

(19) **United States**  
(12) **Reissued Patent**  
**Levine**

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(45) **Date of Reissued Patent:** **May 8, 2007**

- (54) **REMOTE, AIRCRAFT, GLOBAL, PAPERLESS MAINTENANCE SYSTEM** 5,200,902 A 4/1993 Pilley  
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- (76) Inventor: **Seymour Levine**, 4928 Maytime La., 5,325,302 A \* 6/1994 Izidon et al. .... 701/301  
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- (21) Appl. No.: **10/004,429** 5,408,515 A 4/1995 Bhagat et al.
- (22) Filed: **Oct. 25, 2001** 5,440,544 A 8/1995 Zinser, Jr.

**Related U.S. Patent Documents**

Reissue of:

- (64) Patent No.: **5,974,349**
- Issued: **Oct. 26, 1999**
- Appl. No.: **09/205,331**
- Filed: **Dec. 4, 1998**

(Continued)

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(57) **ABSTRACT**

This invention is a system that monitors many performance parameters and many aircraft operational parameters, and broadcasts this information along with aircraft identification, audio, video, global positioning and altitude data, to a world wide two-way rf network. This information is monitored and recorded at a remote, centralized location. At this location, this information is combined with archived data, ATC data, weather data, topological data, map data, and manufacturers' data. Analysis of this combined data allows identification of problems and generation of advisories. Six types of advisories are generated: maintenance, safety of flight, flight efficiency, flight separation, safe to fly and safe to take off. In the event of a crash the remotely recorded data provides an instant indication of the cause of the crash as well as where the crashed plane can be found. Use of this invention allows replacement of the current, on-board flight data recorders thus saving costs and weight. Having the recorded data at a remote site eliminates the need to search for flight data recorders. Other advantages are back-up for ATC radar position data, better control of aircraft separation, improved flight efficiency, and allowing use of simpler and lower power radar.

U.S. Applications:

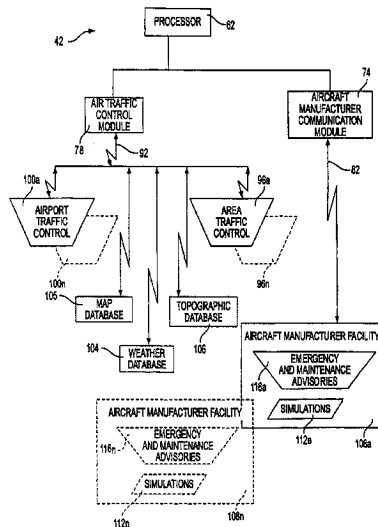
- (63) Continuation of application No. 08/768,313, filed on Dec. 17, 1996, now Pat. No. 5,890,079.
- (51) **Int. Cl.**  
**G06F 19/00** (2006.01)
- (52) **U.S. Cl.** ..... **701/29; 701/14; 701/35;**  
340/945
- (58) **Field of Classification Search** ..... 701/14,  
701/29, 35, 120, 301; 340/945, 961, 963,  
340/971; 342/29, 454, 36–38, 455, 456  
See application file for complete search history.

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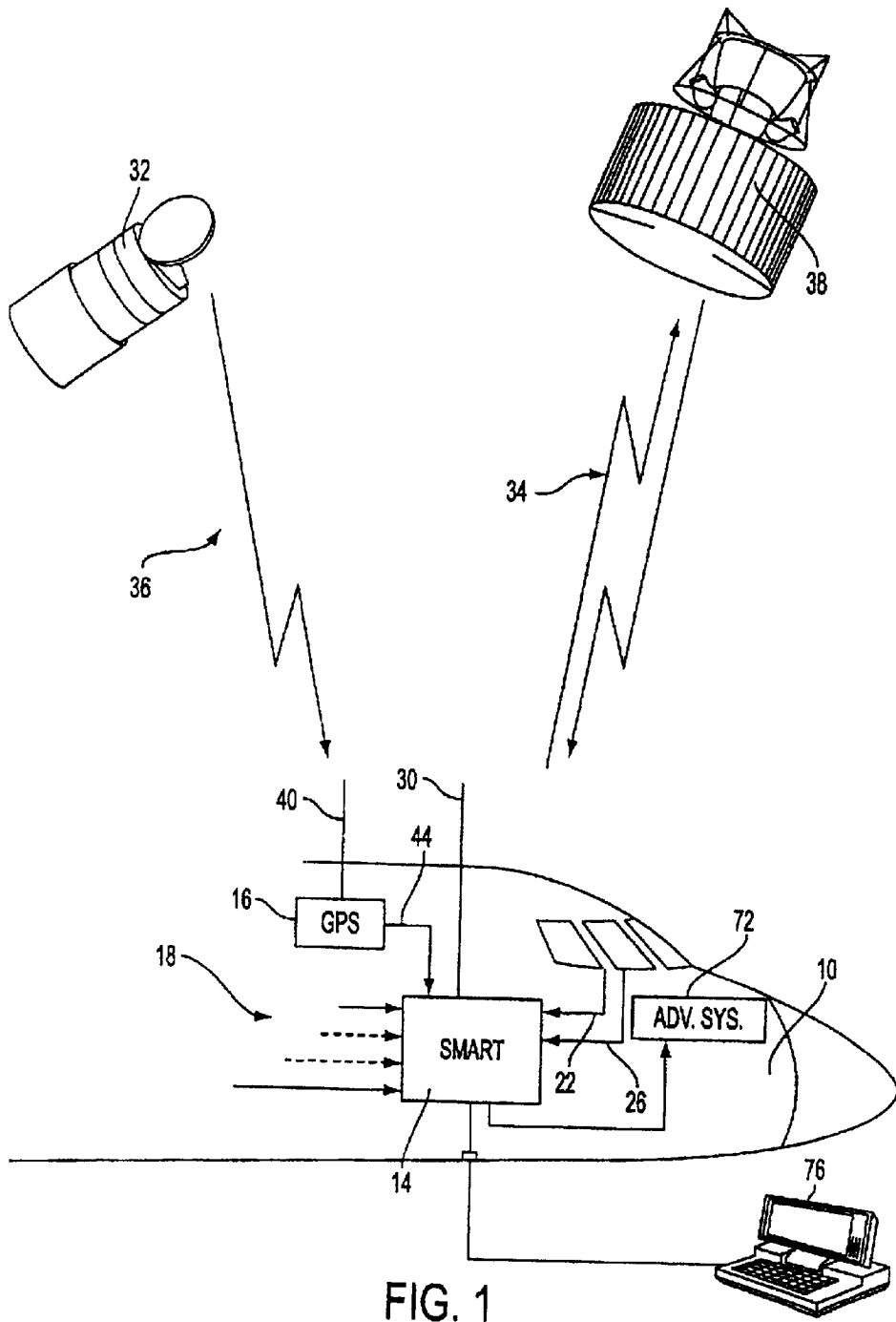
**16 Claims, 4 Drawing Sheets**



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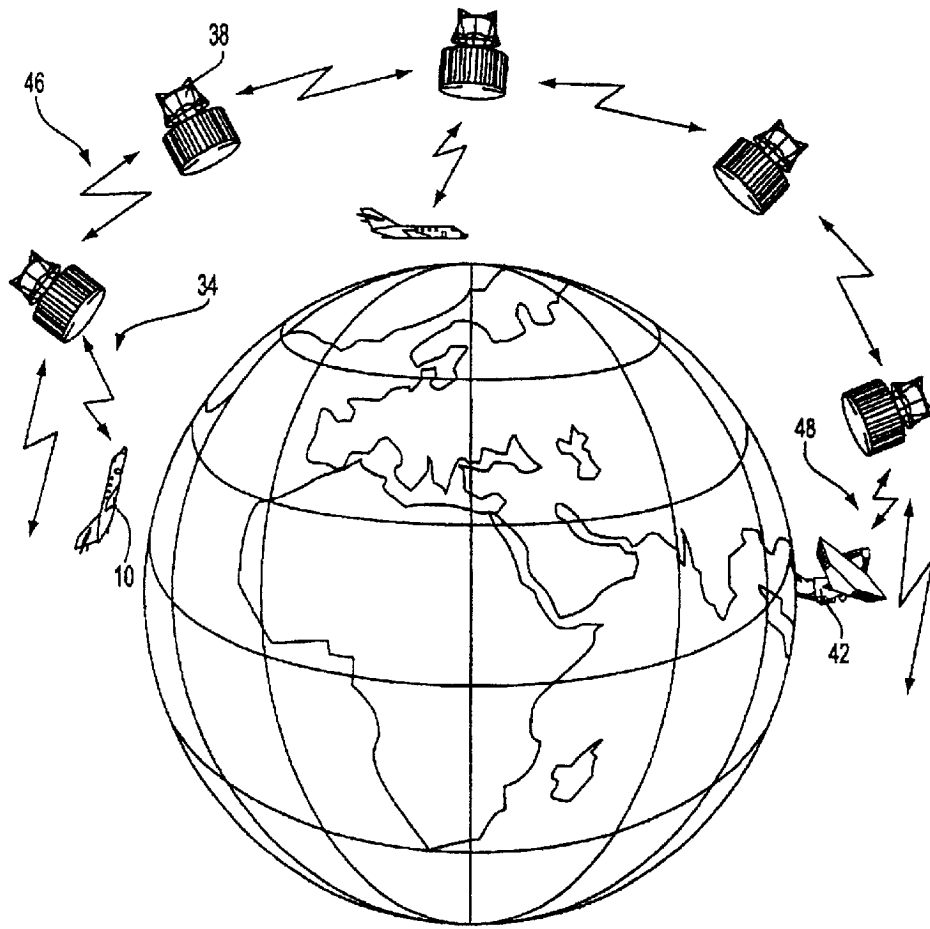


FIG. 2

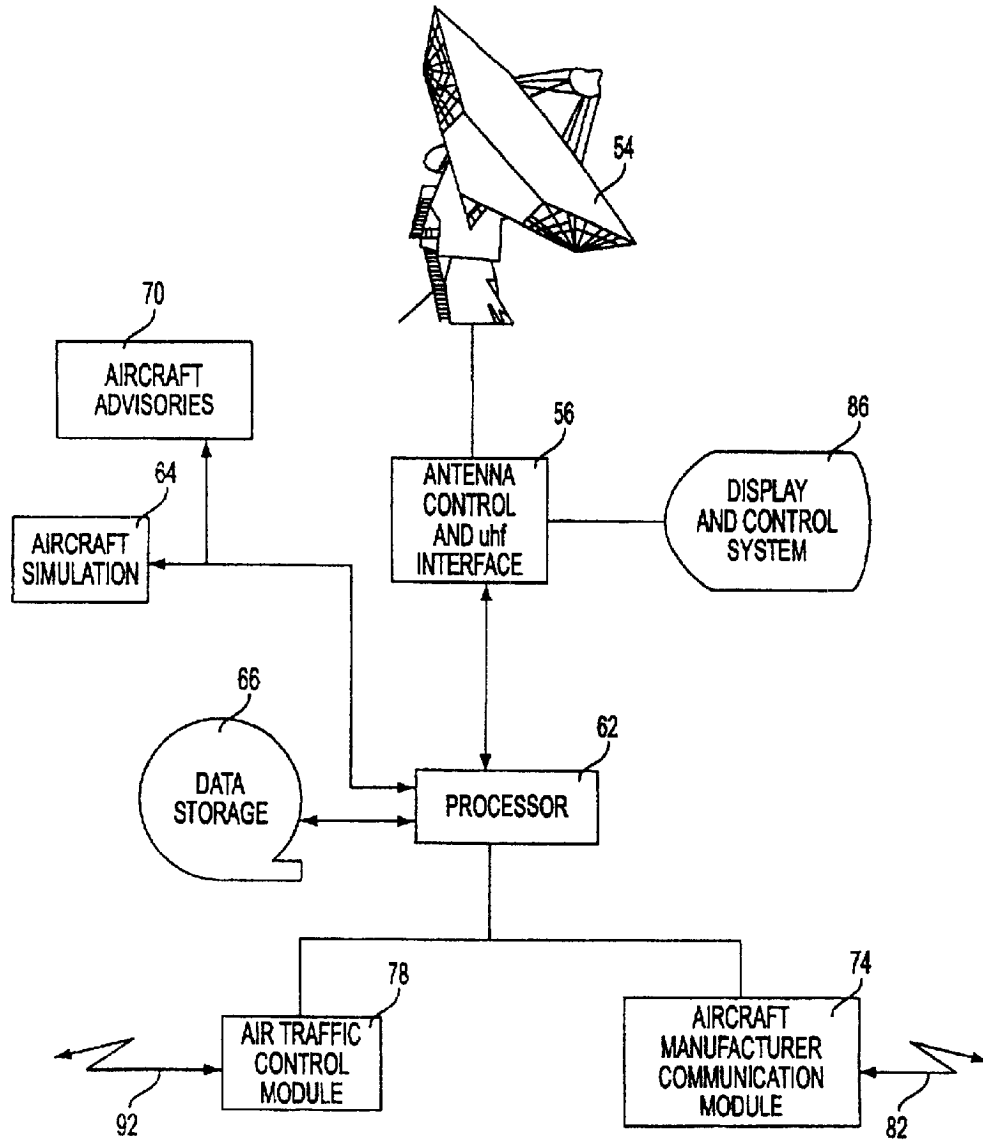


FIG. 3

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