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14 **ATTORNEYS FOR PLAINTIFF ADVANCED**
VOICE RECOGNITION SYSTEMS, INC.

15
16 **UNITED STATES DISTRICT COURT**
17 **FOR THE DISTRICT OF ARIZONA**

18 ADVANCED VOICE RECOGNITION
19 SYSTEMS, INC.,

20 Plaintiff,

21 v.

22 APPLE, INC.,

23 Defendant.

Case No. _____

**PLAINTIFF ADVANCED VOICE
RECOGNITION SYSTEMS, INC.'S
COMPLAINT FOR PATENT
INFRINGEMENT**

1 Plaintiff Advanced Voice Recognition Systems, Inc. files this Complaint for patent
2 infringement against Defendant Apple, Inc., and alleges as follows:

3 **PARTIES**

4 1. Plaintiff Advanced Voice Recognition Systems, Inc. (“AVRS”) is a
5 corporation organized and existing under the laws of the State of Nevada, with its principal
6 place of business located at 7659 E. Wood Drive, Scottsdale, Arizona 85260. AVRS is a
7 publicly-held software development company headquartered in Scottsdale, Arizona that
8 specializes in creating interface and application solutions for speech recognition
9 technologies. AVRS introduced its initial speech recognition software in 1994. Today,
10 AVRS is the owner of a family of United States patents directed at a system for facilitating
11 speech recognition and transcription among users employing heterogenous protocols for
12 generating, transcribing and exchanging speech.

13
14 2. Apple Inc. (“Apple”) is a corporation organized under the laws of the State
15 of California, and has a principal place of business at 1 Infinite Loop, Cupertino,
16 California 95014. Apple may be served with process through its registered agent CT
17 Corporation System, located at 3800 N Central Ave., Suite 460, Phoenix, AZ 85012.

18 **JURISDICTION AND VENUE**

19 3. This is an action for patent infringement arising under the patent laws of the
20 United States of America, Title 35, United States Code.

21 4. This Court has original jurisdiction over the subject matter of this action
22 pursuant to 28 U.S.C. §§ 1331 and 1338(a).

23 5. Apple is subject to the specific personal jurisdiction of this Court because
24 AVRS’s claims for patent infringement against Apple arise from Apple’s acts of

1 infringement in the State of Arizona, and throughout the United States. These acts of
2 infringement include offering for sale and selling products in the State of Arizona that
3 infringe AVRS' asserted patent. These acts of infringement also include Apple's use in
4 the State of Arizona of systems and methods covered by the asserted patent, including
5 operating a fully interactive website facilitating the sale of infringing products in the State
6 of Arizona. These acts of infringement also include Apple's knowing and intentional
7 inducement of users of Apple products to infringe the asserted patent in the State of
8 Arizona by using the systems and methods covered by the asserted patent. Therefore, this
9 Court has personal jurisdiction over Apple under the Arizona long-arm statute, ARIZ. R.
10 CIV. P. § 4.2(a).

11
12 6. Venue is proper in this district under 28 U.S.C. §§ 1391(c) and 1400(b).
13 Apple has engaged in acts of infringement in this District as alleged above. In addition,
14 Apple has several regular and established places of business in this district including stores
15 located at the following addresses: (1) Apple Chandler Fashion Center, 3111 W. Chandler
16 Boulevard, Chandler, Arizona 85226; (2) Apple SanTan Village, 2218 E. Williams Field
17 Road, Gilbert, Arizona 85295; (3) Apple Arrowhead, 7700 West Arrowhead Towne
18 Center, Glendale, Arizona 85308; (4) Apple Biltmore, 2502 East Camelback Road,
19 Phoenix, Arizona 85016; (5) Apple Scottsdale Quarter, 15169 North Scottsdale Road,
20 Scottsdale, Arizona 85254; Apple La Encantada, 2905 East Skyline Drive, Tucson,
21 Arizona 85718.

THE ASSERTED PATENT

1
2 7. AVRS, in connection with its work creating and developing interface and
3 application solutions for speech recognition technologies, has applied for and obtained a
4 family of United States patents directed at a system for facilitating speech recognition and
5 transcription among users employing incompatible protocols for generating, transcribing
6 and exchanging speech.

7 8. The first issued patent among this family of patents is United States Patent
8 No. 7,558,730 (“the ‘730 Patent”) entitled “Speech Recognition and Transcription among
9 users having Heterogeneous Protocols” issued by the United States Patent and Trademark
10 Office on July 7, 2009, a true copy of which is attached as Exhibit 1.

11 9. Inventor Douglas Holt is deceased. Inventors Michael K. Davis and Joseph
12 Miglietta, are residents of Arizona. In addition, the inventors were all employees of the
13 predecessor of AVRS during the time they conceived of and reduced to practice each of
14 the inventions described in the Asserted Patents.

15 10. AVRS is the owner by assignment of the ‘730 Patent and owns all right, title,
16 and interest in the ‘730 Patent, including the right to sue for and recover all past, present,
17 and future damages for infringement of the ‘730 Patent.

18 11. The ‘730 Patent is directed at solving a longstanding problem that prevented
19 facilitating speech recognition and transcription among users employing incompatible
20 protocols for generating, transcribing, and exchanging transcribed speech. Prior to the
21 invention disclosed in the ‘730 Patent, speech recognition and transcription systems
22 existed, such as DRAGON DICTATE and IBM’s VIAVOICE. These early transcription
23
24

1 applications, however, were limited to desktop applications, and merely output a text file,
2 which would typically be in a standard text format (Word or WordPerfect, for example).
3 These systems did not facilitate speech recognition and transcription among heterogeneous
4 systems and were only able to work among a single, homogenous system. For example, a
5 user of VIAVOICE, was forced to install the speech recognition software onto his or her
6 personal computing device, and the speech recognition software was limited to working on
7 that device and was unable to function with software programs utilizing disparate
8 protocols.

9
10 12. The inventors of the '730 Patent recognized that networked application
11 service providers are the most efficient way to utilize sophisticated speech recognition
12 and/or transcription engines having robust dictionaries and vocabularies for large scale
13 users, especially in the professions. The networked application service provider (also
14 known as “on demand” software or software as “a service”) interconnects application
15 software to high accuracy speech recognition and/or transcription engines which may exist
16 on a centralized server application, or one of the facilities in a peer-to-peer network
17 computing (peer node), or, networking as a distributed application architecture that
18 partitions tasks and/or workloads between peers to form a peer-to-peer network, as well as
19 a “cloud” computing network configuration.

20 13. A barrier to implementation of these networked systems, however, is the use
21 of internal “business” systems. These systems, sometimes called “legacy systems,” are
22 difficult to alter, as they may be hardwired into the internal workings of a business or
23 computer system. Moreover, these legacy systems are equipped with specialized
24

1 protocols, known as “legacy protocols,” which use interfaces unique to the particular
2 system used by a business. As software had to be specially configured to be compatible
3 with these legacy systems and legacy protocols, the inventors of the ‘730 Patent realized
4 there would be a substantial improvement to speech recognition and transcription systems
5 by moving the speech recognition and transcription engine apart from the legacy system
6 and legacy protocols employed by the user so that more powerful speech recognition and
7 transcription engines could be implemented which could work seamlessly with disparate
8 legacy systems and legacy protocols.

9
10 14. The inventors of the ‘730 Patent invented and disclosed systems and
11 methods allowing legacy systems with legacy protocols to interface effectively with robust
12 network-based systems and, in particular, with network application service provider
13 software that enables the use of powerful speech recognition and transcription engines by
14 users of legacy systems with legacy protocols. This enabled users of speech recognition
15 and transcription systems to interface with speech recognition and transcription engines
16 with uniformly accessible databases that contain information for a number of users,
17 including the wide spread availability of specific vocabularies which include phraseology,
18 grammar, and dictionaries, as well as formatting structures for users of such systems.
19 These systems and methods are more efficient than a network of mere direct, point-to-
20 point links between individual users. In particular, the inventors foresaw the need for a
21 user to be able to utilize speech recognition and transcription between or among multiple
22 systems that do not always use the same protocols.
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1 15. The invention of the '730 Patent rectified the problem of prior speech
2 recognition and transcription engines through the implementation of a novel system
3 architecture for speech recognition systems allowing the speech recognition and
4 transcription engine to be located separate from a user's personal computing device, which
5 may utilize both legacy systems and legacy protocols, and to operate separately using a
6 uniform system protocol that is compatible with heterogeneous protocols.

7 16. The inventors of the '730 Patent addressed the need to enable a user using a
8 legacy protocol to communicate with a separate server capable of communicating with
9 other users using heterogeneous protocols by providing for a bridge between the user and
10 the speech recognition and transcription engine, as opposed to forcing every speech
11 recognition and transcription engine developed to be compatible with user specific legacy
12 protocols and legacy systems. This was done through the development of a component
13 (which the '730 Patent calls an Application Service Adapter or "ASA"), which
14 communicates with the legacy protocol and a system transaction manager using a uniform
15 system protocol. The ASA operates as an interface between the users and the system
16 transaction manager and facilitates communication between the user's legacy system and
17 protocol and a uniform system protocol.

18 17. The novel system architecture invented and disclosed in the '730 Patent
19 enhanced and facilitated the capabilities of a speech recognition and transcription systems
20 by allowing the speech recognition and transcription engine to be decoupled from a legacy
21 operating system used by a specific user device. Through this novel invention, users who
22 are utilizing different legacy systems and protocols—such as the protocols specific to
23
24

1 Android, iOS, and macOS—may exchange speech recognition requests and transcribed
2 speech through a decoupled speech recognition and transcription engine. This novel
3 system architecture and design was not well-understood, routine or conventional in the
4 field of speech recognition systems at the time of the invention of the ‘730 Patent.

5 **THE INFRINGING INSTRUMENTALITIES**

6 18. Apple designs, manufactures and markets mobile communication and media
7 devices and personal computers, and sells a variety of related software, services,
8 accessories, networking solutions and third-party digital content and applications. Apple’s
9 products and services include the iPhone, iPad, Mac, Apple Watch, Apple TV, Apple
10 HomePod, a portfolio of consumer and professional software applications, a variety of
11 accessory, service and support offerings, the iCloud and Apple Pay services as well as the
12 iOS, macOS, watchOS and tvOS operating systems.

13
14 19. Many of these Apple products include a service called Siri, a voice-activated
15 intelligent assistant, which provides, among other things, voice recognition and natural
16 language understanding solutions, including automated speech recognition and
17 transcription services. Among these products are the iPhone, iPad, Mac, Apple Watch, the
18 Apple HomePod and the iOS, macOS, watchOS and tvOS operating systems (referred to
19 herein as the “Accused Instrumentalities”).

20 20. Apple, in patent litigation against Samsung, touted that Siri has driven
21 consumer demand for the iPhone—and Apple submitted sworn declarations attesting to
22 this fact. *Apple Inc. v. Samsung Elecs. Co., et al.*, No. 12-cv-630, slip op. at 81 (N.D. Cal.
23 June 29, 2012) (“Apple asserts that . . . Siri, a computerized personal assistant, has driven
24

1 consumer demand for the iPhone 4S.”). Apple also persuaded the United States Court of
2 Appeals for the Federal Circuit that Siri drives consumer demand for the iPhone 4S. *Apple*
3 *Inc. v. Samsung Elecs. Co., et al.*, No. 2012-1507, slip op. at 8 (Fed. Cir. Oct. 11, 2012)
4 (“Advertised by Apple as an ‘intelligent personal assistant,’ Siri enables iPhone 4S users to
5 speak their commands to the phone in a natural and conversational tone. There is no
6 dispute that this highly popular feature is a significant source of consumer demand for the
7 iPhone 4S.”)

8
9 **FIRST CLAIM FOR RELIEF**
(Infringement of the ’730 Patent)

10 21. AVRS incorporates paragraphs 1 through 20 as though fully set forth herein.

11 22. Apple has been and is continuing to directly infringe one or more claims of
12 the ‘730 Patent by making, using (including for testing, demonstrating and marketing
13 purposes), offering for sale, and/or selling the Accused Instrumentalities in the United
14 States in violation of 35 U.S.C. § 271(a). The Accused Instrumentalities include Siri,
15 which makes them fully capable of executing the functions of systems and methods
16 claimed in the ‘730 Patent. When a user of any of the Accused Instrumentalities activates
17 Siri, the Accused Instrumentalities place the Siri system into service.

18 23. Upon information and belief, Siri uses a system transaction manager utilizing
19 a uniform system protocol. Upon information and belief, the Siri system has a component
20 that is able to process commands/requests for speech recognition and transcription from
21 different types of legacy operating systems using different legacy protocols, such as from
22 users using devices operating on the MacOS and others using devices operating on the
23 iOS. An internal uniform system protocol is necessary for Siri to process speech
24

1 recognition and transcription commands or requests from different operating systems using
 2 different legacy protocols. Siri is described in U.S. Patent 9,318,108 (the “‘108 Siri
 3 Patent”). Upon information and belief, the “Active Ontology” described in the ‘108 Siri
 4 Patent is the component of the Siri system which performs this function. Upon
 5 information and belief, Figure 1 of the ‘108 Patent depicts the “Active Ontology”
 6 component used in Siri.

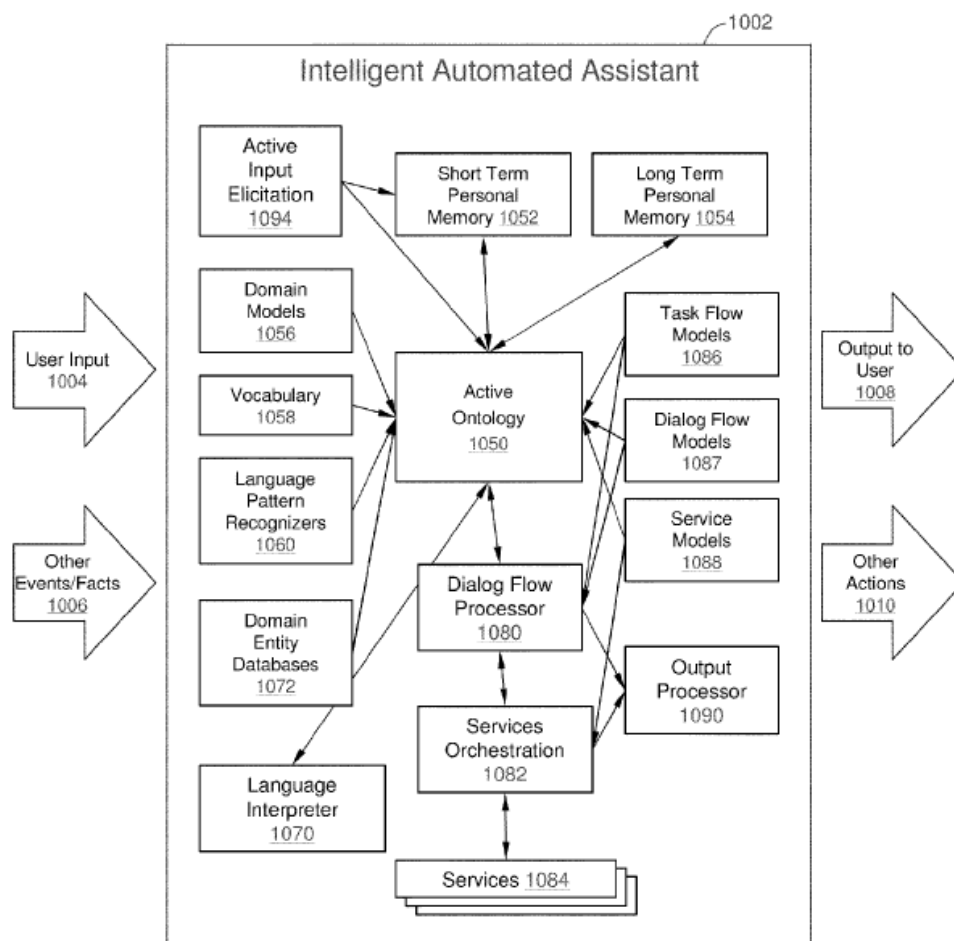


FIG. 1

21 Figure 7B in United States Patent Application No. 2017/0358301 filed by Apple
 22 regarding the Siri system also depicts the “Active Ontology” (760) used in the Siri System:
 23
 24

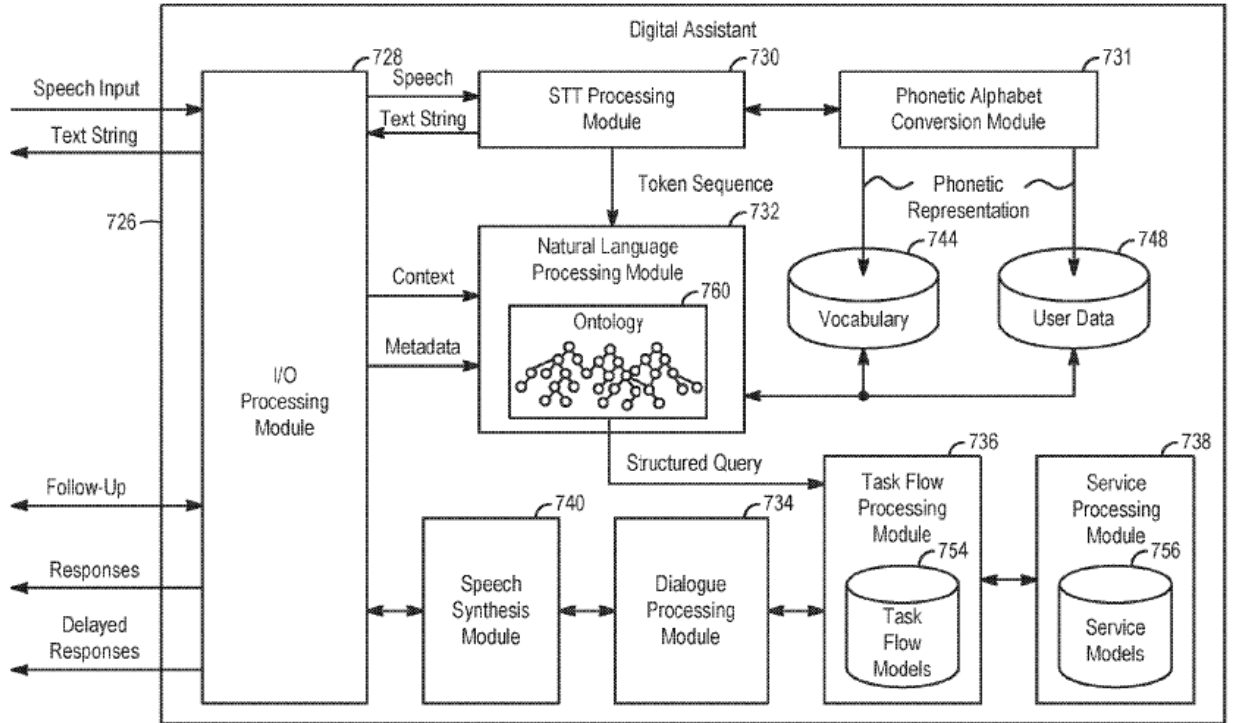


FIG. 7B

Figure 7B in United States Patent Application No. 2017/0358301 filed by Apple regarding the Siri system also depicts the “Active Ontology” (760) used in the Siri System:

24. Upon information and belief, Siri uses a speech recognition and transcription engine to process speech recognition and transcription commands or requests in communication with the system transaction manager. Upon information and belief, the Siri system has a component which receives from the system transaction manager an audio file comprising spoken text, recognizes the audio file, and processes that file by transcribing the spoken text into written text. Upon information and belief, the “STT Processing Module” shown in Figure 7B above functions as the speech recognition and transcription engine in Siri.

1 25. Upon information and belief, Siri has at least one or more components that
2 communicate with both a user of the Siri system and the system transaction manager to
3 generate a speech recognition and transcription command or request from spoken text and
4 a transcription of the spoken text. Upon information and belief, this component is the “I/O
5 Processing Module” (728) in Figure 7B above which reflects the bidirectional functionality
6 of this component (providing speech input and outbound responses.)

7 26. Thus, upon information and belief, the “Active Ontology” component of the
8 Siri system acts as a system transaction manager in communication with the user
9 generating a speech recognition and transcription request, the speech recognition and
10 transcription engine or “speech-to-text service” as defined by Apple, and the user who
11 receives the transcribed speech. The “I/O Module” acts as an application service adapter
12 bridging the generation of the speech recognition and transcription request by a user with
13 its receipt by the Active Ontology system transaction manager, and the transmission of a
14 transcription of the spoken text from the Active Ontology system transaction manager to
15 the same or different user. The Active Ontology component utilizes a uniform system
16 protocol (1) to send the speech information requests generated by the users to the speech
17 recognition and transcription engine; and (2) receive the responses generated by the speech
18 recognition and transcription engine. After the response is received, the Active Ontology
19 component sends the response to the same or different user.
20

21 27. In addition, or in the alternative, Apple has been and is now indirectly
22 infringing one or more claims of the Asserted Patents by inducing others to the Siri
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1 functionality enabled through the Accused Instrumentalities to directly infringe one or
2 more claims of the '730 Patent in violation of 35 U.S.C. § 271(b).

3 28. Apple has been aware of the '730 Patent since at least 2013. In particular,
4 Apple has cited the '730 Patent at least 77 times in the prosecution of 77 patents issued to
5 Apple in the field of speech recognition. The earliest date that Apple cited to the '730 is
6 June 21, 2013, when Apple cited the '730 Patent in an Information Disclosure Statement
7 during the prosecution of U.S. Patent 9,053,089. Apple has continued to cite the '730
8 Patent in various Inventor Disclosure Statements during its prosecution of patents directed
9 at either digital assistants or speech to text technologies.

10 29. In addition, in 2015 AVRS brought the '730 Patent and the fact that Apple
11 was infringing the patent to the attention of Apple by sending Apple correspondence
12 explaining how the Siri functionality incorporated in the Accused Instrumentalities
13 infringes that patent. Apple, however, continued to incorporate Siri in the Accused
14 Instrumentalities.

15 30. Apple, with the knowledge of the '730 Patent and the infringing functionality
16 of Siri, has aggressively encouraged users of the Accused Instrumentalities to use Siri.
17 Apple provides training and instructions to end users of its Accused Instrumentalities
18 instructing them how to use Siri through the Accused Instrumentalities in a manner which
19 directly infringes the '730 Patent. When end users of the Accused Instrumentalities use
20 the Siri system through the Accused Instrumentalities they necessarily and directly infringe
21 one or more of the system and method claims of the '730 Patent, and Apple is aware of
22 this fact. Use of the claimed systems and methods for implementing a speech recognition
23
24

1 and transcription workflow process is an essential part of the functionality of the Accused
2 Instrumentalities. Notwithstanding Apple's knowledge of the '730 Patent and AVRS'
3 notice to Apple that the Siri functionality enabled by the Accused Instrumentalities
4 infringes that patent, Apple continues in acts of infringement without regard to the '730
5 Patent. Apple's infringement of the '730 Patent, therefore, is willful.

6 31. AVRS has been damaged by Apple's infringing activities.

7 **DEMAND FOR JURY TRIAL**

8 Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, AVRS hereby
9 demands a trial by jury of all issues so triable.

10 **PRAYER FOR RELIEF**

11 WHEREFORE, AVRS requests the following relief:

12 (a) A judgment in favor of AVRS that Apple has directly infringed and/or has
13 indirectly infringed by way of inducement of one or more claims of the Asserted Patents;

14 (b) A judgment in favor of AVRS that Apple has willfully infringed the '730
15 Patent;

16 (c) A judgment and order requiring Apple to pay AVRS damages adequate to
17 compensate for infringement under 35 U.S.C. § 284, which damages in no event shall be
18 less than a reasonable royalty for its usage made of the inventions of the Asserted Patents,
19 including pre- and post-judgment interest and costs, including expenses and
20 disbursements;

21 (d) A judgment awarding AVRS its enhanced damages as provided by 35 U.S.C.
22 § 284.
23
24

- 1 (e) A judgment awarding AVRS its costs as provided under FED. R. CIV. P.
2 54(d)(1);
- 3 (f) A judgment for pre- and post-judgment interest on all damages awarded;
- 4 (g) A judgment awarding AVRS post-judgment royalties; and
- 5 (h) Any and all such further necessary or proper relief as this Court may deem
6 just and equitable.

7
8 Dated: July 2, 2018

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