IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VB ASSETS, LLC, Plaintiff, v. AMAZON.COM SERVICES, LLC, Defendant.	C.A. No. 24-_____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

This complaint addresses Amazon's continuing infringement of Plaintiff's patents through its use of natural language systems – including those products trained on large language models (LLMs) – for improved contextual conversations and voice driven advertisement and commerce.

Undaunted by a November 2023 jury verdict finding that Amazon willfully infringed four of Plaintiff's patents and awarding an ongoing royalty, which (at the time of trial) equated to $46.7 million in damages, Amazon continues to infringe not only the four previously adjudicated patents, but also five additional patents that are the subject of this complaint.

VoiceBox was a pioneer in conversational computing technology, developed the first smart speaker, and fostered a successful business with customers such as Toyota. Defendant Amazon.com Services LLC ("Defendant" or "Amazon") desperately needed VoiceBox's technology for its then top-secret Alexa project. Lured by the prospect of a partnership, VoiceBox disclosed its technology to Amazon, which unscrupulously crushed VoiceBox's business and poached its engineers. VoiceBox filed a first lawsuit against Amazon in 2019. The jury unanimously concluded that Amazon willfully infringed VoiceBox's patents. Yet, Amazon's

willful infringement persists, compelling VoiceBox to file this second complaint against Amazon for willful patent infringement of U.S. Patent Nos. 10,297,249, 10,755,699, 11,087,385, 11,080,758, and 9,502,025 (collectively, the "Patents-in-Suit").

FACTUAL BACKGROUND

A. 2002-2010: VoiceBox Invents Groundbreaking Voice Technology

1. VoiceBox pioneered voice-based search and commerce technology and invented what Amazon itself has described as "Echo-like" products long before Amazon.

2. In 2001, three brothers, Mike, Rich, and Bob Kennewick founded VoiceBox to bring natural language understanding ("NLU") to a wide array of computer applications. They recognized that the typical computer speech-recognition systems forced human operators to adhere to a limited number of rigid speech prompts. These rigid prompts limited how systems were used and inhibited the widespread adoption of speech-recognition systems. The brothers believed that VoiceBox could become the first company to enable people to naturally and effectively interact with computer speech systems.

3. From its inception, VoiceBox engaged in intense research efforts to develop its NLU technology. As part of these efforts, VoiceBox achieved a significant milestone when it developed an early prototype called "Cybermind." As demonstrated on the Seattle evening news, Cybermind was a voice-controlled speaker that could provide weather, recipes, sports scores, calendar updates, or play music.[1]

[1] https://www.youtube.com/watch?v=DDcRyPnvWhw

Figure 1: Cybermind Prototype

B. 2011: Amazon Steals Echo Concept from VoiceBox

4. In 2011, VoiceBox contacted Amazon to explore a potential business relationship where VoiceBox would provide core NLU services to Amazon. Amazon's corporate development department expressed interest and asked for "company and/or product overview slides" to facilitate an October 7, 2011 teleconference. In response, VoiceBox provided Amazon with a presentation that described its award-winning patented technology and explicitly referred to VoiceBox's "patented Contextual Speech Technology." Slides from that presentation are reproduced below:

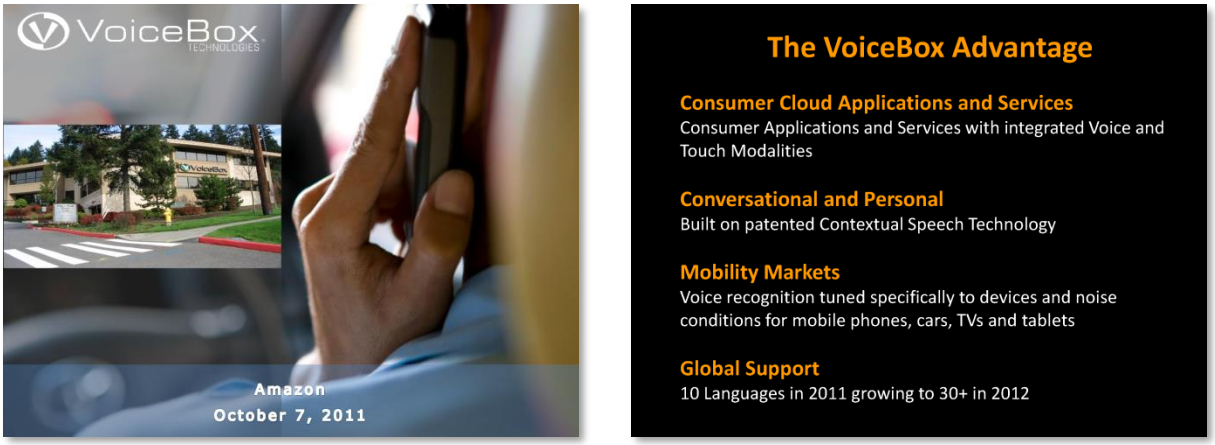


Figure 2: 2011 Slides

5. Amazon was so impressed by the technology VoiceBox presented on October 7, 2011, that its representative emailed VoiceBox the next business day to invite VoiceBox to visit Amazon's offices on October 19, 2011. That meeting was with Douglas Booms, Amazon's Vice President of Worldwide Corporate Development, as well as engineers and product/business development members of Amazon's devices and digital teams. The email from Amazon stated that this was "the right audience to discuss [VoiceBox's] personal digital assistant and underlying conversational voice technology." On information and belief, in addition to Mr. Booms and several engineers, at least the following Amazon executives attended the meeting: Nick Komorous (Director, Corporate Development), Ian Freed (VP, Amazon Devices), Greg Hart (VP, Digital), Al Lindsay (Director, Software Engineer), and Frederic Deramat (Senior Principal Engineer).

6. Two days later, Amazon's Mr. Komorous emailed VoiceBox and asked to visit the company's office for a "deeper dive." Mr. Komorous wanted to meet as soon as possible. VoiceBox agreed to meet at VoiceBox's office on October 26, 2011.

7. In advance of the meeting, Mr. Komorous sent a detailed set of technical questions that would help Amazon's "tech team understand the scope and [r]ange of things [Amazon] can try to tackle with VoiceBox[] as a partner." Mr. Komorous also conveyed that Amazon's culture was "engineering heavy" and asked that VoiceBox "have engineering and speech representation at the meeting."

8. The October 26, 2011 meeting at VoiceBox's office ran from 10 AM until 12 PM with some Amazon engineers staying until around 2:30 PM. The meeting included a tour with technology demonstrations, a review of the technical architecture for VoiceBox's server software, and a disclosure of plans for next generation products.

9. During the meeting, VoiceBox made a slide presentation providing even more detail about VoiceBox's patented technology and informed Amazon that VoiceBox had 12 patents at the time with an additional 14 pending applications. The slide deck included the following slides regarding the VoiceBox patent portfolio.

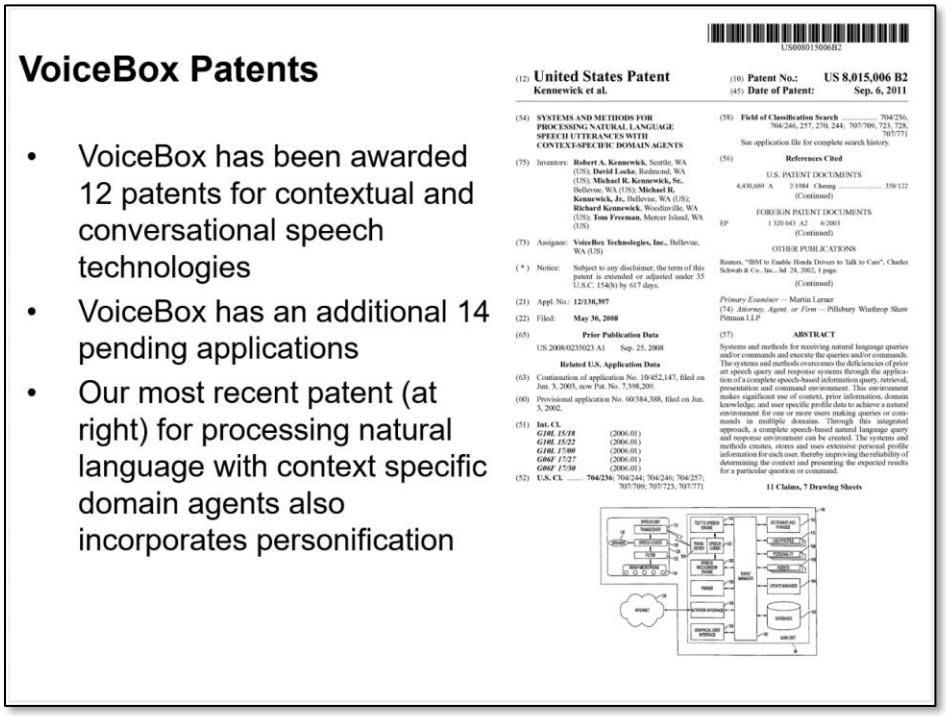


Figure 3: Slide from 2011 Presentation

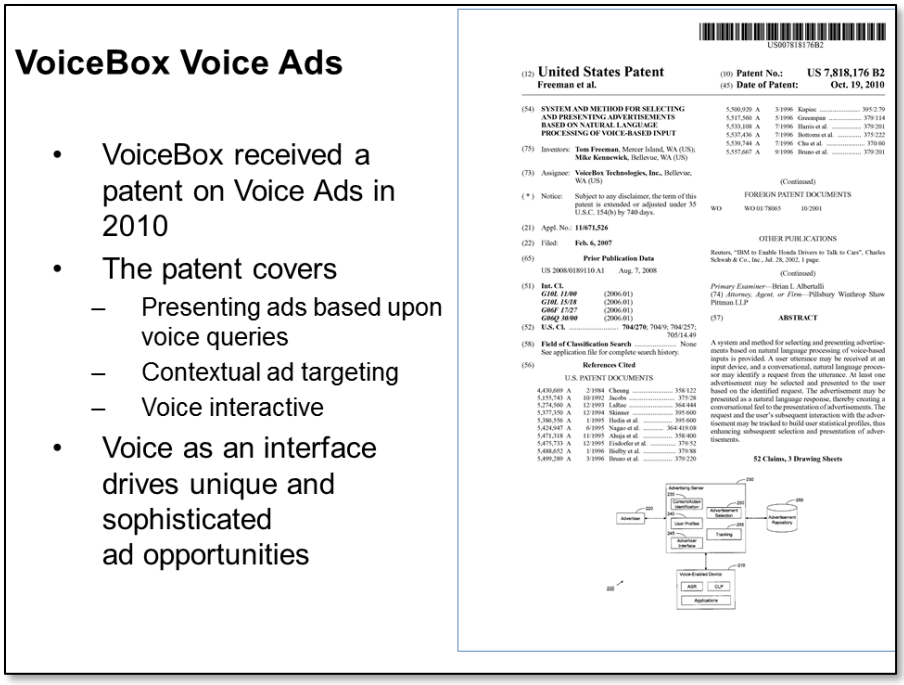


Figure 4: Slide from 2011 Presentation

10. VoiceBox's presentation also proposed a business arrangement where VoiceBox would provide "Voice Services" to Amazon. The VoiceBox Voice Services from the presentation are shown below:

Figure 5: Slide from 2011 Presentation

11. On information and belief, some of the Amazon personnel involved in the 2011 meetings became technical leaders for Amazon's Alexa Products[2] while others became high-level executives with close working relationships with the senior leadership of Amazon. For instance, on information and belief, Mr. Freed was the Technical Advisor to the CEO, effectively Jeff Bezos's "shadow" advisor. On information and belief, Mr. Freed later became Vice President, Amazon Devices where he led a team of engineers working on Amazon's Alexa Products. On information and belief, Mr. Hart has also been Mr. Bezos's "shadow" advisor—he held the Technical Advisor to the CEO position around 2011. On information and belief, around 2011, Mr. Lindsay was promoted to Vice President managing the Alexa Engine Software team. On information and belief, around 2011, Mr. Deramat was promoted to the position of Vice President & Distinguished Engineer for Amazon Alexa. On information and belief, around 2011, Mr. Thimsen was promoted to the position of Director of Engineering for Amazon Echo. As for Mr. Typrin, he states on his LinkedIn page that he is "[o]ne of the founding members of the team that shaped the vision and direction for Amazon's Echo and Alexa Voice Services."

12. On information and belief, Amazon did not have its own NLU technology, nor did Amazon have NLU expertise in-house. As a result, Amazon had to look externally to provide that NLU technology and expertise as it was developing the Alexa Products. This was Amazon's true motive for meeting with VoiceBox.

13. A couple of days after the last meeting in 2011, VoiceBox sent an email to Amazon asking for Amazon's feedback. Mr. Komorous from Amazon replied that Amazon was "still discussing internally how contextual speech / cybermind 2012 could play a part in

[2] "Alexa Products" refers to Alexa, including but not limited to all associated hardware and software, Echo devices, Alexa mobile apps, Fire TV, Amazon smart glasses, and third-party devices with Alexa integrated.

[Amazon's] future." Amazon abruptly went silent. Amazon did not provide the results of these discussions and did not pursue a business relationship with VoiceBox.

C. 2011-2016: VoiceBox Gains Industry Recognition for Its Technology

14. VoiceBox was obviously disappointed with Amazon's conduct, but moved past its disappointment focusing on its successful business. For example, after learning about VoiceBox's technology, Toyota hired it to build a sophisticated NLU speech interface for its Lexus automobiles. Toyota was so impressed with VoiceBox's technology that it expanded the relationship such that VoiceBox provided voice and NLU capability for Toyota's award-winning Entune multimedia system.

15. Additional customers included TomTom, Pioneer, Chrysler, Dodge, and Magellan. VoiceBox had software applications that ran on smart speakers, in-car systems, smartphones, smart TVs, computers, tablets, e-readers, and personal navigation devices. A few examples are illustrated below:

Figure 6: Connected Home

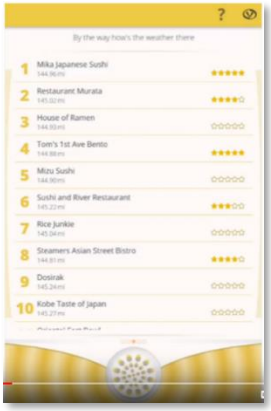


Figure 7: Mobile

16. In 2013, the Institute of Electrical and Electronics Engineers ("IEEE") ranked VoiceBox number 13 in patent power for the computer software industry. VoiceBox had become

the leader in conversational Artificial Intelligence ("AI"), including Voice Recognition (VR), NLU, and AI services.

17. As illustrated in the following company photograph, VoiceBox was, at this time, optimistic about its technology and its future.

D. 2014-2017: Amazon Launches Alexa and Poaches VoiceBox Employees

18. Everything changed in November 2014. Amazon announced the launch of Alexa, a virtual assistant, along with the first-generation Echo product, a smart speaker. VoiceBox was stunned and dismayed. Amazon had clearly mimicked VoiceBox's products and technology. The 2011 meetings were a ploy that Amazon used to learn as much as it could about VoiceBox's technology, business, products and vision for the future.

19. Amazon's efforts to supplant and replace VoiceBox did not stop with mimicry. In 2016, Amazon abruptly hired Philippe Di Cristo, who was VoiceBox's Chief Scientist. While at VoiceBox, Dr. Di Cristo gained knowledge of the company's voice technology and had full access to VoiceBox's intellectual property. As Dr. Di Cristo explains on his LinkedIn Page, he had worked on an "Amazon Echo-like system" while at VoiceBox.

20. On information and belief, Dr. Di Cristo was pivotal in soliciting additional VoiceBox employees to join Amazon. For example, on January 10, 2017, Amazon rented the

entire high-end seafood restaurant near VoiceBox to host an "Evening with the Leadership of Amazon Voice & Advanced Shopping," which Amazon expressly described as an "invite only networking event for Voice Box employees . . . to talk . . . about opportunities at Amazon." Dr. Di Cristo's boss invited a large number of VoiceBox engineers—including Mike Kennewick's own son—and shared that Amazon was "building a world-class speech & NLU engineering team" and "[y]our profile looks quite relevant and we'd love to talk to you and see if there's a fit." Dr. Di Cristo was originally scheduled to speak at the event—but abruptly withdrew.

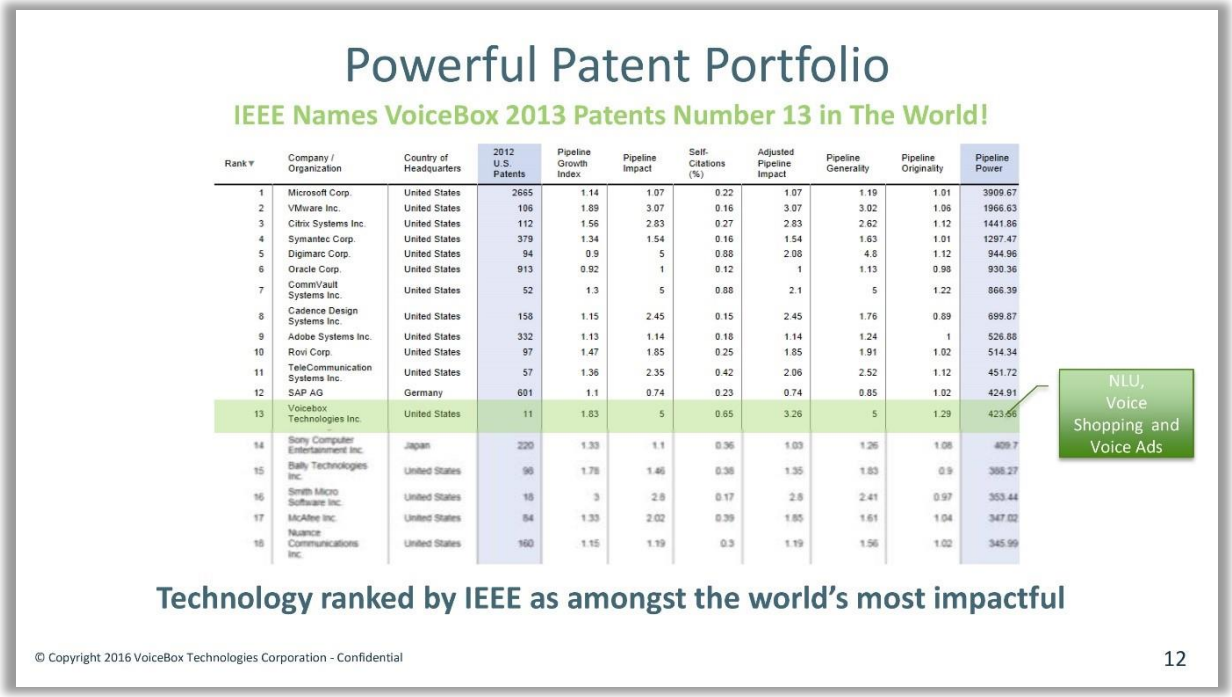
21. By January 17, 2017, it was apparent that Amazon was using its vast resources to recruit and capture VoiceBox's engineering talent. In response, Mike Kennewick, CEO of VoiceBox, sent a letter to Jeff Bezos, CEO of Amazon, to propose a business solution. The letter explains that, at the time, VoiceBox had "a deep portfolio of technology and IP, including a large number of significant patents not only in NLU but also in Voice[]Commerce, running on over 200 million devices."

E. 2017: Amazon Steals VoiceBox's Automotive Business

22. Mr. Booms, Amazon's Vice President of Worldwide Corporate Development, responded the very next day. He requested a meeting at VoiceBox's offices for purposes of "go[ing] fairly deep on the technology, data, customer relationships."

23. On February 2, 2017, the parties met at VoiceBox's office. Amazon came with a team of technologists from its Alexa program, including on information and belief, Manoj Sindhwani (Director, Alexa), Karthik Ramakrishnan (Senior Manager, Alexa software), Nikko Strom (Scientist, Alexa), and Deepesh Mohnani (Alexa Voice Services Product Management) joined by Mr. Booms. VoiceBox provided a detailed technical presentation, which included information about patents and pending applications then owned by VoiceBox.

24. Slides in the presentation listed all VoiceBox patents and published applications at the time, including U.S. Patent Publication No. 2015/0228276, later issued as the '249 patent.



Powerful Patent Portfolio

IEEE Names VoiceBox 2013 Patents Number 13 in The World!

Rank	Company / Organization	Country of Headquarters	2012 U.S Patents	Pipeline Growth Index	Pipeline Impact	Self-Citations (%)	Adjusted Pipeline Impact	Pipeline Generality	Pipeline Originality	Pipeline Power
1	Microsoft Corp.	United States	2665	1.14	1.07	0.22	1.07	1.19	1.01	3909.67
2	VMware Inc.	United States	106	1.89	3.07	0.16	3.07	3.02	1.06	1966.63
3	Citrix Systems Inc.	United States	112	1.56	2.83	0.27	2.83	2.62	1.12	1441.86
4	Symantec Corp.	United States	379	1.34	1.54	0.16	1.54	1.63	1.01	1297.47
5	Digimarc Corp.	United States	94	0.9	5	0.88	2.08	4.8	1.12	944.96
6	Oracle Corp.	United States	913	0.92	1	0.12	1	1.13	0.98	930.36
7	CommVault Systems Inc.	United States	52	1.3	5	0.88	2.1	5	1.22	866.39
8	Cadence Design Systems Inc.	United States	158	1.15	2.45	0.15	2.45	1.76	0.89	699.87
9	Adobe Systems Inc.	United States	332	1.13	1.14	0.18	1.14	1.24	1	526.88
10	Rovi Corp.	United States	97	1.47	1.85	0.25	1.85	1.91	1.02	514.34
11	TeleCommunication Systems Inc.	United States	57	1.36	2.35	0.42	2.06	2.52	1.12	451.72
12	SAP AG	Germany	601	1.1	0.74	0.23	0.74	0.85	1.02	424.91
13	Voicebox Technologies Inc.	United States	11	1.83	5	0.65	3.26	5	1.29	423.56
14	Sony Computer Entertainment Inc.	Japan	220	1.33	1.1	0.36	1.03	1.26	1.08	409.7
15	Bally Technologies Inc.	United States	96	1.78	1.46	0.38	1.35	1.83	0.9	388.27
16	Smith Micro Software Inc.	United States	18	3	2.8	0.17	2.8	2.41	0.97	353.44
17	McAfee Inc.	United States	84	1.33	2.02	0.39	1.85	1.61	1.04	347.02
18	Nuance Communications Inc.	United States	160	1.15	1.19	0.3	1.19	1.56	1.02	345.99

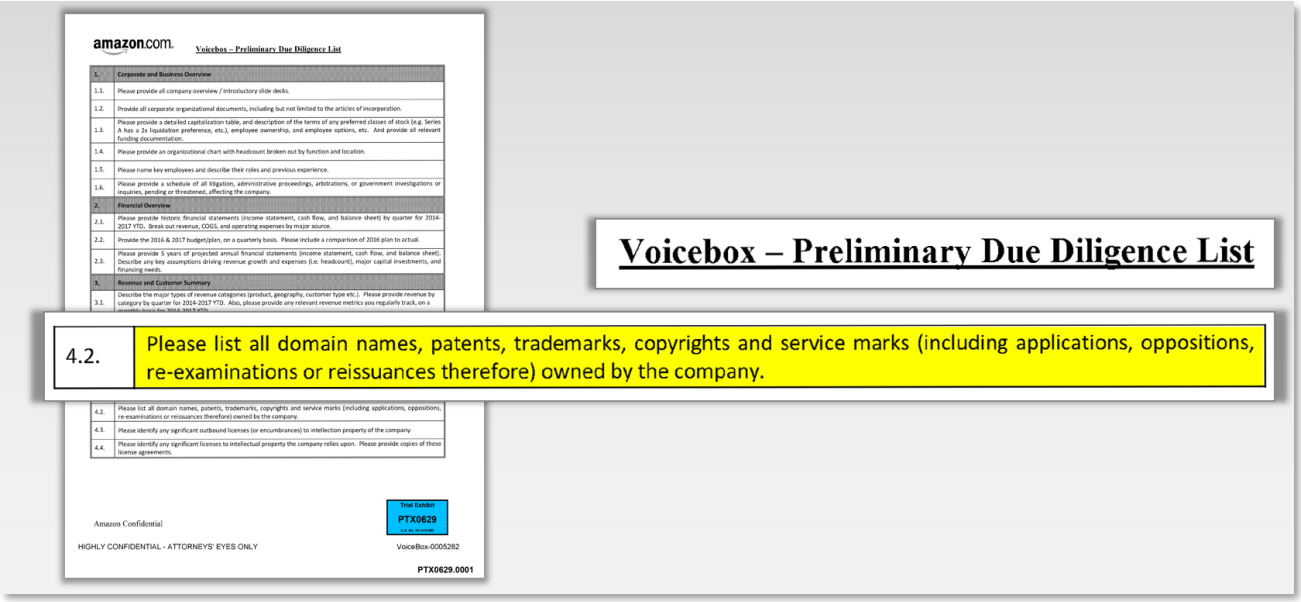
NLU, Voice Shopping and Voice Ads

Technology ranked by IEEE as amongst the world's most impactful

12

The slides further confirmed the strength of VoiceBox's patent portfolio in the areas of NLU, Voice Shopping and Voice Ad technology. The presentation also emphasized industry recognition of VoiceBox's patent portfolio:

25. Following the meeting, Mr. Booms emailed VoiceBox to request even more technical details. Then, on February 20, 2017, Amazon specifically asked VoiceBox for a list of all patents owned by the company.



26. VoiceBox responded to Amazon's request by providing the requested materials, including the identity of all patents including patent applications.

27. In March 2017, the parties met again at VoiceBox's office. The Amazon attendees included senior executives and Alexa technologists. VoiceBox informed Amazon by email after the meeting that VoiceBox had "[p]atents that could be useful as the market goes mainstream." Shortly thereafter, Mr. Komorous from Amazon emailed VoiceBox, writing that Amazon had been "[poring] through the material" that VoiceBox had provided and that Amazon had created yet another, even more detailed, list of requests. Then, in April 2017, VoiceBox shared a written summary of VoiceBox's patent portfolio with Amazon.

28. After, for the second time, providing the company's crown-jewels to Amazon, VoiceBox felt confident that Amazon would follow through and acquire VoiceBox. Instead, Amazon once again severed communications. VoiceBox soon learned why. Amazon was actively poaching VoiceBox's remaining customers, including Toyota. Once again, Amazon had no interest in acquiring or partnering with VoiceBox. Amazon was interested only in pillaging VoiceBox's intellectual property and know-how.

29. At this point, for the first time, Mike Kennewick appreciated that Amazon was targeting VoiceBox and that his company would not survive long term. Mr. Kennewick began looking for buyers. Unfortunately, most of VoiceBox's value had already been eviscerated by Amazon. The best Mr. Kennewick could do was to sell VoiceBox to Nuance Communications, Inc. ("Nuance"), a computer software technology company, for a fraction of the company's true value. Despite the sale to Nuance, Mr. Kennewick managed to hold onto key VoiceBox patents even after the sale to Nuance to hold Amazon accountable for its misconduct.

F. 2019-2023: Amazon Found to Willfully Infringe

30. On July 29, 2019, VoiceBox filed a complaint for patent infringement against Amazon in this District, asserting infringement of certain patents related to and in the same patent families as the Patents-in-Suit.

31. Amazon pulled out all the stops in litigation, including challenging the patent eligibility of each patent, putting up obstinate witnesses who went so far as disputing the veracity of their own internal documents, and submitting a 1500-page opening expert report on alleged invalidity. At trial, Amazon abandoned nearly all of those many invalidity arguments and focused on a simple theme: Alexa was a neural network-based system that could not infringe VoiceBox patents. After hearing all the evidence, the jury rejected Amazon's theme as utterly false. On November 8, 2023, a Delaware federal jury found that Amazon willfully infringed four VoiceBox patents (related to the Patents-in-Suit) and determined that Amazon should pay VoiceBox an ongoing royalty for its infringement which, at the time of trial, equated to $46.7 million in damages. The jury also resoundingly rejected Amazon's invalidity defenses.

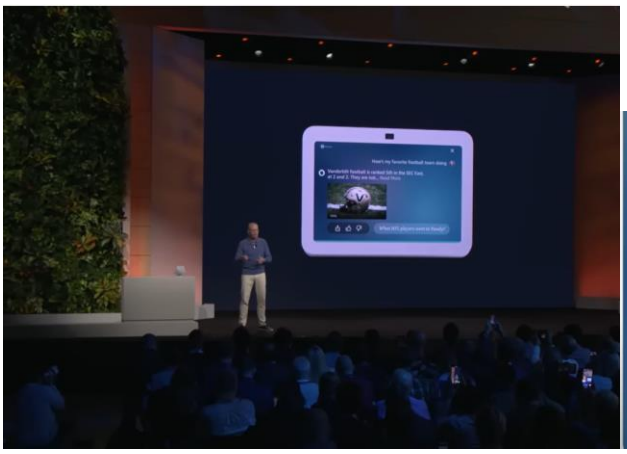
32. Despite this history, Amazon doubled down on its exploitation of VoiceBox's technology. In September 2023, shortly before trial commenced, Amazon heavily promoted Alexa's improved conversation capabilities based on personalization and context:

amazon

3. Personalization and context

An LLM for the home has to be personalized to you, and your family. Just as a conversation with another person would be shaped by context—such as your previous conversations or the situational context—Alexa needs to do the same. The next generation of Alexa will be able to deliver unique experiences based on the preferences you've shared, the services you've interacted with, and information about your environment. Alexa also carries over relevant context throughout conversations, in the same way that humans do all the time. People use pronouns, catchphrases, and build up context of the places, times, or scenes we talk about. Ask Alexa a question about a museum, and you'll be able to ask a series of follow-ups about its hours, exhibits, and location without needing to restate any of the prior context, like the name or the day you plan to go.

33. Amazon's announcement came while it was, in effect, arguing in court that Alexa did not utilize "context" at all. Amazon accompanied its announcement with a live show-and-tell led by Dave Limp, one of Alexa's highest-ranking executives. Mr. Limp demonstrated an example where Alexa knew the identity of his favorite football team based on his previous conversations and provided a response tailored to his prior interactions:



34. Following trial, Amazon moved still closer to VoiceBox, introducing a smart speaker nearly identical in appearance to the original VoiceBox.

35. On May 1, 2024, VoiceBox sent Amazon a letter notifying it of what Amazon already knew. Namely, that Alexa Products infringed the patents-in-suit. Amazon denied infringement, but its reasons, as before, were meritless.

THE PARTIES

36. VB Assets, LLC, is a limited liability company organized under the laws of Delaware and has its principal place of business at 1229 120th Ave. NE, Suite A, Bellevue, WA 98005.

37. On information and belief, Amazon.com Services LLC is a limited liability company organized under the laws of Delaware and has a principal place of business at 410 Terry Ave. N, Seattle, WA 98109. On information and belief, Amazon.com Services LLC has participated in the sale or offer for sale of one or more Alexa Products and/or has provided digital services and content for use by Alexa Products.

JURISDICTION AND VENUE

38. This Court has original jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a) because the action arises under the patent laws of the United States.

39. Personal jurisdiction over Amazon is proper in this District based on one or more of the following: its presence in this judicial district; it has availed itself of the rights and benefits of the laws of Delaware; or it has derived substantial revenue from sales of Alexa Products in Delaware, and it has systematic and continuous business contacts with Delaware. Amazon was incorporated in Delaware and/or formed under the laws of Delaware and Amazon designs Alexa Products, which are advertised, offered for sale, sold, and used in Delaware.

40. Venue is proper in this district under 28 U.S.C. § 1400(b) and 28 U.S.C. §§ 1391(b)(1), (b)(2). For purposes of § 1400(b), Amazon was incorporated in Delaware and/or formed under the laws of Delaware and therefore resides within this District. For purposes of § 1391(b)(1), (b)(2), Amazon resides in the District of Delaware by virtue of being incorporated in Delaware and/or formed under the laws of Delaware.

OVERVIEW OF THE PATENTS-IN-SUIT

The ’249 and ’699 Patents

41. United States Patent Number 10,297,249 (“the ’249 patent”), entitled “System and Method for a Cooperative Conversational Voice User Interface,” was duly and legally issued on May 21, 2019, and names Larry Baldwin, Tom Freeman, Michael Tjalve, Blane Ebersold, and Chris Weider as the inventors. Attached as Exhibit A is a true and correct copy of the ’249 patent.

42. The ’249 patent claims, among other things, a system for facilitating natural language system responses via short-term knowledge generated based on one or more prior multi-modal device interactions: one or more physical processors programmed with one or more computer program instructions which, when executed, cause the one or more physical processors to: receive, during a first conversation, a first voice input via a first input device, the first voice input comprising a first natural language utterance; receive a second voice input comprising the

first natural language utterance via a second input device; compare the first voice input with the second voice input; filter sound from the first voice input and the second voice input based on the comparison; obtain, during the first conversation, a user interface state related to one or more non-voice inputs associated with the first voice input, the one or more non-voice inputs comprising at least a first non-voice input; generate the short-term knowledge based on at least the first voice input and the first non-voice input; determine, based on the short-term knowledge, a first context for the first natural language utterance; determine, based on the first context, an interpretation of the first natural language utterance; and generate, based on the interpretation of the first natural language utterance, a first response to the first natural language utterance.

43. VB Assets, LLC is the assignee of the entire right, title, and interest in the ’249 patent.

44. United States Patent Number 10,755,699 (“the ’699 patent”), entitled “System and Method for a Cooperative Conversational Voice User Interface,” was duly and legally issued on August 25, 2020, and names Larry Baldwin, Tom Freeman, Michael Tjalve, Blane Ebersold, and Chris Weider as the inventors. Attached as Exhibit B is a true and correct copy of the ’699 patent.

45. The ’699 patent claims, among other things, a system for generating natural language system responses adapted based on a user’s manner of speaking, the system comprising: one or more physical processors programmed with one or more computer program instructions which, when executed, configure the one or more physical processors to: receive a user input comprising a natural language utterance; recognize one or more words or phrases from the natural language utterance; identify a context for the natural language utterance based on the one or more words or phrases recognized from the natural language utterance; determine an

interpretation of the natural language utterance based on the identified context; accumulate short-term knowledge based on one or more natural language utterances received during a predetermined time period, wherein the one or more natural language utterances received during the predetermined time period are related to a single conversation between a user and the computer system; accumulate long-term knowledge, wherein the long-term knowledge is accumulated based on one or more natural language utterances received prior to the predetermined time period; identify a manner in which the natural language utterance was spoken based on the short-term knowledge and the long-term knowledge; and generate a response to the natural language utterance based on the interpretation and the identified manner in which the natural language utterance was spoken.

46. VB Assets, LLC is the assignee of the entire right, title, and interest in the ’699 patent.

47. Voice user interface systems in existence before the inventions of the ’249 and ’699 patents were typically of the “Command and Control” type. Such systems used verbal menus to restrict information that a person can provide at a given point. For example, the voice system would present the list of available options either verbally and/or on a screen. The user could then respond by speaking the menu item. Such a system could include numerous menus that the user would have to get through in order to convey the desired information to the system and/or to cause the system to take the desired action. This type of system often fails to provide a seamless conversational experience.

48. The inventors of the ’249 and ’699 patents recognized a significant problem with the Command and Control systems in that users would have to memorize exact words and phrases in order to interact with the system. This required significant learning because the user

had to know which words and phrases to use in order to make a request of a Command and Control voice user interface system. Additionally, the process of stepping through menus could be time-consuming and, in some cases, might dissuade a user from utilizing the voice-based system.

49. To overcome the shortcoming of prior art systems, the inventors provided a solution that used an "Automatic Speech Recognizer" (or ASR) to generate a preliminary interpretation and provide that preliminary interpretation to a "conversational speech engine" for further processing. The conversational speech engine—which was not well-understood, routine, or conventional—could be implemented locally on a user device or remotely on a server. In certain embodiments, the conversational speech engine included a conversational language processor, voice search engine / free form voice search module with context domain agents, and a context determination process. The conversational speech engine communicates with databases to generate an adaptive conversational response.

50. Through the use of a conversational speech engine, the '249 and '699 patents advantageously rely on conversational responses which, in some embodiments, use short-term, and in some embodiments long-term shared knowledge, about user utterances to determine a context for the request, infer additional information about a request, and provide an adaptive conversational response. For example, Figure 1 shows an architecture for the conversational speech engine of the cooperative conversational voice user interface.

51. The inventors were thereby able to improve the functioning of voice user interface systems which improved the operation of those systems in an unconventional manner. For example, the innovations in the '249 and '699 patents allowed a user to converse naturally with a voice user interface system instead of "dumbing down" their requests to match the simple sets of

instructions that existing Command and Control systems required. In this regard, one of the problems faced by the inventors was necessarily rooted in voice user interface technology specifically arising in the realm of voice user interface systems. Indeed, the commercial success and industry accolades provide objective evidence as to VoiceBox's innovative approach through the use of unconventional technology.

52. The '249 patent further describes and claims a system for facilitating natural language system responses using short-term knowledge generated based on multi-modal device interactions including a system that can receive and process inputs from multiple modalities, such as voice and non-voice inputs, to generate short-term knowledge. This allows for a more comprehensive understanding of user interactions by integrating different types of input data. The system also includes mechanisms to compare multiple voice inputs and filter out noise, enhancing the accuracy of speech recognition. This ensures that the system can handle variations in voice input quality and environmental noise effectively.

53. The known prior art in the field of voice user interfaces neither taught accumulating short-term knowledge nor expressed any appreciation for the substantial advantages associated with utilizing this shared knowledge for various purposes in a conversational speech engine. Such uses include to identify context, infer additional information about an utterance that contains insufficient information to complete a request, establish an intended meaning for an utterance within the context based on the additional information inferred about the utterance, and generate a response based on the intended meaning established within the identified context. In this regard, accumulating and using both short-term and long-term knowledge was not well-understood, routine, or conventional and stands in sharp contrast to

the conventional and routine approach of Command and Control systems that require a user to use rigid menus to establish context before making a request.

54. Additionally, the known prior art in the field of voice user interfaces did not teach receiving multiple voice inputs and filtering sounds from a first voice input and second voice input, whereby the filtering is based on a comparison. Such comparison helps in identifying and discarding inconsistent or extraneous sounds that do not match across the inputs. The system can also compare speech signals from the various voice inputs to filter out irrelevant noise and focus on the primary voice input. The context determination process can also filter out words that do not fit into the identified context.

55. During prosecution of the ’249 patent, the examiner rejected numerous application claims as being unpatentable over Byers (US 6,219,645), in combination with other prior art, such as Kennewick (US 2004/0044516), Ehlen (US 2004/0006475), and Perkins (US 7,072,888). The USPTO eventually granted the claims of the ’249 patent finding that the prior art (Byers) did not describe “where ‘sound from the first voice input and the second voice input’ (i.e. sound that is based on both voice inputs from the first and second input devices) are filtered, where the filtering is based on the comparison.” This was not well-understood, conventional, or routine to a person of ordinary skill in the art.

56. The ’699 patent further enhances voice user interfaces by using short-term knowledge accumulated based on one or more natural language utterances received during a predetermined time period. This accumulation occurs during a conversation between the user and the computer system. The system is designed to model human conversations, where short-term session data is expired after a psychologically appropriate amount of time to humanize system behavior and reduce the likelihood of contextual confusion based on stale data. Consequently,

the invention significantly improves conversational accuracy and the natural flow of interactions between the user and the computer system.

57. The ’699 patent further provides for a system that can identify a manner in which the natural language utterance was spoken based on the short-term knowledge and the long-term knowledge. In some embodiments, the manner includes an indication of at least one of tone, pace, timing, inflection, word use, and/or jargon.

58. During prosecution of the ’699 patent, the examiner rejected numerous application claims as being unpatentable over Kargman (US 2005/0015256), Morin (US 5,748,841), Kennewick (US 2004/0044516), Perkins (7,072,888), and/or several other prior art references. Based, at least in part, on the inventors’ amendments to the claims, the USPTO eventually granted the claims of the ’699 patent finding them novel and non-obvious over the prior art. As indicated, a key distinction—which the examiner eventually agreed with—is that Kargman did not teach or suggest that “context is determined based on short-term knowledge and long-term knowledge (i.e. intended meaning is not the same as context).” Moreover, “[n]either Morin nor Perkins teach/suggest where short-term knowledge that has been expired is included in long-term information (expired information is simply deleted in Morin and Perkins), and Kennewick does not specifically teach that both short-term and long-term information is used to determine context (even though dialog history and other examples in Kennewick are likely to be based on utterances entered long enough ago to be considered ‘long-term’).” Nor did they teach “expiring short-term knowledge that is based on natural language utterances received prior to the predetermined time period being expired and added to long-term storage.” None of this was well-understood, conventional, or routine to a person of ordinary skill in the art.

The ’385 Patent

59. United States Patent Number 11,087,385 (“the ’385 patent”), entitled “Voice Commerce,” was duly and legally issued on August 10, 2021, and names Michael R. Kennewick, Sr., as the inventor. Attached as Exhibit C is a true and correct copy of the ’385 patent.

60. The ’385 patent claims, among other things, a system for providing voice commerce, the system comprising: one or more physical processors programmed with computer program instructions which, when executed, cause the one or more physical processors to: receive a single first user input comprising a natural language utterance; provide the natural language utterance as an input to a speech recognition engine; obtain one or more words or phrases recognized from the natural language utterance as an output of the speech recognition engine; search one or more databases of products or services based on the one or more words or phrases; select, without further user input other than the single first user input, a product or service from the database to be purchased based on the search; receive a second user input indicating confirmation by a user to complete a purchase transaction of the selected product or service; and complete, without further user input after the receipt of the second user input, a purchase transaction of the selected product or service.

61. VB Assets, LLC is the assignee of the entire right, title, and interest in the ’385 patent.

62. Online shopping systems in existence before the inventions of the ’385 patent typically required a user to browse a website to locate a product, make payment, and have the product delivered.

63. The inventor recognized a significant problem with such systems in that a user must search a website in order to locate a product or service to be purchased and fill-out

numerous payment and shipping forms to complete checkout. This problem was exacerbated on a mobile electronic device because such devices typically have small screens and keyboards making it hard for the user to search for the product or service to purchase and input payment and shipping information.

64. In certain embodiments, the ’385 patent advantageously provides a voice commerce system with a voice user interface for online shopping. For example, Figure 1 shows an architecture for the voice commerce system. The voice commerce system includes user input processing instructions 122, which may comprise a speech recognition engine and a natural language processing engine. Figure 2 shows a system for facilitating natural language processing for the voice commerce system including a speech recognition engine and a natural language processing engine.

65. The ’385 patent claims and describes a system that advantageously determines a product or service to be purchased on behalf of the user based on a natural language utterance. To do so, the system receives a natural language utterance and uses a speech recognition engine to recognize words and phrases from the natural language utterance. An example of this speech recognition engine is shown in Figure 2 as the Speech Recognition Engine 220. From the words and phrases the system identifies a context and determines a product or service to be purchased without further user input identifying a product or service. Exemplary components for performing this natural language processing are the Natural Language Processing Engine 230 shown in Figure 2 and the Transaction Preparation Instructions 124 shown in Figure 1.

66. By providing this innovation, the inventor was able to improve the functioning of voice user interfaces for online shopping systems thereby improving the operation of those systems in an unconventional manner. For example, the innovations in the ’385 patent determine

a product or service to be purchased based on a natural language utterance. This distinguishes the '385 patent from existing online shopping systems that required a user to search a website to locate a product or service to be purchased. In this regard, one of the problems faced by the inventors was necessarily rooted in online shopping technology specifically arising in the realm of online shopping.

67. The system has a further advantage in that it prepares and completes a transaction without further user input identifying a product or service, payment information, and/or shipping information. The system may obtain payment information with which to pay for the product or service without further user input identifying payment information. The system obtains shipping information with which to deliver the product or service without further user input identifying shipping information. Then the system completes a purchase transaction for the product or service without further user input identifying a product or service, payment information, and/or shipping information. An exemplary component for performing the above is the checkout management instructions 126 shown in Figure 1 of the '385 patent.

68. In doing so, the inventor was able to improve the functioning of online shopping and voice user interface systems thereby improving the operation of those systems in an unconventional manner. For example, the innovations in the '385 patent prepare and complete a transaction without further user input identifying a product or service, payment information, or shipping information. This distinguishes the '385 patent from existing online shopping systems that required a user to search for a product or service and fill-out numerous payment and shipping forms to complete checkout. In this regard, one of the problems faced by the inventors was necessarily rooted in online shopping technology specifically arising in the realm of online shopping.

69. During prosecution of the ’385 patent, the examiner rejected numerous application claims as being unpatentable over Cohen (US 6,859,776) and Kinsey (US 2014/0136259). In response, VoiceBox argued that “Cohen fails to teach or suggest searching a database of products or services – it simply discloses stored words and dictionaries. Further the latter portion cited by the Examiner, Cohen discloses a series of quires and answers used to, for example, select a flight, that is quite different from the claimed invention. The claimed invention selects a product or service from a database based on ***single user input*** (the claimed ‘single first user input’), without the further user input.” VoiceBox went on to explain that the combination of references lacked numerous claim limitations. The USPTO eventually granted the claims of the ’385 patent finding them novel and non-obvious over Cohen, Kinsey, and other cited references.

70. Conventional wisdom in the context of shopping was keenly focused on menu-based systems. Indeed, web-stores were (and still are) based on product categorizations. The typical user experience involves going through a series of menus to narrow down the particular product. As such, there was particular focus and motivation to emulate the menus in a speech-based system. That is, for the computer to read options which the end-user selects before moving to the next menu. The ’385 patent represents a dramatic departure by “selecting…without further user input other than the single first user input, a product or service from the database to be purchased based on the search….”

71. Additionally, conventional wisdom was that to complete an online purchase the user would either have to provide a shipping address or, at minimum, affirmatively select a predefined address. While this approach was perhaps feasible in the context of a visual user interface, the inventor recognized that it was an unnecessary and distracting step in the context of voice-controlled purchase transactions. Therefore, the ’385 patent requires

"completing…without further user input after the receipt of the second user input, a purchase transaction of the selected product or service." In some embodiments, the '385 patent further requires "obtaining…shipping information with which to deliver the selected product or service, wherein the shipping information specifies a name or address of a recipient to which the selected product or service is to be delivered after the selected product or service is purchased, and wherein the purchase transaction is completed based on the shipping information without receiving confirmation of the shipping information by the user."

72. Additionally, "obtaining ... a predetermined set of sellers specified by an administrator of the system that is different than the user" was not well-understood, routine, or conventional. Indeed, such information could be used to reduce the amount of information manually entered (or selected) by the user which reduces the complexity associated with using voice for commerce. This was an unconventional approach to solving the problems associated with transactions via voice.

73. A skilled artisan would not consider the claim limitations of the '385 patent – either alone or in combination – to recite well-understood, routine, or conventional concepts. Instead, a person of ordinary skill in the art would recognize that the claim limitations of the '385 patent are directed to the inventive concepts described in the specification and prosecution history.

The '758 Patent

74. United States Patent Number 11,080,758 ("the '758 patent"), entitled "System and Method for Delivering Targeted Advertisements and/or Providing Natural Language Processing Based on Advertisements," was duly and legally issued on August 3, 2021, and names Tom

Freeman and Mike Kennewick as the inventors. Attached as Exhibit D is a true and correct copy of the ’758 patent.

75. The ’758 patent claims, among other things, a system for processing natural language utterances that include selecting and presenting purchase opportunities based thereon, the system comprising: one or more physical processors programmed with computer program instructions, which when executed cause the one or more physical processors to: provide a natural language utterance as an input to a speech recognition engine; receive words or phrases, recognized from the natural language utterance, as an output of the speech recognition engine; determine a context for the natural language utterance based on the recognized words or phrases; select a purchase opportunity based on the determined context; deliver the selected purchase opportunity via an electronic device in communication with the one or more processors; track an interaction pattern associated with the purchase opportunity delivered to the electronic device, wherein the tracked interaction pattern associated with the purchase opportunity includes information associated with a subsequent request in which the electronic device interacts with the purchase opportunity, wherein the subsequent request in which the electronic device interacts with the purchase opportunity includes the electronic device completing a transaction related to the purchase opportunity; build or update a user-specific profile based on the tracked interaction pattern; and interpret a subsequent natural language utterance using the user-specific profile to select a subsequent purchase opportunity based on the subsequent natural language utterance.

76. VB Assets, LLC is the assignee of the entire right, title, and interest in the ’758 patent.

77. Before the invention of the ’758 patent, voice user interface systems were typically difficult to use, in part, because they had complex human to machine interfaces. Such

systems forced a user to navigate through a series of menus and provide a series of user inputs to perform a relatively simple task.

78. The inventors recognized significant problems with existing systems. The systems did not allow a user to directly issue a request without having to memorize specific syntaxes, words, phrases, concepts, semantic indicators, or other keywords/qualifiers. Similarly, when users were uncertain of particular needs, many existing systems did not engage the user in a productive, cooperative dialogue to resolve requests and advance a conversation. Instead, many existing speech interfaces forced users to use a fixed set commands or keywords to communicate requests in ways that systems could understand. Using existing voice user interfaces, there was virtually no option for dialogue between the user and the system to satisfy mutual goals.

79. The inventors recognized other problems with existing systems. The lack of adequate voice user interfaces resulted in missed opportunities for providing valuable and relevant information to users. Not only did this potentially leave user requests unresolved, in certain instances, providers of goods and services may have lost out on potential business. In an increasingly global marketplace, where marketers are continually looking for new and effective ways to reach consumers, the problems with existing voice user interfaces left a large segment of consumer demand unfulfilled. Furthermore, existing techniques for marketing, advertising, or otherwise calling consumers to action failed to effectively utilize voice-based information, which is one of the most natural, intuitive methods of human interaction.

80. In certain embodiments, the ’758 patent advantageously uses a speech recognition engine and natural language processing to interpret natural language utterances, determine context for the natural language utterance, select a purchase opportunity based on the determined context, deliver a selected purchase opportunity, tracking an interaction pattern associated with

the purchase opportunity delivered to the electronic device, wherein the tracked interaction pattern associated with the purchase opportunity includes information associated with a subsequent request in which the electronic device interacts with the purchase opportunity, wherein the subsequent request in which the electronic device interacts with the purchase opportunity includes the electronic device completing a transaction related to the purchase opportunity; building or updating a user-specific profile based on the tracked interaction pattern, and interpreting a subsequent natural language utterance using the user-specific profile to select a subsequent purchase opportunity based on the subsequent natural language utterance. In doing so, the inventors were able to improve the functioning of voice user interface systems thereby improving the operation of those systems in an unconventional manner. For example, the innovations in the '758 patent allowed a user to directly issue natural language requests and engage in a productive, cooperative dialogue to resolve requests and advance a conversation. In this regard, one of the problems faced by the inventors was necessarily rooted in voice user interface technology specifically arising in the realm of voice user interface systems.

81. With respect to the '758 patent, the patent describes and claims a system for processing natural language utterances that include requests and selecting purchase opportunities. The system uses a speech recognition engine and a conversational language processor to interpret a natural language utterance, determine context, select and deliver a purchase opportunity, track an interaction pattern for the delivered purchase opportunity, build a user-specific profile based on the tracked interaction pattern, and interpreting a subsequent natural language utterance using the user-specific profile to select a subsequent purchase opportunity. Figure 2 shows an architecture for an exemplary advertising system:

82. Conventional wisdom lacked an appreciation for the substantial advantages associated with utilizing a speech recognition engine configured in this way with a conversational language processor to interpret a natural language utterance, determine context, select and deliver a purchase opportunity, track an interaction pattern for the delivered purchase opportunity, build a user-specific profile based on the tracked interaction pattern, and interpreting a subsequent natural language utterance using the user-specific profile to select a subsequent purchase opportunity. In this regard, using this speech recognition engine in a system that utilizes a conversational language processor in this way was not well-understood, routine, or conventional and stands in sharp contrast to the conventional and routine approach of existing systems that required a user to memorize specific syntaxes, words, phrases, concepts, semantic indicators, or other keywords/qualifiers.

83. During prosecution of the ’758 patent, the examiner rejected numerous application claims as being unpatentable over Levin (U.S. Patent Application Pub. No. 2003/0061039). In response, the inventors’ prosecution counsel argued that Levin fails to teach or suggest (i) “determining, by one or more processors, a context for the natural language utterance based on the recognized words or phrases,” and (ii) “selecting, by the one or more processors, a purchase opportunity based on the determined context.” The inventors’ patent counsel provided the following example to help explain:

> For example, in the *Levin* system, if a user wanted to search for a Mike Tyson pay-per-view fight, he might say, in response to successive queries from the system, "show titles," then "Tyson fight," and then "yes" to confirm that he wishes to order the fight. As can be understood from this example, each operation by the system is in direct response to a voice command from the user. There is no teaching or suggestion that this process determines a separate "context" outside of the stream of voice commands, or provides any response based on such a "context," let alone the claimed "purchase opportunity." Indeed, no context needs to be determined in the cited portions of *Levin* – the search results are all direct responses to voice commands. Further, there is no teaching or suggestion of the provision of a "purchase opportunity" in the cited portions of *Levin*. The only particular information provided to the user is the show that matches

> While Applicant agrees that "context for the natural language utterance" does have a broad scope, it is not as broad as the Examiner asserts here. For example, as is apparent by reviewing claim 1 (and claim 11) a "context for the natural language utterance" is conceptually different from the "recognized words or phrases" of the natural language utterance – because it is information determined ***based on*** the words or phrases of the utterance. A good example of "context" information can be found in pars. [0032] and [0033] of the instant Application, where contexts (*e.g.*, "navigation," "sports," "Philadelphia") can be determined based on utterances, in addition to recognizing the underlying words or phrases. While *Levin* discloses recognizing words or phrases to complete its voice commands, it does not teach or suggest determining context from those words or phrases.

84. Based, at least in part, on the inventors' arguments, the USPTO eventually granted the claims of the '758 patent finding them novel and non-obvious over Levin. As indicated, a key distinction—which the examiner eventually agreed with—is that Levin lacked the use of "context" to advantageously enable the ability for "selecting…a purchase opportunity based on the determined context."

85. Conventional wisdom in shopping was keenly focused on menu-based systems. Indeed, web-stores were (and still are) based on product categorizations. The typical user experience involves going through a series of menus to narrow down the particular product. As such, there was particular focus and motivation to emulate the menus in a speech-based system. That is, for the computer to read options which the end-user selects before moving to the next menu. The '758 patent represents a dramatic departure by "selecting, by the one or more processors, a purchase opportunity based on the determined context."

86. A skilled artisan would not consider the claim limitations of the '758 patent – either alone or in combination – to recite well-understood, routine, or conventional concepts. Instead, a person of ordinary skill in the art would recognize that the claim limitations of the '758 patent are directed to the inventive concepts described in the specification and prosecution history.

The '025 Patent

87. United States Patent Number 9,502,025 ("the '025 patent"), entitled "System and Method for Providing a Natural Language Content Dedication Service," was duly and legally issued on November 22, 2016, and names Mike Kennewick and Lynn Elise Armstrong as the inventors. Attached as Exhibit E is a true and correct copy of the '025 patent.

88. The '025 patent claims, among other things, a system for providing a natural language content dedication service, comprising: one or more processors; and one or more non-transitory computer readable mediums storing executable instructions that when executed by the one or more processors cause the one or more processors to: receive a first utterance that includes a natural language utterance; determine, based on processing of the first utterance by a speech recognition engine, one or more words or phrases of the first utterance; provide the one or

more words or phrases as an input to a conversational language processor; interpret the first utterance, at the conversational language processor, based on the one or more words or phrases; identify, based on the interpretation of the first utterance, content to dedicate to a recipient; initiate, based on the identified content, a dedication to the recipient; receive a second utterance to be associated with the dedication; determine, based on a processing of the second utterance by the speech recognition engine, one or more words or phrases of the second utterance; provide the one or more words or phrases of the second utterance as textual annotations within metadata of the content; and send information to enable the recipient to access the content and the second utterance.

89. VB Assets, LLC is the assignee of the entire right, title, and interest in the ’025 patent.

90. Voice user interface systems in existence before the invention of the ’025 patent were typically of the “Command and Control” type. Such systems used verbal menus to restrict information that a person can provide at a given point. For example, the voice system would present the list of available options either verbally and/or on a screen. The user could then respond by speaking the menu item. Such a system could include numerous menus that the user would have to get through in order to convey the desired information to the system and/or to cause the system to take the desired action. The inventors recognized a significant problem with the Command and Control systems that caused user frustration or dissatisfaction because of inaccurate speech recognition. Similarly, by forcing a user to provide pre-established commands or keywords to communicate requests in ways that a system can understand, existing voice user interfaces did not effectively engage the user in a productive, cooperative dialogue to resolve requests and advance a conversation towards a satisfactory goal (e.g., when users may be

uncertain of particular needs, available information, device capabilities, etc.). As such, existing voice user interfaces tend to suffer from various drawbacks, including significant limitations on engaging users in a dialogue in a cooperative and conversational manner.

91. Additionally, existing voice user interface systems were constrained to a finite set of applications or devices, limiting users' ability to access a wide array of applications and services across different devices as needed. Users often had to carry multiple devices to fulfill various needs, but the voice user interface systems did not effectively facilitate access to services and content across these disparate devices. There was a notable absence of an integrated environment that enabled users to request content or services associated with virtually any device or network, thereby restricting the availability of information and device interaction mechanisms. When users needed to perform a function on a device but were unsure how to do so, they could not simply use natural language to make the request. This resulted in simple functions becoming cumbersome and tedious. This could be illustrated by the example of purchasing a new ringtone for a mobile phone, which involved navigating through several menus and pressing numerous buttons. Additionally, the existing voice user interface systems did not support cooperative multi-modal interactions, which would allow users to engage with their devices in an intuitive, natural, and efficient manner. By addressing these constraints, the invention aims to enhance the user experience through advanced voice recognition and natural language processing capabilities, enabling more seamless and integrated interactions with electronic devices.

92. To overcome the shortcoming of prior art systems, the inventors provided a solution that provided a system and method for providing a natural language content dedication service operating in a voice services environment that can receive multi-modal natural language device interactions. In particular, providing the natural language content dedication service may

generally include detecting multi-modal device interactions that include requests to dedicate content, identifying the content requested for dedication from natural language utterances included in the multi-modal device interactions, processing transactions for the content requested for dedication, processing natural language to customize the content for recipients of the dedications, and delivering the customized content to the recipients of the dedications.

93. The advantages of the invention include providing a natural language content dedication service that operates in a voice services environment with electronic devices capable of receiving multi-modal natural language interactions. This system can detect interactions that include content dedication requests, identify the requested content from natural language utterances, process transactions, and customize the content for recipients. The invention supports a hybrid processing environment with multiple devices that cooperatively interpret and process natural language inputs, ensuring accurate intent determination. For example, a virtual router selects the cleanest audio sample of a natural language utterance and coordinates with other devices to resolve the request based on intent. This approach enhances user experience by simplifying interactions, making the technology intuitive and efficient. Users can engage in natural language dialogues to dedicate content, process transactions, and customize the content, all seamlessly integrated across various devices and domains. Additionally, the system supports flexible purchase options like buy-to-own, pay-to-play, and subscription models, allowing users to choose how they want to dedicate content, which can be customized and delivered efficiently.

94. During prosecution of the ’025 patent, the examiner rejected numerous application claims as being unpatentable over prior art including Gold (U.S. Publication No. 2002/0032752) and Kennewick (U.S. Publication No. 2004/0193420). The USPTO eventually

granted the claims of the '025 patent finding them novel and non-obvious over the prior art, explaining:

> However, the combination of prior art does not provide for the two step process of natural language processing during a dedication as reflected in the claim language of determine, based on processing of the first utterance by a speech recognition engine, one or more words or phrases of the first utterance; provide the one or more words or phrases as an input to a conversational language processor; interpret the first utterance, at the conversational language processor, based on the one or more words or phrases; determine, based on a processing of the second utterance by the speech recognition engine, one or more words or phrases of the second utterance; and provide the one or more words or phrases of the second utterance as textual annotations within metadata of the content."

95. A skilled artisan would not consider the claim limitations of the '025 patent – either alone or in combination – to recite well-understood, routine, or conventional concepts.

COUNT ONE (INFRINGEMENT OF '249 PATENT)

96. VoiceBox incorporates and realleges each and every allegation contained in the foregoing paragraphs of this complaint, as though fully set forth herein.

97. Amazon has and continues to infringe, literally and/or under the doctrine of equivalents, at least claims 1-10 and 12-15 of the '249 patent by making, using, selling, offering for sale, and/or importing into the United States, Alexa Products, which embody or use the inventions of the '249 patent in violation of 35 U.S.C. § 271(a). Exemplary evidence and an exemplary chart mapping a claim to Alexa Products can be found in Exhibit F.

98. Amazon has been and is inducing infringement of the ’249 patent by actively and knowingly inducing others to make, use, sell, offer for sale, or import Alexa Products that include Alexa and embody or use the inventions claimed in the ’249 patent in violation of 35 U.S.C. § 271(b). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. Additionally, VoiceBox informed the Amazon employees who attended the February 2, 2017 meeting at VoiceBox’s office of the ’249 patent.[3] On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than February 2, 2017. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox’s patent portfolio to Amazon that notified Amazon of its infringement of the ’249 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products.

[3] At the time, the ’249 patent was referred to by its publication number: US 2015/0228276.

99. Amazon has been and is continuing to contributorily infringe the ’249 patent by selling or offering to sell Alexa Products, knowing them to be especially made or especially adapted for practicing the invention of the ’249 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use in violation of 35 U.S.C. § 271(c). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. Additionally, VoiceBox informed the Amazon employees who attended the February 2, 2017 meeting at VoiceBox’s office of the ’249 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than February 2, 2017. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox’s patent portfolio to Amazon that notified Amazon of its infringement of the ’249 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than May of 2024. On information and belief, no later

than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use.

100. On information and belief, Amazon has known of the existence of the ’249 patent, and its acts of infringement have been willful and in disregard for the ’249 patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Additionally, VoiceBox informed the Amazon employees who attended the February 2, 2017 meeting at VoiceBox’s office of the ’249 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than February 2, 2017. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox’s patent portfolio to Amazon that informed Amazon of the ’249 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’249 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products infringe the ’249 patent.

101. Amazon’s infringement has been, and continues to be knowing, intentional, and willful.

102. Amazon’s acts of infringement of the ’249 patent have caused and will continue to cause VoiceBox damages for which VoiceBox is entitled to compensation pursuant to 35 U.S.C. § 284.

103. This case is exceptional and, therefore, VoiceBox is entitled to an award of attorney’s fees pursuant to 35 U.S.C. § 285.

COUNT TWO (INFRINGEMENT OF THE '699 PATENT)

104. VoiceBox incorporates and realleges each and every allegation contained in the foregoing paragraphs of this complaint, as though fully set forth herein.

105. Amazon has and continues to infringe, literally and/or under the doctrine of equivalents, at least claims 1, 3-5, 6-8, and 11 the '699 patent by making, using, selling, offering for sale, and/or importing into the United States, Alexa Products, which embody or use the inventions of the '699 patent in violation of 35 U.S.C. § 271(a). Exemplary evidence and an exemplary chart mapping a claim to Alexa Products can be found in Exhibit G.

106. Amazon has been and is inducing infringement of the '699 patent by actively and knowingly inducing others to make, use, sell, offer for sale, or import Alexa Products that include Alexa and embody or use the inventions claimed in the '699 patent in violation of 35 U.S.C. § 271(b). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '699 patent since no later than its date of issuance. No later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '699 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '699 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its actions would

induce infringement by users of Alexa Products. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products.

107. Amazon has been and is continuing to contributorily infringe the '699 patent by selling or offering to sell Alexa Products, knowing them to be especially made or especially adapted for practicing the invention of the '699 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use, in violation of 35 U.S.C. § 271(c). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '699 patent since no later than it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '699 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '699 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use.

108. On information and belief, Amazon has known of the existence of the ’699 patent, and its acts of infringement have been willful and in disregard for the ’699 patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Amazon has known of, or been willfully blind to, the existence of the ’699 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products infringe the ’699 patent. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox’s patent portfolio to Amazon that informed Amazon of the ’699 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’699 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products infringe the ’699 patent.

109. Amazon’s infringement has been, and continues to be knowing, intentional, and willful.

110. Amazon’s acts of infringement of the ’699 patent have caused and will continue to cause VoiceBox damages for which VoiceBox is entitled to compensation pursuant to 35 U.S.C. § 284.

111. This case is exceptional and, therefore, VoiceBox is entitled to an award of attorney’s fees pursuant to 35 U.S.C. § 285.

COUNT THREE (INFRINGEMENT OF THE ’385 PATENT)

112. VoiceBox incorporates and realleges each and every allegation contained in the foregoing paragraphs of this complaint, as though fully set forth herein.

113. Amazon has and continues to infringe, literally and/or under the doctrine of equivalents, at least claims 1-5, 11-15 and 31-34 of the ’385 patent by making, using, selling, offering for sale, and/or importing into the United States, Alexa Products, which embody or use

the inventions of the ’385 patent in violation of 35 U.S.C. § 271(a). Exemplary evidence and an exemplary chart mapping a claim to Alexa Products can be found in Exhibit H.

114. Amazon has been and is inducing infringement of the ’385 patent by actively and knowingly inducing others to make, use, sell, offer for sale, or import Alexa Products that include Alexa and embody or use the inventions claimed in the ’385 patent, in violation of 35 U.S.C. § 271(b). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the ’385 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox’s patent portfolio to Amazon that informed Amazon of the ’385 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the ’385 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products.

115. Amazon has been and is continuing to contributorily infringe the ’385 patent by selling or offering to sell Alexa Products, knowing them to be especially made or especially adapted for practicing the invention of the ’385 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use in violation of 35 U.S.C. § 271(c). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products

to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '385 patent since no later than it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '385 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '385 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use.

116. On information and belief, Amazon has known of the existence of the '385 patent, and its acts of infringement have been willful and in disregard for the '385 patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Amazon has known of, or been willfully blind to, the existence of the '385 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products infringe the '385 patent. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '385 patent. On

information and belief, Amazon has known of, or been willfully blind to, the existence of the '385 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products infringe the '385 patent.

117. Amazon's infringement has been, and continues to be knowing, intentional, and willful.

118. Amazon's acts of infringement of the '385 patent have caused and will continue to cause VoiceBox damages for which VoiceBox is entitled to compensation pursuant to 35 U.S.C. § 284.

119. This case is exceptional and, therefore, VoiceBox is entitled to an award of attorney's fees pursuant to 35 U.S.C. § 285.

COUNT FOUR (INFRINGEMENT OF THE '758 PATENT)

120. VoiceBox incorporates and realleges each and every allegation contained in the foregoing paragraphs of this complaint, as though fully set forth herein.

121. Amazon has and continues to infringe, literally and/or under the doctrine of equivalents, at least claims 1-7, 9-12, and 18-22 of the '758 patent by making, using, selling, offering for sale, and/or importing into the United States, Alexa Products, which embody or use the inventions of the '758 patent in violation of 35 U.S.C. § 271(a). Exemplary evidence and an exemplary chart mapping a claim to Alexa Products can be found in Exhibit I.

122. Amazon has been and is inducing infringement of the '758 patent by actively and knowingly inducing others to make, use, sell, offer for sale, or import Alexa Products that include Alexa and embody or use the inventions claimed in the '758 patent, in violation of 35 U.S.C. § 271(b). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be

made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '758 patent since its issuance. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '758 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '758 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products.

123. Amazon has been and is continuing to contributorily infringe the '758 patent by selling or offering to sell Alexa Products, knowing them to be especially made or especially adapted for practicing the invention of the '758 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use in violation of 35 U.S.C. § 271(c). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '758 patent since no later than it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both

patented and infringing and that there is no substantial non-infringing use. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '758 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '758 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use.

124. On information and belief, Amazon has known of the existence of the '758 patent, and its acts of infringement have been willful and in disregard for the '758 patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Amazon has known of, or been willfully blind to, the existence of the '758 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products infringe the '758 patent. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '758 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '758 patent since no later than May of 2024. On information and belief, no later than that date, Amazon has known its Alexa Products infringe the '758 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '758 patent since no later

than that date. On information and belief, no later than that date, Amazon has known its Alexa Products infringe the '758 patent.

125. Amazon's infringement has been, and continues to be knowing, intentional, and willful.

126. Amazon's acts of infringement of the '758 patent have caused and will continue to cause VoiceBox damages for which VoiceBox is entitled to compensation pursuant to 35 U.S.C. § 284.

127. This case is exceptional and, therefore, VoiceBox is entitled to an award of attorney's fees pursuant to 35 U.S.C. § 285.

COUNT FIVE (INFRINGEMENT OF THE '025 PATENT)

128. VoiceBox incorporates and realleges each and every allegation contained in the foregoing paragraphs of this complaint, as though fully set forth herein.

129. Amazon has and continues to infringe, literally and/or under the doctrine of equivalents, at least claims 8 and 14-19 the '025 patent by making, using, selling, offering for sale, and/or importing into the United States, Alexa Products, which embody or use the inventions of the '025 patent in violation of 35 U.S.C. § 271(a). Exemplary evidence and an exemplary chart mapping a claim to Alexa Products can be found in Exhibit J.

130. Amazon has been and is inducing infringement of the '025 patent by actively and knowingly inducing others to make, use, sell, offer for sale, or import Alexa Products that include Alexa and embody or use the inventions claimed in the '025 patent, in violation of 35 U.S.C. § 271(b). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from

third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its actions would induce infringement by users of Alexa Products. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '025 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than May of 2024. Additionally, the '025 patent or its published application was cited during prosecution of one or more patents assigned to a subsidiary of Amazon, including U.S. Patent No. 9,953,630. The '025 patent or its published application was first cited during prosecution of one or more patents assigned to a subsidiary of Amazon on January 4, 2018. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than January 4, 2018. On information and belief, no later than that date, Amazon has known its actions would induce infringement by users of Alexa Products.

131. Amazon has been and is continuing to contributorily infringe the '025 patent by selling or offering to sell Alexa Products, knowing them to be especially made or especially adapted for practicing the invention of the '025 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use, in violation of 35 U.S.C. § 271(c). On information and belief, Amazon writes software for Alexa Products and designs Alexa Products to operate in an infringing manner. Amazon causes Alexa Products to be made available through its own website. On information and belief, Amazon also profits from third-parties who sell Alexa Products. Amazon instructs users to use Alexa Products in an infringing manner and

provides technical support for such use, including on its website and also through the Alexa virtual assistant. Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '025 patent. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than May of 2024. Additionally, the '025 patent or its published application was cited during prosecution of one or more patents assigned to a subsidiary of Amazon, including U.S. Patent No. 9,953,630. The '025 patent or its published application was first cited during prosecution of one or more patents assigned to a subsidiary of Amazon on January 4, 2018. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than January 4, 2018. On information and belief, no later than that date, Amazon has known its Alexa Products are especially made or adapted for a use or product that is both patented and infringing and that there is no substantial non-infringing use.

132. On information and belief, Amazon has known of the existence of the '025 patent, and its acts of infringement have been willful and in disregard for the '025 patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than the date it received a copy of this complaint. No later than that date, Amazon has known its Alexa Products infringe the '025 patent. Additionally, in May 2024, VoiceBox sent a written summary of VoiceBox's patent portfolio to Amazon that informed Amazon of the '025 patent. On

information and belief, Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than May of 2024. Additionally, the '025 patent or its published application was cited during prosecution of one or more patents assigned to a subsidiary of Amazon, including U.S. Patent No. 9,953,630. The '025 patent or its published application was first cited during prosecution of one or more patents assigned to a subsidiary of Amazon on January 4, 2018. On information and belief, Amazon has known of, or been willfully blind to, the existence of the '025 patent since no later than January 4, 2018. On information and belief, no later than that date, Amazon has known its Alexa Products infringe the '025 patent.

133. Amazon's infringement has been, and continues to be knowing, intentional, and willful.

134. Amazon's acts of infringement of the '025 patent have caused and will continue to cause VoiceBox damages for which VoiceBox is entitled to compensation pursuant to 35 U.S.C. § 284.

135. This case is exceptional and, therefore, VoiceBox is entitled to an award of attorney's fees pursuant to 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, VoiceBox, respectfully requests the Court to enter judgment in favor of VoiceBox and against Amazon as to all claims asserted herein as follows:

a) Adjudging that Amazon has infringed, literally and/or under the doctrine of equivalents, actively induced infringement of, and contributorily infringed at least one claim of each of the VoiceBox Patents in violation of 35 U.S.C. §§ 271(a), (b), and/or (c);

b) Ordering Amazon to account and pay damages adequate to compensate VoiceBox for Amazon's infringement of the VoiceBox Patents, including for any infringing acts not presented at trial and pre-judgment and post-judgment interest and costs, pursuant to 35 U.S.C. § 284;

c) Ordering that the damages award be increased up to three times the actual amount assessed, pursuant to 35 U.S.C. § 284;

d) Declaring this case exceptional and awarding VoiceBox its reasonable attorneys' fees, pursuant to 35 U.S.C. § 285;

e) Awarding VoiceBox interest, including prejudgment and post-judgment interest, on the foregoing sums;

f) Awarding VoiceBox the costs of this action; and

g) Awarding such other and further relief as this Court deems just and proper.

JURY DEMAND

Pursuant to Federal Rules of Civil Procedure Rule 38, VoiceBox demands a trial by jury on all issues so triable.

Dated: July 18, 2024

Respectfully submitted,

SMITH, KATZENSTEIN & JENKINS LLP

/s/ Neal C. Belgam

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