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

	§	
AGIS SOFTWARE DEVELOPMENT, LLC,	§	Case No. 2:17-cv-513-JRG
	§	(LEAD CASE)
Plaintiff,	§	
v.	§	
	§	**JURY TRIAL DEMANDED**
HUAWEI DEVICE USA INC., ET AL.,	§	
	§	
Defendants.	§	
	§	

**DECLARATION OF DR. JAIME G. CARBONELL IN SUPPORT OF
PLAINTIFF'S OPENING CLAIM CONSTRUCTION BRIEF**

I, Jaime G. Carbonell, declare and state as follows:

   1. I am over the age of twenty-one, competent to make this declaration, and have personal knowledge of the matters stated herein. I make this declaration in support of Plaintiff AGIS Software Development, LLC'S's Opening Claim Construction Brief.

A. Personal Qualifications

 2. I received Bachelor of Science degrees in both Physics and Mathematics in 1975 from the Massachusetts Institute of Technology. I received M.S., M.Phil., and Ph.D. degrees in Computer Science from Yale University in 1976, 1977, and 1979, respectively.

 3. I have held the position of Allen Newell Professor of Computer Science at Carnegie Mellon University from 1995 to the present. I currently also hold the title of Director of the Language Technologies Institute at Carnegie Mellon University. I first joined Carnegie Mellon as an Assistant Professor of Computer Science in 1979.   In 1987, I was appointed as a Professor of Computer Science at Carnegie Mellon.

4. Since 1979 I have taught a wide variety of graduate and undergraduate courses at Carnegie Mellon that fall within the general field of Computer Science, including courses in software engineering, data mining, natural language processing, electronic commerce, and artificial intelligence. I have been involved in a number of different professional organizations and activities, including memberships in the Association of Computing Machinery ("ACM"), the Association for the Advancement of Artificial Intelligence ("AAAI"), and the Cognitive Science Society. I have also held leadership positions within professional organizations. From 1983 to 1985, I served as Chair of the ACM's Special Interest Group on Artificial Intelligence ("SIGART"). From 1988 to the present, I have been a Fellow of the AAAI. From 1990 to 1992, I served on the AAAI executive committee. I have also served on a number of different government committees, including the Computer, Information Science & Engineering Advisory Committee of the National Science Foundation (2010 to 2014); the Human Genome Scientific Advisory Committee to the National Institute of Health, also known colloquially as the "Watson Committee" (from 1988 through 1992); and the Scientific Advisory Committee of the Information Access Division of the National Institute of Standards and Technology (from 1997 through 2001).

5. I am an author or co-author on more than 360 technical papers published as invited contributions and/or in peer-reviewed journals or conferences. These papers present the results of my research, which is generally directed at computer implemented algorithms and methods that relate to machine learning, including such applications as mapping protein sequences to three-dimensional shapes, predicting protein folds, detecting financial fraud, and also related to natural language processing including performing inter-lingual machine translation, parsing natural language (a.k.a. "content analysis") and text mining and to various forms of storage and

communication of data. I have served as an editor and peer-reviewer for a number of different technical journals in my field, including the Machine Learning Journal (from 1984 through 2000), the Machine Translation Journal (the 1980's), and the Artificial Intelligence Journal (1984 through 2008). I was also a co-Editor of the book series Lecture Notes in Artificial Intelligence, which was published by Springer from 1996 through 2008.

6. I received a "recognition of service" award from the Association for Computing Machinery for my role as chair of the ACM's special interest group in Artificial Intelligence (SIGART) between 1983 and 1985. In 1986, I received the Sperry Fellowship for excellence in artificial intelligence research. In 1987, I received the Carnegie Mellon University Computer Science Department's teaching award.

7. I have also worked as a technical consultant on Computer Science applications for a variety of industrial clients. This includes consulting on data mining applications for Industrial Scientific Corporation (data mining to improve workplace safety); Carnegie Group Inc. (artificial intelligence and natural language processing); Citicorp (financial data mining, natural language); Wisdom Technologies (financial optimization); Dynamix Technologies (large-scale algorithms with applications to Homeland Security), and Meaningful Machines in natural language processing and machine translation. I have experience in many aspects of computing technology, including communications programming and protocols, where I regularly teach two classes every year, covering aspects of databases, telecommunications methods, in network-based systems, such as master-slave control devices, whether for displaying or capturing multimedia information, and in applications areas ranging from finance and advertisement models to display-based communications and customer-contact methods and algorithms.

8. I am a named inventor on a number of issued U.S. Patents, including: U.S. Patent No. 5,677,835 ("Integrated authoring and translation system"); U.S. Patent No. 5,995,920 ("Computer-based method and system for monolingual document development"); U.S. Patent No. 6,139,201 ("Integrated authoring and translation system"); U.S. Patent No. 6,163,785 ("Integrated authoring and translation system"); and U.S. Patent No. 7,406,443 ("Method and system for multi-dimensional trading").

9. I have worked with mobile devices, principally smart phones, virtually since their large-scale entry into the marketplace. This work includes electronic commerce as it extends to smartphones, including location-aware search and automatic ranking, working with location-aware dialog systems on smartphones and other platforms, and online communities and affinity groups. I have worked directly with GPS-based systems for location awareness, as well as IP-based and other methods. This work is reflected in the electronic commerce classes that I teach, in two spinoff companies where I participate as technical advisor (WeSpeke and Carnegie Speech), in my academic research (dialog systems, including language interpretation), and in multiple expert witness engagements relating to mobile devices, to Apple's Siri, to Google's Android, and so forth.

10. In the early 1970's, while at student at MIT, I also worked for BBN Technologies in Cambridge MA, which together with MIT was a pioneer in the creation of the ARPANET, which later transformed into the Internet. I was a research assistant assigned to whichever project needed help, and one was in testing the TCP/IP protocol implementation, including for the earliest email systems. At that time the protocol was implemented primarily in the IMP (interface message processing) units and in the TIP (terminal message processors) units, which comprised the backbone of the early ARPANET.

B. Legal Standards

11. I have been instructed by counsel that claim construction is for the Court to decide as a matter of law. Claim terms should be given their ordinary and customary meaning within the context of the patent in which the terms are used, i.e., the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention in light of what the patent teaches.

12. I understand that this hypothetical person of ordinary skill in the art is considered to have the normal skills of a person in a certain technical field. I understand that factors that may help establish the level of skill in the art include: (1) the education level of those working in the field, including the inventor; (2) the types of problems encountered in the art; (3) the prior art solutions to those problems; (4) rapidity with which innovations in this art are made; and (5) the sophistication of the technology.

13. I understand that to determine how a person of ordinary skill would understand a claim term, one should look to those sources available that show what a person of skill in the art would have understood disputed claim language to mean. Such sources include the words of the claims themselves, the remainder of the patent's specification, the prosecution history of the patent (all considered "intrinsic" evidence), and "extrinsic" evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.

14. I understand that in construing a claim term, one looks primarily to the intrinsic patent evidence. I understand that extrinsic evidence, which is evidence external to the patent and the prosecution history, may also be useful in interpreting patent claims when the intrinsic evidence itself is insufficient.

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