

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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THE BOEING COMPANY,  
Petitioner,

v.

SEYMOUR LEVINE,  
Patent Owner.

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Case IPR2015-01341  
Patent RE39,618

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Before MICHAEL W. KIM, TRENTON A. WARD, and  
DANIEL N. FISHMAN, *Administrative Patent Judges*.

WARD, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

## I. INTRODUCTION

We have authority to hear this *inter partes* review under 35 U.S.C. § 6(b), and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 4, 5, 8, 9, 10, 14, and 16 (“the challenged claims”) of U.S. Patent No. RE39,618 (Ex. 1001, “the ’618 patent”) are unpatentable.

### A. Background

The Boeing Company (“Petitioner”) filed a Petition seeking to institute an *inter partes* review of the challenged claims of the ’618 patent pursuant to 35 U.S.C. §§ 311–319. Paper 2 (“Pet.”). Petitioner relies upon the Declaration of Dr. Albert Helfrick in support of its Petition. Ex. 1002. Seymour Levine (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). Pursuant to 35 U.S.C. § 314(a), we instituted an *inter partes* review on the following grounds:

Claims	References	Basis
4, 5, 14, and 16	Ward <sup>1</sup> in view of ARINC 624-1 <sup>2</sup>	§ 103
8, 9, and 10	Ward in view of ARINC 624-1 in further view of Monroe <sup>3</sup>	§ 103
4, 5, 14, and 16	Dyson <sup>4</sup> in view of Chetail	§ 103

<sup>1</sup> M J Ward, “*Power Plant Health Monitoring – The Human Factor*,” Feb. 1992 (Ex. 1015) (“Ward”).

<sup>2</sup> “*Design Guidance for Onboard Maintenance System*,” ARINC Report 624-1, Aug. 1993 (Ex. 1014) (“ARINC 624-1”).

<sup>3</sup> US Patent No. 5,798,458, filed Oct. 28, 1996 (Ex. 1017) (“Monroe”).

<sup>4</sup> R.J.E. Dyson, “*Commercial Engine Monitoring Status at GE Aircraft Engines*,” Oct. 1988 (Ex. 1019) (“Dyson”).

Claims	References	Basis
8, 9, and 10	Dyson in view of Chetail <sup>5</sup> in further view of Monroe	§ 103
4, 5, 14, and 16	Dowling <sup>6</sup> in view of ARINC 624-1	§ 103
8, 9, and 10	Dowling in view of ARINC 624-1 in further view of Monroe	§ 103
8, 9, and 10	Ward in view of ARINC 624-1, ARINC 702-6, <sup>7</sup> and FAA, Increased FDR Parameters <sup>8</sup>	§ 103
8, 9, and 10	Ward in view of ARINC 624-1, FAA, Increased FDR Parameters and Farmakis <sup>9</sup>	§ 103

See Decision on Institution, Paper 10 (“Dec.”), 36.

On January 27, 2016, Petitioner filed a Motion to Submit Supplemental Information pursuant to 37 C.F.R. § 42.123(a) (Paper 21), as previously authorized by the Board (Paper 20), seeking to submit a Supplemental Declaration of Dr. Albert Helfrick (Ex. 1042) and Exhibits A–C to his supplemental declaration. Patent Owner opposed the Motion to Submit Supplemental Information. Paper 23. On April 15, 2016, the Board granted Petitioner’s Motion to Submit Supplemental Information and

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<sup>5</sup> P. Chetail, “*LE CFM 56-5 SUR A320 A Air France*,” Oct. 1988 (Ex. 1018) (“Chetail”).

<sup>6</sup> Drew Dowling and Richard A. Lancaster, “*Remote Maintenance Monitoring Using a Digital Link*,” Dec. 1984 (Ex. 1013) (“Dowling”).

<sup>7</sup> “*Flight Management Computer System*,” ARINC Characteristic 702-6, Jun. 10, 1994 (Ex. 1016) (“ARINC 702-6”).

<sup>8</sup> “*Increased Flight Data Recorder Parameters*,” 60 Fed. Reg. 13,862, Mar. 14, 1995 (Ex. 1011) (“FAA, Increased FDR Parameters”).

<sup>9</sup> US Patent No. 5,714,948, filed Apr. 16, 1996 (Ex. 1021) (“Farmakis”).

entered Exhibit 1042, and associated Exhibits A–C, into the record.  
Paper 30, 5.

After institution of trial, Patent Owner then filed a Patent Owner Response (Paper 28, “PO Resp.”), to which Petitioner filed a Reply (Paper 33, “Pet. Reply”). Among other evidence, Patent Owner relies upon the Declaration of John F. Grabowsky in support of Patent Owner’s Response. Ex. 2011.

An oral argument was held on September 14, 2016. A transcript of the oral argument is included in the record. Paper 45 (“Tr.”).

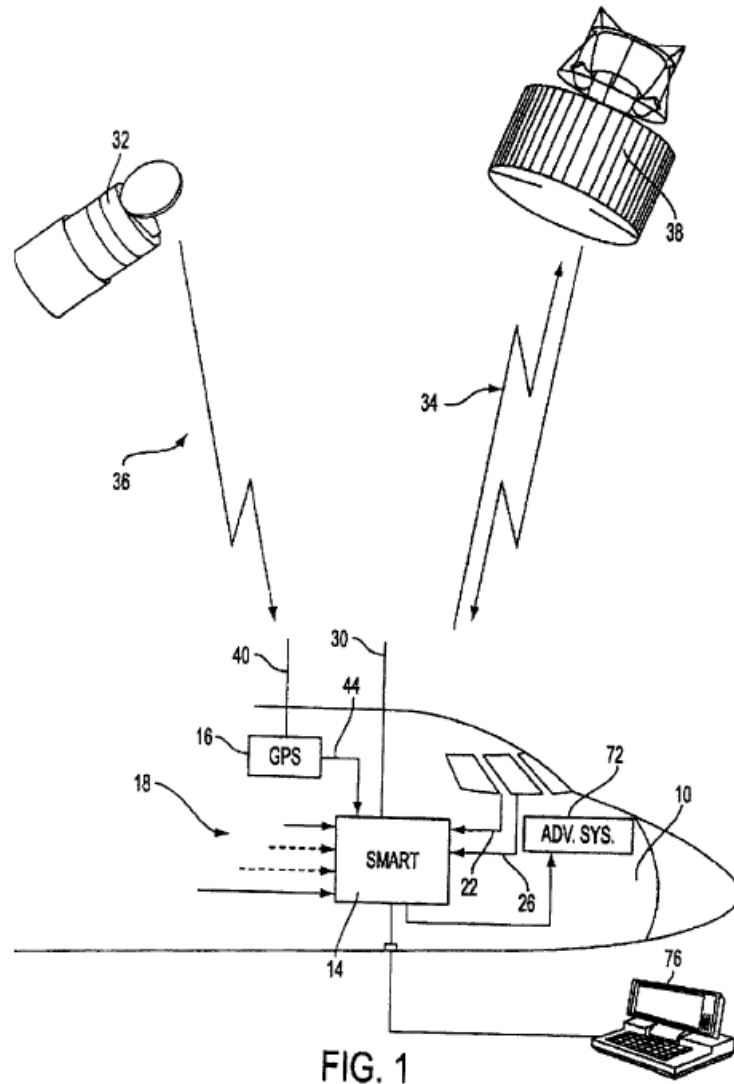
### *B. Additional Proceedings*

The parties indicated the ’618 patent is the subject of the following district court action: *Levine v. The Boeing Company*, No. 14-cv-1991 (W.D. Wash.). Pet. 1; Paper 4, 1.

### *C. The ’618 Patent*

The ’618 patent is titled “Remote, Aircraft, Global, Paperless Maintenance System” and generally relates to a system that monitors performance parameters and aircraft operational parameters, and broadcasts this information along with aircraft identification, audio, video, global positioning, and altitude data, to a worldwide two-way RF network. Ex. 1001, Abstract. The ’618 patent discloses that the information is monitored and recorded at a remote, centralized location and analysis of this information allows identification of problems and generation of advisories. *Id.*

Figure 1 of the '618 patent, reproduced below, illustrates an embodiment of the system described:



As shown above in Figure 1, the '618 patent discloses aircraft 10 with Sensor Multiplexer Receiver & Transmitter (“SMART”) 14, which can receive aircraft performance and control data 18, acoustic data 22, video data 26, and information from GPS receiver system 16. *Id.* at 4:57–65. SMART 14 periodically samples sensor signals 18, 22, 26, 44 and adds to each signal a sensor identification label, an aircraft identification label, and a configuration label. *Id.* at 5:1–5. Aircraft 10 equipped with SMART 14

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