Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner,

v.

ANDREA ELECTRONICS INC.,
Patent Owner.

Patent No. 6,363,345

Inter Partes Review No. IPR2017-00626

Petitioner's Response to Patent Owner's Observations on Cross Examination

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I. Introduction

In its Motion for Observations on Cross-Examination ("Observations"), Patent Owner Andrea repeats the incorrect argument from its Patent Owner's Response that the critical feature of Martin's noise floor algorithm is the use of sub-windows to determine whether noise power is monotonically increasing over a time window. In Reply, Petitioner Apple Inc. and its expert Dr. Hochwald explained that Andrea's interpretation of Martin was incorrect because Martin discloses that (i) the key feature of his algorithm is the tracking of the noise floor itself and (ii) the number of sub-windows is a configurable parameter that can be set to a value that removes sub-windows and obviates any distinction between a signal is monotonically increasing or not.

In its Observations, Andrea attempts to challenge those opinions by identifying deposition testimony where Dr. Hochwald stated that Martin discloses using sub-windows and that using sub-windows can provide benefits in some scenarios. But Dr. Hochwald already addressed that issue in his Reply declaration, where he explained that there are tradeoffs involved in choosing the parameters used in Martin's algorithm and that it was reasonable to set the sub-window size equal to the window size. Nothing in Andrea's Observations casts any doubt on Dr. Hochwald's opinions.

II. Response to Andrea's Observations

A. Response to Observation #1

Andrea states that the value of *W* in Martin corresponds to the number of sub-windows used in Martin's algorithm. This point is undisputed.

B. Response to Observation #2

Andrea states that Martin determines whether a signal is monotonically increasing by determining whether the P_{Mmin} values stored in *min_vec* are increasing over the window length (*e.g.*, if there are 4 sub-windows, Martin determines whether the past 4 P_{Mmin} values stored in *min_vec* are increasing). This point is undisputed.

C. Response to Observation #3

Andrea incorrectly states that Dr. Hochwald agreed that when *W*=1, there is only one P_{Mmin} value in *min_vec* and "in such a case the algorithm cannot determine whether the *min_vec* values are monotonically increasing." Obs. at 2.

Dr. Hochwald did not state that the algorithm could not determine whether the signal was monotonically increasing. Instead, he repeatedly explained that determination did not matter because, no matter what the determination was, Martin would set $P_n(i)$ equal to P_{Mmin}. Ex.2007 at 25:7-15 (explaining that whether the answer was yes or no "the same results hold, that $P_n(i)$ is equal to $_{PMmin}$."); *see id.* at 22:18-23:8 (it "becomes a trivial case when you have a vector of just one value…. if there's just one element, the issue of monotonically increasing is

trivially answered either yes or no, and it doesn't matter."), 26:3-28:9, 29:19-30:21, 34:16-23, 37:2-38:22, 45:15-46:2; *id.* at 24:20-17. Ex.2005 at 84:21-85:1 ("Q When W is equal to 1, the comparison in this monotonically increasing power block is comparing the same value to the same value.· Is that correct? A Again, it's one of those cases that you encounter all the time if you're taking the minimum of a list of values and that list happens to have only one value, it's that value itself. There's nothing unusual about that.").

D. Response to Observation #4

Andrea correctly observes that Dr. Hochwald explained that where the skilled person set *W* equal to 1, that person had determined the distinction between a signal that is monotonically increasing or not was immaterial. Dr. Hochwald's testimony is consistent with his declaration, where he explained that "Martin says the overall window length *L* must be large enough to bridge any peak of speech activity, but short enough to follow non-stationary noise variations. He does not make similar comments about the number of sub-windows *W*…. [Martin] specifies these values as configurable parameters which one in the art would understand how to set." Ex.1023, ¶5.

E. Response to Observation #5

Andrea incorrectly suggests that Dr. Hochwald agreed Martin discloses that the algorithm decides on "rapid noise power variation" ***only*** where the signal

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