

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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IPR2017-01036

Patent No. 6,700,602

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**EX. 2009- SUPPLEMENTAL EXPERT DECLARATION OF JOSEPH B.**

**ZICHERMAN, Ph.D., SFPE**

I, Joseph B. Zicherman, hereby declare the following:

## **I. BACKGROUND AND QUALIFICATIONS**

1. I am over 21 years of age and otherwise competent to make this Declaration. I make this Declaration based on facts and matters within my own knowledge and on information provided to me by others.

2. I have been retained as an expert in this matter by Counsel for Patent Owner Scott Blair to provide my independent opinions on certain issues requested by Counsel for Patent Owner relating to the accompanying petition for *Inter Partes* Review of U.S. Patent No. 6,700,602 ("the '602 Patent"). My compensation in this matter is not based on the substance of the opinions rendered here.

3. I have previously summarized in my original declaration submitted herein (Ex. 2007) my educational background, career history, and other relevant qualifications.

4. I have been working actively in the rail design engineering industry for more than 35 years.

5. As part of my work in connection with this proceeding, I have reviewed the following materials:

- Patent 6,700,602 (the '602 Patent) including the claims thereof;
- Petition for *Inter Partes* Review of U.S. Patent No. 6,700,602, No. IPR2017-01036 including Exhibits;
- Translation of Japan Train Operation Association Magazine, Vol. 37, Issue No. 3 (March 1, 1995) (Ex. 1003, "JTOA Magazine");
- The translation of Japanese Publication No. 04-085379 (Ex. 1005, "Namikawa");

- The translation of Japanese Publication No. 07-181900 (Ex. 1007, "Miyajima");
- The translation of Japanese Publication No. 04-322579 (Ex. 1011, "Sasao");
- The translation of Japanese Publication No. 04-160991 (Ex. 1009, "Maekawa");
- U.S. Patent No. 5,293,244 to Kawaguchi (Ex. 1022, "Kawaguchi");
- The translation of Japanese Publication No. 02-23985 (Ex. 1021, "Amano");
- U.S. Patent 5,148,282 to Sedighzadeh (Ex. 1025, "Sedighzadeh")
- U.S. Patent 3,211,904 to Schwenkler (Ex. 1026, "Schwenkler")
- The translation of Japanese Publication No. 05-042853 (Ex. 1028, "Yamada")
- The file history of the '602 patent provided in Exhibit 1012;
- The reexamination file history of the '602 patent provided in Exhibit 1013; and
- Decision Instituting *Inter Partes* Review (Paper 10) ("Decision").
- A complete copy of the Proposed FRA rules (Ex. 2004)
- Consumer Product Safety Division Guidelines for Television Receiver Safety (Ex. 2005)

## II. OVERVIEW OF THE '602 PATENT AND THE PRIOR ART

### The '602 Patent

6. The '602 Patent is directed to a video display monitor system that is mounted at fixed intervals at the junction of the sidewall and the ceiling of a subway car. According to certain embodiments, the video monitor system includes an enclosure for the video monitor that is designed to be mounted at the junction of the sidewall and the ceiling in such a manner that

the screen of the video display monitor (or an enclosure or a transparent cover unit for the video display monitor) is substantially flush (or substantially contiguous or flush) with the adjacent surface structure of the wall and oriented obliquely downward towards the subway car's seats. See Ex. 1001, p. 12 at 1:23-44, 1:63-67-2:17, 2:33-46. According to other embodiments, the video display monitors are each enclosed within an enclosure which may be secured to a structural member between an inner wall and an outer structural shell of the subway car. See Ex. 1001, p. 12 at 1:55-1:59, 2:56-60. According to still other embodiments, there may be a back lit panel disposed on the adjacent wall surface structure of the car. See Ex. 1001, p. 12 at 1:51-54, 2:29-31 and 2:53-55. The system also comprises a "video signal source unit" connected to the monitors. The "video signal source unit" consists of pre-recorded material for broadcasting on the screens such as news, advertisements, etc. It can be in the form of video disk players, CD-ROM players, and video tape players (Ex. 1001 at 2:15-42).

### **III. UNDERLYING FINDINGS**

#### **Level of Skill of a Person Having Ordinary Skill In The Art**

7. Based on my education, training, and professional experience in the field of the claimed invention, I am familiar with the level and abilities of a person of ordinary skill in the art at the time of the claimed invention. I do not disagree with the qualifications recited by Petitioner's expert that a person of ordinary skill in the art of the '602 Patent at the time of the claimed invention ("POSITA") would have been a person having the equivalent of a bachelor's degree (e.g., a bachelor's in Aerospace, Industrial or Mechanical Engineering) or a practical experience equivalent to these degrees with at least two years of experience in design of rail cars in order to be capable of understanding the '602 Patent and the prior art references discussed

herein. Additionally, I meet at least these minimum qualifications to be a person having ordinary skill in the art as of the time of the claimed invention of the '602 Patent.

**Background Information on Subway Cars**

8. DELETED.

9. DELETED.

10. Subway cars may have a rounded portion at the junction of the sidewall and the ceiling to accommodate travel through subway tunnels which are bored by a machine in a round shape and made to be as small as possible to reduce costs.

11. It would be clear to one of ordinary skill in the art that the "junction of the sidewall and the ceiling" in a subway car is not a single point, but an area between the ceiling and a sidewall that is typically curved.

12. Buses and above-ground trains would not have the same need to be rounded at the junction of the sidewall and the ceiling, as they do not go through underground tunnels in the same manner as subway cars.

13. Square junctures at the junction of the ceiling and the sidewall in subway cars are also avoided to reduce fatigue stresses and formation of fatigue cracks.

14. Prior to the current invention, the problem was how to achieve a television in a subway car that was smooth and aesthetically pleasing, similar to a television in a wall, but also directed obliquely downwards for ease of viewing and located at the junction of the sidewall and the ceiling so as not to take up car space or injure passengers. The problem, posed to the inventor at the time of the invention, was particularly challenging as subway cars have challenges that do not exist in residential environments or even buses or Amtrak trains.

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