

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
<a href="#">WO 2019120390 A1</a>	CONTI TEMIC MICROELECTRONIC GMBH	Adaptable control for a vehicle
<a href="#">WO 2019189152 A1</a>	NEC CORP	Traffic monitoring device, traffic monitoring system, traffic monitoring method, and non-transitory computer-readable medium with program stored thereon
<a href="#">WO 2019132082 A1</a>	LG ELECTRONICS INC	V2x communication device and method for transmitting and receiving v2x message thereof
<a href="#">WO 2019159214 A1</a>	HONDA MOTOR CO LTD	Vehicle control device and vehicle control method
<a href="#">WO 2019166289 A1</a>	SIEMENS AG	Traffic control method, radar sensor and radar sensor network
<a href="#">WO 2019172289 A1</a>	TOSHIBA DIGITAL SOLUTIONS CORP	Convoy travel operating system and convoy travel operating method
<a href="#">WO 2019175422 A1</a>	SWAREFLEX GMBH	Device for monitoring the state of roads, infrastructure and traffic
<a href="#">WO 2019180216 A1</a>	TRAFFIC CONDUCTOR IVS	An assembly for warning drivers
<a href="#">WO 2019145232 A1</a>	VITRONIC DR ING STEIN BILDVERARBEITUNG SSYSTEME GMBH	Method for monitoring traffic and traffic monitoring system
<a href="#">WO 2019130299 A1</a>	AXILION LTD	Method, device, and system of dynamic allocation of traffic resources
<a href="#">WO 2019145018 A1</a>	SIEMENS AG	System, device and method for detecting abnormal traffic events in a geographical location
<a href="#">WO 2019159605 A1</a>	HONDA MOTOR CO LTD	Operation management device, operation management method and operation management system
<a href="#">WO 2019120727 A1</a>	BOSCH GMBH ROBERT	Method and device for automatically controlling the longitudinal dynamics of a vehicle
<a href="#">WO 2019140222 A1</a>	CONTINENTAL AUTOMOTIVE SYSTEMS INC	Improve vehicle position estimate using information from infrastructure
<a href="#">WO 2019117795 A1</a>	SCANIA CV AB	Method and control arrangement for arranging driving order of a platoon
<a href="#">WO 2019152888 A1</a>	NVIDIA CORP	Safety procedure analysis for obstacle avoidance in autonomous vehicle
<a href="#">WO 2019139937 A1</a>	CONTINENTAL AUTOMOTIVE SYSTEMS INC	System and method for generating a traffic heat map
<a href="#">WO 2019155495 A1</a>	WADHWANI SANJAY	Road traffic management system
<a href="#">WO 2019163262 A1</a>	SUMITOMO ELECTRIC INDUSTRIES	Traffic signal control device, traffic signal control method, and computer program
<a href="#">WO 2019125446 A1</a>	INTEL CORP	Coordinated autonomous driving
<a href="#">WO 2019165135 A1</a>	NISSAN NORTH AMERICA INC	Remote operation extending an existing route to a destination
<a href="#">WO 2019170986 A1</a>	ORANGE	Method for adjusting the speed of vehicles moving in a convoy
<a href="#">WO 2019179576 A1</a>	DEUTSCHE BAHN AG	Method for planning or controlling the movements of a plurality of vehicles over a network of routes
<a href="#">WO 2019173426 A1</a>	BOSCH GMBH ROBERT	Known lane intervals for automated driving

<a href="#">WO 2019179804 A1</a>	HERE GLOBAL BV	Generation and update of a lane network graph model
<a href="#">WO 2019156956 A2</a>	CAVH LLC	Intelligent road infrastructure system (iris): systems and methods
<a href="#">WO 2019161501 A1</a>	MIOVISION TECH INCORPORATED	System and method for providing a digital intersection
<a href="#">WO 2019158963 A1</a>	PREMEL SA	Electronic device for event detection for traffic regulation, and corresponding method

[..ver más](#)

## REDES VEHICULARES

### Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

<a href="#">WO 2019178377 A1</a>	STC INC	Systems and methods for detection of travelers at roadway intersections
<a href="#">WO 2019135246 A1</a>	FORESIGHT AUTOMOTIVE LTD	A multi-spectral system for providing pre-collision alerts
<a href="#">WO 2019182865 A1</a>	LANGOS GEOFFREY	Voice activated visual communication system
<a href="#">WO 2019142474 A1</a>	PANASONIC IP CORP AMERICA	Data analysis device and program
<a href="#">WO 2019168355 A1</a>	AD CONNECTED INC	Apparatus and method for using connected vehicles as an advertisement platform
<a href="#">WO 2019172944 A1</a>	SF MOTORS INC	Systems and methods of inter-vehicle communication
<a href="#">WO 2019150843 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Vehicle-mounted network system, electronic control device, and gateway device
<a href="#">WO 2019158802 A1</a>	NOKIA TECHNOLOGIES OY	Enhancing communication
<a href="#">WO 2019174887 A1</a>	BOSCH GMBH ROBERT	Method and device for a c2x communication between motor vehicles of a motor vehicle combination
<a href="#">WO 2019146760 A1</a>	TADANO LTD	Wireless communication device, work vehicle, and work vehicle wireless communication system
<a href="#">WO 2019174860 A1</a>	BOSCH GMBH ROBERT	System and method for carrying out transactions decentrally
<a href="#">WO 2019173547 A1</a>	BOSCH GMBH ROBERT	Odometry system and method for tracking traffic lights
<a href="#">WO 2019178548 A1</a>	NVIDIA CORP	Determining drivable free-space for autonomous vehicles

[..ver más](#)

## GESTIÓN DE APARCAMIENTOS Y PEAJES

### Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019122555 A1</a>	PSA AUTOMOBILES SA	Assistance device and method for determining the route to be followed by a vehicle in a car park in the absence of signage
<a href="#">WO 2019181264 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking assistance device
<a href="#">WO 2019147111 A2</a>	LG ELECTRONICS INC	Method and device for recording parking location
<a href="#">WO 2019181260 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking assistance device
<a href="#">WO 2019123585 A1</a>	NISSAN MOTOR	Parking control method and parking control device
<a href="#">WO 2019132852 A1</a>	DYVINETS OLEH LEONIDOVYCH	Smart camera, information system and method of identifying free parking places in parking facilities having such a camera
<a href="#">WO 2019172823 A1</a>	SCANIA CV AB	Method and control arrangement for identification of parking areas
<a href="#">WO 2019172333 A1</a>	DENSO CORP	Parking support device
<a href="#">WO 2019138763 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Parking lot management system and parking lot management method
<a href="#">WO 2019179678 A1</a>	BAYERISCHE MOTOREN WERKE AG	Method for operating a toll system
<a href="#">WO 2019192995 A1</a>	CPT GROUP GMBH	Device for positioning a motor vehicle on a parking space for inductive charging
<a href="#">WO 2019144283 A1</a>	SHENZHEN MALLPARKING INFORMATION TECH CO LTD	Parking space reservation method and device, computer device, and computer readable storage medium
<a href="#">WO 2019144285 A1</a>	SHENZHEN MALLPARKING INFORMATION TECH CO LTD	Parking space reservation system
<a href="#">WO 2019177926 A1</a>	SAUDI ARABIAN OIL CO	Parking indicator comprising indicator retracting mechanism
<a href="#">WO 2019174851 A1</a>	VOLKSWAGEN AG	Method and assistance system for generating recommendations for parking in parking garages
<a href="#">WO 2019144622 A1</a>	BOE TECHNOLOGY GROUP CO LTD	Parking management system and method
<a href="#">WO 2019170515 A1</a>	BOSCH GMBH ROBERT	Positioning system for a vehicle parking in a parking area
<a href="#">WO 2019144827 A1</a>	HANGZHOU AUTOMOTIVE TECH CO LTD	Parking path acquisition method, apparatus, computer device, and storage medium
<a href="#">WO 2019133993 A1</a>	GEOTOLL INC	High accuracy geo-location system and method for mobile payment
<a href="#">WO 2019144090 A1</a>	RPMANETWORKS HOLDING	System and method of two-way wireless communication for connected car vehicle

[...ver más](#)

## NOTIFICACIÓN DE ACCIDENTES

### Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019175796 A1</a>	MORE VINIT SHAMKANT	A smart barrier
<a href="#">WO 2019181358 A1</a>	JVC KENWOOD CORP	Vehicular image capture recording device, vehicular image capture control method, and program
<a href="#">WO 2017062562 A1</a>	MORGAN TIMOTHY E	Vehicle pursuit warning system
<a href="#">WO 2019130706 A1</a>	JVC KENWOOD CORP	Recording control device, recording device, recording control method, and recording control program
<a href="#">WO 2019163204 A1</a>	JVCKENWOOD CORP	Vehicle recording device, vehicle recording method, and program
<a href="#">WO 2019164035 A1</a>	RTST CO LTD	Automatic accident rescue request method and system using smartphone
<a href="#">WO 2019172461 A1</a>	SUNTECH INT LTD	Real-time acceleration sensor correction device for measuring vehicle movement, and acceleration sensor correction method using same

[...ver más](#)

## OTRAS REFERENCIAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019176197 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Vehicle position determination device
<a href="#">WO 2019115309 A1</a>	BOSCH GMBH ROBERT	Method and system for warning road users of a vehicle that is driving in the wrong direction, comprising subsequent plausibility check
<a href="#">WO 2019133246 A1</a>	WAYMO LLC	High-speed image readout and processing
<a href="#">WO 2019176200 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Vehicle control device
<a href="#">WO 2019130300 A1</a>	AXILION LTD	Method, device, and system of traffic light control utilizing virtual detectors
<a href="#">WO 2019131735 A1</a>	KOITO MFG CO LTD	Head-up display device
<a href="#">WO 2019141653 A1</a>	RENAULT SAS	Parking assistance method for a motor vehicle
<a href="#">WO 2019172084 A1</a>	MAZDA MOTOR	Information providing device
<a href="#">WO 2019185097 A1</a>	CONTI TEMIC MICROELECTRONIC GMBH	Method for monitoring and controlling a remotely-controlled parking or maneuvering operation of a vehicle
<a href="#">WO 2019141397 A1</a>	BOSCH GMBH ROBERT	Method for warning the driver of a first motor vehicle of an approaching second motor vehicle
<a href="#">WO 2019166540 A1</a>	BOSCH GMBH ROBERT	Method for operating an autonomous or partially autonomous vehicle
<a href="#">WO 2019183981 A1</a>	INTEL CORP	Vehicle and method for avoiding a collision of a vehicle with one or more obstacles
<a href="#">WO 2019133743 A1</a>	DRIVE AI INC	Method for accessing supplemental perception data from other vehicles
<a href="#">WO 2019166714 A1</a>	PSA AUTOMOBILES SA	Method and device for assisting the automated driving of a vehicle close to a restricted area(s)
<a href="#">WO 2019139913 A1</a>	MOTOROLA SOLUTIONS INC	Systems and methods for improving privacy in vehicular ad hoc network
<a href="#">WO 2019161437 A1</a>	HUNTLEY SEAN	An adaptive and adaptable message display system
<a href="#">WO 2019158412 A1</a>	BOSCH GMBH ROBERT	Data recorder for a vehicle and corresponding device for a vehicle
<a href="#">WO 2019143157 A1</a>	AD CONNECTED INC	Apparatus and method for delivering advertisement content to connected vehicles
<a href="#">WO 2019168031 A1</a>	DENSO CORP	Road surface condition determination device
<a href="#">WO 2019148253 A1</a>	SCHWARZ MARK PETER	A system and method of alerting road users to safe stopping distance
<a href="#">WO 2019175015 A1</a>	AUDI AG	Method for transferring a motor vehicle to an automatic parking system, automatic parking system, and motor 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**

**¿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.



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

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