IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

PORTAL COMMUNICATIONS, LLC, Plaintiff, V. APPLE, INC., Defendant.	§ § § § § § § § §	Civil Action No. 2:18-cv-00061 **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Pursuant to Fed. R. Civ. P. 15(a), Plaintiff, Portal Communications, LLC ("Portal" or "Plaintiff"), by and through its undersigned counsel, hereby respectfully submits this Original Complaint against the above-named Defendant, as follows:

NATURE OF THE ACTION

1. This is a patent infringement action to stop Defendant's infringement of United States Patent Nos. 7,376,645 (the "'645 patent"), 7,873,654 (the "'654 patent"), and 8,150,872 (the "'872 patent") (collectively, the "patents-in-suit").

THE PARTIES

2. Plaintiff, Portal Communications, LLC, is a Texas Limited Liability Company with an office and place business at 1400 Preston Road, Suite 400, Plano, TX 75093.

3. Upon information and belief, Apple, Inc. ("Apple" or "Defendant"), is a corporation established under the laws of the State of California, with its principal place of business at 1 Infinite Loop, Cupertino, California 95014. Apple may be served via its registered agent, CT Corporation System, 4701 Cox Road, Suite 285, Glen Allen, Virginia 23060.

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, 35 U.S.C. § 1 et seq., including

35 U.S.C. §§ 271, 281, 283, 284, and 285. This Court has subject matter jurisdiction over this case for patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. The Court has personal jurisdiction over Defendant, including because Defendant has minimum contacts within the State of Texas; Defendant has purposefully availed itself of the privileges of conducting business in the State of Texas; Defendant regularly conducts business within the State of Texas; and Plaintiff's cause of action arises directly from Defendant's business contacts and other activities in the State of Texas, including at least by virtue of Defendant's infringing systems, devices, and methods, which are at least sold, practiced, and/or used in the State of Texas. Further, this Court has general jurisdiction over Defendant, including due to its continuous and systematic contacts with the State of Texas. Further, on information and belief, Defendant is subject to the Court's jurisdiction, including because Defendant has committed patent infringement in the State of Texas.

6. Venue is proper for Defendant in the Eastern District of Texas pursuant to 28 U.S.C. §§ 1391 and 1400. Without limitation, on information and belief, Defendant has regular and established places of business in this District, and in Texas, and at least some of its infringement of the patents-in-suit occurs in this District, and in Texas.

7. Without limitation, on information and belief, venue is proper in this District because Defendant has a physical places from which its business is conducted within this District comprising Apple stores, including at 6121 West Park Boulevard in Plano, Texas and 2601 Preston Road in Frisco, Texas; the business conducted at such places is steady, uniform, orderly, and/or methodical, and is settled and not transient, including, but not limited to, distribution, sales, and/or offers for sale, including related to infringing methods and apparatuses. On information and belief, Defendant also has Apple Stores in multiple locations throughout the state of Texas, and it has significant corporate facilities in Austin, Texas as well. Further, on information and belief,

Defendant is subject to venue in this District, including because Defendant has committed patent infringement in this District. Pursuant to 35 U.S.C. § 271, Defendant infringes the patents-in-suit by the infringing acts described herein in this District. Further, Defendant solicits and induces customers/users in this District, including via its stores and website at www.apple.com. On information and belief, Defendant has customers/users who are residents of this District and who purchase, acquire, and/or use Defendant's infringing products in this District.

INTRODUCTION

A. Portal Communications, LLC

8. The technologies owned by Portal comprise those related to distributed systems and methods that comprise (1) returning search results responsive to natural language voice and audio (hereinafter "voice") queries that are improved over search results of prior art system and methods, including because location information of the person or device making the query is used in a new and unconventional way in connection with determining the meaning of the query; (2) returning improved search results to voice queries without the need for time-consuming, and often inaccurate, imprecise, and unreliable, legacy voice training systems; and (3) improved, faster, more efficient and more accurate search and database technology, achieved at least in part by more accurate, narrowed and streamlined queries. The patents-in-suit were developed and patented by the named inventor, Dave Bernard, an accomplished businessman and inventor, and a visionary in this field.

9. Portal is the current assignee of the patents-in-suit and has standing to bring this lawsuit, including the right to recover damages for past, present, and future infringement of the Patents-in-Suit.

B. The Patents-In-Suit

10. Mr. Bernard filed provisional patent application 60/631,339 with the United States Patent

and Trademark Office ("USPTO") on November 29, 2004. The '645 patent was filed as application No. 11/041,605 on January 24, 2005 and issued on May 20, 2008. The '654 patent is a continuation-in-part of the application '605 application that issued as the '645 patent. The '654 patent was filed as application No. 12/048,434 on March 14, 2008 and issued on January 18, 2011. The '872 patent is a continuation-in-part of the '434 application, which issued as the '654 patent. The '872 patent was filed as application No. 12/979,758 on December 28, 2010 and issued on April 3, 2012.

a. '645 Patent

11. The Abstract of the '645 patent states the following:

> The present invention provides a wireless natural language query system, architecture, and method for processing multimodally-originated queries, including voice and proximity-based queries. The natural language query system includes a Web-enabled device including a speech input module for receiving a voice-based query in natural language form from a user and a location/proximity module for receiving location/proximity information from a location/proximity device. The natural language query system also includes a speech conversion module for converting the voice-based query in natural language form to text in natural language form and a natural language processing module for converting the text in natural language form to text in searchable form. The natural language query system further includes a semantic engine module for converting the text in searchable form to a formal database query and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database.

12. As of the priority date of the '645 patent, user interaction with PCs, PDAs, Web-enabled phones, wireline and wireless networks, the Internet, Web-based query systems and engines, and the like had been primarily non-voice-based, through keyboards, mice, intelligent electronic pads, monitors, printers, and the like. '645/1:44-49. This had limited the adoption and use of these devices and systems somewhat, and it has long been felt that allowing for accurate, precise, and reliable voice-based user interaction, mimicking normal human interaction, would be advantageous. '645/1:49-53. As inventor Bernard envisioned, and as has come to fruition since, allowing for accurate, precise, and reliable voice-based user interaction would certainly draw more

users to e-commerce, e-support, e-learning, etc., and reduce learning curves. ‘645/1:53-56.

13. Software products existing before the priority date of the ‘645 patent, as well as patents describing systems, apparatuses, and methods, only allowed for limited voice-based user interaction with PCs, PDAs, and the like. ‘645/2:3-4. These software products allowed a user to perform dictation, voice-based command-and-control functions (opening files, closing files, etc.), and voice-based searching (using previously-trained uniform resource locators (URLs)), only after time-consuming, and often inaccurate, imprecise, and unreliable, voice training. ‘645/2:7-13. Further, their accuracy rates are inextricably tied to a single user that has provided the voice training. ‘645/2:13-14.

14. Prior art that preceded the priority of the Patents-in-Suit, and notably the prior art described in the specification of ‘645 patent, suffers from at least one of many shortcomings. ‘645/3:50-52. Some of the systems, apparatuses, software products, and methods require time-consuming, and often inaccurate, imprecise, and unreliable, voice training. ‘645/3:52-55. Some of the systems, apparatuses, software products, and methods are single-modal, meaning that a user may interact with each of the systems, apparatuses, software products, and methods in only one way. ‘645/3:55-59. As a result of this single-modality, and due to other shortcomings, the prior art lacks context or environment within which a voice-based search is performed, and several of the systems, apparatuses, software products, and methods must perform multiple iterations to pinpoint a result or answer related to the voice-based search. ‘645/3:59-63.

15. In view of these issues and others, there was a need for natural language query systems, architectures, and methods for processing voice and proximity-based queries that do not require time-consuming, and often inaccurate, imprecise, and unreliable, voice training. ‘645/3:64-67. What was also needed were natural language query systems, architectures, and methods that are multimodal, including that they utilize multiple inputs (e.g., voice input and location input, for

example from a GPS) in order to create and take into consideration a context or environment within which a voice and/or proximity-based search or the like is performed. ‘645/4:1-10. In other words, what was needed, and what among other things the claimed technology achieved, was natural language query systems, architectures, and methods that comprised attributing meaning to words based on the context or environment within which they are spoken. ‘645/4:10-14. What was further needed, and what among other things the claimed technology achieved, were natural language query systems, architectures, and methods that performed only a single iteration to pinpoint a result or answer related to a voice and/or proximity-based search or the like. ‘645/4:14-17.

16. Among other things claimed, the ‘645 technology provides a natural language query system, architecture, and method for processing voice and proximity-based queries that do not require time-consuming, and often inaccurate, imprecise, and unreliable, voice training. ‘645/4:21-25. Among other things claimed, the ‘645 technology also provides a natural language query system, architecture, and method that are multimodal, including that the natural language query system, architecture, and method utilize multiple inputs in order to create and take into consideration a context or environment within which a voice and/or proximity-based search or the like is performed. ‘645/4:25-33. Among other things claimed, the ‘645 technology provides a natural language query system, architecture, and method that comprises attributing meaning to words based on the context or environment within which they are spoken. ‘645/4:33-38. In some embodiments, this context or environment may be prior information-based, domain knowledge-based, user-specific profile data-based, and/or, preferably, location or proximity-based. ‘645/4:38-40. Some embodiments also comprise a natural language query system, architecture, and method that performs only a single iteration to pinpoint a result or answer related to a voice and/or proximity-based search or the like. ‘645/4:41-44.

17. The claimed inventions of the ‘645 patent provides a natural language query system,

architecture, and method that do more than simply convert speech to text, use this text to search a database, and convert text to speech. '645/4:44-48. While off-the-shelf tools may be used to incorporate and combine speech recognition, natural language processing and speech synthesis technologies. '645/4:51-55, the combined claimed invention is more than just a combination of off the shelf tools. Without limitation, the claimed systems and methods include improvements to any pre-existing technology comprising (1) returning search results responsive to natural language voice queries that are improved over search results of prior art system and methods, including because location information of the person or device making the query is used in a new and unconventional way in connection with determining the meaning of the query; (2) returning improved search results to voice queries without the need for time-consuming, and often inaccurate, imprecise, and unreliable, voice training; and (3) improved, faster, more efficient and more accurate search and database technology, achieved at least in part by more accurate, narrowed and streamlined queries.

18. The '645 patent invention further provides for a natural language query method for processing voice and proximity-based queries by providing a device including a speech input module for receiving a voice-based query in natural language form from a user and a location/proximity module for receiving location/proximity information from a location/proximity device. '645/5:26-32. The natural language query method also includes converting the voice-based query in natural language form to text in natural language form using a speech conversion module and converting the text in natural language form to text in searchable form using a natural language processing module. '645/5:32-37. The natural language query method further includes converting the text in searchable form to a formal database query using a semantic engine module and obtaining a result related to the voice-based query in natural language form from a database using the formal database query and a database-look-up module. '645/5:37-42.

19. Including as noted in the '645 patent, the technologies of the '645 patent improved prior voice query, natural language processing, search, and database technology including in connection with:

a. Utilizing multiple inputs in order to create a context or environment within which a voice and/or proximity-based search or the like is performed. *See, e.g.*, '645/4:1-10 & 4:25-33.

b. Taking into consideration a context or environment when performing a voice and/or proximity-based search or the like. *See, e.g.*, '645/4:1-10 & 4:25-33.

c. Attributing meaning to words based on the context or environment within which they are spoken. *See, e.g.*, '645/4:10-14 & 4:33-38.

d. Performing only a single iteration search to pinpoint a result or answer related to a voice and/or proximity-based search or the like, while doing more than simply convert speech to text, use this text to search a database, and convert text to speech. *See, e.g.*, '645/4:14-17 & 4:41-48.

e. Processing voice and proximity-based queries without requiring time-consuming, and often inaccurate, imprecise, and unreliable, voice training. *See, e.g.*, '645/4:21-25.

f. Permitting users to interact with a natural language query system in multiple ways, simultaneously, including via multiple inputs. *See, e.g.*, '645/4:25-33.

g. Returning search results responsive to natural language voice queries that are improved over search results of prior art system and methods, including because location information of the person or device making the query is used in a new way in connection with determining the meaning of the query. *See, e.g.*, '645/6:37-7:4.

h. Returning improved search results to voice queries without the need for time-consuming, and often inaccurate, imprecise, and unreliable, voice training; *See, e.g.*, '645/3:50-55 & 4:21-34.; and

i. Providing improved, faster, more efficient, and more accurate search and database technology, achieved at least in part by more accurate, narrowed and streamlined queries. *See, e.g.*, '645/9:23-30 & 10:30-37.

20. The technology recited in the claims of the '645 patent provides an inventive concept and does not claim an abstract idea. Including due to the inventive combination of elements the claimed

inventions achieve many benefits over prior art systems and methods, including the benefits noted above. The claimed inventive concepts greatly enhance and facilitate technological systems, architectures, and methods which comprise receiving and processing voice and proximity-based queries, including from a device which receives a voice-based query in natural language form from a user and location/proximity information from a location/proximity device; converting the voice-based query in natural language form to text in natural language form; converting the text in natural language form to text in searchable form; determining the meaning of the voice-based query, including based on lexicon and grammar rules and the location/proximity information; converting the text in searchable form to a formal database query; narrowing and streamlining the database query, including based on the location/proximity information; and using the formal database query to obtain a result related to the voice-based query in natural language form from a database.

21. The technology recited in the claims of the ‘645 patent improves the functioning of computers and databases, it improves computer and database capabilities, efficiencies, and usability, and it improves over existing technological processes, including with respect to voice and location-based searches and natural language processing and searching, wherein the natural language processing and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user’s search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user’s device.

22. One inventive component of the ‘645 claimed inventions is improving voice and location-based searching and efficiency and natural language processing, searching, and efficiencies in ways that are necessarily rooted in computer technology, including database and search query processing technology, to overcome problems, including the shortcomings noted above,

specifically arising in the realm of computer databases, search queries, and natural language processing systems, architectures, and methods. Including as noted above, the claims recite inventions that were not merely a routine or conventional use of conventional devices and technologies. The claimed inventions are not well-known, fundamental economic or conventional business practices, nor were they practices to which general-purpose computer components were added after the fact. Nor, as noted in the patent, were the specifically disclosed and claimed combination of devices, steps, and processes existing in the art prior to the '645 invention. *See* '645/3:50-4:17.

23. Independent claim 1 of the '645 patent covers the following:

> A natural language query system processing voice and proximity-based queries, comprising:
> a device, comprising:
> a speech input module receiving a voice-based query in natural language form from a user; and
> a location/proximity module receiving location/proximity information from a location/proximity device;
> a speech conversion module converting the voice-based query in natural language form to text in natural language form;
> a natural language processing module converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query, wherein the underlying meanings are further determined responsive to the location/proximity information from the location/proximity module;
> a semantic engine module converting the text in searchable form to a formal database query; and
> a database-look-up module using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

24. Claim 11 comprises architecture stores on a computer readable storage media comprising the components of claim 1. Claim 21 comprises a method for providing the devices and performing the operations described in claim 1. Independent claims 1, 11, and 21 of the '645 patent have

multiple similarities with each other, and are each unconventional and not directed to any abstract idea, including for at least the reasons noted herein, including with respect to claim 1. Further, independent claims 1, 11, and 21 of the '645 patent have multiple similarities with each other, and each comprise meaningful limitations, inventive concepts, and technological benefits, including for at least the same reasons noted herein, including with respect to claim 1.

25. Neither claim 1, nor any other claims, of the '645 patent preempt any abstract idea or otherwise preempt anything that would render them unpatentable. For example, one is free to practice the prior art of record and the prior art referenced in the specification. The '645 claims do not improperly inhibit further discovery by tying up any building blocks of human ingenuity or technological work.

26. The '645 patent claims cannot be practiced by a human alone. Although the '645 invention involves natural language processing, its methods are far different from human methods used in connection with responding to natural language queries. There exists no human analogue to the methods, architecture, or systems claimed in the '645 patent. The claims are specifically directed to, *inter alia*, voice and location-based searches and natural language processing and searching, wherein the natural language processing and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user's search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user's device. These things exist only in the context of computers, and, specifically, computer databases and natural language processing systems.

27. The claims of the '645 patent cover, among other things, specific applications of specific methods, specific computer architectures, and computer systems for voice and location-based

searches and natural language processing and searching, wherein the natural language processing and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user's search, using context and environment information, such as location information, to narrow and streamline the database query, and returning the context and environment specific result to the user's device, as noted above. The claims comprise, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing voice and location-based searching and natural language processing methods, architecture, and systems. Properly understood, the claimed technology constitutes the application of certain inventive ideas, not previously existing or obvious, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions.

28. Claim 1 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise natural language query system. Claim 1 of the '645 patent covers, among other things, natural language processing systems comprising specific applications of specific architecture and processes by a specialized computer for voice and location-based searches and natural language processing and searching, wherein the natural language processing and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user's search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user's device, as noted above, including in order to achieve the aims of the invention as stated above, and to overcome the shortcomings in the prior art, including prior art voice and location-based searching and natural language processing systems, architectures, and methods, as

noted above.

29. Claim 1 comprises, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing voice and location-based searching and natural language processing methods, architecture, and systems. Properly understood, the claimed technology constitutes the application of certain inventive ideas, not previously existing or obvious, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions, including in order to achieve the aims of the invention as stated above, including through computer architecture stores on computer readable storage media, and to overcome the shortcomings in the prior art, including prior art voice and location-based searching and natural language processing systems, architectures, and methods, as noted above.

30. Further, including when claim 1 is viewed as a whole at the time of the invention, there are sufficient unconventional, non-routine, novel, meaningful, and inventive claim limitations to claim 1 that are sufficient to ensure that the claim, in practice, amounts to significantly more than merely a patent on any abstract idea or patent ineligible concept. Those unconventional, non-routine, novel, meaningful, and inventive claim limitations comprise the following: receiving and processing voice and proximity-based queries, including from a device, comprising: a speech input module receiving a voice-based query in natural language form from a user; and a location/proximity module receiving location/proximity information from a location/proximity device; a speech conversion module converting the voice-based query in natural language form to text in natural language form; a natural language processing module converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query, wherein the underlying meanings are further determined responsive to the location/proximity information from the location/proximity

module; a semantic engine module converting the text in searchable form to a formal database query; and a database-look-up module using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

31. The invention of claim 1 uses computer technology to overcome the shortcomings of prior art systems, architectures, and methods, as noted above, including state of the art voice and location-based searching and natural language processing systems, architectures, and methods, which lacked, among other things, the ability to perform the foregoing steps. As such, claim 1 overcomes specific technical problems, including those discussed in the '645 patent, and noted above, and effects improvements to specific technologies or technical fields, namely computer technologies, such as voice and location-based searching and natural language processing and searching. One such inventive component of the '645 patent is improving voice and location-based searching and natural language processing and searching in ways that are necessarily rooted in computer technology to overcome problems specifically arising in the realm of computer voice and location-based searching and natural language processing and computer networking, including the Internet. However, the claims recite inventions that were not merely routine or conventional uses of the Internet, including in view of the specifically disclosed and claimed solutions noted above.

32. Claim 1 is not directed to a longstanding commercial practice, nor does it merely apply generic or general-purpose computers to prior art systems, architectures, or methods. Including as noted above, prior art systems, architectures, and methods were incapable of the functionality and disclosed improvements of the method of claim 1, including those limitations of the prior art

specifically noted in the ‘645 patent, noted above. The technology claimed in the ‘645 patent does not preempt all types of voice and location-based searching or natural language processing or searching, or anything else. For example, the prior art cited on the face of the ‘645 patent remains available for practice by Defendant, and the ‘645 patent claims do not preempt practice of those prior art systems, architectures, or methods.

b. ‘654 Patent

33. The Abstract of the ‘654 patent, which, as noted, is a continuation-in-part of the ’645 patent, and thus shares a similar specification, states the following:

> The present invention provides a natural language query system and method for processing and analyzing multimodally-originated queries, including voice and proximity-based queries. The natural language query system includes a Web-enabled device including a speech input module for receiving a voice-based query in natural language form from a user and a location/proximity module for receiving location/proximity information from a location/proximity device. The query system also includes a speech conversion module for converting the voice-based query in natural language form to text in natural language form and a natural language processing module for converting the text in natural language form to text in searchable form. The query system further includes a semantic engine module for converting the text in searchable form to a formal database query and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database.

34. In addition to the disclosures of the ‘645 patent, noted above, which are incorporated herein, the ‘654 patent provides additional unconventional, non-routine, novel, meaningful, and inventive concepts and disclosures. As inventor Bernard envisioned, and as has come to fruition since, the ‘654 patent invention further provides for a natural language query method for processing and analyzing voice and proximity-based queries includes providing a device with a speech input module for receiving a voice-based query in natural language form from a user and a location/proximity module for receiving location/proximity information from a location/proximity device; converting the voice-based query in natural language form to text in natural language form using a speech conversion module; converting the text in natural language form to text in

searchable form using a natural language processing module configured to use lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-based query; converting the text in searchable form to a formal database query using a semantic engine module; narrowing the formal database query responsive to the location/proximity information from the location/proximity module, wherein the location/proximity module is configured to provide a context and environment for narrowing and streamlining the formal database query associated with the voice-based query; and obtaining a result related to the voice-based query in natural language form from a database using the formal database query and a database-look-up module. '654/6:9-32.

35. The device may include a device selected from the group consisting of a Web-enabled portable personal computer, a Web-enabled laptop computer, a Web-enabled personal digital assistant, and a Web-enabled phone; the speech input module includes a speech plug-in and a microphone; the location/proximity module includes a location/proximity module selected from the group consisting of a radio frequency identification reader and a global positioning system; and the location/proximity device includes a location/proximity device selected from the group consisting of a radio frequency identification tag and a satellite. '654/6:32-44. The speech conversion module, the natural language processing module, the semantic engine module, and the database-look-up module may reside in one or more servers located remotely from the device; and natural language query method further includes transmitting the voice-based query from the device to the one or more servers. '654/6:44-49. The natural language query method can further include delivering the result related to the voice-based query in natural language form to the user using a speech output module. '654/6:49-52. The natural language query method may further include storing data from the speech conversion module, the natural language processing module, the semantic engine module, and the database-look-up module in a user database, wherein the data

includes information related to the voice-based query. '654/6:52-57. The natural language query method can further include analyzing the data in the user database to provide analysis of a plurality of voice-based queries. '654/6:56-60.

36. Including as with the '645 patent noted above, the technologies of the '654 patent improved prior voice query, natural language processing, search, and database technology, including in connection with:

a. Utilizing multiple inputs in order to create a context or environment within which a voice and/or proximity-based search or the like is performed. *See, e.g.*, '654/4:1-10 & 4:25-33.

b. Taking into consideration a context or environment when performing a voice and/or proximity-based search or the like. *See, e.g.*, '654/4:1-10 & 4:25-33.

c. Attributing meaning to words based on the context or environment within which they are spoken. *See, e.g.*, '654/4:10-14 & 4:33-38.

d. Performing only a single iteration search to pinpoint a result or answer related to a voice and/or proximity-based search or the like, while doing more than simply convert speech to text, use this text to search a database, and convert text to speech. *See, e.g.*, '654/4:14-17 & 4:41-48.

e. Processing voice and proximity-based queries without requiring time-consuming, and often inaccurate, imprecise, and unreliable, voice training. *See, e.g.*, '654/4:21-25.

f. Permitting users to interact with a natural language query system in multiple ways, simultaneously, including via multiple inputs. *See, e.g.*, '654/4:25-33.

g. Returning search results responsive to natural language voice queries that are improved over search results of prior art system and methods, including because location information of the person or device making the query is used in a new way in connection with determining the meaning of the query. *See, e.g.*, '645/6:37-7:4.

h. Returning improved search results to voice queries without the need for time-consuming, and often inaccurate, imprecise, and unreliable, voice training; *See, e.g.*, '645/3:50-55 & 4:21-34.

i. Providing improved, faster, more efficient and more accurate search and database technology, achieved at least in part by more accurate, narrowed

and streamlined queries. *See, e.g.*, '645/9:23-30 & 10:30-37.

j. Removing obstacles to capture very interesting and never before measured behaviors and insights into user's thinking, including via performing frequency analysis on questions and results to get an idea of what kinds of information people in an organization are looking for the most, including for optimization of searching. *See, e.g.*, '654/12:34-41.; and

k. Enabling the discovery of "interesting" questions that someone deep down in the organization is asking, which may not have been noticed before, including leading to more of an atmosphere of "information democratization," where more people in the organization become more valuable because the cost to test their ideas goes to almost zero. *See, e.g.*, '654/12:41-47.

37. The technology recited in the claims of the '654 patent provides an inventive concept and does not claim an abstract idea. Including due to the inventive combination of elements the claimed inventions achieve many benefits over prior art systems and methods, including the benefits noted above. The claimed inventive concept greatly enhances and facilitates technological systems, devices, and methods which comprise receiving, processing, and analyzing voice and proximity-based queries, including from a device which receives a voice-based query in natural language form from a user and location/proximity information from a location/proximity device; and one or more servers connected to the device comprising converting the voice-based query in natural language form to text in natural language form; converting the text in natural language form to text in searchable form; determining the meaning of the voice-based query, including based on lexicon and grammar rules and the location/proximity information; converting the text in searchable form to a formal database query; narrowing and streamlining the database query, including based on the location/proximity information; and using the formal database query to obtain a result related to the voice-based query in natural language form from a database.

38. The technology recited in the claims of the '654 patent improves the functioning of computers and databases, it improves computer and database capabilities, efficiencies, and usability, and it improves over existing technological processes, including with respect to voice

and location-based searches and natural language processing, analyzing, and searching, wherein the natural language processing, analyzing, and searching is performed by breaking down the voice-based search into a database query performed on a server, including by determining the meaning of the user's search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user's device.

39. One inventive component of the '654 claimed inventions is improving voice and location-based searching and efficiency and natural language processing, analyzing, searching, and efficiencies in ways that are necessarily rooted in computer technology, including database and search query processing and analyzing technology to overcome problems, including the shortcomings noted above, specifically arising in the realm of computer databases, search queries, and natural language processing and analyzing systems, devices, and methods. Including as noted above, the claims recite inventions that were not merely a routine or conventional use of conventional devices and technologies. The claimed inventions are not a well-known, fundamental economic or conventional business practices, nor were they practices to which general-purpose computer components were added after the fact. Nor, as noted in the patent, were the specifically disclosed and claimed combination of devices, steps, and processes existing in the art prior to the '654 invention. *See* '654/3:50-4:17.

40. Independent claim 1 of the '654 patent covers the following:

> A natural language query system for processing and analyzing voice and proximity-based queries, comprising:
> a device, comprising:
> a speech input module for receiving a voice-based query in natural language form from a user; and
> a location/proximity module for receiving location/proximity information from a location/proximity device;
> one or more servers connected to the device, wherein the one or more servers

comprise:

a speech conversion module for converting the voice-based query in natural language form to text in natural language form;

a natural language processing module for converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query;

a semantic engine module for converting the text in searchable form to a formal database query; and

a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module for narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

41. Claim 8 comprises a device similar to the device of claim 1. Claim 15 comprises a method for providing the devices and performing the operations described in claim 1. Independent claims 1, 8, and 15 of the ‘654 patent have multiple similarities with each other, and are each unconventional and not directed to any abstract idea, including for at least the same reasons noted herein, including with respect to claim 1. Further, independent claims 1, 8, and 15 of the ‘654 patent have multiple similarities with each other, and each comprise meaningful limitations, inventive concepts, and technological benefits beyond any alleged abstract idea, including for at least the same reasons noted herein, including with respect to claim 1.

42. Neither claim 1, nor any other claims, of the ‘654 patent preempt any abstract idea or otherwise preempt anything that would render them unpatentable. For example, one is free to practice the prior art of record and the prior art referenced in the specification. The ‘654 claims do not improperly inhibit further discovery by tying up any building blocks of human ingenuity or technological work.

43. The ‘654 patent claims cannot be practiced by a human alone. Although the ‘654 invention involves natural language processing, its methods are far different from human methods used in connection with responding to natural language queries. There exists no human analogue to the

methods, devices, or systems claimed in the ‘654 patent. The claims are specifically directed to, *inter alia*, voice and location-based searches and natural language processing, analyzing, and searching, wherein the natural language processing, analyzing, and searching is performed by breaking down the voice-based search into a database query to be performed at a server, including by determining the meaning of the user’s search, using context and environment information, such as location information, to narrow and streamline the database query and returning the context and environment specific result to the user’s device. These things exist only in the context of computers, and, specifically, computer databases and natural language processing and analyzing systems.

44. The claims of the ‘654 patent cover, among other things, specific applications of specific methods, specific computer devices, and computer systems for voice and location-based searches and natural language processing, analyzing, and searching, wherein the natural language processing, analyzing, and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user’s search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user’s device, as noted above. The claims comprise, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing voice and location-based searching and natural language processing and analyzing methods, devices, and systems. Properly understood, the claimed technology constitutes the application of certain inventive ideas, not previously existing or obvious, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions.

45. Claim 1 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise natural language query system. Claim 1 of the '654 patent covers, among other things, natural language processing and analyzing systems comprising specific applications of specific device and processes by a specialized computer for voice and location-based searches and natural language processing, analyzing, and searching, wherein the natural language processing, analyzing, and searching is performed by breaking down the voice-based search into a database query to be performed at a server, including by determining the meaning of the user's search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user's device, as noted above, including in order to achieve the aims of the invention as stated above, and to overcome the shortcomings in the prior art, including prior art voice and location-based searching and natural language processing and analyzing systems, devices, and methods, as noted above.

46. Claim 1 comprises, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing voice and location-based searching and natural language processing and analyzing methods, devices, and systems. Properly understood, the claimed technology constitutes the application of certain inventive ideas, not previously existing or obvious, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions, including in order to achieve the aims of the invention as stated above, including through computer device stores on computer readable storage media, and to overcome the shortcomings in the prior art, including prior art voice and location-based searching and natural language processing and analyzing systems, devices, and methods, as noted above.

47. Further, including when claim 1 is viewed as a whole at the time of the invention, there are sufficient unconventional, non-routine, novel, meaningful, and inventive claim limitations to claim 1 that are sufficient to ensure that the claim, in practice, amounts to significantly more than merely a patent on any abstract idea or patent ineligible concept. Those unconventional, non-routine, novel, meaningful, and inventive claim limitations comprise the following: receiving, processing, and analyzing voice and proximity-based queries, including from a device, comprising: a speech input module for receiving a voice-based query in natural language form from a user; and a location/proximity module for receiving location/proximity information from a location/proximity device; and one or more servers connected to the device, wherein the one or more servers comprise: a speech conversion module for converting the voice-based query in natural language form to text in natural language form; a natural language processing module for converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query; a semantic engine module for converting the text in searchable form to a formal database query; and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module for narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

48. The invention of claim 1 uses computer technology to overcome the shortcomings of prior art overcome the shortcomings of prior art systems, devices, and methods, as noted above, including state of the art voice and location-based searching and natural language processing and analyzing systems, devices, and methods, which lacked, among other things, the ability to perform the foregoing steps. As such, claim 1 overcomes specific technical problems, including those

discussed in the ‘654 patent, and noted above, and effects improvements to specific technologies or technical fields, namely computer technologies, such as voice and location-based searching and natural language processing, analyzing, and searching. One such inventive component of the ‘654 patent is improving voice and location-based searching and natural language processing, analyzing, and searching in ways that are necessarily rooted in computer technology to overcome problems specifically arising in the realm of computer voice and location-based searching and natural language processing and analyzing, and computer networking, including the Internet. However, the claims recite inventions that were not merely routine or conventional uses of the Internet, including in view of the specifically disclosed and claimed solutions noted above. Moreover, the distributed architecture of claim 1, including in combination with the other claimed elements, provides substantial benefits including the ability to store and process large amounts of software and data in one or more centralized locations, which decreases the cost, storage and capabilities necessary for the user device

49. Claim 1 is not directed to a longstanding commercial practice, nor does it merely apply generic or general-purpose computers to prior art systems, devices, or methods. Including as noted above, prior art systems, devices, and methods were incapable of the functionality and disclosed improvements of the method of claim 1, including those limitations of the prior art specifically noted in the ‘654 patent, noted above. The technology claimed in the ‘654 patent does not preempt all types of voice and location-based searching or natural language processing, analyzing, or searching, or anything else. For example, the prior art cited on the face of the ‘654 patent remains available for practice by Defendant, and the ‘654 patent claims do not preempt practice of those prior art systems, devices, or methods.

c. ‘872 Patent

50. The Abstract of the ‘872 patent, which, as noted, is a continuation-in-part of the ‘654 patent, which is a continuation-in-part of the ‘645 patent, and thus shares a similar specification with both the ‘645 and ‘654 patents, states the following:

> The present disclosure provides a natural language query system and method for processing and analyzing multimodally-originated queries, including voice and proximity-based queries. The natural language query system includes a Web-enabled device including a speech input module for receiving a voice-based query in natural language form from a user and a location/proximity module for receiving location/proximity information from a location/proximity device. The query system also includes a speech conversion module for converting the voice-based query in natural language form to text in natural language form and a natural language processing module for converting the text in natural language form to text in searchable form. The query system further includes a semantic engine module for converting the text in searchable form to a formal database query and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database.

51. In addition to the disclosures of the ‘645 and ‘654 patents, noted above, which are incorporated herein, the ‘872 patent provides additional unconventional, non-routine, novel, meaningful, and inventive concepts and disclosures. As inventor Bernard envisioned, and as has come to fruition since, the ‘872 patent invention further provides for a query method, includes receiving an audio query from a user; determining location information of the user based on Global Positioning Satellite functionality or Radio Frequency Identification readings; transmitting the audio query and the location information to a server; and receiving a plurality of responses to the audio query from the server, each of the plurality of responses is ranked by the server using an accuracy algorithm. ‘872/5:29-37.

52. Including as with the ‘645 and ‘654 patents noted above, the technologies of the ‘872 patent improved prior voice query, natural language processing, search, and database technology, including in connection with:

a. Utilizing multiple inputs in order to create a context or environment within which a voice and/or proximity-based search or the like is performed. *See, e.g.*, ‘872/4:1-10 & 4:25-33.

b. Taking into consideration a context or environment when performing a voice and/or proximity-based search or the like. *See, e.g.*, '872/4:1-10 & 4:25-33.

c. Attributing meaning to words based on the context or environment within which they are spoken. *See, e.g.*, '872/4:10-14 & 4:33-38.

d. Performing only a single iteration search to pinpoint a result or answer related to a voice and/or proximity-based search or the like, while doing more than simply convert speech to text, use this text to search a database, and convert text to speech. *See, e.g.*, '872/4:14-17 & 4:41-48.

e. Processing voice and proximity-based queries without requiring time-consuming, and often inaccurate, imprecise, and unreliable, voice training. *See, e.g.*, '872/4:21-25.

f. Permitting users to interact with a natural language query system in multiple ways, simultaneously, including via multiple inputs. *See, e.g.*, '872/4:25-33.

g. Returning search results responsive to natural language voice queries that are improved over search results of prior art system and methods, including because location information of the person or device making the query is used in a new way in connection with determining the meaning of the query. *See, e.g.*, '872/6:37-7:4.

h. Returning improved search results to voice queries without the need for time-consuming, and often inaccurate, imprecise, and unreliable, voice training; *See, e.g.*, '872/3:50-55 & 4:21-34.

i. Providing improved, faster, more efficient and more accurate search and database technology, achieved at least in part by more accurate, narrowed and streamlined queries. *See, e.g.*, '872/9:23-30 & 10:30-37.

j. Removing obstacles to capture very interesting and never before measured behaviors and insights into user's thinking, including via performing frequency analysis on questions and results to get an idea of what kinds of information people in an organization are looking for the most, including for optimization of searching. *See, e.g.*, '872/11:64-12:4.

k. Enabling the discovery of "interesting" questions that someone deep down in the organization is asking, which may not have been noticed before, including leading to more of an atmosphere of "information democratization," where more people in the organization become more valuable because the cost to test their ideas goes to almost zero. '872/12:4-9.

l. Providing unique ways of presenting analytics, including via a standard

visual "dashboard" in which each metric is represented by an English language question/query, displaying multiple metrics at once in separate panes, often in the form of charts and graphs, computer-based techniques used in spotting, digging-out, and analyzing business data, such as sales revenue by products and/or departments, or by associated costs and incomes, including providing a front-end interface to various BI systems. '872/12:14-35.

m. Tracing the "steps" of a person's search in chronological order, which can render the "decision tree" they used to get to their answer, including via refinement of search criteria, use of clinical pathways, a large standard decision tree used by physicians to analyze patient conditions and come to a diagnosis, and/or anaphoric referencing (meaning that you can refer to earlier queries), to help make the query session more natural to a human. '872/12:36-56.

n. Providing a process, such as the use of a middleware layer or accuracy algorithm, for analyzing an incoming question and automatically routing it to one or more constrained semantic models simultaneously to determine which of the attempts returned the best answer instead of using a broad database, including to determine accuracy on an individual domain query, and "scorecarding" and ranking results from multiple domains and returning the best results to the user. '872/12:57-13:5.

53. The technology recited in the claims of the '872 patent provides an inventive concept and does not claim an abstract idea. Including due to the inventive combination of elements the claimed inventions achieve many benefits over prior art systems and methods, including the benefits noted above. The claimed inventive concept greatly enhances and facilitates technological systems and methods which comprise receiving, processing, analyzing, and ranking voice and proximity-based queries, including from a device which receives a voice-based query in natural language form from a user and location/proximity information from a location/proximity device; converting the voice-based query in natural language form to text in natural language form; converting the text in natural language form to text in searchable form; determining the meaning of the voice-based query, including based on lexicon and grammar rules and the location/proximity information; converting the text in searchable form to a formal database query; narrowing and streamlining the database query, including based on the location/proximity information; and using the formal database query

to obtain a result related to the voice-based query in natural language form from a database, and ranking the responses using an accuracy algorithm.

54. The technology recited in the claims of the ‘872 patent improves the functioning of computers and databases, it improves computer and database capabilities, efficiencies, and usability, and it improves over existing technological processes, including with respect to voice and location-based searches and natural language processing and searching, wherein the natural language processing and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user’s search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, ranking the search results using an accuracy algorithm, and returning the ranked, context and environment specific result to the user’s device.

55. One inventive component of the ‘872 claimed inventions is improving voice and location-based searching and efficiency and natural language processing, searching, and efficiencies in ways that are necessarily rooted in computer technology, including database and search query processing technology, to overcome problems, including the shortcomings noted above, specifically arising in the realm of computer databases and natural language processing systems and methods. Including as noted above, the claims recite inventions that were not merely routine or conventional uses of conventional devices and technologies. The claimed inventions are not a well-known, fundamental economic or conventional business practice, nor were they a practice to which general-purpose computer components were added after the fact. Nor, as noted in the patent, were the specifically disclosed and claimed combination of devices, steps, and processes existing in the art prior to the ‘872 invention. *See* ‘872/3:50-4:17.

56. Independent claim 1 of the ‘872 patent covers the following:

A query system, comprising:
a computing device communicatively coupled to a network and configured to receive audio input comprising a query and determine location information; and
a server communicatively coupled to the computing device via the network, wherein the server is configured to:
receive the query from the computing device;
perform natural language processing on the query using lexicons and grammar rules to parse sentences and determine a meaning of the query, wherein the natural language processing comprises converting text in natural language form to text in searchable form using the lexicons and grammar rules to determine the meaning of the query;
utilize location information to further determine the meaning of the query;
perform a database look up based on the determined meaning of the query, wherein the database look up is provided with a context and environment for narrowing and streamlining the database look up utilizing the location information; and
rank responses of the database lookup using an accuracy algorithm.

57. Claim 12 comprises a method for performing the steps of claim 1. Independent claims 1 and 12 of the ‘872 patent have multiple similarities with each other, and are each unconventional and not directed to any abstract idea, including for at least the same reasons noted herein, including with respect to claim 1. Further, independent claims 1 and 12 of the ‘872 patent have multiple similarities with each other, and each comprise meaningful limitations, inventive concepts, and technological benefits beyond any alleged abstract idea, including for at least the same reasons noted herein, including with respect to claim 1.

58. Neither claim 1, nor any other claims, of the ‘872 patent preempt any abstract idea or otherwise preempt anything that would render them unpatentable. For example, one is free to practice the prior art of record and the prior art referenced in the specification. The ‘872 claims do not improperly inhibit further discovery by tying up any building blocks of human ingenuity or technological work.

59. The ‘872 patent claims cannot be practiced by a human alone. Although the ‘872 invention involves natural language processing, its methods are far different from human methods used in connection with responding to natural language queries. There exists no human analogue to the

methods or systems claimed in the ‘872 patent. The claims are specifically directed to, *inter alia*, voice and location-based searches and natural language processing and searching, wherein the natural language processing and searching is performed by breaking down the voice-based search into a database query, including by determining the meaning of the user’s search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, and returning the context and environment specific result to the user’s device. These things exist only in the context of computers, and, specifically, computer databases and natural language processing systems.

60. The claims of the ‘872 patent cover, among other things, specific applications of specific methods and computer systems for voice and location-based searches and natural language processing and searching, wherein the natural language processing, analyzing, ranking, and searching is performed by breaking down the voice-based search into a database query to be performed by a server, including by determining the meaning of the user’s search, using context and environment information, such as location information, to narrow and streamline the database query, ranking the results of a database search using an accuracy algorithm, and returning the ranked, context and environment specific result to the user’s device, as noted above. The claims comprise, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing voice and location-based searching and natural language processing methods and systems. Properly understood, the claimed technology constitutes the application of certain inventive ideas, not previously existing or obvious, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions.

61. Claim 1 also contains additional unconventional, non-routine, novel, meaningful, and

inventive claim limitations, including when the claim is viewed as a whole, which comprise natural language query system. Claim 1 of the '872 patent covers, among other things, natural language processing systems comprising specific applications of specific processes by a specialized computer for voice and location-based searches and natural language processing and searching, wherein the natural language processing, analyzing, ranking, and searching is performed by breaking down the voice-based search into a database query to be performed at a server, including by determining the meaning of the user's search, using context and environment information, such as location information, to narrow and streamline the database query, performing a database search based on the narrowed and streamlined query in a single iteration, ranking the results using an accuracy algorithm, and returning the ranked, context and environment specific result to the user's device, as noted above, including in order to achieve the aims of the invention as stated above, and to overcome the shortcomings in the prior art, including prior art voice and location-based searching and natural language processing systems and methods, as noted above.

62. Claim 1 comprises, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing voice and location-based searching and natural language processing methods and systems. Properly understood, the claimed technology constitutes the application of certain inventive ideas, not previously existing or obvious, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions, including in order to achieve the aims of the invention as stated above, including through computer systems and methods, and to overcome the shortcomings in the prior art, including prior art voice and location-based searching and natural language processing systems and methods, as noted above.

63. Further, including when claim 1 is viewed as a whole at the time of the invention, there are

sufficient unconventional, non-routine, novel, meaningful, and inventive claim limitations to claim 1 that are sufficient to ensure that the claim, in practice, amounts to significantly more than merely a patent on any abstract idea or patent ineligible concept. Those unconventional, non-routine, novel, meaningful, and inventive claim limitations comprise the following: receiving, processing, analyzing, and ranking voice and proximity-based queries, including from a computing device communicatively coupled to a network and configured to receive audio input comprising a query and determine location information; and a server communicatively coupled to the computing device via the network, wherein the server is configured to: receive the query from the computing device; perform natural language processing on the query using lexicons and grammar rules to parse sentences and determine a meaning of the query, wherein the natural language processing comprises converting text in natural language form to text in searchable form using the lexicons and grammar rules to determine the meaning of the query; utilize location information to further determine the meaning of the query; perform a database look up based on the determined meaning of the query, wherein the database look up is provided with a context and environment for narrowing and streamlining the database look up utilizing the location information; and rank responses of the database lookup using an accuracy algorithm.

64. The invention of claim 1 uses computer technology to overcome the shortcomings of prior art overcome the shortcomings of prior art systems and methods, as noted above, including state of the art voice and location-based searching and natural language processing systems and methods, which lacked, among other things, the ability to perform the foregoing steps. As such, claim 1 overcomes specific technical problems, including those discussed in the ‘872 patent, and noted above, and effects improvements to specific technologies or technical fields, namely computer technologies, such as voice and location-based searching and natural language processing and searching. One such inventive component of the ‘872 patent is improving voice

and location-based searching and natural language processing and searching in ways that are necessarily rooted in computer technology to overcome problems specifically arising in the realm of computer voice and location-based searching and natural language processing and computer networking, including the Internet. However, the claims recite inventions that were not merely routine or conventional uses of the Internet, including in view of the specifically disclosed and claimed solutions noted above. Moreover, the distributed architecture of claim 1, including in combination with the other claimed elements, provides substantial benefits including the ability to store and process large amounts of software and data in one or more centralized locations, which decreases the cost, storage and capabilities necessary for the user device.

65. Claim 1 is not directed to a longstanding commercial practice, nor does it merely apply generic or general-purpose computers to prior art systems or methods. Including as noted above, prior art systems and methods were incapable of the functionality and disclosed improvements of the method of claim 1, including those limitations of the prior art specifically noted in the ‘872 patent, noted above. The technology claimed in the ‘872 patent does not preempt all types of voice and location-based searching or natural language processing or searching, or anything else. For example, the prior art cited on the face of the ‘872 patent remains available for practice by Defendant, and the ‘872 patent claims do not preempt practice of those prior art systems or methods.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,376,645

66. Plaintiff refers to and incorporates herein the allegations in the above paragraphs.

67. The ‘645 patent, entitled “Multimodal Natural Language Query System and Architecture for Processing Voice and Proximity-Based Queries,” was duly and legally issued by the USPTO on May 20, 2008 after full and fair examination.

68. The claims of the ‘645 patent cover, *inter alia*, systems, architecture stores on computer

readable storage media, and methods, including associated with computers and computer databases, for receiving and processing voice and proximity-based queries, including from a device, comprising: a speech input module receiving a voice-based query in natural language form from a user; and a location/proximity module receiving location/proximity information from a location/proximity device; a speech conversion module converting the voice-based query in natural language form to text in natural language form; a natural language processing module converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query, wherein the underlying meanings are further determined responsive to the location/proximity information from the location/proximity module; a semantic engine module converting the text in searchable form to a formal database query; and a database-look-up module using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

69. Defendant has infringed and is now infringing, including literally, jointly, and/or equivalently, the ‘645 patent, including at least claims 1-30, in this judicial district, the State of Texas, and elsewhere in the United States, in violation of 35 U.S.C. § 271 through actions comprising the practicing, making, using, offering for sale, and/or selling, without authority from Plaintiff, systems, architecture stores on computer readable storage media, and methods, including devices implementing methods, including associated with computers and computer databases, for receiving and processing voice and proximity-based queries, including from a device, comprising: a speech input module receiving a voice-based query in natural language form from a user; and a

location/proximity module receiving location/proximity information from a location/proximity device; a speech conversion module converting the voice-based query in natural language form to text in natural language form; a natural language processing module converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query, wherein the underlying meanings are further determined responsive to the location/proximity information from the location/proximity module; a semantic engine module converting the text in searchable form to a formal database query; and a database-look-up module using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

70. Defendant infringes the ‘645 patent by and through at least its making, offering for sale, and/or selling of computing devices, including mobile phones, smart watches, tablets, and/or other computing devices, which comprise Defendant’s “Siri” functionality, including related to voice-searching. Without limitation, Defendant’s “Siri” functionality comprises computer hardware and/or software for, *inter alia*, receiving and processing voice and proximity-based queries, including one or more servers comprising: a speech conversion module converting the voice-based query in natural language form to text in natural language form; a natural language processing module converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query, wherein the underlying meanings are further determined responsive to the location/proximity information from the location/proximity module; a semantic engine module converting the text in searchable form to a formal database query; and a database-look-up module using the formal

database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

71. Further, Defendant at least makes, offers for sale, and/or sells infringing devices to its customers and/or end users which comprise a device comprising a speech input module receiving a voice-based query in natural language form from a user; and a location/proximity module receiving location/proximity information from a location/proximity device. These infringing devices comprise computing devices, including mobile phones, smart watches, tablets, and/or other computing devices, comprising those products running iOS 3.1 or later and/or MacOS Sierra 10.12 or later, including at least the products referred to by Defendant as iPhone, iPad, iPad Air, iPad mini, iPad Pro, iPod touch, iMac, MacBook, MacBook Pro, Mac Mini, iMac, iMac Pro, MacBook Air, Mac Mini, Apple TV, HomePod, and/or Apple Watch, comprising the following products and/or model numbers: iPhone, iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S, iPhone 5, iPhone 5C, iPhone 5S, iPhone 6, iPhone 6 Plus, iPhone 6S, iPhone 6S Plus, iPhone SE, iPhone 7, iPhone 7Plus, iPhone 8, iPhone 8 Plus, iPhone X, iPad (1st generation), iPad 2, iPad (3rd generation), iPad (4th generation), iPad Air, iPad Air 2, iPad (2017), iPad mini, iPad mini 2, iPad mini 3, iPad mini 4, iPad Pro 12.9-inch, iPad Pro 9.7-inch, iPad Pro 12.9-inch (2nd generation), iPad Pro 10.5-inch, iPod touch (1st generation), iPod touch (2nd generation), iPod touch (3rd generation), iPod touch (4th generation), iPod touch (5th generation), iPod touch (6th generation), iMac (Late 2009), MacBook (Late 2009), MacBook Pro (Mid 2010), MacBook (Mid 2010), Mac Mini (Mid 2010), iMac (Mid 2010), Mac Pro (Mid 2010), MacBook Air (Late 2010), MacBook Pro (Early 2011), iMac (Mid 2011), MacBook Air (Mid 2011), Mac Mini (Mid 2011), MacBook

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including by providing the accused devices and the accused Siri functionality thereon.

72. Additionally, or in the alternative, upon information and belief, Defendant has induced, and continues to induce, infringement of the ‘645 Patent in this judicial district, the State of Texas, and elsewhere, by intentionally inducing direct infringement of the ‘645 Patent, including by aiding or abetting the infringement of its end users and/or customers, by and through at least Defendant’s making, offering for sale, and/or selling, without authority from Plaintiff, systems and/or devices implementing methods, including associated with computers, computer networks, and computer databases, comprising at least the above-described products comprising “Siri” functionality. Upon information and belief, such aiding and abetting comprises providing hardware, software, and/or instructions for such infringing uses by Defendant’s customers and/or end users, including the use of the accused devices in combination with the “Siri” functionality thereon. Upon information and belief, such induced infringement has occurred since Defendant became aware of the ‘645 Patent

73. On information and belief, Defendant has known of the ‘645 patent since at least June 6, 2012, when it submitted an Information Disclosure Citation, citing the ‘645 patent, in its own patent application, U.S. Patent Application No. 12/042,309. Further, Defendant has over 75 patent publications which cite to the ‘645 patent. At a minimum, this Complaint notifies Defendant that it is infringing, and is being accused of infringing, the ‘645 patent. It also recites facts which state a valid and plausible claim of infringement. Plaintiff reserves the right to take discovery regarding Defendant’s first actual notice of the ‘645 patent, to the extent it preceded this suit being filed.

74. Further, to the extent Defendant continues its infringing activities post-suit, such infringement would be clearly and necessarily willful. On information and belief, Defendant have a significant need to continue providing the accused devices and accused Siri functionality, which are infringing the ‘645 patent, including in order to stay competitive and to avoid losing customers.

Plaintiff believes and contends that Defendant's continuance of its clear and inexcusable infringement of the '645 patent post-suit is willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, and/or characteristic of a pirate.

75. On account of the foregoing, Plaintiff contends such post-suit activities by Defendant qualify this as an egregious case of misconduct beyond typical infringement, entitling Plaintiff to enhanced damages. Thus, Plaintiff requests an award of enhanced damages, including treble damages, pursuant to 35 U.S.C. § 284.

76. Each of Defendant's aforesaid activities have been without authority and/or license from Plaintiff.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 7,873,654

77. Plaintiff refers to and incorporates herein the allegations in the above paragraphs.

78. The '654 patent, entitled "Multimodal Natural Language Query System for Processing and Analyzing Voice and Proximity-Based Queries," was duly and legally issued by the USPTO on January 18, 2011 after full and fair examination.

79. The claims of the '654 patent cover, *inter alia*, systems, devices, and methods, including associated with computers and computer databases and networks, for receiving, processing, and analyzing voice and proximity-based queries, including a speech input module for receiving a voice-based query in natural language form from a user; and a location/proximity module for receiving location/proximity information from a location/proximity device; and one or more servers connected to the device, wherein the one or more servers comprise: a speech conversion module for converting the voice-based query in natural language form to text in natural language form; a natural language processing module for converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query; a semantic engine module for converting the text in

searchable form to a formal database query; and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module for narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

80. Defendant has infringed and is now infringing, including literally, jointly, and/or equivalently, the '654 patent, including at least claims 1-5, 8-12, 15, 16, and 18, in this judicial district, the State of Texas, and elsewhere in the United States, in violation of 35 U.S.C. § 271 through actions comprising the practicing, making, using, offering for sale, and/or selling, without authority from Plaintiff, systems, devices, and method, including devices implementing methods, including associated with computers and computer databases and networks, for receiving, processing, and analyzing voice and proximity-based queries, including a speech input module for receiving a voice-based query in natural language form from a user; and a location/proximity module for receiving location/proximity information from a location/proximity device; and one or more servers connected to the device, wherein the one or more servers comprise: a speech conversion module for converting the voice-based query in natural language form to text in natural language form; a natural language processing module for converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query; a semantic engine module for converting the text in searchable form to a formal database query; and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module for narrowing and streamlining the formal database

query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

81. Defendant infringes the '654 patent by and through at least its making, offering for sale, and/or selling of computing devices, including mobile phones, smart watches, tablets, and/or other computing devices, which comprise Defendant's "Siri" functionality, including related to voice-searching. Without limitation, Defendant's "Siri" functionality comprises computer hardware and/or software for, *inter alia*, receiving, processing, and analyzing voice and proximity-based queries, including one or more servers comprising: a speech conversion module for converting the voice-based query in natural language form to text in natural language form; a natural language processing module for converting the text in natural language form to text in searchable form using lexicons and grammar rules to parse sentences and determine underlying meanings of the voice-base query; a semantic engine module for converting the text in searchable form to a formal database query; and a database-look-up module for using the formal database query to obtain a result related to the voice-based query in natural language form from a database, wherein the location/proximity module is configured to provide a context and environment to the database-look-up module for narrowing and streamlining the formal database query associated with the voice-based query, and wherein the narrowing and streamlining is responsive to the location/proximity information.

82. Further, Defendant at least makes, offers for sale, and/or sells infringing devices to its customers and/or end users which comprise a device comprising a speech input module for receiving a voice-based query in natural language form from a user and a location/proximity module for receiving location/proximity information from a location/proximity device. These infringing devices comprise computing devices, including mobile phones, smart watches, tablets, and/or other computing devices, comprising those products running iOS 3.1 or later and/or MacOS

Sierra 10.12 or later, including at least the products referred to by Defendant as iPhone, iPad, iPad Air, iPad mini, iPad Pro, iPod touch, iMac, MacBook, MacBook Pro, Mac Mini, iMac, iMac Pro, MacBook Air, Mac Mini, Apple TV, HomePod, and/or Apple Watch, comprising the following products and/or model numbers: iPhone, iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S, iPhone 5, iPhone 5C, iPhone 5S, iPhone 6, iPhone 6 Plus, iPhone 6S, iPhone 6S Plus, iPhone SE, iPhone 7, iPhone 7Plus, iPhone 8, iPhone 8 Plus, iPhone X, iPad (1st generation), iPad 2, iPad (3rd generation), iPad (4th generation), iPad Air, iPad Air 2, iPad (2017), iPad mini, iPad mini 2, iPad mini 3, iPad mini 4, iPad Pro 12.9-inch, iPad Pro 9.7-inch, iPad Pro 12.9-inch (2nd generation), iPad Pro 10.5-inch, iPod touch (1st generation), iPod touch (2nd generation), iPod touch (3rd generation), iPod touch (4th generation), iPod touch (5th generation), iPod touch (6th generation), iMac (Late 2009), MacBook (Late 2009), MacBook Pro (Mid 2010), MacBook (Mid 2010), Mac Mini (Mid 2010), iMac (Mid 2010), Mac Pro (Mid 2010), MacBook Air (Late 2010), MacBook Pro (Early 2011), iMac (Mid 2011), MacBook Air (Mid 2011), Mac Mini (Mid 2011), MacBook Pro (Late 2011), Mac Pro (Mid 2012), MacBook Air (Mid 2012), MacBook Pro (Mid 012), MacBook Pro with Retina display (3rd gen) (15") (Mid 2012), Mac Mini (Late 2012), MacBook Pro with Retina display (3rd gen) (13") (Late 2012), iMac (21.5") (Late 2012), iMac (27") (Late 2012), MacBook Pro with Retina display (3rd gen) (Early 2013), MacBook Air (Mid 2013), iMac (21.5") (Late 2013), iMac (27") (Late 2013), MacBook Pro with Retina display (3rd gen) (Late 2013), Mac Pro (Late 2013), MacBook Air (Early 2014), iMac (21.5") (Mid 2014), MacBook Pro with Retina display (3rd gen) (Mid 2014), iMac with Retina 5K display (27") (Late 2014), Mac Mini (Late 2014), MacBook Air (13") (Early 2015), MacBook Air (11") (Early 2015), MacBook Pro with Retina display (3rd gen) (13") (Early 2015), MacBook (Early 2015), MacBook Pro with Retina display (3rd gen) (15") (Mid 2015), iMac with Retina 5K display (27") (Mid 2015), iMac with Retina 4K display (21.5") (Late 2015), iMac with Retina 5K display (27") (Late

2015), MacBook (Early 2016), MacBook Pro (4th gen) (13"), MacBook Pro with Touch Bar (4th gen) (13"), MacBook Pro with Touch Bar (4th gen) (15"), MacBook Air (13") (Mid 2017), MacBook (Mid 2017), MacBook Pro (4th gen) (13") (Mid 2017), MacBook Pro with Touch Bar (4th gen) (13") (Mid 2017), MacBook Pro with Touch Bar (4th gen) (15") (Mid 2017), iMac (21.5") (Mid 2017), iMac with Retina 4K display (21.5") (Mid 2017), iMac with Retina 5K display (27") (Mid 2017), iMac Pro (27") (Late 2017), Apple TV (4th generation), Apple TV 4K, HomePod, Apple Watch Series 3, Model A1860, and Model A1861, including when used in combination with the "Siri" functionality. Specifically, Defendant infringes by and through at least its practicing of the patented method, making and/or using computing devices, including the accused computing devices, including computers comprising architecture stores on computer readable storage media specifically made and/or used for performing the patented method, and/or making and/or using computer systems, including computer systems comprising the accused devices, including systems specifically made and/or used for performing the patented method, including by providing the accused devices and the accused Siri functionality thereon.

83. Additionally, or in the alternative, upon information and belief, Defendant has induced, and continues to induce, infringement of the '654 Patent in this judicial district, the State of Texas, and elsewhere, by intentionally inducing direct infringement of the '654 Patent, including by aiding or abetting the infringement of its end users and/or customers, by and through at least Defendant's making, offering for sale, and/or selling, without authority from Plaintiff, systems and/or devices implementing methods, including associated with computers, computer networks, and computer databases, comprising at least the above-described products comprising "Siri" functionality. Upon information and belief, such aiding and abetting comprises providing hardware, software, and/or instructions for such infringing uses by Defendant's customers and/or end users, including the use of the accused devices in combination with the "Siri" functionality

thereon. Upon information and belief, such induced infringement has occurred since Defendant became aware of the ‘654 Patent.

84. On information and belief, Defendant has known of the ‘654 patent since at least June 6, 2012, when it submitted an Information Disclosure Citation, citing the ‘654 patent, in its own patent application, U.S. Patent Application No. 11/688,664. Further, Defendant has over 100 patent publications which cite to the e’654 patent. At a minimum, this Complaint notifies Defendant that it is infringing, and is being accused of infringing, the ‘654 patent. It also recites facts which state a valid and plausible claim of infringement. Plaintiff reserves the right to take discovery regarding Defendant’s first actual notice of the ‘654 patent, to the extent it preceded this suit being filed.

85. Further, to the extent Defendant continues its infringing activities post-suit, such infringement would be clear and necessarily willful. On information and belief, Defendant have a significant need to continue providing the accused devices and accused Siri functionality, which are infringing the ‘654 patent, including in order to stay competitive and to avoid losing customers. Plaintiff believes and contends that Defendant’s continuance of its clear and inexcusable infringement of the ‘654 patent post-suit is willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, and/or characteristic of a pirate.

86. On account of the foregoing, Plaintiff contends such post-suit activities by Defendant qualify this as an egregious case of misconduct beyond typical infringement, entitling Plaintiff to enhanced damages. Thus, Plaintiff requests an award of enhanced damages, including treble damages, pursuant to 35 U.S.C. § 284.

87. Each of Defendant’s aforesaid activities have been without authority and/or license from Plaintiff.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 8,150,872

88. Plaintiff refers to and incorporates herein the allegations in the above paragraphs.

89. The '872 patent, entitled "Multimodal Natural Language Query System for Processing and Analyzing Voice and Proximity-Based Queries," was duly and legally issued by the USPTO on April 3, 2012 after full and fair examination.

90. The claims of the '872 patent cover, *inter alia*, systems, architecture stores on computer readable storage media, and methods, including associated with computers and computer databases, for receiving, processing, analyzing, and ranking voice and proximity-based queries, including from a computing device communicatively coupled to a network and configured to receive audio input comprising a query and determine location information; and a server communicatively coupled to the computing device via the network, wherein the server is configured to: receive the query from the computing device; perform natural language processing on the query using lexicons and grammar rules to parse sentences and determine a meaning of the query, wherein the natural language processing comprises converting text in natural language form to text in searchable form using the lexicons and grammar rules to determine the meaning of the query; utilize location information to further determine the meaning of the query; perform a database look up based on the determined meaning of the query, wherein the database look up is provided with a context and environment for narrowing and streamlining the database look up utilizing the location information; and rank responses of the database lookup using an accuracy algorithm.

91. Defendant has infringed and is now infringing, including literally, jointly, and/or equivalently, the '872 patent, including at least claims 1-12, in this judicial district, the State of Texas, and elsewhere in the United States, in violation of 35 U.S.C. § 271 through actions comprising the practicing, making, using, offering for sale, and/or selling, without authority from Plaintiff, systems, architecture stores on computer readable storage media, and method, including

devices implementing methods, including associated with computers and computer databases, for receiving, processing, analyzing, and ranking voice and proximity-based queries, including from a computing device communicatively coupled to a network and configured to receive audio input comprising a query and determine location information; and a server communicatively coupled to the computing device via the network, wherein the server is configured to: receive the query from the computing device; perform natural language processing on the query using lexicons and grammar rules to parse sentences and determine a meaning of the query, wherein the natural language processing comprises converting text in natural language form to text in searchable form using the lexicons and grammar rules to determine the meaning of the query; utilize location information to further determine the meaning of the query; perform a database look up based on the determined meaning of the query, wherein the database look up is provided with a context and environment for narrowing and streamlining the database look up utilizing the location information; and rank responses of the database lookup using an accuracy algorithm.

92. Defendant infringes the ‘872 patent by and through at least its making, offering for sale, and/or selling of computing devices, including mobile phones, smart watches, tablets, and/or other computing devices, which comprise Defendant’s “Siri” functionality, including related to voice-searching. Without limitation, Defendant’s “Siri” functionality comprises computer hardware and/or software for, *inter alia*, receiving, processing, analyzing, and ranking voice and proximity-based queries, including one or more servers communicatively coupled to a computing device via a network, wherein the server is configured to: receive the query from the computing device; perform natural language processing on the query using lexicons and grammar rules to parse sentences and determine a meaning of the query, wherein the natural language processing comprises converting text in natural language form to text in searchable form using the lexicons and grammar rules to determine the meaning of the query; utilize location information to further

determine the meaning of the query; perform a database look up based on the determined meaning of the query, wherein the database look up is provided with a context and environment for narrowing and streamlining the database look up utilizing the location information; and rank responses of the database lookup using an accuracy algorithm.

93. Further, Defendant at least makes, offers for sale, and/or sells infringing devices to its customers and/or end users which comprise a computing device communicatively coupled to a network and configured to receive audio input comprising a query and determine location information. These infringing devices comprise computing devices, including mobile phones, smart watches, tablets, and/or other computing devices, comprising those products running iOS 3.1 or later and/or MacOS Sierra 10.12 or later, including at least the products referred to by Apple as iPhone, iPad, iPad Air, iPad mini, iPad Pro, iPod touch, iMac, MacBook, MacBook Pro, Mac Mini, iMac, iMac Pro, MacBook Air, Mac Mini, Apple TV, HomePod, and/or Apple Watch, comprising the following products and/or model numbers: iPhone, iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S, iPhone 5, iPhone 5C, iPhone 5S, iPhone 6, iPhone 6 Plus, iPhone 6S, iPhone 6S Plus, iPhone SE, iPhone 7, iPhone 7Plus, iPhone 8, iPhone 8 Plus, iPhone X, iPad (1st generation), iPad 2, iPad (3rd generation), iPad (4th generation), iPad Air, iPad Air 2, iPad (2017), iPad mini, iPad mini 2, iPad mini 3, iPad mini 4, iPad Pro 12.9-inch, iPad Pro 9.7-inch, iPad Pro 12.9-inch (2nd generation), iPad Pro 10.5-inch, iPod touch (1st generation), iPod touch (2nd generation), iPod touch (3rd generation), iPod touch (4th generation), iPod touch (5th generation), iPod touch (6th generation), iMac (Late 2009), MacBook (Late 2009), MacBook Pro (Mid 2010), MacBook (Mid 2010), Mac Mini (Mid 2010), iMac (Mid 2010), Mac Pro (Mid 2010), MacBook Air (Late 2010), MacBook Pro (Early 2011), iMac (Mid 2011), MacBook Air (Mid 2011), Mac Mini (Mid 2011), MacBook Pro (Late 2011), Mac Pro (Mid 2012), MacBook Air (Mid 2012), MacBook Pro (Mid 012), MacBook Pro with Retina display (3rd gen) (15") (Mid 2012), Mac

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94. Additionally, or in the alternative, upon information and belief, Defendant has induced, and continues to induce, infringement of the ‘872 Patent in this judicial district, the State of Texas, and elsewhere, by intentionally inducing direct infringement of the ‘872 Patent, including by aiding or abetting the infringement of its end users and/or customers, by and through at least Defendant’s making, offering for sale, and/or selling, without authority from Plaintiff, systems and/or devices implementing methods, including associated with computers, computer networks, and computer databases, comprising at least the above-described products comprising “Siri” functionality. Upon information and belief, such aiding and abetting comprises providing hardware, software, and/or instructions for such infringing uses by Defendant’s customers and/or end users, including the use of the accused devices in combination with the “Siri” functionality thereon. Upon information and belief, such induced infringement has occurred since Defendant became aware of the ‘872 Patent

95. At a minimum, this Complaint notifies Defendant that it is infringing, and is being accused of infringing, the ‘872 patent. It also recites facts which state a valid and plausible claim of infringement. Plaintiff reserves the right to take discovery regarding Defendant’s first actual notice of the ‘872 patent, to the extent it preceded this suit being filed.

96. Further, to the extent Defendant continues its infringing activities post-suit, such infringement would be clear and necessarily willful. On information and belief, Defendant have a significant need to continue providing the accused devices and accused Siri functionality, which are infringing the ‘872 patent, including in order to stay competitive and to avoid losing customers. Plaintiff believes and contends that Defendant’s continuance of its clear and inexcusable infringement of the ‘872 patent post-suit is willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, and/or characteristic of a pirate.

97. On account of the foregoing, Plaintiff contends such post-suit activities by Defendant

qualify this as an egregious case of misconduct beyond typical infringement, entitling Plaintiff to enhanced damages. Thus, Plaintiff requests an award of enhanced damages, including treble damages, pursuant to 35 U.S.C. § 284.

98. Each of Defendant's aforesaid activities have been without authority and/or license from Plaintiff.

DAMAGES

99. By way of their infringing activities, Defendant has caused and continues to cause Plaintiff to suffer damages, and Plaintiff is entitled to recover from Defendant the damages sustained by Plaintiff as a result of Defendant's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

100. Defendant's infringement of Plaintiff's rights under the patents-in-suit will continue to damage Plaintiff, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court.

101. Plaintiff also requests that the Court make a finding that this is an exceptional case entitling Plaintiff to recover their attorneys' fees and costs pursuant to 35 U.S.C. § 285.

JURY DEMAND

102. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure on all issues so triable.

PRAYER FOR RELIEF

103. Plaintiff respectfully requests that the Court find in their favor and against Defendant, and that the Court grant Plaintiff the following relief:

A. An adjudication that, including pursuant to 35 U.S.C. § 271, one or more claims of the patents-in-suit has been directly and/or indirectly infringed, either literally and/or under the

doctrine of equivalents, by Defendant;

B. An award to Plaintiff of damages pursuant to 35 U.S.C. § 284 adequate to compensate Plaintiff for Defendant's past infringement, together with pre-judgment and post-judgment interest, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses, and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A grant of preliminary and permanent injunction pursuant to 35 U.S.C. § 283, enjoining Defendant, and all persons, including its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation therewith, from making, using, offering to sell, or selling in the United States, or importing into the United States, any methods, systems, devices, or computer readable media that infringe any claim of the patents-in-suit, or contributing to, or inducing, the same by others, from further acts of infringement with respect to the claims of the patents-in-suit;

D. That this Court declare that Defendant's pre-suit and continuing post-suit infringement is, and continues to be, willful and egregious, and, accordingly, award enhanced damages, including treble damages, pursuant to 35 U.S.C. § 284;

E. That this Court declare this to be an exceptional case and award Plaintiff reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and

F. A judgment and order requiring Defendant to pay Plaintiff their damages, costs, expenses, fees, and prejudgment and post-judgment interest for Defendant's infringement of the patents-in-suit as provided under 35 U.S.C. §§ 284 and/or 285; and

G. Any and all further relief for which Plaintiff may show itself justly entitled that this Court deems just and proper.

March 8, 2018

Respectfully submitted,

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