

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

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2019065698 A1	PIONEER CORP	Stopping position determination device
WO 2019076695 A1	BOSCH GMBH ROBERT	Method for evaluating traffic data, computer program, machine-readable storage medium and apparatus
WO 2019086464 A1	KISTLER HOLDING AG	Wireless camera
WO 2019118132 A1	WAYMO LLC	Suggesting alternative pickup and drop off locations for autonomous vehicles
WO 2019118797 A1	GOOGLE LLC	Customizing visualization in a navigation application using third-party data
WO 2019068412 A1	VOLKSWAGEN AG	Method for operating an assistance system for a motor vehicle, and motor vehicle
WO 2019105717 A1	AUDI AG	Motor vehicle with a vehicle guidance system, method for operating a vehicle guidance system, and computer program
WO 2019121283 A1	SIEMENS AG	System and method for supporting the prediction of a future signaling of a traffic infrastructure element
WO 2019047905 A1	ALIBABA GROUP HOLDING LTD	Road traffic analysis system, method and apparatus
WO 2019081255 A1	TELECOM ITALIA SPA	System for managing automated vehicles
WO 2019105714 A1	BOSCH GMBH ROBERT	Vehicle fleet management having a hierarchy of priority factors
WO 2019115898 A1	PSA AUTOMOBILES SA	Driving assistance method and device for a vehicle with partially automated driving, by comparison of global states
WO 2019121795 A1	ECOLE NAT DE LAVIATION CIVILE	Method and apparatus managing entities in a physical space
WO 2019133526 A1	LYFT INC	Optimizing transportation networks through dynamic user interfaces
WO 2019077669 A1	HONDA MOTOR CO LTD	Vehicle control device
WO 2019084012 A1	METROPIA INC	Targeted traffic campaign management system
WO 2019092012 A1	BOSCH GMBH ROBERT	Method and device for warning of a hazardous location
WO 2019125269 A1	SCANIA CV AB	System and method for controlling a motor vehicle to drive autonomously
WO 2019072959 A1	CONTINENTAL AUTOMOTIVE GMBH	Determining the position of a later stopping point of a vehicle
WO 2019078866 A1	FORD GLOBAL TECH LLC	Vehicle to vehicle and infrastructure communication and pedestrian detection system
WO 2019084663 A1	DAMON MOTORS INC	Anticipatory motorcycle safety system
WO 2019094538 A1	CUMMINS INC	Predictive and optimal vehicle operation control in platooning operations
WO 2019063491 A1	VOLKSWAGEN AG	Method and system for updating a control model for an automatic control of at least one mobile unit
WO 2019105971 A1	VOLKSWAGEN AG	System and method for predicting and maximizing traffic flow

WO 2019125268 A1	SCANIA CV AB	System and method for controlling a motor vehicle to drive autonomously
WO 2019079129 A2	MICROSOFT TECHNOLOGY LICENSING LLC	Traffic data reconciliation and brokering
WO 2019072949 A2	BOSCH GMBH ROBERT	Systems and methods for vehicle to improve an orientation estimation of a traffic participant
WO 2019089749 A1	CUMMINS INC	Control of vehicle platoon systems in response to traffic and route conditions
WO 2019109262 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for determining new roads on a map
WO 2019079845 A1	THE CROWN IN RIGHT OF THE STATE OF SOUTH AUSTRALIA	Road traffic monitoring and notification system
WO 2019086301 A2	BOSCH GMBH ROBERT	Active lane markers having driver assistance feedback
WO 2019090753 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for monitoring traffic congestion
WO 2019109685 A1	GUANGZHOU AUTOMOBILE GROUP CO	Intersection traversing control method, device, and system

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REDES VEHICULARES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2019071122 A2	UNIV CARNEGIE MELLON	Systems and methods for virtual traffic lights implemented on a mobile computing device
WO 2019070231 A1	GOOGLE LLC	Vehicle function control with sensor based validation
WO 2019125389 A1	FORD GLOBAL TECH LLC	Shuttle routing system
WO 2019066106 A1	LG ELECTRONICS INC	V2x communication device and multimedia content transmitting/receiving method thereof
WO 2019070233 A1	GOOGLE LLC	Actionable event determination based on vehicle diagnostic data
WO 2019091646 A1	BOSCH GMBH ROBERT	Road-side network node and method to operate the road-side network node
WO 2019096530 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for communication between vehicles
WO 2019068235 A1	HUAWEI TECH CO LTD	Method of prediction of a state of an object in the environment using an action model of a neural network
WO 2019060909 A1	CONTINENTAL AUTOMOTIVE SYSTEMS INC	Adaptive cruise control system and method
WO 2019071065 A1	UNIV CARNEGIE MELLON	Methods and systems for self-organized traffic management at intersections using a distributed ai approach
WO 2019079807 A1	ZENDRIVE INC	Method and system for vehicular-related communications
WO 2019079546 A1	ZOOX INC	Architecture for secure vehicle control
WO 2019088977 A1	NISSAN NORTH AMERICA INC	Continual planning and metareasoning for controlling an autonomous vehicle
WO 2019090366 A1	CALAMP CORP	Systems and methods for dynamic telematics messaging
WO 2019126459 A1	BENDIX COMMERCIAL VEHICLE SYSTEMS LLC	Determining and using braking capabilities of vehicles for platooning deceleration operations
WO 2019063237 A1	ZAHNRADFABRIK FRIEDRICHSHAFEN	Communication flow from road user to a vehicle driving an automated manner
WO 2019076464 A1	VOLVO TRUCK CORP	Methods for diagnosing error of an ego vehicle and/or a surrounding vehicle
WO 2019055277 A1	EXXONMOBIL RES & ENG CO	Data collection from auxiliary controller area network devices
WO 2019091982 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for operating a sensor of a motor vehicle, sensor and coupling device
WO 2019115186 A2	ZAHNRADFABRIK FRIEDRICHSHAFEN	Signalling a driving decision of an automatable vehicle, for a road user
WO 2019125489 A1	NISSAN NORTH AMERICA INC	Solution path overlay interfaces for autonomous vehicles
WO 2019115593 A1	BOSCH GMBH ROBERT	Method and system for warning road users of a vehicle that is driving in the wrong direction, comprising transmitter data control
WO 2019118542 A2	LUMINAR TECH INC	Controlling vehicle sensors based on dynamic objects

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GESTIÓN DE APARCAMIENTOS Y PEAJES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2019106395 A1	VERES GYOERGY	Device to facilitate the parking of means of transport to a precise location
WO 2019121478 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for mobile parking assistance apparatus
WO 2019064232 A1	ALSAFI ABDULAZIZ	Parking reservation device and online management system including automatic vehicle time violation system and remote booking
WO 2019121318 A1	BOSCH GMBH ROBERT	Method for calibrating a device for determining the occupancy state of a parking space of a parking area
WO 2019073653 A1	HITACHI LTD	Parking management system and method
WO 2019083661 A1	DISH NETWORK LLC	Wide area parking spot identification
WO 2019084829 A1	SHENZHEN MALLPARKING INFORMATION TECH CO LTD	Barrier gate system and parking system
WO 2019086487 A1	BOSCH GMBH ROBERT	Method and device for determining an occupancy state of a parking space in a parking area
WO 2019087030 A1	VU MANH CUONG	The system and method of operating the self-steering electric taxi and smart underground parking lots
WO 2019118091 A1	WAYMO LLC	Fleet management for autonomous vehicles
WO 2019116445 A1	MITSUBISHI HEAVY IND MACH SYSTEMS LTD	Billing processing device, toll collection system, billing processing method, and program
WO 2019062954 A1	BYD CO LTD	Highway toll collection method, server and system and storage medium
WO 2019080975 A1	CONTINENTAL TEVES AG & CO OHG	Method for controlling a parking process
WO 2019062962 A1	BYD CO LTD	Highway toll method, server, system, and storage medium
WO 2019083443 A1	WEI LONG ELECTRONICS ENG PTE LTD	System, apparatus and method for vehicle parking management
WO 2019091834 A1	BOSCH GMBH ROBERT	Method for operating a magnetic field sensor and associated magnetic field sensor arrangement
WO 2019132526 A1	SAMSUNG ELECTRONICS CO LTD	System and method for providing overhead camera-based precision localization for intelligent vehicles
WO 2019064784 A1	OMRON TATEISI ELECTRONICS CO	State determination unit, detection device, state determination method, and state determination program
WO 2019065328 A1	HONDA MOTOR CO LTD	Parking space estimation device and parking space estimation method
WO 2019086488 A1	BOSCH GMBH ROBERT	Method and device for determining an occupancy state of a parking space in a parking area
WO 2019100272 A1	AVCON WISDOM INFORMATION TECH SHENZHEN CO LTD	Smart city roadside parking method and related product
WO 2019097884 A1	SONY CORP	Information processing device, management device and method, and program
WO 2019101500 A1	BAYERISCHE MOTOREN WERKE AG	Method for operating a system for checking parking probabilities, system, computer program and computer program product
WO 2019121035 A1	VALEO SCHALTER & SENSOREN GMBH	Method for classifying parking spaces in a surrounding area of a vehicle having a neural network

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NOTIFICACIÓN DE ACCIDENTES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2019087664 A1	JVC KENWOOD CORP	Recording device for vehicle, event information recording method, and program
WO 2019106444 A1	SALEH ATALLAH ATALLAH AMER	Catch hit and run – system (char-s)
WO 2019110434 A1	BAYERISCHE MOTOREN WERKE AG	Method for determining damage which occurs on the vehicle in the event of an accident between a vehicle and a collision partner
WO 2019100071 A1	GENCORE CANDEO LTD	Systems, methods and apparatus for providing enhanced situational awareness in incidents
WO 2019103197 A1	ATEC T& CO LTD	System for predicting traffic accident on basis of artificial intelligence and method therefor

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OTRAS REFERENCIAS

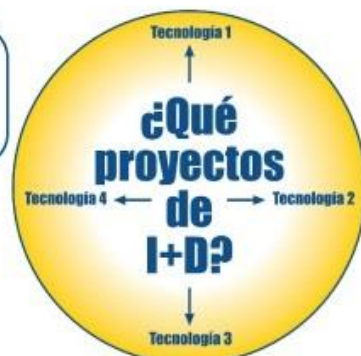
Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2019081100 A1	AUDI AG	Method for carrying out fully automatic driving process of a motor vehicle
WO 2019093190 A1	SONY CORP	Information processing device, vehicle, moving body, information processing method, and program
WO 2019099465 A1	UBER TECHNOLOGIES INC	Dynamic vehicle routing using annotated maps and profiles
WO 2019086315 A1	VALEO SCHALTER & SENSOREN GMBH	Parking assistance for a motor vehicle for parking on public and private land
WO 2019117333 A1	LG ELECTRONICS INC	Display device provided in vehicle and control method of display device
WO 2019118219 A1	WAYMO LLC	Methods and systems for controlling extent of light encountered by an image capture device of a self-driving vehicle
WO 2019125276 A1	SCANIA CV AB	Method and control arrangement in a surveillance system for monitoring a transportation system comprising autonomous vehicles
WO 2019091672 A1	BOSCH GMBH ROBERT	Method and device for determining a road condition
WO 2019091729 A1	CONTINENTAL AUTOMOTIVE GMBH	System for automated driving with assistance for a driver in performing a non-driving activity
WO 2019105640 A1	AUDI AG	Method for adjusting fully automatic vehicle guidance functions in a predefined navigation environment and motor vehicle
WO 2019114794 A1	NIO NEXTEV LTD	System and method for use in automatically parking vehicle into battery exchange space within battery exchange station, and electric vehicle
WO 2019066949 A1	INTEL CORP	Lane motion randomization of automated vehicles
WO 2019071311 A1	SPOT PARKING PTY LTD	A parking assistance system and method
WO 2019079750 A1	SMITS GERARD DIRK	Methods and systems for navigating a vehicle including a novel fiducial marker system
WO 2019089132 A1	QUALCOMM INC	Methods and systems to broadcast sensor outputs in an automotive environment
WO 2019106787 A1	HONDA MOTOR CO LTD	Vehicle control device, vehicle having same, and control method
WO 2019105974 A1	VOLKSWAGEN AG	Systems and methods for training and controlling an artificial neural network with discrete vehicle driving commands
WO 2019081204 A1	VALEO SCHALTER & SENSOREN GMBH	Method for supporting a driver in a manual parking process of a motor vehicle, wherein a first and a second indicator are detected, parking assistance system and motor vehicle
WO 2019117572 A1	LG ELECTRONICS INC	Vehicle electronic device and operation method for vehicle electronic device
WO 2019125485 A1	FORD GLOBAL TECH LLC	Vehicle real-time performance feedback system
WO 2019073872 A1	AISIN SEIKI	Parking assistance device
WO 2019092234 A1	VOLKSWAGEN AG	Systems and methods for a cryptographically guaranteed vehicle identity
WO 2019115662 A1	BOSCH GMBH ROBERT	Method for determining a friction value for a contact between a tyre of a vehicle and a roadway, and method for controlling a vehicle function of a vehicle
WO 2019112309 A1	SAMSUNG ELECTRONICS CO LTD	Vehicle and method for controlling same
WO 2019074288 A1	RENAULT SAMSUNG MOTORS CO LTD	Conditions for switching to manual driving mode in autonomous vehicle
WO 2019094863 A1	SMART AG INC	Safety system for autonomous operation of off-road and agricultural vehicles using machine learning for detection and identification of obstacles

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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

¿Son patentables nuestros resultados?



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.



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