bower.io: Package manager

Management

- Code versioning & Issue tracking: BitBucket (Git)
- Task Tracking: Asana

Storing the Data

- Data Modelling
 - What do we want to store
 - What data types do we have
 - How are the Entities related to each other?

In this case, the database schema is created via the web application

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| | | | name | | VARC | HAR | < | > | 255 | | | | |
| | | | script_com | mentary | TEXT | | (| 2 | | | | | |
| | | | url | | VARC | HAR | < | 2 | 255 | | | | |
| | | | tm_number | | VARC | HAR | (| 2 | 255 | | | | |
| | | | is_public | | TINYI | | (| 2 | 1 | | 0 | 0 | |
| | | | created_at | | TIME | STAMP | (| ~ | | | | | |
| 10 | | | updated_at | | 110 | STAMP | ```` | <i>.</i> | | | | | |
| 13 | publ | .1C T | unctio | on up | N/A | | | | | | | | |
| 14 | | Sche | ma::ci | reate | ('cat | alog | ue it | te | ems', func | tion(s | tabl | e) | |
| | | - | | | | | | | , | · • • • • • • • • • • • • • • • • • • • | | | |
| 15 | | { | | | | | | | | | | | |
| 16 | | | \$table | e—>in | creme | ents(| 'id') |); | : | | | | |
| 17 | | | | | | | | | • | | | | |
| 18 | | | \$table | e–>st | ring(| 'ser | ial_r | າເ | umber')->n | ullabl | e(); | | |
| 19 | | | \$table | e->st | ring(| 'scr | ipt') |); | ; | | | | |
| 20 | | | \$table | e->st | ring(| 'dat | e')-> | >r | ullable() | ; | | | |
| 21 | | | \$table | e−>in | teger | (' nu | merio | ca | al_date_st | art')- | >nul | lab | le |
| 22 | | | \$table | e−>in | teger | -('nu | merio | Ca | al_date_en | nd')->n | ulla | ble | () |
| 23 | | | \$table | e->st | ring(| 'cla | _volu | JU | ne')->null | lable() | ; | | |
| 24 | | | \$table | e->st | ring(| 'cla | _numb | be | er')->null | lable() | ; | | |

5.7.21-Oubuntu0.16.04.1) Hom

API REFERENCE

Introduction

PATHS

View the full manuscript cata... Find manuscript by ID Filter manuscript collection Listing that describes collect... Find a single collection by it...

SCHEMA DEFINITIONS

Item

Collection FilterCollection Corpus CorpusSingle ManuscriptMinimal Manuscript Shelfmark Library Facsimile ScriptBase ScriptFluidity

ScriptPlace

ScriptTime ApiResponse

Earlier Latin Manuscripts @ NUI Galway

View the full manuscript catalogue listing

API documentation for the Earlier Latin Manuscripts project at NUI Galway. This project is led by Mark Stansbury.

RESPONSES

GET /catalogue

Paths

PATH

200 OK successful operation Collection

API Endpoint

public

https://elmss.nuigalway.ie/api/v1

Terms of Service: https://elmss.nuigalway.ie/about/technical/ Contact: david.d.kelly@nuigalway.ie Schemes: https Version: 1.0.0

How else might the data be used?

Response Content-Types: application/json

Response Example (200 OK)

{ "id": "integer (int64)", "script": "Cursive Minuscule", "date": "VIIâ€"VIII", "numerical_date_start": 601, "numerical_end_date": 800, "cla_volume": 5, "cla_number": 624, "name": "string", "iduate": "string", "iduate: "string", "iduat



| Chat with MooreBot | Show |
|--|------|
| a few seconds ago | |
| | |
| Searching for manuscripts with Script_Type: uncial, Start_Year: 400, End_Year: 700. | |
| Number of results = 234. To further filter down the results, give me more information. | |
| a few seconds ago | |
| Filter Display as table | |
| Display TreeMap | |
| Display a specific property | |
| Display as table | |
| a few seconds ago | |
| Please see the table for detailed results. Do you want to continue further with this search? | |
| a few seconds ago | - |
| Yes No | |
| SUBMIT | |

| how 10 🛊 entries | | | Search: | |
|------------------|--------|---------------|--|--|
| | | | shelfmark | |
| catalogue_id * | date 🛊 | script_type 🛊 | \$ | |
| 82 | v | Uncial | [Vatican City Italy Biblioteca del Vaticano Palatinus Lat. 24 (foll. 38, 45) [palimpsest old]] | |
| <u>87</u> | v | Uncial | [Vatican City Italy Biblioteca del Vaticano Palatinus Lat. 24 (foll. 74, 77, 81, 86, 100, 101) [palimpsest old]] | |
| 88 | v | Uncial | [Vatican City Italy Biblioteca del Vaticano Palatinus Lat. 24 (foll. 122–128A) [palimpsest old]] | |
| 96 | V ex. | Uncial | [Vatican City Italy Biblioteca del Vaticano Palatinus Lat. 210] | |
| <u>121</u> | VII1 | Uncial | [Leiden Netherlands Universiteitsbibliotheek Fragm. 21, Copenhagen Denmark Royal Library Ny Kgl. Saml. 1878 FOL., Vatican City Italy Biblioteca del Vaticano Reginensis Latinus 689 bis (foll. 322–325)] | |
| 128 | VI ex | Uncial | [Vatican City Italy Biblioteca del Vaticano Reginensis Latinus 1462 (fol. 1), Orléans France Bibliothèque Municipale 19 (16) (foll. 1–10)] | |
| <u>129</u> | v | Uncial | [Orléans France Bibliothèque Municipale 306 (259) (offsets), Leiden Netherlands Universiteitsbibliotheek Vossius Lat. Quarto 110 A (foll. 167–172), Paris France Bibliothèque Nationale de France Lat. 6400 B (foll. 1–8, 285–290), Vatican City Italy Biblioteca del Vaticano Reginensis Latinus 1709 B (foll. 34–35)] | |
| <u>134</u> | V ex | Uncial | [Vatican City Italy Biblioteca del Vaticano Urbinas Lat. 1154] | |
| <u>138</u> | VII1 | Uncial | [Vatican City Italy Biblioteca del Vaticano Lat. 689 bis (foll. 322–325), Leiden Netherlands Universiteitsbibliotheek Fragm. 21, Copenhagen Denmark Royal Library Ny Kgl. Saml. 1878 Fol.] | |
| | | | [Darmstadt Germany Hessische Landes- und Hochschulbibliothek MS 3140, Darmstadt Germany Hessische Landes- und Hochschulbibliothek MS 895 (offset), Fulda Germany Landesbibliothek MS Aa 1 a. Sankt Paul im Lavanttal Austria Stiftsbibliothek without | |

Evaluation

- Evaluation perspectives
 - Does this piece of code function as expected?
 - Does this piece of the system work as expected?
 - Has requirement number XX been met?
 - Does the UI work as expected across all required browsers, devices and operating systems?
 - Can our users accomplish specific tasks with this feature?
 - How can this feature be improved?

Unit testing

Functional testing / Integration testing

Integration testing / Acceptance testing

Acceptance testing / Usability Testing

- Pre-launch / New features
- On-going
 - Usage
 - Behaviour

Top Channels





| Event Label 🕜 | Total Events 🕜 🗸 🗸 |
|-----------------------|--|
| | 1,037 % of Total: 38.17% (2,717) |
| 1. Run Filters | 684 (65.96%) |
| 2. Chart | 108 (10.41%) |
| 3. Map | 100 (9.64%) |
| 4. Data Table | 76 (7.33%) |
| 5. Reset Filters | 65 (6.27%) |
| 6. Run Script Filters | 4 (0.39%) |

Pilot group

User testing

Google Analytics

Mixpanel, Kiss Metrics

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•

•

•

So, you've built it...

- Where do users come from?
 - How do you keep them coming back?
- Who is going to maintain the?
 - Research content
 - Software
 - Hardware
- Long term preservation?

Thank you

Feedback: http://bit.ly/dsw-31012019

David Kelly david.d.kelly@nuigalway.ie





DIGITAL SCHOLARS' WORKSHOPS 2019



Planning & Building Digital Projects David Kelly, G010, 12-1pm Thursday, 31st January



Introduction to Research Data Management Trish Finnan, G010, 12-1pm Wednesday 27th February

Creating Digital Exhibitions with Omeka Cillian Joy, G011, 12-1pm Thursday 28th March



Archives in the Digital Age Aisling Keane, G010, 12-1pm Tuesday, 30th April

Feedback on today's session: http://bit.ly/dsw-31012019