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Aker et al.

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(54) **SYSTEM AND METHOD FOR DETERMINING PATROL SPEED**

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(58) **Field of Classification Search** **342/104-117, 342/59, 175, 192-197, 165, 173, 174**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,371,341	A *	2/1968	Stavis	342/114
3,833,906	A *	9/1974	Augustine	342/59
3,859,660	A *	1/1975	Augustine et al.	342/114
4,107,680	A *	8/1978	Kaplan	342/115
4,635,059	A *	1/1987	Ball	342/117
4,980,633	A *	12/1990	Roskoni	342/115
5,204,682	A *	4/1993	Beasley	342/117
5,691,724	A *	11/1997	Aker et al.	342/104
6,023,236	A *	2/2000	Shelton	342/104
6,646,591	B2 *	11/2003	Aker et al.	342/114

* cited by examiner

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(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.

19 Claims, 8 Drawing Sheets

