

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

ANDREA ELECTRONICS CORP.,
Patent Owner.

Case IPR2017-00628
Patent 6,049,607

Before STEPHEN C. SIU, MICHAEL R. ZECHER, and
JEREMY M. PLENZLER, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

DECISION

Granting Institution of *Inter Partes* Review
35 U.S.C § 314(a) and 37 C.F.R. § 42.108

I. INTRODUCTION

Apple Inc. (“Petitioner”) requests *inter partes* review of claims 1 and 25 of U.S. Patent No. 6,049,607 (“the ’607 patent,” Ex. 1001) pursuant to 35

IPR2017-00628
Patent 6,049,607

U.S.C. §§ 311 *et seq.* Paper 1 (“Pet.”). Andrea Electronics Corp. (“Patent Owner”) did not file a preliminary response. Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Upon consideration of the Petition, we conclude the information presented therein shows there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1 and 25 of the ’607 patent.

A. *Related Matters*

We are informed that the ’607 patent is presently the subject of the following:

- District court actions: *Andrea v. Apple, Inc.*, Action No. 2-16-cv-05220; *Andrea v. Samsung Electronics Co.*, Action No. 2-16-cv-05217; *Andrea v. Hewlett-Packard Co.*, Action No. 2-15-cv-00208; *Andrea v. Dell Inc.*, Action No. 2-15-00209; *Andrea v. Acer Inc.*, Action No. 2-15-cv-00210; *Andrea v. Toshiba Corp.*, Action No. 2-15-cv-00211; *Andrea v. Lenovo Holding Co., Inc.*, Action No. 2-15-cv-00212; *Andrea v. ASUSTeK Computer Inc.*, Action No. 2-15-cv-00214; and *Andrea v. Realtek Semiconductor Corp.*, Action No. 2-15-cv-00215.
- Administrative proceedings before the International Trade Commission: 337-TA-1026, 337-TA-949, 337-TA-3053.
- Proceedings before the U.S. Patent and Trademark Office: Cases IPR2015-01393, IPR2016-00461, and IPR2016-00474.

See Pet. v-vii; Paper 4, 2.

B. The '607 Patent

The '607 patent describes echo-canceling in teleconferencing communications. Ex. 1001, 1:17–19.

C. Illustrative Claim

Independent claim 1, reproduced below, is illustrative of the challenged claims:

1. An interference canceling apparatus for canceling, from a target signal generated from a target source, an interference signal generated by an interference source, said apparatus comprising:
 - a main input for inputting said target signal;
 - a reference input for inputting said interference signal;
 - a beam splitter for beam-splitting said target signal into a plurality of band-limited target signals and beam splitting said interference signal into band-limited interference signals, wherein the amount and frequency of band-limited target signals equal the amount and frequency of band-limited interference signals, whereby for each band-limited target signal there is a corresponding band-limited interference signal;
 - an adaptive filter for adaptively filtering, each bandlimited interference signal from each corresponding band-limited target signal.

Id. at 10:10–27.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1 and 25 are unpatentable based on the following grounds (Pet. 5):

Reference(s)	Basis	Claims Challenged
Chu ¹	§ 102	1 and 25
Chu and Kellermann ²	§ 103	1 and 25

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning, as understood by a person of ordinary skill in the art, in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

At this juncture of the proceeding, we determine that it is not necessary to provide an express interpretation of any term recited in the challenged claims. *See, e.g., Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (explaining that only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy).

¹ U.S. Patent No. 5,263,019, issued Nov. 16, 1993 (“Chu,” Ex. 1005).

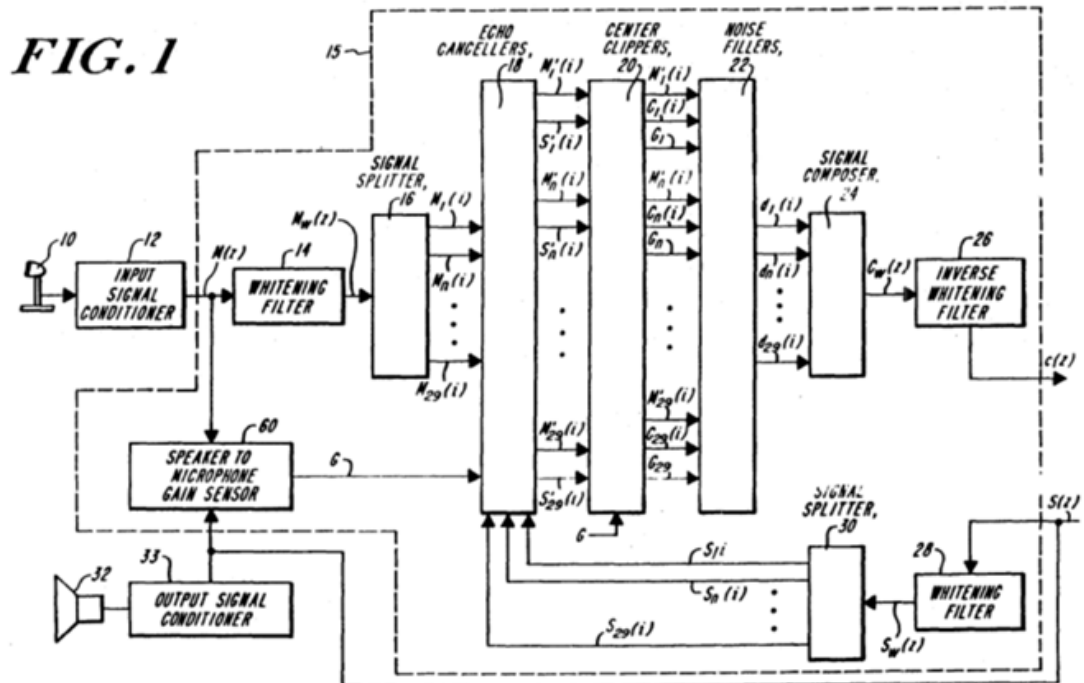
² Kellermann, Walter, “Strategies for Combining Acoustic Echo Cancellation and Adaptive Beamforming Microphone Arrays, Vol. 1 IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING 219–222 (1997) (“Kellermann,” Ex. 1007).

B. Cited Prior Art References

1. Chu

Chu describes an echo cancelling device for reducing the effects of feedback in a communication system. Ex. 1005, 3:23–25.

Figure 1 of Chu is reproduced below.



As illustrated in Figure 1 of Chu, a noise cancellation device receives and processes signal $m(z)$ from a near end of a communication system to remove echo components from signal $m(z)$ (52-53, 59-61) and receives and processes signal $s(z)$ from a far end of the communication system, which is

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