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

IPR2017-00626

Petitioner's Opening Remand Brief

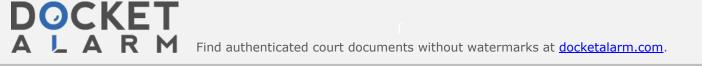


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I. Introduction

The sole question to be addressed in this remanded proceeding—whether claims 6 to 9 of the '345 Patent would have been obvious over Hirsch (Ex. 1005) and Martin (Ex. 1006)—has been substantially narrowed by prior events in this case. First, Andrea did not appeal the Board's finding that the apparatus described in Hirsch meets every requirement of claim 1 of the '345 Patent. Second, Andrea did not appeal the Board's determination that claim 25 was obvious in view of Hirsch and Martin, and now cannot dispute that a skilled person would have considered Hirsch and Martin together or that "techniques such as those shown in Hirsch and Martin are routinely combined." Final Written Decision (FWD) at 16; see also 949 F.3d 697, 703 (Fed. Cir. 2020) ("Hirsch refers to Martin as a 'known' approach 'to avoid the problems of speech pause detection and to estimate the noise characteristics just from a past segment of noisy speech."). The obviousness question thus distills down to a question of how Martin's sound floor algorithm works, and whether when integrated into Hirsch, the resulting device will meet the requirements of claims 6 to 9. The answer, based on the arguments and evidence in this record, is yes. The Board should find claims 6 to 9 unpatentable.

II. Procedural Background

A. Summary of the Claims at Issue

Claims 6-9 ultimately depend from claim 1, which defines "[a]n apparatus for canceling noise" by, *inter alia*, setting a threshold for each frequency bin using

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a noise estimation process and detecting whether each bin's magnitude is less than the corresponding threshold. Ex. 1001, 9:34-46. Claim 4 depends from claim 1 and specifies "...set[ting] the threshold for each frequency bin in accordance with a *current minimum value* of the magnitude of the corresponding frequency bin; said current minimum value being derived in accordance with a future minimum value of the magnitude of the corresponding frequency bin." Id., 9:54-60. Claim 5 adds that the "future minimum value is determined as the minimum value of the magnitude of the corresponding frequency bin within a predetermined period of time." Claim 6 depends from claim 5 and specifies that "said current minimum value is set to said future minimum value periodically."¹ Id., 9:65-67. Claims 7 and 8 depend from claim 6, and address updating of the future minimum and current minimum values, respectively, while claim 9 depends from claim 5, and addresses updating of the future minimum value.

B. Scope of Issues to Be Decided

The Board's remand order (Paper 28) specifies that briefing is limited to issues previously raised in the Response, Reply, or Observations on Cross. In those papers, Andrea addressed Apple's patentability challenges to claims 6-9 by contending that Hirsch and Martin did not teach an apparatus as defined in claims

¹ "Periodically" means a fixed interval of time. See 949 F.3d at 709.

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