

Researching Law on the Internet with the Resource Discovery Network

By Steven Whittle

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Summary

This paper offers an introduction to a UK national Internet project called the Resource Discovery Network (RDN), focusing in particular on work to develop a Law Gateway with international scope and relevance, utilising web database technologies, metadata standards and specialist site evaluation.

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Aims and structure of the Resource Discovery Network

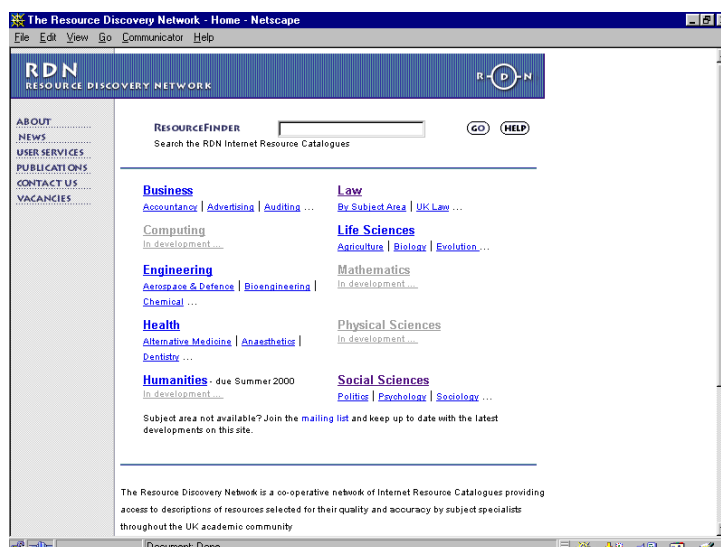
The Resource Discovery Network (<http://www.rdn.ac.uk>) is a co-operative project supported by UK Higher Education funding bodies¹ to provide easy and effective

access to high quality Internet resources for the learning, teaching and research communities. The RDN offers a variety of Internet quality filtering facilities tailored to the needs of specific subject communities, complemented by an interdisciplinary approach. The project, which began in January 1999 with participation from partners commencing in August and September 1999, is now entering the latter phase of a three year initial development period. All services are free at point of use.

The Resource Discovery Network consists of a number of Hubs with subject responsibilities based at higher education institutions in the UK. Each Hub provides access to freely available Internet Resource Catalogues, delivering detailed descriptive records of over 30,000 international web-based resources. The Hubs are developing subject-centred portal services in a number of fields: BIOME (Health and Life Sciences) led by the University of Nottingham, EMC (Engineering, Maths , Computing) led by Heriot-Watt University, Humbul (Humanities) led by University of Oxford, PSigate (Physical Sciences) led by University of Manchester and SOSIG (Social Science, Business and Law) led by the University of Bristol.² Distributed teams of experts in other institutions and organisations contribute to these services as part of their professional work. RDN projects are co-ordinated by a Network Centre (RDNC) based at King's College, London.

The RDN Internet Catalogues maintain comprehensive independent metadata about each resource indexed. Resources are described objectively by subject and electronic information specialists in the UK academic community. Keywords, subject specific classification schema and thesauri are used to ensure that users can access data quickly and efficiently.

The constituent subject portals have a pathfinding and prospecting role in helping researchers make use of the Internet, filtering the wealth of information the web has to offer and guiding researchers to reliable sites and materials. Each of the core Internet Resource Catalogues is enhanced by a range of customisation, current awareness and community-building services developed by the participating Hubs.



A strength of the RDN lies in the integrated range of search and browse features offered to users at the Resource Network and subject specific levels. The service combines powerful search options with classified browsability.

A search tool called "ResourceFinder" allows users to query RDN component Internet Resource Catalogues simultaneously. It is a full text keyword search supported by basic boolean logic functions, looking for matches in resource titles, descriptions and subject fields. Through ResourceFinder, RDN services are aiming to

offer subject communities web search facilities that provide more precision and relevant coverage than can be achieved with Internet-wide robot driven search engines.

The RDN browsing interface consists of a table of subject headings arranged in ten broad subject areas covering: Business, Computing, Engineering, Health, Humanities, Law, Life Sciences, Mathematics, Physical Sciences and Social Sciences. Hypertext links lead to the classified subject centres and collections of evaluative site records and links. Minimum graphics are employed through out to aid global access and delivery.

Responding to information climate change

The Resource Discovery Network has been established to help researchers respond to dramatic developments in information technology and transfer, which have seen more information flowing more quickly, deeply and widely to more people than in any previous era.

In this new Century, growth in the capacity and capability of the web continue to drive and be driven by globalisation in economics, business and politics. The size and role of the Internet continues to change with more people relying on its information resources and exercising its marketing power. With this effective globalisation of information, the Internet continues to move from the edge to the centre of society, underpinning and effecting the work of everyone involved in government, education and commerce.

In the legal sphere, such globalisation promotes an international outlook, increasing the need for rapid and reliable access to truly multi-national materials, sources for many jurisdictions and topical areas that can support comparative academic and professional work. There is also growth in the range and work of inter-governmental organisations and in the body of international law and instruments enabling international relations, trade and communications.

Many legal information professionals are finding that the World Wide Web, offering convenient desktop access and freedom from restrictions of physical location or opening hours, is rapidly becoming the preferred source of information for users who resort to hard copy sources only in the absence of a reliable electronic alternative.

In recent years there has been sustained expansion in global legal information resources and digital law sources on the net achieved not least through initiatives such as AustLII (<http://www.austlii.edu.au/>), BAILII (<http://www.bailii.org/>), CanLII (<http://www.canlii.org/>) and Cornell's Legal Information Institute (<http://www.law.cornell.edu/>) who share a family resemblance and commitment to public service publication. Their work in turn encourages others, including Governments, Courts, universities, and publishers, to raise the level of coverage in the public domain.

There is now more legal information than ever online, waiting to be found. As Diana Botluck's article on the invisible web³ has emphasised, there is a surface web that search engine can theoretically reach and index and another deeper web with 500 times more content often unindexed by the automatic search tools. The need to organise access to this information iceberg and survey the 99.8 % below the surface offers challenges that reinvent and reinforce the role of the law librarian and legal information manager.

Role of the Social Science Information Gateway (SOSIG)

Resource discovery and delivery in the field of law are the responsibility of the Social Science Information Gateway (SOSIG) (<http://www.sosig.ac.uk>) within the RDN, allowing the service to set law within an increasingly important socio-legal context.

SOSIG provides the network with access to carefully selected business, government, parliamentary, social welfare and legal sites and materials available on the Internet. The Internet Catalogue contains some 14,000 descriptive records of selected web-accessible resources worldwide classified under more than 900 subject headings, supplemented by an automatic search tools linking to more than 100,000 other sites. SOSIG is run by the Institute for Learning and Research Technology (ILRT) (<http://www.ilrt.bris.ac.uk>) at the University of Bristol in association with a number of other UK academic institutions with a reputation for excellence in their field.

SOSIG has grown from a pioneering project site in 1994 to become a leading RDN portal service, successfully relaunched in London in February 2000 with a new interface, more content and a number of new features.

Section editors for Law

Since September 1999 a small team of law librarians at the Institute of Advanced Legal Studies (University of London) (<http://ials.sas.ac.uk>) has been working in partnership with the Wills Memorial Library (University of Bristol) (<http://www.bris.ac.uk/is/locations/willslibrary/>) and SOSIG to develop and establish the SOSIG Law Gateway as an important new service for the UK and international legal communities.

The IALS was founded in 1946 and is one of the ten Institutes which constitute the School of Advanced Study of the University of London and which function as open environments for research and study by scholars and other specialists from all over the United Kingdom and beyond. The Institute is a leading centre for legal research and provides national research library and information services in law.

IALS Library was amongst the first of many libraries to develop a collection of links to Internet resources for law on its own website. Those simple web pages evolved into an index of links called eagle-i (electronic access to global legal information) (<http://ials.sas.ac.uk/links/eagle-i.htm>). The IALS eagle-i service characterises much of the parallel work undertaken in the late '90s by academic, government and law firm librarians devising and sharing hypertext links to sites.

Such services have often been created as flat HTML pages, offering quick links perhaps in country and subject arrangements with some brief annotations on content and possibly a local search option. As the Internet has grown and continues to grow it has become less practicable to manage and rely on static HTML pages of this type for routes to the Internet. The Resource Discovery Network was formed to help rationalise, consolidate and co-ordinate this effort in the UK by introducing suitable web and database technology backed by agreed standards on selection, evaluation and description.

Technical Infrastructure - ROADS

SOSIG is built on the ROADS (Resource Organisation and Discovery in Subject-based services) (<http://www.roads.lut.ac.uk>) suite of web database software and tools, providing the necessary technical architecture for a project on this scale.

ROADS was originally developed as part of the UK Electronic Libraries Programme (eLib) by a consortium including the Institute for Learning and Research Technology

at the University of Bristol, and the UK Office of Library and Information Networking at the University of Bath, with the bulk of the software development being done by the Department of Computer Science at Loughborough University. ROADS is utilised by a number of projects in the UK, Europe and around the World such as the EU's Renardus project (<http://www.renardus.org/>).

ROADS is a set of free, open source software and standards designed specifically for Internet gateway development. ROADS is written in Perl to run on any UNIX or LINUX based system. WHOIS++ and Z39.50 are used to link distributed databases and provide interoperability between services.

ROADS offers a configurable interface for users and contributors. The systems facilitate distributed working so the database can be accessed and edited remotely from any authorised PC with a web browser. Browse subject sections are automatically generated from classified database entries, boolean searching and web interface administration are also available. ROADS provides automatic housekeeping tools to ensure reliable performance and systematic update. There are facilities to identify duplicate records, check the currency of links, track and repair broken links, prompt for record review and generate search statistics.

ROADS has offered an adaptable infrastructure on which to build the law section of the Social Science Information Gateway.

The SOSIG Law Gateway



The SOSIG Law Gateway (<http://www.sosig.ac.uk/law>) has been designed to provide access to quality law related resources on the Internet, presenting detailed site profiles, content assessments and well-maintained links to sites in a structured web database. In particular the service offers expert descriptions and links to sites publishing primary and secondary legal literature and to specific documents of legal interest.

The Law Gateway is designed specifically with legal people in mind, aiming to help law students, law teachers, researchers and the legal profession with their studies, research, teaching and current awareness needs. It provides a framework for handling and meeting legal information needs, can help identify and locate sources and then facilitate evaluation of appropriate sources. It offers features to help locate core legal materials, to browse for similar and related materials and to keep up-to-date with new additions and innovations. It aims to make it easier for researchers to find useful sites for a full range of legal subject areas and jurisdictions world wide.

Integrated components

The SOSIG Law Gateway includes a number of integrated components:

- The main element is an Internet Catalogue - containing over 2,000 descriptive records and entry points for legal documentation and law related Internet sites, selected, classified and reviewed by legal information specialists.
- A Social Science Search Engine is also provided - this is a limited area search engine drawn from a supplementary database of over 100,000 links gathered by a web robot which visits each of the quality websites featured in the Catalogue (including all the Law section sites) and follows any links it finds for those pages and automatically indexes the content.
- A Grapevine service - allowing users to establish professional contacts and search or browse details of university departments, trace like-minded researchers, conferences and courses relevant to their field.
- A personalised account and current awareness service called "My Account" - allowing users to register freely on the service and to publish their own information, customise their use of the Gateway and receive e-mail alerts with notifications of new information on the system from the full range of legal jurisdictions and subject areas.
- Options to search across the whole SOSIG database containing business, government and political sources relevant to socio-legal studies or extend a search to the whole Resource Discovery Network.

The Law Gateway offers users options to:

- Search by keyword
- Search with advanced form facilities
- Browse by jurisdiction, subject and resource type
- Search and browse via a legal thesaurus
- Set up a personal account to customise use of the gateway and receive email alerts.

Search options

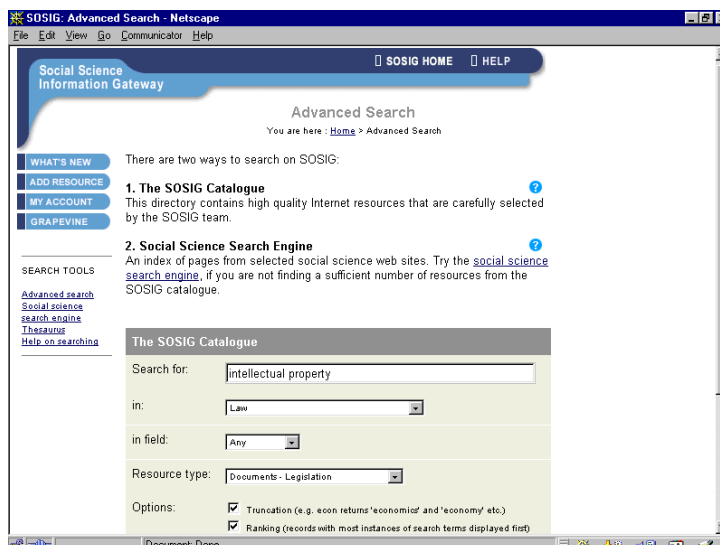
Users can choose from a set of simple or advanced search options to query the catalogue of Internet resources for law.

A search box is offered on each browsing screen. Users can type one or more terms in the search box and click go. The search facility is dynamic, automatically limiting or extending its scope according to the section or subsection in which it is initiated. The default search is free text. Phrase searching and boolean connectors are supported. A search for "intellectual property" returns records containing the phrase, batched in sets of 10 records, ranked by the number of occurrences of the search term in each record with the term highlighted in bold.

Advanced searching facilitates more precise and powerful searches of the database. Users are offered a form in which they can specify a particular field to search or limit a search to a particular type of resource, such as Documents:Legislation.

The LIR legal thesaurus devised by specialist Christine Miskin⁴ serves as the authority file for the keywords assigned to each record in the Law Gateway. If a user's search fails to retrieve any results, the system prompts with an option to check the legal thesaurus. Users can search or browse the thesaurus to find broader or narrower terms and then link directly to records using those terms.

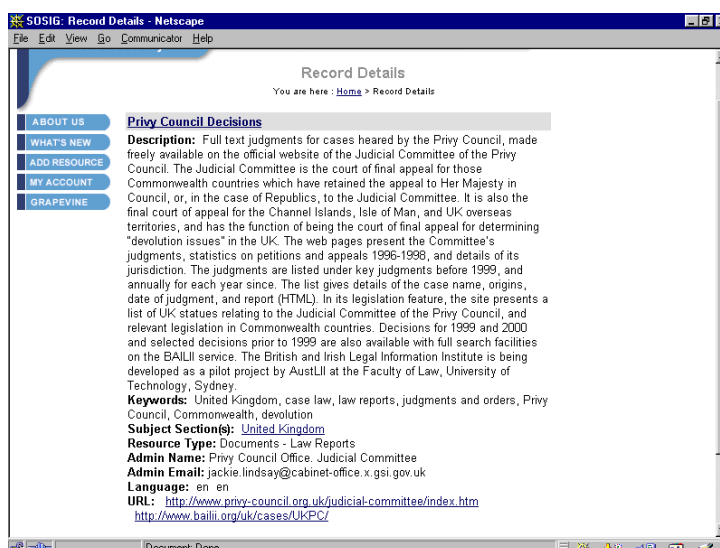
Onscreen help gives background and hints to searching with an explanation of how to combine search words with Boolean operators, adjust ranking and truncation settings.



Database records

Structured templates help us create descriptive records in the database for each of the quality law and legal interest sources traced on the web. Record details include mandatory fields indicating the site title, keywords, url and a description. The default presentation is a brief display generated from these core fields which may be switched to a full display to reveal information about contacts, classification codes, subject sections, resource type and language(s).

Variant urls can be included to handle multiple language versions of the site, framed and unframed versions and multiple sources for primary materials such as Privy Council decisions where alternative sources are described and compared in one record.



Evaluative site profiles

Evaluative site profiles are an important feature of each RDN service. SOSIG Law Gateway descriptions provide an informed and objective assessment of the resource,

with a view to revealing the full qualities of the site. The profile confirms the authority of the site, gives details of who is taking responsibility for authorship, administration and publication, gives an indication of the contents of the site, any date limits on the information included, and says whether the site covers a specific subject or range of topics or refers to an individual jurisdiction or country or is international in scope.

The description uncovers hidden materials, sources of legal texts, online guides and official reports with a note of any special file types, download options and plug-in software requirements. Every word in the description is included in the simple search, helping users to trace less obvious materials from more remote locations.

An additional evaluation feature allows key sites of special interest to be assigned editor's choice status, highlighting their qualities for users and giving them priority in the browse screens.

Methodology and quality control

Policies have been devised and adopted across the RDN to help with selection and management issues. Constituent gateways follow well-defined collection development policies. Scope guidelines, selection criteria and a set of cataloguing rules based on Dublin Core (<http://mirrored.ukoln.ac.uk/dc/>) metadata standards are applied to maintain consistency and quality across the range of disciplines and services. The background documents for SOSIG are available for consultation on the site. (http://www.sosig.ac.uk/about_us/sitemap.html). The general strategic, information management and technical issues drawing on the experience of European gateways and portals have been documented by the DESIRE project (<http://www.desire.org/handbook>).

Strategies for law resource discovery

We follow agreed strategies to identify new resources to feature in the Law Gateway. We join and monitor email discussion and distribution lists in the field of legal information, higher education, web and internet developments; sign up for notification services; actively search the Internet with the more efficient search engines like Google; and browse key sites, sites that regularly list new resources; we also review and follow up leads in non-Internet sources such as professional journals and newsletters; and increasingly receive user suggestions and recommendations.

We look for scholarly rather than popular sites, check their trustworthiness, currency and user-friendliness. We include resources that are particularly likely to satisfy users' information needs. We exclude sites that demonstrate political bias, excessive personal opinion or where content is limited to promotional material.

We target our efforts to develop the catalogue in particular subject areas and jurisdictions, giving priority to sites offering substantive content from authoritative sources. Attention has been given to quality tested sources of: primary legal documents (legislation, law reports and treaties) government bodies (law reform commissions) government documents, research reports and consultation papers, professional organisations and societies (bar councils, law societies), regulatory bodies (publishing codes of practice, standards and rules), electronic journals and texts, current legal news, companies (solicitors' and barristers' sites), legal publishers and online databases, learning and teaching resources (including information about legal researchers, law conferences and law courses).

Classification

As in traditional libraries, the virtual libraries forming the RDN's Internet Resource Catalogues have employed formal classification schemes to give a systematic arrangement and ready access to materials. Within an interdisciplinary project there is a balance to achieve between practical consistency and specialist subject requirement. SOSIG has followed a flexible approach accommodating both UDC, Universal Decimal Classification and DDC, Dewey Decimal Classification schemes to match the needs of specific subject sections. UDC helps structure the browsing arrangement in the Law Gateway.

Browse options

Hypertext links lead users through the browse screens, providing them with an overview of the size and scope of the Law Gateway's Internet Catalogue. Users can choose to display all resource titles within the subject and subsections and view resources in alphabetical order within sections sorted by resource type category such as Documents: Legislation (descriptive records and links to sites providing acts and regulations), or Documents: Law Reports, or Governmental Bodies amongst others. Alternatively users can sort the titles into a single A-Z listing regardless of resource type.

The main browse options are:

- Browsing General Law
- Browsing United Kingdom
- Browsing European Union
- Browsing individual jurisdictions
- Browsing by subject area

The "United Kingdom law" section presents UK-wide resources with links to subsections offering sites specifically related to England, Northern Ireland, Scotland, Wales, the Channel Islands and Isle of Man.

A "European Union law" section is developing links to quality sites covering European Communities law, providing ready access to treaty texts, regulations, directives, case law and comment as well as access to key bibliographic databases such as European Documentation Centre sites and the European Commission Libraries.

A section for "Other Jurisdictions" contains link collections for a growing number of individual countries, jurisdictions and regions world wide, concentrating on officially published legislative and court materials.

The browsing screens also offer a topical approach to resource discovery, giving researchers access to a comprehensive range of legal subject areas including: international law, human rights, environmental law, e-commerce, arbitration and family law. Further work is planned to extend the subject coverage.

Material types - RDN resource categories

To aid browsing, resources are grouped and categorised by type. Resource Types include: Bibliographies, Companies, Governmental Bodies, Government publications, News, Organisations and Societies. Essentially the same categories are used across the RDN Gateways to provide interoperability between subject centres.

In the browse screens, users can choose to display resources grouped by category, jump to a particular category or switch to an alphabetical listing by site title.

The category menus are context sensitive, with the choices offered varying appropriately from jurisdiction to jurisdiction or subject to subject. If users are interested

in a particular type of source, such as full text journals, they can select that Resource Type from the left of the screen and jump to the relevant section and either read the site description by clicking on the title or link directly to the service via the arrow icon to the left of the title.

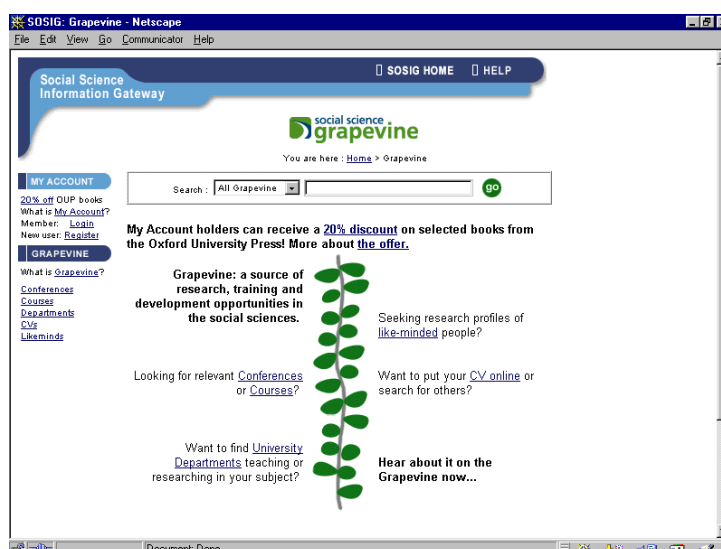
A number of special law categories have been added under the Documents heading to help locate the main forms of legal literature: Legislation, Law Reports, Digests and Treaties.

A guide card on using the Law Gateway has been devised and posted on the site as colour and b/w PDF files for downloading or printing (http://www.sosig.ac.uk/about_us/user_support.html)

Community-building services

As well as helping researchers gain maximum benefit from the legal Internet, we continue to gain a sense and understanding of their needs for new features and coverage through feedback and user participation in additional SOSIG services.

Related facilities offered through SOSIG are orientated around the target communities, aiming to support interactive and communal approaches to research. The "Add Resource" feature offers an online form for submitting suggested additions to the site. A "What's New" feature enables users to check records that have been added recently either in the Law Gateway or SOSIG as a whole.



Grapevine

The Social Science Research Grapevine service is an optional free facility providing a focus for information about events and career development opportunities, listing conferences, courses and UK HE departments by subject. A simple search box allows users to access the whole of Grapevine data or individual subject sections.

My Account

The "My Account" option enables users to establish a personal profile and set email alerting preferences in self-selected areas of subject interest and keep track of new additions to the Gateway. The alerting service aims to promote proactive research, help people keep abreast of the subject. They can then find people sharing research interests, find conferences and find courses that match their profile.

Interactive tutorial

The Law Gateway also links directly to a feature called "Internet for Lawyers", part of the Resource Discovery Network's Virtual Training Suite (<http://www.vts.rdn.ac.uk>) a

collection of subject focused introductory tutorials to the Internet and information, enabling users to develop Internet research skills. "Internet for Lawyers" (<http://www.sosig.ac.uk/vts/lawyers/index.htm>), provides an interactive online legal research tutorial written by Sue Pettit, Law Librarian at the Wills Memorial Library, University of Bristol. The tutorial brings users closer to the service, suggesting ways to conduct legal research in relation to paper and electronic sources.

These services aim to create a virtual community supporting the real community - assist academics planning new research, enable the sharing and exchange of information and ideas, and so stimulate and facilitate practical and collaborative scholarship.

Collaboration

The Resource Discovery Network is very much a co-operative venture involving specialists at over 30 UK higher education establishments. In particular the SOSIG Law Gateway project has provided an important opportunity for collaboration. An Advisory Group of leading figures in UK legal information management is guiding its development. The project welcomes such feedback and suggestions from current and potential users. Ongoing advice and support from a growing user base within the UK and enthusiastic international responses have underlined the importance of the new service and provide renewed momentum and purpose to the work ahead.

A presentation at the International Association of Law Libraries (IALL) conference in Dublin in August 2000 has been followed by collaboration in principle and practice with AustLII's World Law Service (<http://www.austlii.edu.au/links/World/>), Cornell's InSITE service (http://www.lawschool.cornell.edu/library/Finding_the_Law/insite.htm) and the American Society of International Law's EISIL initiative (Electronic Information System for International Law).

Promotional work in 2001 will include presentations at the AjBD Arbeitsgemeinschaft für juristisches Bibliotheks-und Dokumentationswesen meeting as part of the German Bibliothekartag in Bielefeld, Germany (<http://www.bibliothekartag.de/>) and the AALL American Association of Law Libraries meeting and conference in Minnesota, USA (<http://www.aallnet.org/events/>).

Some facts and figures about usage

Indications are that the services are succeeding in attracting and supporting a growing number of users. Analysis of usage and access data has revealed that there are 1 million page accesses per month to SOSIG. Over 25% of this usage is from the UK. 97% of UK Higher Education Institutions link to SOSIG and there are 10,000 links to the SOSIG main page.

The service is establishing itself as a teaching aid for lecturers and law course tutors. Feedback has shown that the Law Gateway is being used to complement teaching and study programs, to help source new courses and assist with inter-disciplinary research. In the first year My Account users were particularly interested in resources relating to: human and civil rights, criminal law and criminology, European Union law, social welfare law, UK law, International law, employment law, environmental law, commercial law, intellectual property, and women and law. Our planning for the next phase of the project will build on this success, focusing especially on reaching new users and discovering their needs.

Planned developments

With the core features in place we are entering an exciting stage for the project.

We plan to extend the range of the Law Gateway, to increase its coverage and usefulness, to raise further awareness of the service and stimulate further interest and input from academic, government and professional lawyers and their students.

Expanding subject coverage

In the coming months SOSIG will be adding a new subject section covering European Studies to complement existing coverage of the European Union and European nation states.

The RDN will also add new subject coverage with developments in the areas of: Arts and Creative Industries; Geography and Environment; Sports, Tourism and Leisure. The Law Gateway will link to sites addressing the legal aspects of these areas.

Extending access

The ascent of web technologies and digital sources, supported by the development of local websites and WebPac library catalogues provide opportunities which we plan to pursue in the next phase of the project.

We are investigating ways to extend access to RDN services and the metadata information resources they themselves represent, through local annotation facilities and interface with OPACs. A proposed development, provisionally called RDN-LinkStore will provide a mechanism for creating and sharing lists of links which may be made publicly available as reading lists with a means of annotating and commenting on the records included in the lists.

The RDN is also look at its potential role as an agent, delivering quality site records for local use in websites and catalogues.

OPAC integration

Standardisation on WebPac is presenting real choices and opportunities as libraries decide how best to organise access to web-based resources. The RDN is working actively in the area of OPAC integration to provide libraries with quality-assured and cost-effective user access to Internet resources via local WebPac terminals. Z39.50 brokers are being developed to enable libraries to take full advantage of co-operative work embodied in component gateways.

SOSIG is working with other organisations in a venture called the Portal Project (<http://www.portal.ac.uk>) to develop cross search facilities with other databases. The current plan will allow SOSIG to be searched with:

- COPAC (Combined OPACs of major UK universities)
- IBSS (International Bibliography of the Social Sciences)
- REGARD (Database of ESRC awards)
- ZETOC (British Library's current awareness service) ⁵

The Law Gateway will be exploring options for WebPac integration offered by Z39.50 technology. The aim will be to enable users to search on a library catalogue for onsite material in the home library and then elect to extend the same search to the Law Gateway to discover and link to relevant materials on the Internet. Such a facility would bring the Law Gateway closer to its users and enable them to make use of Internet resources in the context of local print and electronic sources, raising awareness of the full range of materials available on library shelves and via web workstations.

Conclusion

A project on the scale of the Resource Discovery Network is ambitious and we believe rewarding for users and contributors. A shared enthusiasm for the venture and belief in its value will help ensure that the RDN continues to develop services that are distinguished by their selectivity, quality control, organisation and presentation. In an era of increasing socio-legal action and economic and political globalisation, the Law Gateway will be well placed as a specialist subject centre within the wider SOSIG and RDN services to offer global legal communities access to the most relevant research resources on the Internet.

Contacts

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Footnotes

1

JISC, the Joint Information Systems Committee (<http://www.jisc.ac.uk/>)
Supported by:
ESRC, the Economic and Social research Council (<http://www.esrc.ac.uk>)
AHRC, the Arts and Humanities Research Board (<http://www.ahrb.ac.uk/>)

2

BIOME (<http://www.biome.ac.uk>)
EMC (<http://www.emc.ac.uk/>)
Humbul (<http://www.humbul.ac.uk>)
PSIgate (<http://www.psigate.ac.uk>)
SOSIG (<http://www.sosig.ac.uk>)

3

Diana Botluk , "Mining Deeper Into the Invisible Web", Pulished November 15, 2000 in LLRX.com (<http://www.llrx.com/features/mining.htm>)

4

Christine Miskin, Granite and Comfrey Information Engineers
(<mailto:christine.miskin@infoengineers.com>)

5

COPAC (<http://copac.ac.uk>)
IBSS (<http://www.lse.ac.uk/IBSS/>)
REGARD (<http://www.regard.ac.uk>)
ZETOC (<http://zetoc.mimas.ac.uk/>)