IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VB Assets, LLC, Plaintiff, v. Amazon.com, Inc.; Amazon.com LLC; Amazon Web Services, Inc.; A2Z Development Center, Inc. d/b/a Lab126; Rawles LLC; AMZN Mobile LLC; AMZN Mobile 2 LLC; Amazon.com Services, Inc. f/k/a Amazon Fulfillment Services, Inc.; and Amazon Digital Services LLC, Defendants.	)	**C.A. No. 1:19-cv-01410-MN**

SECOND AMENDED JOINT CLAIM CONSTRUCTION CHART

In accordance with Paragraph 11 of the Scheduling Order (D.I. 32) and the Court's May 19, 2021 Oral Order (D.I. 83), Plaintiff VB Assets, LLC ("VoiceBox" or "Plaintiff") and Defendants Amazon.com, Inc.; Amazon.com LLC; Amazon Web Services, Inc.; A2Z Development Center, Inc. d/b/a Lab126; Rawles LLC; AMZN Mobile LLC; AMZN Mobile 2 LLC; Amazon.com Services, Inc. f/k/a Amazon Fulfillment Services, Inc.; and Amazon Digital Services LLC (collectively, "Amazon" or "Defendants")[1] submit the following Second Amended Joint Claim Construction Chart in advance of the claim construction hearing scheduled for June 9, 2021 regarding U.S. Patent Nos. 8,073,681 ("the '681 patent"); 9,015,049 ("the '049 patent");

[1] Defendants' Footnote: On January 1, 2020, Amazon Digital Services, LLC merged into Amazon.com Services LLC. Rawles LLC and AMZN Mobile 2 LLC are not properly named defendants.

9,626,703 ("the '703 patent"); 7,818,176 ("the '176 patent"); 8,886,536 ("the '536 patent"); and 9,269,097 ("the '097 patent") (collectively, the "Patents-in-Suit").

This Second Amended Joint Claim Construction Chart, attached as **Exhibit A,** sets forth (i) agreed construction for certain claim terms; (ii) the disputed claim terms; (iii) the parties' respective proposed constructions for the disputed claim terms; and (iv) citations to the intrinsic evidence on which each party will rely to support its proposed construction for disputed claim terms. The parties have made good faith effort to include herein all support in intrinsic evidence, but reserve the right to rely on additional evidence, such as intrinsic and extrinsic evidence, in their claim construction briefs to provide additional context or to rebut arguments made by the other party during the claim construction briefing. The parties further reserve the right to rely on any intrinsic evidence identified by the other party. The parties further reserve the right to update and/or supplement their proposed claim constructions with the claim construction briefs.

The parties intend to rely on the Patents-in-Suit, and patents and applications to which the Patents-in-Suit claim priority, including any related patents or patent applications related to the Patents-in-Suit. Any citation to intrinsic evidence provided by the parties in support of their proposed claim construction is intended as an example. The parties reserve the right to cite to claims in which the proposed terms for construction appear. The parties reserve the right to cite to analogous passages in other relevant patents or prosecution histories and agree that a citation to the specification of one Patent-in-Suit also incorporates by reference citations to duplicative portions of the specifications of the other Patent-in-Suit. Any additional evidence or reference within or encompassed by a particular citation is deemed incorporated by reference (*e.g.*, references to a figure or table or other patents and patent applications are incorporated by reference and specification descriptions of a cited figure or table are similarly incorporated by

reference). Cited passages are intended to include all figures and tables referenced therein, whether referenced or not.

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VB Assets, LLC v. Amazon.com, Inc. et al.
Civil Action No. 1:19-cv-01410-MN
Exhibit A: Second Amended Joint Claim Construction Chart

I. AGREED CONSTRUCTIONS

Claim Term	Joint Proposed Construction
"model" '049 patent, claims 1, 3, 4, 5, 8, 11, 13, 14, 15, 18; '176 patent, claims 2–5, 18–21, 28–31, 44–47.	"an approximation, representation, or idealization of selected aspects of the structure, behavior, operation, or other characteristics of a real-world process, concept, or system"
"short-term shared knowledge" / "short-term knowledge" '681 patent, claims 1–3, 10, 13–15, 22, 25–27, 34, 37, 39, 41. '049 patent, claims 1, 3-4, 7-8, 11, 13-14, 17-18.	No construction necessary[2]
"domain agent" '536 patent, claims 1, 4, 32.	"software with domain-specific behavior and information"
"acoustic grammar" '176 patent, claims 1, 16, 27, 42.	"grammar of phonotactic rules of the English language that maps phonemes to syllables"

[2] The parties reached an agreement during briefing that "no construction is necessary for 'short-term shared knowledge'" because the parties "agree the claims of the '681 and '049 patents require 'short-term[shared] knowledge' to be about the current conversation as opposed to just any conversation." *See* May 14, 2021 Joint Claim Construction Appendix, Ex. 8 at 1, 3.

II. DISPUTED CONSTRUCTIONS[3]

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
1.	"long-term shared knowledge" / "long-term knowledge" '681 patent, claims 1, 4, 13, 16, 25, 28, 37, 39, 41. '049 patent, claims 4-6, 8, 14-16, 18.	Plain and ordinary meaning: "shared knowledge built by identifying information with long-term significance that is user-centric, rather than session-based"	'681 patent at 4:51–5:30, 13:10–37, 14:3–30, 16:34–40. '681 patent file history at: 11/1/2010 Office Action; 8/15/2011 Notice of Allowance. '049 patent at 4:63–5:42, 13:24–34, 14:16–43, 16:55–61.	No construction necessary; or, alternatively: "shared knowledge from one or more prior conversations"	**'681 Patent** Specification: 3:41-64; 4:51-5:30; 5:48-60; 10:57-11:20; 11:62-12:18; 13:32-37; 13:38-14:2; 14:3-23; 15:35-54; 16:24-53; 17:51-18:3; Fig. 3; cls. 1, 4, 13, 16, 25, 28, 37, 39, and 41. File History: • Amendment and Remarks dated January 21, 2011. • Amendment and Remarks dated September 2, 2010. **'049 Patent** Specification:

[3] During the claim construction briefing process, the parties resolved their disputes as to the following claim terms: "short-term shared knowledge" / "short-term knowledge" and "psychologically appropriate amount of time." The Court dismissed with prejudice all claims of the '681 patent reciting "psychologically appropriate amount of time," thereby mooting the parties' dispute on this term. *See* D.I. 73.

[4] Plaintiff's citations include any publications or references cited therein. Plaintiff also identifies the entirety of the claims in which the terms appear, including dependent claims, as intrinsic evidence and/or context that supports Plaintiff's constructions, and further reserves the right to rely on any evidence cited by Defendants.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					3:53-4:9; 4:63-5:42; 5:60-6:5; 11:3-34; 13:45-50; 13:51-14:15; 14:16-36; 15:57-16:8; 16:45-17:7; 18:5-25; Fig. 3; cls. 4-6, 8, 14-16, and 18. File History: • Non-Final Rejection dated August 25, 2014. • *Amazon.com, Inc. v. VB Assets, LLC*, IPR2020-01346, Paper 1 at 6, 7, 19-21, 33-42 (PTAB July, 23, 2020); Ex. 1002 (Declaration of Dr. Smyth ISO Petition of *Inter Partes* Review of '049 Patent) at ¶¶69-74, 93-98. • *Amazon.com, Inc. v. VB Assets, LLC*, IPR2020-01346, Paper 6 at 11-12 (PTAB Nov. 9, 2020). • *Amazon.com, Inc. v. VB Assets, LLC*, IPR2020-01346, Paper 7 at 9, 10

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					(PTAB Feb. 4, 2021).
2.	"speech recognition engine" / "speech recognition" '681 patent, claims 7, 10, 19, 22, 31, 33, 34; '703 patent, claims 1, 9, 15, 22, 25, 29, 30; '176 patent, claims 1, 10, 14, 25, 27, 36, 40, 42, 51; '536 patent, claims 1, 10, 32; '097 patent, claim 7.	Plain and ordinary meaning: "software or hardware that generates one or more preliminary interpretations of a given utterance" / "the process of generating one or more preliminary interpretations of a given utterance"	'681 patent at 2:16–25, 7:24–60. '703 patent at 4:7–19, 7:27-40, 7:48–59, 9:27–11:37. '176 patent at 3:14–4:16. '536 patent at 3:38–4:42. '097 patent at 3:40–4:42. U.S. Patent No. 7,398,209 at 10:49–64, 16:52–17:40. '176 patent file history at 5/27/2010 Office Action.	Plain and ordinary meaning: "software or hardware that recognizes the words or phrases in the natural language utterance"	**<u>'681 Patent</u>** Specification: 2:4-30; 3:41-64; 7:24-60; 11:21-32; 16:54-17:20; Fig. 1; cls. 7, 10, 22, 31, and 34. File History: • Amendment and Remarks dated September 2, 2010. • Amendment and Remarks dated January 21, 2011. • Notice of Allowance dated August 15, 2011. **<u>'703 Patent</u>** Specification: 4:7-23; 7:48-59; 9:20-42; 9:43-54; 9:63-10:16; 10:17-36; 10:37-42; 10:43-51; 10:52-56; 10:57-11:7; 11:8-27; 18:28-39; Fig. 2; cls. 1, 9, 15, 22, 25, 29, and 30.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					File History: • Amendment and Remarks dated December 21, 2016. **<u>'176 Patent</u>** Specification: 2:61-3:27; 3:28-51; 3:66-4:16; Fig. 1; cls. 1, 10, 14, 25, 27, 36, 40, 42, and 51. File History: • Amendment and Remarks dated February 17, 2010. **<u>'536 Patent</u>** Specification: 3:18-51; 3:52-4:11; 4:24-41; Fig. 1; cls. 1, 10, and 32. **<u>'097 Patent</u>** Specification: 3:20-53; 3:54-4:10; 4:25-42; Fig. 1; cl. 7.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					'409 Patent[5] Specification: 2:16-56; 2:57-3:13; 3:53-4:3; 5:62-6:62; 7:49-63; Figs. 1-2. **'209 Patent[6]** Specification: 10:49-64; 16:52-67; 17:9-21. **'720 Patent[7]** Specification: 20:62-21:10; 27:1-16; 27:25-41; 27:42-55.

[5] The'681 and '049 patents incorporate by reference U.S. Patent No. 7,634,409 ("'409 patent") entitled "Dynamic Speech Sharpening" filed on August 31, 2006 and issued on December 15, 2009 in its entirety.

[6] The '176, '536, '049, and '097 patents incorporate by reference U.S. Patent No. 7,398,209 ("'209 patent") entitled "Systems and Methods for Responding to Natural Language Speech Utterance" filed on June 3, 2003 and issued on July 8, 2008 in its entirety.

[7] The '176, '536, '049, and '097 patents incorporate by reference U.S. Patent No. 7,693,720 ("'720 patent") entitled "Mobile Systems and Methods for Responding to Natural Language Speech Utterance" filed on July 15, 2003 and issued on April 6, 2010 in its entirety.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					'549 Patent[8] Specification: 2:37-38.
3.	"context" '681 patent, claims 1, 7, 13, 19, 22, 25, 31, 34, 37, 39, 41; '703 patent, claims 1, 15, 25, 30; '176 patent, claims 1, 14, 27, 40.	No construction necessary: "context"	'681 patent at 3:41-4:32, 11:57-60, 11:65-67. '703 patent at 7:60–8:13. '176 patent at 2:12–32, 4:17–44, 8:53-57, 8:63-9:2, 9:10-15, 9:29–10:9 U.S. Patent No. 7,640,160 at 2:33–3:15, 13:29–43. U.S. Patent No. 7,949,529 at 2:46–57, 3:47–4:36, 7:5–61, 19:10–20:26, 32:32–36:9. US Patent No. 7,620,549 at 3:15–49. U.S. Patent No. 7,395,209 at 5:47–6:37, 11:58–12:3, 17:41–56,	"subject domain(s) that applies to a user utterance"	**'681 Patent** Specification: Abstract; 2:31-3:14; 3:15-40; 3:41-64; 3:65-4:32; 4:51-30; 5:31-47; 5:61-4; 6:18-39; 6:46-57; 7:61-8:18; 8:35-51; 8:52-9:18; 9:46-10:6; 10:57-11:20; 11:21-32; 11:33-61; 11:62-12:18; 12:19-45; 12:46-13:9; 14:3-23; 16:54-17:20; Figs. 2-3; cls. 1, 13, 25, 34, 39, and 41. File History: • Amendment and Remarks dated September 2, 2010. • Amendment and Remarks dated January 21, 2011. **'049 Patent**

[8] The '176, '536, and '097 patents incorporate by reference U.S. Patent No. 7,620,549 ("'549 patent") entitled "System and Method of Supporting Adaptive Misrecognition in Conversational Speech" filed on August 10, 2005 and issued on November 17, 2009 in its entirety.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					Specification: 2:43-26; 3:53-4:9; 4:10-44; 4:63-5:42; 6:31-51; 8:6-30; 8:47-63; 8:64-9:30; 9:59-10:19; 11:2-34; 11:35-46; 11:47-12:8; 12:9-32; 12:33-59; 12:60-13:23; 13:51-14:15; 17:8-41; 17:56-18:4; 18:5-19:8; Figs. 2-3; cls. 1-6 and 11-16. File History: • Non-Final Rejection dated August 25, 2014. **<u>'703 Patent</u>** Specification: 4:7-23; 7:60-8:13; 8:43-54; 11:8-27; 12:34-46; 12:47-61; 18:28-39; 18:40-52; Figs. 1-3; cls. 1, 8-9, 15, 21-22, 25, and 28-30. File History: • Amendment and Remarks dated December 21, 2016.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
					'176 Patent Specification: 2:19-42; 3:52-65; 4:17-44; 6:38-65; 7:32-57; 7:58-8:6; 8:44-9:2; 9:3-28; 9:29-45; 9:46-10:9; Figs. 1-3; cls. 1, 14, 27, and 40. File History: • Amendment and Remarks dated February 17, 2010. **'536 Patent** Specification: 2:43-67; 4:42-5:3; 5:4-37; 5:55-6:3; 6:66-7:26; 7:60-8:18; 8:19-33; 9:4-29; 9:30-55; 10:6-36; 11:38-50; 11:51-62; Figs. 1-3; cl. 3.
4.	"identifying . . . roles associated with the user and one or more other participants" '681 patent, claims 5, 17, 29	No construction necessary: "identifying . . . roles associated with the user or one or more other participants"	'681 patent at 5:31–47, 14:31–15:35. '681 patent file history at: 6/16/2010 Office Action; 9/2/2010 Response to Non-final Office Action; 11/1/2010 Office Action; 1/21/2011 Reply and Amendment; 8/15/2011 Notice of Allowance, IPR2020-01367 at	Indefinite	**'681 Patent** Specification: 5:31-47; 14:31-60; 14:61-15:35; Fig. 3; cls. 5, 17, and 29.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
			Petition pp. 6, 34–36, Ex. 1002 ¶¶ 140–144, 150, 153, Ex. 1003, Ex. 1011.		
5.	"classifying one or more of the utterance or the current conversation into a conversation type" '681 patent, claims 5, 7-8, 17, 19-20, 29, 31-32	No construction necessary: "classifying one or more of the utterance or the current conversations into a conversation type"	'681 patent at 5:31–47, 14:31–54, 14:61-15:54. '681 patent file history at: 6/16/2010 Office Action; 9/2/2010 Response to Non-final Office Action; 11/1/2010 Office Action; 1/21/2011 Reply and Amendment; 8/15/2011 Notice of Allowance, IPR2020-01367 at Petition pp. 36–40, 51–52, Ex. 1002 ¶¶ 145–155, 180–185, Ex. 1003, Ex. 1011.	Indefinite	**'681 Patent** Specification: 5:31-47; 5:48-60; 14:31-15:10; 15:35-54; Fig. 3; cls. 5, 17, and 29.
6.	"identifying . . . information allocation among the user and one or more other participants" '681 patent, claims 5, 17, 29	No construction necessary: "identifying . . . information allocation among the user and one or more other participants"	'681 patent at 1:12–55, 5:31–47, 14:31–15:36. '681 patent file history at: 6/16/2010 Office Action; 9/2/2010 Response to Non-final Office Action; 11/1/2010 Office Action; 1/21/2011 Reply and Amendment; 8/15/2011 Notice of Allowance; IPR2020-01367 at Petition pp. 6, 34–38, Ex. 1002 ¶¶	Indefinite	**'681 Patent** Specification: 5:31-47; 14:31-60; 14:61-15:35; cls. 5, 17, and 29.

	Claim Term	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence[4]	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
			34, 138, 140–147, 150–154, Ex. 1003, Ex. 1011.		