

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FORD MOTOR COMPANY, JAGUAR LAND ROVER NORTH AMERICA
LLC, SUBARU OF AMERICA INC., TOYOTA MOTOR NORTH AMERICA,
INC., and VOLVO CARS OF NORTH AMERICA LLC,
Petitioner,

v.

CRUISE CONTROL TECHNOLOGIES LLC,
Patent Owner.

Case IPR2014-00291
Patent 6,324,463

Before JOSIAH C. COCKS, HYUN J. JUNG, and GEORGE R. HOSKINS,
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

Ford Motor Company et al. (“Petitioner”), filed an amended petition (Paper 6, “Pet.”) requesting an *inter partes* review of claims 1–5, 12–16, 18, 19, 21, 25–31, and 34–36 of U.S. Patent 6,324,463 (“the ’463 patent”). Cruise Control Technologies LLC (“Patent Owner”), filed a Patent Owner Preliminary Response. Paper 7. The panel determined that the information presented in the Petition demonstrated a reasonable likelihood that Petitioner would prevail in challenging claims 1–5, 12–16, 18, 19, 21, 25–31, and 34–36 as unpatentable. Paper 11 (“Decision”). The panel instituted an *inter partes* review on the following grounds: (1) claims 1–3, 5, 12–14, 18, 19, 25–27, 29–31, and 34–36 under 35 U.S.C. § 102 as anticipated by Prometheus¹; (2) claims 3, 5, 12, 15, 16, 21, and 28 under 35 U.S.C. § 103 as unpatentable over Prometheus and Narita²; and (3) claim 4 under 35 U.S.C. § 103 as unpatentable over Prometheus and Celsior³.

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 21, “PO Resp.”). Petitioner filed a Reply (Paper 29, “Pet. Reply”). An oral hearing was conducted on March 25, 2015. A transcript of the oral hearing is included in the record. Paper 42 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This decision is a final written decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of claims 1–5, 12–16, 18, 19, 21, 25–31, and 34–36. For the reasons discussed below, Petitioner has demonstrated by a preponderance of the evidence that claims 1–5, 12–16, 18, 19, 21, 25–31, and 34–36 are unpatentable.

¹ Autonomous Intelligent Cruise Control (AICC), Prometheus dated April 1991 (Ex. 1003).

² JP 8-192663 dated September 1995 (Ex. 1004) (English translation, Ex. 1006).

³ Toyota Celsior Owner’s Manual dated July 1997 (Ex. 1007) (English translation, Ex. 1009).

A. Related Matters

Petitioner has identified several related district court proceedings involving the '463 patent. *See* Pet. 3–4; Paper 5, at 2–4. The '463 patent is also the subject of four other requests for *inter partes* review (IPR2014-00279, IPR2014-00280, IPR2014-00281, and IPR2014-00289). Final decisions in those proceedings are being entered concurrently with this final decision.

B. The '463 Patent (Ex. 1001)

The '463 patent discloses cruise control systems for use in a human operated vehicle. Ex. 1001, Abst. Figures 1 and 2 of the '463 patent are shown below:

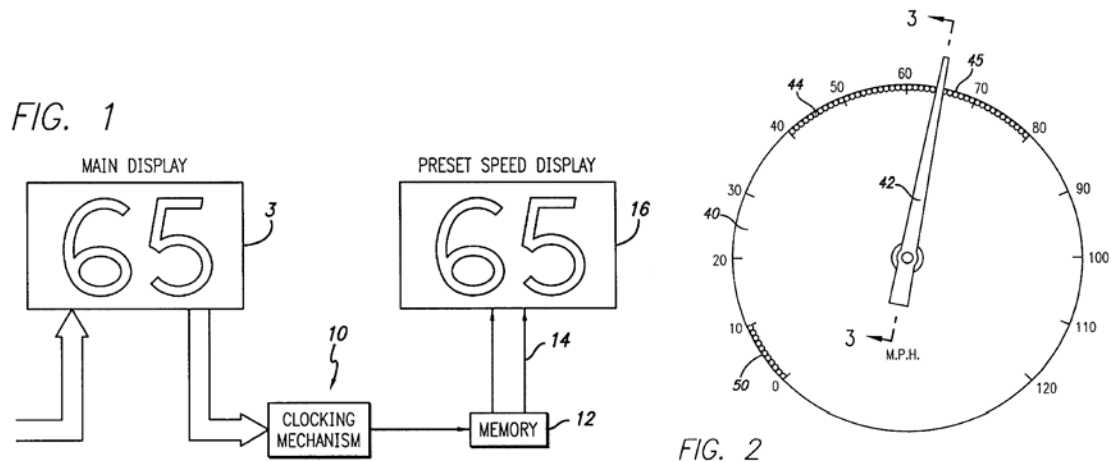


Figure 1 illustrates a digital speed display, while Figure 2 illustrates an analog speedometer. *Id.* at 3:8–13. In Figure 1, main speed display 3 shows the current speed at which the vehicle is operating. *Id.* at 3:49–53. When a cruise control set button (not shown in Figure 1) is pressed, the vehicle speed is stored in digital memory 12 as a preset speed. *Id.* at 3:53–60. Second speed display 16 shows that preset speed. *Id.* Figure 2's analog speedometer 40 incorporates several LED assemblies 45. *Id.* at 4:19–26. Each LED assembly 45 has an LED and a detector. *Id.* at 4:29–30. When a cruise control set button (not shown in Figure 2) is pressed, all of the detectors are activated, and all of the LEDs

momentarily light up. *Id.* at 4:48–51. The back of needle 42 reflects the light of the lit LEDs behind the needle, and that reflected light is detected by the detector of the LED assembly disposed at the location of needle 42. *Id.* at 4:51–57. The LED of that assembly is then activated and remains lit to indicate the speed at which cruise control was engaged. *Id.* at 4:57–64.

C. Illustrative Claims

Claims 1, 2, 6, 12, 13, 18, 21, 25, 26, and 34 are independent. Claims 1 and 12 are illustrative and are reproduced below:

1. A cruise control system for vehicle having a human operator, comprising:
 - a speed controller that automatically maintains the vehicle speed at a preset speed;
 - an enable switch associated with said controller for enabling the system;
 - a set speed input in communication with said controller for manually setting the speed of the vehicle at said preset speed, thereby engaging the system;
 - a memory which stores information indicative of said preset speed; and
 - a feedback system for communicating said information in said memory to the operator of the vehicle.

12. A method for visually communicating to the human operator of a vehicle having a cruise control system a cruising speed at which the vehicle is set, comprising:
 - determining the speed at which the vehicle is travelling;
 - activating the cruise control system at a desired cruising speed;
 - displaying a symbol indicative of the speed at which the cruise control system is activated;
 - maintaining the activated cruise control speed symbol upon temporary acceleration or deceleration of the vehicle;
 - removing said symbol when the cruise control system is deactivated or a new cruising speed is selected.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. *See* 37 C.F.R. § 42.100(b) (2013); *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1279–83 (Fed. Cir. 2015). Under that construction, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

In instituting trial with respect to the '463 patent, we determined that all terms of the involved claims should be given their ordinary and customary meaning in the context of the disclosure of that patent. We made that meaning explicit for certain claim terms/phrases. Neither party challenges any aspect of our claim constructions. Based on the entire record presented during trial, we discern no reason to alter our claim constructions in connection with this Final Written Decision. For reference, the claim constructions that we made explicit are reproduced in the table below:

Claim Term or Phrase	Claim Construction
“engaging the system” (claim 1) and “engaging the cruise control system” (claim 21)	“[W]e construe ‘engaging the system’ in claim 1 and ‘engaging the cruise control system’ in claim 21 to mean ‘operating the cruise control system to automatically control the vehicle at the preset speed.’ Decision 9.
“enabling” (claims 1 and 2) and “enabled” (claims 2 and 4)	“‘[E]nabling the system’ in claim 1 and ‘enabling . . . the controller’ in claim 2 mean ‘a “system on” state for the cruise control system.’ This construction also applies to the descriptor ‘enabled’ in claims 2 and 4.” <i>Id.</i> at 10.

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