Evaluation criteria of legal electronic resources. 
A case study of Italian legal web resources’ selection

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1. STATE OF THE ART OF LEGAL ELECTRONIC RESOURCES

The rapid explosion of electronic information on the Internet is an unquestionable reality, as well as its enormous impact on research, business and every social activity.

However this electronic transformation has its drawbacks; in fact navigating through such an amount of information sources, often unstructured, may make people waste their time and miss their expectations1.

Badly designed web pages, characterised by inaccuracy and lack of currency of content, unreliability of data, uncertain authority, missing description of data sources are only a few of the limitations that hinder effective access and use of electronic information.

This is the reason why a strong movement is underway for establishing evaluation criteria to be used in selecting electronic information resources. The primary goal of such recommendations is to ensure that information selected be authoritative, reliable and effectively usable. These requirements have been at the heart of the collection development activity for printed materials, undertaken by information professionals and librarians, who since long have devised and applied criteria to assess the usefulness of resources, mainly in print. Many criteria elaborated so far are applica-

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ble to electronic resources, but the peculiarities of web-based materials require specific assessment methods in regard to their origin, content, form, process or system supporting the information concerned.

In this study evaluation criteria of legal web sites are examined focusing on attitudes, beliefs and behaviour of legal information experts committed to select law materials on the web within the Institute of Legal Information Theory and Techniques (ITTIG). As it is commonplace on the web for valuable resources to coexist with low quality information, whose provenance is questionable and authority is uncertain, and having verified that this is particularly true for Italian legal electronic information, the need is felt of evaluation criteria to be adopted in selecting electronic documents, now that some developments are underway in publishing legal electronic resources on the Internet.

To that purpose it is essential to study and define a set of evaluation criteria for Italian web-based legal information resources in order to assist users in the selection process and foster producers to publish quality digital law information.

In particular it is useful to: a) identify characteristics of success of electronic legal resources to be taken into account by users and providers of legal materials; b) verify whether evaluation criteria vary in relation to the different legal sources (legislation, judicial decisions and legal literature); c) investigate and document the methods of ITTIG’s experts in selecting legal materials from the net; d) develop a systematic understanding and provide evidence of the need of appropriate criteria for evaluating legal web resources.

It is worth noting that all over the world legal electronic information has appeared on the web with some delay as compared with other

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3 The Institute is one of the specialised branches of the National Research Council; it has a leading role in the field of legal research and is a reference point for the Italian academic, professional, business community in the field of legal informatics and computer law. It carries out projects and research studies, develops tools and services for legal information access (including guides, directories and the recently planned Portal to legal literature), and undertakes teaching activities on legal documentation access and on the relationship between law and technology.

resources, but it is now available in a variety of forms and its use is becoming increasingly popular among professionals, administrators, scholars, citizens. This occurs in different measures in the various countries. In Italy, in particular, recent developments date to the last few years, especially as regards legal literature.

Web-based law material follow the pattern of worldwide production on the Internet in a variety of formats and undoubtedly its emergence has its origin in the ease in creating documents and sites and in the availability of facilities for connecting to the net. All these factors call for guidance and support to end-users as well as to producers of web information for the benefits of their customers.

As compared to what happens for general resources’ evaluation, a limited amount of research and practical work is available to be used as a reference point to assess legal web sites. The sources provided so far have been analysed and taken into account with the aim to add, through a case study analysis of legal experts in selecting essentially Italian law electronic materials, some items of reflection and fresh information on quality indicators as well as on the process of evaluation.

The adoption of evaluation criteria of legal web resources is an essential factor for the selection and use of information sources and its seems important to analyse the work done and explore how the specificity of legal material affects evaluation.

2. LEGAL RESEARCH AND USERS’ ATTITUDES IN SEARCHING FOR INFORMATION

Users of legal information on print and electronic format belong to different categories and have various requirements and competencies. They share characteristics, attitudes and needs of other users in seeking for information, but have peculiarities due to the sophisticated nature of legal information.

In general legal users have different levels of interests, according to their profession and specialisation, and discrepancies are found in the frequency of use of various legal information materials and in the activities for which legal information is needed.

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They use legal information for various purposes, and differences exist in the way such information is disseminated. To ensure access, commercial publishing is insufficient. In fact, although commercial publishing can serve the needs of legal professionals, by the experience of some countries it results that such services only indirectly benefit the general public\(^6\).

New forms of dissemination, such as Internet distribution, have made it possible to reach large segments of population, even if information should be conveyed by intermediaries before reaching their final recipients.

However in the legal environment, electronic resources are traditionally regarded as not familiar tools and problems are connected with managing electronic legal research. Gaining a better understanding of legal academics’ and professionals’ information needs, their seeking behaviour in using existing electronic resources, satisfaction or discontent of available actual legal web sites would help to have a clear view of the state of the art in Italy of issues concerning the use of such resources and hence to inform the design of user-centred information-seeking support for digital law libraries.

There are few studies, both at international and national level, which focus on legal users' requirements of electronic material, on their information seeking behaviour of digital law libraries and related tools\(^7\). Available research mostly concentrate on a specific aspect of legal


research of electronic resources, represented by user interface issues of retrieval systems providing access to legal information. This is the reason why user interface is often retained as an important limitation to usage.

At international level few reports on surveys and case studies specifically dedicated to legal users have been carried out. These investigations have been undertaken in specific environments and institutions, but the methodology, the topics investigated and their results can provide useful insights to surveys and research projects in different law contexts.

In general, findings show several concerns by users of legal electronic resources on both the quality of content available and the systems providing access to law material.

As regards the most important desired features, users tend to favour free access and currency, followed by coverage, integrity and authority. Among the benefits of accessing legal information, free access is mostly appreciated.

Quality of resources and persistency of links are retained crucial issues to be carefully considered for accessing legal material and the lack of quality control is often claimed as a serious limitation that hinders extensive use of law-oriented Internet sites.

What users mostly require are facilities for simpler and at the same time more accurate searching, better currency, especially of legislation and judicial decisions, improved coverage, both in terms of the breadth of databases (more legislation and courts) but also the depth (older court cases, missing local regulations and Public Administration acts).

The ability to list regulations made under an act while viewing an act is retained an important feature, although very few systems at the moment can afford providing such functionality.

Site design, easier navigation, quality of the search engine and of user interface are addressed as important features by a relevant number of users. Here a distinction can be derived from the surveys where concerns on the search engine functionalities and on ease of use of the system are mostly expressed by legal professionals who complain the inability in many systems, to easily refine searches and to search within acts.

Sorting of search results and flexibility in assembling and rearranging information is also a feature which is highly requested, and claims are made concerning the difficulty in doing so in a number of implementations.
As regards navigation between the three essential components of legal research: statutes, judicial decisions and literature, the need is emphasized of systems where hypertext links allow legal users to move between references in such a way that any source mentioned in a database (a case, a statute or a journal article) can directly lead users, by a simple click, to the referenced source. This is an extremely important functionality which users have found missing in many systems.

A number of complaints regard the scarce ability found in several legal web sites to adequately use the retrieved material at local workstations: as an example, situations are mentioned where it is difficult if not impossible to be provided with functionalities as downloading and easy printing.

In Italy only a limited number of investigations have been carried out to understand legal users' attitudes and needs in accessing electronic material. Surveys undertaken so far essentially concentrated on usage and requirements of general-library users, with no focus on legal information. Within the ITTIG a number of surveys have been conducted regarding access to legal material and related requirements, with emphasis, in recent years, on the attitude of legal experts (faculty members, legal professionals, scholars) towards legal electronic resources on the web: this has appeared to be an essential phenomenon to study and analyse, due to the emergence and increasing availability of legal information resources on the Internet. In particular a survey on users of legal literature, their needs, attitudes and satisfaction in searching for information has been carried out, aimed at achieving insights and indications on this particular category of users to better understand the problems connected with accessing legal literature. The survey concentrated on specific issues which are peculiar to legal users and, where possible, to those interested in legal literature. Here the main requirements regard comprehensive coverage, currency and consistent indexing of legal publications as well as integrated access to the three components of legal research: statutes, judicial decisions and literature.

The survey has been conducted investigating a sample of Italian faculty members (professors and researchers). This applied research work

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has started with a web-based questionnaire which has been e-mailed to some 80 Italian faculty members. The open-ended questions included in the questionnaire concerned the use of information sources, the activity for which legal literature is searched, preferred sources and channels to get information, frequency of activities such as searching catalogues and indexes, consult librarians, browsing shelves, exchange with colleagues. Other investigated areas are the type of materials mostly searched, use made of IT-based tools and services, relevance of constraints such as lack of currency of information provided, different user interfaces, various classification systems, inadequate publicity of services and lack of training. The importance of existing functionality and desired services are the last areas of investigation.

Although the sample chosen and the response rate (45%) are both limited in size, data have been analysed to identify possible trends; a number of tests of significance have been made to check whether differences in responses could be associated with the academic title of respondents and the law discipline they work on.

As regards materials mostly used, articles of Italian periodicals and books are among faculty members’ priorities. The use of IT-based tools is rather common among law scholars who seem familiar with searching the web, but complaints are made about effective access to electronic documents. Lack of currency of information and inadequate publicity of services are an area of concern. In spite of the limitations mentioned above regarding the size of the sample investigated, some general insights on critical areas and some trends can be derived. Further analysis has appeared to be necessary specifically regarding users needs in assessing legal electronic resources.

3. Evaluating resources on the web

There is a vast amount of literature on evaluation criteria of general electronic resources made up of articles, reports, recommendations, projects and survey results9. Documentation on evaluation criteria of domain

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specific resources is not so popular and in general suggested criteria for particular information sources mostly reflect features which are common to no domain specific resources. The peculiarities of legal web resources’ evaluation are starting to be tackled and some recent contributions focus on legal resources’ assessment\(^\text{10}\), trying to establish specific quality indicators and recommending strategies for selecting electronic legal materials on the web.

It is important firstly to address evaluation criteria for general resources, which are applicable to legal information as well, and secondly to highlight the issues legal resources’ assessment.

### 3.1. Evaluation criteria of general web resources

Resource evaluation is mainly tackled with reference to users, and recommendations on strategies and indicators to be followed are mostly addressed to researchers in their information selection process. This perspective is appropriate also for establishing evaluation criteria to be retained by publishers and creators of documents and sites in their attempt to match users’ requirements and needs. In addressing evaluation criteria of electronic resources, a number of authors\(^\text{11}\) focus on the importance of users’ purposes, that is the use planned to be made of sources, to mean that methods of criteria vary depending on requirements, type of research and personal skills. Mention is made of “internal criteria” to access the credibility of information, based on user’s own expertise to evaluate, for example, if a resource is faulty or valuable where something the user knows is discussed. It is also pointed out how credibility issues are related both to the content of the source and to the reader’s purpose, so that personal and professional/educational use of information would imply a difference in evaluation of information. In gener-

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al a variety of methods of criteria are to be considered, ranging from personal, informal methods to the more educational, formal techniques\textsuperscript{12}.

From the point of view of producers of web information, the purpose criteria can be met by a precise definition of the scope, goal, intended audience of the site, with special attention to coverage of information in the field.

Educational and formal techniques for evaluation are tackled by individual authors, by institutions, mainly academic, and by others organisations acting as clearing houses. Evaluation of Internet resources is a topic often dealt with in conjunction with teaching courses for students and researchers to guide them in careful planning and carrying out their research\textsuperscript{13}.

Different categorization methods are used to group evaluation criteria\textsuperscript{14}. Criteria are organised in broad items\textsuperscript{15}, such as scope, content, graphic and multimedia design, purpose, reviews, workability, cost. Each of these items has its own specific indicators to be taken into account. For example, within the area of content, recommended features are accuracy, authority, currency, uniqueness, links to other resources, quality of writing. Similar categorizations are defined using a slightly different terminology\textsuperscript{16}, where purpose, content, authority, accuracy, objectivity, currency and coverage are proposed as relevant indicators.

At Cornell University much work has been done on evaluating sources\textsuperscript{17}. A two steps analysis is proposed: an initial appraisal of author, date of publication, edition or revision, publisher, title of journal, if this

\textsuperscript{17} Critically analysing information sources, cit.
is the case. Content analysis is the second step, where intended audience, scope, objective reasoning, coverage, navigation and design, writing style and evaluative reviews have to be checked\textsuperscript{18}.

Indicators for evaluation are often proposed with related questions (in the form of checklists) that evaluators/researchers should ask themselves, in the attempt to facilitate the process of critical selection of information sources. The most frequently proposed evaluation criteria are, here again, authority, accuracy, objectivity, currency, coverage. These criteria origin from the world of print\textsuperscript{19}, and their application to the web requires careful inspection of sources\textsuperscript{20}.

Challenges presented by web resources also refer to technical and commercial aspects. These issues are regarded as a concern by a number of authors\textsuperscript{21} who point out how the use of hypertext links and frames, the presence of search engines incorporated need careful checking. It is recommended to evaluate each web page and frame independently, and return to the home page to determine the source of information to cope with pages out of context.

Other technical aspects regard software requirements which may limit access to information, instability of web pages\textsuperscript{22}, domain type, site format and overall design, availability of metadata for searching. Care is also recommended in distinguishing between advertising and informational content\textsuperscript{23} now that a blending of entertainment information and advertising are quite common on the web.


\textsuperscript{22} B. Richmond, Ten C's for evaluating Internet sources, McIntyre Library, University of Wisconsin, 2003, http://www.uwec.edu/Library/tutorial/mod5/.

Formal reviews of web sites are provided not only by professional journals (i.e. Library Journal, column WebWatch), but by web sites evaluating and grading web sites, such as the well known Argus Clearinghouse, which uses its ratings system for reviewing guides\textsuperscript{24} based on crucial points such as: \textit{a)} description of the resource’s content and of the update frequencies; \textit{b)} intended audience; \textit{c)} access instructions and technical performance; \textit{d)} quality of content and authority; \textit{e)} usability of resource; \textit{f)} design and organizational schemes; \textit{g)} meta information.

Limitations of these reviews sometimes are the lack of articulated standards and the small percentage of sites evaluated.

Additional helpful tools are worksheets on web page evaluation\textsuperscript{25} and checklists including key questions to ask in evaluating\textsuperscript{26}. In general indicators listed on these tools reflect the above mentioned criteria.

Broad categories for content, form process criteria are described below, with a definition of indicators and explanatory tables.

3.1.1. Content criteria

Content criteria concern the evaluation of the information that the resource contains.

<table>
<thead>
<tr>
<th>Content</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Validity</td>
<td>It depends on how well researched and trustworthy the content of the resource is</td>
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<tr>
<td>Currency</td>
<td>It refers to the timeliness of information and maintenance of updating</td>
</tr>
<tr>
<td>Accuracy</td>
<td>It depends on how correct (more formal) the information is</td>
</tr>
<tr>
<td>Authority</td>
<td>It depends on the expertise, reputation and status of the author/producer</td>
</tr>
<tr>
<td>Uniqueness</td>
<td>It depends on the existence of primary material that is contained in the resource and it is not available from other sources</td>
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</table>

\textsuperscript{24} The Argus Clearinghouse, Ratings System, http://www.clearinghouse.net/ratings.html.


The validity of a resource, for example, depends on how well researched, well substantiated and trustworthy the content of the resource is. Anyone can publish on the Internet, so information has often not been through traditional quality “filters” such as publishers, editors or peer reviewers. Resources may not be what they appear to be or what they say they are, as on the Internet there is no guarantee that the resource is accurate or honest.

Possible question criteria of validity are: a) the information is evaluated by a well known publisher, editor or reviewer, either an organisation or an individual; b) the resource is available in another format, such as a printed publication or CD-ROM; c) the resource is authentic: it is what it says it is, and is actually coming from the person mentioned as author/publisher; d) the original source of the information is stated, this resource is known to be authentic and authoritative; e) in case of doubt the information is verified by the subject specialist; f) the information is based on thorough research; g) references are provided; h) a substantial bibliography is provided; i) any bias or partiality is stated or is of an acceptable level (no propaganda).

Closely related to validity the accuracy of the resource depends on how correct the information is. The lack of information filters on the Internet like peer reviewers, publishers and editors, means that mistakes are more

<table>
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<tbody>
<tr>
<td>Substantiveness</td>
<td>It depends on substantive quantity of information, that is not information linked to in the resource, rather substantial content provided on the site</td>
</tr>
<tr>
<td>Coverage</td>
<td>It refers to the depth and extent of the information. The resource should cover the subject adequately and extensively</td>
</tr>
<tr>
<td>Organisation and composition</td>
<td>It depends on the organisational structure of information and if it is arranged logically and consistently</td>
</tr>
<tr>
<td>Comprehensiveness</td>
<td>It depends on the way information is provided as regards completion of the site (no incomplete information, no “under construction” message)</td>
</tr>
<tr>
<td>Objectivity</td>
<td>It refers to the presence of factual data and the lack of personal prejudice in the information presented</td>
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</tbody>
</table>

Tab. 1 - Content criteria and definitions
likely to occur than in printed publications. Those may be accidental errors, but also deliberate deceit.

Possible question criteria of accuracy are: a) has the information been checked by an independent individual or organisation (for instance a publisher, peer reviewer or editor); b) does the resource contain a bibliography / references; c) are grammar and spelling accurate; d) are there many typo’s; e) in case of doubt the information should be verified.

The authority of the resource depends on the expertise, reputation and status of the author/producer.

On the Internet the origin of a resource is not always clearly stated and its attribution cannot always be trusted. Sometimes some detective work is needed. In case of doubt the information will be verified by the subject specialist.

Possible question criteria of authority are: a) the author/information provider of the resource is explicitly stated; b) the author/information provider is authoritative; c) the origin of the information is explicitly stated and is authoritative; d) contact details and/or e-mail addresses of author/information provider are given.

Uniqueness depends on primary information that is contained in the resource and is not available from other sources.

On the Internet a lot of resources contain relatively little primary information, but consist mainly of links to other, external resources, available from other servers, or that reproduce information available elsewhere. A resource that provides information that is nowhere else (online) available, is in most cases of more value than resources that contain exclusively secondary information, unless there is substantial added value, either in evaluation, annotation, presentation, metadata or comprehensiveness of the information.

Possible question criteria of uniqueness are: a) the resource contains original work; b) the resource contains at least some primary information; c) the resource consists of more than just a list of links to external servers; d) in case of links to external resources there is some added value in terms of evaluation; annotation, presentation, metadata or comprehensiveness of the information.

The substantiveness of the resources is the quantity of information that is actually provided on the site.
On the web, where information is hyperlinked, it is not always clear where one resource ends and another begins. Many resources contain very little real information, but link almost exclusively to information that is produced and stored elsewhere. The information that is linked to should not be considered as part of the resource itself. A resource should be evaluated on the basis of the information it contains and not on the basis of the information that is linked to.

Possible question criteria of substantiveness are: a) the information is of substantive quantity; b) the resource contains more than just address information and/or links to other resources.

*Comprehensiveness* means that the information is provided in a fairly complete form.

On the web information is often provided that is not yet completed (“under construction”), or that is only partly made available online and refers to printed or off line versions for the complete resource.

Although it is a characteristic of Internet information that it is regularly changed and updated, a website should meet some minimum requirements, in terms of comprehensiveness of the information that is made available.

Possible question criteria of comprehensiveness are: a) the resource contains more than very basic information; b) the resource is completed, and not under construction; c) the resource is available as full text, not only the bibliographical details or abstract; d) the resource offers useful abstracts or summaries of the information; e) there are no dead links or empty files; f) there is no missing information; g) the information that is actually available is in accordance with the index or description of the content of the site.

*Coverage* refers to depth and extent of the information.

Possible question criteria of coverage are: a) the information has sufficient depth; b) the resource covers the subject adequately; c) there are no obvious omissions.

3.1.2. Form criteria

As concerns form criteria, they deal with the presentation and the structure of the information and the interface offered to users.
Tab. 2 - Form criteria and definitions

<table>
<thead>
<tr>
<th>Form</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Navigation</td>
<td>It depends on the ease to find the way within a site, and to get to the information needed</td>
</tr>
<tr>
<td>Usability</td>
<td>It refers to how easily the site allows users to get to the information efficiently</td>
</tr>
<tr>
<td>Provision of user support</td>
<td>It depends on various facilities to help end-users to answer their questions and solve problems in accessing information</td>
</tr>
<tr>
<td>Use of technology and recognized standards</td>
<td>It depends on technology and standards that give users access and allow them to make use of all components of a site</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>It depends on consideration given to the appearance of the site, on adoption of good design principles and on friendly communication dialogue</td>
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</table>

Navigation refers to find a way within a site, and to get to the information needed. Users should get support to help them understand the structure of the resource and to find their way. Possible question criteria of navigation are: a) the resource has an index or site map that gives an overview of its contents; b) the resource is structured in convenient pieces of information that can be easily browsed; c) the resource has an adequate search facility; d) there are good navigational aids available ("back", "forward", "home").

Usability supports user performance, ease of navigation and understandability. Possible question criteria of usability are: a) how do user features (search engines, "help" systems, interactivity) aid you in finding and understanding information on the site; b) how do alternative access features (for text-only and heritage browsers, for sight or hearing impaired) aid different users; c) how well does the resource address your particular information needs.

 Provision of user support includes the various facilities to help end users to answer their questions and solve any problems they may have. Users may need support concerning the content of the resource or the mode of access to the technology used. The Internet is accessible 24 hours, so static online support that is permanently available can be very useful, although in some cases interactive support is preferable.
Possible question criteria of provision of user support are: a) clear instructions are provided; b) online help is available; c) online documentation is available; d) interactive help is provided (for instance e-mail contact, a telephone number); e) training materials and/or tutorials are provided.

The use of technology and recognized standards that give users access and allow them to make use of all components of a site. Internet standards and technologies are continuously under development and often influence the level of access for users who have various hardware and software to their disposal. The criteria for this part will need to be evaluated periodically because of new developments in the area of technology and connectivity.

Possible question criteria of the use of technology and recognized standards are: a) use of standard HTML; b) availability of a minimum set of metadata elements of a document: name of the information provider etc.; c) use of standard multimedia formats.

Aesthetics intents to follow good design principles.

Possible question criteria of aesthetics are: a) does the resource follow good design principles; does it look and feel friendly; is the balance of text, images, links, headers, font sizes and white space good; are the size, colour and animation of the images appropriate

3.1.3. Process criteria

Process criteria refer to the processes and systems which exist to support the information resource. The system that is situated between the creation of the information by the author and the access to the information by end users is determined by many parameters that may influence the value of a resource for an end user. Internet information is volatile and likely to change over time. Resources may at any moment be changed, moved or deleted. Old resources or older versions will not always be archived

<table>
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<tr>
<th>Process</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Information integrity</td>
<td>It refers to the stability of the content of the resource over time</td>
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<tr>
<td>Site integrity</td>
<td>It means guaranteed access over time</td>
</tr>
<tr>
<td>System integrity</td>
<td>It has to do with the permanent accessibility of the site over time</td>
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Tab. 3 - Process criteria and definitions
Information integrity refers to the stability of the content of the resource over time. This depends on the author or the information provider.

The fact that the content of Internet resources may at any moment be changed, updated or replaced can be an advantage as well as a disadvantage. Time dependent resources (such as time tables) depend on regular updates, while statical resources (such as novels) should remain unchanged. For various types of services and documents different criteria will be valid.

Possible question criteria of information integrity are: a) if information is time dependent, it should be frequently updated; b) if information is static, it should be protected against unauthorised changes; c) the information should be up to date; d) the information is permanent and of lasting value; e) the information is archived.

Site integrity means guaranteed access over time. This is normally the work of the site manager or the webmaster.

Sites may be moved or removed by those that are responsible for making the resource available over the Internet. Addresses, directory structures, formats and interfaces may be changed at any moment.

Possible question criteria of site integrity are: a) the information is well maintained and up to date; b) the site is proven or expected to be durable; c) the site is adequately administered and maintained; d) any revisions are announced; e) the links are well maintained; f) the organisation or person hosting the resource seems to have the commitment to the ongoing maintenance and stability of the resource.

System integrity has to do with the permanent accessibility of the site over time - usually the work of the systems administrator.

If a server is not permanently accessible this may influence the value of the resource, independent of the intrinsic value of the information content. The technology and systems used to improve levels of access may influence the judgment formed about the resource.

Possible question criteria of system integrity are: a) the technical performance of the resource is acceptable; b) the system underpinning the site seems to be stable; c) adequate measures seem to be taken to maintain the integrity of the system.

Despite the production of guidelines and recommendations, using such indicators for assessing the reliability of documents and sites is not
always an easy task. Efforts to formalise such criteria and provide tools facilitating evaluation are surely useful, but for the assessment of sources, no “one size fits all” approach is adequate, and critical thinking is a paramount requirement.

3.2. Evaluation criteria of legal web resources

Legal information has specific features due to its nature, its different utilisation purposes and the intrinsic need for integration of its components, represented by legislation, judicial decisions and legal literature. Accessing such material is a primary requirement for a number of communities: citizens, scholars and professionals. The dissemination of legal information contributes to the rule of law and to the overall ideals of democracy in a number of ways. Many are the benefits of accessing legal information, such as the awareness of the applicable rule of law, the creation of conditions necessary to the equality and fairness of a legal system, while guaranteeing the functioning of democratic institutions, the development and improvement of social and economic conditions.

Ignorance of the law excuses no one, and citizens have the right to know the laws governing their conduct. Everyone has the means to gain knowledge of the law, and governments have an obligation to put forth legal knowledge by enabling access to the law using all available and reasonable media.

The Internet promises to effect a radical transformation in the existing system of legal information. Legal producers and providers have made a great progress in placing legal materials on the web; these efforts


have almost been too successful, as legal researchers can now deal with a great amount of information spread across different servers.\(^\text{30}\)

However, despite the benefits, there are still many limitations.\(^\text{31}\) These mainly concern: a) difficulty in retrieving pertinent legal information; b) lack of a logical and systematic method for the arrangement of legal information; c) difficulty of checking the quality of retrieved information. The consequences are that users of legal information are faced with both noise, magnified by the huge amount of heterogeneous materials, and silence, due to the fact that legal information is often unstructured and not properly categorized.

In such a context legal information professionals, as educators, information consultants, and system designers, have a crucial role to play in the future of legal information access.\(^\text{32}\)

Nowadays legal research is facing a serious problem: the abundance of electronic legal information makes it very difficult to organize such resources in a way that they can be consulted with confidence, checked and cited as valuable sources.\(^\text{33}\) One main issue here is the instability of sites, which may change or even disappear. Dead or broken links on the web are common: sites just disappear or are not updated; this is a really crucial issue in the law domain.\(^\text{34}\)

One mostly debated topic is the validity of content in print as opposed to electronic format.\(^\text{35}\) In the print world the reputation of the


author is directly verifiable during the publication process preventing, in principle, that informal, poorly designed, difficult-to-use documents are delivered to the public. In Internet research, on the contrary, there is no systematic monitoring of much of what appears, except, of course, for articles published in the online forms of otherwise reputable scholarly journals and books, for official public sites offering legislation and judicial decisions, and for guides prepared by well established institutions and professionals. What is often found is distorted perspectives, commercial promotions, inaccuracies, web pages exhibiting very few clues regarding their origins and authoritativeness. Moreover some relevant information, such as dates, authors, references and alike are not always easy to locate.

It is worth noting that modern legal research greatly relies, apart from legislation and judicial decisions, on secondary sources 36, and researchers need help from legal experts and legal information professionals who know how to organize, analyze, index, information to make it accessible. Discontinuous and obsolescent networked information is of low utility and runs the risk of becoming extremely expensive in economic terms as well as making information providers and users’ wasting precious time.

For example legal professionals are very concerned about the rapid evolution of statutes and judicial production. They require adequate services to access legal literature outputs, and recommend appropriate measures to avoid that such information become obsolete and hence useless. Therefore a fundamental function of legal practitioners and experts in their activity of law interpretation and application is challenged, as they need updated and timely information resulting from law scholars’ and professionals’ intellectual reasoning as expressed in their works 37.

Differences in search and browse options and terminology used in retrieval systems may often disorient users. Quite often, even when a

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36 D. POULIN, Open access to law in developing countries, cit.

standard interface is used across information systems, the different functionalities offered by these systems are an obstacle to precise and consistent retrieval of legal information. Beyond the diversity of interfaces, a more difficult problem is the difference between the various law classification systems, due to the system-bound nature of legal classification and terminology that reflects the different legal orders of the various countries. While this is an intrinsic problem that legal information faces in any format it may appear, it is magnified in a global electronic environment where multiple systems are offered to users, who need guidance in the selection of materials and services.

In such a complex and articulated environment evaluation criteria are as well starting points in building electronic resource collections, in developing Internet-based information services, and in instructing users in the effective use of digital information.

Today legal information is present on the web in various forms and types of resources: government (international, national, regional), law faculty and commercial web sites containing legislation, judicial decisions, legal literature. It is a matter of fact that the Internet contains both futile and official, scholar, and specific data that it is often difficult to differentiate. Quality, reliability and currency of web legal sources vary tremendously, and they cannot be always consulted with the same confidence as officials codes of law in print and other primary and secondary sources found in law library and institutional settings. In order to ascertain if the Internet is a viable source of legal authority and information, it is crucial to rely on effective evaluation criteria. As mentioned above, general evaluation criteria defined for web sites are also valid for legal information, but in legal research some indicators have specific relevance and significance due to the type, content and origin of the material.

Resources should be evaluated on the basis of three types of criteria: the information content, the form in which the information is presented and the processes that support and guarantee Internet access.

This classification criteria has been chosen for selecting Internet resources for *Intute: Social Sciences*\(^{40}\), which includes a Law gateway. Here features particularly relevant for legal sources are the provenance of information from an authoritative source, verification of the motivation of the provider for making the information available, presence of substantive and value added information, composition and organisation of material, user-friendly interface, user support provided by the system, information and site integrity.

A number of indicators are commented below in relation to their relevance to law material. Surely authority has to be checked to verify if the author or institution is well regarded and frequently cited. Special care must be taken in interpreting the goal of sites in order to mistrust sites created to market an individual or a law firm, while users expect an objective and comprehensive analysis of the law. Site’s sponsor or its affiliation is also crucial in assessing the credibility of legal resources. The same is true for the domain type of entity that posted the website, favouring domains such as “edu”, “gov”, “org”, even if in the field of law, linked as it may be with business, domain types as “com” should not be refused per se.

The review of sponsor’s site is important for discerning any bias or point of view, and the mission statement hopefully present in sites can provide evidence of the kind of material expected to be found.

Identification of authoritative sites and sources, a general requirement for all domains, becomes essential in law, where information of dubious or indeterminate quality must be absolutely avoided.

Uniqueness of the site is also important in legal research, as users should not be confused with duplicate materials which can make them waste time while losing accuracy.

Content authentication is a must in law related material and credibility of a web site’s author or sponsor is not enough\(^{41}\). Not only is explanation necessary of the relevance and legal standing of the legal docu-

\(^{40}\) *Intute: Social Sciences* is a Social Science Information gateway, built in UK as part of the Resource Discovery Network (http://www.intute.ac.uk/socialsciences/lost.html).

ments presented, distinguishing between proposed regulations adopted and in force, but also detailed information on provision of transcriptions rather than original law texts.

As regards currency, competent legal research requires access to current legal material for which it is extremely important to know effective dates, dates of issuance or expiration.

Search and retrieval facilities should include logical display of results, with cases weighted by age, frequency of reference, level of court/jurisdiction.

Arrangement of legal documents and presence of hyperlinks are important for effective access and use of legal information. A simple chronological list of legal documents is not enough for most users: they expect articulated sections to locate specific legal information and links to hopefully a few authoritative sites rather than all sites potentially relevant. Related to this is the stability of web sites, as users must be aware if they can rely the information contained and safely access legal documents produced by an agency or government entity.

4. INVESTIGATION ON THE ACTIVITY OF ASSESSING THE QUALITY OF RESOURCES

Based on user needs studies and on the findings of user perceptions of legal web resources resulting from surveys undertaken by ITTIG, it has been considered relevant to investigate on which criteria are retained suitable for legal resources by a group of legal information experts who use to assess legal web resources. The exploratory case study is represented by the legal researchers operating at ITTIG in their evaluation activity of Italian legal web resources for their research and teaching work.

In order to conduct an in-depth analysis of beliefs and attitudes in evaluating legal web resources, before undertaking a specific investigation of legal experts in assessing resources, focus group sessions with key informants represented by legal and social science librarians and law researchers working at the University of Florence have been organised to analyse their perceptions and beliefs in selecting legal web resources. Their ideas have formed the foundation, in association with the research...

42 M. STEFANINI NEWMAN, Evaluating criteria and quality control for legal knowledge systems on the Internet: a case study, cit.
studies, recommendations and reflections provided by the literature, to
prepare the interviews to ITTIG’s legal experts.

The aim was to gather fresh information provided by information
professionals and librarians having practical experience of the issues
involved for their commitment to provide access to high quality elec-
tronic information in support of users.

Three main issues reflecting different facets of evaluation of legal
resources have been proposed to participants. These concerned: a) what
participants meant by quality of electronic legal resources; b) application
of quality criteria in practice; c) whether differences exist in evaluating
print and online legal resources.

ITTIG’s legal information experts have been chosen as key respon-
dents to a series of questions aimed at gathering an in–depth under-
standing of how evaluation is carried out and what is the relevance of
indicators chosen in assessing legal resources. The issues proposed for
discussion concerned the purpose and context of evaluating web
resources, quality criteria of web-based legislation, judicial decisions and
legal literature, subjectivity and objectivity in assessing resources, con-
formity of actual Italian legal web resources in relation to content, form
and process criteria.

Following this investigation, observation of the behaviour of the
experts who had been previously interviewed has seemed appropriate
when at work, examining their activity of accessing, navigating and evalu-
ating legal web sites.

The evaluators were asked to assess a group of official and commer-
cial legal web sites containing legislative, judicial and doctrinal material.

4.1. Findings of the investigation

The data collected from the focus groups’ discussion, interviews and
observation show several specific aspects in relation to the topics which
are currently debated on evaluation of general web resources and in par-
ticular of electronic legal material.

People investigated, represented by the ITTIG’s legal experts, law
librarians and law research assistants, considered many of the criteria that
are usually recommended for no domain specific materials as relevant for
assessing legal resources; this same approach is found in the literature
specifically dedicated to legal electronic resources, where the suitability of general criteria for law material is confirmed\(^{43}\).

However, it is worth noting that ITTIG’s people in particular have considered such criteria in relation to the different types of legal information sources: legislation, judicial decisions and legal literature and have retained some criteria strictly pertinent to some sources, assigning them a specific meaning and value.

A number of aspects have been retained as particularly relevant:
- the concept of quality;
- expectations in quality versus the actual situation;
- relevance of content criteria;
- process and methods followed in evaluation and application of criteria in practice;
- attitude towards legal information in electronic format as opposed to printed format.

4.1.1. The concept of quality

Quality of electronic resources is at the heart of the question of evaluation criteria. Both in the literature and in the present investigation it has been tackled in terms of the criteria to assess it. The literature does not explicitly provide a definition of quality of web sites, but identifies evaluation criteria which serve to assess quality. In fact it appears that it is a difficult concept to grasp and describe, as shown by the focus groups’ participants who, when explicitly asked for a definition, identified it with some indicators. Here some definitions are reported: “quality is synonymous of originality”; “quality means consistently organized and well structured resources”; “quality is a value related to content where data provided are not simply information, but knowledge”; “quality is to be identified with fair reputation of authors and responsible providers”.

4.1.2. Expectations in quality versus the actual situation

In comparing the expectations of interviewees as regards the requirements of electronic legal resources with the features found in the actual web based Italian law resources, some discrepancies are found.

\(^{43}\) M. STEFANINI NEWMAN, Evaluating criteria and quality control for legal knowledge ..., cit.
Before commenting on the results, it is worth mentioning that, when ITTIG’s experts were asked to indicate the criteria they retained important in assessing legal resources, they used their own expressions to formulate them. When they were asked to indicate the conformity of the actual Italian legal resources to evaluation criteria, they were given a list of criteria in a pre-coded form, (subdivided by content, form and process indicators) as expressed in the related literature.

As for legislation, there is no big difference between expectations and reality of resources as evaluated by the people under investigation. Authority, currency, coverage, information integrity, navigation facilities are the criteria which are expected by most of the interviewees and, to a certain extent, found to be present in the actual legal output.

There is evidence that in Italy online legislation is the source which most responds to quality requirements to be effectively used as evidence in trials and extrajudicial settings.

Some discrepancies are found between expectations and the actual situation in judicial decisions’ electronic output especially as regards coverage and information site integrity criteria, while for authority and currency no major differences exist. It is worth noting that the assessment of actual electronic judicial output was difficult to accomplish by the investigated people, due to practical reasons that most resources are on charge and not easily accessible.

As regards legal literature, strong discrepancies exist in interviewees’ opinion between expectations and the actual situation. Quality indicators that are expected by most of the investigated people and to be found simultaneously, such as authority, coverage, quality of writings and search quality, are retained practically nonexistent in the actual legal literature output, which is, therefore, considered far from optimal.

4.1.3. Relevance of content criteria

It appears that the criteria most commonly chosen for the evaluation of legal electronic resources by ITTIG’s experts are those relating to content, such as authority, objectivity, coverage and currency of information. Such belief reflects their role as jurists, who are mainly concerned on substantial content to be found for research and professional activities. This is in line with what is emphasized in the literature and confirms the appro-
priateness and relevance of well established criteria which are commonly adopted in the print world. This does not reduce the importance of form and process criteria to be applied in the evaluation of the web, as recommended in the literature and equally agreed by the investigated people.

4.1.4. Process and methods followed in the evaluation and application of criteria in practice

In the literature reference is made to the steps and sequence of checks to be made in the evaluation process\textsuperscript{44}, while the investigated people show an approach where specific characteristics are checked randomly and no standard order is followed in investigating certain features.

As regards the practical application of evaluation criteria, it appears that subjectivity is recognized as a quite ordinary method in assessing resources: this is the case of the ITTIG’s legal information experts, who often rely on their own expertise to ascertain, for example, the reputation of authors and sponsors. It is worth noting that this behaviour is confirmed by the literature where evaluators’ own expertise is retained a valuable method to evaluate the reliability of the reasoning and the overall pertinence of authors’ arguments in dealing with a certain topic\textsuperscript{45}.

Despite their subjective approach, ITTIG’s experts expressed the need for checklists helping to focus on a number of key issues and characteristics to be identified in resources, so to ascertain their existence or non existence and ensure in-depth evaluation.

4.1.5. Attitude towards legal information in electronic format as opposed to printed format

Focus groups’ participants, composed by law librarians and legal research assistants, insisted on the scarce reliability of Italian electronic legal information as a whole. In the literature, although some concern is shown on the validity of electronic legal resources\textsuperscript{46}, legal information on

\textsuperscript{44} Critically analysing information sources, cit; R. HARRIS, WebQuester: a guidebook to the Web, Guilford, Dushkin/McGraw-Hill, 1999.

\textsuperscript{45} R. HARRIS, WebQuester: a guidebook to the Web, cit.

\textsuperscript{46} R. HAIGH, What shall I ware to the computer evolution? cit.
the web is a source of its on right to be accepted together with the traditional printed ones, provided that it responds to criteria which are usually those proposed for general resources\textsuperscript{47}.

The lack of flexibility and the distrust with which librarians and law research assistants look at electronic legal resources is likely to be due to some low quality legal resources recently appeared in Italy. This is especially true for legal literature as contained in some commercial law sites which are far from meeting the specific requirements of legal users who expect precision, objectivity, in-depth coverage of topics.

5. CONCLUSIONS

5.1. Main achievements

Nowadays applying evaluation criteria for assessing quality web resources is considered an appropriate method to ensure that electronic information be effectively selected. This is confirmed by the literature on assessment of resources over the Internet\textsuperscript{48}, as well as by the various practices adopted all over the world in research and business environments.

Despite the considerable work undertaken in this direction, both at theoretical and practical level, there are still issues which require further analysis. This is due to the rapid and increasing provision of resources with ever changing features and to the growing number of people and organisations putting material on the Internet. Developments in Information Technology and Communication (ITC) are also playing a major role in the explosion and diversification of resources.

The experience shows that there is a strong need for criteria to be used in the evaluation of web-based information resources, and that such cri-


criteria may vary in relation to the discipline and domain to which these resources belong, as well as to their format\textsuperscript{49}.

Moreover, difficulties are encountered in interpreting and applying criteria, even if guidelines and recommendations have been provided in various settings.

Some important topics remain to be investigated, such as the relevance and implications of the purpose of evaluation, that is consideration of users’ characteristics and needs in evaluating web resources. Another major aspect to be explored is the incidence of the format of resources in relation to the criteria to be applied in assessing resources. These topics are not adequately addressed in the investigation due to the choice, in designing the interview questions, to explore which criteria are most relevant.

The results of this investigation cannot be generalized in full and further analysis is required in wider contexts. The information professionals, law research assistants and legal experts who have been investigated, have the skills and practice to properly deal with the explored subject, but are a very small sample, somehow new at reflecting on their behaviour and beliefs in assessing web legal resources. Once consensus will be reached both by information professionals and legal experts, for evaluation criteria to be directly adopted on a large scale by end-users and providers of legal information on the web, initiatives have to be taken to prepare appropriate tools and guidelines to support information resources’ assessment.

A summary of key achievements and an analysis of relevant themes is presented below.

5.1.1. Identification of evaluation criteria for law material

Key informants and in particular the legal experts under investigation fairly contributed to the identification of criteria for the assessment of legal web sites. By discussing the concept of quality in reference to electronic material, by identifying issues in the practical application of criteria and by examining possible differences in evaluating print versus online web resources, the investigated people claimed the importance of con-

\textsuperscript{49} A. Cooke, \textit{A guide to finding quality information on the Internet: selection and evaluation strategies}, cit.
tent criteria for the assessment of web-based law material, identifying a number of quality indicators, such as authority, currency, coverage, high quality indexing as mostly relevant.

Authority was considered extremely important and specific tips were added for the interpretation of this indicator. Not only was the reputation of authors (mainly in reference to legal literature) highly recommended for careful checking, but also of the organisation where the resource is hosted. In particular public institutions were considered as synonym of quality, whereas for private and commercial sites a more strict checking was retained essential.

5.1.2. Comparison between expectations in quality and the actual situation of Italian legal electronic resources

This topic was raised as a point of investigation to better understand the legal experts’ opinion on desirable features of web-based law materials. This gave a picture of expected quality indicators as compared to what is actually found in the Italian legal information output. Discrepancies were evidenced, thus providing insights on the relevance of criteria as for legislation, judicial cases and literature, while highlighting the positive and negative features of Italian legal electronic resources.

This is to be considered a first glance assessment which requires further investigation so to allow proposals and recommendations on the quality assessment of Italian legal resources.

5.1.3. Identification and relevance of criteria in relation to the type of legal sources

During the interviews, questions were raised to provide insights on the peculiarities (and their implications for evaluation) of legal information as composed by three different types of legal sources: legislation, case law and legal literature. Their specific features resulted to affect the assessment of the corresponding materials in the sense of requiring particular indicators or at least, in certain cases, an appropriate interpretation of general indicators.

In particular not only were some indicators identified as mainly relevant for each legal source, but indications were provided on how to interpret them in the light of the characteristics of each source. This is to be
taken into account for the production of checklists as useful tools to help evaluators in their work.

5.1.4. Interpretation of criteria and their application in practice

This theme was worth tackling as affecting the process of evaluation. It reflects the concern for thorough understanding of the real meaning of certain criteria which are expected in valuable law material. In this inquiry a number of indicators have been analyzed in-depths, and the reason for their relevance has been explained by the investigated people in a way they can be used as a basis for preparing tools to help in the assessment and appraisal of resources. One example is coverage, which has been analyzed in its various aspects, depending on the type of legal source examined.

The topic of subjectivity versus objectivity in evaluating resources contributed to the understanding of the approach followed by the investigated legal information experts. Subjectivity was claimed to be a common attitude in the ITTIG people’s selection activity. They insisted on personal skills, long experience in the field, and thorough knowledge of the subject as conditions helping in the assessment of resources. This is confirmed by the literature where particular mention is made of such approach.

Insights have also been gained on the attitude of the legal experts under investigation as to the purpose and context in which their evaluation activity takes place. Here several particular aspects have emerged: no specific consideration, by the legal experts, of users’ purposes in evaluating resources, except mentioning that their evaluation was based on their specific expertise as jurists and hence that the target users of their evaluation activity were in fact highly experienced legal users.

Difficulties in the practical application of criteria were underlined, and requirements such as time, skills and appropriate tools were claimed as factors affecting the evaluation itself. These limitations were differently emphasized by law research assistants, legal experts and librarians, the latter showing the greatest concern about such constraints.

5.2. Final remarks and recommendations

On the whole the achievements of this inquiry can be summarised in the provision of expert opinion of a group of legal experts on criteria for
assessing electronic law material and on the relevance and meaning of
quality indicators in relation to different legal sources. Parallel to this,
record is provided of the process of evaluation as experienced by the
group of legal experts examined, and of the need for proper interpreta-
tion of criteria. Indications on the application of criteria in practice are
also provided, together with an analysis of the actual Italian legal web-
based resources and their conformity to the criteria which are debated
worldwide and are retained valuable by the investigated people. These
findings can be made available to critical appraisal within the legal infor-
mation community. First of all they can be used by legal information pro-
fessionals for constructive debate. Only indirectly they may be useful for
providers of law-related web sites, who need formalized guidelines based
on official consensus of a large community of legal users expressing their
needs. The results are intended as starting points for further in-depths
analysis of the peculiarities of the increasing number of law resources
appearing on the web, that are to be carefully examined for selection pur-
poses. Related to this, initiatives should be agreed and strengthened for
the preparation of clear articulated check-lists to help in the interpreta-
tion of general indicators as validity, accuracy, completeness. The pro-
duction of guidelines specifically thought for the various types of legal
sources, based on the findings of this study to be verified in wider con-
texts, is an additional follow-up measure which is highly recommended.
The proposed support tools, which should be prepared in Italian, could
fill a gap in the area of legal research on the web.

In conclusion, on the basis of the present research and of previous
studies and undertakings on evaluation of both general and legal
resources, there is evidence that web-based law material is a context for
specific selection criteria or at least for specific interpretation of a num-
ber of general criteria. In such a context and in particular in the Italian
situation, measures to be taken are the following:

- work in the direction of providing a systematic set of quality indica-
tors specifically fitted to the peculiarities of legislation, judicial decisions
and legal literature’s electronic material;
- define patterns of methodological approaches in selecting legal
resources, establishing steps to be followed in the evaluation process and
checks to be made on several features of legal electronic resources;
- encourage exchange of information and practices at national and international level among legal information professionals, law researchers and jurists on requirements of web-based law material and on the methods for their assessment;
- start contacting legal publishers and providers of electronic law material, expressing the concern by the legal research community for quality resources to be produced, while discussing strengths, weaknesses and requirements of electronic legal material on the basis of evaluation criteria as analysed in this investigation.