EXHIBIT F

(Redacted Version of Doc. # 305-1)

Expert Report of Philip Greenspun

Regarding infringement of U.S. Patent No. 7,752,060 by MDX Medical

This report is submitted pursuant to Rule 26(a)(2) of the Federal Rules of Civil Procedure.

I. Introduction

1. My name is Philip Greenspun. I received a PhD in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology in 1999 and have been teaching software engineering for Internet applications and database programming there periodically since receiving my degree. My business address is 5 Irving Terrace, #3, Cambridge, Massachusetts 02138. I have been involved in the computer science field for since 1978. I am over eighteen years of age and I would otherwise be competent to testify as to the matters set forth herein if I am called upon to do so at trial.

2. I have been retained by counsel for Health Grades, Inc. ("Health Grades") as a technical expert witness with respect to the proceedings currently before the Court in the above-captioned matter. I receive compensation in the amount of $425 per hour. Health Grades has also reimbursed me for travel and other expenses that I have incurred that are related to providing this technical analysis. My compensation does not depend on the outcome of this case.

3. For purposes of this Expert Report, I have been asked by Health Grades to provide an expert technical analysis of whether the asserted claims of U.S. Patent No. 7,752,060 (the "'060 Patent") that Health Grades contends are infringed by Defendant MDx Medical, Inc. ("MDx") as properly interpreted, are infringed by MDx's systems and methods, either literally, or under the doctrine of equivalents. Additionally, I have been asked by Health Grades to provide an expert technical analysis concerning whether MDx indirectly infringes these patent claims by inducing or contributing to the direct infringement of the patent claims by selling its customers certain products and services and enabling its customers to implement systems and methods which infringe the patent claims either literally or under the doctrine of equivalents.

4. I understand that Health Grades contends that MDx directly or indirectly infringes claims 1, 4-9, 11, and 14-16 of the '060 Patent ("the asserted claims"). I further understand that Health Grades contends that MDx directly infringes all of the asserted claims with the exception of claim 11. I further understand Health Grades further contends that MDx indirectly infringes (either through inducement or contributory infringement) all of these claims.

5. As set forth herein, it is my opinion that MDx's systems and methods directly infringe claims 1, 4- 9, and 14-16 of the '060 Patent literally or, alternatively, under the doctrine of equivalents.

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6. Moreover, it is my opinion that MDx indirectly infringes all of the asserted claims by inducing or contributing to the direct infringement of these patent claims by its customers (e.g., Aetna) by selling/licensing its physician database and providing services and enabling its customers to implement systems and methods which infringe the patent claims either literally or under the doctrine of equivalents.

7. In a separate Rebuttal Expert Report, I may also provide expert technical analysis with respect to MDx's contentions that the asserted claims of the patents-in-suit are invalid, if any.

8. This report briefly sets forth my background and qualifications to provide my opinions, sets forth the materials reviewed and investigations conducted to prepare this report, and sets forth my opinions and analysis.

9. This Expert Report is based on my study to date and includes:

a. My opinion concerning a person of ordinary skill in the field of the patents-in-suit;

b. My opinions that MDx's systems and methods directly infringe the asserted patent claims either literally or under the doctrine of equivalents; and

c. My opinions that MDx indirectly infringes the asserted patent claims by inducing or contributing to the direct infringement of those claims by Aetna.

10. I currently hold the opinions set forth in this Report. As my study of the case continues, I may acquire additional information and/or attain supplemental insights that result in added observations. I reserve the right to supplement this Expert Report and to rely on additional documents and testimony that come to my attention between now and the time of the trial. For example, I may supplement this Report to take into account the fact that MDx continues to produce additional documents relevant to my analyses in response to Health Grades' document requests. Nevertheless, I believe the evidence adduced to-date provides support for the opinions expressed in this Report. However, I believe that the additional discovery outstanding from MDx would serve to buttress my opinions. I also reserve the right to rely on all other Expert Reports submitted in this litigation.

11. If requested, I will testify regarding the opinions set forth herein. I may also discuss my own work and experience with the technology disclosed in the '060 Patent, and knowledge of the state of the art at the relevant time period

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II. Background, Qualifications, and Prior Testimony

12. Attached as Appendix A is a copy of my resume, which includes the publications I have authored in the previous 10 years, either listed directly or by reference to http://philip.greenspun.com.

13. In terms of my background and experiences that qualify me as an expert in this case, I earned a Ph.D. in Computer Science in Massachusetts Institute of Technology in 1999. I also obtained a Bachelor of Science Degree in Mathematics from Massachusetts Institute of Technology in 1982 and a Master of Science Degree in Electrical Engineering and Computer Science from Massachusetts Institute of Technology in 1993.

14. I have authored five computer science textbooks in total, including Database Backed Web Sites (Macmillan), Software Engineering for Internet Applications, and a SQL language tutorial.

15. I have served as an independent member of various advisory and corporate boards, mostly for technology companies. For example, I joined the corporate board of an MIT materials science spin-off in late 2005 during a $550,000 seed capital phase. I stepped down when company secured $10 million in venture capital in mid-2007.

16. I have served as an expert witness for Amazon.com, Xerox, and Google in patent cases.

17. I began working full-time as a computer programmer in 1978, developing a database management system for the Pioneer Venus Orbiter at the National Aeronautics and Space Administration's Goddard Space Flight Center.

18. In 1999, I received a Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology. My thesis concerned the engineering of large online Internet communities with a Web browser front-end and a relational database management system (RDBMS) containing site content and user data.

19. I developed my first program using a relational database management system in 1994, a Web interface to the Children's Hospital Oracle RDBMS version 6. This enabled doctors at the hospital to view patient clinical data using any computer equipped with a Web browser.

20. In 1995, I led an effort by Hearst Corporation to set up an infrastructure for Internet Applications across all of their newspaper, magazine, radio, and television properties. This infrastructure included software for managing users, shopping carts, electronic commerce, advertising, and user tracking.

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21. Between 1995 and 1997, I significantly expanded the photo.net online community that I had started, in 1993, in order to help people teach each other to become better photographers. I began distributing the source code behind photo.net to other programmers as a free open-source toolkit, called "ArsDigita Community System".

22. In May 1997, Macmillan published my first textbook on Internet Application development, "Database Backed Web Sites".

23. In 1997, I started a company, ArsDigita, to provide support and service for the free open-source toolkit. Between 1997 and the middle of 2000, I managed the growth of ArsDigita to 80 people, almost all programmers, and $20 million per year in annual revenue. This involved supervising dozens of software development projects, nearly all of which were Internet Applications with a Web front-end and an Oracle RDBMS back-end. As the founder, CEO, and chief technical employee of the company, I personally developed functional specifications, SQL data models (Structured Query Language, or "SQL", is the standard programming language for relational database management systems), and Web page flows that determined the user experience.

24. Between 2000 and the present, I have done software development projects for philip.greenspun.com and photo.net, two online services that are implemented as relational database management Applications.

25. Separately from this commercial and public work, I have been involved, as a part-time teacher within the Department of Electrical Engineering and Computer Science, educating students at MIT in how to develop Internet Applications with an RDBMS back-end. In the Spring of 1999, I taught 6.916, Software Engineering of Innovative Web Services, with Professors Hal Abelson and Michael Dertouzos. In the Spring of 2002, this course was adopted into the standard MIT curriculum as 6.171. I wrote 15 chapters of a new textbook for this class, "Software Engineering for Internet Applications". This book was published on the Web at http://philip.greenspun.com/seia/ starting in 2002 and 2003 and also in hardcopy from MIT Press in 2006. I am the sole author of a supplementary textbook for the class, "SQL for Web Nerds", a succinct SQL programming language tutorial available only on the Web at http://philip.greenspun.com/sql/.

26. Based at least on my education and experience, I consider myself to be an expert in software engineering, including the development of database-backed Internet Applications.

27. Within the previous four years, I have testified, either at trial or by deposition, in the following cases: (1) CA v. Ingres, C.A. No. 4300-VCS in the Delaware Chancery Court, July 2009 (deposition and trial); (2) Jardin v. DATAllego, Inc. and Stuart Frost, case 3:2008cv01462 in California Southern District Court (deposition and a tutorial delivered at a Markman hearing); (3) LEAR CORPORATION, et al., UNITED STATES BANKRUPTCY COURT, SOUTHERN

DISTRICT OF NEW YORK, Case No. 09-14326 (deposition); (4) Bouret et al v. Caribbean Aviation Maintenance Corp. et al, Puerto Rico District Court, Case No. 3:2009cv2034 (deposition and trial); (5) The Rector and Visitors of the University of Virginia v. IDX Systems Corporation, Civil Case No. CL09-58, Circuit Court for the City of Charlottesville, Virginia (deposition).

III. Materials Reviewed and Investigation Conducted

28. The materials that I reviewed, considered, and/or relied on in preparing this report are those that are referenced within. I have also attached as Appendix B a list of the most important materials that I reviewed, considered, and/or relied on. In addition, I attended the depositions of Mitchell Rothschild, the CEO of MDx Medical, and Larry West, the manager of engineering for the vitals.com site.

IV. Priority Date

29. My understanding is that the '060 Patent claims priority to U.S. Provisional Application No. 60/771,757, which was filed on February 8, 2006.

V. Person of Ordinary Skill in the Art

30. I personally hired and supervised Web developers in 2006 for the photo.net online community, an Internet Application.

31. My definition of a person of ordinary skill in the art, based on my direct personal experience in the field in 2006, is someone with a Bachelor's degree in Computer Science or related field and some experience building database-backed Web sites.

VI. Summary of My Opinions

32. Opinion No. 1: It is my opinion that MDx's systems and methods directly infringe claims 1, 4- 9, and 14-16 of the '060 Patent literally or, alternatively, under the doctrine of equivalents.

33. Opinion No. 2: It is my opinion that MDx indirectly infringes all of the asserted claims by inducing or contributing to the direct infringement of these patent claims by its customers (e.g., Aetna) by selling/licensing its physician database and providing services and enabling its customers to implement systems and methods which infringe the patent claims either literally or under the doctrine of equivalents.

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VII. The Basis and Reasons for My Opinions

A. Background of Database-backed Web Sites

1. What is a Database?

34. A database is an organized collection of information. A computer program that assists programmers with common challenges regarding creating, updating, and querying a database is a database management system (DBMS). The most popular type of DBMS is the relational DBMS or "RDBMS", the best conceptual model for which is "a big spreadsheet that several people can update simultaneously." Familiar examples of the RDBMS include Oracle and Microsoft SQL Server.

35. Information within an RDBMS is stored in tables. Communication with the RDBMS is via the Structured Query Language (SQL), which includes statements such as CREATE TABLE, INSERT (add a row), UPDATE (change a data item within a table), DELETE (remove a row), and SELECT (return a report). The "SQL schema" or "data model" is a collection of CREATE TABLE statements that prepares the RDBMS to accept data items.

36. For example, suppose that a Web site developer wished to record subscribers to an email newsletter. He or she would create a new table called mailing_list with two columns (also sometimes called "fields"), email and name, both text strings that can be up to 100 characters in length ("varchar(100)"):

```
create table mailing_list (
    email       varchar(100),
    name        varchar(100)
);
```

37. After a series of INSERT commands, the contents of this table may be viewed in a spreadsheet format, e.g.:

Name	email
Philip Greenspun	philg@mit.edu
Bill Gates	billg@microsoft.com
Scott Adams	scottadams@aol.com

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by typing a SELECT statement such as:

select name, email from mailing_list

38. Each row in the table is also referred to as a record. Note that, unlike with a desktop spreadsheet Application, every data item in the same column, e.g., email, must be of the same data type (in this case a character string).

2. What is a Database Application?

39. A database application is a computer program whose primary purpose is entering information into and retrieving information from a computer-managed database. Some of the earliest database Applications were accounting systems and airline reservation systems such as SABRE, developed between 1957 and 1960 by IBM and American Airlines.

40. Users interacted with early database applications, such as SABRE, by typing at a terminal connected directly to a mainframe computer running the database management system. The IBM 3270 terminal, introduced in 1972, was a very commonly used device. The terminal had no ability to process information, but merely displayed characters or "screens" sent from the mainframe.

41. Software development for an early database application was simply software development for the mainframe computer, which executed all of the program code centrally. Software was developed in assembly language, a "second-generation language", or one of the "third-generation languages" developed in the late 1950s and early 1960s, e.g., COBOL, Fortran, or PL/I. Whatever conventional programming language was used, there may have been embedded database commands in a specialized query language.

42. The heart of any database application is the data model or SQL schema. If there is no table or column to store, for example, a customer's credit card number, even the cleverest programmer will not be able to add an automatic monthly bill-my-credit-card feature.

3. What is a Web Application?

43. A "Web application" is a server-based computer program that can be used by a user sitting in front of a standard Web browser, such as Microsoft Internet Explorer, Firefox, or Google Chrome. Examples of Web applications include wikipedia.org, nytimes.com, facebook.com, and youtube.com. The advantage of the Web, compared to some 1980s and early 1990s systems of networked computers, is that no specialized software need be installed on the end-user's computer. The same personal computer or mobile phone and the same Web browser can be used to read a news article from nytimes.com, order a book from amazon.com, or

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calculate the cost of a new car using Google Spreadsheets. A classical Web application is very similar to an old mainframe application. All computation is performed on the central computer in response to a request for a URL. E.g., a request for http://www.txwd.uscourts.gov/general/judges/biographyview.asp?bID=13 causes the server to run the program in the file biographyview.asp located in the /general/judges/ directory on the www.txwd.uscourts.gov server) and only information necessary to paint a "screen" is sent to the device on the user's desktop via the Hypertext Transfer Protocol (HTTP). Thanks to 30 years of progress in microelectronics, the desktop device can display color graphics rather than simply green characters, but the software ideas are very similar.

44. Rather than the IBM 3270 terminal protocol, the specifications for the screen or "page" to be displayed are sent in Hypertext Markup Language (HTML), which is a specification or format for a document (analogous to the format in which Microsoft Word, for example, might save a file to disk). The structured data in HTML is distinct from a programming language, which generally either expresses a step-by-step algorithm for a computer to follow or specifies a computation to be performed.

4. What is a "Web-based database Application" or "database-backed Web site"?

45. A "Web-based database application" or "database-backed Web site" is simply a combination of the systems described above, i.e., "a computer program that can be used by a user sitting in front of a standard Web browser whose primary purpose is entering information into and retrieving information from a computer-managed database". No additional software needs to be installed by end-users. The computer programs on the server, however, are modified so that they rely on a database management system (DBMS) for storing and retrieval of information. The user requests pages by URL, as before, and in response the server will run computer programs (page scripts) that will generally access the DBMS and then merge the results with a template in order to build up a complete HTML page to return.

B. <u>The '060 Patent</u>

1. Background

46. The '060 Patent describes a database-backed Web site whose function is to connect patients with healthcare providers such as physicians and hospitals. (*See* '060 Patent, Abstract.)

47. The company providing the information service creates and maintains a database of detailed information relating to healthcare providers. (*See* '060 Patent, Abstract.)

48. A patient may access the healthcare provider information through a search conducted using a search engine, such as Google, Yahoo, etc. (*See* '060 Patent, Abstract.) Alternatively, a patient may access the information directly from the information service provider's web page that provides search capabilities for its database. (*See* '060 Patent, Abstract.)

49. A patient may search for physicians using various search criteria, including for example, geographic area, physician specialty, and gender. (*See* '060 Patent, col. 1:56-2:15, *see also* claim 6.)

50. The information provided to patients in response to their search query may be in the form of a report that includes detailed healthcare provider information with verified information sections, including physician-verified and independent third-party-verified sections, and a patient-provided information section that includes patient ratings to assist patients in differentiating among healthcare providers. (*See* '060 Patent, col. 1:11-20.)

51. The information provided by the website enables patients to differentiate among healthcare providers and thereby select the provider that best meets their individual needs. (*See* '060 Patent, Abstract.)

52. All of the claims of the '060 Patent require creating a healthcare provider report by using the following three kinds of information:

a. healthcare provider-verified information: "about the first healthcare provider . . . [that] is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;"

b. patient-provided information: "compris[ing] patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and wherein the company Web site is managed by the company providing the service for connecting healthcare providers with the potential patients;"

c. third party verified information: "information regarding the first healthcare provider verified by an independent third-party source . . . [that] comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information . . . ."

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('060 Patent, cols. 20-24.)

53. Further, all of the claims require that the healthcare provider report include "comparison ratings of health care providers." (*See* '060 Patent, claims 1 and 15)

2. Prosecution History - Initial Prosecution

54. Health Grades filed a provisional application, Serial No. 60/177,757 ("the '757 Application"), on February 8, 2006.

55. Health Grades filed the Application that ultimately issued as the '060 Patent on August 29, 2006 ("the '060 Application"). The '060 Application claimed priority to the '757 Application.

56. The '060 Application was filed with 20 claims, of which claims 1, 16, and 19 were independent.

57. The Patent Office issued a restriction requirement requiring Health Grades to elect to proceed with either claims 1-15 and 19-20 or claims 16-18. Health Grades elected to proceed with claims 1-15 and 19-20.

58. In a first office action, the Patent Office made several rejections against:

a. Claims 1-15 (for an antecedent basis problem) and 19-20 (for being directed toward functional descriptive materials) based on 35 U.S.C. §112 for being indefinite;

b. Claims 1-15 and 19-20 based on 35 U.S.C. §101 for failing to recite patentable subject matter;

c. Claims 1-6, 8, 9, 13-15 and 19 under 35 U.S.C. §103 as being unpatentable over Henley (U.S. Patent Pub. No. 2003/0195838) in view of Cook et al. (U.S. Patent Pub. No. 2006/0080146); and

d. Claims 7, 10, 11, 12 and 20 under 35 U.S.C. 103 (a) as being unpatentable over Henley in view of Cook et al. and further in view of Sameh (U.S. Patent Pub. No. 2004/0010423).

59. In response, Health Grades amended claims 1 and 19 as shown below:

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1. (Currently Amended) A method of providing healthcare provider information to potential patients, said method comprising:

compiling healthcare provider-verified information;

compiling past-patient provided information;

compiling information verified by independent third-party sources;

creating, by a processor, a healthcare provider report using the ~~physician-verified~~ healthcare provider-verified information, the past-patient provided information, and the ~~verified~~ information verified by independent third-party sources, wherein the healthcare provider report includes comparison ratings of healthcare providers; and

providing access to the healthcare provider report over a computer network.

(File History, 02/16/10 Amendment at p. 2.)

19. (Currently Amended) An on-line information system for providing verified information regarding healthcare providers, the system comprising:

at least one processor; and

memory coupled with and readable by the at least one processor and comprising a series of instructions that, when executed by the at least one processor, cause the at least one processor to:

~~a compilation module for compiling~~ compile healthcare provider-verified information;

~~a compilation module for compiling~~ compile patient-provided information;

~~a compilation module for compiling~~ compile healthcare provider information verified by an independent third party; and

~~a creation module for creating~~ create a healthcare provider report using the ~~provider-verified~~ healthcare provider-verified information, the patient-provided information, and the independently verified information, wherein the healthcare provider report includes comparison ratings of healthcare providers; ~~and~~

~~a computing system with access to healthcare provider information stored in a database, wherein patients may search the database and review healthcare provider reports to differentiate among healthcare providers~~.

(File History, 02/16/10 Amendment at p. 5.)

60. The prosecution history states that the comparison ratings limitation was added to overcome the Patent Office's rejection based on the Henley and Cook prior art:

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> Claims 1-6, 8, 9, 13-15, and 19 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Henley in view of Cook. . . . Specifically, the references fail to teach or suggest all of the claim elements.
>
> For example, Henley in view of Cook fail to teach or suggest at least the following with respect to claim 1:
>
> > creating, by a processor, a healthcare provider report using the healthcare provider-verified information, the past-patient provided information, and the information verified by independent third-party sources, wherein the healthcare provider report includes comparison ratings of healthcare providers; and
> >
> > providing access to the healthcare provider report over a computer network.
>
> Claim 1, supra (as amended) (emphasis added).

(File History, 02/16/10 Amendment at pp. 9-12 (italicized emphasis in original).)

61. The Amendment and Response further argued that while Henley teaches making facts available for comparison, this is not the same thing as comparison ratings:

> Further, Henley fails to teach or suggest, for example, ". . . wherein the healthcare provider report includes comparison ratings of health care providers . . ." The Office Action relies on Henley at "paragraphs 0015-0016, 0037, 0081, 0090 and 0107" for providing such a teaching. However, the Applicants respectfully disagree. The cited portions of Henley provide no teaching or suggestion of "comparison ratings." . . . . For example, paragraph [0107] provides that "[t]he qualifier engine and associated databases allow the qualifications of both the physician providing the service and the qualifications of the hospital/treatment facilities [to be] available to the consumer/patient." Henley, at [0107]. However, making general qualifications "available" to a consumer does not teach or suggest "comparison ratings." Additionally, while paragraph [0090] provides for "hyperlinks to databases storing the identification of medical service providers having satisfied a particular qualifying requirement," Henley, at [0090], access to databases storing the "identification" of medical service providers satisfying a particular requirement provides no teaching or suggestion of, for example, "comparison ratings" of health care providers. Henley thus fails to provide any teaching or suggestion of at least ". . . wherein the healthcare provider report includes comparison ratings of health care providers . . ."

(File History, 02/16/10 Amendment at pp. 9-12 (italicized emphasis in original, bolded emphasis added).)

62. After Health Grades made this amendment, it interviewed the Patent Office examiner. The summary of the interview states:

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> The undersigned, Timothy Scull, thanks Examiner Nguyen and Examiner O'Connor for their time and cooperation in the in-person interview held on March 10, 2010. During the interview, the undersigned provided a summary of the embodiments of the above-identified Application. The undersigned also distinguished the above-identified Application from the art cited in the Office Action mailed on November 13, 2009, in which such cited art included U.S. Pat. App. Publ. No. 2003/0195838 to Henley; U.S. Pat. App. Publ. No. 200610080146 to Cook; and U.S. Pat. App. Publ. No. 2004/0010423 to Sameh. The Examiners and the undersigned also discussed the 35 U.S.C. § 112 rejections, 35 U.S.C. § 101 rejections, and 35 U.S.C. §103(a) rejections from the Office Action mailed November 13, 2009. Further, the claim amendments submitted in the Amendment and Response filed on February 16, 2010 were also discussed. No agreement was reached.

(File History, 04/12/10 Statement of the Substance of the Interview.)

63. After the interview, Health Grades filed a supplemental amendment that amended several claims, including those copied below:

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1. (Currently Amended) A computer-implemented method of providing healthcare provider information to potential patients, said method comprising:

receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider, wherein the Web server computer comprises at least one computer processor and memory;

accessing ~~compiling~~ healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;

compiling, by the at least one computer processor, ~~past-patient~~ patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and wherein the company Web site is managed by the company providing the service for connecting healthcare providers with the potential patients;

compiling information regarding the first healthcare provider verified by an independent

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third-party source, ~~sources~~ wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information;

creating, by [[a]] the at least one computer processor, a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the ~~past-patient~~ patient-provided information, and the information verified by the independent third-party source ~~sources~~, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers; and

providing access to the healthcare provider report on the first healthcare provider over a computer network.

8. (Currently Amended) The method as defined in claim 7, wherein [[a]] the search of the database produces a results list of one or more healthcare providers satisfying the search criteria, wherein the results list includes the first healthcare provider.

9. (Currently Amended) The method as defined in claim 8, wherein the results list further includes an advertisement for [[a]] the first healthcare provider with a hyperlink to information on ~~that~~ the first healthcare provider.

10. (Currently Amended) The method as defined in claim 8, further comprising:

determining from the results list whether a particular healthcare provider is a member of [[a]] the company managing the Web site; and

if the particular healthcare provider is a member of the company managing the Web site, providing enhanced services for the member healthcare provider on the Web site.

15. (Currently Amended) The method as defined in claim 1, wherein the first healthcare provider is a physician~~, hospital, nursing home, or other treatment facility~~.

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19. (Currently Amended) An on-line information system for connecting healthcare providers with potential patients ~~providing verified information regarding healthcare providers~~, the system comprising:

at least one computer processor; and

memory coupled with and readable by the at least one computer processor and comprising a series of instructions that, when executed by the at least one computer processor, cause the at least one computer processor to:

receive a request for information regarding a first healthcare provider;

~~compile~~ access healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;

compile patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or

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current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and wherein the company Web site is managed by a company providing a service for connecting healthcare providers with the potential patients;

compile healthcare provider information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information; [[and]]

create a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source ~~independently verified information~~, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers; and

provide access to the healthcare provider report on the first healthcare provider over a computer network.

20. (Currently Amended) The on-line information system defined in claim 19, wherein:

the healthcare provider report is obtained through one or more from the group consisting of: a predetermined Web page that provides search capabilities on its database [[or]] and a third-party search engine; and

the search capabilities of the predetermined Web page permit searching based on one or more from the group consisting of: name, medical specialty, gender, state, city, procedure, diagnosis, ~~procedure,~~ and location criteria.

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64. The Patent Office thereafter allowed claims 1-4, 6-15, and 19-21. Claims 5 and 16-18 had been previously cancelled.

65. The Notice of Allowance provided the following reasons for allowability:

Reasons for Allowance

4. The following is an Examiner's statement of reasons for allowance:

Regarding claim 1

The prior arts of record neither anticipate nor fairly and reasonably teaches a computer-implemented method of providing healthcare provider information to potential patients, said method comprising:

receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider, wherein the Web server computer comprises at least one computer processor and memory;

accessing compiling healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications,

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languages, and hobbies;

compiling, by the at least one computer processor, patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and wherein the company Web site is managed by the company providing the service for connecting healthcare providers with the potential patients;

compiling information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information;

creating, by the at least one computer processor, a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers; and providing access to the healthcare provider report on the first healthcare provider over a computer network.

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6. The cited prior arts of record fail to expressly teach a computer-implemented method of providing healthcare provider information to potential patients wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies; and wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship.

(File History, 05/14/10 Notice of Allowance at pp. 2-4.)

3. Asserted Claims

66. It is my understanding that Health Grades is accusing MDX of infringing claims 1, 4-9, 11, and 14-16 of the '060 Patent. The asserted claims are copied below:

Claim 1

A computer-implemented method of providing healthcare provider information to potential patients, said method comprising:

receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider, wherein the Web server computer comprises at least one computer processor and memory;

accessing healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;

compiling, by the at least one computer processor, patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line

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patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and wherein the company Web site is managed by the company providing the service for connecting healthcare providers with the potential patients;

compiling information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information; creating, by the at least one computer processor, a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers; and

providing access to the healthcare provider report on the first healthcare provider over a computer network.

Claim 4

The method as defined in claim 1, wherein the healthcare provider report includes a hyperlink to an affiliated hospital, medical center, or other type of treatment center.

Claim 5

The method as defined in claim 1, wherein the access to the healthcare provider report is obtained through a predetermined Web page that provides search capabilities for a database comprised of healthcare provider information.

Claim 6

The method as defined in claim 5, wherein the search capabilities permit a search based on one or more from the group consisting of: name, medical specialty, gender, state, city, procedure, diagnosis, procedure, and location criteria.

Claim 7

The method as defined in claim 6, wherein the search of the database produces a results list of one or more healthcare providers satisfying the search criteria, wherein the results list includes the first healthcare provider.

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Claim 8

The method as defined in claim 7, wherein the results list further includes an advertisement for the first healthcare provider with a hyperlink to information on the first healthcare provider.

Claim 9

The method as defined in claim 7, further comprising:

determining from the results list whether a particular healthcare provider is a member of the company managing the Web site; and

if the particular healthcare provider is a member of the company managing the Web site, providing enhanced services for the member healthcare provider on the Web site.

Claim 11

The method as defined in claim 9, wherein the enhanced services comprise favorable positioning in the results list.

Claim 14

The method as defined in claim 1, wherein the first healthcare provider is a physician.

Claim 15

An on-line information system for connecting healthcare providers with potential patients, the system comprising:

at least one computer processor; and

memory coupled with and readable by the at least one computer processor and comprising a series of instructions that, when executed by the at least one computer processor, cause the at least one computer processor to:

receive a request for information regarding a first healthcare provider;

access healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;

compile patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are

received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and wherein the company Web site is managed by a company providing a service for connecting healthcare providers with the potential patients;

compile healthcare provider information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information;

create a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers; and

provide access to the healthcare provider report on the first healthcare provider over a computer network.

Claim 16

The on-line information system defined in claim 15, wherein:

the healthcare provider report is obtained through one or more from the group consisting of: a predetermined Web page that provides search capabilities on its database and a third-party search engine; and

the search capabilities of the predetermined Web page permit searching based on one or more from the group consisting of: name, medical specialty, gender, state, city, procedure, diagnosis, and location criteria.

C. Claim Construction

67. The Court issued a claim construction order on February 13, 2012.

68. The term "first healthcare provider" shall mean: "a particular healthcare provider about whom information is requested and a report is produced."

69. The term "comparison ratings of healthcare providers" shall mean: "ratings on multiple healthcare providers, including the 'first healthcare provider', in the report on that 'first healthcare provider,' thus permitting comparison of the 'first healthcare provider' with other potential healthcare providers."

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70. The term "received from the first healthcare provider" shall mean: "receipt of information from the first healthcare provider or one of his or her agents, such as an employee, as distinguished from information received from patients or public sources."

71. The terms "compiling" / "compile" shall mean: "gathering and/or putting together."

72. The Court found that the term "verified" should be given its plain and ordinary meaning, of which there are several. One meaning of verified is "to prove." Another is "to confirm" or "to substantiate." The Court stated: "the specification makes clear that the act of 'verifying' requires only that the website receive confirmation of the information from some other source, in this instance the healthcare provider. Indeed, the confirmation described appears to not extend beyond receipt of such information from the first healthcare provider." (Markman Order at p. 15 n.8.)

D. Understanding of the Law to be Applied to Determine Infringement

73. In formulating my opinions and conclusions in this case, I have been provided with an understanding of the prevailing principles that govern the issue of patent infringement.

74. As a result, I understand that it is a basic principle of patent law that the determination of whether a patent claim is infringed requires a two-step analysis. In the first step, the claim language must be properly construed to determine its scope and meaning.

75. Second, the claim, as properly construed, must be compared to the accused device(s), system(s) or process(es), which in this case are MDx's and MDx's customers' computer systems, software Applications and methodologies, to determine whether the claim is infringed

76. I am informed and understand that I am to apply the constructions for the claims set forth in the Court's Markman Order.

77. I am informed and understand that once the claims have been interpreted, the second step in the infringement analysis involves determining whether the accused system(s) or method(s) meet(s) each and every element of the claim literally or equivalently under the doctrine of equivalents.

78. It is my understanding that an accused infringer cannot avoid infringement by adding components, features or steps to an accused system or method if each element recited in the patent claims is found in the accused system or method.

79. I am further informed and understand that a system or method that does not literally infringe a claim may nonetheless infringe under the doctrine of equivalents if every element in the claim is equivalently present in the accused system or method. It is my understanding that a structure, feature or step of the accused system or method may be found to be equivalent to a claim element based on objective evidence viewed from the vantage point of someone of ordinary skill in the art.

80. It is my understanding that there are several accepted ways in which to assess whether a structure or feature of an accused system or method infringes under the doctrine of equivalents. For example, an accused system or method that does not literally infringe a patent claim may infringe the claim under the doctrine of equivalents if each component of the accused system or each step of the accused method performs substantially the same function in substantially the same way to obtain substantially the same result. This is commonly known as the function/way/result test.

81. In addition, I understand that the known interchangeability of the accused and claimed component or step among persons of ordinary skill in the art is evidence of whether or not the change in the accused system or method was substantial. Nevertheless, each component or step of the accused system or method must still perform the same function in substantially the same way to obtain substantially the same result as the limitations recited in the claim.

82. I am informed and understand that the doctrine of equivalents is limited by what is called "prosecution history estoppel." I understand that prosecution history estoppel may bar an equivalents argument for subject matter relinquished when a patent claim is narrowed by the patent Applicant during prosecution. For example, prosecution history estoppel may bar an equivalents argument when the patent Applicant, for reasons related to patentability, either (1) makes a narrowing amendment to a claim during prosecution, or (2) surrenders claim scope through argument to the patent examiner. If, however, the reason for the amendment was tangential to the asserted equivalent, the amendment will not limit the doctrine of equivalents for such accused equivalent.

83. I am also informed and understand that an accused system can be found to infringe if it is capable of satisfying the claim elements even though it may be capable of noninfringing modes of operation.

84. I also have been informed that a party may be liable for various acts of indirect infringement based on the acts of direct infringement by another. I understand that there are two types of indirect infringement - contributory infringement and induced infringement.

85. It is my understanding that under the Patent Act a party that sells a component of a patented machine, article or manufacture, combination or composition, or a material of Apparatus for use in practicing a patented process, constituting a material part of the invention,

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knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

86. To be liable for induced infringement, I am informed and understand that the defendant must have either actual knowledge of a patent or a willful blindness to the existence of the patent, committed affirmative actions that induced the infringing acts and the defendant knew or should have known that his actions would induce infringement. Various activities may be relied upon to show inducement of the direct infringement of another, including advertising and providing instructions to the other on how to carry out the acts or operate the systems or methods that give rise to the direct infringement, licensing the activities of the direct infringer and the inducer's provision of assistance in the design, implementation or operation of the direct infringer's systems or operations.

E. Accused Products

87. My understanding is that the accused products include the following:

a. Vitals.com Web site:

i. current version of the vitals.com Web site ("Current Version")

ii. an earlier version of the vitals.com Web site ("Prior Version")

iii. the two versions are very similar, with the removal of the comparison feature being the major difference between the Prior Version and the Current Version. Unless otherwise noted, the opinions described herein relate to both versions of the vitals.com Web site.

b. iTriage Mobile Application, both iOS (e.g., iPhone and iPad) and Android versions ("iTriage")

c. In addition, I understand that an MDx iPhone Application ("App") as described in a March 30, 2012 design document (MDX 0104422-39), may be added to the above list of accused products. If so, I will be supplementing my report with a full analysis of this App. Based on an initial reading of MDX 0104422-39, I believe that it is likely that this App infringes at least one claim of the '060 Patent, e.g., pages MDX 0104424 and MDX 0104433 appear to show search results pages similar to what the Current Version displays, with lists of physicians and star ratings next to each physician.

88. For the behavior of the Current Version, I relied on the behavior of the live vitals.com Web site, as accessed between December 2011 and July 2012 as well as screen captures within Plaintiff's Rule 3.1(c) Disclosure dated October 19, 2011 and February 2012.

89. For the behavior of the Prior Version, I relied on the screen captures with Plaintiff's Rule 3.1(c) Disclosure dated July 1, 2011 and February 2012.

F. Both Versions of Vitals.com

90. The vitals.com site, as of January 25, 2012, tells visitors that it is "Your source for comprehensive medical information on 830,000 doctors nationwide." The title of the home page is "Doctor Reviews and Doctor Ratings | Compare & Find Doctors | Vitals". (*See* Appendix C.) This title is displayed by a Web browser due to the presence of the following line in the HTML source of the home page: <title>Doctor Reviews and Doctor Ratings | Compare & Find Doctors | Vitals</title> (obtained using the "View page source" command from the Google Chrome browser on July 11, 2012). The four most prominent links invite a patient to check on a particular doctor, search for a doctor by specialty, search for a doctor by "medical need" (e.g., symptom or disease), and "rate your doctor". Less prominent are links for medical doctors, offering the ability for them to "update your profile" or "drive more patients" or "manage your reviews". These lead to a separate area of the site titled "Doctor Portal". There is an additional set of links targeted at potential advertisers on the site.

91. A typical patient session with vitals.com might start with a search for endocrinologists within 10 miles of Denver, Colorado. This brings up a list of 73 doctors, of which the first 8 are shown, along with links to the remainder. The first page or summary page of a report on each doctor is displayed and the reports are presented in order of how well they match the patient's search criteria. The responsive reports may be sorted by "distance," "relevance," or "last name", depending on the user's selection from a drop-down menu at the top right of the list. If sorted by distance, for example, the doctor closest to the center of Denver appears at the top of the list. If sorted by last name, a doctor whose last name begins with "A" appears at the top of the list. It is unclear what the criteria for "relevance" are. Sliding controls at the lower left allow the user to, for example, adjust the importance of "years of experience" or "travel distance". Following an adjustment to a slider, the list of doctors is reordered according to what Vitals calls a "match score." (*See* Vitals.com PowerPoint, "Site Functionality & Data Set Overview" at MDX0071975; Vitals.com PowerPoint, "Thinking About Physician Quality" at MDX0012076; Deposition of Larry West (Rough Draft) at 178.)

92. Further, www.vitals .com (both versions) allows for filtering by gender, board certification, star ratings, languages spoken, and physicians who were educated in the U.S. If the "board certified" checkbox is selected, for example, the number of doctors is reduced from 73 to

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42, with those doctors who are not board-certified having been removed. This feature allows a user to specify narrower search criteria for the particular doctor he or she seeks.

93. The summary page (e.g., first page) of a doctor's report includes an overall star rating (1-4 stars), whether or not the doctor has received the distinction of being one of "America's Top Doctors", and whether or not the doctor has received the vitals.com "Patients' Choice Award" (http://www.patientschoice.org/whatispca). Clicking on the doctor's name brings up the remainder of the report, which includes more detail from patient surveys as well as information regarding the doctor's training, affiliations, awards, languages spoken, etc. From the report, the Web site visitor has the opportunity, following treatment, to rate the doctor. (*See* Appendix C.)

94. As this dispute involves the operation of a Web application, which may be reprogrammed to some extent between the date of this report and the date of the trial, I am attaching to this report a set of video recordings that show a Web user interacting with the vitals.com Web site (Current Version) in June 2012. I reserve the right to use these as demonstratives at trial.

1. Claim 1 and both versions of the vitals.com Web site

a. Preamble: A computer-implemented method of providing healthcare provider information to potential patients, said method comprising:

95. Vitals.com meets this element.

96. Both the Current Version and the Prior Version, like any Web site on the Internet, must respond to requests via the TCP/IP and HTTP protocols and therefore must be implemented with computers.

97. The Current Version menu bar offers choices including "check up on your doctor" and "find a doctor". A doctor is a "healthcare provider" and a person looking for a doctor is a "potential patient". The Prior Version had similar language.

98. The Current Version, states that vitals.com was "Your source for comprehensive medical information on 830,000 doctors nationwide." As a doctor is a healthcare provider, the site explicitly promises "information." (*See* Appendix C.)

99. Based on the screen shots reviewed and the live site accessed, both versions of the vitals.com Web site are computer-implemented methods of providing healthcare provider information to potential patients.

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b. *Step 1: receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider,*

100. Vitals.com meets this element.

101. This claim element depends in part on whether or not there is a company that has a Web server computer. A WHOIS lookup on the register.com Web site on June 26, 2012 resulted in the following record for vitals.com:

Registrant:
mdX Medical
ATTN VITALS.COM
care of Network Solutions
PO Box 459
Drums, PA. US 18222

102. From this I conclude that the vitals.com Web site is owned and operated by MDx Medical and that Network Solutions is the domain registrar.

103. Both the Current Version and the Prior Version offer a variety of options for connecting healthcare providers with potential patients and a user can request information in a variety of ways, e.g., by searching for a doctor by specialty, by condition, or by name. As of December 9, 2011, the first page of the site promised to "match you with the right doctor", i.e., connect a healthcare provider with a patient.

104. The Court has construed "first healthcare provider" as "a particular healthcare provider about whom information is requested and a report is produced".

105. A "particular healthcare provider" can mean one particular doctor, for example. Both the Current Version and Prior Version are able to display information on one doctor at a time as well as being able to display information in such a way that one doctor is highlighted, e.g., by appearing at the top of a list. Both versions are able to produce reports as discussed in detail in below portions of report dealing with other claim elements.

106. One mechanism via which the Current Version receives a request for information regarding a first healthcare provider is when a user types a doctor's name into the search box on the vitals.com home page. When the user clicks the "search" button, his or her web browser submits a GET request via HTTP to the URL: http://www.vitals.com/doctor/checkup with arguments of "name" and "location." (*See* Appendix C.)

107. Another mechanism is when a user searches for a doctor by specialty or by medical condition, in which case the browser will request the URL

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http://www.vitals.com/doctor/find with arguments such as "specialist_id" or "expertise". (*See* Appendix C.)

108. Based on the Internet domain registration for vitals.com, the HTML source code of the Current Version's home page and the fact that response pages are generated after I clicked the "search" button, I conclude that MDx Medical operates a system that is capable of receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider.

c. Step 1 continued: wherein the Web server computer comprises at least one computer processor and memory;

109. Vitals.com meets this element.

110. All conventional Web servers contain at least one processor, such as an Intel Pentium. Conventional processors read their program instructions from a memory and therefore a memory is required for the processor to function, a design called a "stored program computer" that goes back at least as far as the 1949 EDSAC. There has been no evidence in this case that MDx Medical has developed or is employing computers that are unconventional.

111. Further, based at least on the deposition testimony of Larry West, I conclude that the Current Version of vitals.com is delivered from Web server computers with at least one computer processor and memory. (Deposition of Larry West (Rough Draft) at 77:11-77:16; 80:21-81:04)

d. Step 2: accessing healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;

112. Vitals.com meets this element.

113. The vitals.com database includes specialty information, which it displays on vitals.com for every physician in the database. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3; Deposition of Larry West (Rough Draft) at 26:15-26:19; Appendix C; Vitals.com PowerPoint, "Site Functionality & Data Set Overview" at MDX0071958; MDx E-mail dated 06/11/2010 at MDX0019305.)

114. The vitals.com database includes medical philosophy information in at least one place, which is the location storing whatever physicians type as a "personal statement". (*See* Appendix C; MDx E-mail dated 06/11/2010 at MDX0019305.)

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115. The vitals.com database includes gender information, which it displays on vitals.com for every physician in the database. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3; Deposition of Larry West (Rough Draft) at 26:15-26:19; Appendix C; MDx E-mail dated 06/11/2010 at MDX0019305.)

116. The vitals.com database includes age information. (*See* MDx E-mail dated 06/11/2010 at MDX0019305.)

117. The vitals.com database either includes or derives years in profession information, which it displays on vitals.com for every physician in the database. (*See* Appendix C; MDx E-mail dated 06/11/2010 at MDX0019305.)

118. The vitals.com database includes awards and honors information, which it displays on vitals.com for physicians, where applicable. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3; Appendix C; MDx E-mail dated 06/11/2010 at MDX0019305.)

119. The vitals.com database includes professional appointments and memberships information, which it displays on vitals.com for physicians, where applicable. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3; Deposition of Larry West (Rough Draft) at 26:15-26:19 & 279:21-279:23; Appendix C.)

120. The vitals.com database includes publications information, which it displays on vitals.com for physicians, where applicable. (*See* Vitals.com PowerPoint, "Site Functionality & Data Set Overview" at MDX0071958; MDx E-mail dated 06/11/2010 at MDX0019305; Appendix C.)

121. The vitals.com database includes information regarding the language spoken by physicians, which it displays on vitals.com for physicians, where applicable. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3; Deposition of Erika Boyer at 92:11-92:18; Vitals.com PowerPoint, "Site Functionality & Data Set Overview" at MDX0071958; MDx E-mail dated 06/11/2010 at MDX0019305; Appendix C.)

122. The Court found that the term "verified" should be given its plain and ordinary meaning, of which there are several. One meaning of verified is "to prove." Another is "to confirm" or "to substantiate." The Court stated: "the specification makes clear that the act of 'verifying' requires only that the website receive confirmation of the information from some other source, in this instance the healthcare provider. Indeed, the confirmation described appears to not extend beyond receipt of such information from the first healthcare provider." (Markman Order at p. 15 n.8.)

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123. http://www.vitals.com/v/index.php?v=user/show_register offers physicians the ability to "Edit and add information that patients and others see." (*See* Appendix C.)

124. MDx admits that the system is capable of allowing physicians to edit the following fields: specialty information, gender, awards/honors, professional appointments, professional memberships, and languages. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3.)

125. MDx further admits that physicians have actually edited each of these fields. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3.)

126. While MDx says it does not know of any physician who edited three or more of these fields, this could be determined by the same conventional SQL queries that MDx used to count the numbers of physicians who had made edits to a single field. Larry West testified that all edits made by physicians can be determined. (*See* Deposition of Larry West (Rough Draft) at 269:14-270:16) I believe that information regarding edits made by physicians via Web forms are stored in a table named "mdx_import.impt_provider_webedit". (*See* MDx Queries at MDX0104073.) Without access to the complete SQL data model for the Vitals system it is not possible for me to provide an example SQL query, but a query such as:

```
SELECT pro_master_id, count(*)
FROM mdx_import.impt_provider_webedit
GROUP BY pro_master_id
HAVING count(*) >= 3
ORDER BY count(*) desc
```

would return a list of providers who had made at least three edits via the Web site and, for each provider, the number of edits that had been made. Adding additional query terms would make it possible to limit the results to those providers who had edited gender, specialty, and language, for example.

```
SELECT pro_master_id, count(*)
FROM mdx_import.impt_provider_webedit
GROUP BY pro_master_id
HAVING count(*) >= 3 and max(pro_gender) != ‘‘
and max(lang_record_status) != ‘‘ and max(spe1_field_specialty_id) is not null
ORDER BY count(*) desc
```

127. Regardless of the popularity of editing profile information, the system is capable of receiving this information from physicians and it is used to create some reports. This capability is available to any licensed physician and no changes or alternations need be made to enable this feature.

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128. Additionally, I understand that many more physicians have registered with vitals.com and viewed their profiles without changing any information. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 3.) It is my opinion that in doing so these physicians have confirmed (e.g., verified) their information for MDx and that MDx has thereafter received this information from these physicians.

e. *Step 3: compiling, by the at least one computer processor, patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider,*

129. Vitals.com meets this element.

130. The Court construed the terms "compiling" / "compile" to mean: "gathering and/or putting together."

131. Vitals.com compiles ratings from one or more past or current patients of the first healthcare provider. I know this at least because I see patient ratings displayed on the Vitals.com website.

132. Vitals receives patient ratings from an on-line patient experience survey on the vitals.com website. The Current Version displays a "RATE this doctor" button near the upper right corner of a page showing information regarding one doctor, e.g., http://www.vitals.com/doctors/Dr_Kenneth_Mandl. Clicking on this button results in the display of a survey form regarding the patient's opinion of the doctor and experience with that doctor in specific areas such as "accuracy in diagnosing a problem" and "following up as needed after my visit." (*See* Appendix C.)

133. The Prior Version offered a patient experience survey with similar questions. (*See* Vitals.com PowerPoint, "Site Functionality & Data Set Overview" at MDX0071980.)

134. Specifically, the patient experience survey on vitals.com asks former or current patients to rate a physician from 1 to 4 stars based on the following questions:

1. Overall, what is your opinion of this doctor?

2. Now, tell us how this doctor rates on...

- Ease in getting an appointment

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- Waiting time during a visit
- Courtesy and professionalism of office staff
- Accuracy in diagnosing a problem
- Bedside manner (caring)
- Spending enough time with me
- Following up as needed after my visit
- How long was your wait at the office?

135. On the same page, the patient is also offered the opportunity to "leave a review" of the doctor. The review has two components, an option "Title", and a body called "Comments". The patient is prompted within the "Comments" text entry field with some grayed-out text, reading "Some ideas to get you started: -Write about overall experiences – Write about what you like or dislike about your physician –Write about whether you would recommend –Write as if you are talking to a peer who is asking your opinion".

136. A single Submit button sends both the ratings and the review, if entered, to the vitals.com server.

137. MDx admits that it compiles patient ratings. (*See* Deposition of Larry West (Rough Draft) at 91:13-93:2 & 158:6-158:10; MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 5.)

f. *Step 3 continued: and wherein the company Web site is managed by the company providing the service for connecting healthcare providers with the potential patients;*

138. Vitals.com meets this element.

139. As noted above, a WHOIS lookup at register.com reveals that the vitals.com Internet domain is owned by "mdX Medical". http://www.vitals.com/about states that the content on the page is "Copyright 2006-2011 Vitals.com & MDx Medical, Inc.". The page says, under "To Our Consumers": "How do you choose the doctor that is right for you? Do you have enough information at your fingertips? We at Vitals would like to help." and, above, that the site was "created to give consumers the tools … to make informed decisions about which doctor to choose." (*See* Appendix C.)

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140. Larry West, at his June 26, 2012 deposition, testified that he supervises a group of MDx Medical employees who manage the technical aspects of the vitals.com Web site. (*See* Deposition of Larry West (Rough Draft) at 95:15-95:19.)

141. Based on the vitals.com "about" page and Larry West's description of who manages the vitals.com Web site, I conclude that the vitals.com Web site is "managed by a company providing a service for connecting healthcare providers with potential patients".

142. I understand that MDx is arguing that vitals.com does not infringe because not all patient ratings come from vitals' online experience survey. I disagree. The claim does not require that all ratings come from the on-line experience survey.

> g. *Step 4: compiling information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information;*

143. Vitals.com meets this element.

144. The Court construed the terms "compiling" / "compile" to mean: "gathering and/or putting together."

145. The Court found that the term "verified" should be given its plain and ordinary meaning, of which there are several. One meaning of verified is "to prove." Another is "to confirm" or "to substantiate." The Court stated: "the specification makes clear that the act of 'verifying' requires only that the website receive confirmation of the information from some other source, in this instance the healthcare provider. Indeed, the confirmation described appears to not extend beyond receipt of such information from the first healthcare provider." (Markman Order at p. 15 n.8.)

146. The vitals.com database includes board certification information that MDx gathers from third parties (e.g., from sources other than physicians), such as ABMS (as stated on a typical doctor report: "Vitals receives quarterly updates on board certification from ABMS.") (*See* Appendix C; MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; MDx E-mail dated 06/11/2010 at MDX0019305; Deposition of Erika Boyer at 55:16-55:17.) Therefore, this information is verified by these third parties.

147. The vitals.com database includes medical licensure information that MDx gathers from third parties (e.g., from sources other than physicians). (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; Deposition of Erika Boyer at 81:10-81:16; 85:8-85:12; MDx E-mail dated 06/11/2010 at MDX0019305; Appendix C.) Moreover,

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Vitals.com states that the doctor is "confirmed" (e.g., verified) to have certain state licenses. (*See,* e.g., Appendix C.) Therefore, this information is verified by these third parties.

148. The vitals.com database includes medical school information that MDx gathers from third parties (e.g., from sources other than physicians) because it is able to display a medical school for every doctor on the site that I looked at. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; MDx E-mail dated 06/11/2010 at MDX0019305; Appendix C; Deposition of Erika Boyer at 87:12-87:15.) Therefore, this information is verified by these third parties. The vitals.com database includes internship information that MDx gathers from third parties (e.g., from sources other than physicians). (*See* Deposition of Erika Boyer at 87:1-87:7; MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; MDx E-mail dated 06/11/2010 at MDX0019305.) Therefore, this information is verified by these third parties.

149. The vitals.com database includes residency information that MDx gathers from third parties (e.g., from sources other than physicians). (*See* Deposition of Erika Boyer at 87:1-87:7;MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; MDx E-mail dated 06/11/2010 at MDX0019305.) Therefore, this information is verified by these third parties.

150. The vitals.com database includes fellowship information that MDx gathers from third parties (e.g., from sources other than physicians). (*See* Deposition of Erika Boyer at 87:1-87:7;MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; MDx E-mail dated 06/11/2010 at MDX0019305.) Therefore, this information is verified by these third parties.

151. The vitals.com database includes disciplinary information that MDx gathers from third parties (e.g., from sources other than physicians). (*See* Deposition of Erika Boyer at 93:5-93:23;MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; MDx E-mail dated 06/11/2010 at MDX0019305.) Therefore, this information is verified by these third parties.

152. I understand that MDx argues that it does not infringe because it employs the following rule:

> If displaying third-party verified information for a physician would include three or more of third-party information, then the same information obtained from a physician (e.g., medical school, residency, fellowship, internship) would be used instead (when available) to reduce the number of displayed third-party data to less than three. If the same information for a data field has not been obtained from a physician, then the data field is not displayed at all, so that no more than two third-party data fields are ever displayed for a physician.

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(Policy E-mail from Mitch Rothschild dated 1/5/2011 at MDX0034444-MDXMDX0034445.)

153. Such a programming rule would not be relevant to the question of whether or not this claim element is infringed. This claim element relates to whether information is compiled, e.g., into a relational database, and is unrelated to the question of what is ultimately displayed in a report. MDx has admitted (see above) that they compile at least three kinds of information regarding physicians from third party sources. As will be further discussed below, a person of ordinary skill in the art would understand "compiling" to mean collecting information and organizing it into a database for retrieval. This information would then be processed or "used" by report- or page-generating software. Finally the report or page would be "displayed" to a Web site user such as a patient. The claim construction of "compiling" as "gathering and/or putting together" does not change this analysis. "Compiling" and "Displaying" are separate operations and relate to separate elements of Claim 1.

154. I understand that MDx argues it does not infringe this element because it compiles third party information based on a schedule that depends on the third party source rather than compiling the information in response to a request for information. I disagree. The claim does not place any limits on when the information is compiled – it does not have to be in response to a request. If we were to extend MDx's argument, the patient-provided information, such as ratings, would also have to be obtained in response to a request for a report on a doctor. This would require the potential patient and previous patients all to be visiting the vitals.com site simultaneously. The potential patient would then have to wait for a report until the previous patients had finished typing.

> *h.* *Step 5: creating, by the at least one computer processor, a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers;*

155. Vitals.com meets this element.

156. In the HTML files that are delivered to a consumer's browser, e.g., in response to a request for http://www.vitals.com/doctors/Dr_Peter_Hoenig , there are references to files on the vitals.com server with a ".php" extension, indicating that these are computer programs written in the popular PHP language. (*See* Appendix C.)

157. The report on an individual physician contains a combination of information that the physician entered or verified (e.g., personal statement, languages spoken, specialties, awards, honors), information that patients have provided, and information from third party sources. (*See,* e.g., Appendix C.) Furthermore, the creation of the report involves using a combination of the information that the physician entered or verified (e.g., personal statement, languages spoken,

specialties, awards, honors), information that patients have provided, and information from third party sources, even if that information is not explicitly displayed. (*See* Deposition of Mitch Rothschild at 116:06-117:01; Vitals.com PowerPoint, "Thinking About Physician Quality" at MDX0012068.)

158. If information is displayed in a report, then I can conclude it was used to create a report. It is not necessary to examine the source code of the report-generation software to draw this conclusion.

159. I know that the reports are created using physician-verified information because, in many cases, this information is displayed in the physician report. For example, I have viewed physician reports on vitals.com that display the following: specialty information, medical philosophy, gender, years in profession, awards, honors, professional appointments, professional memberships, publications, and languages. (*See,* e.g., Appendix C.)

160. I know that the reports are created using patient-provided information because, in many cases, this information is displayed in the physician report. (*See,* e.g., Appendix C.)

161. I know that the reports are created using third party-verified information because, in many cases, this information is displayed in the physician report. For example, I have viewed physician reports on vitals.com that display: board certification, licensure, medical school, medical residency, and medical fellowship information. (*See,* e.g., Appendix C.)

162. Vitals.com creates multi-page reports. The first page typically is a summary page with some information about the particular physician about whom information is requested (e.g., specialty information, star rating, location, awards, ratings of affiliated hospital, rating of medical school, etc.). (*See*, e.g., February 2012 Infringement Contentions; Appendix C.) Additional pages of each physician's report may be accessed by clicking on the physician's name.

163. Within each page of a report, additional pages may be accessed that have additional information. My review of the vitals.com website showed that most reports have the following sections: specialty, patient ratings & comments, hospital affiliation, education, awards & honors, publications, and insurance accepted. (*See,* e.g., Appendix C.) Each of these sections may have links to additional pages. (*See* Deposition of Larry West (Rough Draft) at 190:1-193:04; Vitals.com PowerPoint, "Creating the First Truly Comprehensive Website, Database and Evaluation System of America's Physicians" at MDX0069163, MDX0069167; "Find a Doctor on Vitals.com" Video.) For example, the publications section may have a link to an additional page that lists all of a physician's publications. (*See* Appendix C.)

164. I understand that MDx argues that it does not infringe this element because it employs the following rule:

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> If displaying third-party verified information for a physician would include three or more of third-party information, then the same information obtained from a physician (e.g., medical school, residency, fellowship, internship) would be used instead (when available) to reduce the number of displayed third-party data to less than three. If the same information for a data field has not been obtained from a physician, then the data field is not displayed at all, so that no more than two third-party data fields are ever displayed for a physician.

(Policy E-mail from Mitch Rothschild dated 01/05/2011 at MDX0034444-MDXMDX0034445.)

I disagree that MDx follows this rule. I have seen physician reports (for example, TABS 66 & 161) that display board certification, medical school information, and licensure information. All three of these items come from third parties. (*See* MDx's Second Supplemental Resps. to Health Grades' First Set of Interrogs. at p. 6; Appendix C; Deposition of Erika Boyer at 55:16-55:17, 87:12-87:15; 81:10-81:16; 85:8-85:12.)

165. Additionally, I disagree that following this rule will avoid infringement of this element because it does not require that the report display *all* compiled information. The Court's Markman Order specifically rejected this construction. (*See* Markman Order at p. 20.) Even without the Court's order, a person of ordinary skill in the art would not expect a report designed for viewing by humans to contain all of the information previously compiled in a database. One of the main purposes of report-generation or page-generation software is to select, distill, and summarize the most relevant information from a database. A typical server hard drive can store 3 trillion characters of information or approximately 600 billion words. The average adult reads no more than 300 words per minute and therefore would require approximately 3800 years (reading 24 hours per day) to read through the contents of a single hard drive, absent report-generation software to assist with the process.

166. Also, if vitals.com displays fellowship information that has been self-reported by a doctor, it is my opinion that it is still "using" the fellowship information MDx collected from a third party. It is after all stored in the database. In order to avoid displaying incorrect information, Vitals must resolve conflicts between doctor-reported information and third-party verified information. This is a "use" of both kinds of information.

167. Further, MDx displays reports only for physicians who are actively licensed. (*See* Deposition of Larry West (Rough Draft) at 141:04-142:05.) Thus, it is my understanding that Vitals.com uses licensure information to create a report even if they do not always explicitly display that information in the report.

168. I understand that MDx is arguing that these screenshots (*see,* e.g., Appendix C) cannot be a report because they are a results list. It is my opinion that they are both a results list (see discussion below) and a healthcare provider report. They contain a list of physicians who meet the search criteria, but they also contain additional information (e.g., specialty information,

address, ratings, awards, hospital affiliations, board certifications), which is not required by the results list claim element, but which meets the claim limitation of a report on a particular healthcare provider as discussed above.

169. I understand that MDx is arguing that these screenshots are not part of the "report," but instead believe that the report includes only what vitals.com refers to as the "full profile." I disagree. Both parties agree that an ordinary meaning of the term "report" is a "formatted and organized presentation of information." These screenshots include information about a particular healthcare provider that is formatted and organized. The fact that the information is organized into multiple pages linked together does not mean that these pages are not a report. Paper reports often contain many pages and the same is true for reports in electronic form. I do not see any requirement in the claim that the report be limited to one-page, that all of the information be displayed on the same page, or that an embodiment cannot offer multiple report options.

170. If a multi-page report does not literally meet this claim element, then it meets it under the doctrine of equivalents. Vitals.com's multi-page reports perform substantially the same function, in substantially the same way, to produce substantially the same result a single page report. The "function" of the "report on the first healthcare provider" claim element is to allow patients to obtain detailed information about a particular doctor. The "way" this function is achieved in the claim is to create a report with the three types of information (i.e., doctor-verified, patient-provided, and third-party verified). MDx achieves the same function in the same way. The "result" of the claim is a report that includes the claimed information about the particular provider. The result of vitals.com's reports is the same.

171. The court has construed "comparison ratings of healthcare providers" as ratings on multiple healthcare providers, including the "first healthcare provider," in the report on that "first healthcare provider," thus permitting comparison of the "first healthcare provider" with other potential healthcare providers. (Markman Order at p. 24.)

172. A variety of items on vitals.com (both versions) that qualify as comparison ratings. Each of these "ratings" applies to individual physicians, therefore to the first healthcare provider and other healthcare providers.

173. First, there is an "overall patient rating" (1-4 stars) for most physicians. (*See,* e.g., Appendix C.) By displaying the scale along with every rating, vitals.com ensures that potential patients can see how a doctor compares to an ideal doctor. Most physicians on vitals.com have an overall star rating.

174. An additional "comparison rating" for a doctor is whether or not the doctor has been selected for certain awards. (*See* Deposition of Larry West (Rough Draft) at 145:24-148:20.) For example, one "comparison rating" is the "Patients' Choice Award", which is based

on vitals.com patient surveys (source: http://www.patientschoice.org/whatispca). (*See* Appendix C.)

175. A similar, but separate, "comparison rating" is presented to show whether or not the doctor has been selected for an "America's Top Doctors" award, administered by http://www.castleconnolly.com/, one of Vitals.com's listed database vendors. (*See* Appendix C.)

176. Another similar "comparison rating" is whether or not a doctor is listed as "one of America's Leading Experts" (*see* http://www.vitals.com/doctors/Dr_Robert_Mcduffie for example). (*See* Appendix C.)

177. A personalized "comparison rating" is offered following the search for a doctor in that doctors are shown in order of "match score", i.e., how closely a doctor matches the potential patient's search criteria. (*See* Appendices C and D.)

178. The healthcare provider reports created by the Current Version literally include each of the foregoing "comparison ratings" of both the first healthcare provider and other healthcare providers, either on the same screen in response to a search query or on separate screens, depending on the detail level of the reports sought by patients. (*See,* e.g., Appendix C.)

179. For example, if a patient runs a specialty search for a particular doctor, MDx's current website uses information within MDx's database to produce a report on that doctor that can include comparison ratings of that doctor and other doctors contained within the right-hand section of the first page of the report. These ratings can include any of those listed above. By clicking on the particular doctor's name, a patient is able to access additional pages of the healthcare provider report. (*See,* e.g., February 2012 Infringement Contentions.) A demonstration for such a search is attached as Appendix D.

180. Another example if a patient runs a name search for a particular doctor, MDx's current website uses information within MDx's database to produce a report on that doctor that can include comparison ratings of that doctor and other doctors contained within the "highlights" section of the first page of the report, thus permitting comparison of that particular doctor with other potential doctors. These ratings can include any of those listed above. By clicking on the particular doctor's name, a patient is able to access additional pages of the healthcare provider report. (*See,* e.g., February 2012 Infringement Contentions; Appendix C.) A demonstration for such a search is attached as Appendix D.

181. I understand that MDx is arguing the overall patient rating is the claimed patient-provided information and thus cannot also be comparison ratings. I disagree. It is my opinion that it satisfies the requirements of both claim elements as described in this report.

182. I understand that MDx argues that the healthcare provider report must be limited

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to the first healthcare provider and *only* the first healthcare provider, and thus, the display of search results cannot be a healthcare provider report if it contains information on more than one physician (as is the case with the screenshot examples I referenced above). I disagree. (*See* Markman Order at p. 24.)

183. However, if the claimed report must be limited to only one physician, then vitals.com infringes under the doctrine of equivalents. As shown in the screenshots and demos listed above, MDx's current website displays multiple healthcare provider reports, each limited to a single healthcare provider and each containing comparison ratings of that particular healthcare provider, on the same Web page, with other healthcare provider reports of other physicians. (*See,* e.g., Appendix C.) Each of those other reports contains comparison ratings of their particular doctor.

184. Furthermore, on pages of an individual physician's reports, there are links to "Related Doctors" in the profiles. (*See* Appendix C.) These related doctors' profiles, which are included as links within the profile of a particular doctor's profile, each contain "comparison ratings." These related profiles are included in the report just as the other pages of the report are integrated as links. As confirmed by Mr. West, when a section of profile is backed by more data, those data are accessible by a link to a "drill down" page. (*See* Deposition of Larry West (Rough Draft) at 190:1-193:04.) These other profiles, and their ratings, have been included as a "drill down" page in a report on the first healthcare provider.

185. These above examples of reports on Vitals.com perform substantially the same function, in substantially the same way, to produce substantially the same result as the claimed comparison ratings element. The "function" of the comparison ratings claim element is to allow patients to compare the first healthcare provider with other healthcare providers. Vitals.com performs the same function. The "way" this function is achieved in the claim is to include comparison ratings of other healthcare providers in the same report with ratings of the first healthcare provider. The way MDx achieves this function is by displaying multiple reports, each with comparison ratings of the first healthcare provider, on the same page, so that a patient can compare the first healthcare provider with other healthcare providers. This is substantially the same as the claim. The "result" of the claim is a report that allows for comparison of the first healthcare provider with others. The result of vitals.com is substantially the same, i.e., multiple reports that allow for comparison of the first healthcare provider with other healthcare providers.

186. Viewed another way, a healthcare provider report that includes multiple providers (as shown the display of profiles within search results, e.g., Appendix C) performs substantially the same function, in substantially the same way, to produce substantially the same result as the claimed report on the first healthcare provider. The functional difference of reporting on one particular doctor versus multiple particular doctors is insubstantial. A single provider report is substantially the same as a multiple provider report – both have information on the single

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particular provider.

187. Additionally, the Prior Version had a "Compare" Feature that allowed a user to select up to three physicians to compare. The result was a one page report that included "full profiles" for each of the physicians selected, where each physician was displayed in a columnar format. (*See,* e.g., February 2012 Infringement Contentions; Appendix C.) This Compare Feature included comparison ratings for the first healthcare provider and other healthcare providers, including star ratings. If the healthcare provider report is limited to one and only one physician, the doctrine of equivalents arguments detailed above apply equally to this embodiment.

188. Despite the removal of the "Compare" feature from the Current Version, the capability remains available to the user of any standard Web browser on any standard desktop computer. Previously, the user would click the mouse once to select Physician A, once to select Physician B, and once to activate the "compare" page. After these three mouse clicks, the user would be looking at information about Physician A and Physician B side-by-side. In the Current Version, the user would right-click the mouse to select Physician A, left-click the mouse to "open in new window", right-click the mouse to select Physician B, and left-click the mouse to "open in new window". Thus after four mouse clicks, the user would be looking at information about Physician A and Physician B side-by-side on the same computer screen. This is the same function (comparing doctors), in the same way (clicking the mouse), to produce the same result (side-by-side display of information about two doctors). The only difference is that one version requires three mouse clicks and one version requires four mouse clicks.

i. *Step 6: and providing access to the healthcare provider report on the first healthcare provider over a computer network.*

189. Vitals.com meets this element.

190. Both the Current Version and the Prior Version would have no business purpose if they did not provide their reports over the Internet so that potential patients could see them. Sitting at my home computer, for example, I was able to access reports on all of the doctors for whom I searched.

2. Claim 4 and both versions of the vitals.com Web site

The method as defined in claim 1, wherein the healthcare provider report includes a hyperlink to an affiliated hospital, medical center, or other type of treatment center.

191. Vitals.com meets this element.

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192. Vitals.com offers hyperlinks to affiliated hospitals from healthcare provider reports. For example, http://www.vitals.com/doctors/Dr_Peter_Hoenig lists Emerson Hospital in Concord, Massachusetts as an affiliated hospital for this doctor. The name of the hospital is a hyperlink to a vitals.com subpage showing information just for this hospital. (*See* MDx E-mail dated 11/14/2011 at MDX0039644; Vitals.com PowerPoint, "Site Functionality & Data Set Overview" at MDX0071952; *see also* Appendix C.)

193. I understand that MDx is arguing that vitals.com does not infringe this claim because its profiles do not link to a hospital's outside website. The claim does not require this. (*See* Markman Order at p. 21.) Links to a hospital report on vitals.com will meet this element.

3. Claim 5 and both versions of the vitals.com Web site

The method as defined in claim 1, wherein the access to the healthcare provider report is obtained through a predetermined Web page that provides search capabilities for a database comprised of healthcare provider information.

194. Vitals.com meets this element.

195. The vitals.com home page, on both the Prior Version and Current Version, provides search capabilities into a database of healthcare provider information. (*See* Deposition of Larry West (Rough Draft) at 241:10-241:12); Appendix C; Infringement Contentions.) Based on the deposition testimony of Larry West, MDx Medical made efforts to maximize its rank within search engines such as Google. (*See* Deposition of Larry West (Rough Draft) at 226:14-226:24.) Maintaining search engine rank requires keeping pages at the same Web address, starting with the vitals.com domain name, for example. Therefore the vitals.com home page may be said to be "predetermined".

196. To the extent that the Prior Version and Current Version infringe Claim 1, then, they also infringe Claim 5.

4. Claim 6 and both versions of the vitals.com Web site.

The method as defined in claim 5, wherein the search capabilities permit a search based on one or more from the group consisting of: name, medical specialty, gender, state, city, procedure, diagnosis, procedure, and location criteria.

197. Vitals.com meets this element.

198. Continuing to regard the home page as the "predetermined Web page" of Claim 5, the Current Version allows searches by name, medical specialty, state, city, procedure, diagnosis, and location criteria. This is shown in the attached claim chart.

199. In the Current Version, among the options above that might require a more detailed explanation, are procedure, diagnosis, and location criteria. An example of searching by "procedure" would be selecting "search by specialty" then choosing "Radiologist" and "Diagnostic Ultrasound Radiologist" as the subspecialty. The procedure in this case would be a diagnostic ultrasound. The portion of the vitals.com home page that allows a user to search by diagnosis is "search by condition" in which a patient can type in a diagnosis of, for example, "psoriasis". The "location criteria", as distinct from city and state, corresponds to the "Radius" search option on the vitals.com home page, with drop-down options of 2-30 miles. (*See* Deposition of Larry West (Rough Draft) at 178-182.)

200. The only search capability set forth in claim 6 that is not present in the user interface of the vitals.com home page is to search by gender. In the current version, this is available with a checkbox on the search results page that follows. Clicking the checkbox results in a narrowing of the search results. In my opinion, this is still part of the same search that was started from the vitals.com home page and therefore every portion of claim 6 is literally infringed.

5. Claim 7 and both versions of the vitals.com Web site

The method as defined in claim 6, wherein the search of the database produces a results list of one or more healthcare providers satisfying the search criteria, wherein the results list includes the first healthcare provider.

201. Vitals.com meets this element.

202. The vitals.com Current Version returns a results list from a search by name from the Web address www.vitals.com/doctor/checkup. Results lists are returned from a search by specialty or a search by diagnosis (condition) from the Web address www.vitals.com/doctor/find. (*See* Deposition of Larry West (Rough Draft) at 241; *see also* Appendix C.)

6. Claim 8 and both versions of the vitals.com Web site

The method as defined in claim 7, wherein the results list further includes an advertisement for the first healthcare provider with a hyperlink to information on the first healthcare provider.

203. Vitals.com meets this element.

204. Larry West testified in his June 26, 2012 deposition that doctors can purchase a "sponsored link", which will result in the vitals.com Web site displaying advertisements to potential patients. (*See* Deposition of Larry West (Rough Draft) at 259.) He further testified that if the doctor specifies that the advertisement should be displayed to people searching for doctors in a given specialty in a given location, and that information matches the doctor's own, the

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advertisement may be displayed on the right side of a search results page from the Current Version while an ordinary vitals.com summary of information regarding that doctor would be displayed in the center. (*See* Deposition of Larry West (Rough Draft) at 247-248.)

205. Other documents and displays also shown this functionality. (*See* Vitals.com Patient Referral Program at MDX0000177; Vitals.com PowerPoint, "Creating the First Truly Comprehensive Website, Database and Evaluation System of America's Physicians" at MDX0069164; Appendix C.)

7. Claim 9 and both versions of the vitals.com Web site

The method as defined in claim 7, further comprising:

determining from the results list whether a particular healthcare provider is a member of the company managing the Web site; and

if the particular healthcare provider is a member of the company managing the Web site, providing enhanced services for the member healthcare provider on the Web site.

206. Vitals.com meets this element.

207. The question of whether or not the vitals.com Web site infringes claim 9 hinges on the meaning of "member" and the meaning of "enhanced services". Figure 2A of the '060 Patent shows that one aspect of a physician being a "member" is the display of an advertisement for that physician on the search results page. The '060 Patent, col. 7, ll. 26-27, explains that "the advertisement may be for any member entity or physician". Column 7, ll. 28-30 states: "In an embodiment, the member advertisement may contain a hyperlink 213 for providing a report or ratings on that entity". In other words, this corresponds to the "sponsored link" facility of the vitals.com Web service.

208. The "enhanced services" of the '060 Patent include a physician appearing on a results page where otherwise he or she would not have. This is precisely what vitals.com, both in the Current Version and Prior Version, provides to physicians who purchase "sponsored links". (*See* Appendix C.)

209. In my opinion, the Current Version and Prior Version of the vitals.com Web service offer physicians the ability to affiliate themselves more closely with the service by purchasing sponsored links and this corresponds to the "membership" concept of the '060 Patent. Those who purchase sponsored links receive the enhanced service of appearing on results pages where they otherwise would not appear, with links to additional information about those physicians. (*See* Deposition of Larry West (Rough Draft) at 247-248, 259.)

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210. Further, vitals.com defines any physician who registers with its website as a "member." It states: "**Members** log in here. . . ." (*See* Appendix C.) Physician members receive enhanced services including the ability to edit their profiles and manage their reputation by doing things such as suppressing comments. (*See* Deposition of Larry West (Rough Draft) at 249-251; Appendix C.)

8. Claim 14 and both versions of the vitals.com Web site

The method as defined in claim 1, wherein the first healthcare provider is a physician.

211. As shown in the attached claim charts, the typical usage of vitals.com is to find healthcare providers who are physicians and therefore the typical report from both the Prior Version and Current Version is regarding one or more physicians. In many cases, all of the healthcare providers mentioned on a page from the vitals.com server are physicians and therefore the "first healthcare provider" is also a physician. (*See,* e.g., Appendix C.)

9. Claim 15 and both versions of the vitals.com Web site

An on-line information system for connecting healthcare providers with potential patients, the system comprising:

at least one computer processor; and

memory coupled with and readable by the at least one computer processor and comprising a series of instructions that, when executed by the at least one computer processor, cause the at least one computer processor to:

212. Both the Current Version and Prior Version of the vitals.com Web service are "on-line" in that they are accessible via the Internet. As noted in my analysis of Claim 1, vitals.com offers to connect physicians ("healthcare providers") and patients. Larry West, in his June 26, 2012 deposition, confirmed that MDx Medical uses conventional servers with "at least one computer processor" and "memory".

receive a request for information regarding a first healthcare provider;

213. My analysis here is substantially similar to the corresponding element of Claim 1 ("receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider") and, in the interest of concision, is not repeated here.

access healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in

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profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;

214. My analysis here is substantially similar to the corresponding element of Claim 1 ("accessing healthcare provider-verified … hobbies;") and, in the interest of concision, is not repeated here.

compile patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider, and

215. My analysis here is substantially similar to the corresponding element of Claim 1 ("compiling … patient-provided information …current patients of the first healthcare provider,") and, in the interest of concision, is not repeated here.

wherein the company Web site is managed by a company providing a service for connecting healthcare providers with the potential patients;

216. My analysis here is substantially similar to the corresponding element of Claim 1 (identically worded) and, in the interest of concision, is not repeated here.

compile healthcare provider information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information;

217. My analysis here is substantially similar to the corresponding element of Claim 1 ("compiling information regarding the first healthcare provider … and medical fellowship information") and, in the interest of concision, is not repeated here.

create a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers; and

218. My analysis here is substantially similar to the corresponding element of Claim 1 ("creating … a healthcare provider report … includes comparison ratings of healthcare providers;") and, in the interest of concision, is not repeated here.

provide access to the healthcare provider report on the first healthcare provider over a computer network.

219. My analysis here is substantially similar to the corresponding element of Claim 1 ("and providing access … over a computer network") and, in the interest of concision, is not repeated here.

10. Claim 16 and both versions of the vitals.com Web site

The on-line information system defined in claim 15, wherein:

the healthcare provider report is obtained through one or more from the group consisting of: a predetermined Web page that provides search capabilities on its database and a third-party search engine; and

220. Vitals.com meets this element.

221. My analysis of claim 5 can be applied to this element of claim 16 when the healthcare provider report is obtained through the vitals.com Web page and a search of the vitals.com database. To the extent that "one or more" can mean "one", therefore both the Prior Version and Current Version practice this element of Claim 16. The second method of obtaining the report, through "a third-party search engine", requires a new analysis.

222. A person of ordinary skill in the art would understand the term "a third-party search engine" to mean the Google Web Search capability, for example, at www.google.com. This understanding is confirmed by the Abstract of the '060 Patent: "a search engine, such as Google, Yahoo, etc." Figures 6 and 14 of the '060 Patent also confirm this understanding of the term.

223. For infringement of this element to occur using only the third-party search engine, and not the vitals.com home page database search capabilities, a Web user would have to open up two browser windows. In each window, the user would type the name of a doctor into a search engine (e.g., Google). Due to the search-engine optimization efforts made by MDx Medical, as explained by Larry West in his June 26, 2012 deposition, the user would very likely have little trouble finding vitals.com pages covering each doctor searched for. (*See* Deposition of Larry West (Rough Draft) at 225:21-227:18.) Looking at the windows side-by-side, therefore, the user would be able to compare the doctors. (*Id.*) If this did not literally infringe the '060 Patent, it would do so under the doctrine of equivalents. The user of a modern personal computer is accustomed to having multiple windows open simultaneously and it is not a matter of great interest to that user whether or not the required information appears in one window or in two side-by-side windows.

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224. Due to the fact that obtaining reports via the use of third-party search engines is an optional rather than required part of this claim element, however, it is not necessary to consider their use in order to find that this claim element is infringed.

> *the search capabilities of the predetermined Web page permit searching based on one or more from the group consisting of: name, medical specialty, gender, state, city, procedure, diagnosis, and location criteria.*

225. Vitals.com meets this element.

226. My analysis of this element of claim 16 is identical to my analysis of claim 6 and, in the interest of concision, is not repeated here.

G. The iTriage App

227. The iTriage App uses data licensed from MDx's physician database, which is the same database used by the accused vitals.com website. As such the opinions expressed above with regard to MDx's database apply equally to the iTriage App.

228. The home page of the iTriage App includes a link for "Doctors" - the link takes a user to a list of "Most Common Specialties" – and selecting a specialty yields a page that includes a list of "providers" (doctors) that practice the selected specialty. This page also includes additional information for each doctor listed, including for example, specialty information, star ratings (if available), a photograph (if available), and an address. There are multiple doctors listed on this page, each with a star rating, which can be used to compare one doctor with others on the same page.

229. There is a "Sort" button that allows a user to sort the list of physicians by various criteria, including "Rating" (with a gold star above the word "Rating"). Sorting the list by "Rating" yields a list of doctors, now showing star ratings for each doctor listed. The doctors and ratings are listed on top of each other - four per screen - and a user can scroll down to see more doctors in the list. With respect to the "star ratings" the App has the following language:

> Star ratings are consumer ratings provided by Vitals, which is a service of MDX Medical, Inc. Vitals allows patients to review and rate their doctors online. Patient ratings are averaged for each doctor and are the sole source of the Star Ratings. Star ratings are provided for your information only and do not represent a recommendation or endorsement by iTriage or Vitals. For more information on Star Ratings, or to rate a provider, visit Vitals.com.

(*See* Appendix E.)

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230. The "Sort" button also allows a user to set and sort the results list by "Advanced Preferences" - there are six different preferences you can select, and put in order of importance. The six preferences are:

- "Consumer Rating"
- "Extended Profile"
- "Years of Experience"
- "Gender"
- "Distance"
- "Languages Spoken."

231. If a user sorts the results list by your preferences, the App yields a list of doctors, each in a box on top of each other, and each showing his or her respective star rating. If a user touches a doctor's box, it takes him or her to a full profile for that doctor, showing the star rating and all the preference data as well as the information listed in the second paragraph above. The profile includes address and phone number, and also "Clinical Interests," "Research Interests," "Education," "Training," "Residency," "Fellowships," "Membership," "Awards" and "Board Certifications." Some doctors have a subset of these, some have all of them.

232. Attached as Appendix E is a claim chart detailing my infringement opinions regarding the iTriage App. The analysis below is intended to be read in conjunction with the claim chart.

1. Claim 1 and iTriage

a. preamble: A computer-implemented method of providing healthcare provider information to potential patients, said method comprising:

233. The iTriage App meets this element.

234. For example, http://about.itriagehealth.com/what-is-itriage/ states that the iTriage will assist a potential patient ("consumer") with answering the question "where do I need to go for treatment?" and with locating "the closest Appropriate healthcare providers to your current location".

235. Mobile phones such as iPhones and Androids on which the iTriage App runs are computers and therefore this is a "computer-implemented method".

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236. Based on the screen shots reviewed and the live App used, iTriage is a computer-implemented method of providing healthcare provider information to potential patients.

b. Step 1: receiving, by a Web server computer of a company providing a service for connecting healthcare providers with the potential patients, a request for information regarding a first healthcare provider,

237. The iTriage App meets this element.

238. The iTriage App does not function when a phone is in "Airplane mode" and thus is unable to connect to a network. Thus the iTriage App must be connecting to a Web server with a request for information, e.g., on Cardiologists near Denver.

239. Attempts to determine the exact nature of the request were made by capturing network traffic during a use of the iTriage App to find cardiologists in Denver, Colorado. Tests were conducted using an iPhone 4S running iOS 5.1.1 connected via Wi-Fi to a Lenovo Thinkpad Edge 0196-24U laptop computer running the Windows 7 Professional operating system. The network adapter installed within the computer is Realtek RTL8111DL based. The laptop computer was running Fiddler v2.4.0.0 configured as an HTTP proxy for packet capture and analysis.

240. The capture indicated that the phone made a Transport Layer Security (TLS) 1.2 connection to the server itriage.healthagen.com on port 443. Traffic was observed between the phone and the server in response to both selecting a specialty and selecting a specific doctor. Due to the encryption of the TLS 1.2 protocol, it was impossible to determine the format of the request or the response received.

241. Requesting a non-secure Web page from the server itriage.healthagen.com results in a direction to the about.itriagehealth.com server, indicating an affiliation between iTriage and the healthagen.com domain. It is reasonable therefore to infer that this is a "server computer of a company providing a service for connecting healthcare providers with the potential patients".

c. Step 1 continued: wherein the Web server computer comprises at least one computer processor and memory;

242. The iTriage App meets this element.

243. As noted in the above analysis of the '060 Patent claims and the vitals.com Web site, all conventional Web servers contain at least one processor and memory. Thus the Web server computers operated by iTriage must comprise at least one computer processor and memory.

d. *Step 2: accessing healthcare provider-verified information about the first healthcare provider, wherein the healthcare provider-verified information is received from the first healthcare provider and comprises three or more from the group consisting of: specialty information, medical philosophy, gender, age, years in profession, years in practice, awards, honors, professional appointments, professional memberships, publications, languages, and hobbies;*

244. The iTriage App meets this element.

245. REDACTED

246. The Court found that the term "verified" should be given its plain and ordinary meaning, of which there are several. One meaning of verified is "to prove." Another is "to confirm" or "to substantiate." The Court stated: "the specification makes clear that the act of 'verifying' requires only that the website receive confirmation of the information from some other source, in this instance the healthcare provider. Indeed, the confirmation described appears to not extend beyond receipt of such information from the first healthcare provider." (Markman Order at p. 15 n.8.)

247. http://www.vitals.com/v/index.php?v=user/show_register offers physicians the ability to "Edit and add information that patients and others see." (*See* Appendix C.)

248. MDx admits that its system is capable of allowing physicians to edit the following fields in MDx's physician database, which it then licenses to Aetna: specialty information, gender, awards/honors, professional appointments, professional memberships, and languages. (*See* Supplemental Response to Interrogatory No. 2.)

249. MDx further admits that physicians have actually edited each of these fields. (*See* Supplemental Response to Interrogatory No. 2.)

250. In any event, I understand that Health Grades need only prove that the system is reasonably capable of receiving this information from physicians, which I conclude it is. This capability is available to any licensed physician and no changes or alternations need be made to enable this feature.

251. Additionally, I understand that many more physicians have registered with vitals.com and viewed their profiles without changing any information. It is my opinion that in

doing so these physicians have confirmed (e.g., verified) their information for MDx and therefore provided it to MDx.

e. *Step 3: compiling, by the at least one computer processor, patient-provided information regarding the first healthcare provider, wherein the patient-provided information comprises patient ratings from one or more past or current patients of the first healthcare provider, and wherein the patient ratings are received from an on-line patient experience survey completed on a company Web site by the one or more past or current patients of the first healthcare provider,*

252. The iTriage App meets this element.

253. The agreements between iTriage and Aetna show that Aetna has licensed patient ratings from MDx and retrieves these via an XML data feed. (MDx Queries (MDX0104073) Conventional industry practice would be to store ("compile") these data in a database on a server in preparation for answering requests from clients such as the iTriage App. Evidence that this information exists in the iTriage database is provided by the fact that the ratings are included in pages within the iTriage App. Vitals.com obtains its patient ratings from an on-line patient experience survey on vitals.com as described in detail above with regard to the vitals.com website, which discussion is incorporated by reference herein.

f. *Step 3 continued: and wherein the company Web site is managed by the company providing the service for connecting healthcare providers with the potential patients;*

254. The iTriage App meets this element under the doctrine of equivalents.

255. To the extent that the iTriage App does not literally infringe this element because the online survey is hosted by vitals.com (e.g., MDx), it infringes under the doctrine of equivalents because it performs substantially the same function in substantially the same way to obtain the same result. The function of the claim is to obtain the patient ratings. The way the patient ratings are obtained is through an on-line survey. The result is that Aetna has patient ratings obtained from an on-line survey. Indeed, the iTriage App directs patients to go to vitals.com to rate the physician they are looking at. This is insubstantially different from including the survey in the iTriage App.

256. REDACTED

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g. *Step 4: compiling information regarding the first healthcare provider verified by an independent third-party source, wherein the information verified by the independent third-party source comprises three or more from the group consisting of: board certification, licensure, disciplinary action information, medical school, medical internship, medical residency, and medical fellowship information;*

257. The iTriage App meets this element.

258. REDACTED

259. As discussed above, MDx gathers this information from third parties, who by virtue of providing it to MDx, are verifying it.

h. *Step 5: creating, by the at least one computer processor, a healthcare provider report on the first healthcare provider using the healthcare provider-verified information, the patient-provided information, and the information verified by the independent third-party source, wherein the healthcare provider report on the first healthcare provider includes comparison ratings of healthcare providers;*

260. The iTriage App meets this element.

261. The Court's Markman Order defines "First Healthcare Provider" as "a particular healthcare provider about whom information is requested and a report is produced." (Markman Order at p. 23.)

262. The Court's Markman Order defines "Comparison Ratings of Healthcare Providers" as "ratings on multiple healthcare providers, including the 'first healthcare provider,' in the report on that 'first healthcare provider,' thus permitting comparison of the 'first healthcare provider' with other potential healthcare providers." (Markman Order at p. 24.)

263. The iTriage App's web server receives a request for information about a particular healthcare provider when a potential patient clicks the "doctor" icon shown below:

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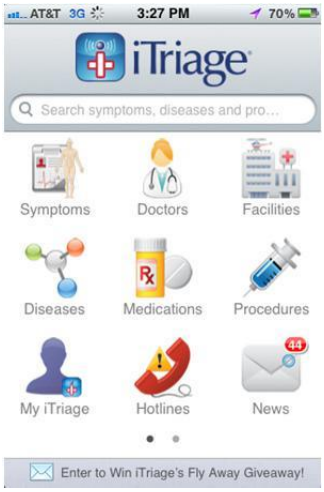
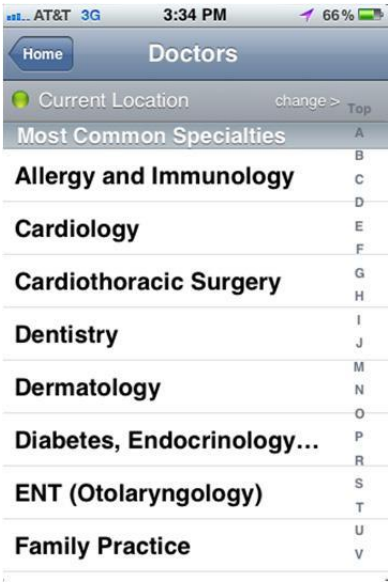


264. One way of searching for a doctor is by specialty. When a user selects the "Doctors" icon, a list of specialties by which a patient can search is displayed, as shown below:



265. At this screen, a user can select the location for where the user would like to search. In the example shown above, the user has selected the user's current location, which is determined by the Global Positioning System (GPS) feature of the iPhone.

266. For example, when one selects the family practice link, this prompts the patient's web browser to send a request for information about a doctor to the iTriage App's web server, which receives the request for information and then accesses the Master Database developed by MDx to find data that responds to the user's search query. After a user selects a specialty, such as family practice, the user is given the opportunity to further restrict his or her request for information by selecting a sub-specialty or viewing all doctors near the user's current location with a family practice specialty, as shown below:

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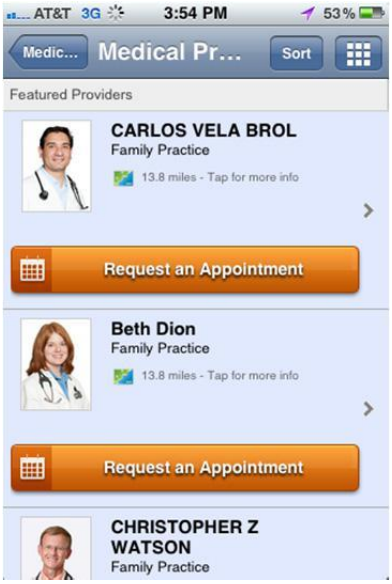
267. Where a user selects "All Family Practice," a results list of compressed doctor's profiles for doctors near the user's current location with a specialty of family medicine is displayed, as shown below:



268. A user can further narrow his or her request for information and/or by clicking the "sort" button above, and then the "advanced" icon shown in the screenshot below:

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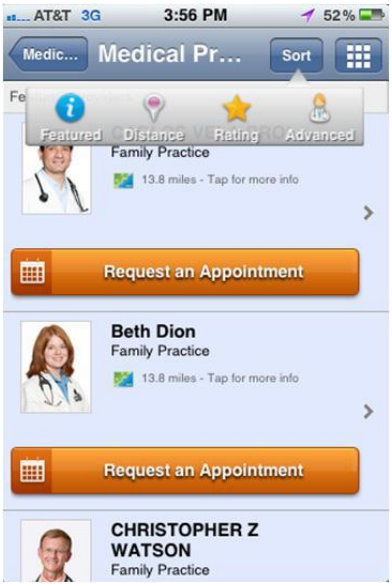


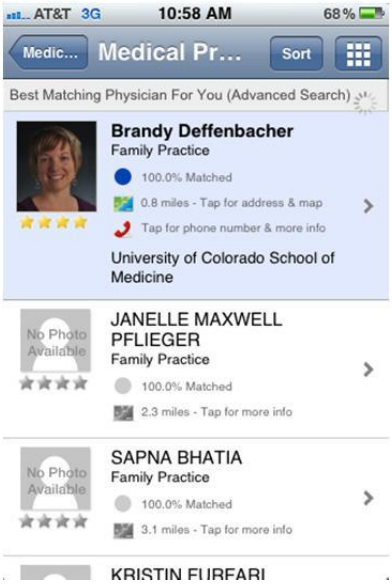
269. After selecting "Advanced" an advanced preferences menu is presented, as shown below:



270. From the advanced preferences menu, a potential patient, for example, can request information about a particular, female, family practice specialist, located within 5 miles of his or her current location, who speaks English, has 5-10 years of experience, and was rated 3 stars or higher, as shown below:



271. After applying these search criteria, a results list with the particular physician best matching the search criteria is presented:



272. For example, the user could then select the first page of the profile of Brandy Deffenbacher, which would cause the iTriage App to move to the second page of Dr. Deffenbacher's profile, as shown below in the following two screenshots:

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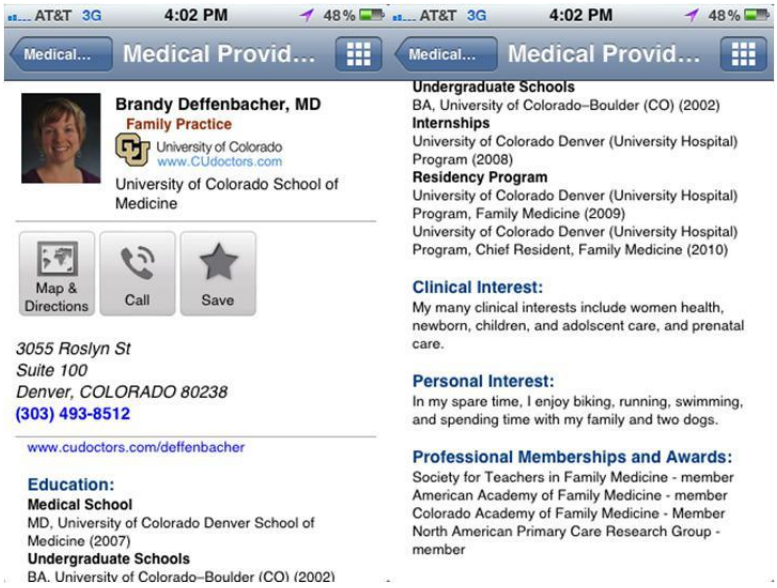
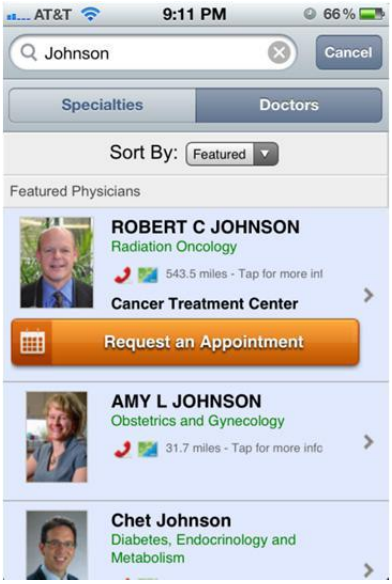


273. Another way a user can request information on a particular healthcare provider is to search for the healthcare provider by name, as shown below:



274. As can be seen from the above screenshot, a doctor's name can be entered and list of profiles for doctors matching the name will be presented. In the example above, the name Johnson was searched for, and a list of profiles for doctors with the name of Johnson was produced. From the same screen, a user can further limit the search results by distance from a specified location, or by featured doctors, as shown below:

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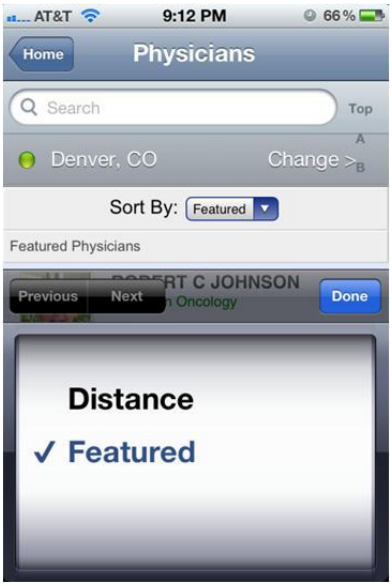

275. To the extent that the Court's construction of first healthcare provider requires that the request for information be directed to only one particular healthcare provider, a position with which Health Grades disagrees, the iTriage App both literally infringes this element and infringes under the doctrine of equivalents. The iTriage App literally infringes this element because it is capable of receiving requests for information about only one particular physician. The iTriage App infringes under the doctrine of equivalents because a request for information about multiple particular physicians performs substantially the same function, in substantially the same way, to achieve substantially the same result as a request for one particular physician as shown above.

276. To the extent that the Court's construction of first healthcare provider requires that the potential patient know the identity of the particular physician for whom he or she is requesting information before they request the information, a position with which Health Grades disagrees, the iTriage App both literally infringes this element and infringes under the doctrine of equivalents. The iTriage App literally infringes this element because it is capable of receiving requests for information about a particular physician whose identity is known to the requestor before the information is requested. The iTriage App infringes under the doctrine of equivalents because a request for information about a particular physician that has characteristics that meet search criteria (e.g., female, Family Practitioner that Speaks English, within 5 miles of Denver, CO, with 5-10 years of experience) performs substantially the same function, in substantially the same way, to achieve substantially the same result as a request for a particular physician whose identity is known before the search is run.

277. After a user enters the search criteria for a particular provider, the iTriage App creates one or more healthcare provider reports using information from the Aetna Master Database, which is developed, maintained, and managed by MDx and contains MDx's data. The

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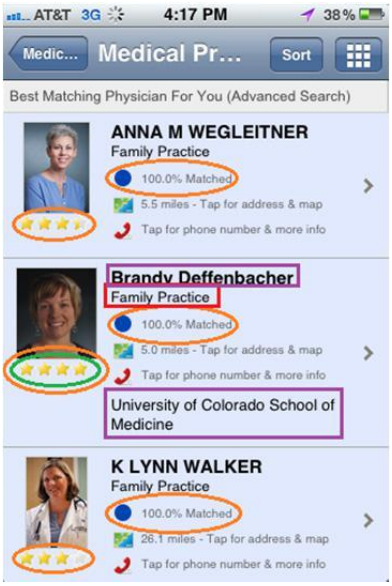
iTriage App creates the reports using healthcare provider-verified information, patient-provided information, and information verified by the independent third-party source about the first healthcare provider. Further, the reports contain comparison ratings of the healthcare providers.

278. The following screenshots show portions of a healthcare provider report for Dr. Brandy Deffenbacher, who is an example of a first healthcare provider as defined by the Court in its Markman ruling. This report was created using at least the following information: (1) healthcare provider-verified information, circled or boxed in red; (2) patient-provided information, circled or boxed in green; and (3) information verified by an independent third party circled or boxed in purple. The report also includes comparison ratings, circled or boxed in orange, about Dr. Deffenbacher, and other healthcare providers as required by the Court's Markman Order. As with any computer generated report, it is generated by at least one computer processor.

279. After entering the search criteria for Dr. Deffenbacher, the iTriage App generates a report for Dr. Deffenbacher, the first page of which is shown below:



280. In the above screenshot, the percentage matched to the search criteria are comparison ratings as defined by the Court. These ratings provide the patient with information regarding how well physicians listed in the results list satisfy the patient's specified criteria, e.g., specialty, location, gender, language, patient rating, or having an extended profile. A user can thus use these ratings to compare which doctor best matches the user's preferences. There are percentage matched for the first healthcare provider (i.e., Dr. Deffenbacher) and other healthcare providers (i.e., Dr. Walker and Dr. Wegleitner).

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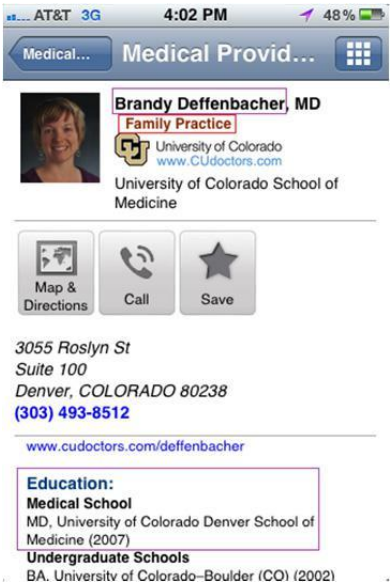
281. Another comparison rating that exists in the above screenshot is the star ratings for Dr. Deffenbacher and the other doctors. By viewing these star ratings, a user can understand that by having 4 stars, Dr. Deffenbacher is rated higher than a doctor with a 3-star rating.

282. The above report also includes percentage match ratings and star ratings for other providers as required by the Markman Order.

283. To the extent that MDx asserts that any of these three ratings do not literally satisfy the limitation of a healthcare provider report that includes comparison ratings, these ratings meet the claim limitation under the doctrine of equivalents because they have substantially the same function and operate in substantially the same way to achieve substantially the same result as comparison ratings in a healthcare provider report.

284. The above screenshot of the report on Dr. Deffenbacher also shows physician provided information of specialty (boxed in red). It also shows third party verified information, boxed in purple: Dr.'s Licensed Name and Medical School. Also shown is patient provided information, which is circled in green.

285. When a user chooses to view more information on Dr. Deffenbacher, he or she can see additional pages of the report as shown below:



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286. As can be seen from the above screenshots, this report includes provider-verified information, including: clinical interests, hobbies, and specialty information (boxed in red). Also in the report is third-party verified information (boxed in purple) including: Medical School, Medical Residency, Medical School, and the doctor's licensed name.

287. Additional pages for another healthcare provider report for a Dr. Allen, is shown below:



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288. As can be seen from Dr. Allen's profile, there is provider-verified information including Dr. Allen's research, his memberships and awards, his clinical interests, and his specialty. Also, there is third-party verified information including his Board Certifications, his Medical Internship, Medical Residency, Medical Fellowship, and Medical School.

289. A user can enter search criteria and preferences into the iTriage application for a particular healthcare provider. For example, a user could search for a female family practitioner within 5 miles of his or her current location, who speaks English, has 5-10 years of experience, and was rated 3 stars or higher. When a user defines these preferences and searches for the particular provider the iTriage App creates one or more healthcare provider reports using

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information from the Aetna Master Database, REDACTED

290. The iTriage App creates the reports using healthcare provider-verified information, patient-provided information, and information verified by the independent third-party source about the first healthcare provider.

291. Further, the reports contain comparison ratings of the healthcare providers.

292. A variety of items in the iTriage App qualify as comparison ratings. Each of these "ratings" applies to individual physicians, therefore to the first healthcare provider and other healthcare providers.

293. First, there is a "star rating" (1-4 stars) for most physicians. By displaying the scale along with every rating, the iTriage App ensures that potential patients can see how a doctor compares to an ideal doctor.

294. The percentage matched to the search criteria are also comparison ratings as defined by the Court. These ratings provide the patient with information regarding how well physicians listed in the results list satisfy the patient's specified criteria, e.g., specialty, location, gender, language, patient rating, or having an extended profile. A user can thus use these ratings to compare which doctor best matches the user's preferences. There are percentage matched for the first healthcare provider and other healthcare providers. This feature is very similar to vitals.com's match score rating.

295. The healthcare provider reports created by the iTriage App literally include each of the foregoing "comparison ratings" of both the first healthcare provider and other healthcare providers, either on the same screen in response to a search query or on separate screens, depending on the detail level of the reports sought by patients.

296. For example, if a patient runs a search for a particular doctor, the iTriage App uses information within MDx's database to produce a report on that doctor that can include comparison ratings of that doctor and other doctors on the first page of the report, thus permitting comparison of that particular doctor with other potential doctors. These ratings can include any of those listed above. By clicking on the particular doctor's name, a patient is able to access additional pages of the healthcare provider report.

297. I understand that MDx argues that the healthcare provider report must be limited to the first healthcare provider and *only* the first healthcare provider. I disagree. However, if the claimed report must be limited to only one physician, then the iTriage App infringes under the doctrine of equivalents. As shown in the screenshots in Appendix E, the iTriage App displays multiple healthcare provider reports, each limited to a single healthcare provider and each

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containing comparison ratings of that particular healthcare provider, on the same webpage, side-by-side, with other healthcare provider reports of other physicians. Each of those other reports contain comparison ratings of their particular doctor.

298. While none of these reports include ratings of other healthcare providers, they perform substantially the same function, in substantially the same way, to produce substantially the same result as the claimed comparison ratings element. The "function" of the comparison ratings claim element is to allow patients to compare the first healthcare provider with other healthcare providers. Vitals.com performs the same function. The "way" this function is achieved in the claim is to include comparison ratings of other healthcare providers in the same report with ratings of the first healthcare provider. The way MDx achieves this function is by displaying multiple reports, each with comparison ratings of the first healthcare provider, on the same page, so that a patient can compare the first healthcare provider with other healthcare providers. This is substantially the same as the claim. The "result" of the claim is a report that allows for comparison of the first healthcare provider with others. The result of vitals.com is substantially the same, i.e., multiple reports that allow for comparison of the first healthcare provider with other healthcare providers.

299. Viewed another way, a healthcare provider report that includes multiple providers (as shown the display of search results) performs substantially the same function, in substantially the same way, to produce substantially the same result as the claimed report on the first healthcare provider. The functional difference of reporting on one particular doctor versus multiple particular doctors is insubstantial. A single provider report is substantially the same as a multiple provider report – both have information on the single particular provider.

300. To the extent that MDx asserts that any of these three ratings do not literally satisfy the limitation of a healthcare provider report that includes comparison ratings, these ratings meet the claim limitation under the doctrine of equivalents because they have substantially the same function and operate in substantially the same way to achieve substantially the same result as comparison ratings in a healthcare provider report.

i. *Step 6: and providing access to the healthcare provider report on the first healthcare provider over a computer network.*

301. The iTriage App meets this element.

302. Both the Current Version and the Prior Version would have no business purpose if they did not provide their reports over the Internet so that potential patients could see them. Sitting at my home computer, for example, I was able to access reports on all of the doctors for whom I searched.

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2. Claim 4 and iTriage

The method as defined in claim 1, wherein the healthcare provider report includes a hyperlink to an affiliated hospital, medical center, or other type of treatment center.

303. As shown in the attached claim chart, Appendix E, the iTriage App displays a hyperlink to at least "an affiliated medical center", e.g., "CUdoctors.com", from at least one doctor report. Therefore, the iTriage App infringes this claim.

3. Claim 5 and iTriage

The method as defined in claim 1, wherein the access to the healthcare provider report is obtained through a predetermined Web page that provides search capabilities for a database comprised of healthcare provider information.

As shown in the claim chart attached as Appendix E, the iTriage App provides search capabilities from a home page within the iTriage App. Due to the fact that this provides a very similar user experience to a Web browser accessing a Web page, the iTriage App infringes this claim under the doctrine of equivalents.

4. Claim 6 and iTriage

The method as defined in claim 5, wherein the search capabilities permit a search based on one or more from the group consisting of: name, medical specialty, gender, state, city, procedure, diagnosis, procedure, and location criteria.

304. As shown in the claim chart attached as Appendix E, the iTriage App provides very straightforward searching by medical specialty, state, and city. Via the "Advanced Preferences" feature, the iTriage App provides searching by gender and location criteria ("distance", offering such choices as "Less than 15 miles"). Therefore the iTriage App infringes this claim.

5. Claim 7 and iTriage

The method as defined in claim 6, wherein the search of the database produces a results list of one or more healthcare providers satisfying the search criteria, wherein the results list includes the first healthcare provider.

305. As show in the attached claim chart (Appendix E), the iTriage App displays a results list of one or more healthcare providers satisfying the search criteria. A first page of a report on each healthcare provider, including of a "first healthcare provider", is shown.

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6. Claim 8 and iTriage

The method as defined in claim 7, wherein the results list further includes an advertisement for the first healthcare provider with a hyperlink to information on the first healthcare provider.

306. As a variety of the screen captures in the claim chart attached as Appendix E demonstrate, the iTriage App results page shows "featured providers" and "additional providers". The "featured providers" list may be regarding as a list of advertisements for physicians. Each advertisement contains a hyperlink to additional information regarding that physician. Thus the iTriage App infringes this claim.

7. Claim 9 and iTriage

The method as defined in claim 7, further comprising:

determining from the results list whether a particular healthcare provider is a member of the company managing the Web site; and

if the particular healthcare provider is a member of the company managing the Web site, providing enhanced services for the member healthcare provider on the Web site.

307. As shown in the attached claim chart (Appendix E), the iTriage App provides a variety of enhanced services to a physician who has elected to purchase a "premier listing" and therefore this corresponds to the "member" distinction of the '060 patent specification. For those physicians, and not non-members, the search results page shows color portraits, a blue background color, and an earlier position in the list.

8. Claim 11 and iTriage

The method as defined in claim 9, wherein the enhanced services comprise favorable positioning in the results list.

308. As shown in the claim chart attached as Appendix E, the iTriage App displays member physicians' reports in a higher position in the results list than non-member physicians. This is "favorable" because these reports are therefore viewable by the end-user without the need for scrolling.

9. Claim 14 and iTriage

The method as defined in claim 1, wherein the first healthcare provider is a physician.

EXHIBIT A

309. As shown in the attached claim chart (Appendix E), the top center icon on the iTriage App's home page is "Doctors" and the typical healthcare provider on whom the iTriage App displays a report is a physician. Thus the iTriage App infringes this claim.

10. Claim 15 and iTriage

310. My analysis of claim 15 is substantially similar to my analysis of Claim 1 and iTriage. Moreover, the attached claim chart (Appendix E) contains a complete element-by-element analysis of claim 15 and the iTriage App. The iTriage App does not function with a phone in "airplane mode" and therefore it may be said to be an "on-line information system". For that reason and for all of the reasons that the iTriage App literally infringes claim 1, it infringes claim 15.

11. Claim 16 and iTriage

The on-line information system defined in claim 15, wherein:

the healthcare provider report is obtained through one or more from the group consisting of: a predetermined Web page that provides search capabilities on its database and a third-party search engine; and

311. As shown in the attached claim chart (Appendix E), the iTriage App infringes this claim by providing search capabilities from a predetermined page. This page is not within a traditional Web browser and therefore this claim is infringed under the doctrine of equivalents.

312. Due to the fact that only one mechanism from the "group" of the claim is required for this claim to be infringed, there was no need for me to explore whether or not there is any way to obtain iTriage App healthcare provider reports by starting from a third-party search engine, such as Google.

H. Doctrine of Equivalents

313. For each of the claims above, to the extent that an argument can be made that the Current Version or Prior Version of the vitals.com site does not literally infringe, the sites would infringe under the doctrine of equivalents. To the extent that information is contained within the vitals.com relational database management system, varying the manner and layout of presenting that information is a straightforward and simple task for a person of ordinary skill in the art. Larry West testified on June 26, 2012, for example, that he received instructions to change the vitals.com Web Application so that it would be less likely to be considered as infringing the '060 Patent. (Deposition of Larry West (Rough Draft) at 106.) He further testified that the changes were made by a programmer and launched to the public within one day. (*Id.* at 106:10-106:22.) That is consistent with my experience supervising student projects at MIT and commercial Web

EXHIBIT A

development projects. Reorganizing information so that it is consolidated on fewer pages or spread among additional pages, for example, is something that even an undergraduate can typically do within a few hours. From both a technical point of view and a user's point of view, there is little difference between receiving the information sought by, for example, viewing five pages from a site as opposed to four. Web Application publishers often combine or split up information in hopes of improving the user experience, building in extra spaces for advertising, raising search engine rank, or adapting to newly popular hardware screen sizes (e.g., bigger desktop computer displays or smaller tablets and mobile phones).

314. Here is an example of a Web page from the open-source ArsDigita Community System, with some comments added for clarity and some irrelevant lines removed. According to the comment at the top, it was created in January 2000. This is representative of a typical Web page script, which uses the SQL language to request information from a relational database management system and mixes the results with HTML to create a complete Web page. The function of this page is to show a listing of upcoming events within a particular category and to provide the user with hyperlinks to pages offering complete details of each event.

```
# the file /calendar/one-category.tcl
# shows
# Written by Caroline@arsdigita.com Jan 2000.

set_the_usual_form_variables
# get the category_id for the category of events to be displayed

set db [ns_db gethandle]
# a connection to the relational database management system is now available

set category [database_to_tcl_string $db "select category from calendar_categories where
category_id=$category_id"]
# now we have, in the variable $category, the name, rather than the numeric ID

set page_title "$category"

# below is where we begin writing data back to the Web user
ReturnHeaders

ns_write "[ad_header $page_title]

[ad_context_bar_ws_or_index [list "index.tcl" [ad_parameter SystemName calendar
"Calendar"]] "$category"]

<h2>$page_title</h2>
<hr>
<ul>
```


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```
“

# below is the meat of the page; it asks the database for the
# ID, title, and start date of all non-expired events within
# the requested category
set selection [ns_db select $db “select
calendar_id,
title,
to_char(start_date,’Month DD, YYYY’) as pretty_start_date,
from calendar
where sysdate < expiration_date
and category_id=$category_id
and approved_p = ‘t’
order by start_date, creation_date”]

while {[ns_db getrow $db $selection]} {
  set_variables_after_query

   # offer a link to the page “item” that will show full details
   # show the user, at this level, only the title and start date
    ns_write “<li><a href=\”/calendar/item?calendar_id=$calendar_id\”>$title</a>
($pretty_start_date)\n”
  }

ns_write “
</ul>
[calendar_footer]
“
```

Suppose that the publisher said “Users should be able to see ending date for an event as well and I would like them to have direct access to the Web site for an event rather than having to go to our internal detail page first. The central SQL query would need to be changed to add the columns end_date and event_url (shown in bold, below):

```
select
calendar_id, title, event_url
to_char(start_date,’Month DD, YYYY’) as pretty_start_date,
to_char(end_date,’Month DD, YYYY’) as pretty_end_date,
from calendar
where sysdate < expiration_date
and category_id=$category_id
and approved_p = ‘t’
order by start_date, creation_date
```


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Assuming that end_date and event_url were always present, one line of the TCL script code would need to be changed:

ns_write "<li>$title ($pretty_start_date - $pretty_end_date ; direct_link)\n"

In all, three lines of code would need to be modified.

As noted in the above analysis of Claim 16, the user of a modern personal computer is accustomed to having multiple windows open simultaneously. A patient considering something as important as choosing a physician specialist is not going to be substantially inconvenienced by having to open two browser windows rather than one in order to conduct a comparison more easily.

VIII. Trial Exhibits

315. I reserve the right to use demonstrative exhibits at trial if necessary to explain my analysis.

IX. Reservation of Rights

316. My opinions are based on the information that I have considered to date. I reserve the right to supplement or amend my opinion given new discovery, testimony heard at trial, and information from opposing experts. In addition, I may be asked to testify in rebuttal to issues and opinions raised by other experts or fact witnesses.

Signed: 

Philip Greenspun, Ph.D.

Date: July 13, 2012

EXHIBIT A

Resume

of Philip Greenspun

Summary:

- Business experience: started six companies and buried three. As CEO, grew an open-source enterprise software company to $20 million annual revenue in two years with $10,000 in capital.
- Software product development experience: 20 years. Have had the same email address since 1976: philg@mit.edu. Have been developing open source software since 1982. List of engineering projects completed is available from http://philip.greenspun.com/narcissim/resume-list
- Pedagogy experience: Co-developed "Software Engineering for Internet Applications" with Hal Abelson at MIT; it has been a successful course at MIT and is being used by computer science departments at 10 other universities around the world.
- Non-profit experience: Started a 501c3 foundation in December 1998. The Foundation operated a prize program for high-school age Web developers and a one-year post-baccalaureate program in computer science; the annual budget was approximately $1.5 million.
- Political experience: Testified before the U.S. Senate Commerce Committee and the Subcommittee on Patents, Copyrights and Trademarks of the Senate Judiciary Committee
- Writing experience: four computer science textbooks, one book about North America and its people, numerous journal and magazine articles.
- Photography experience: started photo.net in 1993, an online community for photographers. Work published in dozens of print magazines and books and used for advertising (see separate photo resume).
- Aviation experience: holder of Airline Transport Pilot certificate with multi-engine, single-engine seaplane, and helicopter ratings; holder of flight instructor certificate with instrument and helicopter ratings; have flown single-engine aircraft to Alaska (twice) and just about everywhere else in North America and the Caribbean; have flown three coast-to-coast trips in Robinson helicopters; flew the Canadair Regional Jet out of JFK for a subsidiary of a major airline
- Education: three MIT degrees (including a Ph.D., but you can't call me "Dr. Greenspun" because my brother is a real doctor).

Employment Experience

2006-present: expert witness

I have served as a software expert witness and also as an expert witness in cases regarding Internet software patents. I am qualified to serve as an aviation expert witness or a relational database expert witness.

1997-present: various advisory and corporate boards

Serve as an independent member of various advisory and corporate boards, mostly for technology companies. Example: Joined corporate board of MIT materials science spin-off in late 2005 during $550,000 seed capital phase. Stepped down when company secured $10 million in venture capital in mid-2007.

1991-present: Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology.

Teach and expand the MIT computer science curriculum, conduct research, and supervise student research.

1993-2000; 2006-2007: photo.net

Started, programmed, financed, and managed this online learning community as a personal hobby. Spun it off in 2000 to a team of entrepreneurs who attempted to make it a profitable business. Took it back over in mid-2006 to clean up the content, software, and balance sheet (crippled with debt). With 600,000 registered users and 60 million page views per month, sold the company in April 2007 to NameMedia.

1997 through March 2000: ArsDigita Corporation

Started, financed, and managed this company, which developed an open-source toolkit for building collaborative Internet applications. Grew the company profitably from 5 part-time people to 80 full-timers and revenue of $20 million per year. Between January and March 2000, negotiated and closed a $38 million venture capital investment from Greylock and General Atlantic Partners. Handed over the reins to a team of professional managers brought in by the venture capitalists.

February 1988 through August 1990: Isosonics Corporation

Founded company to develop a product that stored digital data with consumer video recorders. Co-designed custom digital signal processor. Developed simulation environment, complete simulator for digital audio recorder (1.4 Mbits/second), microcode compiler on the Symbolics Lisp Machine. Used Lisp tools to develop error correction microcode and refine DSP architecture. Co-designed three phase locked loops. With partners, developed system for auditing television broadcasts nationwide by monitoring commercials and compiling reports for advertisers. We designed a single board that tunes a chosen channel, recognizes tagged advertisements and makes a record for each ad of time of broadcast, number of fields, video quality and color burst presence. Served as president of Isosonics from its inception until its dissolution.

April 1986 through November 1989: ConSolve Incorporated

Co-founded this construction automation company. With partner, developed initial product, obtained financing (from PaineWebber Ventures), hired software development, marketing and support staff, established R&D partnership with Tektronix, obtained government contracts and sold software. Was active participant in all important planning, legal, and management activities. Wrote every line of code in the first system shipped to a customer (Caterpillar).

November 1984 through August 1985: ICAD, Inc.

Co-founded company with three partners. With Patrick O'Keefe, developed Lisp software to automate mechanical engineering. The ICAD System was initially primarily intended for large steel structures, e.g., air-cooled heat exchangers, offshore oil rigs, coal-fired power plants, but has been extended to many general ME problems.

Company went public in January 1995 as Concentra with a market valuation of $50 million and was subsequently acquired by Oracle Corporation.

June 1983 through November 1984: Symbolics, Inc.

Developed VLSI tools, including automatic layout functions and worked on the system architecture for the Ivory microprocessor (the base of all Symbolics products sold in the late 1980s). Wrote parts of the Symbolics operating system.

June 1982 through June 1983: Hewlett-Packard Labs

Wrote packet-switched network simulation software on Symbolics Lisp Machine. Helped architect, simulate and design prototype of HP's Precision Architecture RISC computer. The prototype took two man-years to complete and ran at VAX 11/780 speed in June 1983. This architecture became the basis of HP's computer product line for 15 years and then became the basis for the 64-bit generation of Intel processors.

1978 to 1982

Paid tuition and living expenses through MIT with employment and contract work for Wang Laboratories, Verbex Corporation, National Aeronautics and Space Administration, and other organizations.

Education (Massachusetts Institute of Technology)

Ph.D. 1999 in electrical engineering and computer science. Thesis title: *Architecture and Implementation of Online Communities*.

S.M. 1993 in electrical engineering and computer science. Thesis title: *Site Controller: A system for computer-aided civil engineering and construction.*

S.B. 1982 in mathematics. Completed coursework for electrical engineering S.B. with emphasis on digital systems and signal processing. Took undergraduate and graduate computer science courses, with an emphasis on algorithms. Took graduate courses in microeconomics and neurophysiology.

Selected Publications

Software Engineering for Internet Applications (online and MIT Press 2006), *Philip and Alex's Guide to Web Publishing* (Morgan Kaufmann; 1999), *Database Backed Web Sites* (Ziff Davis Press; 1997), *Travels with Samantha*, a book about North America; SITE CONTROLLER: A system for computer-aided civil engineering and construction.; numerous journal articles; dozens of magazine articles. United States patents 5,172,363 (digital audio recorder circuit), 5,150,310 (location system), and 5,964,298 (computer-aided earthmoving system).

Most of my relevant publications are linked from http://philip.greenspun.com/.

Personal

Birthdate: September 28, 1963. Some familiarity with French, Italian, and German.

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philg@mit.edu