IIIF, APIs and Robust Use of Digital Archives

REALIZING IIIF'S POTENTIAL THROUGH

TRAINING, ADVOCACY, RESOURCES, ACCESS

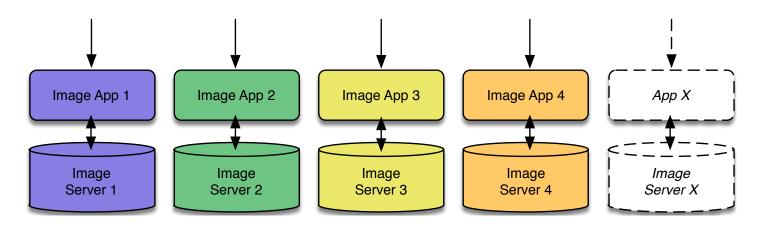
Regan Murphy Kao

Stanford University Libraries

March 24, 2018



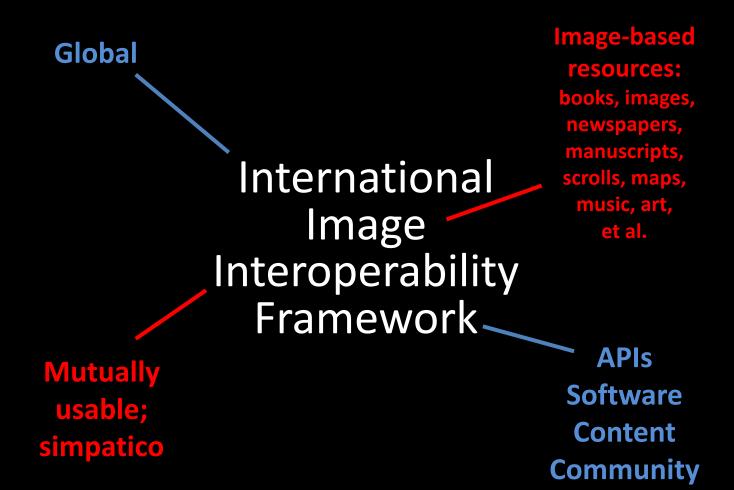
A world of silos & duplication



EVERY SITE A SILO (→ NO INTEROPERABILITY)

EVERY APP A ONE-OFF (→OVERHEAD TO CODE AND KEEP)

EVERY USER FORCED TO COPE (→ MANY UIS, LITTLE INTEGRATION)





IIIF-C Founding Members to Date

0	Artstor	0	National Library of Poland
0	Bavarian State Library (BSB)	0	National Library of Scotland
0	British Library	0	New York University
0	Brown University	0	North Carolina State University
0	Cambridge	0	Ohio State University
0	Chinese U. of Hong Kong	0	Oxford
0	Cornell	0	Penn State University
0	Data Futures	0	Princeton
0	Ecole Polytechnique Federale de	0	Saint Louis University
	Lausanne (EPFL)	0	Smithsonian Institution
0	Europeana	0	Stanford
0	Folger Library	0	University of Basel
0	J. Paul Getty Trust	0	University of Edinburgh
0	Johns Hopkins	0	University of Göttingen
0	Harvard University	0	University of Leiden
0	Hong Kong University	0	University of Michigan
0	Indiana University	0	University of Notre Dame
0	Kyoto University Library Network	0	University of Pennsylvania
0	MIT	0	University of Tokyo
0	National Gallery of Art (US)	0	University of Toronto
0	National Library of France	0	Vatican Library
0	National Library of Israel	0	Wellcome Library
0	National Library of Norway	0	Yale University (incl. Yale Center for British Art)
			(incl. Yale Center for British Art)



IIIF Vision

CREATE A GLOBAL FRAMEWORK BY WHICH IMAGE-BASED RESOURCES (IMAGES, BOOKS, MAPS, SCROLLS, MANUSCRIPTS, MUSICAL SCORES, ETC.)

...FROM **ANY** PARTICIPATING INSTITUTION CAN BE DELIVERED IN A STANDARD WAY

...VIA ANY COMPATIBLE IMAGE SERVER

...FOR DISPLAY, MANIPULATION AND ANNOTATION IN **ANY** APPLICATION,

...TO ANY USER ON THE WEB.



IIIF Vision, continued

- with tens of millions of image-based resources
- backed by a consortium of world-leading cultural heritage and research institutions
- supported by a rich and growing suite of software tools
- incorporating the best of current image delivery technology, and leveraging Web standards



Deep Zoom with Large Images





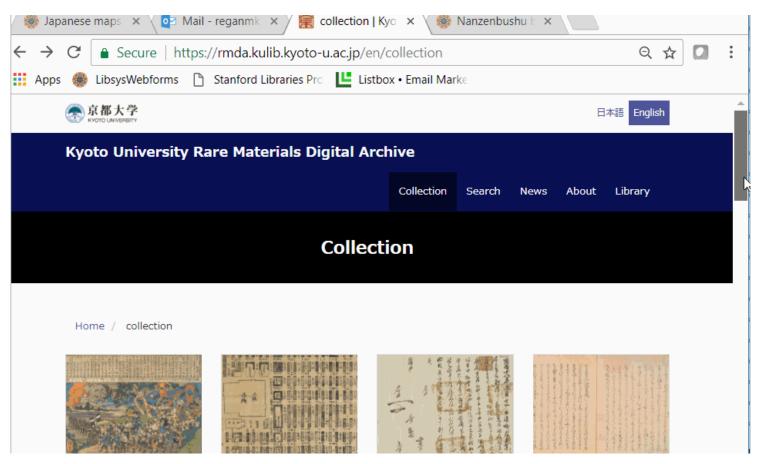
Compare within a Collection

 Compare two or more images in one workspac e





Or across Institutional Repositories



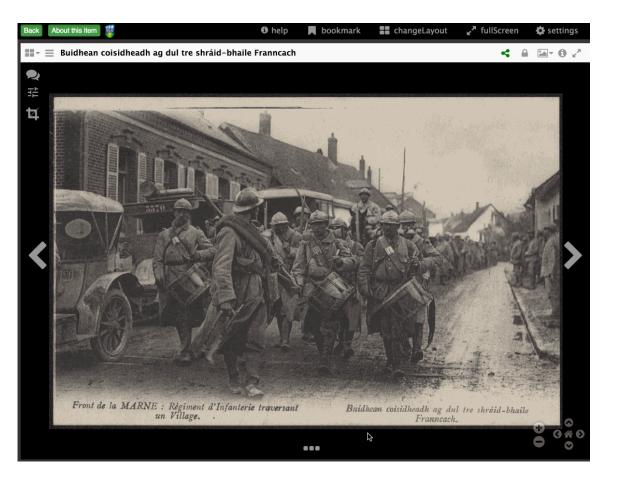


Annotaate





Cite and share





Right-to-left reading





Collect items that belong together



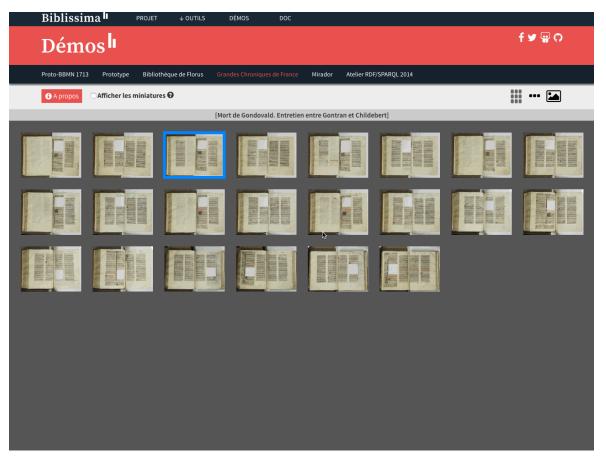
LE MANUSCRIT 5 DE LA
BIBLIOTHÈQUE MUNICIPALE
DE CHÂTEAUROUX, C. 1460

FOLIO IN BVMM
MINIATURE IN THE BNF





Reunify





Ege MS No. I - Reconstructed





Analyze and Manipulate Images





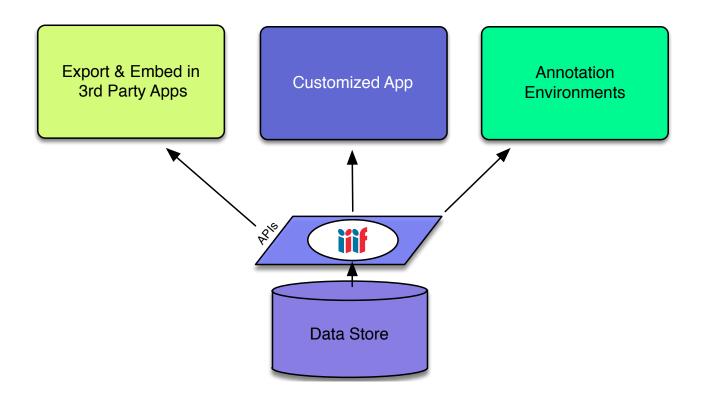


A Community

- that develops Shared APIs,
- ·implements them in **Software**,
- and exposes interoperable Content

IIIF Community IIIF APIs in production IIIF adoption Greenland in progress Iceland Russia Kazakhstan Mongolia North North Pacific Atlantic Afghanistan Ocean Ocean Pakistan Algeria Egypt Libya Mali Niger Sudan Nigeria Indonesia Papua New Guinea Angola Namibia Indian Botswana Ocean South South Australia Chile Atlantic Pacific Ocean Ocean South Africa Argentina New Zealand

APIs* enable reuse



^{*&}quot;Application Programming Interface" -- the part of the server that receives and responds to messages.

IIIF: Two Core APIs

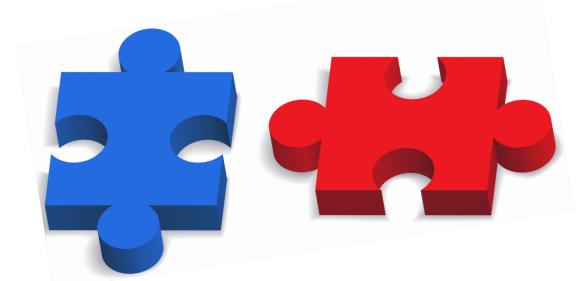


Image API

"get pixels" via a simple, RESTful, web service

Presentation API

Just enough metadata to drive a remote viewing experience

Image pixels + Presentation data = Object

Presentation API

- Title Label
- •Structure (TOC)
- Sequence

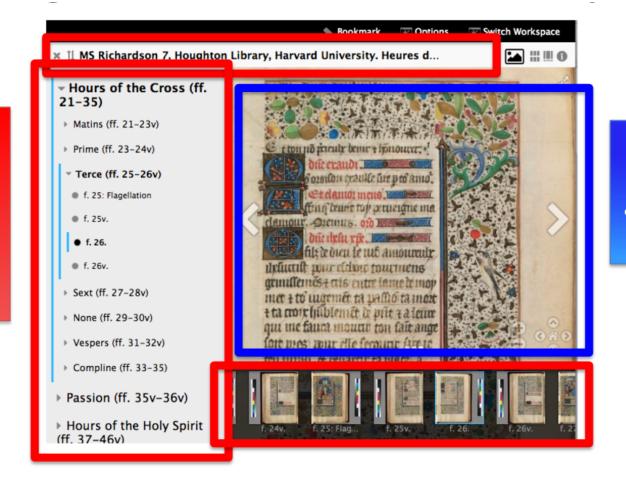


Image API

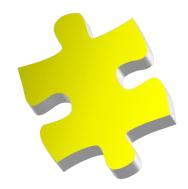
ImageData

IIIF: Three More APIs



Search API

Search within an object, such as the full text of a book or newspaper



Authentication API

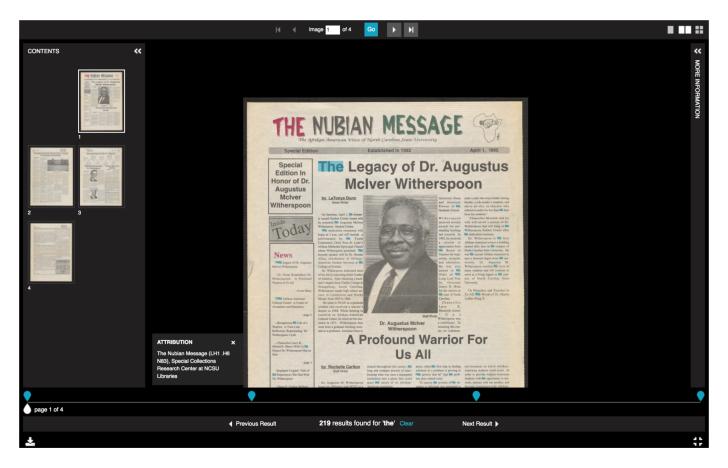
To support login, and differential access to resources.



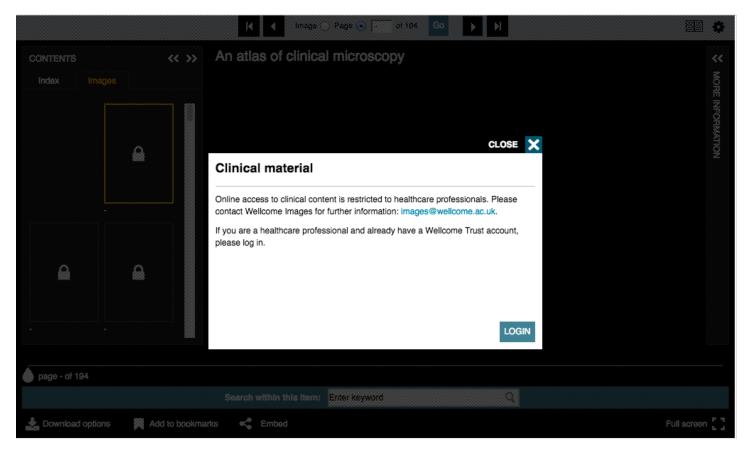
A/V API

Deliver timebased media (audio, video)

IIIF Content Search API - search within



IIIF Authentication API



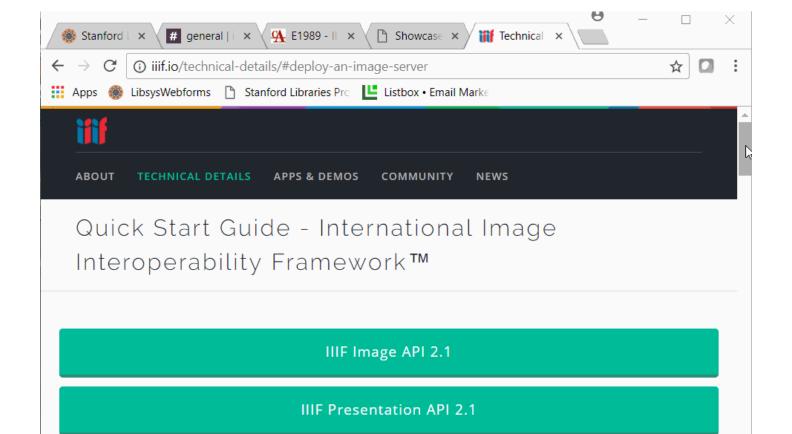
IIIF Compatible Software





More Information on IIIF

IIIF WEBSITE: HTTP://IIIF.IO



IIIF-Compatible Content

.400,000,000+ Images .from .100+ Institutions

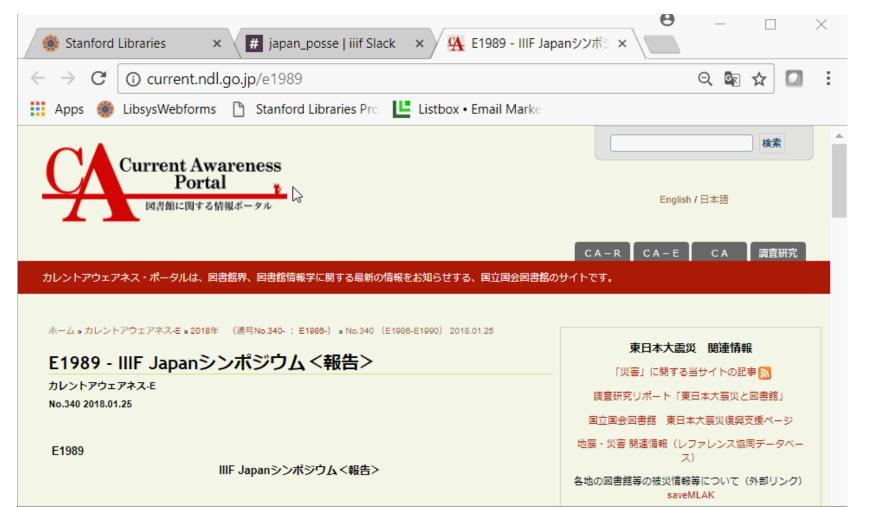


IIIF enables users to do more than **view** resources

- Zoom, pan, interact, manipulate
- Compare, reunite, remix & mash up
- Cite and share
- Annotate
- Apply machine learning and Al

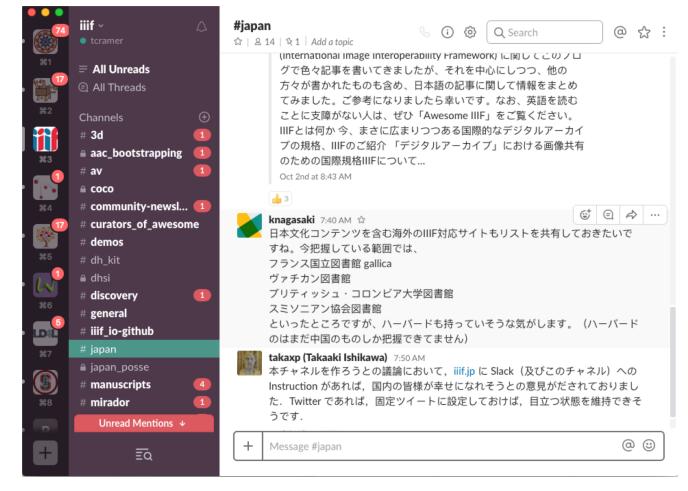


IIIF Japan Symposium, October 2017





#japan in IIIF Slack





Partial List of IIIF Implementers in Japan

国文学研究資料館

HTTP://LAB.NDL.GO.JP/DHII/OMK2/

HTTP://WWW.NINJAL.AC.JP/

SHIMANE UNIVERSITY LIBRARY DIGITAL ARCHIVE COLLECTION

中野区立図書館

GENERAL LIBRARY IN THE UNIVERSITY OF TOKYO

大蔵出版(DAIZO SHUPPAN) AND SAT大蔵経テキストデータベース研究会(SAT DAIZŌKYŌ TEXT DATABASE COMMITTEE)

慶應義塾大学メディアセンター KEIO UNIVERSITY LIBRARIES

高知県立高知城歴史博物館 国文学研究資料館

味の素食の文化センター 国文学研究資料館

日本古典籍データセット(<u>国文研</u>所蔵)CODH配信

KYOTO UNIVERSITY RARE MATERIALS DIGITAL ARCHIVE

AND NEXT MONTH ... THE NATIONAL MUSEUM FOR JAPANESE HISTORY AND THIS COMING SUMMER ... THE NATIONAL DIET LIBRARY.



Realizing IIIF's Potential through...

TRAINING
ADVOCACY
RESOURCES
ACCESS

Thank you very much!

REGAN MURPHY KAO
EAST ASIA LIBRARY
STANFORD UNIVERSITY
REGANMK@STANFORD.EDU

