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September 2022

Rebuilding webpages with Alma records and collections using Robotic Process Automation

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Overview



Context: University,
Library, and Special
Collections



Problem: Special
Collections discovery



Solution: stabilise the
backend process for the
Special Collections A-Z
using RPA



Benefits and
challenges



Future plans...

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Context

University of Manchester

Based in North-west England, UK

Research intensive – part of Russell Group

40,000+ students & 12,800 staff

3 faculties (Biology, Medicine and Health,
Science & Engineering, Humanities)

Our Future strategy



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Context

The University of Manchester Library



300 staff

10 library sites, including the John Rylands
Research Institute and Library

National Research Library *in the North*

Imagine 2030 strategy

ExLibris
Alma

ExLibris
Primo

ExLibris
Leganto

 **RAPID** ILL
Now part of ExLibris
A ProQuest Company

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Special Collections

Over 6.75million items, spanning nearly
5,000 years and more than 50
languages...

Law Books
B340 - 340.5C



COLLECTION

LAUNCHING
THE
BRITISH POP ARCHIVE

UNTIL
15 JANUARY 2023

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Digital Collections

Manchester Digital
Collections

Library Digital Collections
(LUNA)

Special Collections digital infrastructure

Emu

Preservica

ELGAR (Archives Hub)

Alma

Discovery

Library Search (Primo)

Special Collections
webpages

< The University of Manchester Library

< John Rylands Research Institute and Library

< Special Collections

▼ Exploring Special Collections

Guide to Special Collections

Special Collections A to Z

Subject groups

Exploring Special Collections

There are several ways to find out about our amazing Special Collections.

The best way to get an overview is to start with our Guide to Special Collections. Follow the links below to browse and search for more detailed information on our physical and digital collections.

- + Rare books and maps
- + Archives and manuscripts
- + Visual collections
- + Ahmed Iqbal Ullah RACE Centre

Overview of material and types of collections held



Guide to Special Collections

The University of Manchester Library holds one of the finest collections of rare books, manuscripts and archives in the world.



Special Collections A-Z

Explore the Special Collections through the collection names and descriptions using our searchable A-Z tool.

Thematic groupings of collections

Subject groups

The Guide to Special Collections contains summary descriptions of the majority of the outstanding Special Collections held by the Library.

Read more >

Search Special Collections

Search the majority of our Special Collections rare books, maps, visual collections, works of art, photography and objects.

Read more >

Browse and search listings of collection descriptions

Special Collections search scope in Primo and links to other platforms

A grayscale photograph of a library aisle. The aisle is lined with tall bookshelves filled with books. In the center of the aisle, a person is standing and reaching up to a high shelf to retrieve a book. The person is holding a book in their left arm. The lighting is soft, and the overall atmosphere is quiet and scholarly.

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Rebuilding the Special Collections A-Z using Alma:

A new methodology for a specific problem



Special Collections Discovery

Strategic review planned for 2020 (pre-COVID)

Investigate replacement for Guide to Special Collections / A-Z and review of potential solutions

Address legacy issues adding and updating content for A-Z from Emu

Alma (and Alma-D) identified as preferred replacement solution

Cost

No additional cost, existing system

API support

Enable automation and support update of information

Variety of presentation options

Direct integration with Primo and export data to present
in other systems

Metadata capabilities

Support for MARC and DC, import via XML

Project Team



Special Collections

Associate Director:
Curatorial Practices

Collection and
Discovery Manager



Digital Development

Software Developer

Digital
Communications
Developer



Discovery & Metadata

Metadata Manager
for Content
Management



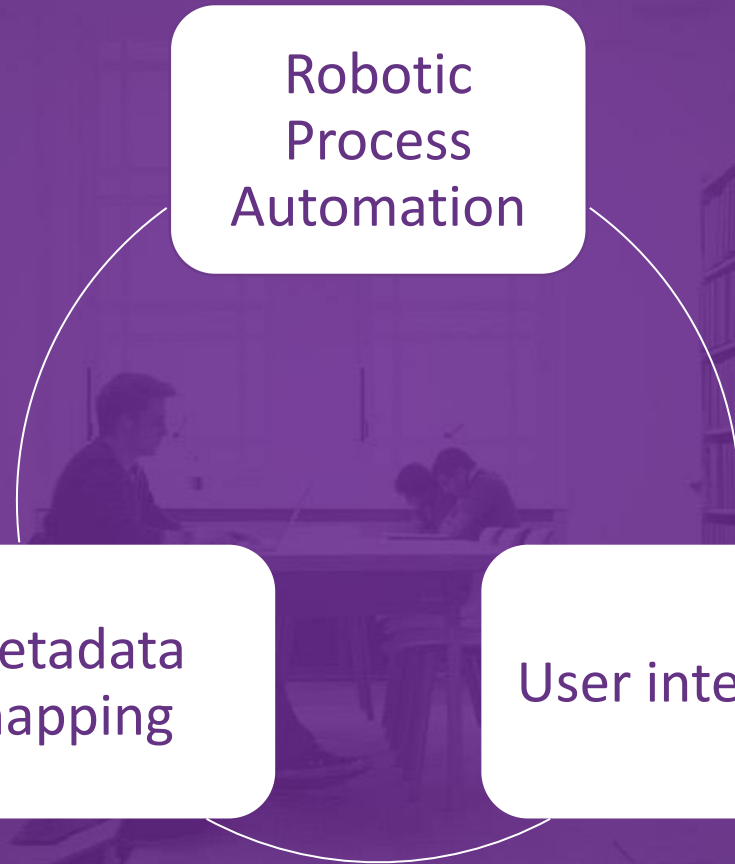
Digital Services

Systems Support
Analyst (Library
Systems)

Robotic
Process
Automation

Metadata
mapping

User interface



Mapping the Metadata...

```
<?xml version="1.0" encoding="UTF-8"?>
<article data-xmlns="http://www.w3.org/1999/xhtml">
  <section class="scg-title" style="display:block; margin-bottom: 1em;">
    <header>
      <h1>Title:</h1>
    </header>
    <section class="scg-content">
      <h1>Women's Suffrage Movement Archives</h1>
    </section>
  </section>
  <section class="scg-order" style="display:block; margin-bottom: 1em;">
    <header>
      <b>Sort Order:</b>
    </header>
    <section class="scg-content">Women's Suffrage Movement Archives</section>
  </section>
  <section class="scg-daterange" style="display:block; margin-bottom: 1em;">
    <header>
      <b>Date range:</b>
    </header>
    <section class="scg-content">1892-1923</section>
  </section>
  <section class="scg-medium" style="display:block; margin-bottom: 1em;">
    <header>
      <b>Medium:</b>
    </header>
    <section class="scg-content">Archive</section>
  </section>
  <section class="scg-number-of-items" style="display:block; margin-bottom: 1em;">
    <header>
      <b>Number of items:</b>
    </header>
```

XML schema from Emu



```
<marc:record>
  <marc:leader>05630npcaa22002893i 4500</marc:leader>
  <marc:controlfield tag="008">210708|||||||xx
  nnn|||||||eng|d</marc:controlfield>
  <marc:datafield tag="040" ind1=" " ind2=" ">
    <marc:subfield code="a">UkMaJRU</marc:subfield>
    <marc:subfield code="b">eng</marc:subfield>
    <marc:subfield code="e">rda</marc:subfield>
  </marc:datafield>
  <marc:datafield tag="336" ind1=" " ind2=" ">
    <marc:subfield code="a">text</marc:subfield>
  </marc:datafield>
  <marc:datafield tag="337" ind1=" " ind2=" ">
    <marc:subfield code="a">unmediated</marc:subfield>
    <marc:subfield code="b">n</marc:subfield>
    <marc:subfield code="2">rdamedia</marc:subfield>
  </marc:datafield>
  <marc:datafield tag="338" ind1=" " ind2=" ">
    <marc:subfield code="a">other</marc:subfield>
    <marc:subfield code="b">nz</marc:subfield>
    <marc:subfield code="2">rdacarrier</marc:subfield>
  </marc:datafield>
  <marc:datafield tag="245" ind1="1" ind2="0">
    <marc:subfield code="a">Women's Suffrage Movement
  Archives</marc:subfield>
  </marc:datafield>
  <marc:datafield tag="210" ind1="0" ind2="0">
    <marc:subfield code="a">Women's Suffrage Movement
  Archives</marc:subfield>
  <marc:subfield code="b">UkMaJRU</marc:subfield>
```

MARC XML for import into Alma

Mapping of approx. 490 XML collection records to MARC for import into Alma and added to collection

Iterative process and multiple revisions


Implications:

- Consideration of how metadata would display in public facing UI
- Conform to MARC standards
- How to handle HTML formatting and URLs in records
- Standardise conversion as much as possible

The screenshot shows the 'Collection Resource Editor' interface. At the top, there are tabs for 'General', 'Sub-collections (0)', 'Title List', 'Discovery', and 'History'. Below the tabs, there is a search bar with '1 - 20 of 492' items and a search icon. To the right of the search bar, there are options for '0 rows selected', '+ Add Title', '+ Add Titles from Set', 'Move Selected', and 'Remove Selected'. The main content is a table with the following columns: a checkbox, 'MMS ID', 'Title', and 'Material Type'. The table contains 13 rows of data, each representing a collection record.

| <input type="checkbox"/> | MMS ID | Title | Material Type |
|--------------------------|--------------------|--|----------------|
| <input type="checkbox"/> | 992983876595101631 | Alfred Darbyshire Collection | Mixed material |
| <input type="checkbox"/> | 992983876595201631 | ICI Dyestuffs Division Archive | Mixed material |
| <input type="checkbox"/> | 992983876595301631 | James Prescott Joule Papers | Mixed material |
| <input type="checkbox"/> | 992983876595401631 | Samuel Hird Papers | Mixed material |
| <input type="checkbox"/> | 992983876595501631 | Manchester Airport Second Runway Inquiry Archive | Mixed material |
| <input type="checkbox"/> | 992983876595601631 | Jan Lukasiewicz Papers | Mixed material |
| <input type="checkbox"/> | 992983876595701631 | Zdenek Kopal Papers | Mixed material |
| <input type="checkbox"/> | 992983876595801631 | Gustave Adolphe Hemsalech Papers | Mixed material |
| <input type="checkbox"/> | 992983876595901631 | Botfield Papers | Mixed material |
| <input type="checkbox"/> | 992983876596001631 | Arthur Schuster Papers | Mixed material |
| <input type="checkbox"/> | 992983876596101631 | Tanks Group Archive | Mixed material |
| <input type="checkbox"/> | 992983876596201631 | Papers of D. A. Wilson | Mixed material |
| <input type="checkbox"/> | 992983876596301631 | Sir William Boyd Dawkins Papers | Mixed material |


Discovery interface



COLLECTION

John Strachan Papers

[Help me find it >](#)



Top

Find In Library

Details

Collection

Send To

Links

Find in library

Need help?
Please contact us if you need further help

[↗](#)

Order a Book
If you are searching for a book that we don't hold you can order a copy: please visit the Library website to find out more

[↗](#)

Details

| | |
|------------------------|--|
| Title | John Strachan Papers |
| Publisher | 1885-1907 |
| Language | English |
| Description | <p>John Strachan (1862-1907) was Hulme Professor of Greek, 1885-1907, and Professor of Sanskrit and Comparative Religion, 1890-1907, at Owens College, and from 1903, the University of Manchester.</p> <p>Strachan is best remembered as a leading figure in the revival of Celtic studies. His small collection of manuscript notebooks contains information on philosophy, the classics, and the Irish Gaelic language.</p> |
| Summary | Uncatalogued. |
| MMS ID | 992983876729901631 |
| Source | UoM Library Catalogue |
| Collection Path | 🏠 COLLECTIONS / Guide To Special Collections / |

Links

- [The University of Manchester Main Library, Oxford Rd >](#)
- [John Strachan Book Collection >](#)
- [Conditions of Access >](#)
- [Display Source Record >](#)

John Strachan Papers

Date range: 1885-1907

Medium: Archive

John Strachan (1862-1907) was Hulme Professor of Greek, 1885-1907, and Professor of Sanskrit and Comparative Religion, 1890-1907, at Owens College, and from 1903, the University of Manchester.

Strachan is best remembered as a leading figure in the revival of Celtic studies. His small collection of manuscript notebooks contains information on philosophy, the classics, and the Irish Gaelic language.

See also:

- [John Strachan Book Collection](#)

Further information:

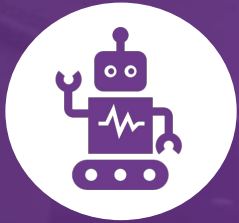
Uncatalogued.

Location:

- [The University of Manchester Main Library, Oxford Rd \[Map\]](#)
- Find out how to [use the reading room in the Main Library](#).

[<< Back to A-Z list](#)

Robotic Process Automation



Robotic Process Automation (RPA) is technology which allows software to emulate human actions when interacting with digital systems. Software 'robots' can perform repetitive tasks faster and more consistently than humans

Manchester's preferred RPA platform is UIPath. Several robots have been deployed in the library since 2019 to support repetitive aspects of services



RPA adopted in this project to automate full workflow for generating A-Z webpages from Alma data

RPA Workflow

1. Export collection from Alma to Excel and save as .csv
2. Run Powershell script to retrieve bib records via API and save as xml file. Custom sort terms/order record in MARC field 210.
3. Csv file of title list sorted by custom sort order.
4. Run Powershell script to generate search XML file and upload to T4
5. HTML file for A-Z generated and uploaded to T4, alongside XML file of bib records
6. A-Z listings pages are generated on website and use ALMA MMS ID to link to individual listing, pulling full metadata from XML bib file.

Benefits and challenges



Stabilised and automated backend process

Easier for Special Collections staff to create and update records in Alma

Scope to enhance further



Weren't able to improve discovery as much as hoped...yet

Risk of records becoming unsuppressed in Alma inadvertently

Challenges in making metadata fit to MARC

Future plans

Special Collections A-Z

- Dynamic subject groupings
- Link to material within a collection
- Increase visual elements
- Revisit inclusion in Primo

Other areas

- Databases A-Z
- Alma-D and Collection Discovery

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Any questions?

Thank you for listening

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