1   UNITED STATES PATENT AND TRADEMARK OFFICE

2   ----------------------------

3   BEFORE THE PATENT TRIAL AND APPEAL BOARD

4   ----------------------------

5   APPLE INC.

6   Petitioner

7   v.

8   ANDREA ELECTRONICS CORPORATION

9   Patent Owner

10   ----------------------------

11   Case No. IPR2017-00626

12   U.S. Patent No. 6,363,345

13

14

15   DEPOSITION OF BERTRAND HOCHWALD, PH.D.

16   Washington, D.C.

17   Tuesday, March 13, 2018

18   10:14 a.m.

19

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21

22   Job No.: BO-166003

23   Pages 1 - 79

24   Reported By: Joan V. Cain

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 1          Deposition of BERTRAND HOCHWALD, PH.D., held

 2   at the law offices of:

 3

 4              SIDLEY AUSTIN, LLP

 5              1501 K Street, Northwest

 6              Washington, D.C. 20005

 7              (202) 736-8000

 8

 9        Pursuant to Notice, before Joan V. Cain,

10   Court Reporter and Notary Public in and for the

11   District of Columbia.

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 1                 A P P E A R A N C E S

 2


 3   ON BEHALF OF THE PETITIONER:

 4        THOMAS A. BROUGHAN, III, ESQUIRE

 5        SIDLEY AUSTIN LLP

 6        1501 K Street, Northwest

 7        Washington, D.C. 20005

 8        Telephone: (202) 736-8000

 9        E-mail:  tbroughan@sidley.com

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11   ON BEHALF OF THE PATENT OWNER:

12        BRADLEY T. LENNIE, ESQUIRE

13        PEPPER HAMILTON LLP

14        600 Fourteenth Street, Northwest

15        Washington, D.C. 20005

16        Telephone: (202) 220-1200

17        E-mail:  lennieb@pepperlaw.com

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 1                    C O N T E N T S

 2   EXAMINATION OF BERTRAND HOCHWALD, PH.D.        PAGE

 3    By Mr. Lennie                                   5

 4

 5                    E X H I B I T S

 6             (Attached to the Transcript.)

 7   DEPOSITION EXHIBITS                            PAGE

 8    EXHIBIT 1    Reply Declaration of              5

 9                 Bertrand Hochwald Regarding

10                 U.S. Patent 6,363,345,

11                 2/7/18

12    EXHIBIT 2    An Efficient Algorithm to        14

13                 Estimate the Instantaneous

14                 SNR of Speech Signals by

15                 Rainier Martin

16    EXHIBIT 3    Figure 2 from An Efficient        20

17                 Algorithm to Estimate the

18                 Instantaneous SNR of Speech

19                 Signals by Rainier Martin

20

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 1                  P R O C E E D I N G S

 2                  BERTRAND HOCHWALD, PH.D.

 3    having been duly sworn under penalties of perjury by

 4    the Notary Public, was examined and did testify as

 5    follows:

 6        EXAMINATION BY COUNSEL FOR THE PATENT OWNER

 7    BY MR. LENNIE:

 8        Q    Good morning, Dr. Hochwald.

 9        A    Good morning.

10        Q    Let's start off by just introducing your

11    declaration that you prepared in connection with the

12    626 IPR.

13        A    I have a clean copy here if --

14        Q    I need to mark it, so I'll give you one

15    that's marked, and we can use those.

16            MR. LENNIE:  Here's one for Tom.

17            MR. BROUGHAN:  Thank you.

18            MR. LENNIE:  Mark this as Exhibit 1.

19                (Deposition Exhibit 1 was marked for

20    identification.)

21    BY MR. LENNIE:

22        Q    So can you identify Exhibit 1 for the

23    record?

24        A    Yes.  It's my reply declaration.
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