

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
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<a href="#">WO 2020048350 A1</a>	ALIBABA GROUP HOLDING LTD	Road condition information processing method, apparatus and system
<a href="#">WO 2020049488 A1</a>	KANADE UDAYAN	Adaptive traffic signal with adaptive countdown timers
<a href="#">WO 2020052465 A1</a>	ALIBABA GROUP HOLDING LTD	Road condition information processing system, method, and apparatus
<a href="#">WO 2020048807 A1</a>	BOSCH GMBH ROBERT	Sensor apparatus for detecting acoustic signals in the surroundings of a vehicle
<a href="#">WO 2020045354 A1</a>	KYOCERA CORP	Base station, vehicle, and traffic communication system
<a href="#">WO 2019243040 A1</a>	BOSCH GMBH ROBERT	Method for controlling traffic flow
<a href="#">WO 2020040411 A1</a>	KOREA INST SCI & TECH INF	Device for predicting traffic state information, method for predicting traffic state information, and storage medium for storing program for predicting traffic state information
<a href="#">WO 2020040558 A1</a>	QUANTUM GATE INC	Blockchain-based route guide and traffic flow control system and method
<a href="#">WO 2020039058 A1</a>	MAN TRUCK & BUS SE	Vehicles, network component, apparatuses, methods and computer programs for a vehicle, for a platooning vehicle, and for a network component
<a href="#">WO 2019246063 A1</a>	UBER TECHNOLOGIES INC	Pre-fetching map data
<a href="#">WO 2020036607 A1</a>	GOOGLE LLC	Reducing vehicular congestion at an intersection
<a href="#">WO 2020018011 A1</a>	ERICSSON TELEFON AB L M	Control of traffic lights that govern vehicular traffic at a junction of roads
<a href="#">WO 2020020417 A1</a>	WINTER DANIEL BIJU	Computer-implemented method, software program and device for requesting the formation of an emergency lane
<a href="#">WO 2020001867 A1</a>	BOSCH GMBH ROBERT	Adaptation of the trajectory of an ego vehicle to moved extraneous objects
<a href="#">WO 2020002333 A1</a>	TOMTOM GLOBAL CONTENT B V	Systems and methods for providing traffic information
<a href="#">WO 2020031236 A1</a>	SUMITOMO ELECTRIC INDUSTRIES	Traffic flow simulator, simulation method of traffic flow, and computer program
<a href="#">WO 2019245124 A1</a>	CHEMTRONICS CO LTD	Intersection collision prevention method and system performing same
<a href="#">WO 2020020655 A1</a>	SMS SMART MICROWAVE SENSORS GMBH	System for controlling a traffic management system at an intersection
<a href="#">WO 2020014227 A1</a>	CAVH LLC	Route-specific services for connected automated vehicle highway systems
<a href="#">WO 2020014131 A1</a>	CAVH LLC	Connected automated vehicle highway systems and methods related to transit vehicles and systems

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## REDES VEHICULARES

### Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2020035248 A1</a>	BRITISH TELECOMM	Vehicle platooning
<a href="#">WO 2020043455 A1</a>	WABCO GMBH	V2x communication unit and transmitting vehicle comprising such a v2x communication unit
<a href="#">WO 2020054396 A1</a>	DENSO CORP	Relay device for vehicle
<a href="#">WO 2020044638 A1</a>	SUMITOMO ELECTRIC INDUSTRIES	Vehicle-mounted communication system, data acquisition device, management device, and monitoring method
<a href="#">WO 2020002086 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Following vehicle with a communication device, vehicle combination, method for operating the following vehicle, computer program, and computer-readable storage medium
<a href="#">WO 2020039739 A1</a>	CLARION CO LTD	Communication terminal, abnormality check method of communication terminal, and program for communication terminal
<a href="#">WO 2020053650 A1</a>	BEISKI BEN ZION	Systems and methods for improving the detection of low-electromagnetic-profile objects by vehicles
<a href="#">WO 2020007589 A1</a>	CONNAUGHT ELECTRONICS LTD	Training a deep convolutional neural network for individual routes
<a href="#">WO 2020034052 A1</a>	QUALCOMM INC	Rsu-assisted joiner of vehicle platooning groups
<a href="#">WO 2020013796 A1</a>	DISH UKRAINE L L C	Vehicle to vehicle event notification system and method
<a href="#">WO 2020026461 A1</a>	NEC CORP	Information processing device, information processing method, and information processing program
<a href="#">WO 2020001826 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Vehicle combination, method for operating the vehicle combination, computer program, and computer-readable storage medium
<a href="#">WO 2019244441 A1</a>	SHARP KK	Network system, server, and information processing method
<a href="#">WO 2020005875 A1</a>	NISSAN NORTH AMERICA INC	Orientation-adjust actions for autonomous vehicle operational management
<a href="#">WO 2020022327 A1</a>	PANASONIC IP CORP AMERICA	Fraud handling method and fraud handling device
<a href="#">WO 2020004319 A1</a>	KYOCERA CORP	Wireless communication system, base station, mobile station, and wireless communication method
<a href="#">WO 2020007337 A1</a>	HUAWEI TECH CO LTD	Internet of things platoon communication method
<a href="#">WO 2020006161 A1</a>	CAVH LLC	Cloud-based technology for connected and automated vehicle highway systems

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## GESTIÓN DE APARCAMIENTOS Y PEAJES

### Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2020049977 A1</a>	SONY SEMICONDUCTOR SOLUTIONS CORP	Information processing device, information processing system, information processing method and program
<a href="#">WO 2020054354 A1</a>	MAXELL LTD	Head-up display device, information processing device, processing method for information processing device, and parking facility guidance system which uses same
<a href="#">WO 2020039938 A1</a>	NIPPON TELEGRAPH & TELEPHONE	Lane pricing system, lane pricing device, method, and program
<a href="#">WO 2020035383 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Method and system of recommending a place to park
<a href="#">WO 2020044392 A1</a>	NEC DISPLAY SOLUTIONS LTD	Parking lot guidance system and parking lot guidance method
<a href="#">WO 2020028620 A1</a>	PARKIFI INC	Parking sensor magnetometer calibration
<a href="#">WO 2020023986 A1</a>	OBERHOFER JULIA	Operating device
<a href="#">WO 2020003111 A1</a>	IBM	Providing navigational assistance to target location in vehicle parking facility
<a href="#">WO 2020025260 A1</a>	RENAULT SAS	Method for determining a type of parking space
<a href="#">WO 2020001263 A1</a>	HANGZHOU HIKVISION DIGITAL TEC	Parking space recognition
<a href="#">WO 2019244537 A1</a>	CLARION CO LTD	Parking assistance system and parking assistance device
<a href="#">WO 2020002978 A1</a>	UAB SOFTRA	Vehicle parking space sharing method and driving control system
<a href="#">WO 2020006613 A1</a>	KAVALIERIS LUIZ CARLOS	System and process for paying tolls and vehicle parking fees in general by means of a cellular telephony device
<a href="#">WO 2020007235 A1</a>	GUANGZHOU XIAOPENG MOTORS TECH CO LTD	Parking space detection method and apparatus, and medium and device
<a href="#">WO 2020008598 A1</a>	MITSUBISHI ELECTRIC CORP	Automatic driving control device, information communication terminal, automatic driving control system, automatic driving control method, and parking spot designation method
<a href="#">WO 2020014346 A1</a>	KYRA SOLUTIONS INC	Toll settlement system and method
<a href="#">WO 2020019598 A1</a>	TUNGHSU TECHNOLOGY GROUP CO LTD	Parking space query method and apparatus, and street lamp
<a href="#">WO 2020003493 A1</a>	WASH PLUS CO LTD	Device control system, facility device control system, and parking lot system

[...ver más](#)

## NOTIFICACIÓN DE ACCIDENTES

### Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

<a href="#">WO 2020014795 A1</a>	BONO CAROLINE	Computer-assisted method for analyzing person-related accident data
<a href="#">WO 2020045993 A1</a>	LEE DO HUN	Apparatus and method for providing risk information by using mobile id group information
<a href="#">WO 2020007688 A1</a>	THYSSENKRUPP AG	Sensor apparatus and method for monitoring the driving-mode-dependent state of a vehicle
<a href="#">WO 2020041780 A1</a>	CURRY CARLOS MIGUEL	Vehicle alarm system
<a href="#">WO 2020012635 A1</a>	MITSUBISHI ELECTRIC CORP	Notification device and notification method
<a href="#">WO 2020016496 A1</a>	PSA AUTOMOBILES SA	Motor vehicle comprising a visual warning device alerting about danger

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## OTRAS REFERENCIAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2020050492 A1</a>	PARK KEUN HO	Electric car capable of adjusting sound
<a href="#">WO 2020035233 A1</a>	DAIMLER AG	Key apparatus for adjusting a vehicle parameter
<a href="#">WO 2020049089 A1</a>	TOMTOM GLOBAL CONTENT B V	Methods and systems for determining the position of a vehicle
<a href="#">WO 2020048651 A1</a>	BOSCH GMBH ROBERT	Method and device for making safe an overtaking procedure for a vehicle approaching a bicycle
<a href="#">WO 2020053165 A1</a>	VALEO SCHALTER & SENSOREN GMBH	Method for determining at least one position parameter of an object in an environment of a vehicle, computer program product, driver assistance system and vehicle
<a href="#">WO 2020037060 A1</a>	CPS TECH HOLDINGS LLC	Advanced battery health diagnostic
<a href="#">WO 2020002972 A1</a>	TIBOPO D O O	Method and system for assessing position of hands on a steering wheel of a vehicle
<a href="#">WO 2020051085 A1</a>	QUALCOMM INC	Messaging for infrastructure parameter modification in wireless systems
<a href="#">WO 2020051203 A1</a>	WAYMO LLC	Ambient lighting conditions for autonomous vehicles
<a href="#">WO 2020027530 A1</a>	JS CHEM CORP	Method for generating magnetic field, method for detecting lane by using magnetic field, and vehicle using same
<a href="#">WO 2019226117 A1</a>	V3 SMART TECH PTE LTD	Driving risk computing device and method
<a href="#">WO 2020005983 A1</a>	INTELLIGENT COMMUTE LLC	Extensiview and adaptive lka for adas and autonomous driving
<a href="#">WO 2020020743 A1</a>	CONTINENTAL AUTOMOTIVE FRANCE	Optimisation of wireless communications of a tyre-pressure-monitoring system for a motor vehicle
<a href="#">WO 2020001447 A1</a>	BYD CO LTD	Safe driving method for vehicle
<a href="#">WO 2020014128 A1</a>	CAVH LLC	Vehicle on-board unit for connected and automated vehicle systems
<a href="#">WO 2020008685 A1</a>	KONICA MINOLTA INC	Information notification device, program for information notification device, and information notification system
<a href="#">WO 2020013525 A1</a>	SAMSUNG ELECTRONICS CO LTD	In-vehicle infotainment system communicating with unmanned aerial vehicle and method of operating the same
<a href="#">WO 2020006154 A2</a>	KATZ ITAY	Contextual driver monitoring system

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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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