

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

SCHRADER-BRIDGEPORT INTERNATIONAL, INC.  
and SCHRADER ELECTRONICS, INC.  
Petitioner

v.

CONTINENTAL AUTOMOTIVE SYSTEMS US, INC.  
Patent Owner

---

Case IPR2013-00014  
Patent 6,998,973

---

Before SALLY C. MEDLEY, JOSIAH C. COCKS, and  
MITCHELL G. WEATHERLY, *Administrative Patent Judges*.

COCKS, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. Summary

Schrader-Bridgeport International, Inc. and Schrader Electronics, Inc. (collectively “Schrader”) filed a Petition on October 8, 2012 (Paper 1, “Pet.”) requesting *inter partes* review of claims 1-5 and 7-11 of U.S. Patent No. 6,998,973 (“the ’973 patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 311-319. On March 13, 2013, the Board instituted a trial for each of claims 1-5 and 7-11 on one ground of unpatentability.<sup>1</sup>

After institution of trial, the Patent Owner, Continental Automotive Systems US, Inc. (“Continental”), filed a Patent Owner Response (“PO Resp.”) to the Petition. Paper 19. Schrader filed a Reply to Continental’s Response on September 12, 2013. Paper 20.

Oral hearing was conducted on December 11, 2013.<sup>2</sup>

The Board has jurisdiction under 35 U.S.C. § 6(c). Pursuant to 35 U.S.C. § 318(a), this decision is “a final written decision with respect to the patentability of any patent claim challenged by the petitioner.”

Schrader has shown that claims 1-5 and 7-11 are unpatentable.

### B. The Invention of the ’973 Patent

The ’973 patent sets forth that its disclosed invention “relates to a data transmission method for a tire-pressure monitoring system of a vehicle. More particularly, it relates to a method for preventing collisions between the data transmitted by the wheel units of one and the same vehicle.” Ex. 1001, col. 1, ll.

---

<sup>1</sup> See Paper 12 (“Institution Decision” or “Inst. Dec.”).

<sup>2</sup> A transcript of the oral hearing has been entered into the record as Paper 31 (“Hr’g. Tr.”).

6-11.

As explained in the '973 patent, in the art of tire-pressure monitoring systems for vehicles, there is a known disadvantage in transmitting sensed data from each wheel unit of a vehicle “simultaneously” to a central computer for processing of the data. *Id.* at col. 1, ll. 15-48. As a result of such simultaneous transmissions, “scrambling” of the data may occur (*id.* at col. 1, ll. 43-47), also characterized as data “collision” (*id.* at col.1, ll. 56-58), which may render the data unusable. To alleviate the data collision problem, the invention of the '973 patent incorporates in each wheel unit internal clocks of “relatively poor precision,” for instance, RC-type oscillating circuits. *Id.* at col. 2, ll. 17-26. The poor precision of the clocks introduces what is characterized as a “natural time lag” of the data transmission of each wheel unit, so as to impose time shifting of the transmissions. Such time shifting is not generally present in internal clocks recognized in the art as “extremely precise.” *Id.* at col. 2, ll. 27-34.

Claim 1 is the sole independent claim and is reproduced below.

1. A data transmission method for a tire-pressure monitoring system (10) of a vehicle, said data being transmitted by wheel units (12) to a central computer (13) located in the vehicle, said method comprising:

a data transmission phase in parking mode, over a first period; and

a data transmission phase in running mode, over a second period shorter than the first period; said method being characterized in that:

a natural time lag between various internal clocks with which each wheel unit (12) is equipped is used to prevent collisions between transmissions from the various wheel units of one and the same vehicle.

*Id.* at col. 4, ll. 7-19.

### *C. Prior Art*

The following items of prior art are involved in this *inter partes* review:

US 6,271,748 B1 (“Derbyshire”)	August 7, 2001	Ex. 1003
US 5,883,582 (“Bowers”)	March 16, 1999	Ex. 1005
US 6,486,773 B1 (“Bailie”)	November 26, 2002	Ex. 1006

### *D. The Asserted Ground of Unpatentability*

The Board instituted trial on the following ground of unpatentability:

Claims 1-5 and 7-11 are unpatentable under 35 U.S.C. § 103(a) as obvious over Derbyshire, Bailie, and Bowers.

## II. ANALYSIS

Claim 1 of the ’973 patent is the only independent claim and is directed to a data transmission method in connection with a tire-pressure monitoring system of a vehicle. It is the following feature associated with claim 1 that lies at the heart of this *inter partes* review: “a natural time lag between various internal clocks with which each wheel unit (12) is equipped is used to prevent collisions between transmissions from the various wheel units of one and the same vehicle.” The limitation is required by all of claims 1-5 and 7-11 in the ’973 patent.

### *A. Claim Construction*

The Board construes a claim of an unexpired patent in an *inter partes* review using the “broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *see* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Claim terms usually are given their ordinary and customary meaning, as would be understood by one of

ordinary skill in the art in the context of the underlying patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor, however, also may act as his or her own lexicographer and give a claim term a special meaning. Even where, as here, no such lexicographic definition is presented, it is appropriate, nevertheless, to rely on the written description for guidance in determining claim meaning. *See id.* Indeed, the construction that stays true to the claim language and most naturally aligns with the inventor's description is likely to be the correct construction. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

All claim terms have been given their ordinary meaning as would be understood by a skilled artisan in light of the '973 patent. For clarity in this Decision, however, we explicitly set forth the ordinary meaning for the terms "natural time lag" and "used to prevent collisions."

1. "Natural time lag"

In instituting trial in this *inter partes* review, the Board determined that the specification of the '973 patent sheds light on the meaning of the term "natural time lag," as would be understood by one of ordinary skill in the art. Inst. Dec. 7. In that regard, we observed:

[T]he '973 Patent sets forth that "natural time lag" of the transmission of data from the individual clock components of each wheel arises due to "substantial tolerance" possessed by each clock, and "minimize[s] the risk of simultaneously transmitting several information items" by "randomly time-shifting each frame transmission from a wheel unit relative to the other wheel units." ('973 Patent, col. 3, ll. 39-51.) The "substantial tolerance" is elsewhere characterized as "poor precision" of the internal clocks, which operates "to automatically time-shift (randomly) the transmissions from the wheel units." (*Id.* at col. 2, ll. 17-24.) While a suitable or preferred "degree of precision" of the invention is expressed as " $\pm 15\%$ " (*id.* at col. 3, ll. 26-27), the '973

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.