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Paper 29
Date: May 17, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD, DELL TECHNOLOGIES INC., and ANKER INNOVATIONS LTD.,[1]
Petitioner,

v.

MYPAQ HOLDINGS LTD.,
Patent Owner.

IPR2022-00311
Patent 8,477,514 B2

Before KRISTINA M. KALAN, DANIEL J. GALLIGAN, and ELIZABETH M. ROESEL, *Administrative Patent Judges.*

GALLIGAN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

[1] Anker Innovations Ltd. filed a motion for joinder and a petition in IPR2022-01134 and has been joined as a petitioner in this proceeding.

I. INTRODUCTION

In this *inter partes* review, Samsung Electronics Co., Ltd. ("Samsung"), Dell Technologies Inc. ("Dell"), and Anker Innovations Ltd. ("Anker") (collectively "Petitioner") challenge the patentability of claims 1–20 of U.S. Patent No. 8,477,514 B2 (Ex. 1001, "the '514 patent"), which is assigned to MyPAQ Holdings Ltd. ("Patent Owner").

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a), addresses issues and arguments raised during the trial in this *inter partes* review. For the reasons discussed below, we determine that Petitioner has proven by a preponderance of the evidence that claims 1–20 of the '514 patent are unpatentable. *See* 35 U.S.C. § 316(e) (2018) ("In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.").

A. Procedural History

Samsung and Dell filed a Petition (Paper 3, "Pet.") challenging claims 1–20 of the '514 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–12, 14–17, 19, 20	102(a), (b)[2]	Chagny[3]
1–20	103(a)	Chagny
1–10, 16, 17, 19, 20	102(a), (b)	Hwang[4]
11, 12, 14–17, 19, 20	103(a)	Hwang, Chagny
18	103(a)	Hwang
13, 18	103(a)	Hwang, Chagny

[2] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011) amended 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Because the '514 patent was filed before this date, we refer to the pre-AIA versions of §§ 102 and 103. Ex. 1001, code (22).
[3] Ex. 1004, US 6,873,136 B2, issued March 29, 2005 ("Chagny").
[4] Ex. 1006, US 2004/0174152 A1, published September 9, 2004 ("Hwang").

Pet. 8–9. Patent Owner filed a Preliminary Response. Paper 7. With our authorization, Samsung and Dell filed a reply to the Preliminary Response (Paper 9) addressing discretionary denial issues, and Patent Owner filed a sur-reply (Paper 10). We instituted trial on the asserted grounds of unpatentability. Paper 11 ("Inst. Dec."), 29.

After institution, Anker filed a motion for joinder and a petition in IPR2022-01134. We joined Anker as a petitioner in this proceeding. Paper 18.

During the trial, Patent Owner filed a Response (Paper 17, "PO Resp."), Petitioner filed a Reply (Paper 22, "Pet. Reply"), and Patent Owner filed a Sur-reply (Paper 23, "PO Sur-reply").

An oral hearing was held on February 24, 2023, a transcript of which appears in the record. Paper 28 ("Tr.").

Petitioner relies on testimony from Dr. Sayfe Kiaei. Exs. 1002 (Declaration), 1026 (Reply Declaration). Patent Owner relies on testimony from Dr. Frank Ferrese. Ex. 2018. The parties have entered in the record transcripts for depositions of these declarants. Exs. 2020, 2021 (Kiaei Deposition), 1027 (Ferrese Deposition).

B. Real Parties in Interest

Petitioner identifies the following as real parties in interest: Samsung, Dell, Samsung Electronics America, Inc., Samsung Semiconductor, Inc., Samsung Austin Semiconductor, LLC, Dell Inc., and Anker. Pet. 1; IPR2022-01134, Paper 2 at 1.

Patent Owner identifies itself as the real party in interest and notes that "Transpacific IP Group Limited has an ownership interest in MyPAQ." Paper 5 at 1; Paper 8 at 1.

C. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), the parties identify various related matters, including *MyPAQ Holdings Ltd. v. Samsung Electronics Co., Ltd.*, 6:21-CV-00398 (W.D. Tex.) ("district court litigation"). Pet. 1; Paper 8 at 1. We are concurrently issuing a final written decision in IPR2022-00312, involving related U.S. Patent 7,675,759 B2. *See* Ex. 1001, code (63) (related application data showing that the '514 patent is a continuation of a continuation-in-part of Patent 7,675,759 B2).

D. The '514 Patent and Illustrative Claims

The '514 patent discloses a power system having a power converter with an adaptive controller that can change an internal operating characteristic (such as switching frequency) of the power converter based on signals about the load to which it provides power. Ex. 1001, code (57), 6:51–7:4, 9:28–38.

Petitioner challenges all 20 claims of the '514 patent. Pet. 8–9. Claims 1, 6, 11, and 16 are independent. Claims 1 and 6 are illustrative of the claimed subject matter and are reproduced below.

> 1. A power converter coupled to a load, comprising:
>
> a power switch configured to conduct for a duty cycle to provide an output characteristic at an output thereof; and
>
> a power converter controller configured to receive a signal from said load indicating a system operational state of said load and control an internal operating characteristic of said power converter as a function of said signal.
>
> 6. A power system, comprising:
>
> a power system controller configured to provide a signal characterizing a power requirement of a processor system; and
>
> a power converter coupled to said processor system, comprising:

> a power switch configured to conduct for a duty cycle to provide an output characteristic at an output thereof, and
>
> a power converter controller configured to receive a signal from said power system controller to control an internal operating characteristic of said power converter as a function of said signal.

II. ANALYSIS

A. Principles of Law

To establish anticipation, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc*., 545 F.3d 1359, 1371 (Fed. Cir. 2008). Although the elements must be arranged or combined in the same way as in the claim, "the reference need not satisfy an *ipsissimis verbis* test," i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009) (citing *In re Bond*, 910 F.2d 831, 832–33 (Fed. Cir. 1990)).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any secondary

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