

Boletín VT

REDES DE SENSORES INALÁMBRICAS

42

2.º trimestre 2020

Vigilancia Tecnológica

Desde su aparición, los campos de aplicación de las redes de sensores inalámbricos se han ido ampliando de forma constante. La posibilidad de crear extensas plataformas de gestión integrada para la monitorización, captura de datos, y control remoto y en tiempo real mediante estas redes sensoriales, ha proporcionado una poderosa herramienta para el desarrollo de aplicaciones y servicios en sectores económicos tan diversos como el agrícola, el industrial o el de la administración pública.

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 algunas de las aplicaciones más relevantes abordadas por las redes de sensores

inalámbricas, tales como: su uso en entornos agrícolas (gestión de cultivos, plagas, invernaderos, regadíos), su uso en entornos urbanos o públicos (seguridad ciudadana, infraestructuras, gestión de información medioambiental, polución, residuos) o su uso para la detección y gestión de incendios.

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:

- Redes de sensores para entornos agrícolas
- Redes de sensores para entornos urbanos o públicos
- Redes de sensores para detectar incendios
- Otras referencias

NIPO: 116-19-015-9

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.

REDES DE SENSORES PARA ENTORNOS AGRÍCOLAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020073060 A1	SKYPAWS LLC	Systems and methods for monitoring animal vitals
WO 2020051650 A1	SNAPTRAP PTY LTD	System and method for automated phenology analysis
WO 2020056395 A1	PREC PLANTING LLC	Fluid control assembly and system
WO 2020058170 A1	BAYER AG	Sensor based observation of anthropods
WO 2020059696 A1	BLANCO CO LTD	Environment measurement device and environment measurement system
WO 2020047593 A1	BOSCH AUSTRALIA	Automatic irrigation system with 3d soil moisture mapping tool
WO 2020077193 A1	NUTECH VENTURES INC	Sensing system and method for direct injection systems on agricultural sprayers
WO 2020061222 A1	GILBERT DAVID WAYNE	Equid wearable device, performance analytics system and methods thereof
WO 2020072438 A1	X DEV LLC	Sensor positioning system
WO 2020057828 A1	ARCELIK AS	A plant growing cabinet with improved watering algorithm
WO 2020086516 A1	CLIMATE CORP	A cartridge-based sensor system for monitoring properties of field soils and wastewater
WO 2020086868 A1	SWINETECH INC	Livestock stillbirthing alerting system
WO 2020109348 A1	EVONIK OPERATIONS GMBH	Method of controlling a livestock farm
WO 2020082119 A1	PROVECTUS IP PTY LTD	A control system
WO 2020093126 A1	COSME CARVALHO ERVILHA JOELCIO	Adapter for automating devices for the automatic and continuous remote counting and detection of target pests and perimeter lepidoptera controller
WO 2020081551 A1	TEXAS A & M UNIV SYS	Low cost, batteryless and wireless paper multiplexing sensor
WO 2020085837 A1	DAMOATECH CO LTD	Soil moisture sensor and operating method thereof
WO 2020087073 A1	SAGEGREENLIFE	Apparatus and methods for automated control for a performance vegetation wall system
WO 2020068474 A1	MITTELMARK MARTIN	Various embodiments of a plant air purifier with a filter container that holds filter material, which lets air pass through the filter material during its air purifying phase, and lets water submerge that same filter material during the remoisturization phase
WO 2020090023 A1	FULTA ELECTRIC MACHINERY CO LTD	Frost protection apparatus, frost protection fan control device, and frost protection fan control method
WO 2020096528 A1	NITTO DENKO CORP	Animal physiological device
WO 2020099847 A1	IMPERIAL COLLEGE OF SCIENCE TECH & MEDICINE	Red palm weevil larva detection
WO 2020112424 A1	LINDSAY CORP	System and method for adjusting irrigation system scheduling
WO 2020084391 A1	RADIANT TECH INNOVATIONS INC	Optical determination of cannabis harvest date
WO 2020086601 A1	CLIMATE CORP	In-ground sensor systems with modular sensors and wireless connectivity components
WO 2020087112 A1	D I T TECH LTD	Dosing system and method

WO 2020108981 A1	ZAHNRADFABRIK FRIEDRICHSHAFEN	Apparatus for locating an agricultural machine on the basis of sensor data and image segmentation
WO 2020094825 A1	TOLDOV VIKTOR	Monitoring of the well-being and/or comfort of a livestock animal
WO 2020117847 A1	MICASENSE INC	Image sensor and thermal camera device, system and method
WO 2020087045 A2	SPRINGWORKS FARM MAINE INC	System and method to improve plant growth
WO 2020092804 A1	CENTAUR ANALYTICS INC	Predictive post-harvest stored commodity management methods
WO 2020095290 A1	ARUGGA AI FARMING LTD	Automated plant treatment systems and methods
WO 2020084455 A1	RADIANT TECH INNOVATIONS INC	Post-harvest optimization
WO 2020112062 A1	ADABAG HAKAN	Livestock tracking control unit
WO 2020120276 A1	AMAZONEN WERKE DREYER H	Sowing machine having individual coulter pressure control
WO 2020086763 A1	OPTI HARVEST INC	A light directing platform for a cultivar growing environment
WO 2020102879 A1	BINSENTRY INC	Bin level monitoring system
WO 2020111434 A1	PARK BYUNG HYUN	Aquaponics device
WO 2020123381 A1	GEISSLER COMPANIES LLC	System and method for animal location tracking and health monitoring using long range rfid and temperature monitoring
WO 2020110063 A1	GERMISHUYS DENNIS MARK	Plant cultivation
WO 2020101195 A2	EMOTION CO LTD	System for calculating and managing average weight of egg laying poultry, and method for calculating and managing average weight by using same
WO 2020123342 A1	CLIMATE CORP	Mapping soil properties with satellite data using machine learning approaches
WO 2020123428 A1	CLIMATE CORP	Image-based irrigation recommendations
WO 2020061509 A2	TERALYTIC INC	Extensible, multimodal sensor fusion platform for remote, proximal terrain sensing
WO 2020073060 A1	SKYPAWS LLC	Systems and methods for monitoring animal vitals
WO 2020051650 A1	SNAPTRAP PTY LTD	System and method for automated phenology analysis
WO 2020056395 A1	PREC PLANTING LLC	Fluid control assembly and system
WO 2020058170 A1	BAYER AG	Sensor based observation of arthropods
WO 2020059696 A1	BLANCO CO LTD	Environment measurement device and environment measurement system

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REDES DE SENSORES PARA ENTORNOS URBANOS O PÚBLICOS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020055872 A1	DELOS LIVING LLC	Systems and methods for air remediation
WO 2020064476 A1	KONINKLIJKE PHILIPS NV	A pollution mask and control method
WO 2020064741 A1	SIEMENS AG	Method and device for identifying the occurrence of a defect in a pipeline by means of estimation
WO 2020086326 A1	ZONAR SYSTEMS INC	System and method for facilitating regeneration of particulate filters in a fleet of vehicles
WO 2020069317 A1	MSA TECH LLC	Determination of sensor operational status via sensor interrogation
WO 2020072863 A1	CUBIC CORP	Method and system to control traffic speed through intersections
WO 2020074963 A1	TYCO ELECTRONICS LTD UK	Communication network for monitoring a chain based network
WO 2020086499 A1	SEEKOPS INC	A uav-borne, high-bandwidth, lightweight point sensor for quantifying greenhouse gases in atmospheric strata
WO 2020060305 A1	KOREA ELECTRIC POWER CORP	Apparatus for detecting fault location of underground cable, and method therefor
WO 2020064499 A1	SCHREDER SA	Multi-protocol luminaire system
WO 2020112442 A1	GOOGLE LLC	Methods and systems for colorizing infrared images
WO 2020094904 A1	ONTECH SECURITY SL	Flood sensor for automisation systems
WO 2020101130 A1	KLES INC	Space separation-type bus stop having fine dust reduction system
WO 2020122330 A1	MIRO CO LTD	Sensor-integrated communication module, control system comprising same, and control method
WO 2020111934 A1	MIMOS BERHAD	A method and system for detection of natural disaster occurrence
WO 2020100116 A1	PRETENSADOS DE CONCRETO DEL ORIENTE PRETECOR LTDA	Intelligent post and method for controlling said post
WO 2020064520 A1	KONINKLIJKE PHILIPS NV	A pollution mask and control method
WO 2020094850 A1	KONINKLIJKE PHILIPS NV	A pollution mask and control method
WO 2020109963 A1	3M INNOVATIVE PROPERTIES CO	Air quality monitoring system
WO 2020115609 A1	ATLAS COPCO AIRPOWER NV	Gas network and method for the simultaneous detection of leaks and obstructions in a gas network under pressure or vacuum
WO 2020111398 A1	SAMSUNG ELECTRONICS CO LTD	Electronic apparatus and controlling method thereof
WO 2020113275 A1	NEWCASTLE CITY COUNCIL	A housing

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REDES DE SENSORES PARA DETECTAR INCENDIOS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2020064935 A1	SIEMENS SCHWEIZ AG	Scattered light smoke detector having a two-color led, a photosensor, and a wavelength-selective polarizer connected upstream of the photosensor or connected downstream of the two-color led, and suitable use of such a polarizer
WO 2020074731 A1	ELECTRONIC MODULAR SERVICES LTD	Manual call point device with sensor
WO 2020070710 A1	TYCO FIRE PRODUCTS LP	Electronic accelerator for automatic water control valves
WO 2020054306 A1	AGC INC	Fire extinguishing agent, fire extinguishing agent composition and fire extinguishing system using said fire extinguishing agent or fire extinguishing agent composition
WO 2020069599 A1	NORTHERN CENTRE FOR ADVANCED TECH INC	Fire extinguisher training device
WO 2020060810 A1	FEDEX CORP SERVICES INC	Methods for detecting an environmental anomaly and initiating an enhanced automatic response
WO 2020112216 A1	CARRIER CORP	Fire suppression system remote monitoring
WO 2020117058 A1	UNICA FIRE SAFETY B V	Sprinkler test device and method
WO 2020112223 A1	CARRIER CORP	Fire suppression system remote monitoring
WO 2020085894 A1	ROCHA CORTEZ DOUGLAS RENE	Portable defensive protective alarm device with gsm device
WO 2020091604 A1	NORDIC ITECH AS	A safety device and a method of using same
WO 2020114942 A1	MARIOFF CORP OY	Crack detection function for a fire sprinkler with frangible bulb
WO 2020118057 A1	CARRIER CORP	Method of optical alignment and verification of field of view integrity for a flame detector and system
WO 2020115472 A1	FIREANGEL SAFETY TECH LIMITED	Control system
WO 2020112631 A1	ITRON INC	Metering system response based on incident-related notification from third party system
WO 2020120508 A1	BSH HAUSGERAETE GMBH	Cooking vessel support system having a passive wireless reader/transponder for an integral cooking vessel temperature monitoring system
WO 2020108963 A2	RHEINMETALL LANDSYSTEME GMBH	Fire extinguisher
WO 2020099502 A2	AGI AG FUER ISOLIERUNGEN	Monitoring of a fire protection element
WO 2020120489 A1	BSH HAUSGERAETE GMBH	Cooking vessel support system having an integral temperature monitoring and fire prevention system
WO 2020109964 A1	3M INNOVATIVE PROPERTIES CO	Sensor for particle detection
WO 2020110569 A1	PANASONIC IP MAN CO LTD	Presentation system, presentation system control method, program, and relay terminal

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OTRAS REFERENCIAS

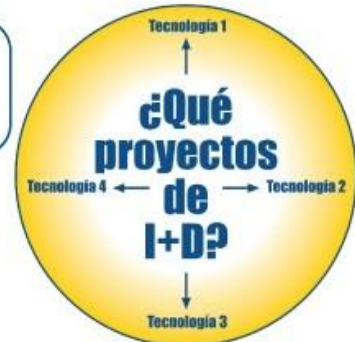
Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020068403 A1	HALLIBURTON ENERGY SERVICES INC	Reducing resonant noise in seismic data acquired using a distributed acoustic sensing system
WO 2020080361 A1	THK CO LTD	Information processing method, and program
WO 2020078827 A1	SIGNIFY HOLDING BV	Determining a length of a timeout period
WO 2020106470 A1 WO 2020070388 A1	SIEMENS AG SAFERA OY	Multilevel consistency check for a cyber attack detection in an automation and control system Stove guard arrangement with a timer for providing time data
WO 2020074322 A1	SIGNIFY HOLDING BV	Systems and methods for identifying and tracking a target
WO 2020074725 A1	SUEZ GROUPE	Method and device for managing a waste gas treatment device
WO 2020081024 A2	BEKDAS CEBRAYIL	Improved alarm security (ias) alarm system and device
WO 2020076540 A1	FORUM US INC	Real-time performance monitoring and predictive maintenance system
WO 2020081010 A1	NAT UNIV SINGAPORE	Radio-wave confinement on metamaterial textiles for wireless sensor networking
WO 2020065462 A1	3M INNOVATIVE PROPERTIES CO	Dynamically determining safety equipment for dynamically changing environments
WO 2020070293 A1	FBGS TECH GMBH	Interrogation of optical fiber sensor networks
WO 2020077034 A1 WO 2020074936 A1	MAGSEIS FF LLC OLYMPUS CORP	Modular seismic unit storage system with gantry robot and charging magazine System and method for generating a diffraction pattern in order to optimize sensor location in a 3d environment
WO 2020075395 A1	AZBIL CORP	Wireless sensor
WO 2020077376 A1	AIT AUSTRIAN INSTITUTE OF TECH GMBH	Method for determining contamination or impairment of people by pollutants
WO 2020058374 A1	WFS TECH LTD	Communication system
WO 2020058425 A1	ANDREW WIRELESS SYSTEMS GMBH	Unified facility communications system with device location
WO 2020065463 A1 WO 2020079005 A1	3M INNOVATIVE PROPERTIES CO REFCO MFG LTD	Automatic personal protective equipment constraint management system Intelligent measuring apparatus
WO 2020083355 A1	SHANGHAI TRUTHVISION INFORMATION TECH CO LTD	Systems and methods for intelligent video surveillance
WO 2020086518 A1	ROOF ASSET MAN USA LTD	System for monitoring the integrity of a roof
WO 2020081803 A1	QUALCOMM INC	Timing adjustment techniques in wireless communications
WO 2020089901 A1 WO 2020097526 A1 WO 2020114665 A1	TECHNION RES & DEV FOUNDATION ITRON INC KT ELEKTRONIK GMBH	Chemically sensitive sensor comprising micro-barrier and method of fabrication thereof Techniques for geolocation and cloud detection with voltage data from solar homes Radio nodes for operating in a radio network in the surroundings of a blocked region
WO 2020061621 A1	WILLOW TECH CORPORATION PTY LTD	Technology configured to facilitate monitoring of operational parameters and maintenance conditions of physical infrastructure
WO 2020069108 A1	I D SYSTEMS INC	Cargo sensors, cargo-sensing units, cargo-sensing systems, and methods of using the same
WO 2020113305 A1	MOKA MIND SOFTWARE LTDA	Method and system for smart environment management
WO 2020076941 A1	KIRKEBY CYNTHIA FASCENELLI	Secure wireless data devices and methods of use
WO 2020081967 A1	INFINITE KINGDOMS LLC	System for providing an immersive experience using multi-platform smart technology, content streaming, and special effects systems

WO 2020105250 A1	AZBIL CORP	Wireless sensor
WO 2020059384 A1	OMRON TATEISI ELECTRONICS CO	Seismic sensor and sensor control method
WO 2020091570 A1	LG ELECTRONICS INC	Method whereby terminal receives preconfigured uplink resource from base station in wireless communication system, and device for same
WO 2020104709 A1	ARCTIC SEA S L	Device, method and system for the recording of parameters during the transport of goods
WO 2020101959 A1	MICROSOFT TECHNOLOGY LICENSING LLC	Explicit interaction contracts for network connected devices
WO 2020089945 A1	INDIAN INSTITUTE OF TECH DELHI	Multivariate data compression system and method thereof
WO 2020098277 A1	ZTE CORP	Distributed optical fiber sensing system and control method and control device therefor, and storage medium
WO 2020106848 A1	DOW AGROSCIENCES LLC	Selective detection of bed bugs
WO 2020115606 A1	3M INNOVATIVE PROPERTIES CO	Adaptive notification system based on contextual information
WO 2020074968 A1	AOUN JOSEPH	Methods, systems to facilitate atmospheric water generation, and regulation of an environment of atmospheric water generation
WO 2020112920 A1	JFM INT CORP	Systems and methods for theft prevention and detection
WO 2020123366 A1	BRADY WORLDWIDE INC	Sorbent with detection array
WO 2020112630 A1	VECTOR LAUNCH INC	Enhanced deployment of applications in airborne and spaceborne nodes
WO 2020089929 A2	TATA CONSULTANCY SERVICES LTD	Apparatus and method for multimodal sensing and monitoring of perishable commodities
WO 2020122579 A1	LG ELECTRONICS INC	Moving robot and method for controlling the same
WO 2020072686 A2	MAGSEIS FF LLC	Systems and methods of coupling underwater vehicle with underwater sensor storage container
WO 2020101759 A2	CARRIER CORP	System and method for detecting presence of multiple people using an fmcw radar
WO 2020123692 A2	VMWARE INC	Internet of things system topology generation
WO 2020093350 A1	QUALCOMM INC	Supervised traffic management in sigmesh networks
WO 2020111609 A1	SONG SOON MYUNG	Pet house
WO 2020111700 A1	CORECHIPS CO LTD	Thermoelectric energy harvesting-based pipeline monitoring system and method
WO 2020068403 A1	HALLIBURTON ENERGY SERVICES INC	Reducing resonant noise in seismic data acquired using a distributed acoustic sensing system
WO 2020080361 A1	THK CO LTD	Information processing method, and program

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