



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/419,891	01/30/2017	Jeffrey A. Bowers	46076/314	1007
103746	7590	09/30/2020	EXAMINER	
Elwha LLC c/o Polsinelli PC Kory D. Christensen Three Embarcadero Center Suite 2400 San Francisco, CA 94111			NGUYEN, NGA X	
			ART UNIT	PAPER NUMBER
			3662	
			NOTIFICATION DATE	DELIVERY MODE
			09/30/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ISFDocketInbox@intven.com
USPT@polsinelli.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JEFFREY A BOWERS, GEOFFREY F. DEANE, RODERICK A. HYDE, NATHAN KUNDTZ, NATHAN P. MYHRVOLD, DAVID R. SMITH, CLARENCE T. TEGREENE, and LOWELL L. WOOD, JR.

Appeal 2020-002002
Application 15/419,891
Technology Center 3600

Before EDWARD A. BROWN, BENJAMIN D. M. WOOD, and
CARL M. DEFRANCO, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–20, which constitute all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Elwha LLC, which is wholly-owned by The Invention Science Fund II, LLC. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Claim 1, the sole independent claim on appeal, is reproduced below.

1. A method comprising:

acquiring, at a first land vehicle, sensor data from a sensor of a second land vehicle, wherein the sensor data includes data of a kinematic relationship between the first land vehicle and the object; and

generating, at the first land vehicle by a processor, a collision detection model using the sensor data acquired from the second land vehicle, wherein the collision detection model is a kinematic object model of objects in the vicinity of the first land vehicle for identifying object kinematics of the objects in the vicinity of the first land vehicle.

Appeal Br. 14 (Claims App.).

EVIDENCE OF RECORD

Name	Reference	Date
Takiguchi	US 2002/0107649 A1	Aug. 8, 2002
Lutter	US 2002/0198660 A1	Dec. 26, 2002
Kalliske	US 2005/0269805 A1	Dec. 8, 2005
Avery	US 2010/0214085 A1	Aug. 26, 2010
Shujian	Chinese Pub. CN 202077142 U	Dec. 14, 2011

EXAMINER'S REJECTIONS²

Claims 1, 2, 4–12, 14–17, and 20 are rejected under 35 U.S.C.

§ 102(b) as anticipated by Lutter. Final Act. 3–7.

Claim 3 is rejected under 35 U.S.C. § 103(a) as unpatentable over Lutter and Avery. *Id.* at 8.

Claim 13 is rejected under 35 U.S.C. § 103(a) as unpatentable over Lutter and Kalliske. *Id.* at 8–9.

² Although claim 13 is listed as rejected under 35 U.S.C. § 102(b), it is actually rejected under 35 U.S.C. § 103(a). Final Act. 3, 8–9.

Claim 18 is rejected under 35 U.S.C. § 103(a) as unpatentable over Lutter and Shujian. *Id.* at 9–10.

Claim 19 is rejected under 35 U.S.C. § 103(a) as unpatentable over Lutter and Takiguchi. *Id.* at 10.

ANALYSIS

A. Claims 1, 2, 4–12, 14–17, and 20

Appellant argues pending claims 1, 2, 4–12, 14–17, and 20 as a group. *See* Appeal Br. 6–10. We deem claim 1 as representative. 37 C.F.R. § 41.37(c)(1)(iv). The Examiner rejected claim 1 as anticipated by the teachings of Lutter. Final Act. 3–4. Lutter indisputably discloses the claim 1 limitations of: (1) a first vehicle (Fig. 3, vehicle E) acquiring from a second vehicle (Fig. 3, vehicle D) certain sensor data (Fig. 3, sensors 42) that includes data of the kinematic state of an object (Fig. 3, vehicles A, B) in the vicinity of the first vehicle, and (2) generating at the first vehicle, by means of a processor, a collision detection model (¶¶ 26–28, Fig. 4, screen displays 50, 52) using the sensor data acquired from the second vehicle. *Compare* Final Act. 3–4, *with* Appeal Br. 6–8.

Appellant, in turn, contends that Lutter lacks the claim limitation requiring that “the sensor data includes data of a kinematic relationship between the *first land vehicle* and the object.” Appeal Br. 6–7. According to Appellant, Lutter’s first vehicle does not receive sensor data “of its *own* kinematic state” from the second vehicle, but instead receives sensor data of “the kinematic state of *the second vehicle.*” *Id.* Appellant supports this contention by pointing to Lutter’s disclosure that the second vehicle (Fig. 1, vehicle 14A) sends “*its* kinematic state data 17 such as location, speed, acceleration and direction” to the first vehicle (Fig. 1, vehicle 14B) without

sensing or transmitting any data relating to the kinematic state of the first vehicle. *Id.* at 7.

We disagree, as Appellant appears to ignore Lutter’s disclosure as a whole. First, Appellant disregards that Lutter is an “inter-vehicle communication system” that “allows vehicles to effectively see around corners and other obstructions *by sharing sensor information between different vehicles.*” Lutter ¶ 28; *see also id.* ¶ 35 (“The kinematic state data 92 for each vehicle A, B, and C is broadcast to the other vehicles in the same vicinity.”). Focusing on Figure 3 in particular, the Examiner persuasively explains that sensors 42 on Lutter’s vehicle D (the second vehicle) detect not only the movement of vehicles A, B entering the intersection (the collision objects), but also movement of vehicle E behind it (the first vehicle). *See* Exr. Ans. 3–4 (citing Lutter ¶¶ 24–25, Fig. 3). In order to warn other vehicles of a potential collision, Lutter’s vehicle D (the second vehicle) transmits that sensor data, via transceiver 48, to Lutter’s vehicle E (the first vehicle). Lutter ¶¶ 23–25.

Moreover, in satisfying the “acquiring” limitation as claimed, Lutter expressly discloses that the transmitted sensor data includes the kinematic state of *all vehicles* in relation to vehicle D (the second vehicle), including the kinematic state of both the vehicle behind it, i.e., Lutter’s vehicle E (first vehicle) and the vehicles at its sides, i.e., vehicles A, B (the collision objects) —

Vehicle D [second vehicle] includes *multiple sensors 42 that sense objects* in front, such as vehicle C, *in the rear, such as vehicle E [the first vehicle]*, or on the sides, such as vehicles A and B. A processor in vehicle D (not shown) processes the sensor data and identifies the speed direction and position of vehicles A and B [the collision objects]. A transceiver 48 in

vehicle D [the second vehicle] transmits the data identifying vehicles A and B to vehicle E [the first vehicle].

Lutter ¶ 24 (emphases added). In that manner, vehicle E is “notified about oncoming vehicles A and B,” thus, extending the “sensing range[]” of vehicle E “by receiving the sensing information from vehicle D.” *Id.* ¶ 25.

Those disclosures support that the data transmitted from Lutter’s second vehicle (vehicle D) to the first vehicle (vehicle E) includes not only sensor data about the collision objects at its sides (vehicles A, B) but also sensor data about the very vehicle at its rear (vehicle E) that is being warned of a potential collision. In other words, while it is true that Lutter’s second vehicle (vehicle D) transmits sensor data of its own kinematic state to the first vehicle (as Appellant argues), it is also true that Lutter’s second vehicle (vehicle D) senses and transmits data of the kinematic state of the first vehicle behind it (vehicle E) relative to the oncoming objects (vehicles A, B). Indeed, Lutter shows as much in screens 50 and 52 of Figure 4, which depict the sensor data transmitted from vehicle D and received by vehicle E as including “motion vector[s]” of all surrounding vehicles, including vehicle E (the first vehicle). Lutter ¶ 26, Fig. 4. And because the motion vectors shown on the screens indicate a kinematic relationship between vehicle E (the first vehicle) and vehicles A and B (the potential collision objects), we are persuaded that Lutter anticipates the method as claimed, including the full extent of the “acquiring” step. Thus, we sustain the Examiner’s rejection of claim 1, as well as the claims not argued separately.

B. Claims 3, 13, 18, and 19

The Examiner rejected dependent claims 3, 13, 18, 19 under 35 U.S.C. § 103(a) as unpatentable over Lutter and additional prior art that

includes Avery, Kalliske, Shujian, and Takiguchi. Final Act. 8–10. To refute the rejection of these claims, Appellant relies on the arguments it presented with respect to claim 1 and argues that the additional prior art used to reject these claims “does not cure the deficiencies of Lutter.” Appeal Br. 10–12. For the same reasons provided above in our analysis of the rejection of claim 1, we do not find these arguments persuasive. Accordingly, we sustain the Examiner’s rejection of dependent claims 3, 13, 18, 19.

CONCLUSION

We sustain the Examiner’s prior art rejections of claims 1–20.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1, 2, 4–12, 14–17, 20	102(b)	Lutter	1, 2, 4–12, 14–17, 20	
3	103(a)	Lutter, Avery	3	
13	103(a)	Lutter, Kalliske	13	
18	103(a)	Lutter, Shujian	18	
19	103(a)	Lutter, Takiguchi	19	
Overall Outcome			1–20	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED