

Filling the Frame: the Role of Practical Metadata in Online Resources at the IALS

Abstract: This article by Steven Whittle gives a comprehensive picture of not only how metadata has been used at the Institute but also the technical details and scope of the very impressive range of digitisation projects and other resources developed to help fellow legal information professionals access a wide array of information which was previously very hard to find.

Keywords: metadata; online services

Introduction

Imagine we are online, comparing “no copyright infringement intended” action clips on YouTube¹ from *You Only Live Twice* (1967)² and *The Bourne Ultimatum* (2007)³. [It’s ok - we’re at home, after an extra long and busy working day].

The James Bond edit by Peter Hunt was fast and influential but despite a trace of familiar resemblance, the Jason Bourne sequence edited by Christopher Rouse moves at a higher frequency altogether. It is so fast you wonder whether they bothered to film the bits in between at all.

Such an increase in pace and the speed of information delivery in popular film making are more than an aesthetic preference, they are evidence of just how rapidly we expect and are accustomed now to receive information and join the images together, finding meaning, following the story and assimilating information received in bits and byte sizes more quickly and less obviously.

In this information-intensive world, changes in expectations for the library catalogue from the web search interface (circa 2000) to the portfolio of integrated and overlapped online services made available through the library and information centre in 2010 are no less dramatic. They make equivalent demands on those involved in information management, database structure and screen design to provide highly visual and intuitive search facilities that maximise findability, that ensure less searching and more delivery, that bring more resources together, that offer the most relevant results that cut right to the chase.

IALS – national online resources for law

Anticipation about where the technology is taking us or where we are taking ever more powerful and portable technology and a sense of changing needs and expectations inform ongoing work at the Institute of Advanced Legal Studies on digital provision of legal information through specialist legal research tools and web service initiatives.

Initiatives underway include a range of established national services and new projects. Each project has involved an adaptation of metadata schema and creation of record structures to best meet the needs of a particular service and address requirements for legal researchers, drawing on continued awareness of a significant ratio between the value of the resulting output and the quality of the original input. Our approach relies on proven and evolving information skills, attention to detail and digital enhancement, sometimes requiring, like all the best stunts, a mix of fearless human endeavour and computer-generated mayhem (or vice-versa).

“Dial D for Digital” - digitisation projects at IALS

In the Autumn of last year the results of a six-month cataloguing and digitisation project at the Institute went live on the IALS Library catalogue <http://ials.sas.ac.uk/catalogue.htm>

As the initial project period would be relatively short, we concentrated on selective digitisation of a collection of rare and historical maritime and shipping law treatises

entrusted to the Institute by the Association of Average Adjusters through the London Shipping Law Centre as well as digitisation of unique items in the Commonwealth collections, making some special items available for the first time on the web to researchers worldwide. A Featured List of the shipping law collection is on the IALS Library catalogue at <http://catalogue.ulrls.lon.ac.uk/search~S6/ftlist%5Ebib101,1,0,7/mode=0>

After helpful consultation with other successful digitisation projects and research into relevant international standards, our attention focused on the practicalities of creating and presenting detailed bibliographic records, illustrative title page images and online access to high-quality digital copies of copyright-free titles.

We wanted to deliver digital copies alongside the details of the print originals in the Library catalogue so are utilising our Innovative Millennium library system's Media Management⁴ facility which supports the attachment of media sets to bibliographic records for delivery through the web catalogue (see Figure 1). The image files themselves are held on the IALS web server with back up copies on high capacity (1.5 terabytes) external drives.

We chose to create master copy TIFF and JPEG image files using digital camera technology⁵ with original images stored on the external drives. Some of the

images were created in-house, particularly those from rare or unique print copies, and others through use of a scanning service from the book binders Hollingworth and Moss⁶. Public access colour PDFs were produced at IALS from the master copies using Adobe Photoshop and Acrobat Pro (see Figure 2).

As the implementation would add digital content to the MARC21 format bibliographic records for the original print versions, we adopted a light touch on inclusion of metadata relating to the digital version, making use of MARC field 533 "Reproduction note on the processing of the digital version" and MARC field 538 "System requirements for the digital version". More background information about the project is on the IALS website at <http://ials.sas.ac.uk/library/digital/digital.htm>.

The media set which is attached to the bibliographic record via MARC field 962 in Millennium Media Management includes: thumbnail images of the title page and cover spine (JPEG format images), full-text digital version (colour PDF) and a text file which provides the opportunity to preserve the metadata generated automatically by the digital camera (see Figure 3).

The project progressed quickly, enhancing the Library catalogue with detailed records, digital resources and web links and achieving the dual aims of increasing the

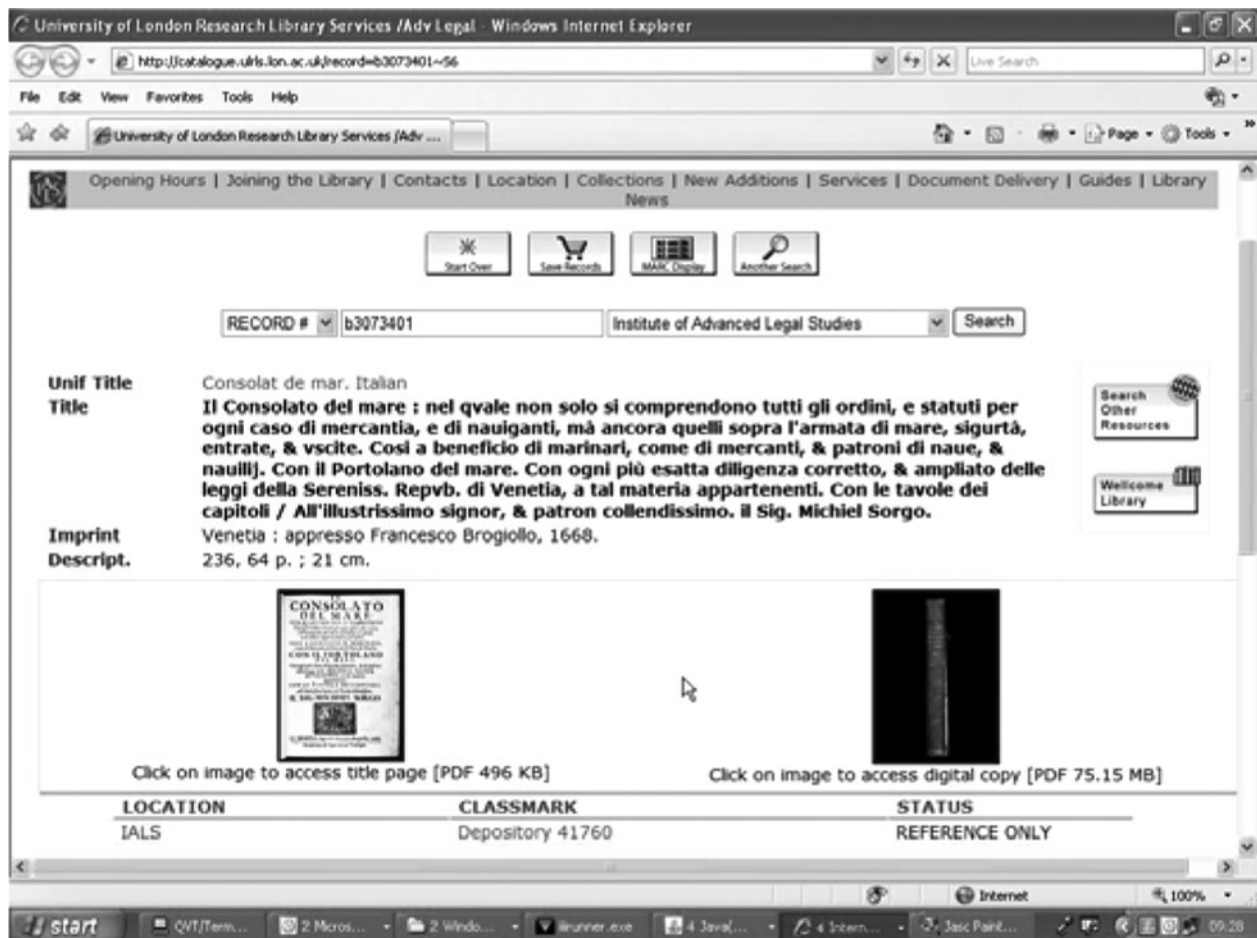


Figure 1: Access to digital copies in the IALS Library catalogue

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accessibility of source materials in digital format for legal researchers and in turn aiding conservation and preservation of rare and unusual print originals held on site.

Locating the method of delivery through the Library web catalogue reflects a clear sense now that digital provision from our own collections is in the process of becoming a mainstream expectation and regular activity. In-house capability means we are well-placed to consolidate our commitment to digital solutions through ongoing selective local digitisation and through continued close collaboration with like-minded international services such as LLMC-Digital <http://www.llmc-digital.org/>.

“ISAD(G) and the Last Crusade” – browsing and searching the archives

In-house digitisation capability will assist us as we continue to build the archive collections held at the Institute and increase awareness of access to special materials held in our on site basement store. The Institute holds three collections of archives: records of the Institute itself including various manuscripts; records of the International

Association of Law Libraries; and Records of Legal Education Archives, comprising records of a variety of legal education organisations which otherwise had no institutional home or were at risk, including: the Association of Law Teachers, Commonwealth Legal Education Association, and Socio-Legal Studies Association (see Figure 4). It is planned to add the archive of the British and Irish Association of Law Librarians (BIALL) shortly.

In addition to finding aids on our own website, IALS Library participates in the development of the ULRLS shared Adlib⁷ Archives and Manuscript catalogue <http://archives.ulrls.lon.ac.uk/> (see Figure 4 and Figure 5).

IALS has over 2,300 entries in this database including summaries of archival collections as well as full catalogue records, focusing on the education and training of legal professionals and scholars in Britain and other Commonwealth countries.

All records are held as ISAD(G)⁸ and the database allows for export in Encoded Archival Description (EAD)⁹ format, the international standards for online archive records, supporting participation in national and international resource-sharing initiatives.

UK Archival Thesaurus (UKAT)¹⁰ has been adapted and applied as far as possible to help standardise index terms for subject headings, personal, corporate and

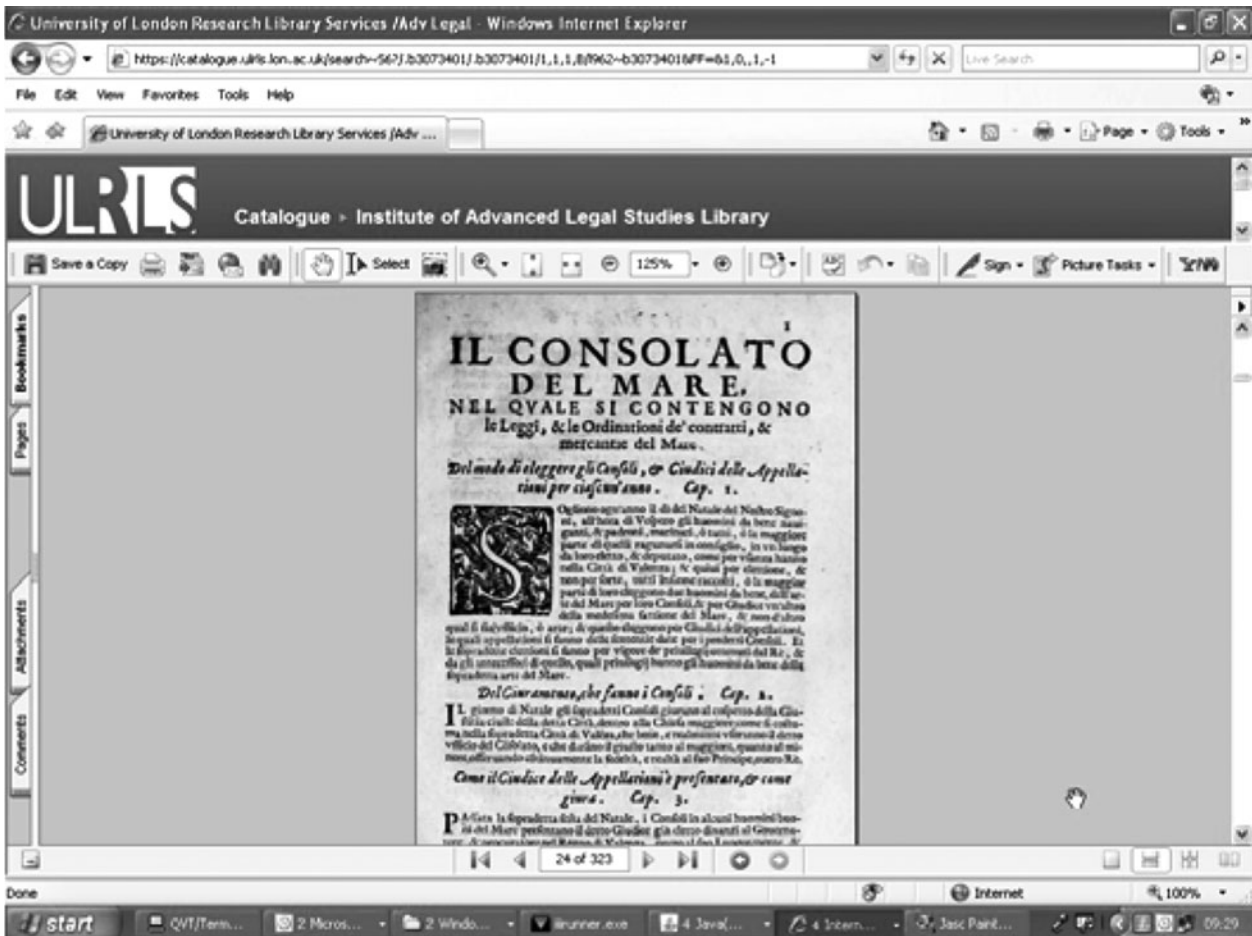


Figure 2: Full text PDF in the IALS Library catalogue

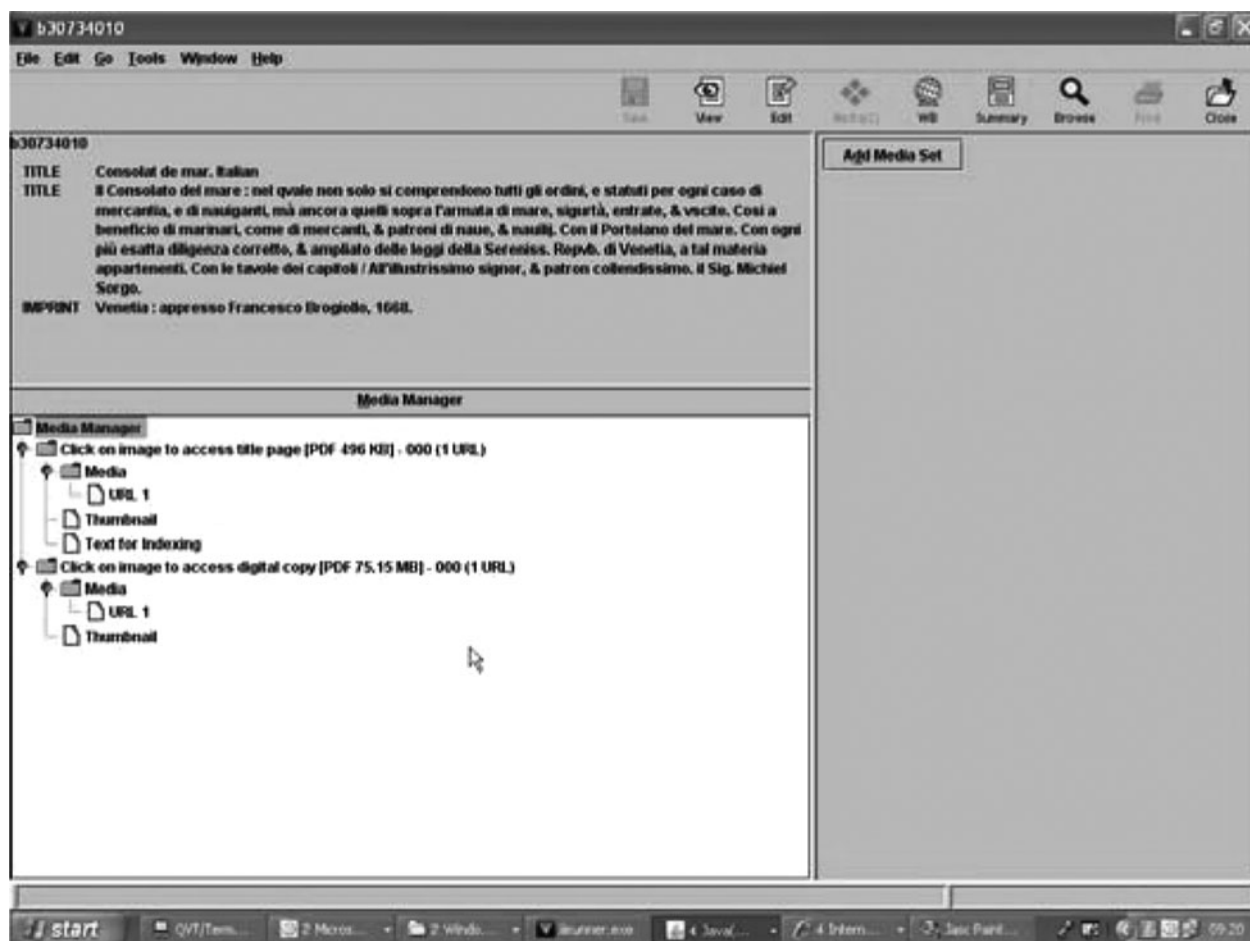


Figure 3: Media Management staff interface in Innovative Millennium Library System

family names. Style guides for cataloguing in the Adlib database help ensure consistency in the format of collection level (fonds) descriptions, series level descriptions, and file level descriptions.

The Adlib web interface offers simple and more complex search options, while the Archives finding information <http://ials.sas.ac.uk/library/archives/archive.htm> in html pages on the IALS website provides a quick browse overview for researchers.

The complementary presentations cater for different audiences offering benefits of adherence to international standards for ease of inter-operability and benefits of quick overview on the web. As habits of browsing and searching change, we will want to review the relative merits of this combined approach.

**“SAS-Space: the final frontier”
(in an e-repository everyone can hear you dream)**

IALS also participates in the development of the School of Advanced Study's¹¹ shared e-repository known as SAS-Space <http://sas-space.sas.ac.uk/dspace/> and manages

the IALS Community <http://sas-space.sas.ac.uk/dspace/handle/10065/37> on the service (see Figure 6).

We publish material on SAS-SPACE for scholarly and archival purposes. Collections in the IALS Community contain work by Institute academic and library staff, students, visiting fellows and associated legal scholars. For example, there are copies of IALS MA or LLM student theses, a collection of articles from our journal *Amicus Curiae*¹² and articles from its predecessor the *IALS Bulletin*. Much of the material is made available for use on an attribution-non-commercial-share alike creative commons licence.

A joint role was envisaged for SAS-Space as archive and research resource and DSpace¹³ open source software was employed to establish the service in 2006. Following feedback from researchers and local review, a project is in progress to migrate SAS-Space to the EPrints¹⁴ open source application, to further highlight the scholarly publication role. The re-launched service later this year will offer improved presentation, usability and accessibility for researchers.

Discussions in the project team have sought to strike a balance between ensuring ease of self-submission by academics and preserving effective metadata and have highlighted the importance of mediated archiving and system-

Summary guide to holdings and finding lists

Ref	Dates	Description
A.ACLEC	1991-1999	Lord Chancellor's Advisory Committee on Legal Education and Conduct: press cuttings
A.ALT	1965-1996	Association of Law Teachers Archive
A.BARR	1990-1994	Barrow Inquiry Papers Papers of R Deech, Principal, St Anne's College Oxford and a member of the Inquiry team, relating to the Committee of Inquiry into Equal Opportunities at the Inns of Court School of Law, chaired by Dame Jocelyn Barrow
A.CHULS	1974-1999	Committee of Heads of University Law Schools
A.CLE	1845-1996	Council of Legal Education Archive
A.CLEA	1972-1995	Commonwealth Legal Education Association Archive
A.CLRP	1987-1993	Commonwealth Legal Records Project Archive
A.IALL	1964-2007	International Association of Law Libraries Archive
A.IALSLIB	1774-1992	IALS Library manuscript material relating to legal education and research
A.ILA	1873-1990	Archive of the International Law Association
A.LSOC	1836-1984	Law Society: Examination Records (PDF handlist)

Figure 4: List of Records of Legal Education Archive on the IALS Library website

supported authority control. A previous requirement for keywords derived from Library of Congress subject headings will be replaced with adoption of a simple two-level subject tree that will be extensible over time and is seen very much as an additional browsing aid for users rather than exhaustive metadata categorisation of content.

In every project there are practicalities and priorities to consider as we gauge how closely and fully to maintain metadata, judging what to include and what to leave out, agreeing a sustainable model suitable to allow direct access by researchers and to allow other technology to share and further exploit the material.

Library web catalogue enhancement products, such as Innovative Interfaces Inc.'s WebBridge and Pathfinder Pro¹⁵, provide facilities to take a user search forward from the webopac to other web-based resources like the E-repository. This can be a useful, if at times hidden, option to extend the reach to other materials. The link to SAS-Space can be offered as required at browse level and/or bibliographic record level in the catalogue and there is some scope to establish context as to which search elements are taken forward, simply the user keyed search terms or known elements from the bibliographic record such as author name.

EPrints (like DSpace) applies the Open Archive Initiative protocol (OAI)¹⁶ facilitating metadata harvesting and piping of SAS-Space content into other websites and applications such as the UK Institutional Repository Search <http://irs.mimas.ac.uk/demonstrator/> and the openDOAR <http://www.opendoar.org/> Directory of Open Access Repositories which has international coverage.

“Dublin Core’s Day Off” and “A Funny Thing Happened on the Way to the Webinar” (an Intute and Jorum double-bill)

Although it seems only yesterday that the Internet Detective <http://www.vts.intute.ac.uk/detective/> first raised a trench coat collar and Internet for lawyers (now Internet for law) <http://www.vts.intute.ac.uk/tutorial/law> went into practice on a website near you, IALS has been actively involved for more than 10 years as law section editors in the development of Intute: Law, <http://www.intute.ac.uk/law/>, the UK's free to use dedicated gateway to high quality legal information sources on the Internet and virtual training materials.

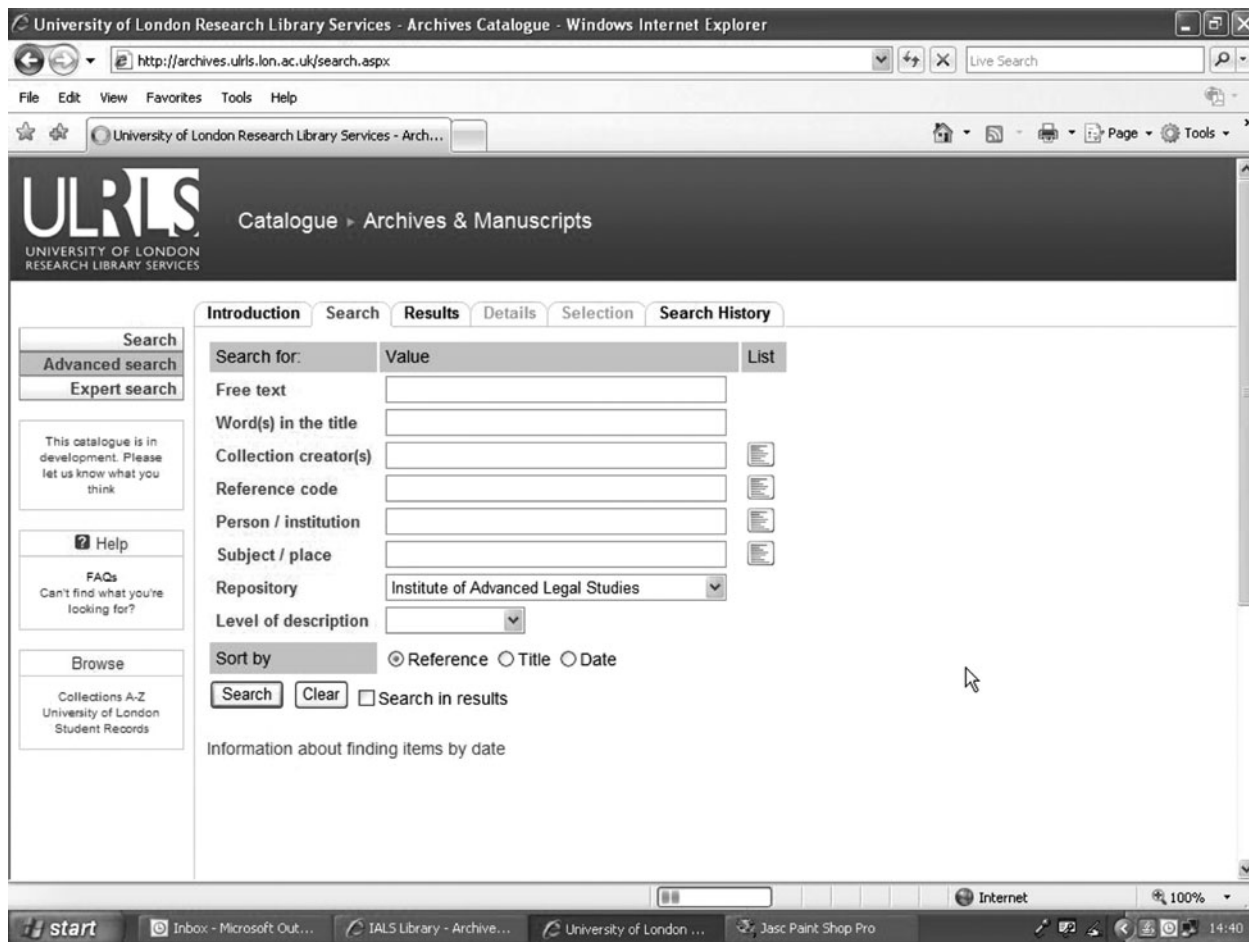


Figure 5: IALS scope within the shared ULRLS Adlib Archives and Manuscripts Catalogue

Intute: Law¹⁷ has always aimed to provide insight into authoritative web resources, guiding researchers to reliable sites and materials, presenting site profiles and content assessments along with well-maintained dynamic links.

The underlying record structure in the web database is based on Dublin Core and RDF metadata standards¹⁸. During its development history Intute has undergone successive changes often in response to emerging new requirements and shifting user emphases. An initially limited UDC classification governing the browsing structure and social science terms feeding the keyword search have been modified and in the case of Intute: Law adapted for wider jurisdictional coverage with the keyword search employing terms from a legal thesaurus devised by Christine Miskin. Consideration was also given to utilising the Joint Academic Coding System (JACS) subject groupings¹⁹ to help structure browse sections.

Our work in building and updating content and providing a law focus can involve a degree of advocacy, explaining the case for adaptation, exception, expansion or customisation necessary to take proper account of the specialities of law, inherent in understanding and using the varied forms of legal literature across multiple jurisdictions.

IALS has had a similar role, through the work of our Intute Project Officer, Heather Memess, in co-ordinating cataloguing for law and other social science areas within Jorum, the repository of learning and teaching resources.

JourmUK gives access to free materials created and contributed by teaching staff at UK Higher and further education institutions. The service offers view, download, re-use and re-purpose deposit options for a wide variety of learning and teaching assets, supported by links to external resources including courseware.

Currently this original collection is only available to staff in HE or FE but its cataloguing rules, collection development policies, and UK LOM Core²⁰ Learning object metadata scheme have all contributed to a further development called the JourmOpen repository <http://open.jorum.ac.uk>. As its name suggests, this service will offer open access to resources licensed under Creative Commons <http://www.creativecommons.org.uk/> so they are free to anyone around the world, particularly students as well as teachers.

Earlier this year, as part of our work on Intute: Law <http://www.intute.ac.uk/law/> and Jorum <http://www.jorum.ac.uk/> we were involved in testing automatic metadata generator options, trying out cataloguing tools like ViM²¹ as part of the ongoing trials for future update of

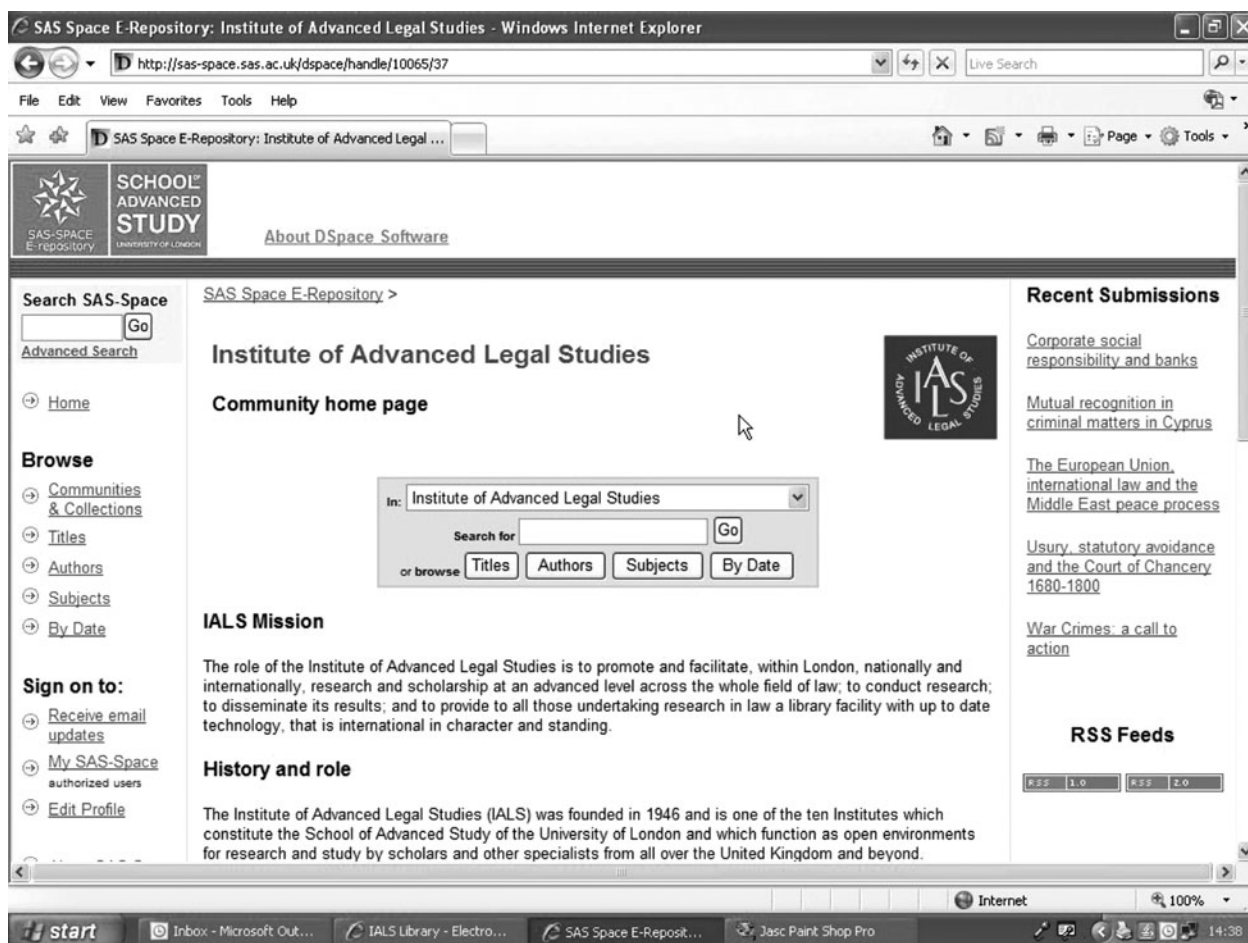


Figure 6: IALS Community in the shared SAS-Space scholarly e-repository

the services (as JISC²² funding reductions from July 2010 mean no new human cataloguing). The technology is getting smarter but there are still significant limitations on analysing materials in PDF format and limited automatic recognition of law and social sciences meta tags.

It remains to be seen whether the value of hand-crafted intelligence can be preserved through sharing and specialist central provision. Work is in progress to investigate the possibilities (<http://www.intute.ac.uk/faq.html>). Curtailed funding has also led both services to look closely at models for open user update, self-submission and automated metadata generation, but none is an easy fit for quality-driven services.

“Born Free” – a bit about BAILII (and a trailer)

BAILII, the British and Irish Legal Information Institute <http://www.bailii.org/> based at IALS has been a leading exponent of information sharing and an open access ethos since its formation, providing free and frequently updated online access to British and Irish case law and legislation, European Union case law, Law Commission reports and other law-related British and Irish material. It

maximises access to this key information to promote justice and the rule of law which in turn supports liberty, responsibility and understanding.

Thanks to dedicated users and supporters and tremendous work by Joe Ury and his team, BAILII was recognised by the *Guardian*²³ newspaper as one of the 100 essential websites in December 2009 and has a global importance that is sure to increase in difficult financial climates.

BAILII utilises the Sino free text search engine (said to be short for “size is no object”) and a suite of hypertext mark-up, web indexing and case law capture applications devised by information systems pioneers at the Australasian Legal Information Institute (AustLII)²⁴ and has shared their prior expertise with minimal metadata, search and hypertext facilities.

The success of the BAILII model and collaborative links with WorldLII open the way to other worthwhile initiatives. Some early discussion is in progress on establishing an archive of Latin American human rights case law as part of the SAS Human Rights Consortium Project²⁵. It is hoped that a combination of smart search software, mark-up and analytical metadata will help open access to full-text verdicts and progress through the courts of disappearance cases in Chile and Argentina and will identify points of international law that would otherwise prove very hard to find.

“XML: the next step” - FLAG, FIT and other IALS web databases

As well as providing significant law content to collaborative University of London projects and national projects, the last decade has seen IALS creating and hosting original web-based information services in-house, customising standard application packages to develop a portfolio of legal research tools and unique information sources and making them freely available on the internet.

We have used Inmagic's DB/Text and *Web Publisher Pro*²⁶ applications to create, deploy and maintain a series of web databases with cross-sector interest and relevance, delivering specialist legal research aids to academic lawyers, practitioners and the judiciary.

DB/Text (version 12 currently) runs on our Windows web server and is networked to staff PCs to provide database design and content building facilities. *Web Publisher Pro* (also version 12) is installed on the same server to publish a number of IALS created databases to the web via a virtual directory in conjunction with Microsoft internet information server.

The flexibility and scalability of the Inmagic products continue to be vital in helping us establish services drawing on our own legal information and technical specialists, so limited funds are not drained by complex programming or bespoke solutions. This means we are able to concentrate on identifying and meeting needs of users in a given project and give appropriate weight to the essential data building which provides the substance of the service.

The form and nature of the legal content helps structure each database. Familiarity with forms of legal literature and frameworks that follow from a court transcript, published law report and treaty text, coupled with awareness of data organisation and description schema like Dublin Core, help us in defining multiple database structures with optional and repeatable elements.

We are able to design and deploy all necessary search screens, results tables and detailed records in HTML, as well as determine and easily adjust displayed fields, indexed fields, sort order, linked documents and linking to external web sources.

Input and output options as XML and standard csv text facilities help exchange data between applications during development stages and through to operational service delivery.

Foreign Law Guide (FLAG)

FLAG the Foreign Law Guide <http://ials.sas.ac.uk/library/flag/flag.htm> was one of our early developments using Inmagic software.

FLAG²⁷ (honoured by BIALL's Wallace Breem Award in 2002) is a web database of records describing and locating collections of foreign and international primary

law resources in the UK, unlocking legal research information held in libraries across the country.

Record details are derived from a metadata structure adapted from the RSLP²⁸ profile scheme (itself a flavour of Dublin Core) designed for a group of collection description projects at the time (<http://www.uklon.ac.uk/metadata/rspl/tool/>).

The nature of the materials involved in FLAG and specialist requirements of law meant adapting and extending the profile to go deeper to describe collections of the individual constituent elements of legal literature in a given jurisdiction – codes, statutes, session laws, court reports, indexes, citators, digests, and encyclopaedia.

The FLAG metadata framework devised by Dr Peter Clinch, who was seconded to IALS as FLAG Project manager²⁹ from 2000–2002, was designed around 31 fields, 9 devised specifically for the FLAG database and 22 derived from RSLP. The added fields take account of: continent, country, state or province, international organisations, shelf mark, and information about the holding library locations, town, county, and region.

Preliminary work by the American Association of Law Libraries (AALL) on development of a legal genre thesaurus was adapted to make it possible to search for collections by form of publication, so collections are described in terms understood by lawyers and fine grain detail is provided on the precise legal content, including whether the materials are official publications and the language of publication.

FLAG has always been intended as a foundation upon which a national strategy³⁰ for the acquisition and retention of foreign, international and comparative primary law materials would be built. In a time of reduced budgets it provides an important tool to identify gaps and overlaps in coverage aiding informed decisions on cancellation or rationalisation of resource provision.

The database was updated in 2005 and 2007 and a further content update drawing again on Peter Clinch's expertise is taking place in 2010.

Flare Index to Treaties (FIT)

The team behind FLAG returned with a sequel in 2009, the well-received Flare Index to Treaties³¹ <http://ials.sas.ac.uk/library/flag/introtreaties.htm>. This fully searchable free web database indexes and lists more than 1,500 of the most significant multilateral treaties concluded from 1856 onwards.

Again knowledge of the legal materials, the structure and evolution of treaty texts and often requested facts about the documents, illustrated by established print tracing indexes like Beaumont and Harris³², informed the design and choice of likely access points.

A full Treaty Record includes: popular, official and alternative treaty titles, details of the date concluded, place concluded, published sources and where the treaty is available on the Internet. The records have embedded links to reliable and stable web versions of the treaty, and where

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appropriate links to value added information on the treaty offered by the American Society of International Law's EISIL service³³. A developments link takes researchers through to related and updating materials provided on the web by the organisation responsible for drawing up the treaty (see Figure 7).

Our approach has been to keep the database search interface as simple as possible while building in the capability to support more complex and sophisticated searches, including Boolean options within or between fields and customised help pages suggesting search strategies and examples.

The aim is to benefit the user (starting with as much or as little information as they possess) but also means that relatively small-scale budgets are invested in simple and effective services that have significant value and may be readily built, populated and sustained.

Flare Union List of Official Government Gazettes database

Thanks to a modest development grant from the School of Advanced Study, we have been able to create a web database version of the Flare Union List of Foreign Official Government gazettes <http://ials.sas.ac.uk/flare/>

[flare_fog_unionlist_europe.htm](#) which provides bibliographic and source information (including details of print holdings in UK libraries and links to online versions) for foreign official government gazettes publishing primary and secondary legislation, offering guidance to pinpoint the relevant portions and sources of gazettes which can be voluminous and complex publications.

The initiative, focussing initially on European legal gazettes, continues collaborative efforts by FLARE³⁴ the Foreign Law Research group of libraries <http://ials.sas.ac.uk/flare/flare.htm> to establish a national distributed collection of government gazettes.

Database design has taken account of elements such as bibliographic record, holdings records, web record, and library location and access details. As well as drafting record structures with necessary flexible and repeatable elements we are currently having fun finding a suitable acronym beginning with F for the Official Gazettes database.

Eagle-i and IALS SKiLLS

In the new academic year we look forward to further projects. Work is already underway on an upgrade to our Eagle-i Internet portal service (Electronic Access to

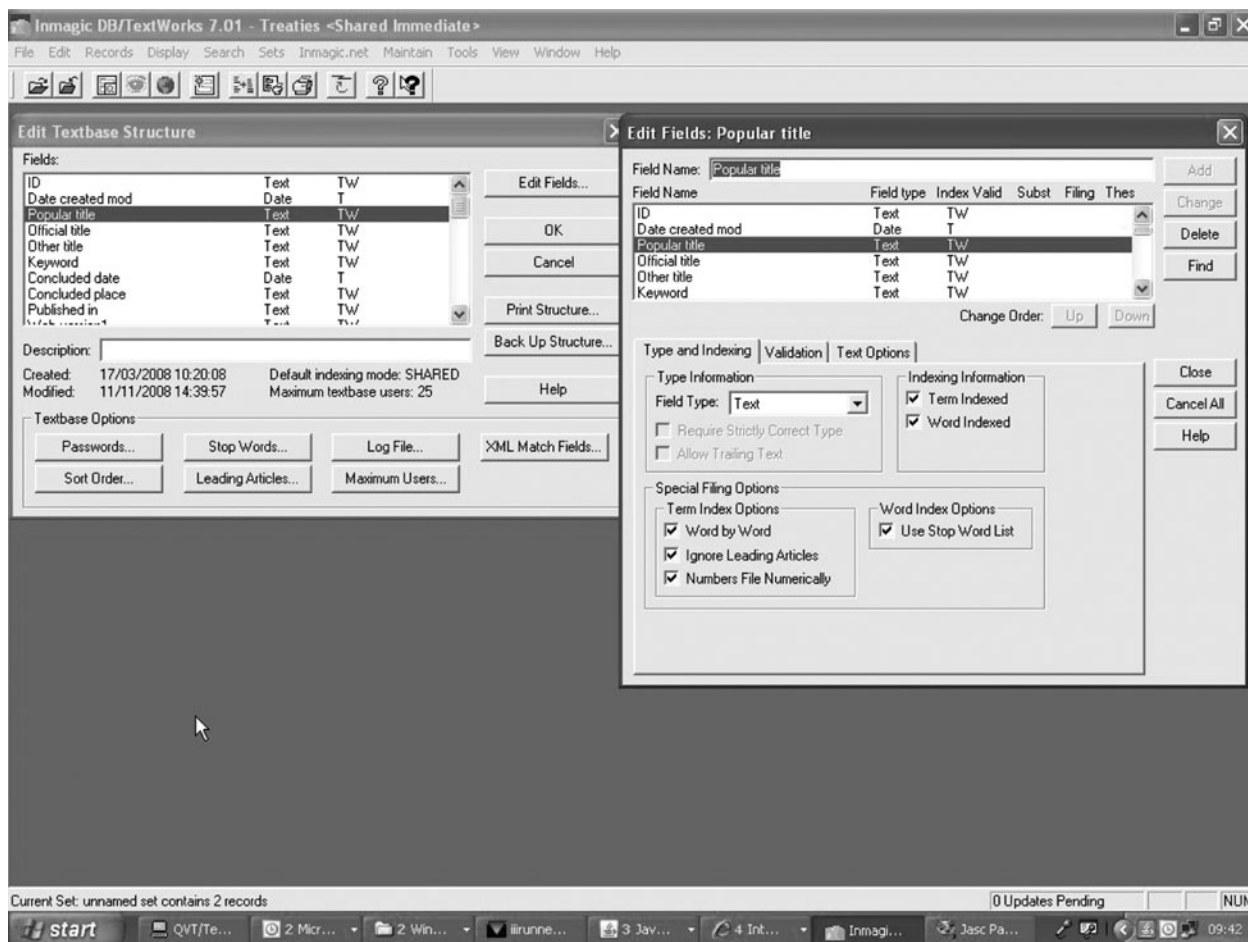


Figure 7: Staff view of the Flare Index to Treaties Textbase structure in Inmagic DB/Textworks

Global Legal Information) to continue to provide an important national online service for legal researchers. We will be introducing a web database component <http://ials.sas.ac.uk/eaglei/eagle-i.htm> to consolidate and continue the work we have been undertaking for the Intute service through selective harvesting and safeguarding of Intute: Law records for ongoing evaluation and update in Eagle-i. Under our agreement with Intute, as section editors for law since 1999, we are able to reuse and effectively rescue the records we created for Intute: Law. Eagle-i will feature a freely available searchable web database which will help ensure that evaluative records of quality web resources continue to be available to support legal studies and research for the UK.

Complementary work will continue on a new database called IALS SKILLS <http://ials.sas.ac.uk/library/skills/skills.htm> – a simple web database, identifying and linking to legal research and information skills resources on the internet. The service aims to help those new to a particular area of legal research and to provide additional support for new law students and distance learners. Some of the guidance materials we have included have been created by IALS Library staff. Many have been produced by university law librarians and information professionals around the world and made freely available on their websites (see Figure 8).

The underlying record format is based on a slimline version of UK LOM core so we have sufficient structure to make the data searchable and sharable effectively, without it becoming too labour intensive to create or update. Additional special fields are being introduced to denote a research task or problem-solving question or to indicate a particular electronic service or law resource that is the subject of guidance.

As access to law sources and legal materials becomes ever easier (and more plentiful) we anticipate continued need for parallel work on information literacy to raise awareness of electronic service contents, features and resources, and to increase effective use and evaluation of the information found.

We expect the flexibility of our web database applications, annual software updates from Inmagic and XML / SOAP³⁵ output and interface facilities to play an important role in implementing new services and extending the reach of our existing services. Much has been done in the last ten years and we plan to accomplish more in the years ahead. Judicious modification and remodelling of metadata structure aligned to interoperability standards should help maintain appropriate context, manage unique information and provide direct access and support integrated access to resources.

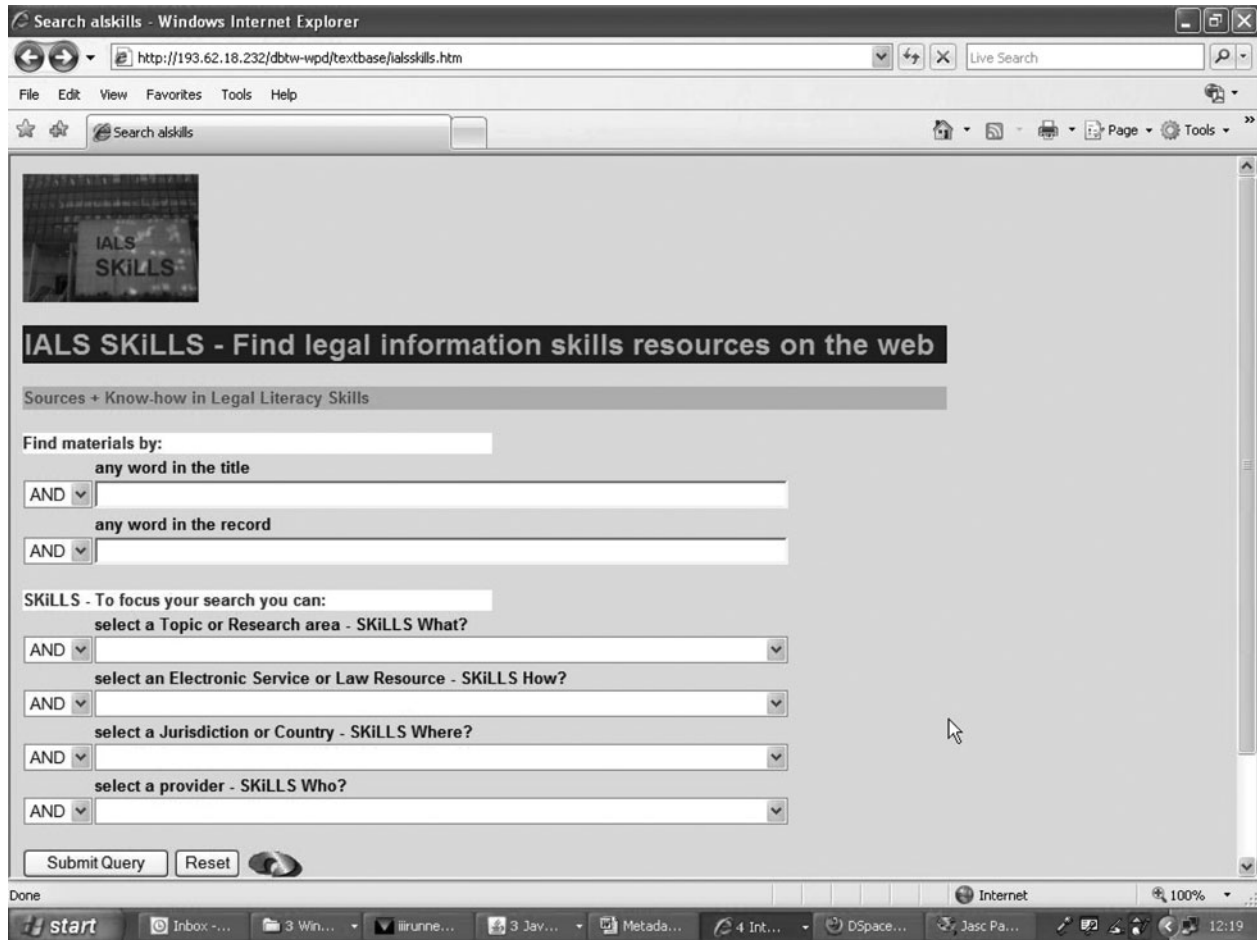


Figure 8: IALS SKILLS database search screen using Inmagic Web Publisher Pro

Drawing on in house skills in legal materials and web technology, IALS sees the ongoing creation of such components as an important and extensible part of our national role in research facilitation and dissemination, delivering web parts and content-driven niche legal research tools for others to employ and include in their own facilities.

“Flight of the Encore Discovery service” or “One Flew Over the Classic Catalogue”

A look at changes in search behaviour from 1997 to 2009 based on user choice of indexes for public searches on the SAS/ULRLS shared Millennium Library System web catalogue shows a move toward reliance on keyword searching, fewer author, title or subject searches and interestingly a small relative increase in use of classified search options.

	Keyword	Author	Title	Subject	Classmark + Other
1997	13.72%	41.5%	30.89%	10.17%	3.72%
1999	15.12%	42.82%	31.48%	8.05%	2.53%
2001	16.35%	38.95%	32.29%	6.76%	5.65%
2003	15.93%	30.61%	38.58%	8.12%	6.76%
2005	17.96%	27.20%	35.07%	8.40%	11.37%
2007	32.03%	23.67%	26.37%	6.04%	11.89%
2009	33.90%	21.81%	28.07%	4.62%	11.60%

This search behaviour, confirming shifted priorities, assumptions, expectations and preferred starting points, indicates a desire to start with some words and see what comes up, avoids the need for extended search paths or complex search strategies.

In recent years our library management system suppliers have responded to this requirement with new generation browser technology, offering search interfaces and modern internet features inspired in part by Google, web sales sites and social networking sites, which start from a single search and bring all the associated resources back to the user with further options to filter, refine, explore and interact with results through web 2.0 capability for user participation.

The Institute Library is soon to offer access to its collections and services this way through participation in the ULRLS shared Encore³⁶ discovery catalogue. Encore <http://ials.sas.ac.uk/encore.htm>, a vertical search discovery and delivery platform, is being configured for ULRLS to provide a next generation catalogue, sitting above the existing library system and catalogue. The Encore framework has been built by our LMS suppliers, Innovative Interfaces Inc., using Service-Oriented Architecture (SOA)³⁷ software design principles (see Figure 9).

Encore is designed to offer our users an initial simple search to access catalogue data and then explodes that data into facets such as: author or subject or title, language, and published date, as well as providing an option to look at just the recently added items.

Ranked and grouped search results, indicating relevance to the original search are presented employing a refined searching algorithm Innovative Interfaces Inc. have called “RightResults” - for example raising the position in rendered returns of law journal titles through appropriate weighting so journals potentially hidden by generic names such as “family law” or “Justice” are easily identified.

Search results can also be refined by using a tag cloud which displays LC subject headings with graphical representation of relative strength in the collection plus other terms added for vocabularies in common use or emerging vocabulary or specialist terms and genre identifiers from the subject community. Mediated user tags can also be added, for example as markers for law tutor course and reading list recommendations. The user tag facilities provide a means to fill gaps in traditional MARC21 metadata, adding meaning and value to the content and bringing specialist knowledge into play by presenting additional guidance and associating it with the online catalogue records.

Additionally, the system offers data drawing on community input, or identifying popular choices working in real-time with dynamic updates pulling information from the circulation system of the underlying LMS.

Encore will also allow us to plug-in visual enhancement and content utilities such as dust jackets, table of contents pages, sample chapters and reviews (available on annual subscription from suppliers such as Syndetic Solutions³⁸) and to socialise the databases through services like LibraryThing for Libraries³⁹.

In the forthcoming version of Encore, Media Management will link to our IALS-created digital copies through a carousel option at record-detail display where users can browse thumbnails and click through to the digital file.

In parallel to the search of local holdings, Encore initiates seamless searching of remote library holdings, licensed and free digital resources and further exploits our federated searching and context-sensitive smart linking facilities and introduces a range of interactive features for users.

Simultaneous cross-searching of multiple resources such as the Adlib Archives catalogue, Eprints E-repository, Intute resource catalogue and our electronic subscription services, including article linking, is provided through an integrated federated search facility called Research Pro⁴⁰.

The hidden smart linking capabilities provided by WebBridge on our current classic catalogue are developed and surfaced for the Encore environment, making intelligent suggestions for further exploration, associating searches and results with the right additional resources, supported by resource configuration settings which, for example, map the user search to fields in the Inmagic web published databases, so the explore options link to

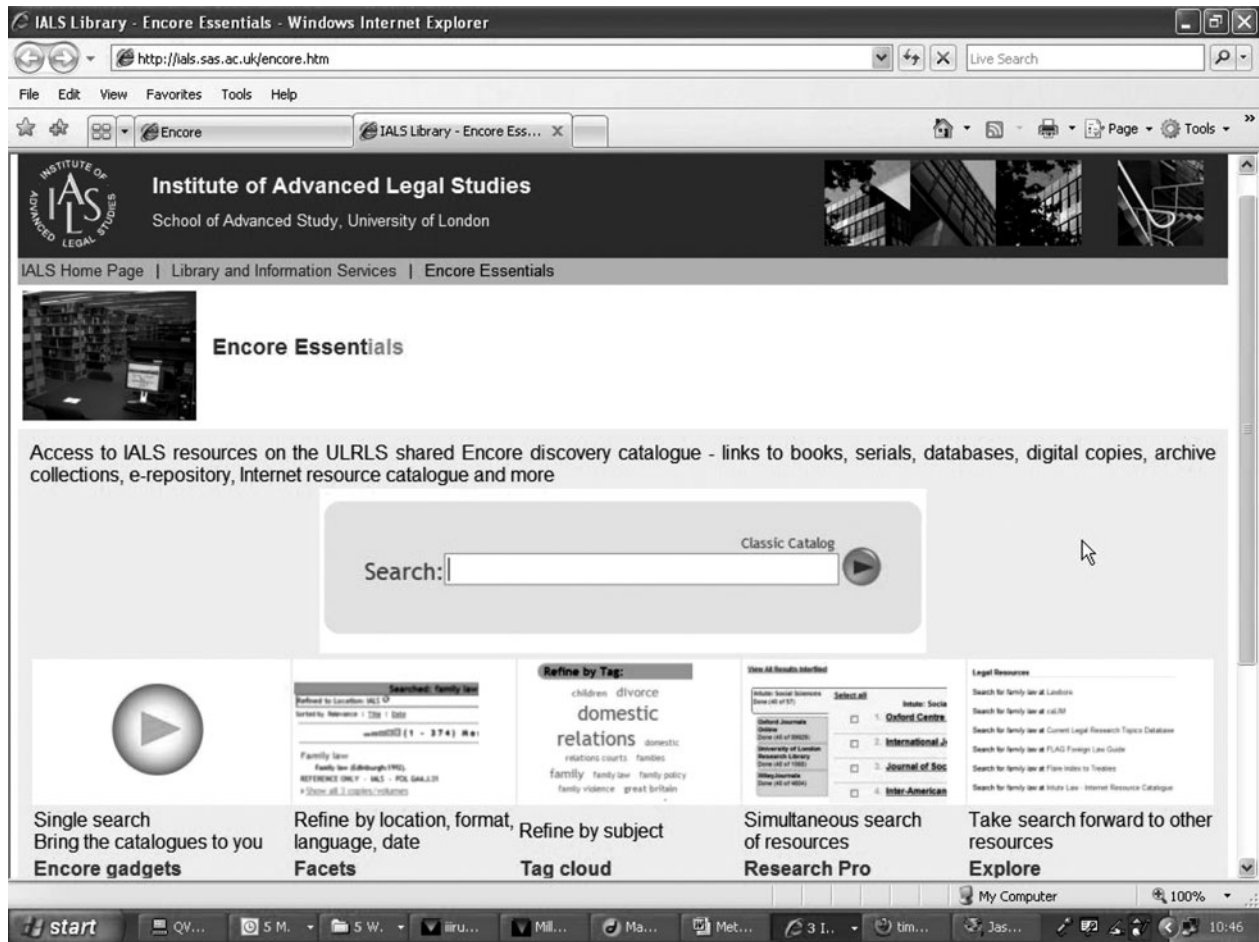


Figure 9: Access to the Encore discovery catalogue from IALS website

services like FLAG, the Flare Index to Treaties and other IALS-created web databases like Current Legal Research Topics (CLRT)⁴¹ and Current Awareness for Legal Information Managers (caLIM)⁴².

Encore will offer our users new ways to locate access to library services according to their own preferred starting point, through a set of gadgets which make the Encore search box widget readily available for inclusion in a personal Google toolbar, iGoogle home page, Firefox search engine and IE search engine thus bringing our catalogues to you and putting them in your own hands.

Encore is in continuous development, with new features appearing frequently, so we look forward to its imminent arrival for IALS and are keen, as ever, to investigate further customisation facilities and deliver additional guidance to provide a context for making best use of Encore to support legal research.

“Avanti!” (or whatever happened to our interval drinks) (and the interval even)

It seems likely that law will continue to be one of the leading disciplines in which the application of information

technology is embedded in academic and professional work and we will find ourselves working with increased content and more technology which can accompany us wherever we need it to go.

Experience so far suggests our work will continue to involve adapting to those changing service technologies and the introduction of new internet delivery interfaces with user-centred interaction, which mean we engage afresh with the subject, move faster and deliver rapid research facilities.

Keeping practicality and affordability firmly in mind our approach at IALS has followed essential standards but with flexibility to take account of subject-specific additions, modifications or omissions for law and legal materials, so we deliver forward looking services that match with the needs of internet-aware users and best serve the evolving research process.

An abiding principle comes back to linking users and relevant materials as reliably and speedily as possible, which means making suitable provision in what we are recording and how it is recorded to provide effective access and preserve quality.

In an era of semantic discovery and enabling technologies there is likely to be more automated information gathering and preparatory research. Through text mining software, more sophisticated metadata generation and

on-the-fly metadata aware semantic searches, the nature of content will become more rapidly evident and deliver to ever smarter visually engaging mobile technology (i-phones and their successors) which adjust to the size of the frame and the frame of reference.

Potentially ease of searchability will release time to concentrate on critical thinking and skills, as we look at ways in which guidance on evaluation, data manipulation and handling of ideas and authoritative reference can be embedded in resources through built in tips and hints.

Additional support for more participatory roles and personalisation options will allow users to “direct their own cut” of the data (as long or as short as they prefer) gather and organise information according to preference and need.

Future proofing and predicting the future (especially in movies) has to be a best guess (and usually says more about now than then). Much may depend on the extent to which intelligence derived from automatic metadata robots progresses from “artificial” to authoritative, but right now the catalogue record (alias metadata) may be changing appearance but it is still some way from the cutting room floor.

For us the work of specialist cataloguers and content builders (the stars and stunt performers of the information world) is still key to making the action happen (along with all the digital enhancements) creating links that safeguard meaning, mobilise understanding and initiate new knowledge (and enjoyment). We shall have to see what happens next, on a screen near you “any time, any place, anywhere”.

Footnotes

¹YouTube <http://www.youtube.com/>

²You Only Live Twice (1967) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0062512/>

³The Bourne Ultimatum (2007) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0440963/>

⁴Innovative Interfaces Inc. Media Management http://www.iii.com/products/media_mgmt.shtml

⁵Canon EOS 1000D digital SLR camera (10.1 megapixel)

⁶Hollingworth and Moss <http://www.hollingworthmoss.co.uk/>

⁷University of London Research Library Services (ULRLS) <http://www.ulrls.lon.ac.uk/> and Adlib <http://www.adlibsoft.com/>

⁸ISAD(G) <http://www.ica.org/en/node/30000>

⁹Encoded Archival Description (EAD) <http://www.loc.gov/ead/>

¹⁰UK Archival Thesaurus (UKAT) <http://www.ukat.org.uk/>

¹¹School of Advanced Study (SAS), University of London <http://sas.ac.uk/>

¹²*Amicus Curiae: Journal of the Institute of Advanced legal Studies and Society for Advanced legal Studies* <http://ials.sas.ac.uk/publish/amicus/amicus.htm>

¹³DSpace <http://www.dspace.org/>

¹⁴EPrints <http://www.eprints.org/>

¹⁵Innovative Interfaces Inc. Pathfinder Pro http://www.iii.com/products/pathfinder_pro.shtml

¹⁶Open Archives Initiative OAI <http://www.openarchives.org/>

¹⁷For more information about Intute: Law see: Whittle, Steven Intute: Law – the What? Why? How? Where? and Who? Published on *GlobaLex* (Hauser Global Law School Program, New York) June/July 2007 <http://www.nyulawglobal.org/globalex/Intute.htm>

¹⁸Dublin Core metadata initiative <http://dublincore.org/> and Resource Description Framework (RDF) <http://www.w3.org/RDF/>

¹⁹Joint Academic Coding System (JACS) http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=158&Itemid=233

²⁰UK LOM Core learning object metadata scheme <http://zope.cetis.ac.uk/profiles/uklomcore>

²¹JISC ViM project (Value for money in automatic metadata generation) <http://www.jisc.ac.uk/whatwedo/programmes/inf11/resdis/vim.aspx>

²²Joint Information Systems Committee (JISC) <http://www.jisc.ac.uk/>

²³As published on the *Guardian.co.uk* site on 9 December 2009 and in the Technology news & features section of the *Guardian* newspaper on Thursday 10 December 2009. <http://www.guardian.co.uk/technology/2009/dec/09/best-websites-internet>

²⁴Free Access to Law Movement <http://www.worldlii.org/worldlii/declaration/>

²⁵School of Advanced Study – Human Rights Consortium http://www.sas.ac.uk/human_rights.html

²⁶Inmagic products <http://www.inmagic.com/>. Software distributed in the UK by Soutron Ltd <http://www.soutron.com/>

²⁷For more information about FLAG see: Clinch, Peter FLAG the new internet gateway to foreign law holdings in UK national and university libraries *Legal Information Management*, vol. 2, no. 4, Winter 2002. pp. 37–39

²⁸Research Support Libraries Programme (RSLP) <http://www.rslp.ac.uk/>

²⁹Clinch, Peter Foreign Law Guide (Flag) Final report July 2002 <http://ials.sas.ac.uk/library/flag/docs/Final%20Report.doc>

³⁰For more information see: Clinch, Peter and Bird, Ruth Finding foreign law collections in the UK: the 2007 FLAG update and questions it raises for future collection development policy in the UK. *Legal Information Management*. Vol. 8, no.2, 2008. pp. 135–139.

- ³¹For more information see: Swift, Hester Opening up the UK's Foreign and International Law Collections: the FLARE Initiative, the FLAG Foreign Law Guide and the FLARE Index to Treaties. *Legal Information Management*. Vol. 9, no. 4, 2009. pp. 262–266.
- ³²Multilateral Treaties: index and current status, compiled and annotated within the University of Nottingham Treaty Centre by M. J. Bowman and D.J. Harris (London: Butterworths, 1984, eleventh cumulative supplement, 1995) <http://catalogue.ulrls.lon.ac.uk/record=b2106912>
- ³³Electronic Information System for International Law (EISIL) <http://www.eisil.org/>
- ³⁴FLARE is a collaboration between the major libraries collecting law in the United Kingdom: Institute of Advanced Legal Studies, University of London (Chair); Bodleian Law Library, University of Oxford; British Library, Squire Law Library, University of Cambridge; School of Oriental and African Studies, University of London.
- ³⁵Extensible Markup Language (XML) <http://www.w3.org/XML/> and Simple Object Access protocol (SOAP) <http://www.w3.org/TR/soap12-part1/#intro>
- ³⁶Encore <http://encoreforlibraries.com/>
- ³⁷Server–Oriented Architecture (SOA) http://en.wikipedia.org/wiki/Service-oriented_architecture
- ³⁸Syndetic Solutions <http://www.bowker.com/syndetics/>
- ³⁹LibraryThing for Libraries <http://www.bowker.com/index.php/component/content/article/552>
- ⁴⁰Innovative Interfaces Inc. Research Pro http://www.iii.com/products/research_pro.shtml
- ⁴¹For more information about this database see: Power, Gerry Current Legal Research Topics Database *Legal Information Management*, vol. 3, no. 2, Summer 2003. pp. 119–121.
- ⁴²For more information about this database see: Gee, David and Whittle, Steven caLIM: current awareness for legal information managers web database Posted June 17, 2002 on LLRX *the Law Library Resource Xchange website* <http://www.llrx.com/features/calim.htm>

Apologies to:

Dial M for Murder (1954) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0046912/>

Indiana Jones and the Last Crusade (1989) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0097576/>

Star Trek V: the final frontier (1989) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0098382/>

Ferris Bueller's Day Off (1986) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0091042/>

A Funny Thing Happened on the Way to the Forum (1966) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0060438/>

Born Free (1966) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0060182/>

X-Men: The Last Stand (2006) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0376994/>

Flight of the Navigator (1986) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0091059/>

One Flew Over the Cuckoo's Nest (1975) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0073486/>

Avanti! (1972) *IMdb Internet Movie database* <http://www.imdb.com/title/tt0068240/>

Biography

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