

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 2019052998 A1	TOMTOM INT BV	Methods and systems of providing lane information using a navigation apparatus
WO 2019060230 A1	CONTINENTAL AUTOMOTIVE SYSTEMS INC	Adaptive traffic control system and method for operating same
WO 2019052595 A1	BUDDE MARTIN	Display device for giving visual warnings about cyclists when turning off a main road into a side road
WO 2019057668 A1	HERE GLOBAL BV	Method, apparatus, and computer program product for generation of a route using time and space
WO 2019054974 A2	ERISKIN EKINHAN	A lighting system showing the start time of the next traffic signaling phase at adjustable distance
WO 2019052867 A1	BAYERISCHE MOTOREN WERKE AG	Method for determining a course of driving lanes of a road network, and server device for carrying out the method
WO 2019060583 A1	TUSIMPLE	System and method for detecting taillight signals of a vehicle
WO 2019046869 A1	KUCHARKO FRANCISZEK JERZY	A vehicle that can travel on a street and is equipped with a signal device
WO 2019009385 A1	PANASONIC IP MAN CO LTD	Autonomous vehicle/drive-through synchronization system and synchronization method
WO 2019049516 A1	ZERO SUM LTD	System for providing novel service using display device for displaying traffic information, control device for controlling said display device, and method and program executed by said control device
WO 2018224354 A1	SIST SOLUZIONI PER INGEGNERIA DEI SISTEMI DI TRASPORTO E INFOMOBILITA S R L	Computer system and method for state prediction of a traffic system
WO 2018215419 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for predicting at least one traffic light switching status during the journey of a motor vehicle, and control device, motor vehicle, and server device
WO 2018231480 A1	MICROSOFT TECHNOLOGY LICENSING LLC	Road hazard detection
WO 2019025101 A1	CONTINENTAL AUTOMOTIVE GMBH	Method for controlling a vehicle driving by automation at a traffic light system
WO 2019042786 A1	VEONEER SWEDEN AB	Road-specific object estimation
WO 2019051571 A1	VELSIS SIST E TECNOLOGIA VIARIA S/A	Integrated, predictive, smart system for traffic signal time control
WO 2019021037 A2	SAYEDAHMAD MOHAMMAD	Wireless road
WO 2019042592 A1	SIEMENS AG	A vehicle control method, devices and system
WO 2019046586 A1	ATC TECH LLC	Systems, devices, and methods for vehicle speed control
WO 2019030916 A1	NISSAN MOTOR	Traffic lane information management method, running control method, and traffic lane information management device

WO 2019049323 A1	NISSAN MOTOR	Driving assistance method and driving assistance device
WO 2019042728 A2	OSRAM GMBH	Detection of road users on a traffic route
WO 2018227325 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for determining an estimated time of arrival
WO 2018230856 A1	LG ELECTRONICS INC	Estimated route-based travel route determination method and mobile its station therefor
WO 2019030182 A2	FASTLANE TRAFFIC WARNING SYSTEMS LTD	Traffic warning system
WO 2018224872 A1	ROY PRANNOY	Predictive traffic management system
WO 2019009067 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Vehicle control device
WO 2019018766 A1	UNIV CARNEGIE MELLON	System and method for vehicle-actuated traffic control
WO 2019021727 A1	NEC CORP	Information processing device, information processing system, information processing method, and program
WO 2019027460 A1	FORD GLOBAL TECH LLC	Intersection crossing control
WO 2018228279 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for analyzing and adjusting road conditions
WO 2018233699 A1	ZTE CORP	Vehicle positioning method, apparatus and terminal device
WO 2019031002 A1	NISSAN NORTH AMERICA INC	Autonomous vehicle notification system and method
WO 2019031002 A1	SONY CORP	Control system and control method
WO 2019028656 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for traffic light timing
WO 2019012832 A1	PANASONIC IP MAN CO LTD	Traffic management device, traffic management system, and traffic management method
WO 2019035301 A1	KOITO MFG CO LTD	Traffic control system
WO 2019002735 A2	ORANGE	Method for alerting to a potential change in a driving parameter of a first vehicle, and associated terminal
WO 2019014023 A1	ZUME PIZZA INC	Configurable food delivery vehicle and related methods and articles
WO 2019016683 A1	HERE GLOBAL BV HERE NORTH AMERICA LLC	Method and apparatus for selectively using different types of networks to obtain information regarding one or more traffic signals and intersections
WO 2019013041 A1	NEC CORP	Method and apparatus for optimizing efficiency of a transport provider
WO 2019016931 A1	MITSUBISHI ELECTRIC CORP	Display control device and display control method
WO 2019005791 A1	WAYMO LLC	Detecting and responding to sirens

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REDES VEHICULARES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2019053695 A1	ERICSSON TELEFON AB L M	System and method for providing precise driving recommendations based on network-assisted scanning of a surrounding environment
WO 2019059618 A1	SAMSUNG ELECTRONICS CO LTD	Electronic device for transmitting relay message to external vehicle and method thereof
WO 2018210184 A1	HUAWEI TECH CO LTD	Fleet control method, device, and internet of vehicles system
WO 2018039114 A1	PELTON TECH INC	Systems for vehicular platooning and methods therefor
WO 2019020369 A1	JAGUAR LAND ROVER LTD	Proximity sensing systems and their control
WO 2019024963 A1	CONTINENTAL AUTOMOTIVE GMBH	Method and system for remotely controlling a vehicle
WO 2019055571 A1	QUALCOMM INC	System and method for relative positioning based safe autonomous driving
WO 2019048034 A1	SWISS REINSURANCE CO LTD	Electronic logging and track identification system for mobile telematics devices, and corresponding method thereof
WO 2019049141 A1	OSR ENTPR AG	A system and method for using knowledge gathered by a vehicle
WO 2019004727 A1	LG ELECTRONICS INC	Method for tracking position of vehicle in wireless communication system and apparatus therefor
WO 2019012690 A1	MITSUBISHI ELECTRIC CORP	Travel assistance device, travel assistance system, and travel assistance method
WO 2019018058 A1	MICROSOFT TECHNOLOGY LICENSING LLC	Augmented reality based community review for automobile drivers
WO 2019021734 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Vehicle control device, vehicle control method, and vehicle
WO 2019021354 A1	FUJITSU LTD	Vehicle parking assistance device, vehicle parking assistance program
WO 2019001929 A1	BAYERISCHE MOTOREN WERKE AG	Method, computer-readable medium, system, and vehicle comprising the system for validating a time function of a master and the clients in a network of a vehicle
WO 2019008755 A1	MAXELL LTD	Information processing system, and information processing system infrastructure and information processing method used in same
WO 2019035124 A1	ARGUS CYBER SECURITY LTD	Automotive cybersecurity
WO 2018228884 A1	LUCAS AUTOMOTIVE GMBH	System for environment detection in a motor vehicle
WO 2019001649 A1	CONTI TEMIC MICROELECTRONIC GMBH	Knowledge transfer between different deep learning architectures
WO 2019021021 A1	EYGS LLP	Shared vehicle security
WO 2019032287 A1	OSRAM SYLVANIA INC	Techniques for resolving angle of transmitter and angle of receiver in light-based communication used to determine vehicle position
WO 2019037129 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Methods and systems for detecting environmental information of a vehicle
WO 2019023491 A1	UNIV MICHIGAN REGENTS	Line-of-sight optical communication for vehicle-to-vehicle (v2v) and vehicle-to-infrastructure (v2i) mobile communication networks
WO 2019044208 A1	PANASONIC CORP	Terminal device, roadside device, communications system, and communications method
WO 2019012890 A1	SUMITOMO ELECTRIC INDUSTRIES	Vehicle-mounted communications device, log collection method, and log collection program
WO 2019035261 A1	SUMITOMO ELECTRIC INDUSTRIES	Control device, control method and computer program
WO 2019013929 A1	WAYMO LLC	Methods and systems for providing remote assistance to a vehicle
WO 2019014754 A1	LES SYSTEMES CYBERKAR	Configurable management system for a vehicle and method of use

WO 2019014372 A1	PELTON TECH INC	Methods, systems, and devices for flexible intra-fleet, inter-fleet, and ad hoc vehicle communications, monitoring, and platooning
WO 2019021134 A1	UBER TECHNOLOGIES INC	Dynamically determining origin and destination locations for a network system
WO 2019000367 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for switching driving mode of vehicle
WO 2018232681 A1	BAIDU COM TIMES TECH BEIJING CO LTD	Traffic prediction based on map images for autonomous driving
WO 2018225069 A1	NEXAR LTD	Digitizing and mapping the public space using collaborative networks of mobile agents and cloud nodes
WO 2018231382 A1	TRW AUTOMOTIVE US LLC	Automobile communication system using unmanned air vehicle intermediary
WO 2018226713 A1	ALLSTATE INSURANCE CO	Vehicle telematics based driving assessment
WO 2019001824 A1	AUDI AG	Method and system for data collection

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GESTIÓN DE APARCAMIENTOS Y PEAJES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2018207778 A1	DENSO CORP	Automated parking system, automated parking vehicle, and automated parking method
WO 2019052352 A1	ROUTER TECH HANGZHOU INC	Parking space service and management system and method based on vehicle detection
WO 2019054883 A1	INUGO SYSTEMS LTD	Parking system and method
WO 2019058578 A1	CLARION CO LTD	Positioning assistance device
WO 2019057371 A1	BOSCH GMBH ROBERT	Method, apparatus and computer program for determining occupancy states of parking spaces and for identifying a motor vehicle parked in a parking space
WO 2019060232 A1	CONTINENTAL AUTOMOTIVE SYSTEMS INC	An intelligent parking managing system, and methods of utilizing same
WO 2019052791 A1	BOSCH GMBH ROBERT	Method for determining a maximum speed of a vehicle during a parking manoeuvre
WO 2018219579 A1	VALEO SCHALTER & SENSOREN GMBH	Assisting the driving of an automotive vehicle on the approach to a toll barrier
WO 2019048287 A1	CONNAUGHT ELECTRONICS LTD	Method for autonomously parking a current vehicle along a trained trajectory
WO 2019029994 A1	BOSCH GMBH ROBERT	Device for monitoring an occupancy state of a parking space in a car park, and system having such a device and method for operating such a device and such a system
WO 2019042047 A1	BOE TECHNOLOGY GROUP CO LTD	Auxiliary parking method, apparatus and system
WO 2019043080 A1	HERE GLOBAL BV	Method, apparatus, and computer program product for providing an indication of favorability of parking locations
WO 2019045899 A1	GEN ELECTRIC	Method and system for identifying location of a parked vehicle
WO 2018234127 A1	PARKBOB GMBH	Method and system for computing parking occupancy
WO 2019011522 A1	RENAULT SAS	Motor vehicle parking assistance method and system
WO 2019049189 A1	NISSAN MOTOR	Vehicle travel determination method and vehicle travel determination device
WO 2019015834 A1	VOLKSWAGEN AG	Method for determining a destination different from an intended location, system, and motor vehicle equipped therewith
WO 2019028195 A1	SUBRAMANYA BALU	Advanced parking management system
WO 2019015849 A1	BOSCH GMBH ROBERT	Concept for monitoring a parking space
WO 2019032353 A1	AMAZON TECH INC	Strategy modes for autonomous vehicle operations
WO 2018229751 A1	PARKAM ISRAEL LTD	A method and system for detecting a parking vehicle
WO 2018230536 A1	HONDA MOTOR CO LTD	Vehicle payment support device
WO 2018235273 A1	NISSAN MOTOR	Parking control method and parking control device
WO 2019005839 A1	AMERICAN TRAFFIC SOLUTIONS INC	Vehicle location tracking systems and methods
WO 2019030922 A1	NISSAN MOTOR	Parking control method and parking control device
WO 2018229695 A1	GRAF TERESA LYN	Method and system of facilitating management of parking spaces for vehicles
WO 2019008764 A1	NISSAN MOTOR	Parking assistance method and parking assistance device
WO 2018224356 A1	CONNAUGHT ELECTRONICS LTD	Method for providing stored data of a trained parking procedure, corresponding computer program product and system
WO 2018230176 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Vehicular control device
WO 2018233298 A1	NIO NEXTEV LTD	Method and device enabling automatic driving of vehicle into parking space

WO 2019019065 A1	GUANGDONG XINGDA SHUN TECH CO LTD	Toll collection processing method and intelligent device
WO 2019021971 A1	DENSO CORP	Parking management system and parking management method
WO 2018226600 A1	CITIFYD INC	Parking objects detection system
WO 2018235929 A1	ADVICS CO LTD	Travel control device
WO 2019015848 A1	BOSCH GMBH ROBERT	Concept for preparing an empty section of a parking area for use of the parking area, and concept for using the parking area
WO 2019032091 A1	FORD GLOBAL TECH LLC	Locating a vehicle using a drone
WO 2018227241 A1	UBIPARK PTY LTD	Computer-implemented systems for locating a vehicular parking space and controlling access thereto
WO 2018235274 A1	NISSAN MOTOR	Parking control method and parking control device
WO 2019012838 A1	DENSO CORP	Obstruction detection device
WO 2019038087 A1	SENTISROS SLP	Parking control method and corresponding computer program
WO 2019003720 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Automatic parking control device
WO 2019012848 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking assistance device
WO 2019018257 A1	VEONEER US INC	Traffic environment adaptive thresholds
WO 2019031107 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking control device and method
WO 2019038973 A1	JVC KENWOOD CORP	Parking assistance device, parking assistance method, and parking assistance program
WO 2018227528 A1	HUANG WEILIN	Intelligent parking lot indicating device
WO 2018227532 A1	HUANG WEILIN	Fully intelligent unattended parking system and method
WO 2019003530 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Driving assistance apparatus
WO 2019003533 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking assistance device
WO 2019005497 A1	JACQUES EONE AND LAURENCE BAER	Parking inventory and reservation management system for flexible parking subscriptions
WO 2019016915 A1	NISSAN MOTOR	Vehicle travel control method and vehicle travel control device
WO 2019022056 A1	DENSO CORP	Parking assist system and parking assist method
WO 2019038206 A1	VALEO SCHALTER & SENSOREN GMBH	Operation of a driver assistance device of a motor vehicle in an autonomous parking process
WO 2018225177 A1	MITSUBISHI ELECTRIC CORP	Empty space notification device, empty space notification system, and empty space notification method
WO 2018230021 A1	JVC KENWOOD CORP	Display control device, display control system, display control method and display control program
WO 2019015927 A1	BOSCH GMBH ROBERT	Device and method for providing state information of an automatic valet parking system
WO 2019020586 A1	VALEO SCHALTER & SENSOREN GMBH	Method for at least semi-autonomously parking a motor vehicle, driver assistance system, and motor vehicle
WO 2019030923 A1	NISSAN MOTOR	Parking control method and parking control device
WO 2019040714 A1	CONTINENTAL AUTOMOTIVE SYSTEMS INC	Unmanned aerial vehicle assisted system for vehicle reverse and parking
WO 2019016917 A1	NISSAN MOTOR	Vehicle travel control method and vehicle travel control device
WO 2019042865 A1	BOSCH GMBH ROBERT	Automated parking for virtual parking spot
WO 2018230175 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking assistance device

WO 2019015852 A1	BOSCH GMBH ROBERT	Method and system for detecting a free region within a parking space
WO 2019010580 A1	SOLUTIONS B CITI INC	System and method for managing parking queries
WO 2019018695 A1	NURO INC	Autonomous vehicle repositioning
WO 2019009863 A2	SISKON ENDUSTRIYEL OTOMASYON SISTEMLERI SANAYI VE TICARET ANONIM SIRKETI	System and method for parking lot with reservation

[...ver más](#)

NOTIFICACIÓN DE ACCIDENTES

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2018215121 A1	AUDI AG	Method for operating a motor vehicle and a motor vehicle
WO 2019045192 A1	KIM DA HYE	Control system for safe return-home and operation method of the system
WO 2019046332 A1	CONTINENTAL AUTOMOTIVE SYSTEMS INC	Smart city data analytics for improved accident reconstruction and solutions
WO 2019044645 A1	MAZDA MOTOR	Vehicle control device
WO 2019028349 A1	TRUEMOTION INC	Method and system for accident detection using contextual data
WO 2019037954 A1	BAYERISCHE MOTOREN WERKE AG	Emergency braking system of a single-track vehicle
WO 2019049134 A1	ENDOVITECH TI MDGO	Automated system and method for evaluation and report of trauma to organs of passengers in a vehicular crash
WO 2019044230 A1	CLARION CO LTD	Vehicle-mounted device, and incident monitoring method
WO 2019028143 A1	ALLSTATE INSURANCE CO	Event-based connected vehicle control and response systems
WO 2019035640 A1	LEE MIN CHEOL	Safety distance maintenance warning device for vehicle
WO 2018229300 A1	DIRKS DAVID	Method for triggering a function of a system enabling at least semi-autonomous movement of a vehicle
WO 2018226220 A1	FORD GLOBAL TECH LLC	Vehicle occupant sleep state management

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OTRAS REFERENCIAS

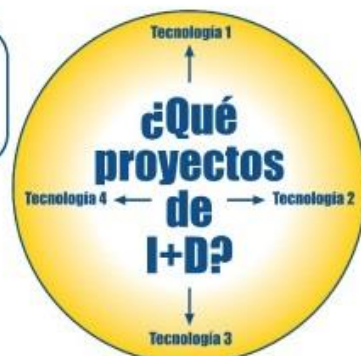
Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2018211301 A1	TOYOTA MOTOR EUROPE	Control device, system, and method for determining a comfort level of a driver
WO 2018222889 A1	WAYMO LLC	Collision prediction system
WO 2018212090 A1	CANON KK	Control device and control method
WO 2018224750 A1	PSA AUTOMOBILES SA	Method for determining the type of road on which a vehicle is travelling
WO 2019007602 A1	BOSCH GMBH ROBERT	Method for operating a more highly automated vehicle (haf), in particular a highly automated vehicle
WO 2019013948 A1	PCMS HOLDINGS INC	Method for power adaptation of the environment perception system
WO 2019001887 A1	VEONEER SWEDEN AB	A vehicle safety system
WO 2019010099 A1	TUSIMPLE	System and method for adaptive cruise control for low speed following
WO 2019002160 A1	SIEMENS AG	Context-based autonomous control of a vehicle
WO 2019001825 A1	SIEMENS AG	Method for generating an image of a route network, use of the method, computer program, and computer-readable storage medium
WO 2018237018 A1	NUTONOMY INC	Risk processing for vehicles having autonomous driving capabilities
WO 2019010659 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for trajectory determination
WO 2018233116 A1	YLX INCORPORATED	Adaptive vehicle lighting device and lighting system
WO 2019003294 A1	HONDA MOTOR CO LTD	Vehicle control device
WO 2019008716 A1	MAXELL LTD	Non-visible measurement device and non-visible measurement method
WO 2018225067 A1	NEXAR LTD	Fusion and calibration of sensor signals in a moving vehicle

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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



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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