IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

WORD TO INFO, INC.,
 	
                    Plaintiff,
 	
          v.
 	
NUANCE COMMUNICATIONS, INC.
 	
                    Defendant.
	Civil Action No. 17-10054
	
	JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Word to Info, Inc. ("Word to Info"), by way of its Complaint for Patent

Infringement ("Complaint") against the above-named Defendant Nuance Communications, Inc.

("Nuance" or "Defendant"), alleges the following:

NATURE OF THE ACTION

1.   This is an action for patent infringement arising under the Patent Laws of the

United States, Title 35 of the United States Code.

THE PARTIES

2.   Plaintiff Word to Info is a corporation organized under the laws of the State of

Texas with a place of business at 1106 Edgewood Dr., Richardson, TX 75081.

3.   Upon information and belief, Defendant Nuance is a corporation organized under

the laws of the State of Delaware, with its principal place of business at 1 Wayside Road,

Burlington, Massachusetts 01803, with a registered agent for service of process at CT

Corporation System, 155 Federal Street, Suite 700, Boston, MA 02110.

JURISDICTION AND VENUE

4.   This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338.

5.   On information and belief, Defendant Nuance is subject to the jurisdiction of this Court by virtue of the facts that Defendant conducts substantial business in this District, Defendant has committed acts of infringement within this District, a substantial part of the events giving rise to the claims in this Complaint occurred and continue to occur in this District, and Defendant has its principal place of business in this District.

6.   Venue is proper in this judicial district under 28 U.S.C. §§ 1391(c) and 1400(b).

STATEMENT OF FACTS

7.   This is an action for patent infringement of one or more claims of United States U.S. Patent No. 5,715,468 entitled "Memory System for Storing and Retrieving Experience and Knowledge with Natural Language" (the '468 Patent); U.S. Patent No. 6,138,087 entitled "Memory System for Storing and Retrieving Experience and Knowledge with Natural Language Utilizing State Representation Data, Word Sense Numbers, Function Codes and/or Directed Graphs" (the '087 Patent); U.S. Patent No. 6,609,091 entitled "Memory System for Storing and Retrieving Experience and Knowledge with Natural Language Utilizing State Representation Data, Word Sense Numbers, Function Codes and/or Directed Graphs" (the '091 Patent); U.S. Patent No. 7,349,840 entitled "Memory System for Storing and Retrieving Experience and Knowledge with Natural Language Utilizing State Representation Data, Word Sense Numbers, Function Codes, Directed Graphs and/or Context Memory" (the '840 Patent); U.S. Patent No. 7,873,509 entitled "Memory System for Storing and Retrieving Experience and Knowledge with Natural Language Utilizing State Representation Data, Word Sense Numbers, Function Codes, Directed Graphs, Context Memory, and/or Purpose Relations" (the '509 Patent); U.S. Patent No. 8,326,603 entitled "Memory System for Storing and Retrieving Experience and Knowledge with Natural Language Queries" (the '603 Patent); U.S. Patent No. 8,688,436 entitled "Memory

System for Storing and Retrieving Experience and Knowledge by Utilizing Natural Language Responses" (the '436 Patent) (collectively, the "Patents-in-Suit").

8.   Word to Info is the assignee and owner of the right, title and interest in and to, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them. The Patents-in-Suit were previously owned by their sole inventor, Robert L. Budzinski, who is the owner of Word to Info.

9.   At least one of the Patents-in-Suit has been cited during prosecution of numerous issued United States Patents relating to natural language processing. In particular, one of the patents-in-suit has been cited during prosecution of patents listing Defendant Nuance as assignee, such patents including but not limited to U.S. Patent Nos. 7,974,835; 8,762,152; 9,076,448; and 9,190,063.

10.   On February 3, 1998, the '468 Patent, was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '468 Patent is attached as Exhibit A to this Complaint.

11.   On October 24, 2000, the '087 Patent was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '087 Patent is attached as Exhibit B to this Complaint.

12.   On August 19, 2003, the '091 Patent was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '091 Patent is attached as Exhibit C to this Complaint.

13.   On March 25, 2008, the '840 Patent was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '840 Patent is attached as Exhibit D to this Complaint.

14.   On January 18, 2011, the '509 Patent was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '509 Patent is attached as Exhibit E to this Complaint.

15.   On December 4, 2012, the '603 Patent was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '603 Patent is attached as Exhibit F to this Complaint.

16.   On April 1, 2014, the '436 Patent was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '436 Patent is attached as Exhibit G to this Complaint.

FIRST CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 5,715,468

17.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 16 as though fully set forth herein.

18.   Defendant Nuance has been directly infringing and continues to directly infringe one or more claims of the '468 Patent, including but not limited to Claims 1, 8, 21, 29, and 33, in the United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through at least its development, testing, support, and operation of Nuance's LinkBase ontology, as well as through Nuance's software applications and services that provide data to or use data from LinkBase ontology. Such software and services include, for example, Nuance's Dragon Medical suite of products and Nuance's 360 Development Platform and clinical language understanding (CLU) services.

19.   For example, on information and belief, Nuance software and services provide electronically encoded data which is representative of natural language by encoding natural

language inputs into audio files and/or text files which represent the natural language input. For

example, Nuance software encodes natural language speech using one or more audio codecs.

See Nuance Audio Input Specification (available at

https://developer.nuance.com/downloads/guidelines/Nuance%20Audio%20Input%20Specificatio

n_v11_ND.pdf) at 4-5.

20.   On information and belief, Nuance software and services provide a dictionary

database containing entries having syntax usage data. Nuance software and services are based

on LinkBase, which was acquired by Nuance. LinkBase integrates databases designed for

natural language processing. See "LinKBase®, a Philosophically-inspired Ontology for

NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 67.

LinkBase contains over 5,000,000 knowledge entries of various types: concepts, relationships

among the concepts, and multi-lingual and synonymous terms that represent the concepts. *Id*. at

3. LinkBase further includes associated word sense numbers having associated state

representation data and which are utilized in traversing such directed graphs. In particular, on

information and belief, LinkBase includes data representing states as well as medical codes

associated with data representing particular medical states.

21.   On information and belief, Nuance software and services provide syntax usage

data. For example, LinkBase comprises concepts associated with synonyms, which are sets of

words that can be used interchangeably. See "LinKBase®, and SNOWMED: some distinct

features and impact on NLP" (available at http://kr-med.org/2008/proceedings/proceedings-kr-

med2008.pdf#page=28) at 27.

22.   On information and belief, Nuance software and services lexically process the

electronically encoded data to access the dictionary database. For example, LinkBase utilizes

grammatical analysis to convert an encoded sentence into a structure used to access the

relationships stored in LinkBase. See "LinKBase®, a Philosophically-inspired Ontology for

NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

23.   On information and belief, Nuance software and services provide a grammar

specification. For example, LinkBase uses a GUM-based (Generalized Upper Model)

grammatical specification. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU

Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

24.   On information and belief, Nuance software and services utilize syntax usage data

which are from entries of the dictionary database and which are associated with words of the

natural language with reference to the grammar specification to produce output data

representative of a grammatical parse of the natural language, the output data including selected

syntax usage. For example, an exemplary workflow shows that tokens and multi-words are

mapped to the ontology, syntactic parsing is performed against grammar, and concepts are

deduced based on syntax, rewriting, and full definitions in order to create output such as an xml

or html. See "The Next Chapter of Healthcare Technology" by Nick van Terheyden, MD, Chief

Medical Information Officer – Clinical Language Understanding, Nuance Communications, Inc.,

at 24. See also "From Free Text to Clinical Data" (available at

https://www.cis.upenn.edu/~ungar/TATRC/Talks/L&C%20IEBI%20Workshop%20Karen%20D

oyle%20.ppt) at 19. See also "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU

Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68, Figure 1.

25.   Because of Nuance's infringement of the '468 Patent, Plaintiff has suffered

damages and will continue to suffer damages in the future. Plaintiff is entitled to an award of such

damages, but in no event less than a reasonable royalty, the precise amount to be determined at

trial.

SECOND CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 6,138,087

26.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 25 as

though fully set forth herein.

27.   Defendant Nuance has been directly infringing and continues to directly infringe

one or more claims of the '087 Patent, including but not limited to Claims 17 and 18, in the

United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,

through at least its development, testing, support, and operation of Nuance's LinkBase ontology,

as well as through Nuance's software applications and services that provide data to or use data

from LinkBase ontology. Such software and services include, for example, Nuance's Dragon

Medical suite of products and Nuance's 360 Development Platform and clinical language

understanding (CLU) services.

28.   For example, on information and belief, Nuance software and services provide

electronically encoded data which is representative of natural language by encoding natural

language inputs into audio files and/or text files which represent the natural language input. For

example, Nuance software encodes natural language speech using one or more audio codecs.

See Nuance Audio Input Specification (available at

https://developer.nuance.com/downloads/guidelines/Nuance%20Audio%20Input%20Specificatio

n_v11_ND.pdf) at 4-5.

29.   On information and belief, Nuance software and services provide a dictionary

database containing entries having syntax usage data. Nuance software and services are based

on LinkBase, which was acquired by Nuance. LinkBase integrates databases designed for natural language processing. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 67. LinkBase contains over 5,000,000 knowledge entries of various types: concepts, relationships among the concepts, and multi-lingual and synonymous terms that represent the concepts. *Id*. at 3. LinkBase further includes associated word sense numbers having associated state representation data. In particular, on information and belief, LinkBase includes data representing states as well as medical codes associated with data representing particular medical states.

30.   On information and belief, Nuance software and services provide syntax usage data. For example, LinkBase comprises concepts associated with synonyms, which are sets of words that can be used interchangeably. See "LinKBase®, and SNOWMED: some distinct features and impact on NLP" (available at http://kr-med.org/2008/proceedings/proceedings-kr-med2008.pdf#page=28) at 27.

31.   On information and belief, Nuance software and services provide syntax usage data. For example, LinkBase comprises concepts associated with synonyms, which are sets of words that can be used interchangeably. See "LinKBase®, and SNOWMED: some distinct features and impact on NLP" (available at http://kr-med.org/2008/proceedings/proceedings-kr-med2008.pdf#page=28) at 27.

32.   On information and belief, Nuance software and services lexically process the electronically encoded data to access the dictionary database. For example, LinkBase utilizes grammatical analysis to convert an encoded sentence into a structure used to access the relationships stored in LinkBase. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

33.   On information and belief, Nuance software and services provide a grammar specification. For example, LinkBase uses a GUM-based (Generalized Upper Model) grammatical specification. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

34. On information and belief, Nuance software and services utilize syntax usage data and word sense numbers which are from entries of the dictionary database and which are associated with words of the natural language with reference to associated state representation data to select word sense number for words of the natural language. For example, an exemplary workflow shows that tokens and multi-words are mapped to the ontology, syntactic parsing is performed against grammar, and concepts are deduced based on syntax, rewriting, and full definitions. See "The Next Chapter of Healthcare Technology" by Nick van Terheyden, MD, Chief Medical Information Officer – Clinical Language Understanding, Nuance Communications, Inc., at 24. See also "From Free Text to Clinical Data" (available at https://www.cis.upenn.edu/~ungar/TATRC/Talks/L&C%20IEBI%20Workshop%20Karen%20Doyle%20.ppt) at 19. See also "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68, Figure 1. As previously stated, LinkBase includes medical codes associated with data representing particular medical states, which comprise a portion of the ontology used to generate output based on the natural language inputs.

35.   Because of Nuance's infringement of the '087 Patent, Plaintiff has suffered damages. Plaintiff is entitled to an award of such damages, but in no event less than a reasonable royalty, the precise amount to be determined at trial.

THIRD CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 6,609,091

36.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 35 as though fully set forth herein.

37.   Defendant Nuance has been directly infringing and continues to directly infringe one or more claims of the '091 Patent, including but not limited to Claims 1 and 12, in the United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through at least its development, testing, support, and operation of Nuance's LinkBase ontology, as well as through Nuance's software applications and services that provide data to or use data from LinkBase ontology. Such software and services include, for example, Nuance's Dragon Medical suite of products and Nuance's 360 Development Platform and clinical language understanding (CLU) services.

38.   For example, on information and belief, Nuance software and services provide electronically encoded data which is representative of natural language by encoding natural language inputs into audio files and/or text files which represent the natural language input. For example, Nuance software encodes natural language speech using one or more audio codecs. See Nuance Audio Input Specification (available at https://developer.nuance.com/downloads/guidelines/Nuance%20Audio%20Input%20Specificatio n_v11_ND.pdf) at 4-5.

39.   On information and belief, Nuance software and services provide a dictionary database containing entries having syntax usage data. Nuance software and services are based on LinkBase, which was acquired by Nuance. LinkBase integrates databases designed for natural language processing. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 67.

LinkBase contains over 5,000,000 knowledge entries of various types: concepts, relationships among the concepts, and multi-lingual and synonymous terms that represent the concepts. *Id*. at 3. LinkBase further includes associated word sense numbers having associated state representation data. In particular, on information and belief, LinkBase includes data representing states as well as medical codes associated with data representing particular medical states.

40.   On information and belief, Nuance software and services provide syntax usage data. For example, LinkBase comprises concepts associated with synonyms, which are sets of words that can be used interchangeably. See "LinKBase®, and SNOWMED: some distinct features and impact on NLP" (available at http://kr-med.org/2008/proceedings/proceedings-kr-med2008.pdf#page=28) at 27.

41.   On information and belief, Nuance software and services lexically process the electronically encoded data to access the dictionary database. For example, LinkBase utilizes grammatical analysis to convert an encoded sentence into a structure used to access the relationships stored in LinkBase. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

42.   On information and belief, Nuance software and services provide a grammar specification. For example, LinkBase uses a GUM-based (Generalized Upper Model) grammatical specification. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

43.   On information and belief, Nuance software and services provide a database of requirements such that the requirements must be met by the associated state representation data of the word sense numbers for the word sense numbers to be selected. For example, documents describing LinkBase provide diagrams representing nodes and relationships between nodes using

circles and lines, respectively. In order for entries to be selected, they must meet these

relationship requirements. See an exemplary workflow shows that tokens and multi-words are

mapped to the ontology, syntactic parsing is performed against grammar, and concepts are

deduced based on syntax, rewriting, and full definitions. See "Mistakes in Medical Ontologies:

Where Do They Come From and How Can They Be Detected?" by Werner Ceusters, Barry

Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. Furthermore, word sense

numbers are selected according to an analysis of syntactic structure and application of syntactic

rules. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications"

(available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68. As previously stated,

LinkBase includes medical codes associated with data representing particular medical states,

which comprise a portion of the ontology used to generate output based on the natural language

inputs.

      44.   On information and belief, Nuance software and services utilize syntax usage data

which are from entries of the dictionary database and which are associated with words of the

natural language with reference to the grammar specification to produce output data

representative of a grammatical parse of the natural language, the output data including selected

syntax usage. For example, an exemplary workflow shows that tokens and multi-words are

mapped to the ontology, syntactic parsing is performed against grammar, and concepts are

deduced based on syntax, rewriting, and full definitions in order to create output such as an xml

or html. See "The Next Chapter of Healthcare Technology" by Nick van Terheyden, MD, Chief

Medical Information Officer – Clinical Language Understanding, Nuance Communications, Inc.,

at 24. See also "From Free Text to Clinical Data" (available at

https://www.cis.upenn.edu/~ungar/TATRC/Talks/L&C%20IEBI%20Workshop%20Karen%20D

oyle%20.ppt) at 19. See also "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU

Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68, Figure 1.

45.   Because of Nuance's infringement of the '091 Patent, Plaintiff has suffered

damages. Plaintiff is entitled to an award of such damages, but in no event less than a reasonable

royalty, the precise amount to be determined at trial.

FOURTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 7,349,840

46.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 45 as

though fully set forth herein.

47.   Defendant Nuance has been directly infringing and continues to directly infringe

one or more claims of the '840 Patent, including but not limited to Claims 1, 2, 3, and 5, in the

United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,

through at least its development, testing, support, and operation of Nuance's LinkBase ontology,

as well as through Nuance's software applications and services that provide data to or use data

from LinkBase ontology. Such software and services include, for example, Nuance's Dragon

Medical suite of products and Nuance's 360 Development Platform and clinical language

understanding (CLU) services.

48.   For example, on information and belief, Nuance software and services provide

electronically encoded data which is representative of natural language by encoding natural

language inputs into audio files and/or text files which represent the natural language input. For

example, Nuance software encodes natural language speech using one or more audio codecs.

See Nuance Audio Input Specification (available at

https://developer.nuance.com/downloads/guidelines/Nuance%20Audio%20Input%20Specificatio

n_v11_ND.pdf) at 4-5.

49.   On information and belief, Nuance software and services provide a dictionary

database containing entries having syntax usage data. Nuance software and services are based

on LinkBase, which was acquired by Nuance. LinkBase integrates databases designed for

natural language processing. See "LinKBase®, a Philosophically-inspired Ontology for

NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 67.

LinkBase contains over 5,000,000 knowledge entries of various types: concepts, relationships

among the concepts, and multi-lingual and synonymous terms that represent the concepts. *Id*. at

3. LinkBase further includes associated word sense numbers having associated state

representation data. In particular, on information and belief, LinkBase includes medical codes

associated with data representing particular medical states.

50.   On information and belief, Nuance software and services provide syntax usage

data. For example, LinkBase comprises concepts associated with synonyms, which are sets of

words that can be used interchangeably. See "LinKBase®, and SNOWMED: some distinct

features and impact on NLP" (available at http://kr-med.org/2008/proceedings/proceedings-kr-

med2008.pdf#page=28) at 27.

51.   On information and belief, Nuance software and services lexically process the

electronically encoded data to access the dictionary database. For example, LinkBase utilizes

grammatical analysis to convert an encoded sentence into a structure used to access the

relationships stored in LinkBase. See "LinKBase®, a Philosophically-inspired Ontology for

NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

52.   On information and belief, Nuance software and services provide a grammar specification. For example, LinkBase uses a GUM-based (Generalized Upper Model) grammatical specification. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

53. On information and belief, Nuance software and services provide a context data base containing entries having word sense numbers. Nuance emphasizes that its products use "vocabulary to recognize words correctly based not only on their sound, but also on their context." ("Dragon Naturally Speaking, Dragon Medical, Version 10, User Guide," version 10.1, available at http://www.nuance.com/naturallyspeaking/resources/documents/DNS10UserGuide.pdf) at 19. Specifically, the Nuance Clinical Language Understanding engine performs language recognition using context recognition. "The Next Chapter of Healthcare Technology", Nick van Terheyden MD, Chief Medical Information Officer – Clinical Language Understanding, Nuance Communications, Inc. at 41. As previously stated, LinkBase includes data representing states as well as medical codes associated with data representing particular medical states, which comprise a portion of the ontology used to generate output based on the natural language inputs.

54. On information and belief, Nuance software and services utilize syntax usage data and word sense numbers which are from entries of the dictionary database and which are associated with words of the natural language with reference to the grammar specification and the context database to select word sense numbers associated with the natural language words. For example, an exemplary workflow shows that tokens and multi-words are mapped to the ontology, syntactic parsing is performed against grammar, and concepts are deduced based on syntax, rewriting, and full definitions. See "The Next Chapter of Healthcare Technology" by

Nick van Terheyden, MD, Chief Medical Information Officer – Clinical Language

Understanding, Nuance Communications, Inc., at 24. See also "From Free Text to Clinical

Data" (available at

https://www.cis.upenn.edu/~ungar/TATRC/Talks/L&C%20IEBI%20Workshop%20Karen%20D

oyle%20.ppt) at 19. See also "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU

Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68, Figure 1. As

previously stated, LinkBase includes medical codes associated with data representing particular

medical states, which comprise a portion of the ontology used to generate output based on the

natural language inputs.

55.   Because of Nuance's infringement of the '840 Patent, Plaintiff has suffered

damages. Plaintiff is entitled to an award of such damages, but in no event less than a reasonable

royalty, the precise amount to be determined at trial.

FIFTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 7,873,509

56.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 55 as

though fully set forth herein.

57.   Defendant Nuance has been directly infringing and continues to directly infringe

one or more claims of the '509 Patent, including but not limited to Claims 9, 10, and 16, in the

United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,

through at least its development, testing, support, and operation of Nuance's LinkBase ontology,

as well as through Nuance's software applications and services that provide data to or use data

from LinkBase ontology. Such software and services include, for example, Nuance's Dragon

Medical suite of products and Nuance's 360 Development Platform and clinical language understanding (CLU) services.

58.   For example, on information and belief, Nuance software and services provide an experience and knowledge database having directed graphs with nodes with associated clause implying word sense numbers organized into paths of the nodes such that the nodes have access conditions which determine zero or more next nodes on zero or more paths that are accessible. Nuance software and services are based on LinkBase, which was acquired by Nuance. Linkbase utilizes directed graphs having paths and conditions for accessing each path. See "Mistakes in Medical Ontologies: Where Do They Come From and How Can They Be Detected?" by Werner Ceusters, Barry Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. LinkBase further includes associated word sense numbers having associated state representation data. In particular, on information and belief, LinkBase includes data representing states as well as medical codes associated with data representing particular medical states. Nuance software is configured to run on a computer having memory for providing the forgoing described functionality.

59.   On information and belief, Nuance software and services perform relation path identification processing to find zero or more paths from nodes associated with a clause implying word sense numbers associated with natural language using the experience and knowledge database such that access conditions of the nodes on the found paths are met. See "Mistakes in Medical Ontologies: Where Do They Come From and How Can They Be Detected?" by Werner Ceusters, Barry Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. Nuance software is configured to run on a computer having memory for providing the forgoing described functionality.

60.   On information and belief, Nuance software and services provide criteria for selecting an experience and knowledge path using the previously identified directed graph. See "Mistakes in Medical Ontologies: Where Do They Come From and How Can They Be Detected?" by Werner Ceusters, Barry Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. Nuance software is configured to run on a computer having memory for providing the forgoing described functionality.

61.   On information and belief, Nuance software and services utilize criteria to select one or more found paths using the previously identified directed graph. See "Mistakes in Medical Ontologies: Where Do They Come From and How Can They Be Detected?" by Werner Ceusters, Barry Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. Nuance software is configured to run on a computer having memory for providing the forgoing described functionality.

62.   Because of Nuance's infringement of the '509 Patent, Plaintiff has suffered damages. Plaintiff is entitled to an award of such damages, but in no event less than a reasonable royalty, the precise amount to be determined at trial.

SIXTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 8,326,603

63.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 62 as though fully set forth herein.

64.   Defendant Nuance has been directly infringing and continues to directly infringe one or more claims of the '603 Patent, including but not limited to Claims 14, and 16, in the United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through at least its development, testing, support, and operation of Nuance's LinkBase ontology,

as well as through Nuance's software applications and services that provide data to or use data

from LinkBase ontology. Such software and services include, for example, Nuance's Dragon

Medical suite of products and Nuance's 360 Development Platform and clinical language

understanding (CLU) services.

65.   For example, on information and belief, Nuance software and services provide

natural language with an associated clause implying word sense numbers. Nuance software and

services are based on LinkBase, which was acquired by Nuance. Linkbase performs natural

language processing using word sense numbers. See "LinKBase®, a Philosophically-inspired

Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-

p08.pdf) at 67. LinkBase contains over 5,000,000 knowledge entries of various types: concepts,

relationships among the concepts, and multi-lingual and synonymous terms that represent the

concepts. *Id*. at 3. LinkBase further includes associated word sense numbers having associated

state representation data and which are utilized in traversing directed graphs. Nuance software is

configured to run on a computer having memory for providing the forgoing described

functionality.

66.   On information and belief, Nuance software and services provide an experience

and knowledge database having directed graphs with nodes with associated clause implying

word sense numbers organized into paths of the nodes such that the nodes have access conditions

which determine zero or more next nodes on zero or more paths that are accessible. Linkbase

utilizes directed graphs having paths and conditions for accessing each path. See "Mistakes in

Medical Ontologies: Where Do They Come From and How Can They Be Detected?" by Werner

Ceusters, Barry Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. LinkBase

further includes associated word sense numbers having associated state representation data. In

particular, on information and belief, LinkBase includes data representing states as well as

medical codes associated with data representing particular medical states. Nuance software is

configured to run on a computer having memory for providing the forgoing described

functionality.

67.   On information and belief, Nuance software and services identify zero or more

paths form nodes associated with a clause implying word sense numbers associated with natural

language with reference to the experience and knowledge database such that the access

conditions of the nodes on the found paths are met. See "Mistakes in Medical Ontologies:

Where Do They Come From and How Can They Be Detected?" by Werner Ceusters, Barry

Smith, Anand Kumarb, Christoffel Dhaen, at sections 2.3-2.4.2. Nuance software is configured

to run on a computer having memory for providing the forgoing described functionality.

68.   Because of Nuance's infringement of the '603 Patent, Plaintiff has suffered

damages. Plaintiff is entitled to an award of such damages, but in no event less than a reasonable

royalty, the precise amount to be determined at trial.

<u>**SEVENTH CLAIM FOR RELIEF**</u>

INFRINGEMENT OF U.S. PATENT NO. 8,688,436

69.   Plaintiff repeats and re-alleges the allegations of paragraphs 1 through 68 as

though fully set forth herein.

70.   Defendant Nuance has been directly infringing and continues to directly infringe

one or more claims of the '468 Patent, including but not limited to Claims 1, 2, and 7, in the

United States in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,

through at least its development, testing, support, and operation of Nuance's LinkBase ontology,

as well as through Nuance's software applications and services that provide data to or use data

from LinkBase ontology as installed in a computer system. Such software and services include, for example, Nuance's Dragon Medical suite of products and Nuance's 360 Development Platform and clinical language understanding (CLU) services.

71.   For example, on information and belief, Nuance software and services as installed in a computer system which receives natural language and processes such language to provide electronically encoded data which is representative of natural language by encoding natural language inputs into audio files and/or text files which represent the natural language input. For example, Nuance software encodes natural language speech using one or more audio codecs. See Nuance Audio Input Specification (available at https://developer.nuance.com/downloads/guidelines/Nuance%20Audio%20Input%20Specificatio n_v11_ND.pdf) at 4-5.

72.   On information and belief, Nuance software and services as installed in a computer system provides in the memory of the computer system a dictionary database containing entries having syntax usage data. Nuance software and services are based on LinkBase, which was acquired by Nuance. LinkBase integrates databases designed for natural language processing. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 67. LinkBase contains over 5,000,000 knowledge entries of various types: concepts, relationships among the concepts, and multi-lingual and synonymous terms that represent the concepts. *Id*. at 3. LinkBase further includes associated word sense numbers having associated state representation data. In particular, on information and belief, LinkBase includes data representing states as well as medical codes associated with data representing particular medical states.

73.   On information and belief, Nuance software and services as installed in a computer system lexically process the electronically encoded data to access the dictionary database. For example, LinkBase utilizes grammatical analysis to convert an encoded sentence into a structure used to access the relationships stored in LinkBase. See "LinKBase®, a Philosophically-inspired Ontology for NLP/NLU Applications" (available at http://ceur-ws.org/Vol-222/krmed2006-p08.pdf) at 68.

74.   On information and belief, Nuance software and services provide syntax usage data. For example, LinkBase comprises concepts associated with synonyms, which are sets of words that can be used interchangeably. See "LinKBase®, and SNOWMED: some distinct features and impact on NLP" (available at http://kr-med.org/2008/proceedings/proceedings-kr-med2008.pdf#page=28) at 27.

On information and belief, Nuance software and services as installed in a computer system provide a natural language plausibility and expectedness processor. For example, Nuuance systems provide alternate choices and/or typeahed functionality. See "Dragon Naturally Speaking, Dragon Medical, Version 10, User Guide", Version 10.1, Nuance, 2009, at p.64 (available at

http://www.nuance.com/naturallyspeaking/resources/documents/DNS10UserGuide.pdf).

75.   On information and belief, Nuance software and services utilizes the natural language plausibility and expectedness processor to initiate accessing entries of the dictionary database which are associated with words of the natural language. For example, a disambiguator performs analysis for relationships that exist between the ambiguous term and terms found in the surrounding context using the domain knowledge available in LinkBase. See "Formal Ontology: The Foundation for Natural Language Processing" (available at http://web.squ.edu.om/med-

Lib/med/net/e-pathways-net/Docs/L&C_Formal%20Ontology_Foundation%20for%20NLP.pdf)
at 6.

76.   Because of Nuance's infringement of the '436 Patent, Plaintiff has suffered
damages. Plaintiff is entitled to an award of such damages, but in no event less than a reasonable
royalty, the precise amount to be determined at trial.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by
jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Word to Info, Inc. respectfully demands entry of judgment against
Nuance as follows:

A.   finding that Nuance has infringed one or more claims of the Patents-in-Suit;

B.   finding Nuance's infringement of at least one of the Patents-in-Suit to be willful;

C.   awarding Plaintiff damages to be paid by Nuance adequate to compensate Plaintiff
for Nuance's past infringement of the Patents-in-Suit and any continuing or future infringement of
the Patents-in-Suit through the date such judgment is entered, together with pre-judgment and post-
judgment interest, costs, expenses and an accounting of all infringing acts including, but not
limited to, those acts not presented at trial as justified under 35 U.S.C. § 284;

D.   a declaration that this case is exceptional under 35 U.S.C. § 285, and an award of
Plaintiff's reasonable attorneys' fees;

E.   ordering an accounting of all infringing acts including, but not limited to, those acts
not presented at trial and an award of damages to Plaintiff for any such acts; and

F.   awarding such other and further relief at law or in equity as the Court deems just

and proper.

Dated: January 11, 2017

Respectfully submitted,

WORD TO INFO, INC.,
By its attorneys,

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