

Boletín VT

COCHE INTELIGENTE 48

4º trimestre 2021

Vigilancia Tecnológica

La integración de las tecnologías de la Información y Comunicaciones (TIC) en vehículos e infraestructuras viales se ha mostrado muy provechosa a la hora de obtener soluciones avanzadas a los problemas del transporte de hoy en día.

Los Sistemas de Coches Inteligentes buscan facilitar la interacción entre el conductor, el vehículo y la carretera, de manera que los sistemas autónomos de abordaje se complementan con sistemas que cooperan entre los diferentes vehículos o entre los vehículos y las infraestructuras, para mejorar, de este modo, aspectos de gran relevancia, tales como la reducción de accidentes, la eficiencia energética o la reducción de la contaminación.

El presente boletín, elaborado por la Unidad de Información Tecnológica de la Oficina Española de Patentes y Marcas (OEPM), pretende revisar la evolución de la innovación, en el marco de las patentes de las tecnologías TIC en relación con algunos

de los sectores prioritarios contemplados en el desarrollo del “Coche Inteligente”, tales como: los sistemas de gestión optimizada del tráfico, las redes sensoriales o de comunicaciones integradas en los vehículos, los sistemas de gestión de plazas de aparcamiento o de peajes, y los sistemas de notificación de accidentes o averías a servicios de emergencia u otros conductores cercanos.

De este modo, el boletín, de periodicidad trimestral, recogerá las publicaciones más recientes de solicitudes internacionales de patente (solicitudes PCT) publicadas en el trimestre inmediatamente anterior a su elaboración. Se ha restringido el ámbito de este boletín a solicitudes PCT por considerarse que al ser estas solicitudes con las que las empresas pretenden proteger sus invenciones en distintos países, se corresponden con invenciones de una cierta relevancia tecnológica.

CONTENIDO:

- Gestión del tráfico
- Redes vehiculares
- Gestión de aparcamientos y peajes
- Notificación de accidentes
- Otras referencias

NIPO: 116-19-010-1

Solicitudes de Patente Publicadas

Los datos que aparecen en la tabla corresponden a una selección de las solicitudes de patentes PCT publicadas durante el trimestre analizado. Se puede acceder al documento completo haciendo clic sobre el mismo.

GESTIÓN DEL TRÁFICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2021207255 A1	NEC LAB AMERICA INC	Multiple lane, real-time traffic monitor and vehicle analysis using distributed fiber sensing
WO 2021209403 A1	VALEO SCHALTER & SENSOREN GMBH	Detection of obstacles in a curved road
WO 2021209225 A1	RENAULT SAS NISSAN MOTOR	Method for detecting a traffic congestion situation in a motor vehicle
WO 2021201569 A1	LAONPEOPLE INC	Signal control apparatus and signal control method based on reinforcement learning
WO 2021211396 A1	NEC LAB AMERICA INC	Vehicle speed, direction, and size measurement using temporal distributed fiber optic sensing
WO 2021239420 A1	RENAULT SAS NISSAN MOTOR	Driver assistance method with virtual target for adaptive cruise control
WO 2021213616 A1	VOLVO TRUCK CORP	Tactical decision-making through reinforcement learning with uncertainty estimation
WO 2021191857 A1	IMPERO PASQUALE	A management system of vehicular traffic along a carriageway
WO 2021217184 A1	CONTINENTAL AUTOMOTIVE SYSTEMS INC	System and method for detecting wrong way driving using a heat map
WO 2021204096 A1	REN SHAOHUA	Three-dimensional road intersection, road network, and motor vehicle terminal system and method
WO 2021190176 A1	HUAWEI TECH CO LTD	Method and apparatus for checking traffic light control scheme
WO 2021199329 A1	NEC CORP	Signal information providing device, signal information providing method, and recording medium having program recorded thereon
WO 2021199319 A1	HONDA MOTOR CO LTD	Information processing device, vehicle, information processing device control method, and program
WO 2021209802 A1	ERICSSON TELEFON AB L M	Method and system for offline modeling for quality of service prediction for connected vehicles
WO 2021228405 A1	TOYOTA MOTOR EUROPE	Road safety warning system for pedestrian
WO 2021226062 A1	INTEL CORP	Intelligent transport system service dissemination
WO 2021209948 A1	PALAN RAJ YOGESH	System and method to enable ride share without pre-booking and with dynamic passenger fare allocation
WO 2021233777 A1	VOLKSWAGEN AG KTM AG	Reduction of the risk of collision with an obscured motor vehicle
WO 2021226065 A1	INTEL CORP	Vulnerable road user basic service communication protocols framework and dynamic states
WO 2021207096 A1	NEC LAB AMERICA INC	Traffic monitoring using distributed fiber optic sensing
WO 2021232387 A1	NANJING INNOVATIVE DATA TECH INC	Multifunctional intelligent signal control system
WO 2021222983 A1	ARROWES IP HOLDINGS PTY LTD	Traffic management system
WO 2021231986 A1	PERCEPTIVE AUTOMATA INC	Scenario identification for validation and training of machine learning based models for autonomous vehicles
WO 2021228334 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for controlling the fleet-based monitoring of the state of a road section of a road network, and associated system and motor vehicle, and associated server device
WO 2021235209 A1	HONDA MOTOR CO LTD	Traffic lane estimation device and traffic lane estimation method

[..ver más](#)

REDES VEHICULARES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2021200421 A1	TOKAI RIKA CO LTD	Communication system and communication method
WO 2021192961 A1	AUTONETWORKS TECHNOLOGIES LTD	Onboard relay device, information processing method, and program
WO 2021198862 A1	ERICSSON TELEFON AB L M	Early traffic event driver notification
WO 2021204368 A1	ERICSSON TELEFON AB L M	Management of direct wireless link establishment by d2d communication devices
WO 2021240082 A1	PSA AUTOMOBILES SA	Method and system for communicating in a wireless cellular network
WO 2021226367 A1	QUALCOMM INC	Vehicle-to-everything (v2x) message monitoring
WO 2021231060 A1	MICRON TECHNOLOGY INC	Automated driving actions for determined driving conditions
WO 2021241415 A1	PANASONIC IP CORP AMERICA	Anomaly detection system and anomaly detection method
WO 2021228765 A1	VOYSYS AB	Method and system for monitoring communication between vehicle and remote terminal
WO 2021243075 A1	4 0 ANALYTICS INC	Analytics platform for remote vehicle onboard diagnostics (obd) and inspection maintenance (i/m)
WO 2021235565 A1	LG ELECTRONICS INC	Method by which first device transmits message in wireless communication system supporting sidelink, and device therefor
WO 2021226059 A1	INTEL CORP	Generation and transmission of vulnerable road user awareness messages
WO 2021241967 A1	IMAGEDROME INC	User interface method for sharing location information with group restrictions by executing map-based social network application
WO 2021223960 A1	AUDI AG	System for transmitting at least one selected item of virtual reality (vr) content for a dynamic environment

[..ver más](#)

GESTIÓN DE APARCAMIENTOS Y PEAJES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2021210758 A1	MESH KOREA CO LTD	Method for determining parking location through wireless terminal, and server and wireless terminal for performing same
WO 2021190712 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for detecting at least one object in the surroundings of a motor vehicle, and assistance system
WO 2021220599 A1	DENSO CORP	Control device, system, control method, and program
WO 2021200046 A1	DENSO CORP	On-vehicle device for toll payment, portable communication terminal, toll payment system, and terminal control program
WO 2021211144 A1	SAUDI ARABIAN OIL CO	Parking control system, parking control method, and mobile robot device
WO 2021230825 A1	GOSPACE TECH S R O	Method for detection of presence of a motor vehicle in a monitored zone with identification of its engine type and detection device
WO 2021233699 A1	DAIMLER AG	Method for predicting a probability of at least one free parking space for motor vehicles in a rest facility, and parking-space prediction system
WO 2021207005 A1	NEC LAB AMERICA INC	Smart stadium applications using fiber optic sensing
WO 2021249737 A1	AUDI AG	Authorisation for use of a travel route section
WO 2021239048 A1	NUCTECH CO LTD	Vehicle inspection system and method
WO 2021235211 A1	DENSO CORP	Parking assistance device, parking assistance method, parking assistance system, parking assistance program, and mobile terminal device
WO 2021217625 A1	BOE TECHNOLOGY GROUP CO LTD	Parked vehicle measurement method, system, processing device, and storage medium
WO 2021211861 A1	RAYTHEON CO	Robust correlation of vehicle extents and locations when given noisy detections and limited field-of-view image frames
WO 2021221716 A1	TECNOVIA S A	Traffic classification arrangement for detection of metal tires tread
WO 2021194686 A1	TOYOTA MOTOR NORTH AMERICA INC	Transport relocation

[...ver más](#)

NOTIFICACIÓN DE ACCIDENTES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2021220845 A1	DENSO CORP	Vehicle recording device and information recording method
WO 2021204661 A1	AUDI AG	Supporting device, auxiliary device and corresponding method, server, vehicle, and medium
WO 2021223952 A1	SIEMENS MOBILITY GMBH	Transport system, transport means and data management method
WO 2021189126 A1	BLACKBERRY LTD	Event data collections for accidents
WO 2021227586 A1	HUAWEI TECH CO LTD	Traffic accident analysis method, apparatus, and device
WO 2021245150 A1	BOSCH GMBH ROBERT	Method and device for detecting an accident of a motorcycle
WO 2021239531 A1	VALEO SCHALTER & SENSOREN GMBH	Emergency lane assistant
WO 2021225841 A1	NEC LAB AMERICA INC	Fault detection in cyber-physical systems

[...ver más](#)

OTRAS REFERENCIAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
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WO 2021213872 A1	BOSCH GMBH ROBERT	Method for monitoring the surroundings of a vehicle
WO 2021240081 A1	PSA AUTOMOBILES SA	Automatic activation of a fog mode of a vehicle lighting system
WO 2021240171 A1	APPY RISK TECH LIMITED	Device for vehicle monitoring and system including same
WO 2021214262 A1	VALEO VISION	Method for managing image data, and vehicle lighting system
WO 2021224258 A1	CAR SOFTWARE ESTONIA AS	Method and device for determining a position of a vehicle in a road network
WO 2021240497 A1	RIDE VISION LTD	Add-on alert display for a vehicle
WO 2021250936 A1	HITACHI ASTEMO LTD	Travel control device and travel control method
WO 2021251468 A1	DENSO CORP	Image processing device
WO 2021238283 A1	HUAWEI TECH CO LTD	Positioning method and positioning apparatus
WO 2021250695 A1	PREHAR RAJ	A device, method and system for vehicle monitoring by using gps position of vehicle for making payment collected by various authorities associated with the vehicle
WO 2021229261 A1	SAYEDAHMAD MOHAMMAD	Adding a device to the car has gps services and controlling its loads by touch
WO 2021249108 A1	NINGBO GEELY AUTOMOBILE RES & DEVELOPMENT CO LTD	Vehicle control system and method for providing information to support overtaking maneuver
WO 2021229704 A1	MITSUBISHI ELECTRIC CORP	Object recognition device, route generation device, parking assistance device, object recognition system, route generation system, and parking assistance system
WO 2021226031 A1	NVIDIA CORP	Systems and methods for performing commands in a vehicle using speech and image recognition
WO 2021235398 A1	DENSO CORP	Storage processing device, and storage processing program

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Los ITPs** de la OEPM nos proporcionan información imprescindible para decidir la priorización óptima de proyectos de I+D en los que invertir.



LANZAMIENTO



Los ITPs** de la OEPM nos han ahorrado horas de revisión bibliográfica para definir el punto de partida de nuestros proyectos de I+D.



EJECUCIÓN



Los ITPs** de la OEPM detectaron solicitudes de patente relevantes cuando estábamos a mitad del proyecto y gracias a ello pudimos reconducir nuestra investigación.



CONCLUSIÓN



Gracias a los ITPs** de la OEPM hemos podido decidir la mejor forma de protección de nuestros resultados de I+D y redactar adecuadamente nuestras solicitudes de patente.



* La OEPM cuenta con más de 150 examinadores de patentes especializados en los diversos sectores tecnológicos y en la búsqueda de información científico-técnica.

** Los Informes Tecnológicos de Patentes o ITPs son estudios a la medida que incluyen una búsqueda de patentes y de literatura científica con un análisis en profundidad de los documentos más relevantes. Su coste es de 440 euros más IVA.