

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOYOTA MOTOR CORPORATION,

Petitioner,

v.

SIGNAL IP, INC.,

Patent Owner.

Case IPR2016-00291

Patent 5,732,375

PATENT OWNER'S PRELIMINARY RESPONSE

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1. Introduction.

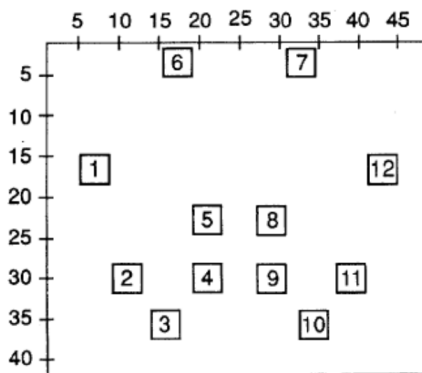
Petitioner challenges the patentability of claim 11 of U.S. Patent 5,732,375 (the “’375 Patent”). For at least the reasons explained below, the Patent Trial and Appeal Board (“PTAB” or “Board”) should not institute an *inter partes* review because Petitioner has not met its burden to show a reasonable likelihood that the challenged claim is unpatentable.

2. Overview of the ‘375 Patent.

The ‘375 Patent discloses a method of controlling airbag deployment using an array of pressure sensors on a vehicle passenger seat. *Ex. 1001* at Abstract.¹ The passenger seat of a vehicle may be occupied or unoccupied, and, if occupied, may be occupied by a child in an infant seat. *Id.* at 1:18-20, 44-47. In the latter case, if the seat is occupied by a rear-facing infant seat it is desirable to prevent airbag deployment. *Id.* at 1:28-29. It is also desirable for the system to be sensitive to possible seating positions of small children. *Id.* at 1:49-50.

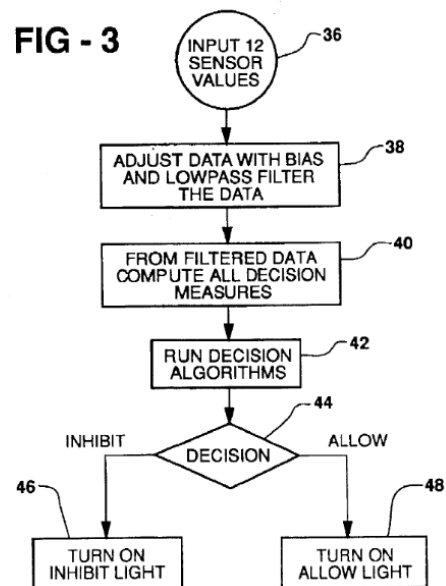
¹ The disclosure of the ‘375 Patent was also discussed by the Board in IPR2015-01003. *Ex. 1006 at 3 et seq.*

In a disclosed embodiment, the passenger seat is equipped with 12



pressure sensors, arranged on the seat according to Figure 2, which is reproduced at left. *Id.* at 3:21-23. In this example, the sensors are turned on one at a time, a microprocessor samples each

sensor four times, and the sensed values are averaged, bias-corrected, and filtered with a time constant. *Id.* at 3:41-43. This resulting value is then used to determine “decision measures,” *id.* at 3:48-49, using “fuzzy logic” to rate and handle marginal cases. *Id.* at 2:13, 19-20. The overall operation is shown in Figure 3 of the ‘375 patent, which is reproduced at right.



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