

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION
(d/b/a WABTEC CORPORATION),
Petitioner,

v.

SIEMENS MOBILITY, INC.,¹
Patent Owner.

Case IPR2017-00580
Patent 9,233,698 B2

Before KRISTEN L. DROESCH, MEREDITH C. PETRAVICK, and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a), 37 C.F.R. § 42.73

¹ Patent Owner represents that on June 1, 2018, Siemens Industry, Inc. transferred ownership of the patent at issue to Siemens Mobility, Inc. See Paper 58. Siemens Mobility, Inc. is represented by the same counsel that previously represented Siemens Industry, Inc. in this proceeding. See *id.*

I. INTRODUCTION

A. Background

We have authority to hear this *inter partes* review under 35 U.S.C. § 6, and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has not shown by a preponderance of the evidence that claims 1, 2, 5, 10, 11, 14, 17, and 18 (“challenged claims”) of U.S. Patent No. 9,233,698 B2 (“’698 Patent”) are unpatentable.

B. Procedural History

Westinghouse Air Brake Technologies Corporation (d/b/a Wabtec (“Petitioner”) filed a Petition (Paper 2, “Pet.”) for *inter partes* review of the challenged claims of the ’698 Patent. *See* 35 U.S.C. §§ 311–312. Siemens Mobility, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 10, “Prelim. Resp.”). Pursuant to 35 U.S.C. § 314, we instituted trial on July 20, 2017, as to some of the challenged claims of the ’698 Patent (Paper 12, “Institution Decision” or “Dec.”).

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 20, “PO Resp.”), to which Petitioner filed a Reply (Paper 26, “Reply”). Patent Owner also filed a Contingent Motion to Amend (Paper 21, “Mot. to Amend”), to which Petitioner filed an Opposition (Paper 27), to which Patent Owner filed a Reply (Paper 33).

Petitioner relies on a Declaration of Samuel Phillip Pullen, Ph.D. (Ex. 1002) to support its Petition, and a second Declaration of Dr. Pullen (Ex. 1038) as well as a Declaration of Richard M. Goodin (Ex. 1027) to support its Reply. Patent Owner relies on Declarations of Shukri Souri, Ph.D. (Ex. 2004, Ex. 2012) to support its Patent Owner Response. Petitioner

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also relies on a Declaration of Jeff Kernwein (Ex. 1040) to support its Opposition to Patent Owner's Contingent Motion to Amend. All witnesses were cross-examined during the trial, and transcripts of their depositions are in the record. Ex. 1031 (Souri Deposition); Exs. 2025, 2033 (Pullen Depositions); Ex. 2031 (Goodin Deposition); Ex. 2032 (Kernwein Deposition).

Patent Owner filed a Motion to Exclude Exhibit 1027 (Goodin Declaration) (Paper 36, "PO Mot. Excl."), to which Petitioner filed an Opposition (Paper 44, "Opp. Mot. Excl."), to which Patent Owner filed a Reply (Paper 47, "Reply Mot. Excl."). Patent Owner also filed a Motion for Observations Regarding Cross-Examination of Petitioner's Expert Richard Goodin (Paper 37, "PO Mot. Obs."), to which Petitioner filed a Response (Paper 45).

Petitioner also filed a Motion to Exclude Exhibit 2029 (Paper 40), to which Patent Owner filed an Opposition (Paper 43), to which Petitioner filed a Reply (Paper 48).

Oral argument was held on April 17, 2018. A transcript of the oral argument is included in the record. Paper 54 ("Tr.").

Following oral argument, on April 27, 2018, pursuant to *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348, 1358 (2018), we modified the Institution Decision to institute review of all challenged claims on all grounds presented in the Petition (Paper 49, "SAS Order"). Accordingly, this *inter partes* review involves the challenge to claims 1, 2, 5, 10, 11, 14, 17, and 18 as unpatentable under 35 U.S.C. § 103 in view of U.S. Patent Application Publication No. 2014/0172205 A1 (filed Sept. 20, 2013, published June 19, 2014) (Ex. 1011, "Ruhland"). See Dec. 28; SAS Order 2.

The Chief Administrative Patent Judge then granted a good cause extension of the one-year period for issuing a Final Written Decision. *See* Paper 51; *see also* Paper 52 (order extending pendency of proceeding up to six months). We authorized the parties to file supplemental briefing to address claims 5 and 14, which were not part of the partial institution in our initial Institution Decision. Paper 53.

Patent Owner filed a Supplemental Response (Paper 55), to which Petitioner filed a Supplemental Reply (Paper 62). Patent Owner also filed a Supplemental Contingent Motion to Amend (Paper 57), to which Petitioner filed an Opposition (Paper 61), to which Patent Owner filed a Reply (Paper 66). Dr. Pullen was cross-examined again following the SAS Order, and a transcript of this deposition is in the record. Ex. 2034.

Petitioner also submitted Supplemental Information (Paper 63, “Pet. Suppl. Info.”), to which Patent Owner filed a Response (Paper 65).

Supplemental oral argument was held on August 17, 2018. A transcript of the oral argument is included in the record. Paper 71 (“Suppl. Tr.”).

C. Related Matters

The parties indicate the ’698 Patent is asserted in *Siemens Industry, Inc. v. Westinghouse Air Brake Technologies Corp.*, Case No. 1:16-cv-00284 (D. Del.). Pet. 26; Paper 5, 1; Paper 6, 2; Paper 8, 1. The parties also indicate that a petition for *inter partes* review, which was denied, was filed for the ’698 Patent in Case IPR2017-00581. Paper 5, 1; Paper 6, 2; Paper 8, 1. The parties further indicate a petition for *inter partes* review, which was denied, was filed for related U.S. Patent No. 8,714,494, Case IPR2017-00584. Paper 5, 1; Paper 6, 2; Paper 8, 1.

D. The '698 Patent (Ex. 1001)

The '698 Patent issued from an application filed on April 16, 2014 as a continuation-in-part of Application No. 13/608,313, filed on September 10, 2012, now U.S. Patent No. 8,714,494 (“’494 Patent”). Ex. 1001, (22), (63). The '698 Patent discloses a railway safety critical application system and method that substitutes commercial off-the-shelf (COTS) hardware and/or software for railway-domain specific product components, yet is validated to conform to railway safety critical system failure-free standards. *See id.* at Abstract, 2:46–53. The train includes an onboard train management system (TMS), onboard unit (OBU), onboard data recording system (DRS), crew human-machine interface (HMI), wireless data/communications system, navigation position system, train location detection system, wireless data/communications system, drive system, throttle control, and brake system. *See id.* at 4:63–5:51, Fig. 1. Each of the TMS, OBU, DRS, and HMI have internal computer/controller platforms of known design that communicate with each other via a data bus. *See id.* at 5:52–56. “However[,] the number of computer controllers, their location and their distributed functions may be altered as a matter of design choice.” *Id.* at 5:56–58.

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