

Applicants : Kenneth Schofield et al.  
Serial No. : 11/626,535  
Page : 2

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the present application:

1 (currently amended): An image sensing system for a vehicle, said image sensing system comprising:

an imaging sensor;

said imaging sensor comprising a two-dimensional array of light sensing photosensor elements formed on a semiconductor substrate;

said imaging sensor disposed at an interior portion of the vehicle proximate the windshield of the vehicle, said imaging sensor being supported by a mounting structure fixedly attached to an interior surface of the vehicle windshield so as to physically fixedly position said imaging sensor close to and rearward of a portion of the windshield swept by a windshield wiper of the vehicle;

said imaging sensor having a fixed forward field of view to the exterior of the vehicle through ~~an area~~ the portion of the windshield that is swept by the windshield wiper of the vehicle, the field of view encompassing the road surface traveled by the vehicle;

a logic and control circuit;

said logic and control circuit comprising an image processor for processing image data derived from said imaging sensor;

said image processing comprising at least one of (i) spatial differentiation, (ii) spectral signature recognition, and (iii) pattern recognition;

said logic and control circuit generating at least one control output; and

wherein said image sensing system detects lane markers on ~~a~~ the road surface being traveled by the vehicle and present in the field of view of said imaging sensor, said image processing detecting lane markers by processing said image data to identify lane markers based on at least one of (i) spatial differentiation, (ii) spectral signature recognition, and (iii) pattern

Applicants : Kenneth Schofield et al.  
Serial No. : 11/626,535  
Page : 3

recognition, said image sensing system generating at least one control output responsive to a detection of lane markers to at least one of (a) assist in steering the vehicle and (b) provide a lane change warning to the driver of the vehicle.

2 (original): The image sensing system of claim 1, wherein at least one of (i) said array of light sensing photosensor elements and (ii) at least a portion of said logic and control circuit is formed on said semiconductor substrate as a CMOS device.

3 (original): The image sensing system of claim 1, wherein said array of light sensing photosensor elements and at least a portion of said logic and control circuit are formed on said semiconductor substrate as a CMOS device.

4 (original): The image sensing system of claim 2, wherein said portion of said logic and control circuit comprises at least one of (i) an analog-to-digital converter, (ii) a logic circuit, (iii) a clock, (iv) random access memory, and (v) a digital-to-analog converter.

5 (original): The image sensing system of claim 1 further comprising a lens imaging light external of the vehicle onto said array of light sensing photosensor elements, and wherein said lens comprises a molded plastic lens.

6 (original): The image sensing system of claim 1, including a lens imaging light external of the vehicle onto said array of light sensing photosensor elements and wherein said lens is at least one of (i) bonded to said imaging sensor and (ii) in close contact with said imaging sensor.

7 (original): The image sensing system of claim 1, wherein said interior portion is at or proximate to an interior rearview mirror assembly of the vehicle.

Applicants : Kenneth Schofield et al.  
Serial No. : 11/626,535  
Page : 4

8 (original): The image sensing system of claim 1, wherein at least a portion of said logic and control circuit is commonly formed with said array of light sensing photosensor elements on said semiconductor substrate as an integrated circuit.

9 (original): The image sensing system of claim 1, wherein said logic and control circuit comprises a logic circuit, at least a portion of said logic circuit comprising a configuration of digital logic elements formed on said semiconductor substrate.

10 (original): The image sensing system of claim 1, wherein said logic and control circuit comprises a logic circuit, said logic circuit comprising at least one of (i) a central processing unit and (ii) a read-only-memory.

11 (original): The image sensing system of claim 1, wherein anti-blooming is provided to mitigate the effect of charge leakage from one of said light sensing photosensor elements to an adjacent one of said light sensing photosensor elements.

12 (original): The image sensing system of claim 1, wherein said logic and control circuit determines a background light level.

13 (original): The image sensing system of claim 1, wherein said at least one control output controls as a function of a speed of the vehicle.

14 (original): The image sensing system of claim 1, wherein said interior portion is generally centrally located along the vehicle axis and is relatively high in the interior of the vehicle.

15 (original): The image sensing system of claim 1, wherein said forward field of view has a horizontal field of view and a vertical field of view and wherein said horizontal field of view is wider than said vertical field of view.

Applicants : Kenneth Schofield et al.  
Serial No. : 11/626,535  
Page : 5

16 (original): The image sensing system of claim 1, wherein said image processing comprises pattern recognition and wherein said pattern recognition identifies objects of interest based on at least one of (i) shape, (ii) reflectivity, (iii) luminance, and (iv) spectral characteristic.

17 (original): The image sensing system of claim 1, wherein said image processing identifies objects of interest and wherein object recognition is enhanced by comparing identified objects over successive frames.

18 (original): The image sensing system of claim 1, wherein said image processing identifies objects of interest and wherein objects of interest are at least one of qualified and disqualified based on object motion in said field of view of said imaging sensor.

19 (original): The image sensing system of claim 1, wherein said imaging sensor detects conditions indicative of fog forward of the vehicle.

20 (original): The image sensing system of claim 1, wherein said detection of lane markers comprises identification by spectral signature.

21 (canceled).

22 (currently amended): An image sensing system for a vehicle, said image sensing system comprising:

an imaging sensor;

said imaging sensor comprising a two-dimensional array of light sensing photosensor elements formed on a semiconductor substrate;

said imaging sensor disposed at an interior portion of the vehicle proximate the windshield of the vehicle, said imaging sensor being supported by a mounting structure fixedly

Applicants : Kenneth Schofield et al.  
Serial No. : 11/626,535  
Page : 6

attached to an interior surface of the vehicle windshield so as to physically fixedly position said imaging sensor close to and rearward of a portion of the windshield swept by a windshield wiper of the vehicle;

said imaging sensor having a fixed forward field of view to the exterior of the vehicle through an area the portion of the windshield and wherein said windshield area comprises a windshield area that is swept by the windshield wipers, the field of view encompassing the road surface traveled by the vehicle;

a logic and control circuit;

said logic and control circuit comprising an image processor for processing image data derived from said imaging sensor;

said image processing comprising at least one of (i) spatial differentiation, (ii) spectral signature recognition, and (iii) pattern recognition;

said logic and control circuit generating at least one control output;

wherein said image sensing system detects lane markers on a the road surface being traveled by the vehicle and present in the field of view of said imaging sensor, said image sensing system generating at least one control output responsive to a detection of lane markers to at least one of (a) assist in steering the vehicle and (b) provide a lane change warning to the driver of the vehicle; and

wherein said image processing detects detection of lane markers based on comprises identification by of a spectral signature of the lane markers.

23 (original): The image sensing system of claim 22, wherein at least one of (i) said array of light sensing photosensor elements and (ii) at least a portion of said logic and control circuit is formed on said semiconductor substrate as a CMOS device.

24 (original): The image sensing system of claim 22, wherein said array of light sensing photosensor elements and at least a portion of said logic and control circuit are formed on said semiconductor substrate as a CMOS device and wherein said portion of said logic and control

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.