

By: William D. Belanger
Pepper Hamilton LLP
125 High Street
19th Floor, High Street Tower
Boston, MA 02110
(617) 204-5100 (telephone)
(617) 204-5150 (facsimile)
belangerw@pepperlaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner

v.

ANDREA ELECTRONICS CORPORATION
Patent Owner

Case No. IPR2017-00626
U.S. Patent 6,363,345

PATENT OWNER'S RESPONSE

TABLE OF CONTENTS

	Page(s)
Table of Authorities	iii
Table of Exhibits	
I. INTRODUCTION	3
A. Related Proceedings	3
B. Institution Decision	4
II. OVERVIEW OF THE '345 PATENT	6
III. CLAIM CONSTRUCTION AND LEVEL OF ORDINARY SKILL IN THE ART	7
A. A Person Having Ordinary Skill In The Art	8
B. Claim Construction.....	8
IV. CLAIMS 4-20, 22, 24-25, and 39-47 ARE NOT OBVIOUS OVER <u>HIRSCH</u> IN VIEW OF ANY SECONDARY REFERENCE	12
A. Grounds Based on the Combination of <u>Hirsch</u> and <u>Martin</u>	13
1. Summary of <u>Hirsch</u>	13
2. Summary of <u>Martin</u>	15
a. <u>Martin's</u> Techniques Allegedly Reduce Delay	19
b. The Role of Subwindows in <u>Martin's</u> Algorithm.....	21
c. <u>Martin's</u> SNR Computation.....	22
3. Claims 4-11 and 39-42 are not obvious over <u>Hirsch</u> and <u>Martin</u>	23
a. The combination of <u>Hirsch</u> and <u>Martin</u> does not teach or disclose a “current minimum” and a “future minimum”	23
(1) P_{Mmin} is Not a “Future Minimum” in the Rapidly Varying Noise Power Case (<i>i.e.</i> , for monotonically increasing signals).....	24
(2) There is No “Future Minimum” in the Slowly Varying Noise Power Case (<i>i.e.</i> , for non-monotonically increasing signals)	26
a) The Alleged “Current Minimum,” $P_n(i)$ is Not Set to the Alleged “Future Minimum,” P_{Mmin} “Periodically”	28

b.	The Combination of <u>Hirsch</u> and <u>Martin</u> Fails to disclose the “Current Magnitude” of Claim 10	30
4.	Method Claims	33
5.	A Skilled Artisan Would Not Have Been Motivated To Combine <u>Hirsch</u> And <u>Martin</u>	33
a.	<u>Hirsch</u> ’s Citation Of <u>Martin</u> Would Not Have Motivated A Skilled Artisan To Combine The References.....	34
b.	Apple’s Assertion That <u>Hirsch</u> ’s Performance In Non-Stationary Noise Environments Could Be Improved By <u>Martin</u> ’s Algorithm Lacks Rational Underpinnings.....	36
c.	Apple Fails To Explain How A Skilled Artisan Would Have Combined Elements From <u>Hirsch</u> And <u>Martin</u> In The Manner Arranged In The Claims	40
6.	Apple’s Validity Positions are Based on Dr. Hochwald’s Incomplete Analysis and His Incorrect Understanding of the <u>Martin</u> System	43
a.	Apple’s Attempt to Eliminate Subwindows Is Contrary to <u>Martin</u> ’s Express Disclosure	44
b.	Dr. Hochwald Failed to Analyze the Monotonic Decision Block.....	46
c.	Dr. Hochwald Has an Erroneous Understanding of the Sample Counter and the Update of the Min_Vec Array	47
B.	Grounds Based On The Combination Of <u>Hirsch</u> And The Other Relied-Upon Secondary References.....	51
1.	Summary Of The Additional Relied-Upon Secondary References	51
2.	Apple Fails to Establish That A Skilled Artisan Would Have Been Motivated to Combine <u>Hirsch</u> and <u>Boll</u>	52
3.	Ground Based on the Combination of <u>Hirsch</u> , <u>Martin</u> , and <u>Boll</u>	54
4.	Ground Based on the Combination of <u>Hirsch</u> , <u>Boll</u> , and <u>Arslan</u>	56
5.	Grounds Based on the Combinations of <u>Hirsch</u> and <u>Uesugi</u> , and <u>Hirsch</u> , <u>Martin</u> , and <u>Uesugi</u>	59
V.	CONCLUSION.....	61

TABLE OF AUTHORITIES

	Page(s)
CASES	
<i>CFMT, Inc. v. Yieldup Int’l Corp.</i> , 349 F.3d 1333 (Fed. Cir. 2003).....	10
<i>Cuozzo Speech Techs., LLC v. Lee</i> , 136 S. Ct. 2131 (2016).....	6
<i>Dish Network Corp. v. Customedia Tech., LLC</i> , IPR2017-00936, Paper 13 (Aug. 24, 2017)	29
<i>Intelligent Bio-Systems, Inc. v. Illumina Cambridge, Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	10, 11
<i>In re Kahn</i> , 441 F.3d 977 (Fed. Cir. 2006)	32
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	10, 39
<i>LG Display, Ltd. v. Innovative Display Technologies LLC.</i> , IPR2014-01094, Paper 10 (Jan. 13, 2015)	59
<i>PersonalWeb Techs., LLC v. Apple, Inc.</i> , 848 F.3d 987 (Fed. Cir. 2017)	51, 55, 57
<i>In re: Smith Int’l, Inc.</i> , 2017 U.S. App. LEXIS 18526 (Fed. Cir. Sept. 26, 2017)	8
<i>Unique Concepts, Inc. v. Brown</i> , 939 F.2d 1558 (Fed. Cir. 1991)	29
<i>WMS Gaming, Inc. v. Int’l Game Tech.</i> , 184 F.3d 1339 (Fed. Cir. 1999).....	10
STATUTES	
35 U.S.C. §311-319.....	1
OTHER AUTHORITIES	
37 C.F.R. § 42.65(a).....	59
37 C.F.R. § 42.120	1

PATENT OWNER'S TABLE OF EXHIBITS

Exhibit No.	Exhibit Description
2001	Reserved
2002	Declaration of Scott Douglas, Ph.D.
2003	Notice of Initial Determination on Violation of Section 337 from Inv. No. 337-TA-1026
2004	Reserved
2005	Bertrand Hochwald Deposition Transcript

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.