

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Filed: May 12, 1999
Issued: November 27, 2001
Inventor: C. Kumar N. Patel
Assignee: Cruise Control Technologies LLC
Title: CRUISE CONTROL INDICATOR

**DECLARATION OF DANIEL A. CRAWFORD
IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 6,324,463 UNDER 37 C.F.R. § 42.100**

I, Daniel A. Crawford, hereby declare, affirm and state the following:

I. Introduction

1. I am over the age of eighteen and otherwise competent to make this declaration.
2. The facts set forth below are known to me personally, and I have firsthand knowledge of them.

3. I make this Declaration in support of the above-captioned petition for *Inter Partes* Review (“IPR”) of U.S. Patent No. 6,324,463 (“the ’463 patent”). The ’463 patent resulted from U.S. Provisional Application No. 60/085,185, filed on May 12, 1998, naming C. Kumar N. Patel as the inventor. The ’463 patent issued on November, 27, 2001. I further understand that the ’463 patent is currently assigned to Cruise Control Technologies LLC (“the patentee”).

4. I have been retained by Latham & Watkins LLP on behalf of Ford Motor Company, Jaguar Land Rover North America LLC, and Volvo Cars of North America LLC.

5. I have been asked to provide my technical review, analysis, insights, and opinions regarding the above-noted references that form the basis for the grounds of rejection set forth in the Petition for *Inter Partes* Review of the ’463 Patent (“Petition”).

II. Qualifications and Compensation

6. I received my B.E.E. in Electrical Engineering from the General Motors Institute in 1975 and my M.S.E.E. (Electrical Engineering) with a focus on control systems from the University of Colorado in 1974.

7. Since 1975, I have acquired extensive experience in electronic and mechanical product design (and validation, implementation), microcontroller-

based instrument design, component testing electromechanical products, computer simulations of engine management systems, and system design. I gained this experience through working in the automotive industry in various roles, including as a Product Engineer and Manager.

8. Since 1979, I have acquired extensive experience in automotive displays and cruise control systems, specifically in the areas of: system design, electronic product design, electronic throttle control and components, fuel pump controllers. In particular, while I worked at Delphi Automotive I developed and tested cruise control systems and components, including the Cruisemaster, Custom Cruise, Custom Cruise III, and Stepper Motor Cruise Control systems. Over 100 million of these cruise control systems were sold and they were incorporated into General Motors, Honda, SAAB, OPEL, and Kia vehicles.

9. I have been awarded 12 U.S. Patents relating to electronics, and mechanical and pneumatic systems. Four of them specifically relate to cruise control: US 4,380,418; US 5,680,024; US 6,278,931; and US 6,384,640. I have also authored five publications concerning cruise control.

10. I have been awarded two Boss Kettering Awards for my work with the Stepper Motor Cruise Control systems and Electronic Throttle Control. The

Boss Kettering Award is General Motors' highest internal recognition for technical innovation.

11. A more fulsome list of my experience and credentials is included in the copy of my CV included at the end of this Declaration.

12. I am being compensated at my standard rate of \$325 per hour for my work in connection with this matter. My compensation in this matter is not dependent in any way on the contents of this Declaration, the substance of any further opinions or testimony that I may provide, or the ultimate outcome of this matter.

III. Materials Considered

13. I have carefully reviewed the '463 Patent and its file history and considered each of the documents cited herein, in light of general knowledge in the art. In formulating my opinions, I have relied upon my experience in the relevant art. In formulating my opinions, I have also considered the viewpoint of a person of ordinary skill in the art (*i.e.* a person who would have had a Bachelor's degree in engineering or equivalent coursework and at least two years of experience in the automotive control systems and user interfaces for vehicles) as of May 12, 1998.

14. Below is a list of documents I have considered in formulating my opinion:

Ford Exhibit No.	Document
1001	U.S. Patent No. 6,324,463 (“the ’463 Patent”)
1002	File History for the ’463 Patent
1004	Certified English Translation of Japanese Patent Publication No. S60-174329 by Narita <i>et al.</i> (“Narita”).
1006	U.S. Patent No. 5,381,388 by Beiswenger <i>et al.</i> (“Beiswenger”).
1007	U.S. Department of Transportation, National Highway Traffic Safety Administration 1989 Report, “An Examination of Sudden Acceleration” by Pollard <i>et al.</i> (“NHTSA 1989 Report”)
1009	Certified English Translation of Japanese Published Utility Application No. H4-102059 to Nagashima <i>et al.</i> (“Nagashima”)

IV. Description of the Relevant Field and the Relevant Timeframe

15. Based upon my review of these materials, I believe that the relevant field for purposes of the ’463 Patent is basic user interface systems in vehicles and, specifically, user interface systems that relay information related to cruise control systems.

16. I have been informed that relevant time period of the alleged invention is on or before May 12, 1998. Well before May 12, 1998, the cruise control systems of the type described in the ’463 Patent were known. Moreover, many aspects of which the ’463 Patent acknowledges in the BACKGROUND OF THE INVENTION section. I agree with the statement in the BACKGROUND OF THE INVENTION section that the features discussed were known in the prior art.

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