

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WAVES AUDIO, LTD
Petitioner

v.

ANDREA ELECTRONICS CORPORATION
Patent Owner

Case: IPR2016-00459

Patent 6,363,345

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 6,363,345**

TABLE OF CONTENTS

I.	MANDATORY NOTICES	6
II.	PAYMENT OF FEES	7
III.	STANDING	7
IV.	REQUEST TO HOLD CLAIMS 1, 2, 3, 12-14, 17, 21, 23, 25, 38 and 47 OF THE '345 PATENT UNPATENTABLE.....	8
	A. The Alleged Invention Of The '345 Patent	8
	B. Summary Of The Prosecution History Of The '345 Patent	9
V.	CLAIM CONSTRUCTION	10
	A. Broadest Reasonable Construction.....	10
	B. “frequency bins” (claims 1-4, 5, 9, 10, 12, 15, 16 18, 21-24, 38, 39- 42, 44 and 45).....	10
	C. “frequency spectrum generator” (claims 1 and 38).....	10
	D. “magnitude of the frequency bin” (claims 1-4, 5, 9, 10, 12, 15, 16 18, 21-24, 38, 39-42, 44 and 45).....	11
	E. “threshold detector/setting a threshold” (claims 1, 38 and dependent claims).....	11
	F. “detecting the position of.../detects the position of” (claims 1, 38 and dependent claims).....	11
	G. “noise estimation process” (claim 1 and dependent claims).....	11
	H. “subtractor for subtracting said noise elements/subtracting said noise elements” (claims 13 and 38).....	12
VI.	PRIOR ART TO THE '345 PATENT FORMING THE BASIS FOR THIS PETITION	12
	A. Prior Art Documents.....	12
	B. Summary Of Unpatentability Arguments	14

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 6,363,345

VII. GROUND FOR UNPATENTABILITY OF EACH CLAIM.....	17
A. Ground 1: Claims 1-3, 13 and 38 Are Unpatentable Under 35 U.S.C. § 102(e) As Being Anticipated By Higgins.	17
B. Ground 2: Claims 1-3, 12, 13, 21, 23 and 38 Are Unpatentable Under 35 U.S.C. § 102(b) As Being Anticipated By Hirsch.	24
C. Ground 3: Claims 1-3, 13, 14 and 38 are Unpatentable Under 35 U.S.C. § 102(b) As Being Anticipated by McAulay.	32
D. Ground 4: Claims 1-3. 13, 14, 21 and 23 are Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Arslan.	37
E. Ground 5: Claims 1 and 38 are Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins in View of Hirsch.	44
F. Ground 6: Claim 12 is Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Of Yang.	52
G. Ground 7: Claims 12 and 13 are Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Of Martin.	54
H. Ground 8: Claim 17 and 47 are Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Of Boll.	56
I. Ground 9: Claim 21 is Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Of Adams.	57
J. Ground 10: Claim 23 is Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Adams and further in view Of O'Hagan.	58
K. Ground 11: Claim 23 is Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Of Adams and further in view of Lindemann.	60
L. Ground 12: Claim 25 is Unpatentable Under 35 U.S.C. § 103(a) As Being Obvious Over Higgins or Hirsch In View Of Cezanne.	61
VIII. CONCLUSION	62

PETITIONER’S EXHIBIT LIST

Description	Exhibit #
U.S. Patent No. 6,363,345, “System, Method and Apparatus For Cancelling Noise” to Joseph Marash and Baruch Berdugo, issued on Mar. 26, 2002 (“345 Patent”)	1001
Prosecution History of Application No. 09/252,874 which issued as U.S. Patent No. 6,363,345	1002
Table 1 – List Of Each Challenged Claim Element Annotated With Its Claim Number and A Reference Letter	1003
Petitioner’s List of Related Litigation Matters And Patents at Issue	1004
Petitioner’s List of IPR Petitions and Challenged Patent Claims of the Andrea Patents	1005
U.S. Patent No. 6,266,633 (“Higgins”) filed in the United States on December 22, 1998	1006
H. G. Hirsch and C. Ehrlicher, “Noise estimation techniques for robust speech recognition,” Proc. IEEE Int. Conf. Acoustics, Speech, Signal Processing, vol. 1, pp. 153 -156, 1995 (“Hirsch”)	1007
McAulay and Malpass, “Speech Enhancement Using a Soft-Decision Noise Suppression Filter,” IEEE Transactions on Acoustics, Speech and Signal Processing, Vol. 28, No. 2, April 1980 (“McAulay”)	1008
U.S. Patent No. 5,706,395 (“Arslan”) was filed in the United States on April 19, 1995	1009
U.S. Patent No. 5,432,859 (“Yang”) was published in the United States in 1995	1010
Rainer Martin, “An Efficient Algorithm to Estimate the Instantaneous SNR of Speech Signals,” Proc. Eurospeech, pp. 1093-96, 1993 (“Martin”)	1011

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 6,363,345

Steven F. Boll, "Suppression of Acoustic Noise in Speech Using Spectral Subtraction," IEEE Transactions on Acoustics, Speech, and Signal Processing, Vol. ASSP-27, No. 2, April 1979 ("Boll")	1012
Adams and Brady, "Magnitude Approximations for Microprocessor Implementation," IEEE Micro, Vol. 3, No. 5, October 1983 ("Adams") was published in the United States in 1983	1013
U.S. Patent No. 5,581,658 ("O'Hagan") was published in the United States on December 3, 1996	1014
U.S. Patent No. 5,651,071, ("Lindemann") "Noise Reduction System For Binaural Hearing Aid," to Eric Lindemann and John Laurence Melanson, issued on Jul. 22, 1997	1015
U.S. Patent No. 5,473,701 ("Cezanne") (Ex. 108) was published in the United States on December 5, 1995	1016
Declaration of Bertand Hochwald ("Hochwald Decl.")	1017

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