

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KRISP TECHNOLOGIES, INC.,
Petitioner

v.

Sanas.ai Inc.,
Patent Owner

Inter Partes Review Case No. IPR2026-00272
U.S. Patent No. 11,948,550

PETITION'S UPDATED EXHIBIT LIST

APPENDIX OF EXHIBITS

Exhibit	Description
Exhibit 1001	U.S. Patent No. 11,948,550 (“’550 Patent”)
Exhibit 1002	Prosecution History for the 11,948,550 Patent (“’550 File History”)
Exhibit 1003	Declaration of Christopher Schmandt
Exhibit 1004	U.S. Patent Application Publication No. 2023/0223006 to Fan et al. (“ <i>Fan</i> ”)
Exhibit 1005	Guanlong Zhao, Sinem Son Saat, Alif Silpachai, Ivana Lucic, Evgeny Chukharev-Hudilainen, John Levis, and Ricardo Gutierrez-Osuna, <i>L2-ARCTIC: A Non-Native English Speech Corpus</i> , Interspeech (2018) (“ <i>Son Saat</i> ”)
Exhibit 1006	Linsen Loots and Thomas Niesler, <i>Automatic conversion between pronunciations of different English Accents</i> , Speech Communication 53 (2011) 75–84 (“ <i>Loots</i> ”)
Exhibit 1007	U.S. Patent Application No. 2013/0030789 to Dalce (“ <i>Dalce</i> ”)
Exhibit 1008	U.S. Patent Publication No. 2020/0193971 to Feinauer et al. (“ <i>Feinauer</i> ”)
Exhibit 1009	Guanlong Zhao and Ricardo Gutierrez-Osuna, <i>Using Phonetic Posteriorgram Based Frame Pairing for Segmental Accent Conversion</i> , IEEE/ACM Transactions on Audio, Speech, and Language Processing (Volume: 27, Issue: 10, October 2019) (“ <i>Osuna</i> ”)
Exhibit 1010	Declaration of June Munford (“ <i>Munford</i> ”)
Exhibit 1011	Priority Chinese Patent Publication No. 202010996501.5 to Fan et al. and Certified English Translation.
Exhibit 1012	Excerpts of the Prosecution History for the U.S. Patent Application Publication No. 2023/0223006 to Fan et al. (“ <i>FanHistory</i> ”)
Exhibit 1013	Arlie Coles, <i>Forced Phonetic Alignment Using Deep Neural Networks</i> , School of Computer Science, McGill University (April 16, 2018) (“ <i>Coles</i> ”)
Exhibit 1014	Micheal McAuliffe, Michaela Socolof, Sarah Mihuc, Micheal Wagner and Morgan Sonderegger, <i>Montreal Forced Aligner: trainable test-speech alignment using Kaldi</i> , Interspeech 2017, 498-502 (“ <i>McAuliffe</i> ”)

Exhibit 1015	Mehrayar Mohri, Afshin Rostamizadeh and Ameet Talwalkar, <i>Foundations of Machine Learning second edition</i> , The MIT Press, 2018 (“ <i>Mohri</i> ”)
Exhibit 1016	Priority PCT 2022/057759 to Fan et al. and Certified English Translation
Exhibit 1017	Su-Hyun Han, Ko Woon Kim, SangYun Kim and Young Chul Youn, <i>Artificial Neural Network: Understanding the Basic Concepts without Mathematics</i> , Dement Neurocognitive Disord. 2018 Sep;17(3):83-89 (“ <i>Han</i> ”)
Exhibit 1018	Jason Brownlee, <i>Difference Between Algorithm and Model in Machine Learning</i> (August 19, 2020), https://machinelearningmastery.com/difference-between-algorithm-and-model-in-machine-learning/ (“ <i>Brownlee</i> ”)
Exhibit 1019	Maurya Vijayaramachandran, and Siddique Afraaz N, <i>Impact of Hidden Layer in Artificial Neural Networks</i> , IOSR Journal of Engineering, Vol. 10, Issue 11, November 2020, Series -I, 33-38 (“ <i>Siddique</i> ”)
Exhibit 1020	Maad M. Mijwel, Adam Esen and Aysar Shamil, <i>Overview of Neural Networks</i> , Babylonian Journal of Machine Learning, 1:2, April 2019 (“ <i>Mijwel</i> ”)
Exhibit 1021	Caroline Wiltshire, <i>Chapter 13 English Sounds in Context: The Pronunciation of Phonemes and Morphemes</i> , in <i>Applied Linguistics for Teachers of Culturally and Linguistically Diverse Learners</i> , 303-324, (2019) (“ <i>Wiltshire</i> ”)
Exhibit 1022	XiuSong Sun, Qun Yang, ShaoHan Liu and Xin Yuan, <i>Improving Low-Resource Speech Recognition Based on Improved NN-HMM Structures</i> , IEEE Access, vol. 8, pp. 73005-73014, (2020) (“ <i>Yang</i> ”)
Exhibit 1023	Nina Kazanina, Jeffery S. Bowers and William Idsardi, <i>Phonemes: Lexical access and beyond</i> , Psychon Bull Rev 25, 560–585, (2018) (“ <i>Kazanina</i> ”)
Exhibit 1024	Daniel Jurafsky and James H. Martin, <i>Speech and Language Processing, Chapter 27 Phonetics</i> , (2019) (“ <i>Jurafsky</i> ”)
Exhibit 1025	Christopher Schmandt, <i>Voice Communication with Computers Conversational Systems</i> , Van Nostrand Reinhold, (1994), (“ <i>Schmandt</i> ”)
Exhibit 1026	U.S. Patent No. 5,502,790 to Jie Yi (“ <i>Yi</i> ”)
Exhibit 1027	Tianze Shi, Shun Kasahara, Teeraphon Pongkittiphan, Nobuaki Minematsu, Daisuke Saito and Keikichi Hirose, <i>A</i>

	<i>Measure of Phonetic Similarity to Quantify Pronunciation Variation by Using ASR Technology</i> , International Congress of Phonetic Sciences, (2015) (“ <i>Shi</i> ”)
Exhibit 1028	Helene Francois and Olivier Boeffard, <i>Design of an optimal continuous speech database for text-to-speech synthesis considered as a Set Covering Problem</i> , Proc. 7th European Conference on Speech Communication and Technology (Eurospeech 2001), 829-832 (“ <i>Francois</i> ”)
Exhibit 1029	Lifa Sun, Kun Li, Hao Wang, Shiyin Kang and Helen Meng, <i>Phonetic Posteriorgrams for Many-to-One Voice Conversion Without Parallel Data Training</i> , 2016 IEEE International Conference on Multimedia and Expo (ICME), pp. 1-6, (2016) (“ <i>Sun</i> ”)
Exhibit 1030	Guanlong Zhao, Shaojin Ding and Ricardo Gutierrez-Osuna, <i>Converting Foreign Accent Speech Without a Reference</i> , IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 29, pp. 2367-2381, (2021) (“ <i>Zhao</i> ”)
Exhibit 1031	Berrak Sisman, Mingyang Zhang and Haizhou Li, <i>Group Sparse Representation with WaveNet Vocoder Adaptation for Spectrum and Prosody Conversion</i> , IEEE/ACM Transactions on Audio, Speech, and Language Processing, 27, (2019). (“ <i>Sisman</i> ”)
Exhibit 1032	David Crystal, <i>A Dictionary of Linguistics and Phonetics, Sixth Edition</i> , Blackwell Publishing, (2008) (“ <i>Crystal</i> ”)
Exhibit 1033	Walter Wolfram, <i>Everyone Has an Accent</i> , Southern Poverty Law Center (2000), https://archive.learningforjustice.org/magazine/fall-2000/everyone-has-an-accent (“ <i>Wolfram</i> ”)
Exhibit 1034	U.S. Patent Application Publication No. 2022/0122579 to Biadsy et al. (“ <i>Biadsy</i> ”)
Exhibit 1035	Shaojin Ding, Guanlong Zhao and Ricardo Gutierrez-Osuna, <i>Accentron: Foreign Accent Conversion to Arbitrary Non-Native Speakers Using Zero-Shot Learning</i> , Journal of LATEX Templates, (2021) (“ <i>Accentron</i> ”)
Exhibit 1036	Leland Roberts, <i>Understanding the Mel Spectrogram</i> , Medium, (2020), https://medium.com/analytics-vidhya/understanding-the-mel-spectrogram-fca2afa2ce53 (“ <i>Roberts</i> ”)

Exhibit 1037	Eleanor Chodroff, <i>Corpus Phonetics Tutorial</i> , arXiv 1811.05553, (2018) (“ <i>Chodroff</i> ”)
Exhibit 1038	Amrianto Saragih, <i>4 Methods to Boost the Accuracy of a Neural Network Model</i> , Medium, (2019) https://medium.com/@amrianto.saragih/4-methods-to-boost-the-accuracy-of-a-neural-network-model-bb694e650a69 (“ <i>Saragih</i> ”)
Exhibit 1039	Wei Zhang, <i>Alternation of [n] and [l] in Sichuan Dialect, Standard Mandarin and English: A Single-Case Study</i> , Leeds Working Papers in Linguistics and Phonetics, Issue 12, (2007) (“ <i>Zhang</i> ”)
Exhibit 1040	G. Ayorkor Mills-Tettey and David Kotz, <i>Mobile Voice Over IP (MVOIP): An Application-level Protocol for Call Hand-off in Real Time Applications</i> , Dartmouth Scholarship, 3453, (2002) (“ <i>Ayorkor</i> ”)
Exhibit 1041	Noriko Umeda, <i>Consonant duration in American English</i> , J. Acoust. Soc. Am. 61, 846–858 (1977) (“ <i>Umeda</i> ”)
Exhibit 1042	Noriko Umeda, <i>Vowel duration in American English</i> , J. Acoust. Soc. Am. 58, 434–445 (1975) (“ <i>UmedaVowels</i> ”)
Exhibit 1043	Songxiang Liu, Disong Wang, Yuewen Cao, Lifa Sun, Xixin Wu, Shiyin Kang, Zhiyong Wu, Xunying Liu, Dan Su, Dong Yu, and Helen Meng, <i>End-To-End Accent Conversion Without Using Native Utterances</i> , https://www1.se.cuhk.edu.hk/~hccl/publications/pub/ICASSP2020_e2eAC%20(1).pdf (2020) (“ <i>Liu</i> ”)
Exhibit 1044	Declaration of June Munford regarding Sonsaat (“ <i>Munford-Sonsaat</i> ”)
Exhibit 1045	Declaration of Mina Ching (“ <i>Ching</i> ”)
Exhibit 1046	Petitioner’s Stipulation

Dated: April 24, 2026

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CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.105

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on April 24, 2026, the foregoing *Petitioner's Updated Exhibit List with Exhibit* was served via electronic filing with the Board and via Electronic Mail on Patent Owner:

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