

UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TENNESSEE  
WESTERN DIVISION AT MEMPHIS

THE SERVICEMASTER COMPANY, THE )  
TERMINIX INTERNATIONAL COMPANY, )  
L.P., TRUGREEN LIMITED PARTNERSHIP, )  
AMERICAN HOME SHIELD CORPORATION, )  
AND AMERISPEC, INC., )  
 )  
 )  
Plaintiffs, ) Civil Action No. 99-2866-TUV  
 )  
 )  
v. )  
 )  
 )  
CARLA VIRGA, )  
 )  
 )  
Defendant. )

**AFFIDAVIT OF CHARLENE CUNNIFFE**

STATE OF TENNESSEE )  
COUNTY OF DAVIDSON )

Comes now the affiant, having been duly sworn, and deposes and states as follows:

1. I am over the age of eighteen years old and of sound mind. I have personal knowledge of the matters addressed herein unless otherwise stated. I offer this affidavit in support of defendant's response in opposition to plaintiffs' motion for a preliminary injunction in the above-captioned action.

**Professional Background**

2. I am an adjunct faculty member at Nashville State Technical Institute ("NSTI"), where I teach classes in computers and Internet related topics, including Navigating the Internet, Intermediate Internet, Advanced Internet, HTML Web Language, Business and the Internet, and Microsoft applications including distance education classes available via modem. In my Internet classes I teach students what "meta tags" are and how they are used, among other topics, and I address meta tags more fully below. In 1995 I designed and programmed the first World Wide

Web home page for the NSTI Library, and I taught the first modem-based distance education classes at NSTI. I have also created and conducted six continuing legal education (“CLE”) seminars concerning the Internet. These CLE seminars were sponsored by the Tennessee Bar Association and were presented in Nashville, Tennessee in July and August of 1999.

3. I also work part-time (thirty hours per week) as an Electronic Research/Training Specialist for Boulton, Cummings, Conners & Berry PLC, a law firm in Nashville, Tennessee (“Boulton, Cummings”). At Boulton, Cummings I design, implement and provide individual and group training to legal professionals in electronic research sources including the Internet and proprietary databases such as Westlaw, Nexis-Lexis, CourtLink, CDB Infotek, PACER, RIA Checkpoint and TBALink, and well as the firm’s internal and CD-ROM databases, and provide other assistance to the firm’s Director of Legal Resources. In my employment at Boulton, Cummings, my duties include performing research on the Internet for clients of Boulton, Cummings under the supervision of Boulton, Cummings lawyers and assisting such lawyers in performing research on the Internet and in performing legal research on the Internet and otherwise.

4. Since January 1984 I have also been self-employed as a information specialist, providing information retrieval, database design and construction, research, training, editing and writing services to corporations, libraries and individual as the principal of Cunniffe Information Resources.

5. I hold an A.B. from Harvard University and an M.S. from Simmons College Graduate School of Library and Information Science.

6. In addition to my more recent work at Boulton, Cummings, I have worked as a librarian at the following libraries: Baker Library, Harvard Business School, Cambridge, Massachusetts (Business Reference Librarian, 1988 to 1993, research, bibliographic assistance

and end-user training for faculty, students, Harvard Business Review staff and the business community); The Gordon Institute, Wakefield, Massachusetts (Librarian, 1987 to 1988, all functions at academic library specializing in engineering management); Nesmith Library, Windham, New Hampshire (Library Assistant, 1981 to 1980); Widener Library, Harvard University, Cambridge, Massachusetts (Library Assistant, 1974-1979).

7. I am a member of or am affiliated with the following: American Society for Training and Development, Middle Tennessee Chapter; Special Libraries Association, Southern Appalachian Chapter, Business and Finance, Library Management and Legal Divisions; Simmons College Graduate School of Library and Information Science, Alumni Board, 1989-1993; Tennessee Paralegal Association; Nashville Library Club; and Information New England (founding member).

### **HTML and the Web**

8. Web pages are constructed with the use of Hypertext Markup Language (“HTML”). HTML is a basic text coding technique which provides instructions to a Web browser program (such as Netscape Navigator or Microsoft Internet Explorer) to generate the particular Web page with that use of that browser for the viewer to see. These codes, or “tags,” operate to instruct the browser where to implement new paragraphs, line breaks, bolded letters, and other display attributes which determine how the document is displayed. Without the use of HTML, the browser would simply display plain text without any organization. Thus, a web page consists of various forms of computer code, including not only the textual and graphical content, but also code which affects the way in which the page is displayed and viewed on a web browser.

9. One example of an HTML tag is a “hyperlink,” usually represented with bolded, underlined or colored text or as an image or graphical “icon,” which allows a web user to display

the contents of another web site when a pointing device such as a mouse is clicked when the moveable cursor is placed on the hyperlink. The term “web” derives from the extensive use of such hyperlinks (enabled with the use of HTML) within the World Wide Web (referred to popularly and herein as the “web”) portion of the Internet. It is a matter of public knowledge that the amount of information published on the web is growing at a dramatic rate. A study published in *Science* magazine in 1998 found that in December 1997 there were approximately 320 million pages of indexable web pages (meaning that there were not hidden behind password protection or otherwise protected from automated computer searches conducted by “spiders,” which are computers devoted to searching or “crawling” the web to build databases of information for use in searching or finding information published on the web). A more recent study published in *Nature* magazine found that as of February 1999, there were approximately 800 million indexable web pages. Suffice to say that there is an extremely large amount of information published on the web and that amount is growing dramatically.

### **Search Engines and Meta Tags**

10. Because there is so much information published on the web, computer utilities called “search engines” have been developed to assist web users in finding information. These search engines, which may be viewed as the card catalogs of the web, perform complex searches with the means of computer algorithms to identify for a web user what hopefully are the web sites most relevant to the user as defined by her search.

11. Some search engines use software called “spiders” or “crawlers” to gather addresses of web pages available on the Internet web and to index text on the web pages, so that a search engine user’s query will associate terms or key words in the query with the indexed web pages. In addition to analyzing the text, titles and addresses of web pages, some search engines also analyze

“meta tag” key words, which consist of text coding hidden from normal view and located within a specially designated portion of the HTML code which generates the web page. Web page designers will often use meta tags to designate key words which are communicated to the software for certain search engines. Thus, the meta tag is an important associational tool for a web site author or designer since some search engines may otherwise be unable to properly index a particular web page based on the text of the page. For example, a web page composed only of images such as photographs or graphs would not have text which a search engine could catalog without the adjunct of the meta tag, which is my understanding of why meta tags were originally developed.

12. Over time, however, meta tags have evolved as a method for the designers of text as well as graphical pages to provide a convenient summary of the topics of a page, thus permitting those search engines which “support” meta tags (that is, which take them into account) both to identify web pages in which particular viewers may be interested, and to determine how close to the beginning of the list of web pages to place each particular page selected (known as “ranking”). The operators of many search engines encourage web site designers to include meta tags in their pages. Meta tags are viewed only by examining the “page source” feature that is available on the more current versions of browsers.

13. Search engines are an important part of the way in which Internet users decide which web pages to visit. *See generally* <http://www.searchenginewatch.com>, the web site for Search Engine Watch, an excellent guide to search engines operated by Danny Sullivan, who is a recognized expert on search engines and how they operate. There are three principal ways in which the owner of a web page can bring the page to the attention of possible viewers. First, a viewer may know the domain name for a particular company and decide to visit that company’s page by entering that name as a web address (“uniform resource locator” or “URL”) in the “location” window of the web

browser. For example, each of the plaintiffs in the above-captioned action has a web site with a domain name in the form www.COMPANYNAME.com (for example, www.terminix.com). This is usually the easiest way of finding a company, since companies seek to associate their name with their web site's domain name in some way. I teach my Internet students this technique and in my experience it is the most common and first-used method to find information regarding a given company. Second, a viewer who is already visiting a different location on the web may be attracted to a hypertext link that appears on that page; by clicking the left button of his mouse on the link, the viewer directs his browser to move directly to the page to which the sending page provides a link (that is, the web user "surfs" from one page to another). Or third, the viewer may take advantage of one of many search engines, discussed above, which viewers use to search the web for pages that contain references to a specific subject in which they are interested. Some of the popular search engines are AltaVista, Excite, Google and Lycos. Many users will gravitate to one search engine over time or will use a variety or combination of search engines for a given search or query.

14. Every search engine uses its own protocol to identify responsive pages. Some search engines use humans to look for web pages and enter code into the engine to identify particular pages in response to searches. Many search engines, however, use largely mechanical devices, the "crawlers" or "spiders" mentioned above, which continually prowl the web seeking and recording new pages, by viewing all or a certain number of words (for example, 250) at the beginning of each web page or by viewing the title of the web page. Still another method used by search engine spiders is to examine the meta tags of a given page. The meta tags, in turn, consist of several component parts. The basic parts of the meta tags are the description (a sentence summarizing the site); and meta keywords (a list of terms describing the topic of the page). *See also*

<http://www.searchenginewatch.internet.com/webmasters/meta.html>. A variety of other meta tags can also be included.

15. When a person doing a search on the web for sites discussing a certain topic enters the relevant term or terms, the search engine will deliver a list of potentially relevant sites. In most cases, the number of sites returned by the search engine may be quite large, numbering in the hundreds if not thousands, depending on the scope of the search. The list is typically viewed in segments – the first ten or twenty sites are listed by the search engine, then the next grouping, and so forth until the list is exhausted (and some search engines impose a limit on the number of sites that can be viewed in the course of a particular search). Each search engine has its own means of ranking the sites it has found in response to a particular search. In some search engines, meta tags play a role in the ranking as well as the listing process, whereas in others they do not or they play a diminished or less important role.

16. The contents of the lists produced by the search engines are also significant. Each list segment includes at least one clickable “link” for each page identified in the search. For each page, there is commonly a title (in which a “link” is embedded that can be followed by clicking a mouse button on the title), a brief description for the page, and the URL. The “page title” will commonly be whatever title the web site designer has given to that particular page; and in engines using meta tags, the brief description may be the “description” meta tag for that page. If a viewer follows such a link but decides that the page is not what she wanted, it is quite simple to return to the list – she simply clicks the “back” button on the browser, and decides what link, if any, to follow next.

17. In summary, then, in order to take advantage of the way in which search engines work in order to bring one’s page to the attention of those who might find its contents interesting, a web

site designer may include meta tags that include terms that the designer expects to be of greatest interest to the designer's target audience.

### **Search Engines, Meta Tags and Ranking**

18. Through my work and teaching experience I have become very familiar with the major "search engines." Some of the major search engines are AltaVista, Excite, Google, Go (formerly called InfoSeek), HotBot, Lycos and NorthernLight. Since the databases of information at the disposal of the search engines are so large, the information which is responsive to the user's query must be ranked or prioritized in some manner. The first search results page will usually include the information that is most relevant and important to the search as defined by the search engine's ranking methodology. The major search engines use a variety of ranking methodologies, which are constructed so that the first screens of information displayed to the user are the screens which are – hopefully (so that the user will continue to use that search engine) – the most relevant and productive to the user's search.

19. Search engines use different methods to refine the ranking of the results of users' searches. Most search engines publish information on how they rank the results of a given search, and third parties such as Search Engine Watch also collect and publish this type of information. Most search engines will also respond to inquiries as to their searching and ranking methodologies, and I have inquired of a number of search engines in this regard.

20. Based on my research, I know that some search engines factor in to the ranking of their results such information as whether the content of a particular site's meta tags matches the search terms, while others do not consider such information. Most of the major search engines (AltaVista, Excite, Google, Lycos and NorthernLight) do not allow the presence in a given sites's meta tags of a word being searched for to boost the ranking of that site in the search results. Go

and Inktomi do provide for the boosting of rankings based on the presence of the searched-for term in the site's meta tags.

21. A more popular method of boosting rankings is to consider the popularity of the site based on the number of links to it in other sites. According to information published by Search Engine Watch and/or the search engines themselves, AltaVista, Excite, Google and Go use this method, while Lycos and NorthernLight do not. The particular algorithms used by search engines are proprietary and the major search engines do not release this information to the public, although most search engines will offer advice on what will boost a page's ranking.

### **The Dynamic Nature of Search Engine Rankings**

22. Search engines are dynamic in several respects. First, the information which they search is constantly being updated as additional information ("pages" in the vernacular of the web) is made available for viewing on the web. Through the automated means referenced above, search engines constantly increase the sizes of their databases that are subject to searching. Second, the changes in the content of the search engines' databases result or may result in different search results and rankings being produced by a given search at two different points in time. Third, search engines are not static in their methodologies. Rather, search engine operators and designers are constantly improving the methods and means by which they search for information, so again, a particular search for a given term may result in different results at different points in time. For example, that a site including a searched-for term may be first on a search engine's ranking may have nothing to do with the site's meta tag content, but may have everything to do with traffic and links being directed to that site. In this instance the search engine designer may assume that it is desirable for the user to be directed to a high traffic site on the assumption that the user is also looking for that site.

23. By way of example, to demonstrate the dynamic nature of the web and search engine results, I replicated the results of the search referenced in the Declaration of Steve Good filed by the plaintiffs. (It is not clear whether Mr. Good performed this search himself, since his declaration states that he “understand[s]” the search result rankings to be as specified in numbered paragraph 9 of his declaration.) The results of my search for the word “TERMINIX”, which is the search I understand that Mr. Good performed or had performed, were altogether different from the results stated in his declaration. Some searches resulted in lower rankings, some higher. I performed this search on three different days, yet the results were different each day. As I understand the methodologies used by some search engines, which will boost rankings depending on the traffic to a given site, hits on the defendant’s site by me and her counsel in the course of defending this action – and hits by plaintiffs’ counsel (who I understand have repeatedly visited her site) may have contributed to certain of these ranking boosts.

#### **Meta Tags as Trademarks and Web Use**

24. I understand that plaintiffs have complained about defendant’s use of trademarks of the plaintiffs (specifically, the following nine marks: SERVICEMASTER, MERRY MAIDS, FURNITURE MEDIC, AMERICAN HOME SHIELD, RESCUE ROOTER, TERMINIX, TRUGREEN, CHEMLAWN and AMERISPEC) in the meta tags for defendants’ web site pages. I performed an investigation of the use of others of the same trademarks of the plaintiffs about which the plaintiffs complain and discovered that others besides plaintiffs also use certain of such trademarks in their sites’ meta tags. For example, the following websites include the indicated meta tags in their meta tags:

<http://supct.law.cornell.edu/supct/html/93-1001.ZO.html> [meta tag: terminix]

<http://usatoday.franchisesolutions.com/unique/servmaster.cfm> [meta tags: terminix, servicemaster, furniture medic, amerispec, merry maids]

<http://www.intermec.com/about/98news/102998.htm> [meta tag: terminix]

[http://lonestar.texas.net/~ubiquity/no\\_ahs.html](http://lonestar.texas.net/~ubiquity/no_ahs.html) [meta tag:american home shield]

Printouts of these web pages and of the HTML source indicating these meta tags are attached hereto as Collective Exhibit N. It should be noted that this investigation is largely anecdotal, since I am not aware that there is any publicly available way to conduct an automated search of the contents of web site meta tags (although I understand that at least one company claims to offer a proprietary automated method of searching the contents of web site meta tags, as opposed to the text of the site that appears when using a browser in its normal viewing mode). However, this anecdotal evidence suggests that there are likely many other uses of these marks as meta tags in the sites of third parties.

25. With respect to plaintiffs' claims that defendant is using plaintiffs' nine complained-of marks in her web site's meta tags, and that such causes web viewers to be diverted to defendant's web site (which assumes that such web viewers are not looking for the type of information included at defendant's web site and are only looking for plaintiffs' web sites), I conducted a series of searches to test plaintiffs' assumption that defendant's use of plaintiffs' marks in her site's meta tags causes viewers to be diverted to her site. On November 29 and 30, 1999, I conducted searches on eight major search engines (in alphabetical order, AltaVista, Excite, Go/Infoseek, Google, Hotbot, LookSmart, Lycos and NorthernLight) for each of the nine marks complained of by plaintiffs (in alphabetical order, American Home Shield, Amerispec, Chemlawn, Furniture Medic, Merry Maids, Rescue Rooter, ServiceMaster, Terminix and Trugreen. I queried each of these eight search engines using these nine marks to determine

whether defendant's web site was included in the first twenty query results for each of these searches. Twenty query results represents approximately the first two responsive screens of a query (except that Google returned thirty query results as I configured this search engine). The following table summarizes the results of my searches:

**Top Position of Virga Site in Web Searches Using Plaintiff's Marks**

	American Home Shield	Amerispec	Chemlawn	Furniture medic	Merry Maids	Rescue Rooter	ServiceMaster	Terminix	Trugreen
AltaVista	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	1	not top 20
Excite	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	1	not top 20
Go/Infoseek	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	2	not top 20
Google	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	21	not top 20
Hotbot	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	8	not top 20
LookSmart	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	3	not top 20
Lycos	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	13	not top 20
NorthernLight	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	not top 20	12	not top 20

As is evident, of these searches, only the Terminix mark showed up in the top twenty query results for any of these search engines. This indicates to me that plaintiffs' assumption that defendant's inclusion of these marks in her web site's meta tags causes defendant's web site to appear higher in response to web viewer's search engine queries is not correct. If this assumption were correct, defendant's inclusion of these marks in her web site's meta tags would cause higher rankings than are apparent in these results. As to the higher results using the "Terminix" query, this may be accounted for by a variety of factors, such as the frequency of the use of the word "Terminix" in defendant's web site pages and the traffic to defendant's site (much of which in recent days is attributable to my searches and those of defendant's counsel -- and perhaps plaintiff's counsel). For each search engine the answer to this question will be different, since they use different algorithms and methodologies. The search queries which evidence the results of the searches summarized in the table above are attached hereto as Collective Exhibits O through V, corresponding to the search engines listed in the left column of the table (AltaVista= Ex. O),

Excite= Ex. P, Go/Infoseek= Ex. Q, Google= Ex. R, Hotbot= Ex. S, LookSmart= Ex. T, Lycos= Ex. U and NorthernLight = Ex. V).

26. The use of search engines to find a web page is only one method of researching a company or product on the web. Almost all companies have created web sites using their company name or trademarked product name; therefore to locate any company, the average searcher uses the format [www.companyname.com](http://www.companyname.com) or [www.productname.com](http://www.productname.com). If I were looking to reach the home page of the corporate entity or any of its products, I would not go to the bother of using a search engine such as Excite or Hotbot. If I wished to reach the home page of a company like Servicemaster or Terminix, I would go directly to [www.servicemaster.com](http://www.servicemaster.com) or [www.terminix.com](http://www.terminix.com). These company web pages are easy to find. Locating [www.merrymaids.com](http://www.merrymaids.com), [www.americanhomeshield.com](http://www.americanhomeshield.com), [www.furnituremedic.com](http://www.furnituremedic.com), [www.chemlawn.com](http://www.chemlawn.com), [www.amerispec.com](http://www.amerispec.com), [www.trugreen.com](http://www.trugreen.com), and [www.rescuerooter.com](http://www.rescuerooter.com) does not require a search engine. If I wanted to locate information *about* a company, including information not included in that company's web page, I would use a search engine. For example, if I wanted to learn about information on a given company for whatever reason, whether for my own purposes as a consumer or for an attorney looking for information regarding a client or an adverse party, I would use a search engine. In addition, it is important to note in this regard that many of the major search engines will search for the query term as part of a domain name and will provide the search engine user with sites matching the query term at or near the top of the query results, so that if a search engine user is looking for a particular company's web site and uses the company's name as the query term, the first query results page will provide a hyperlink to the company's home page. For example, a search for the mark "Terminix" using the Altavista search engine shows hyperlinks to one of Terminix's own web sites at the very top of the search results,

even before the numbered query results. The printout of this query is attached within the AltaVista search engine query results for the nine marks complained of by plaintiffs attached hereto as Exhibit O.

27. It is my understanding that plaintiffs contend that defendant's use of their trademarks in defendant's web pages' meta tags and in the text of defendant's web pages is violative of their trademark rights. In my opinion as an Internet user, web page designer and educator, if the Court were to find that such use of words may be prevented in a non-commercial, non-competitive site such as defendant's, that finding would not only be inconsistent with the manner in which web page designers have used and thought of words -- including trademarks -- as tools for the creation of indices (as opposed to indicators of the source of goods or services), but would also have a substantial chilling effect on consumer speech on the Internet generally.

Further the affiant saith not.

\_\_\_\_\_  
Charlene Cunniffe

STATE OF TENNESSEE )  
COUNTY OF DAVIDSON )

Personally appeared before me, \_\_\_\_\_, the undersigned, a Notary Public in and for said County and State, Charlene Cunniffe, with whom I am personally acquainted, and who upon oath acknowledged that she executed the within instrument for the purposes therein contained.

\_\_\_\_\_

Witness my hand and seal, at office in Nashville, Tennessee, this the \_\_\_ day of November, 1999.

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_