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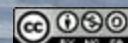
SCIENCE  
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V&A  
iiif

The Practical Applications of IIIF - Final Webinar: Project  
Demonstrators and the Future of IIIF in a National Collection  
Context: 29th April 2022

## Simple Discovery and the IIIF Collection Explorer

Joseph Padfield (NG) – @JoePadfield  
@practicalIIIF – #practicalIIIF



# Discovering IIIF

- IIIF can help provide open access to a wealth of images from institutions across the world.
- All using the same free shared tools and services.
- <https://guides.iiif.io/> brings together a great list of these institutions, showing how to find the published IIIF resources.
- Several institutions even provide access to well documented API(s) to allow more complex searches of their collection and image information.

# Making use of open APIs

```
{
  "totalcount": 570,
  "results": [
    {
      "title": "Saint John the Baptist",
      "url": "/content/ngaweb/collection/art-object-page.434.html",
      "id": 434,
      "displaydate": "probably c. 1325",
      "medium": "tempera on panel",
      "isOSCI": true,
      "isZoomable": true,
      "iiifManifestURL": "https://www.nga.gov/content/ngaweb/api/v1/iiif/presentation/manifest.json?cultObj:id=434",
      "iiifCanvasID": "https://cq.nga.gov/content/ngaweb/api/v1/iiif/presentation/manifest/sequence/canvas.json?cultObj:id=434",
      "classification": "Painting",
      "download": "https://media.nga.gov/iiif/3c95ac77-d680-46b1-bdeb-2add2b0c34e0/full/full/0/default.jpg",
      "attachment_filename=saint_john_the_baptist_1939.1.291.jpg",
      "dimensions1": "painted surface (incised line to incised line): 88.7 x 42.2 cm (34 15/16 x 16 5/8 in.)painted surface (original panel): 92.5 x 44 cm (36 7/16 x 17 5/16 in.)overall: 94.3 x 45.3 cm (37 1/8 x 17 13/16 in.)",
      "dimensions2": "framed: 99.1 x 48.3 x 6 cm (39 x 19 x 2 3/8 in.)",
      "creditline": "Samuel H. Kress Collection",
      "creditlineurl": "/content/ngaweb/collection-search-result.html?artobj_credit=Samuel%20H.%20Kress%20Collection",
      "accessionnumber": "1939.1.291",
      "onview": true,
      "onViewSettings": {
        "roomName": "M-003",
        "roomTitle": "West Building, Main Floor - Gallery 03",
        "coords": "193,48,210,72",
        "shape": "rect",
        "url": "/content/ngaweb/collection/locationview.434.html?room=M-003",
        "floorTitle": "West Building, Main Floor",
        "image": "/content/dam/ngaweb/LocationMaps/wb-main.png"
      },
      "onviewurl": "/content/ngaweb/collection/locationview.434.html?room=M-003",
      "onviewErrMsg": "",
      "ishighlight": false,
      "imagepath": "https://media.nga.gov/iiif/3c95ac77-d680-46b1-bdeb-2add2b0c34e0/full/!384,384/0/default.jpg",
      "showAttribution": false,
      "attribution": "Lippo Memmi",
      "attributionInv": "Lippo Memmi",
      "artists": [
        {
          "name": "Lippo Memmi"
        }
      ]
    }
  ]
}
```

Raw Parsed

- [https://www.nga.gov/collection-search-result/jcr:content/parmain/facetcomponent/parList/collectionsearchres.pageNumber\\_\\_1.pageSize\\_\\_5.json?\\_=UNIQUECODE&keyword=castle](https://www.nga.gov/collection-search-result/jcr:content/parmain/facetcomponent/parList/collectionsearchres.pageNumber__1.pageSize__5.json?_=UNIQUECODE&keyword=castle)
- Open APIs can provide incredible access to collection information and resources.
- But they can be quite complicated.

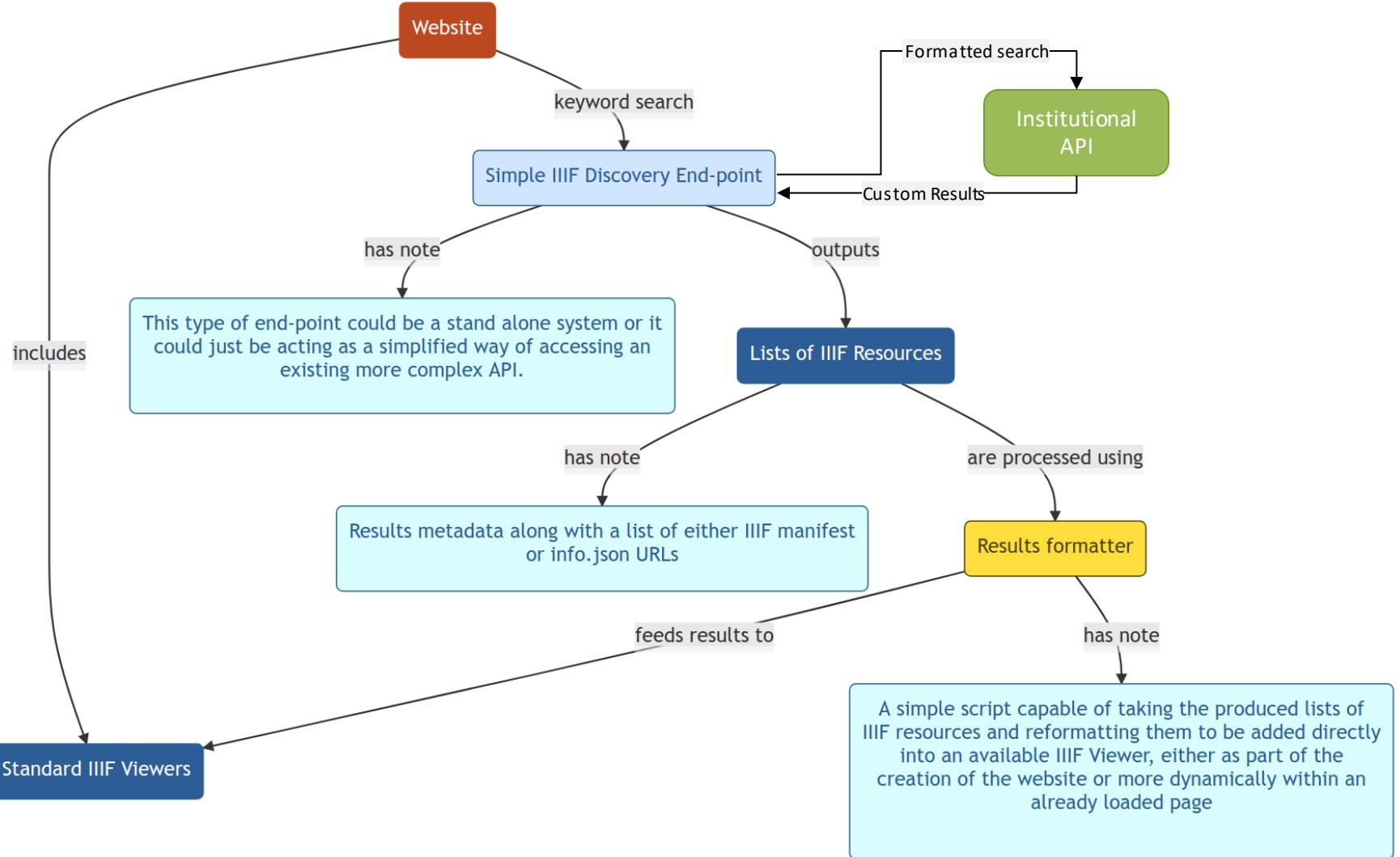
## The question:

- Using the current data provided could a simpler IIIF search and presentation

## Simple IIIF Discovery

- The development of a Simple IIIF Discovery system was carried out to demonstrate an easier way to discover and present IIIF content.
- From individual institutions or across multiple collections at the same time.
- This work has been supported through a collaboration of three related research projects, Practical IIIF (AHRC), SSHOC (EU H2020) and IPERION-HS (EU H2020).

<https://research.ng-london.org.uk/ss-iiif>



[Search](#) > Cross-Collection Search

THE NATIONAL GALLERY



Smithsonian

wellcome  
collection

Multiple Simple IIIF Discovery end-points can be connected to a single page to allow users to search across multiple collections at the same time

This particular example allows users to search across the collections of The Art Institute of Chicago, The National Gallery, The National Gallery of Art, The Smithsonian Institution, Statens Museum for Kunst, The Victoria & Albert Museum and Wellcome Collection.

#### Search and display the Collection(s):

Free text search term ("AND" operator used for multiple words)

Object limit and page number per end-point

Limit

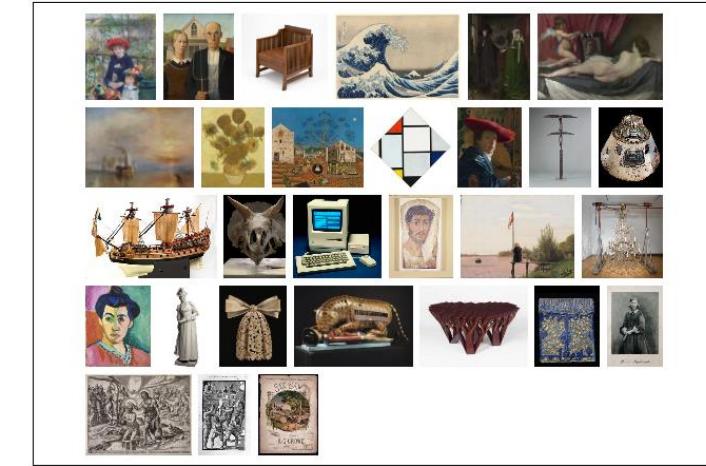
25

▼

Page No.

1

Select the default IIIF viewer

 OpenSeadragon (Image Grid) Mirador (Images with Metadata)

Example images from the Cross-Collection Search Simple IIIF Discovery end-point.

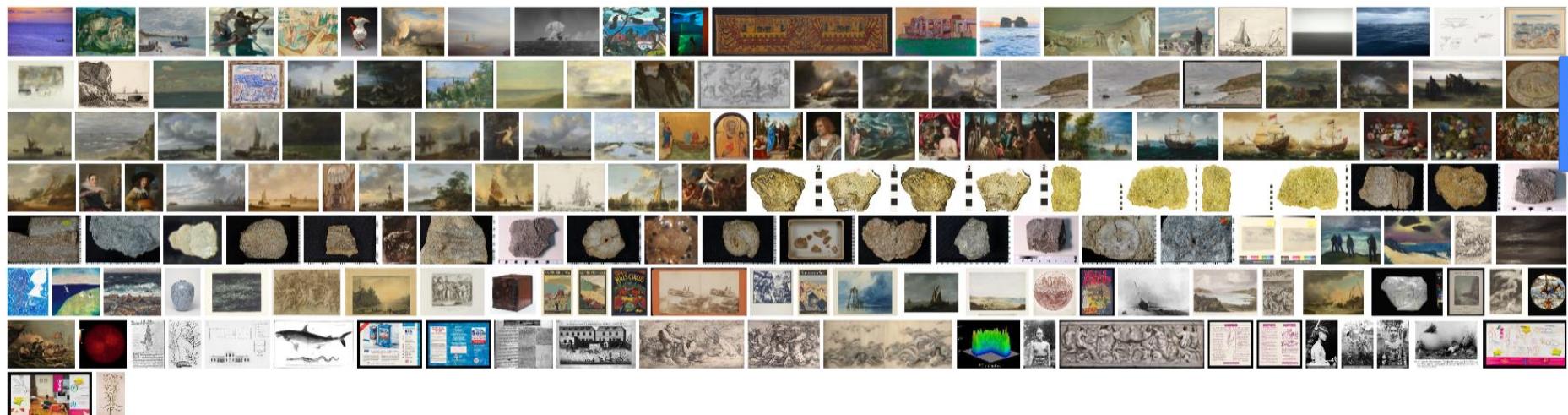
#### Simple IIIF Discovery End-Point(s)

<https://research.ng-london.org.uk/discovery/aic/><https://research.ng-london.org.uk/discovery/ng/><https://research.ng-london.org.uk/discovery/nga/><https://research.ng-london.org.uk/discovery/si/><https://research.ng-london.org.uk/discovery/smk/><https://research.ng-london.org.uk/discovery/va/>

Search For: **sea**. Displaying resources from objects **0 - 175 of 187545**.



< 1/7102 >



Feedback

Search for: sea. Displaying resources from objects



## Identified Details for Displayed Images

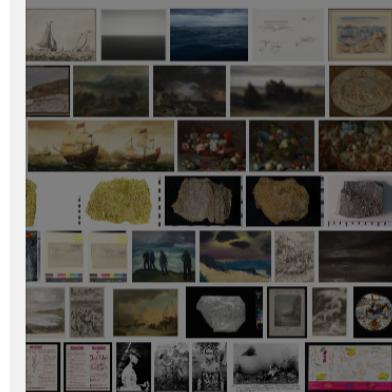
X

FILENAME OR ID	VIEW	INFO
a52c0c03-9668-ae2b-d780-dc928a9d16c1 (2003.86)		 
7b3b8278-694a-f990-76e8-984573b36997 (1947.114)		 
95be2572-b53d-8e7b-abc9-10eb48d4fa5d (1933.439)		 
fa81bfb9-5a07-5e3c-33b4-4efde68981c8 (1990.443)		 
3f860f0a-9996-4731-b43f-35468fc0e3fc (1931.513)		 
21c98476-4704-604e-dac4-c650b5e62f9f (1957.490a)		 
8641479e-c93e-f1a8-9925-19be061706da (1922.4472)		 
70cc5210-4692-0a89-9998-e6a3a8030018 (2007.225)		 
99956788-7a7d-2133-f2c0-7648593395cc (1997.138)		 
9887f97d-06d5-c3b0-b075-43e9ea6c1996 (1931.518)		 

Close



&lt; 1/7102 &gt;



Feedback

# Selecting a IIIF Viewer

- [OpenSeadragon](#) provides a great way of exploring large sets of zooming images.
- [Mirador](#) provides a more complex feature rich experience, with images directly linked to the rich metadata and description provided by each institution.
- Depending on their needs users can simply toggle back and forward between these two options.

Search For: **sea**. Displaying resources from objects **0 - 175 of 187545**.

&lt; 1/102 &gt;

			
	Caribs' Leap/Western Deep	(Added from URL) 1 items	
	Landscape at Cagnes	(Added from URL) 1 items	
	The Beach at Sainte-Adresse	(Added from URL) 1 items	
	In the Sea	(Added from URL) 1 items	
	Landscape	(Added from URL) 1 items	
	Ewer	(Added from URL) 1 items	

[+ ADD RESOURCE](#)

Search For: **sea**. Displaying resources from objects 0 - 175 of 187545.

&lt; 1/102 &gt;



## The Beach at Sainte-Adresse

[About this item](#)

CURRENT ITEM



The Beach at Sainte-Adresse, 1867.  
Claude Monet, French, 1840-1926



## The Beach at Sainte-Adresse

Artist / Maker

Claude Monet French, 1840-1926

Medium

Oil on canvas

Dimensions

75.8 × 102.5 cm (29 13/16 × 40 5/16 in.)

Object Number

1933.439

Collection

[Art Institute of Chicago](#)

RELATED



1 of 1 • The Beach at Sainte-Adresse, 1867. Claude Monet, French, 1840-1926

# Simple IIIF Discovery

Created using the Simple Site system:

<https://jpadfield.github.io/simple-site/>

Code can be found on GitHub:

<https://github.com/jpadfield/iiif-discovery>

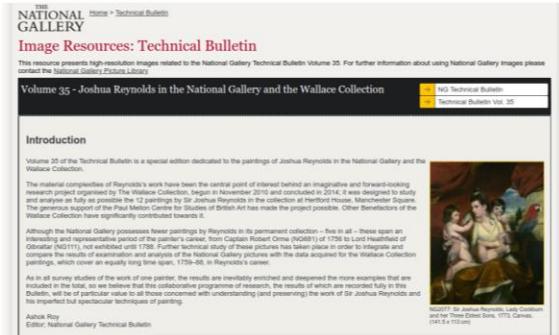
Archived on Zenodo:

<https://doi.org/10.5281/zenodo.5512980>

<https://research.ng-london.org.uk/ss-iiif>

# Supporting Exhibitions & Publications with IIIF

<https://research.ng-london.org.uk/projects>

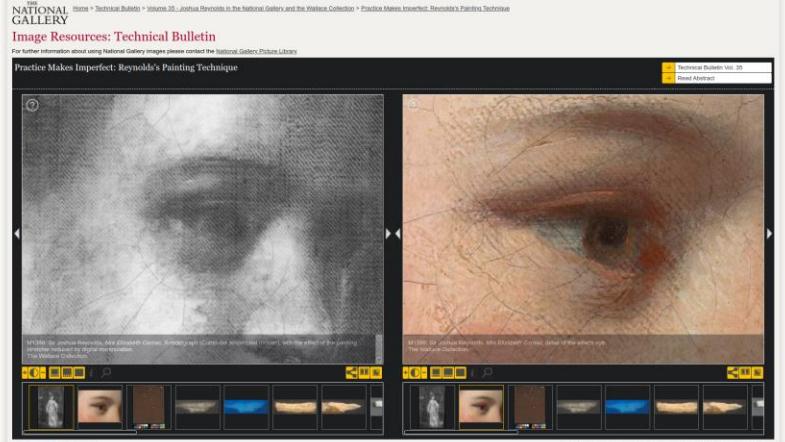


How to use this resource

Explore the sections below for additional resources

## Available resources

- Practice Makes Imperfect
- Catalogue Entries
- Links to other websites

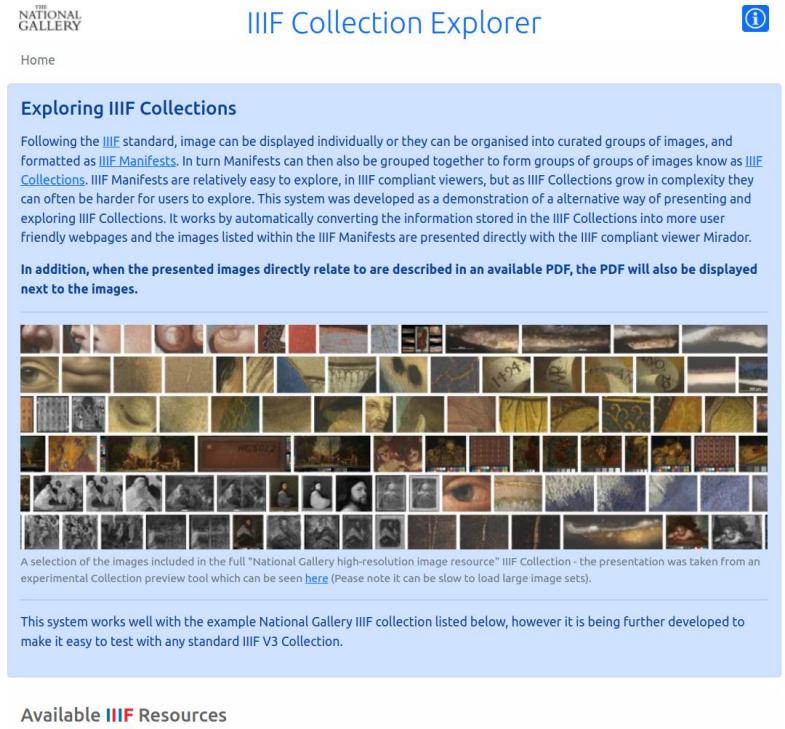


- For over 10 years the National Gallery has publicly presented high resolution images.
- These sets of images have been put together to provide additional content for Exhibitions, Publications and Research projects.

The current system, based on a bespoke [IIPIImage](#) viewer has been showing its age for a while.

As part of the Practical IIIF project work was carried out to update the system to [IIIF Presentation V3](#)

# IIIF Collection Explorer



The screenshot shows the 'Exploring IIIF Collections' page. At the top, there's a header with the National Gallery logo and a 'Home' link. Below that is a section titled 'Exploring IIIF Collections' with a detailed description of what IIIF Collections are and how they differ from IIIF Manifests. It includes a note about PDFs and a large grid of thumbnail images from the National Gallery's collection. Below the grid, there's a paragraph about the experimental collection preview tool. At the bottom, there's a section titled 'Available IIIF Resources' featuring a link to the National Gallery's high-resolution image resources.

- The structure of the old system was based on hierarchical groups of images with titles and descriptions.
- This was easily replicated using groups of IIIF Manifests organised into IIIF Collections.
- So simple system was created to allow users to explore a complex IIIF Collection and display the actual images within Mirador (V3).

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# <https://research.ng-london.org.uk/iiif-projects/>

 IIIF Collection Explorer 

[Home](#) / [National Gallery high-resolution image resources](#) / [Technical Bulletin](#)

## Technical Bulletin

The National Gallery Technical Bulletin, first published in 1977, has achieved a leading position in the study of the materials and techniques of painting, and the scientific examination of paintings; it is essential reading for conservators, conservation scientists, art historians, collectors and curators. Drawing on the combined expertise of curators, scientists and conservators, it brings together a wealth of information about artists' materials, practices and techniques.

## National Gallery Website Links

[NG Technical Bulletin](#)

## Available IIIF Resources

	Volume 31 - Various Articles 2010	2 manifests	
	Volume 32 - Leonardo da Vinci: Pupil, Painter and Master	4 collections	
	Volume 33 - Various Articles 2012	5 collections	
	Volume 34 - Titian's Painting Technique Before 1540	2 collections and 2 manifests	
	Volume 35 - Joshua Reynolds in the National Gallery and the Wallace Collection	2 collections and 1 manifest	
	Volume 36 - Titian's Painting Technique From 1540	2 collections and 1 manifest	

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- Each IIIF Collection or Manifest can be used to generate a simple page which displays titles, comments, additional metadata and included IIIF resources.
- Either as an interactive list as shown here (when at least one IIIF Collection is included), or ...

# <https://research.ng-london.org.uk/iiif-projects/>

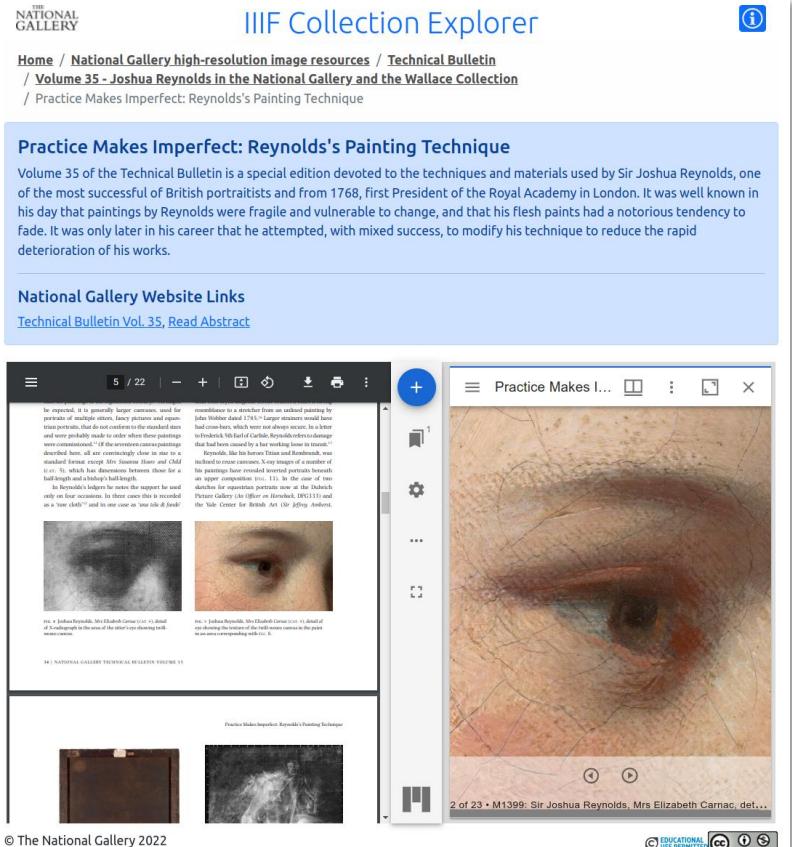
The screenshot shows the IIIF Collection Explorer interface. At the top, there's a header with the National Gallery logo and the title "IIIF Collection Explorer". Below the header, a breadcrumb navigation path is visible: Home / National Gallery high-resolution image resources / Exhibitions / Barocci: A lesson in drawing / Barocci Drawings: Types of drawings. The main content area is titled "Barocci Drawings: Types of drawings". It contains a brief text about the artist's process and links to his biographies. Below this, there's a section titled "National Gallery Website Links" with a link to "View the painting, Barocci: a lesson in drawing". The main feature is a list of categories for Barocci Drawings:

Category	Owner	Items	Thumbnail
Barocci Drawings: Sketches	The National Gallery	7 items	
Barocci Drawings: Studies from models	The National Gallery	13 items	
Barocci Drawings: Compositional studies	The National Gallery	6 items	
Barocci Drawings: Anatomical studies	The National Gallery	8 items	
Barocci Drawings: Head studies	The National Gallery	8 items	
Barocci Drawings: Drapery studies	The National Gallery	4 items	
Barocci Drawings: Finished	The National Gallery	0 items	

At the bottom right of the interface, there's a blue button labeled "+ ADD RESOURCE" and a Creative Commons license logo indicating "EDUCATIONAL USE PERMITTED". The footer of the page includes the text "© The National Gallery 2022".

- IIIF Manifests or their own are loaded directly into Mirador, as shown.

# <https://research.ng-london.org.uk/iiif-projects/>



The screenshot shows a detailed view of a painting's eye and surrounding skin texture. The interface includes a top navigation bar with 'The NATIONAL GALLERY' logo, 'IIIF Collection Explorer', 'Home / National Gallery high-resolution image resources / Technical Bulletin / Volume 35 - Joshua Reynolds in the National Gallery and the Wallace Collection / Practice Makes Imperfect: Reynolds's Painting Technique'. Below this is a main content area with a title 'Practice Makes Imperfect: Reynolds's Painting Technique' and a descriptive paragraph about Reynolds's painting techniques. A sidebar on the left lists 'National Gallery Website Links' and 'Technical Bulletin Vol. 35, Read Abstract'. At the bottom, there are two small thumbnail images and a copyright notice: '© The National Gallery 2022'.

- In addition to exploiting the benefits of the IIIF Viewer Mirador the system has also been designed to display relevant PDFs inline next to the images rather than just providing a link.
- This is achieved by adding the PDF details directly to the IIIF Manifests as additional metadata.
- If this extra metadata field is picked up by the page builder the PDF viewer is automatically added.

# <https://research.ng-london.org.uk/iiif-projects/>

The screenshot shows the IIIF Collection Explorer interface. At the top, there's a header with the National Gallery logo and the title "IIIF Collection Explorer". Below the header, a breadcrumb trail shows the path: Home / National Gallery high-resolution image resources / Exhibitions / Barocci: A lesson in drawing / Barocci Drawings: Types of drawings. The main content area is titled "Barocci Drawings: Types of drawings". It contains a brief text about essential clues to Barocci's artistic process from early biographies and manuals. Below this, there's a section titled "National Gallery Website Links" with a link to "View the painting, Barocci: a lesson in drawing". The main content area displays a list of six categories of Barocci drawings, each with a thumbnail image, the category name, the number of items, and the National Gallery logo:

Barocci Drawings: Sketches	The National Gallery 7 items	THE NATIONAL GALLERY
Barocci Drawings: Studies from models	The National Gallery 13 items	THE NATIONAL GALLERY
Barocci Drawings: Compositional studies	The National Gallery 6 items	THE NATIONAL GALLERY
Barocci Drawings: Anatomical studies	The National Gallery 8 items	THE NATIONAL GALLERY
Barocci Drawings: Head studies	The National Gallery 8 items	THE NATIONAL GALLERY
Barocci Drawings: Drapery studies	The National Gallery 4 items	THE NATIONAL GALLERY

At the bottom right of the content area, there's a blue button labeled "+ ADD RESOURCE" and a Creative Commons license logo. On the far left, there's a vertical sidebar with icons for search, filters, and other navigation options. At the very bottom, it says "© The National Gallery 2022".

- The system is currently optimised to exploit additional metadata in the IIIF documents to define a breadcrumb trail for navigation.
- The system can be made to work from most IIIF Collections – passed to the page as a Get variable.
- But some further development is required here to disconnect it completely from the default NG data.

# IIIF Collection Explorer

THE NATIONAL GALLERY

## IIIF Collection Explorer

Home

### Exploring IIIF Collections

Following the [IIIF](#) standard, image can be displayed individually or they can be organised into curated groups of images, and Formatted as [IIIF Manifests](#). In turn Manifests can then also be grouped together to form groups of groups of images know as [IIIF Collections](#). IIIF Manifests are relatively easy to explore, in IIIF compliant viewers, but as IIIF Collections grow in complexity they can often be harder for users to explore. This system was developed as a demonstration of a alternative way of presenting and exploring IIIF Collections. It works by automatically converting the information stored in the IIIF Collections into more user friendly webpages and the images listed within the IIIF Manifests are presented directly with the IIIF compliant viewer Mirador.

In addition, when the presented images directly relate to are described in an available PDF, the PDF will also be displayed next to the images.



A selection of the images included in the full "National Gallery high-resolution image resource" IIIF Collection - the presentation was taken from an experimental Collection preview tool which can be seen [here](#) (Please note it can be slow to load large image sets).

This system works well with the example National Gallery IIIF collection listed below, however it is being further developed to make it easy to test with any standard IIIF V3 Collection.

### Available IIIF Resources

NATIONAL GALLERY	National Gallery high-resolution image resources	4 collections
------------------	--	---------------

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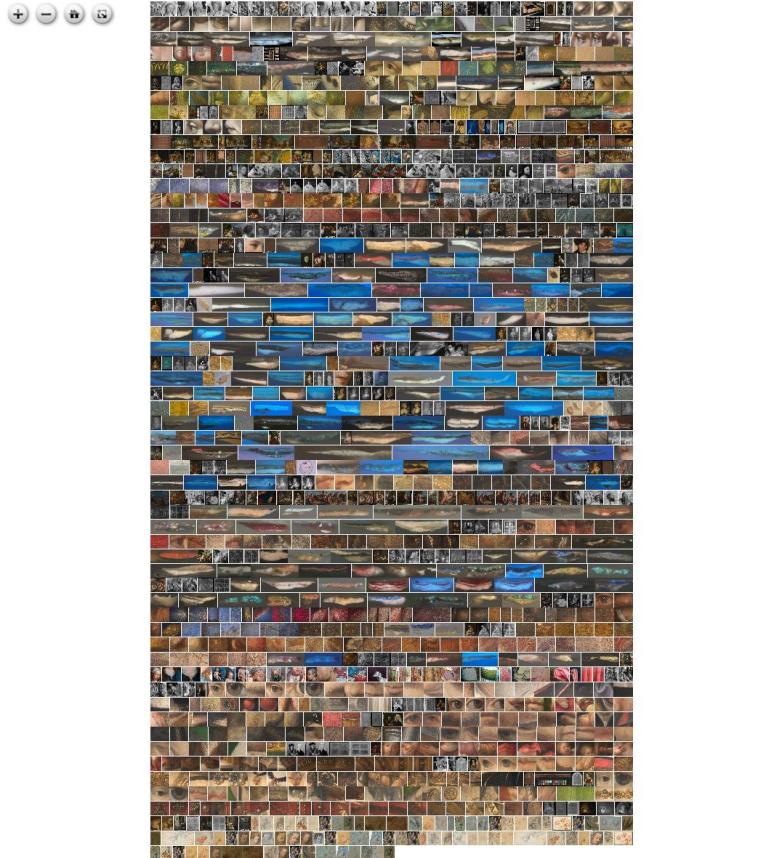
TOWARDS A NATIONAL COLLECTION

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- As part of this work – as a results of a interesting discussion on the IIIF Slack system – we also experimented with the question:
- *If one has a big complex IIIF Collection, is there a way to quickly preview all of the images it includes, without needing go up and down opening up all of the nested Manifests?*

# IIIF Collection Preview

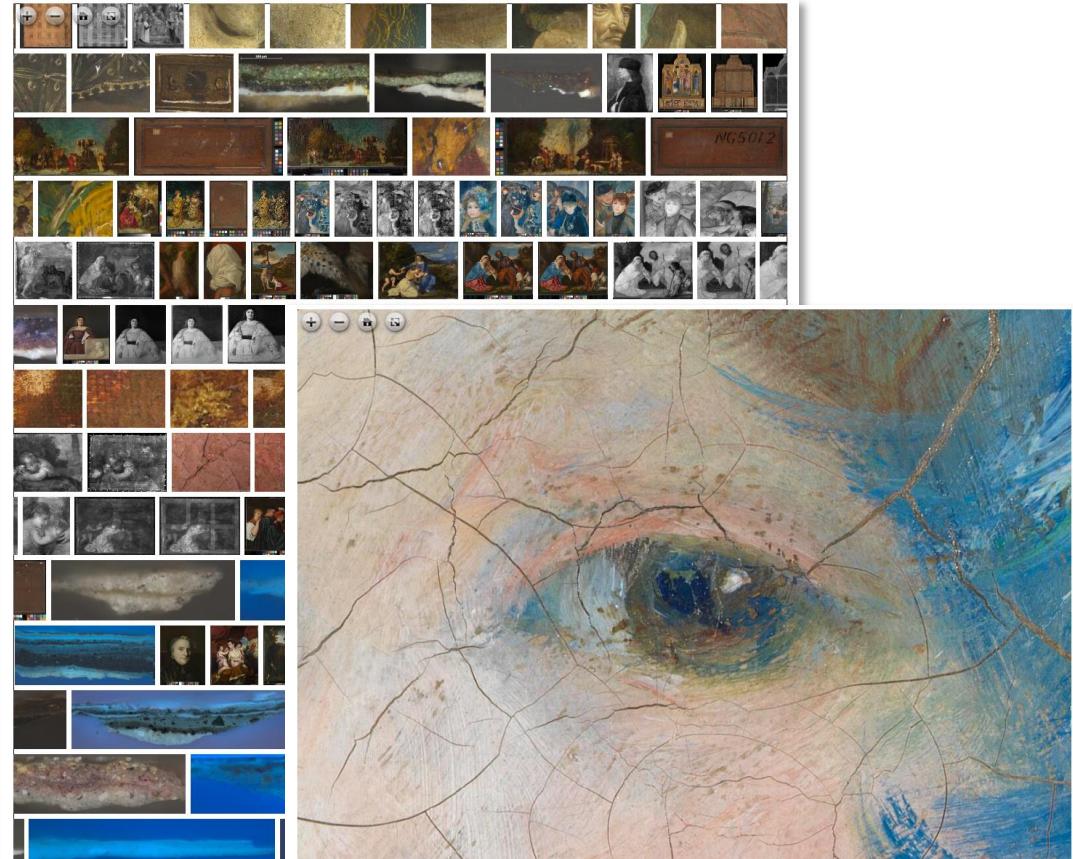


Yes ☺

<https://research.ng-london.org.uk/cv/?uri=https://research.ng-london.org.uk/iiif-projects/json/ng-projects.json&limit=1500>

- This system works from a live IIIF document – parsing out all of the image.info documents referenced in it or any nested documents and drops them all into [OpenSeadragon](#)

# IIIF Collection Preview



- But it can be a little slow to load in large collections so it is currently limited to 2000 images.
- Future work could combine this with the IIIF Discovery GUI to allow users to page through the images as required.



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# The Practical Applications of IIIF - Final Webinar: Project Demonstrators and the Future of IIIF in a National Collection

Context: 29th April 2022

## Thank You

Joseph Padfield (NG) – @JoePadfield  
@practicalIIIF – #practicalIIIF

