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Entered: December 21, 2015

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE BOEING COMPANY, Petitioner,

v.

SEYMOUR LEVINE, Patent Owner.

Case IPR2015-01341 Patent RE39,618

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

WARD, Administrative Patent Judge.

DECISION Institution of *Inter Partes* Review 37 C.F.R. § 42.108



I. INTRODUCTION

A. Background

The Boeing Company ("Petitioner") filed a Petition seeking to institute an *inter partes* review of claims 4, 5, 8, 9, 10, 14, and 16 ("the challenged claims") of U.S. Patent No. RE39,618 (Ex. 1001, "the '618 patent") pursuant to 35 U.S.C. §§ 311–319. Paper 2 ("Pet."). Seymour Levine ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp."). We have statutory authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

Upon consideration of the Petition, Patent Owner's Preliminary Response, and the associated evidence, we conclude Petitioner has established a reasonable likelihood it would prevail with respect to at least one of the challenged claims. Accordingly, for the reasons that follow, we institute an *inter partes* review.

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.

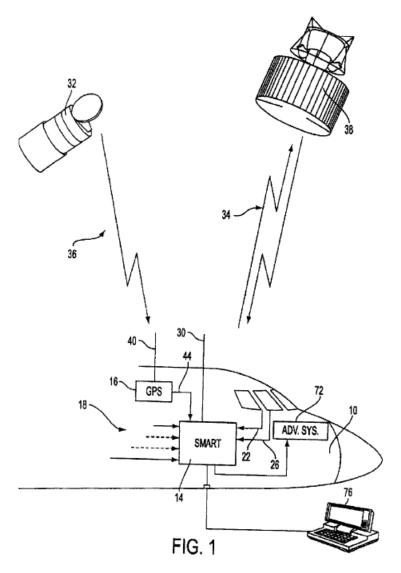
C. The '618 Patent

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 an 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 the 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 transmits the sensor data over a UHF radio to communication satellite 38, which relays the data to Central Ground Based Processing Station ("CGBS") 42. *Id.* at 5:21–28. CGBS 42 includes processing station 62 for data analysis and problem simulation and advisory module 70 for generating aircraft advisories. *Id.* at 5:49–53.

D. Illustrative Claims

Claims 4 and 8 are illustrative of the claimed subject matter and are reproduced below.

- 4. An aircraft maintenance system for use on an aircraft having a flight data recorder, the maintenance system comprising:
- a transmitter portable to be placed on an aircraft, said transmitter configured for transmission of digital aircraft performance data across a communication network while said aircraft is in flight; and
- a central station connected to said communication network configured to receive and analyze said digital aircraft performance data to generate maintenance advice for said aircraft while said aircraft is in flight,
- wherein said digital aircraft performance data includes an identifier unique to a particular aircraft and a configuration label, and at least a portion of said digital aircraft performance data comprises data directed to the flight data recorder.
- 8. The aircraft maintenance system of claim 4 wherein said digital aircraft performance data includes aircraft position data directed to said flight data recorder.



E. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of the challenged claims of the '618 patent based on the following grounds:

Claims	References	Basis
4, 5, 14, and 16	Ward ¹ in view of ARINC 624-1 ²	§ 103
8, 9, and 10	Ward in view of ARINC 624-1 in	§ 103
	further view of Monroe ³	
4, 5, 14, and 16	Dyson ⁴ in view of Chetail	§ 103
8, 9, and 10	Dyson in view of Chetail ⁵ in further	§ 103
	view of Monroe	
4, 5, 14, and 16	Dowling ⁶ in view of ARINC 624-1	§ 103
8, 9, and 10	Dowling in view of ARINC 624-1 in	§ 103
	further view of Monroe	
8, 9, and 10	Ward in view of ARINC 624-1,	§ 103
	ARINC 702-6, and FAA, Increased	
	FDR Parameters ⁸	
8, 9, and 10	Ward in view of ARINC 624-1, FAA,	§ 103
	Increased FDR Parameters and	
	Farmakis ⁹	

¹ M J Ward, "Power Plant Health Monitoring – The Human Factor," February 1992 (Ex. 1015) ("Ward").

⁸ "Increased Flight Data Recorder Parameters," Federal Register 13,862–13,864, March 14, 1995 (Ex. 1011) ("FAA, Increased FDR Parameters").



² "Design Guidance for Onboard Maintenance System," ARINC Report 624-1, August 1993 (Ex. 1014) ("ARINC 624-1").

³ US Patent No. 5,798,458, filed October 28, 1996 (Ex. 1017) ("Monroe").

⁴ R.J.E. Dyson, "Commercial Engine Monitoring Status at GE Aircraft Engines," October 1988 (Ex. 1019) ("Dyson").

⁵ P. Chetail, "*LE CFM 56-5 SUR A320 A Air France*," October 1988 (Ex. 1018) ("Chetail").

⁶ Drew Dowling and Richard A. Lancaster, "*Remote Maintenance Monitoring Using a Digital Link*," December 1984 (Ex. 1013) ("Dowling"). ⁷ "*Flight Management Computer System*," ARINC Characteristic 702-6, June 10, 1994 (Ex. 1016) ("ARINC 702-6").

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