

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLIED CONCEPTS INC.,
Petitioner

v.

KUSTOM SIGNALS INC.,
Patent Owner

Case: IPR2024-00829
U.S. Patent No. 11,194,039

PETITIONER'S PRELIMINARY REPLY¹

¹ Filed pursuant to the Board's authorization provided on August 26, 2024.

No form of the word “accurate” appears in the ’039 Patent. Nor does Patent Owner (“PO”) propose any claim construction that would bring about an “accuracy” limitation. POPR, pp. 17-18 (but reserving the right to do so if trial is instituted). But despite that silence, PO throws up—***without any expert support or other evidence***—an “accuracy” straw man that “[a] POSA would understand that accuracy of patrol speed determination and therefore target speed is of paramount importance.” *Id.* at p. 3. And PO does so contrary to evidence in the Petition that a POSITA would retrofit a vehicle with Thomas’s GPS speedometer in place of a previously existing inaccurate speedometer (*see* Exh. 1003 at [0029]). Thus, it is improper for PO to focus on an unclaimed “accuracy” gateway to assess the combinability of Petitioner’s prior art.

The ’039 Patent states that the speed determining element “generally determines” the patrol vehicle speed and identifies no limitations on speed or position accuracy. Exh. 1001, col. 5, l. 50 – col. 6, l. 12. Moreover, inaccuracy of speed is allowed under claims 1 and 9, reciting that “the processing element [is] configured to . . . form a patrol vehicle speed ***window that includes a range of frequency bin numbers***,”² which according to the specification may “correspond

² Emphasis added. PO added this limitation to overcome a § 103 rejection based on a GPS speedometer prior art reference which had no accuracy discussion. *See* Exh.

to the converted patrol vehicle speed frequency bin number plus 5 mph and minus 5 mph.” *Id.* at col. 9, ll. 3-5. Though, to be clear, no numerical range is spelled out in the claims. It is inherent and acceptable in the claims to have some inaccuracy in patrol vehicle speed determination and the subsequent ability to detect a speeding target vehicle, a position that PO acquiesced to. On that basis alone, PO’s non-obviousness arguments based on an accuracy requirement should be rejected.

Moreover, PO’s non-obviousness arguments which rely on its attempt to imbue an “accuracy” limitation into the claims are flawed. PO argues that a POSITA would not be motivated to combine Thomas with the Aker or Shelton references because the Thomas GPS-derived vehicle position is purportedly inaccurate whereas the Aker and Shelton systems require accuracy.³ But PO is mistaken in limiting the calculation of speed only to Thomas’s non-limiting disclosure of using the difference between positions over time. Indeed, Macnielle, relied on by PO (POPR, p. 32), describes the use of the Doppler shift of GPS range (*not position*) signals to determine vehicle velocity. Exh. 2001, col. 9, ll. 58-67.

1002, pp. 54-101.

³ The Petition relies on the embodiment at Aker, ¶ [0051] (“wherein patrol car speed is determined from the car’s speedometer”), not the embodiment PO points to (“processing returns from stationary objects such as the ground”).

The rationale for PO's calculations on page 29 of its POPR is thus technically erroneous.

Putting PO's technical misunderstanding aside, Thomas discloses GPS receiver position accuracy of about 10 meters. Exh. 1005, p. 11. A 10 meter accuracy is +/- 5 meters, *not* +/- 10 meters as used in PO's calculations. Thomas's receiver is thus more accurate by a factor of two, relative to PO's faulty calculations. In other words, PO's calculation of +/- ~8.95 mph inaccuracy should be revised to a +/- ~4.48 mph inaccuracy, a level of error that is within the +/- 5mph window described in the '039 Patent! Even further, as time increases—*e.g.*, if PO's arbitrary choice of 5 seconds is increased to 10 seconds—the speed inaccuracy in PO's calculation to determine speed decreases. Were GPS signals obtained for a period of 10 seconds, the determined speed inaccuracy would decrease from +/- ~4.48 mph to +/- ~2.24 mph, which is again well within the example accuracy range in the '039 Patent specification. Thus, the '039 Patent itself demonstrates the applicability of Thomas for use in an obviousness combination under PO's rationale, not to mention that both Thomas and Aker rely on speedometer accuracy to ensure compliance with posted speed limits.

Accordingly, because the POPR rests on an unclaimed “accuracy” limitation, the arguments in the POPR should be rejected.

Date: September 4, 2024

Respectfully submitted,

By: /Christopher J. Rourk/
Christopher J. Rourk
USPTO Reg. No. 39,348
Counsel for Petitioner

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing PETITIONER'S PRELIMINARY REPLY was served by filing the documents through the Patent Trial and Appeal Case Tracking System (P-TACTS) on September 4, 2024, and a courtesy copy was also served via electronic mail on the following:

sbrown@hoveywilliams.com
mwalters@hoveywilliams.com
litigation@hoveywilliams.com

/s/ Pam Collins
Pam Collins
2323 Ross Ave., Suite 600
Dallas, TX 75201
Tel: 214-953-5973