

Paper No. ____

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,
Petitioner,

v.

UNIVERSAL ELECTRONICS INC.,
Patent Owner.

Case No. IPR2022-01289
Patent No. 9,847,083

NOTICE OF FILING PETITIONER'S DEMONSTRATIVE EXHIBITS

LISTING OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 9,847,083 (“’083”)
1002	File History of U.S. Application No. 13/298,629, which led to U.S. Patent No. 9,847,083
1003	Declaration of Mr. Bruce McNair (“McNair”)
1004	U.S. Patent No. 8,995,981 (“Aginsky”)
1005	U.S. Patent No. 6,839,670 (“Stammler”)
1006	U.S. Patent Application Publication No. US 2012/0271639 (“Hanson”)
1007	U.S. Patent Application Publication No. US 2003/0103088 (“Dresti”)
1008	U.S. Provisional Patent Application No. 61/422,537 (“Aginsky Provisional”)
1009	Claim Chart Showing <i>Aginsky</i> is Entitled to the Priority Date of <i>Aginsky Provisional</i>
1010	Roberto Pieraccini, <i>From AUDREY to Siri. Is speech recognition a solved problem?</i> (presentation), International Science Institute at Berkeley (archived Jun. 26, 2013) (accessed Apr. 6, 2022), available at https://web.archive.org/web/20130626012955/https://www1.icsi.berkeley.edu/pubs/speech/audreytosiri12.pdf
1011	<i>Pioneering Speech Recognition</i> , IBM (accessed Apr. 6, 2022), available at https://www.ibm.com/ibm/history/ibm100/us/en/icons/speechreco/transform/
1012	B.H. Juang & Lawrence R. Rabiner, <i>Speech Recognition, Automatic: History</i> , in <i>ENCYCLOPEDIA OF LANGUAGE & LINGUISTICS</i> 806-819 (2d ed. 2006)
1013	<i>History of Speech & Voice Recognition and Transcription Software</i> , Dragon Naturally Speaking (archived Mar. 19, 2005) (accessed Apr. 6, 2022), available at https://web.archive.org/web/20050319025603/http://www.dragon-medical-transcription.com/history_speech_recognition.html
1014	Xuedong Huang & Li Deng, <i>An Overview of Modern Speech Recognition</i> , in <i>HANDBOOK OF NATURAL LANGUAGE PROCESSING</i> 339, 339-363 (2d ed. 2010) (accessed June 12, 2022), available at https://www.microsoft.com/en-us/research/wp-content/uploads/2016/02/Book-Chap-HuangDeng2010.pdf
1015	[Intentionally omitted]

Exhibit	Description
1016	<i>Lecture 12: An Overview of Speech Recognition</i> , available at https://web.archive.org/web/20210423171339/https://www.cs.rochester.edu/u/james/CSC248/Lec12.pdf
1017	Scanlon et al., Using Broad Phonetic Group Experts for Improved Speech Recognition, IEEE TRANSACTIONS ON AUDIO SPEECH & LANGUAGE PROCESSING (Mar. 2007), available at https://academiccommons.columbia.edu/doi/10.7916/D84F219Z/download
1018	Latanya Sweeney & Patrick Thompson, Speech Perception Using Real-Time Phoneme Detection: The BeBe System (1997), available at https://web.archive.org/web/20100712042339/http://publications.csail.mit.edu/lcs/pubs/ps/MIT-LCS-TR-736.ps
1019	Cheng et al., Voice-to-Phoneme Conversion Algorithms for Voice-Tag Applications in Embedded Platforms, EURASIP J. ON AUDIO SPEECH & MUSIC PROCESSING (2008), available at https://asmp-urasipjournals.springeropen.com/articles/10.1155/2008/568737
1020	U.S. Patent Application Publication No. 2008/0059193 (“Huang-193”)
1021	U.S. Patent No. 6,584,439 (“Geilhufe”)
1022	U.S. Patent No. 7,689,417 (“Huang-417”)
1023	U.S. Patent No. 7,944,370 (“Harris”)
1024	U.S. Patent No. 5,247,580 (“Kimura”)
1025	International Patent Publication No. WO2008096944 (“Lee”)
1026	U.S. Patent No. 6,397,186 (“Bush”)
1027	U.S. Patent Application Publication No. 2006/0235701 (“Cane”)
1028	U.S. Patent Application Publication No. US 2006/0041655 (“Holloway”)
1029	U.S. Patent Application Publication No. US 2009/0254778 (“Huang-778”)
1030	U.S. Patent Application Publication No. US 2005/0216606 (“Hayes”)
1031	European Patent No. 1,209,661 (“Hayes-661”)
1032	U.S. Patent No. 6,748,361 (“Comerford”)
1033	U.S. Patent Application Publication No. 2002/0095286 (“Ross”)
1034	U.S. Patent Application Publication No. 2008/0133244 (“Bodin”)
1035	U.S. Patent Application Publication No. US 2007/0052549 (“Le”)
1036	U.S. Patent No. 7,259,710 (“Kisliakov”)
1037	U.S. Patent No. 7,046,161 (“Hayes-161”)

Exhibit	Description
1038	GROTH ET AL., NETWORK+ STUDY GUIDE DELUXE EDITION (2d ed. 2005), available at https://www.google.com/books/edition/Network+_Study_Guide/eldC-w9SN-0C?hl=en&gbpv=1
1039	Declaration of Gordon MacPherson in support of the public accessibility of: Scanlon et al., Using Broad Phonetic Group Experts for Improved Speech Recognition, IEEE TRANSACTIONS ON AUDIO SPEECH & LANGUAGE PROCESSING (Mar. 2007), available at https://academiccommons.columbia.edu/doi/10.7916/D84F219Z/download
1040	Affidavit of Nathaniel E Frank-White
1041	Declaration of Dr. Gretchen Hoffman
1042	Declaration of Dara Del Rosario
1043	Transcript of September 21, 2023 Deposition of Dr. Michael Scordilis
1044	U.S. Patent No. 4,623,887 (“Welles”)
1045	Redline comparison of Patent Owner Response and Scordilis Declaration
1046	Petitioner’s Demonstrative Exhibits

Pursuant to 37 CFR § 42.6(e)(4)(ii), and the Board's Hearing Order, Paper 23, Petitioner herewith submits the following Exhibit:

<u>Exhibit</u>	<u>Description</u>
1046	Petitioner's Demonstrative Exhibits

Respectfully submitted,
Roku, Inc.

Date: January 9, 2024

/Scott A. McKeown /

Scott A. McKeown, Reg. No. 42,866
WOLF, GREENFIELD & SACKS, P.C.
601 Massachusetts Avenue, NW
Washington, DC 20001

CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6 (E)(4)

I certify that on January 9, 2024, I will cause a copy of the foregoing document, including any exhibits filed therewith, to be served via electronic mail, as previously consented to by Patent Owner, upon the following:

James J. Lukas, Jr.
Gary Jarosik
Benjamin P. Gilford
Callie J. Sand
Olivia C. Mathews
S. Benjamin Pleune
Thomas W. Davison
Ryan W. Koppelman

lukasj@gtlaw.com
jarosikg@gtlaw.com
gilfordb@gtlaw.com
sandc@gtlaw.com
olivia.mathews@gtlaw.com
ben.pleune@alston.com
tom.davison@alston.com
ryan.koppelman@alston.com

Date: January 9, 2024

/MacAulay Rush/
MacAulay Rush
Paralegal
WOLF, GREENFIELD & SACKS, P.C.