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 OBSERVATIONS REGARDING CROSS-EXAMINATION OF PETITIONER'S REPLY DECLARANT

PATENT OWNER'S TABLE OF EXHIBITS

Previously Filed

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	Transcript from First Deposition of Dr. Bertrand Hochwald dated October 12, 2017
2006	Affidavit of Bradley T. Lennie, Esq.

New

Exhibit No.	Exhibit Description
2007	Transcript from Second Deposition of Dr. Bertrand Hochwald dated March 13, 2018

PATENT OWNER'S OBSERVATIONS REGARDING CROSS-EXAMINATION OF PETITIONER'S REPLY DECLARANT

As authorized by the Board's Scheduling Order dated July 24, 2017 (Paper 8), Andrea Electronics Corporation ("Patent Owner") respectfully submits this Observations on Cross-Examination of Petitioner's Reply Declarant, Bertrand Hochwald, Ph.D., who was deposed on March 13, 2018. In these observations, reference is made by page and line number to the transcript of such deposition, filed as Exhibit 2007 in this matter.

1. Observation #1

In Exhibit 2007, page 17, lines 8-11, Dr. Hochwald testified that in the prior art reference, Rainer Martin, "An Efficient Algorithm to Estimate the Instantaneous SNR of Speech Signals," Proc. Eurospeech, pp. 1093-96, 1993, (Ex. 1006, "Martin"), the value of W in Martin's algorithm corresponds to the number of W windows, or sub-windows.

This testimony is relevant to Dr. Hochwald's previous testimony that it is his opinion that "Martin's Sub-Windows Are an Optional Feature" of Martin's algorithm. *See* Ex. 1023 at ¶¶4-13; *see also* Pet. Reply at 5-8.

2. Observation #2

In Exhibit 2007, page 20, line 23 - page 21, line 23 and page 22, lines 7-24, Dr. Hochwald testified that Martin's algorithm decides whether signal samples

from a sub-window are of "monotonically increasing power" through a determination whether the values inside the "min_vec" vector are increasing.

This testimony is relevant to Dr. Hochwald's previous testimony that it is his opinion that "Martin's Sub-Windows Are an Optional Feature" of Martin's algorithm. *See* Ex. 1023 at ¶¶4-13; *see also* Pet. Reply at 5-8.

3. Observation #3

In Exhibit 2007, page 23, line 24 - page 24, line 8 and page 24, line 18 - page 25, line 5, Dr. Hochwald testified that when W is set equal to 1 in Martin's algorithm, there is only one min_vec value in the min_vec vector and that in such a case the algorithm cannot determine whether the min_vec values are monotonically increasing.

This testimony is relevant to Dr. Hochwald's previous testimony that it is his opinion that "Martin's Sub-Windows Are an Optional Feature" of Martin's algorithm. *See* Ex. 1023 at ¶¶4-13; *see also* Pet. Reply at 5-8.

4. Observation #4

In Exhibit 2007, page 25, line 16 - page 26, line 1 and page 32, lines 5-12, Dr. Hochwald testified that when a person sets W equal to 1 in Martin's algorithm they concluded that a determination of whether the values inside the "min_vec" vector are increasing or not is not important and not material.

This testimony is relevant to Dr. Hochwald's previous testimony that it is his opinion that "Martin's Sub-Windows Are an Optional Feature" of Martin's algorithm. *See* Ex. 1023 at ¶¶4-13; *see also* Pet. Reply at 5-8.

5. Observation #5

In Exhibit 2007, page 44, line 16 - page 45, line 2, Dr. Hochwald testified that the Martin reference discloses that if the minimum power of the last W windows with M samples each is monotonically increasing, the algorithm decides on rapid noise power variation.

This testimony is relevant to Dr. Hochwald's previous testimony that it is his opinion that "Martin's Sub-Windows Are an Optional Feature" of Martin's algorithm. *See* Ex. 1023 at ¶¶4-13; *see also* Pet. Reply at 5-8.

6. Observation #6

In Exhibit 2007, page 45, lines 3-7, Dr. Hochwald testified that the Martin reference's disclosure of the use of "W windows," with "windows" plural, is consistent with the step of his algorithm where a determination is made whether or not the signal power is monotonically increasing within a given window W.

This testimony is relevant to Dr. Hochwald's previous testimony that it is his opinion that "Martin's Sub-Windows Are an Optional Feature" of Martin's algorithm. *See* Ex. 1023 at ¶¶4-13; *see also* Pet. Reply at 5-8.

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