IIIF - Technical benchmark

Institutions	Universitätsbibliothek Heidelberg	e-Codices	Bodleian Lbraries	National Library of Wales	University College Dublin	BNF/Gallica
Institution Website	http://www.ub.uni-heidelberg.de/	http://www.e-codices.unifr.ch/en	http://digital.bodleian.ox.ac.uk/?#	https://www.llgc.uk/index.php?id=1	https://digital.ucd.ie/	http://gallica.bnf.fr/
# records (IIIF only)	29,000	1,749	6,817	249,150	1645?	4.2M of objects
# pages	3,500,000	?	677,685	3,727,141	?	?
Collections description	**See** http://hd-historische-bestaende-digital.uni-hd.de/ Manuscripts Charters Incunabula of Heidelberg University Library Printed Material published in the 16th and 17th Century in the German-Speaking Areas (VD 16, VD 17) Printed Material published in the 18th Century in the German-Speaking Areas (VD 18) Literature concerning the City of Heidelberg and the region Sources concerning the history of Heidelberg University Anatomical literature and drawings Astronomical literature Geological Literature Historic Maps Theological Literature Literature on theory and history of Art Archaeological literature Egyptological literature Literature on South Asia Travel accounts from all over the World Journals and newspapers Literature on the University Library's historical holdings Legal Sources / Authorities from the Early Modern Period Other works from our digital collections Heidelberger Papyrussammlung – digital	Manuscripts **See** - http://www.e-codices.unifr.ch/en/about/summaries - http://www.e-codices.unifr.ch/en/about/descriptions	Part of the University of Oxford http://digital.bodleian.ox.ac.uk/about.html#credits http://www.bodleian.ox.ac.uk/about/history	Collections include - Archives - Printed materials - Newspapers and Journals - Manuscripts - Pictures - Photographs - Maps - Music - The National Screen and Sound Archive of Wales		French National Collections - Books - Newspapers - Graphical content - Audiovisual content - Objects (medals, puppets, globes, theatre decors, etc.
Technical resources	HRA program	e-Codices web application	About technical framework	About technical framework	/	About technical framework
	DWORK Software	/	Armadillo Systems	dev.llgc.org.uk/iiif/NLW-iiif.html	/	https://github.com/hackathonBnF/hackathon2016/wiki/API-IIIF
	EasyDB Software	/	Digital manuscripts toolkit	http://dev.llgc.org.uk/wiki/index.php?title=IIIF_Newspapers	/	BNF Use case
	SemToNotes	/	/	http://dev.llgc.org.uk/wiki/index.php?title=IIIF_Journals	/	/

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Framework	**HRA** **Image and multi-media database heidICON** based on Easy DB (3rd party) **Digital Library** based on DWork (internal) => based on - Web server: Apache 2.x - Database: MySQL 5.x - Search in Metadata and Full Text: SOLR - Repository for annotations: Fedora 4.x **IIIF implementation** - Image API on Loris IIIF Image Server - Presentation API through the DWork presentation module - Internal data schema of DWork is related to METS/MODS - Manifest generation uses internal DWork procedures. There is no direct transformation METS/MODS -> IIIF manifest.	**Back end** LAMP Stack (Linux, Apache, MySQL, PHP) CodeIgniter (PHP Framework on the basis of the Model-View-Controller Pattern) MySQL (Database) Solr (Search) Git (Version control) Image Server: Loris JSON (IIIF Image and Presentation APIs) TEI/XML for scholarly manuscript descriptions JPEG2000 **Front end** HTML5 CSS3 Bootstrap & HTML5 Boilerplate (Front end Frameworks) jQuery	Armadillo Digital manuscripts toolkit (inspired from current tech stack ?)	Collections are stored in a Fedora 3 repository. The presentation API is generated by using XSLT to convert METS documents into Manifests. The Images are a combination of JP2 and PFF files and are stored inside Fedora. The NLW developed a PFF to IIIF image server. For the JP2s the NLW uses IIP. There are a number of search implementations in the library. The two recent ones places.library.wales (to be released) and the Journals website used a PHP proxy in front of a SOLR databases. The Mirador annotation projects including the Welsh Book of Rememberence use the SimpleAnnotationStore pointing to SOLR (https://github.com/glenrobson/SimpleAnnotationServer)	Details from John Howard: **APIs:** Search API supported by loris Presentation and Search are bespoke and interact with (a) our fedora repository and (b) loris Additional bespoke endpoints provide annotation services: Conversion of ALTO OCR data to Open Annotations compliant annotations (returned as single lines of text) Conversion of text 'blobs' from text transcription services: A bespoke service at https://duchas.ie The FromThePage transcription service **Viewers:** UniversalViewer has been deployed for printed materials with OCR text, since it supports the IIIF Search API Mirador has been deployed for use with manuscripts and visual resources primarily. **Plugins for Mirador:** - *In production:* physicalRuler. https://github.com/jbhoward-dublin/mirador-plugins/tree/master/PhysicalRuler IIIF-imageManipulation, to crop and change image attributes via IIIF parameters. See https://github.com/jbhoward-dublin/iiif-imageManipulation - *In development:* linktoFromThePage, plugin to query FromThePage iiif/for endpoint for transcribable collections. See https://github.com/jbhoward-dublin/mirador-plugins-ucd/tree/master/linktoFromThePage IIIF-GeoJSON-maps.js, to visualise data recorded in the IIIF manifest GeoJSON service **Annotation store**: we have deployed SimpleAnnotationServer but only in development and are troubleshooting issues that must be resolved before general public deployment with Mirador viewer	WebApp Lorikeet : - IIIF Image controller support - JNA interfaces between Java WebApp and C++ IIIF image library IIIF Image Library - Image processing core - Native C/C++ library (Expert C++ programming) - Uses combination of : ** Kakadu / coresys SDK (processing format target JPEG2000) ** ImageMagick SDK (image transformation) ** Home made C++ scheduling
IIIF Viewer(s)	SemToNotes	OpenSeadragon	Universal Viewer (from Digirati/Wellcome Library)	Universal Viewer (from Digirati/Wellcome Library)	OpenSeadragon	OpenSeadragon
	/	Mirador	Mirador	Mirador	Mirador	Mirador
Implemented IIIF visualisation features	Rotation, zoom, crop Possible export based on such parameters	Rotation, crop, zoom	Rotation, zoom, crop Possible export based on such parameters	Rotation, crop, zoom	Rotation, crop, zoom	Rotation, zoom, crop Possible export based on such parameters
Record example	http://digi.ub.uni-heidelberg.de/diglit/cpg848	http://www.e-codices.unifr.ch/en/sbb/C0005-2/4v/270/Sequence-957	http://digital.bodleian.ox.ac.uk/inquire/p/38fdf59a-4f37-4a37-95e8-54915403d625	https://viewer.library.wales/1497451#?c=0&m=0&s=0&cv=0	http://digital.ucd.ie/view/ucdlib:38413	http://gallica.bnf.fr/ark:/12148/btv1b10510893f?rk=85837;2
	To HeidICON	X	X	X	X	X
JSON Manifest example	http://digi.ub.uni-heidelberg.de/diglit/iiif/cpg848/manifest.json	http://www.e-codices.unifr.ch/metadata/iiif/sbb-C0005-2/manifest.json		http://dams.llgc.org.uk/iiif/2.0/1497451/manifest.json or https://damsssl.llgc.org.uk/iiif/2.0/1497451/manifest.json		http://gallica.bnf.fr/iiif/ark:/12148/btv1b10539535f/manifest.json
Specific features	Virtual scrolling (turning pages features) http://digi.ub.uni-heidelberg.de/touch/cpg848/#page/24	?	Virtual scrolling http://firstfolio.bodleian.ox.ac.uk/book.html	?	?	Text+OCR display, OCR highlighting after search
User Experience	Expert UI (not very appealing but functional, with a lot of features and information) Extremely fast browsing and loading of the resources	Effort on the UI but resources loading is a bit slow	Very pleasant landing page, but common UI. Fast browsing and loading	Common UI Fast browsing and loading		Modern and consistent UI Fast browsing and loading
				http://newspapers.library.wales/		
				http://journals.library.wales/		

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				http://places.library.wales (soon to be released)		