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**A SURVEY OF WEB SITES OFFERED BY LEGAL PRACTICES IN  
SCOTLAND**

**E-Commerce and Legal Practice in Scotland:**

**A Benchmark Survey**

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**Abstract**

As predicted by Susskind the Web is becoming an important vehicle for marketing the legal practice and a tool enabling the delivery of legal services to clients. To what extent can law firms benefit from selling their services through this medium? Despite the growth of the Web, there is little research concerning the functionality and strategic business use of Web sites within the area of the provision of legal services.

This paper produces a unique and comprehensive benchmark survey of eighty-four Web sites offered by Scottish legal practices. It assesses the Web sites according to two criteria, firstly, James Ho's Matrix based on customers perception of value-added benefits and secondly, the Five Quadrants Evaluation Criteria (5-QEC) developed by the authors, which examined the sites under five headings: Ideas & Content, Organisation, Language & Conventions, Presentation and Technical. The results of the survey assess whether or not Scottish solicitors are taking the opportunity to pursue an e-commerce strategy and trade via the Web, or alternatively focus on the provision of information.

**Keywords**

E-commerce; Internet; Web sites.

**1. Introduction**

The Internet's world-wide 'network of networks' has revolutionised communications technology, redefining and reshaping the way business is conducted. E-business (or electronic business), a term first used by IBM in 1997 (Amor, 1999), refers to the transformation of key business processes through the use of Internet technologies. This transformation has three key aspects: firstly the use of

Intranets to improve communications and collaboration within a firm; secondly Extranets linking the firm with customers and suppliers; and thirdly e-commerce (electronic commerce) applications to enable customers to purchase goods and services via the Internet. This infrastructure provides what Bill Gates (Gates, 1999) calls a 'digital nervous system'.

The legal profession has not been immune from these changes, as Richard Susskind notes (1998, p ix):

'... thousands of lawyers across the world are using the Internet as their principal electronic mail systems, while a growing number of law firms are setting out their stalls on the World Wide Web ('the Web') in the belief that it will be central to the delivery of legal services in years to come.'

Similarly, Andrew Terrett (1999, p 3) argues that radical changes wrought by the Internet will alter the face of legal practice, and the delivery of legal services:

'The only question is when. This disruption will not happen in 1999. But it will happen within the next few years. Most information technology simply automates existing legal processes - the creation of documents, the production of bills and so forth. The Internet has the capacity not only to automate but actually to *alter* the practice of law and the delivery of legal services.' [Emphasis in original.]

This paper focuses on the marketing and e-commerce opportunities offered by the Internet in the specific context of legal practices in Scotland. Eighty-three Web sites offered by Scottish legal practices were surveyed over the period July-September 1999. This was the total number of Web sites offered by Scottish legal practices in the period of the study. Sites were assessed based on two instruments, firstly, James Ho's Matrix (Ho, 1997) based on clients' perception of value-added benefits and secondly, the Five Quadrants Evaluation Criteria (5-QEC) developed by the authors. The instruments and process of evaluation are discussed in detail to make transparent the criteria against which the sites were measured, establishing metrics for solicitors to evaluate web sites. The criteria could be used for example to evaluate their own site, the site of a rival firm, or the work of a Web site developer producing a new site on behalf of the firm.

The results of the survey assess whether or not Scottish solicitors are taking the opportunity to pursue an e-commerce strategy and trade via the Web, or alternatively focus on the provision of information.

## **2. The e-commerce (r)evolution**

Ridd (1999) identifies four main reasons for legal practices to be on-line:

Firstly, access to legal information resources. There is an increasingly wide range of legal information available via the Web (see for example Holmes and Venables, 1997), including specifically Scottish legal sites such as the Scottish Courts Site (Gailey and Sibbald, 1999). Secondly, the internal and external communications opportunities offered by electronic mail (e-mail). Thirdly, the use of the World-Wide-Web ('the Web') as a marketing tool; and lastly e-commerce which is also delivered via the Web.

### **2.1 E-commerce**

E-commerce can be viewed from a number of perspectives, such as the delivery of information by electronic means, as a business process, or improving quality and reducing the speed of service (Kalakota and Whinston, 1997). More generally the term e-commerce is for a buying and selling process that is supported by electronic means in the electronic marketplace (ie via the Internet). Organisations can offer products or services complementary to traditional business or provide a new line of business (Timmers, 1998; Gascoyne and Ozcubukcu, 1997). For potential buyers e-commerce

offers convenience, the ability to buy goods and services 24 hours a day, 7 days a week, 365 (or 366) days a year. On the other hand, firms offering goods or services can make quick adjustments to market conditions, reduce costs, and build closer relationship with customers. Bloch et al, (1996, p 2) consider e-commerce as bringing the benefits of:

- \* Directly connecting buyers and sellers
- \* Supporting fully digital information exchange between them
- \* Suppressing limitations of time and place
- \* Supporting interactivity and therefore able to dynamically adapt to customer behaviour
- \* The site can be updated in real-time providing an always up-to-date service

## ***2.2 Opportunities for legal practices***

We are entering the age of the new electric lawyer where clients will be able to seek legal advice without having to meet a lawyer (Wall, 1998). There is a growing view that in the future legal services will be provided via the Web, and also new forms of delivering information will evolve on this new medium (Blasdale, 1999). Susskind (1998) foresees a burgeoning latent legal market serviced by the new technologies.

Legal practices, the focus of our research, are typically small organisations (see for example Christian, 1998). Recent research studies on the use of Internet by small firms (Lymer and Johnson, 1997; Poon and Swatman, 1997; Schubert and Selz, 1997; Timmers, 1998) show that they mainly use the Internet as a communication medium (e-mail). The Internet is enabling small-scale enterprises to communicate, share and retrieve information with key stakeholders (customers, suppliers, government agencies and competitors) at low cost. However, to secure the benefits of the Internet, small firms 'need to be prepared for the electronic commerce (e-commerce) era which will secure their future competitiveness' (Poon and Swatman, 1997, p 886).

The Internet may provide particular benefits to smaller firms as it 'opens up cyberspace to anybody to publish information and/or to establish a direct link to their customers, from the largest corporate organisation right down to the lowliest entrepreneur' (Barnatt, 1996, p 75). It provides small sized companies and large organisations with the same 'weapons' to compete in this new virtual market (Gascoyne and Ozcubukcu, 1997), a market that is probably the closest approximation towards a perfect, frictionless market (Schubert and Selz, 1997). This opportunity to break free from the traditional indicators of reputation and expertise such as the size and opulence of offices provides what Susskind (1998, p 229) calls a 'democratization within the legal profession'.

Susskind (1998) believes legal web sites will move through four generations. The first generation is the most popular among lawyers today. These sites are promotional sites that present the services offered by the firm in the form of an on-line brochure. These sites evolve, becoming more sophisticated and offer regularly updated legal articles and publications: the second generation. In the third generation sites, materials are organised according to the legal discipline they relate to. The fourth and final generation provides what Susskind calls 'real life' sites which offer on-line legal guidance relating to clients' particular 'problems, activities, tasks and processes' (Susskind, 1998, p liv). It is this final generation allied to the electronic transfer of funds, which provides a true e-commerce based service - payment and delivery on-line.

## **3. Methodology**

### 3.1 Objectives

In general terms, the objectives of the research were two-fold. Firstly, to identify all Web sites offered by Scottish legal practices at the time of the study. Secondly, to evaluate the sites according to a number of clearly defined criteria to gain a picture of the state of the electronic provision of legal services ('e-legal' provision) in Scotland.

### 3.2 Identification of Sites

The two primary sources used for the identification of the Scottish legal sites were Delia Venables' *Portal to Legal Resources in the UK and Ireland* (<http://www.venables.co.uk/>) and the Scottish Law Directory, 1999-2000. Seventy sites were identified from the Venables site and a further thirty web addresses via the Scottish Law Directory and *InfoLaw: Information for Lawyers Limited's Gateway to the UK Legal Internet* (<http://www.infolaw.co.uk/home.htm>). However, only fourteen of those thirty addresses could be accessed. At the time the evaluation of sites was conducted (July-September 1999) the population of web sites offered by Scottish legal practices stood at 83. This represents 6.5% of the approximate total of 1300 legal practices in Scotland. The equivalent figure for England and Wales is a broadly comparable 7.0% of firms with Web sites, based on approximately 700 sites (from Delia Venables' site) and 10,000 firms (Terrett, 1999, p xiii)

Solicitors' firms are distributed across Scotland from the Shetland Islands to the Borders; with over a third of the total number of firms based in Glasgow and Edinburgh. In general firms are small-scale with forty-four percent of firms consisting of a sole practitioner, and ninety-five percent of firms having less than ten partners (Journal of the Law Society of Scotland, 1997, p 380).

A comparison of the number of legal practices in Scotland, grouped by size, and the proportion of these with Web sites is shown in Figure 1.

Size of Firm (Number of partners)	Number of firms in Scotland	% of total number of firms in Scotland	Number of firms with a Web site	% of total number of firms with Web site
Sole practitioner	544	44%	8	10%
2-5	504	40%	37	45%
6-10	140	11%	13	16%
Over 10	57	5%	25	30%
Total	1245	100%	83	100%

**Figure 1 Web sites offered by legal practices in Scotland**

Source of overall number of firms: *Journal of the Law Society of Scotland, 1997, p 380*

Comparing all firms in general with those with Web sites, sole practitioners are underrepresented having 10% of those firms with Web sites from 44% of the population as a whole. In contrast the 5% of firms with over 10 partners constituted 30% of Web sites.

Firms were also categorised according to the geographical location. Four areas were considered: Aberdeen and Grampian, Borders, Central Scotland and Others (Figure 2). Although firms throughout Scotland offered sites, not unsurprisingly a substantial majority of sites were based in the Glasgow-Edinburgh conurbation of Central Scotland (71% of sites) where there is a concentration of firms, including the largest practices.

AREA	Number of Legal web sites	Percentage
Aberdeen and Grampian	12	14%
Borders	3	4%
Central Scotland	59	71%
Other	9	11%
TOTAL	83	100%

**Figure 3 Web sites by location**

### 3.3 Instruments

To evaluate the sites two instruments were used. Firstly, James Ho's Matrix based on customers perception of value-added benefits and secondly, the Five Quadrants Evaluation Criteria (5-QEC) developed by the authors, which examined the sites under five headings: Ideas & Content, Organisation, Language & Conventions, Presentation and Technical. The instruments were aimed at two different aspects of the Web sites: the functionality of the sites from the point of view of a prospective client (Ho's matrix) and the design of the web sites (5-QEC). The two instruments are described in detail in the following sections.

### 4. Ho's Matrix

Ho's (1997) matrix was chosen because it provides a general framework for evaluating sites from the perspective of the customer, or prospective customer. Ho surveyed a varied sample of over 1,000 commercial sites across a range of countries, industries and firm sizes. The matrix was chosen because of the simplicity of the scoring system and its prior use with small and medium-sized enterprises (SMEs) (Webb and Sayer, 1998), appropriate for the size profile of legal practices in Scotland. Ho classified the business purposes of a commercial web site into three categories:

1 **Promotion**, which is specific to the products and services that a business offers to customers

2 **Provision** refers to the supply of information to gain goodwill, exposure, credibility, or to expedite communication.

3 **Processing** refers to those business transactions that are beyond the generation of sales leads by promotion.

He considers four types of value creation:

1 **Timely** applies to time-sensitive information and not to the speed of its delivery.

2 **Custom** is predicated on predisposed preferences of the visitor

3 **Logistic** is predicated on pre-programmed propositions of the site.

4 **Sensational** is totally subjective.

To clarify the terminology, Custom can be regarded as value arising out of interaction between the Site and the visitor where the visitor has the choice (their `predisposed preferences'), whereas Logistic is more a case of `take it or leave it' (non-interactive). The framework can be illustrated as a three by four matrix in Figure 3. To aid understanding, examples are given of the specific facilities a

legal site might offer in each quadrant.

PURPOSE	Promotion	Provision	Processing
VALUE			
Timely	Services on offer	Press releases Job adverts	Special offers online
Custom (Interactive)	E-mail link to fee-earners	General e-mail link to firm	Services offered <i>and paid for via site</i> <b>(E-commerce)</b>
Logistic (Non-interactive)	List of services offered	General info re staff etc (not services)	Services offered by site but paid <i>by non-site method</i>
Sensational	Outstanding web design	Downloads	Discounts for web users

**Figure 3 Ho's Matrix for evaluating commercial Web sites**

In evaluating the sites, one point is allocated to each quadrant if the site has a facility that meets the relevant criteria. The maximum score is 12 points (one per quadrant). This method has the virtue of simplicity, although a limitation is that it penalises sites where several aspects fulfil the same criteria since only one will count towards the overall score.

Based on his sample Ho concluded that at the time of his survey sites mainly provided added value in terms of promotion and provision, with on-line processing of business transactions still undeveloped. Similarly, and closer to home, Webb and Sayer (1998) found that SMEs in Northern Ireland were only beginning to make use of the Web as a business tool.

## 5. The Five Quadrant Evaluation Criteria (5-QEC)

### 5.1 Development of the Instrument

To complement Ho's focus on the functionality of sites, and due to the specific nature of the industry segment - the Scottish legal profession - a more exhaustive and complete set of criteria was developed that would cover other aspects of Web sites.

Web site design is a source of continuing debate and it is not clear what works best. Certainly some designs do not work because they lack organisation and consistency, lack of 'ambience' or character, and fail to achieve the objects of the web site. Self-evidently, 'any set of guidelines is subjective and individual whereupon what may work for some users may be anathema to others' (Ford, 1995, p 16). The second instrument, called the Five Quadrants Evaluation Criteria (or 5-QEC), was devised to provide a more detailed account of web sites' good and less attractive or less useful features.

The 5-QEC was founded on two main sources. Firstly, an instrument adapted from the work of Al Rogers from the Global School Net Foundation and CyberFair Contest (Bakken and Armstrong (1999). Secondly, an academic marking scheme used to assess students' skills in multimedia and web design. These primary sources were complemented by current literature about Web site design (Siegel, 1997; Nielsen, 1997; Morkes and Neilson, 1998, Lynch and Horton, 1999) as well as the researchers own experiences in web design and legal practice.

## 5.2 Description of the 5-QEC

Evaluation of the sites was split into five areas (the quadrants) (Figure 4) with each quadrant further subdivided into a number of criteria (detailed in the Appendix). The rationale for the quadrants and criteria is described in detail in the following sections to provide both an account of the instrument and to act as a template or aide-memoir for others wishing to evaluate or design web sites.

Quadrant	Number of criteria
Presentation	9
Technical	8
Content	7
Organisation	7
Language/Grammar	3

**Figure 4 The 5-QEC quadrants**

### 5.2.1 Section A: Presentation

Siegel (1997, p 8 notes 'Who cares how great your content is if people are not attracted to it or don't find it pleasurable to read?' If there is not visual impression of shape, colour and contrast and pages are 'insipid' the audience will not feel persuaded to explore the content of the site (Conger and Mason, 1998). Presentation was considered the most important quadrant of the criterion, as it is the first thing a user/customer perceives when accessing a web site. The following criteria were used:

#### 1. Background and text work well together

Documents without contrast, graphics or careful page layout can be difficult to read whereas strong contrast and distinctive patterns will attract the eye and the brain of the user (Lynch and Horton, 1999). Background should be pale or mute to avoid interfering with text, although, if choosing carefully, boldly coloured backgrounds could also support legible text (Levine, 1996).

#### 2. Backgrounds appropriate to the aims and function of the site

It is important to use a background (such as a specific colour or graphic), that is appropriate to the user's expectations and the purpose of the site (Conger and Mason, 1998). 'Hot' colours, for example, provide a feeling of anticipation. Muted colours, on the other hand, give a feeling of calmness and stability and are probably the most appropriate for business sites. Some designers (Siegel, 1997; Levine, 1996) suggest white or a very pale colour as the best backgrounds for a site as they will never interfere with text and graphics.

#### 3. Appropriate frames, lists and tables

The goal of frames, lists and tables should be to produce a hierarchical structure that facilitates and guides users accessing the information within the site (Siegel, 1997; Conger and Mason, 1998). There should be a balance between the whole structure of the site and the relationship of the menu and individual content pages (Lynch and Horton, 1999).

#### 4. Appropriate and relevant graphics

As Sterne (1995, p 98) observes, 'a picture is worth a thousand words but a picture takes a thousand

times more data than a word' so there is a preference for small-size images that are really relevant for the content of the page (Cheng and Malaika, 1997). A complex page with graphics that takes a long time to download, may not fit on the average user's screen, and offers little on the functionality will annoy and repel the web user (Ford, 1995; Lynch and Horton, 1999).

#### 5. *Graphical elements are used consistently*

Again consistency and predictability are important, and graphics should create a 'strong, consistent visual hierarchy, where important elements are emphasised, and content is organised logically and predictably' (Lynch and Horton, 1999; also Nemzow, 1997) leading to a 'coherent house style' (Ford, 1995, p 50). Page shape, background, type, and sizing, should be uniform and mirror the home page structure because users assimilate information more easily when repetitive design elements are used. On the other hand, consistency makes the user become familiar with the site and consequently encourages visitors to stay by establishing an expectation on the structure of a text (Berners-Lee, 1998; Conger and Mason, 1998; Lynch and Horton, 1999). A well-organised design grid that is consistently used across all pages within the site would help users to find the information they are looking for and could also build up their confidence that they are using an organised and co-ordinate source of information (Lynch and Horton, 1999).

#### 6. *Overall appeal*

The overall appeal of a site should be measured in terms of the overall presentation, technical, content, organisation and language.

#### 7. *Multimedia adds to the main purpose*

As with graphics, the use of multimedia should have a clear purpose. The basic rationale of multimedia capabilities should be decoration, exploration/navigation or information (Sterne, 1995). Multimedia should be used to enhance the accuracy and integrity of the content (Conger and Mason, 1998).

#### 8. *Internal links are appropriate*

Conger and Mason (1998) considers three types of hyperlinks: *Intrapage* (to move within a page), *Intrasite* (to move from one page to another within the site) and *Intersite* (link to another site).

Regarding Intrapage and Intrasite links, they should be used to split long text into connected pages (Nielsen, 1997 (a)) and in this way to improve the presentation of pages. Content of a page should be obvious from the linking page so the user gets the information expected (Ford, 1995; Vaughan-Nichols et al, 1995). For example, making clicking on a graphic the only way to access another page can be confusing and frustrating if the user is unaware that this is the way to get into the desired page (Devens Learning Center, 1999).

It is also important that as all web sites are organised around the 'home page', so all pages should contain a direct link back to the home page (Levine, 1996; Lynch and Horton, 1999). How links are organised and located is important as it will enhance the presentation and facilitate the navigation within the site (Conger and Mason, 1998).

#### 9. *External links are appropriate*

The purpose of Intersite links is to enhance the site by using the content of another organisation(s)' web site(s) (Conger and Mason, 1998). They will be beneficial only if they provide information that is valuable, compelling, relevant, practical and useful to the user (Conger and Mason, 1998).

### 5.2.2 Section B: Technical

This consisted of eight elements.

#### 1. Links work properly

Clicking on a dead link with the messages 'HTTP file not found error' or 'under construction' will give a bad impression of the site (Devens Learning Center, 1999). External links, for instance, should be checked to ensure they connect (Levine, 1996). If links do not work properly, the user will think that pages are poorly maintained and so not worth her/his time visiting the site (Levine, 1996).

#### 2. Web site is clearly identified and easy to find

This was measured by examining the 'Meta' tag within the HTML code. The keywords in the 'Meta' tag is used by the search engines to index the site in addition to words for the title and page body (Vancouver, 1999). For example: <META NAME="keywords" CONTENT="legal sites, lawyer, lawyers">.

#### 3. Graphics are optimised

'A good image comes in a small package' (Siegel, 1997, p 60). If a user is accessing the site with a low-speed modem, the download time can be very long if graphics files are very large so that the user will end up being frustrated and leaving the site (Vaughan-Nichols et al, 1995). On the other hand, the use of poor images can confuse and distract the audience (Levine, 1996).

#### 4. There is text alternative to images

Not every user of the site will be able to see the graphics posted on the pages because they may be visually impaired (Whitfield, 1999), or a text-only browser (Levine, 1996). It is important to build in 'alternative' messages ('Alt' tags in HTML) that give a description of the function of the graphic to the users without graphics capabilities (Lynch and Horton, 1999).

#### 5. Works in all browsers

Because users employ different browsers which present sites in different ways, it is important to make sure that the site works well at least in the most popular ones. The two browsers chosen in the evaluation were Internet explorer and Netscape, the latter being the most popular Web browser on the Web with about 70% of the market share of Web browsers (Vaughan-Nichols et al, 1995). In the GVU's (1999) Survey both European and US users expect to use a Netscape browser in the next 12 months (81.13%) with only 12.13% stating Microsoft's Internet Explorer.

#### 6. Work in text only mode

How often do people navigate the Web without images? The majority of users (around 86%) prefer to view sites with the Auto Load Images feature turned On rather than Off, viewing the text of the page only (GVU, 1999). However in the GVU survey there was still a sizeable minority of users (14%) who viewed sites without the images loaded. In order to meet the needs of both types of user, a web site should offer two alternative views (Von Versen, 1999; Ford, 1995). One version would be a high-tech, multimedia version that presents the organisation as innovative and leading edge, with a visually attractive home page aimed at the general audience. The second version would be text-only version for those visitors who prefer just to see the text of site with a home page that emphasises rapid access to information via detailed text menus (Lynch and Horton, 1999).

#### 7. Multimedia resources work properly

As with links and graphics, multimedia resources should work properly otherwise, the user will not be affected by its presence (Conger and Mason, 1998).

### *8. Short download time*

Users do not tolerate long delays. For most computing tasks the threshold of frustration is around 10 seconds (Lynch and Horton, 1999). If users have to wait long for a site to download there are more chances of them leaving the site and going somewhere else (Sterne, 1995). Many web sites use large pictures or many multimedia objects or both to offer a pleasant visual experience, which can take a long time to reach the user's computer. Speed of access remains the most cited problem users experience with the Web (GVU, 1999).

### **5.2.3 Section C: Content**

Nielsen's (1997) study of how users read on the web points out that they prefer to scan rather than read, they want text to be concise, and do not like overly promotional writing. The criteria used were as follows:

#### *1. Informative web page title*

Any documents should have a well-defined and clear title to capture the user's attention. The 'Title' tag is very important because the page title is often the first thing a user sees when a page is being downloaded, particularly those using slow modems. It also crucial because the title becomes the name for any personal Bookmarks (or Favourites) the user adds (Lynch and Horton, 1999).

#### *2. Use of disclaimer*

The disclaimer should appear in each page to make clear to the user that the information showed is not legally binding and the presenter does not guarantee the accuracy of the information within the site (Conger and Mason, 1998).

#### *3. Information is updated*

When evaluating the quality of a Web site, timeliness is an important element. The site should be updated frequently in order to keep it interesting, popular and successful (Whitfield, 1999). If the site is kept up to date, it is more likely to be a worthwhile and fully functioning part of the business, with probably a wide range of repeat visitors (Cook, 1997). The site should be kept relevant (MID, 1999).

#### *4. Home page identifies purpose of the site*

The home page is a crucial part in a web site because it gives an overview of the content of the site - it is the 'introductory information screen' (Cronin, 1995, p 284). It should be attractive, easy to use, integrated, interactive, flexible, dynamic and secure. A home page should basically contain (Vaughan-Nichols et al, 1995; Lynch and Horton, 1999):

- \* Reason for page: explanation of the purpose of the site
- \* What does the individual/organisation do?
- \* Date of the most recent update to a page
- \* An outline of other areas that can be accessed from this page, providing a site overview by

presenting links to its major sections

- \* The person or company responsible for the page.
- \* A contact address of the page maintainer ('Webmaster')

#### 5. *Author shows extra knowledge*

'The richer pages are in needed information, the more likely people will be to return to the site' (Cook, 1997, p 1). For example, by offering *Frequently Asked Questions* (FAQ) - the most commonly asked questions that are listed along with answers - the user's understanding of the information and services offered could be significantly improved (Lynch and Horton, 1999). Another element could be to provide links to information that can help less knowledgeable users bring themselves up to the level of the average user of the site (Cook, 1997).

#### 6. *All information relates to the overall purpose*

When building a web site, the individual or organisation should have a clear purpose which will 'direct' the design choices. Web sites can have three basic purposes which will 'guide' the content and design of the site (Conger and Mason, 1998; Cook, 1997). The best site will bind together more than one of these facets:

- \* To provide information about the organisation.
- \* To entertain.
- \* To exchange or trade - offering good or/and services for money.

#### 7. *Web site signed and dated*

One problem in the Internet is the question of how 'authoritative' the content is and often Web authors overlook this crucial piece of information. Publishing information in the Internet is easy but filtering out the information that is not accurate is practically impossible. A site should always tell the user who created the web page so she/he can assess the source, quality and authority of the information given in the site (Lynch and Horton, 1999; Ford, 1995; Tilton et al, 1996). A web site should also be dated so that the user viewing the document can have an indicator of the currency for the information published in the site (Levine, 1996).

### 5.2.4 *Section D: Organisation*

#### 1. *Inviting Home Page draws the visitor attention*

'First impressions are what matter most, particularly when there are so many other fish in the sea' (Lynch and Horton, 1999).

Generally, the top of the Home Page is the first thing web users see when accessing a site, so the proper design - gauging the needs and expectations of the audience - is crucial to the success of the site (Cronin, 1995). The home page must first catch and retain user's attention within seven seconds - the average time a surfer views a web page (Conger and Mason, 1998).

#### 2. *Details within the site are logical and effective*

All objects (text, graphics, multimedia and so on) should be arranged, grouped and located in the

best way in order to achieve effectiveness, affectiveness and navigational efficiency (Conger and Mason, 1998). Visual stimulating pages with clear, consistent icons, pictures or graphics can provide affective messages that will give the user confidence that they can find what they are looking for without wasting time (Conger and Mason, 1998; Lynch and Horton, 1999).

### *3. How to explore an idea is clear*

Reading speeds from computer screens are more than 50% slower than reading speeds from paper (Morkes and Nielson, 1998; Nielsen, 1997). For that reason pages should not be too long because if the user has to scroll down too many times they will get tired and leave the site (Lynch and Horton, 1999; Whitfield, 1999). First of all, in order to make reading easier, each page should have a title header that summarises the content, paragraphs should be short, with margins around the text and with extra white space between lines (Cook, 1997; Levine, 1996). Next, adding a table of contents at the top of the page and Intrasite links to navigate within the page will also help the user exploring the content of the site (Levine, 1996). Summarising, text should in web pages should be short, clear, informative and complete (Conger and Mason, 1998).

### *4. Each page begins with a clear transition*

Hierarchical organisation is a necessity on the web, because most home-page-and-link schemes depend on hierarchies. The Home Page should give the most general overview of the site and then go down through submenus and content pages with more specific information (Lynch and Horton, 1999; Vaughan-Nichols et al, 1995). A disorganised site may lose the credibility of the user (Cook, 1997) so web pages should start with an introduction, a main body and a conclusion, following a clear transition between the parts. It is particularly crucial in web pages, as users often require scrolling when reading so they have to remember the organisation of things that have scrolled off-screen (Lynch and Horton, 1999).

### *5. Layout of pages: easy to navigate through the pages*

If users have trouble finding information, cannot move easily from one page to another or get lost within the web site, they will get frustrated and discouraged to continue exploring the site (Sterne, 1995; Vaughan-Nichols et al, 1995). A good navigational usage is determined by the structure and organisation of the site itself (Cook, 1997). Making intrapage and intersite navigation intuitive, natural and easy to use, will make the user more proficient and less anxious. For example, providing the user with paging buttons and links to the home page or tables of contents the users will have the tools to understand how the web site information is organised (Lynch and Horton, 1999).

### *6. Sophisticated e-mail*

E-mail is one of the most popular Internet activities. There are more people with access to e-mail than with access to the World Wide Web. E-mail makes a long-lasting, easier and cheaper relationship with users and customers through a personalised dialog. If the e-mail service is rated highly by the user, they will spend more time interacting with the site (Allen et al, 1998).

### *7. Sophisticated feedback element*

Users like the ability to request further information and feedback to the webmaster by filling in a form (Nielsen, 1997). A web site could offer the opportunity to write and read questions of common interest through FAQs and also and more important, the possibility of feedback via forms (Schubert and Selz, 1997).

#### ***5.2.5 Section E: Language and Grammar***

Having spelling mistakes and incorrect use of grammar will make the user lose respect for the site (Cook, 1997). It is essential to run a spell checker and make sure that the language and grammar used are appropriate (Levine, 1996). The following criteria were used:

1. *Correct use of grammar*
2. *Punctuation is accurate*
3. *Spelling is generally correct*

### 5.3 The Scoring System

Each criteria can be awarded a maximum of 10 points and a minimum of 0 points. In this way, the 'Content' quadrant, for example, could get a maximum of 70 points and a minimum of 0 points. The mark for each quadrant was weighted to form part of an overall mark out of 100 (ie a percentage mark). The weightings are given in Figure 5.

Quadrant	Number of criteria	Weighting
Presentation	9	30%
Technical	8	25%
Content	7	20%
Organisation	7	20%
Language/Grammar	3	5%

**Figure 5 Weighting of the 5-QEC**

By way of example: the Presentation quadrant has 9 criteria so a maximum mark of 90 (9 criteria times 10 marks each) is possible. If the evaluator gave 5 marks out of 10 for each criteria, this would give a score of 45 out of a maximum possible of 90 ie a 50% mark for that particular quadrant. A perfect score for that quadrant (90 out of 90 or 100%) would give a maximum contribution of 30 marks (the weighting of 30%) to the final score. However since the score is only 45 out of 90 or 50%, then only 50% of the 30 marks are allocated - the final contribution to the overall score would be 15 marks (ie 30 time 50%).

To reduce subjectivity, within each criteria a narrower range of marks were given, along with further criteria for the evaluator. For example in the Presentation area, the following advice was given to the evaluator (Figure 6):

Quadrant: Presentation		
Criteria	Sub-criteria	Range of Marks
Background and text work together	Work well together	7-10
	Not very effective	3-6
	Not effective at all	0-2
Internal links are appropriate	Organised list/table of internal links	8-10
	Appropriate but unclear sometime	5-7
	Few links (plain site); some unrelated	1-4

No internal links (one page)	0
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## Figure 6 Operationalising the 5-QEC

### 5.4 Testing and refining

Both instruments were tested by members of the research team along with two postgraduate students and an academic colleague who had particular expertise in multi-media Web design. A small sample of Scottish legal Web sites was visited (reported in greater detail in Ruiz-Nieto, 1999). Across the testers involved in the pilot test (including the individual ultimately carrying out the evaluation of the whole population of sites) there was agreement as to the quality of the sites. There was naturally variation in the more subjective elements, particularly Presentation and Organisation elements of the 5-QEC and the instrument was refined in light of some of the testers' comments.

## 6. Results

The results are presented for 83 firms. The scores for each instrument are considered in turn.

### 6.1 Ho's Matrix

To recap, if the features of the site could be allocated to fill each quadrant of the matrix, the maximum score possible was 12 points. Overall, the scores achieved by the firms ranged from one to seven with an average of 3.7 (Figure 7).

Score (Out of 12)	Minimum Score	Maximum Score	Average Score	% of sample
<b>Overall</b>	1	7	3.7	100%
<b>Aberdeen/Grampian</b>	1	7	3.8	14%
<b>Borders</b>	2	5	2.0	4%
<b>Central</b>	1	7	3.7	71%
<b>Others</b>	1	6	3.9	11%

**Figure 7 Ho's Matrix: results by area**

Even the sites with the highest score fell well short of scoring in all quadrants of the matrix and the scores achieved tended to hit particular quadrants and miss others (discussed below). Across the geographical areas of Aberdeen/Grampian, Central and Others the average score showed a surprising consistency with little variation from each other or the overall average. The Borders region seems out of step with an average score of only 2.0, although this result could be skewed by the small number of firms (3 firms or 4% of the sample) in that particular cohort of the sample. As the literature predicts, on average different geographical locations did not produce either better or poorer sites - location does not matter in cyberspace.

Comparing the scores by size of firm (Figure 8) there was, overall, a gradual increase in average score as the size of firm grew larger - 3.8 for sole practitioners rising to 4.3 for firms with over 10 partners. Firms with 2-5 partners, although showing a similar range of scores (1 to 6) to the other categories, had a considerably lower average (3.2).

Score (Out of 12)	Minimum Score	Maximum Score	Average	% of sample
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			Score	
<b>Overall</b>	1	7	3.7	100%
<b>Sole practitioner</b>	3	5	3.8	10%
<b>2-5 partners</b>	1	6	3.2	45%
<b>6-10 partners</b>	2	7	4.2	15%
<b>Over 10 partners</b>	1	7	4.3	30%

**Figure 8 Ho's Matrix: results by size of firm**

Looking beyond the average scores, it is apparent that a poor site offered by a large firm is no better, and may be worse, than a poor site offered by a sole practitioner supporting the democratisation possible via the Web (Susskind, 1998). For the larger firms with poor scores, having perhaps made substantial investment in creating the site, the question of value for money from the developers of their site could be an issue.

Figure 9 identifies the overall dispersion of hits across the Purpose and Value dimensions.

<b>PURPOSE</b>	<b>Promotion</b>	<b>Provision</b>	<b>Processing</b>	<b>Totals</b>
<b>VALUE</b>				
<b>Timely</b>	0	25	0	25
<b>Custom (Interactive)</b>	54	79	0	133
<b>Logistic (Non-interactive)</b>	61	71	2	134
<b>Sensational</b>	5	18	1	24
<b>Totals</b>	120	193	3	316

**Figure 9 Ho's Matrix: number of hits in each sector**

Across the *Purpose* dimension 'Provision' scored 193 points from a total of 316, 'Promotion' was 120 points only and 3 points in 'Processing'. The main business purpose of Scottish legal sites was the provision of information about the firm such as:

- \* A profile of the firm
- \* Free general legal advice
- \* Questionnaires to request information concerning legal issues or seminars
- \* Details of the location of the firm
- \* A potted history the firm and its staff
- \* Legal articles and newsletters
- \* Recruitment opportunities.

Although less significant than Provision, Promotion of the firm and its services was still important. The results highlight that at the time of evaluation, legal web sites in Scotland are not utilising the Web as a tool for delivery of legal services. In the Processing dimension, providing legal services on-line was only found in three sites. These three cases fell short of fully-fledged e-commerce, as although the visitor to the site could receive the service as a result of filling a form, payment was not conducted on-line. Two of the three sites in the Processing category offered the service of making a will on-line. The other offered an 'introductory discount' on their usual fees to any person contacting them through their site.

Considering the Value dimension of the matrix, the value creation of the Scottish legal sites comes from 'Logistic' with a total score of 134, then 'Custom' with 133. 'Timely' is third with 25 points and 'Sensational' the fourth with 24. Scottish legal sites were particularly interested in contacting customers through an e-mail address or through sophisticated request information forms offered by the site. A small proportion of sites (25) offer legal articles, newsletters and recruitment opportunities to their visitors. Some sites were considered sensational mainly because they offered jokes and games or the design was outstanding. One of the sites, for example, offered a page called 'legal resources' where the visitor could get access to any law from all over the world (for example the Spanish Constitution). Another site offered the 'Competition Act 1998' free to any visitors who requested it on-line. Perhaps the low score for the 'Sensational' sector is not surprising, as traditionally firms would generally prefer themselves to be perceived as reputable, or conservative (with a small 'c').

### 6.2 The 5-QEC

The 5-QEC focused on the design of the site itself, rather than the purpose or 'value-added'. For this instrument, the maximum possible score is 100. In this case, the average score was 51 (Figure 10).

Score (Out of 100)	Minimum Score	Maximum Score	Average Score	% of sample
<b>Overall</b>	17	84	51	100%

**Table 11 Overall scores for the 5-QEC**

This represents a higher proportion of the total marks possible (51%) compared to Ho's matrix with an average of 3.7 or 31% of the maximum score of 12. This would suggest design issues are, at present, of greater consequence to the firms than the range of services offered or value-added by the site. However an average of 51 out of a possible 100 suggests many sites still have room for improvement. Comparing the average score given as a percentage of the maximum possible score for each quadrant (Figure 11) there was little difference in performance across four of the dimensions (49-51%) with, perhaps not surprisingly, a much higher average for Language/Grammer (87%).

Quadrant	Average Score	Maximum possible Score	Average Score as % of maximum
Content	34	70	49%
Organisation	34	70	49%
Presentation	46	90	51%
Technical	41	80	51%
Language/Grammar	26	30	87%

**Figure 11 Average scores by quadrant as a percentage of maximum possible score**

As with Ho's matrix, the average mark across the regions (Figure 12) was similar for three of the regions, with Borders again having a considerably lower average (35). Within each area there was a wide range of scores, most marked in the Central region which had both the lowest (17) and the highest score (84).

Score (Out of 100)	Minimum Score	Maximum Score	Average Score	% of sample
<b>Overall</b>	17	84	51	100%
<b>Aberdeen/Grampian</b>	32	78	53	14%
<b>Borders</b>	35	48	35	4%
<b>Central</b>	17	84	51	71%
<b>Others</b>	31	62	49	11%

**Figure 12 The 5-QEC: results by area**

As with the marks from Ho's matrix the 5-QEC also showed a positive relationship between firm size and the average score (Figure 13), with a distinct gap between the sole practitioner (score of 45) and firms with over 10 partners (59). Each category showed a range of marks with the lowest score for the largest firms (32) being similar to that of sole practitioners (30). The highest score (84) was not achieved by the largest firm, but one in the 6-10 partner range. The lowest score was for the 2-5 partner category, lending weight to the comments on the same category for Ho's matrix that this appears to be the size of firm offering the poorest sites.

Score (Out of 100)	Minimum Score	Maximum Score	Average Score	% of sample
<b>Overall</b>	17	84	51	100%
<b>Sole practitioner</b>	30	78	45	10%
<b>2-5 partners</b>	17	73	47	45%
<b>6-10 partners</b>	26	84	49	15%
<b>Over 10 partners</b>	32	82	59	30%

**Figure 13 The 5-QEC: results by size of firm**

## 7. Discussion

Taken together, both instruments indicate that, in general, the larger the firm the more likely it is to produce a 'better' Web site (ie score more highly for these instruments). This apparent linking of the quality of site to firm size goes against Susskind's notion of democratisation of the profession. However it is in keeping with the view that smaller practices have more limited resources in terms of time, money and IT expertise available than larger firms (Barton et al, 2000).

This resource-based view of the firm might suggest a possible reason for the lower average scores for the 2-5 partner category. At one extreme is the sole practitioner with limited resources and perhaps little choice but to develop a site themselves. At the other extreme, large firms are able to dedicate resources, in-house or bought-in, for a professionally developed site. In between are these

smaller practices with neither the resources of the large firms, nor the flexibility, enthusiasm and unanimous agreement on the purpose of the site of the sole practitioner - could this result in a compromise site? Of course an alternative view is that with 45% of the sample compared to only 10% for sole practitioners perhaps it is the sole practitioners who happen to be out of step.

Beyond the averages, firms of all sizes can offer both excellent and poor Web sites, supporting the view that in cyberspace size does not, or at least should not, matter. For firms scoring poorly this would seem to hint at quality control issues and in some cases a lack of resources. Enthusiasm to be part of the Internet phenomenon may on occasion overcome the need for taking a strategic view of what is possible or desirable in a Web site. Alternatively lack of knowledge, expertise of advice results in poor bargains being struck with external developers.

On-line legal guidance tailored to specific visitors needs, and the on-line sale and delivery of legal services has not yet emerged for Scottish legal practices. Perhaps there is not yet a critical mass of potential clients who are also users of the Web. This may be changing with the advent of free Internet Service Providers (ISPs) such as Freeserve, and increasing price competition amongst telecommunications firms providing access to the Web.

The approach for evaluating the site - development of instruments and observation of the sites - is to an extent artificial. It does not, of course, truly mimic the actual experiences of those who wish to access legal information, purchase services, or find a solicitor over the Web and the researchers were not actually looking to select a solicitor to act on their behalf, or purchase a house. The evaluation may also have been biased towards a certain standard of site, or towards e-commerce; pro-innovation bias is a common weakness of many innovation-diffusion studies (Rogers, 1995). The authors did not have any insight into the firms' purpose(s) for offering the site, nor the actual business benefits achieved.

Comparing the two instruments, both the authors and those testing the instruments found the 5-QEC to give a clearer indication of quality of sites. The multiple quadrants and criteria allow particular strengths and weaknesses of sites to be pinpointed. To make the instrument more rigorous two further quadrants could be added. Firstly one relating to how effective the site is, with effectiveness being related to the purpose of the site (providing information, selling services, marketing and so on) and how well the site achieves its aim; secondly a quadrant referring specifically to e-commerce.

Another weakness of the 5-QEC is that it is not possible to eliminate subjectivity entirely and individual tastes and preferences will influence people in the way they evaluate sites. A different approach in future could be to have a representative group of clients or prospective clients use the evaluation instrument(s) to assess the strengths and weaknesses of the site. There is a need to extend the research to question the owners of the sites to examine how the purpose and strategy for having the site is linked to business benefits achieved.

## **8. Conclusions**

With the continual growth of the Internet and the Web, traditional and new legal services are being developed, offering potential great opportunities and implications for the legal profession. But as suggested by the literature (Susskind, 1998; Wall, 1998), solicitors should face the rapid technological changes that are taking place around them and be more innovative (Blasdale, 1999) if they do not want to be left behind in the Information Society.

For the practitioner this paper has two important strengths. Firstly, the detailed description of the instruments used, particularly the 5-QEC, provides a template for legal practitioners or other business users to evaluate existing sites (their own or competitors) or standards to aim for in developing a new site. Secondly, the survey provides a unique benchmark evaluation of Web sites offered by legal practices in Scotland. The findings provide empirical support for the view that for a

particular firm, size or location has no bearing on the quality of the site offered. However it may be that on average, smaller, resource-poor firms may find it more difficult to match the sites offered by larger firms.

At present Scottish practices appear to be somewhere between Susskind's (1998) second and third generation, with e-commerce still in its infancy. This represents the position in the autumn of 1999. As is the way of the Internet the position will have changed again, and again, since then. With refinements in the light of the Scottish experience, the authors are currently extending their survey of legal web sites to England and Wales and with, amongst others, Linklaters, Kaye Telser and Desktop Lawyer, a considerably different picture may emerge. To paraphrase Winston Churchill: at this point in time we may not be seeing the beginning of the end for the legal profession, but the end of the beginning of an e-commerce (r)evolution.

#### Appendix The 5-Quadrant Evaluation Criteria (5-QEC)

Quadrant	Criteria
<b>1. PRESENTATION</b>	1. Background and text work well together
	2. Appropriate backgrounds to the aims/function
	3. Appropriate frames, lists and tables
	4. Appropriate and relevant graphics
	5. Site shows consistency or a clear pattern
	6. Multimedia adds to the main purpose
	7. Internal links are appropriate
	8. External links are appropriate
	9. Good overall appeal
<b>2. TECHNICAL</b>	1. Links work properly
	2. Web site is clearly identified (meta tag)
	3. Graphics are optimised
	4. There is text alternative to images
	5. Site works in both browsers (Netscape and Internet)
	6. Work in text only mode
	7. Multimedia resources work properly
	8. Short download time
<b>3. CONTENT</b>	1. Informative web title
	2. Use of disclaimer
	3. Information is updated
	4. Home page identifies the purpose of the site
	5. Site offers extra information
	6. All information relates to the overall purpose
	7. Site is signed and dated
<b>4. ORGANISATION</b>	1. Inviting home page
	2. Details within the site are logical and effective
	3. How to explore an idea is clear
	4. Each page begins with a clear transition

	5. Layout of pages: easy navigation
	6. Sophisticated e-mail
	7. Sophisticated form element
<b>5. LANGUAGE</b>	1. Correct use of grammar
	2. Punctuation is accurate
	3. Spelling is generally correct

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