

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KAWASAKI RAIL CAR, INC.,

Petitioner,

v.

SCOTT BLAIR,

Patent Owner

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Case IPR2017-00117

Patent 6,700,602

**EXPERT DECLARATION OF JACK R. LONG**

EXHIBIT 2002

## **I. INTRODUCTION**

1. I, Jack Long, have been retained by counsel for Scott Blair (hereinafter “Blair”).

2. I submit this declaration in support of Patent Owner’s Preliminary Response to Petition for Inter Partes Review of 6,700,602, No. IPR 2017-00117.

## **II. QUALIFICATIONS**

3. I hold a Bachelor of Science degree in Metallurgical Engineering from the University of Missouri.

4. I was an Officer in the US Army Corps of Engineers with two years active duty as Lieutenant and five years reserve duty as a Captain.

5. I have over 35 years of experience in various engineering, sales, and international positions, including as Chief Engineer and Senior VP International.

6. I have supervised a staff of over 40 professionals in design engineering, testing, field service engineering and drafting.

7. I am a recognized expert in the design and engineering of rolling stock including locomotive, passenger and freight vehicles (“rail cars”) and their components and other areas of engineering and material science.

8. I headed the sales and service engineering functions for proprietary rolling stock equipment.

9. I was the transportation sales manager for a railway equipment company, and worked with major metro agencies and rolling stock builders.

10. I was a program manager for designing and building the Washington D.C. metro cars.

11. I am the inventor of eight issued United States Patents relating to various railway related engineering products, the design and engineering of rolling stock, their components and related devices.

12. I was a Chief engineer for railway proprietary freight and passenger equipment.

13. I have written and presented professional technical papers in seven countries.

14. I am an inventor of U.S. Patent 9,395,276 entitled, “Method and system for detection and analysis of railway bogie operational problems.’

15. I am an inventor of U.S. Patent 6,422,154 entitled, “Three-piece railway truck frame having a selectively removable bolster.”

16. I am an inventor of U.S. Patent 6,142,081 entitled, “Pedestal rocker seat for providing passive axle steering to a rigid railway truck.”

17. I am an inventor of U.S. Patent 5,507,400 entitled, “Slackless drawbar or coupler with swivel mounting.”

18. I am an inventor of U.S. Patent 5,463,964 entitled, “Rocker seat connection.”

19. I am an inventor of U.S. Patent 5,139,161 entitled, “Automatic actuator for coupler knuckle-assembly of a railway passenger car.”

20. I am an inventor of U.S. Patent 5,027,716 entitled, “Stabilized swing-motion truck for railway cars.”

21. I am an inventor of U.S. Patent 4,744,308 entitled, “Combined center plate/center filler for railway freight cars.”

### III. MATERIALS CONSIDERED

22. I have reviewed the following:

a. U.S. Pat. No. 6,700,602 (“the ‘602 patent”) including the claims thereof;

b. Petition for *Inter Partes* Review of U.S. Patent No. 6,700,602, No. OPR2017-00117 including Exhibits.

c. The translation of Japan Train Operation Association Magazine, Vol. 37, issue no. 3 (March 1, 1995) (Ex. 1003, “JTOA Magazine”);

d. The translation of Japanese Publication No. 04-085379 (Ex. 1005, “Namikawa”);

e. The translation of Japanese Publication No. 07-181900 (Ex. 1007, “Miyajima”);

f. The translation of Japanese Publication No. 04-322579 (Ex. 1011, “Sasao”);

g. U.S. Patent No. 5,293,244 to Kawaguchi (Ex. 1022, ‘Kawaguchi”);

h. The translation of Japanese Publication No. 04-160991 (Ex. 1009, “Maekawa”);

- i. The translation of Japanese Publication No. 02-23985 (Ex. 1021, “Amano”);
- j. The file history of the ‘602 Patent provided in Ex. 1012; and
- k. The reexamination file history of the ‘602 Patent provided in Ex. 1013.

23. I understand it has been stated that the following references are prior art to all of the claims of the ‘602 Patent:

- a. JTOA Magazine;
- b. Namikawa;
- c. Miyajima;
- d. Sasao;
- e. Kawaguchi;
- f. Maekawa; and
- g. Amano.

24. In making my conclusions stated herein, while reviewing the materials listed in paragraphs 22 and 23, I have applied the claim construction definitions applied by Petitioner in its Petition for *Inter Partes* Review of U.S. Patent No. 6,700,602, No. IPR2017-00117.

25. I understand that a claim is invalid for obviousness if the differences between the subject matter sought to be patented and the prior art are so insubstantial that the subject matter as a whole would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to which that subject matter pertains.

26. To the best of my understanding, my opinions regarding obviousness of the ‘602 Patent follow the legal principles contained in *Graham v. John Deere*, 383 U.S. 1 (1966) and *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007).

#### IV. PERSON OF ORDINARY SKILL IN THE ART

27. Generally, the ‘602 Patent is in the field of interior design of rail cars and more specifically the field of video display systems mounted in and operating in mass transit subway cars.

28. In the 1995-1997 timeframe, a person of ordinary skill in the art in the field of the '602 Patent would have (1) a Bachelor's Degree in Engineering, and (2) at least 2-3 years of Engineering experience with rail equipment and/or the design of rail equipment.

29. In forming the opinions that I express herein, I have adopted the perspective of a person of ordinary skill in the art, as described above.

## V. OPINIONS

### A. STATE OF THE ART

30. In the early 1990s, it was not known to flush mount television screens in the walls or ceilings of a rail car. The example provided in Appendix C of the Decl. of Lowell Malo in fact confirms this point. The television screen has a protruding swivel mount.

31. The Patent Board of Appeals, during the *ex parte* reexamination of the within patent, concluded that a screen located at a monitor on top of the surface of the car would not be substantially flushed against the car surface. I agree with this position.

32. It was also not well known, prior to the '602 patent, to provide a plurality of video display monitors each having a video screen... each of said monitor being mounted at the junction of the sidewall and ceiling, with the screen of the monitor substantially flushed with the adjacent wall surface structure of the car, and directed obliquely downwardly toward the car seats.

33. Expert Malo states the "norm" (in the first sentence of paragraph 31 of his Declaration) or trend—as exemplified by the FRA rule-making discussed in paragraph 31—was to have "interior fittings" recessed or flush-mounted. The examples given in paragraphs 27-30 (and mentioned above) are examples of such "interior fittings," and, hence, one skilled in the art would have surely known to install such fittings in a recessed or flush-mounted manner. However, the screen of a television or video monitor is not a "fitting." Still further, prior to the '602 patent, it would not have been obvious to flush-mount it at the junction of the ceiling and a sidewall of a rail car. This is further evidenced by Expert Malo's own statements and photos showing Amtrak utilized a protruding swivel mounted monitor, which is not flush mounted (or substantially flushed) and is on a lower sidewall, which would be a typical eye level.

34. Prior to 1997, one skilled in the art would have been aware of installing "interior fittings" (which would not include TVs or video screens) in a rail car in a "recessed or flush-mounted" manner, but the installation of a video screen in this manner—especially at the junction

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