



US006831593B2

(12) **United States Patent**
Aker et al.

(10) **Patent No.:** **US 6,831,593 B2**
(45) **Date of Patent:** ***Dec. 14, 2004**

(54) **SYSTEM AND METHOD FOR PROCESSING RADAR DATA**

(75) Inventors: **John L. Aker**, Kansas City, MO (US);
Alan B. Mead, Plano, TX (US);
Robert S. Gammenthaler, Princeton,
TX (US); **Robert V. Vanman**,
McKinney, TX (US)

(73) Assignee: **Applied Concepts, Inc.**, Plano, TX
(US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-
claimer.

(21) Appl. No.: **10/452,110**

(22) Filed: **Jun. 2, 2003**

(65) **Prior Publication Data**

US 2003/0193431 A1 Oct. 16, 2003

Related U.S. Application Data

(63) Continuation of application No. 09/930,866, filed on Aug.
16, 2001, now Pat. No. 6,580,386.

(51) **Int. Cl.**⁷ **G01S 13/58; G01S 13/08**

(52) **U.S. Cl.** **342/114; 342/104; 342/115**

(58) **Field of Search** **342/104, 114,**
342/115

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,803,602 A *	4/1974	Case et al.	
4,335,382 A *	6/1982	Brown et al.	
5,525,996 A *	6/1996	Aker et al.	342/104
6,023,236 A *	2/2000	Shelton	342/104
6,114,973 A *	9/2000	Winner et al.	340/905
6,356,229 B1 *	3/2002	Schneider	342/70

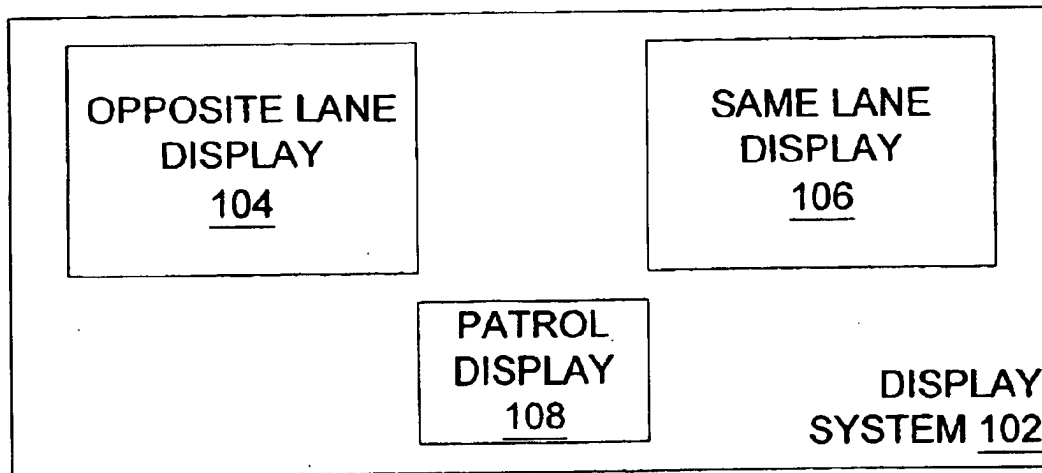
* cited by examiner

Primary Examiner—Stephen C. Buczinski
(74) *Attorney, Agent, or Firm*—Christopher J. Rourk;
Godwin Gruber L.L.P.

(57) **ABSTRACT**

A system for processing radar data from two or more areas of interest is provided, such as for simultaneously processing vehicle speeds in the opposite lane in front of the patrol vehicle and in the opposite lane behind the patrol vehicle. The system includes an antenna signal processor that receives radar data from one or more radar antennae and generates speed data for a first vehicle travelling in a first direction relative to a radar observation point and a second vehicle travelling in a second direction relative to the radar observation point. A display generator system receives the speed data and user-entered display control data, and generates user-readable display data based on the speed data and the user-entered display control data.

21 Claims, 8 Drawing Sheets



100 ↑