

Boletín VT

REDES DE SENSORES INALÁMBRICAS

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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 forestales.

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 forestales
- Otras referencias

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

WO2010033430 A1	PIONEER HI-BRED INT INC	Automated research seed planting system for preparing agricultural research plot in agricultural seed industry, has controller controlling seed package assembly handling device to release research seed sample from seed package assembly
WO2010030346 A1	DOW AGROSCIENCES LLC	Networked pest control method for removing pests in areas occupied by human, involves wirelessly transmitting sensor information from control devices to data collector
WO2010025573 A1	PLANTCARE AG SCHMIDT W TOPRAK Y	Automatic irrigation device regulation and controlling method for automatic irrigation of e.g. grass, involves calculating irrigation duration from moisture value before irrigation and another moisture value after irrigation
WO2010021687 A1	DOW AGROSCIENCES LLC DEMARK J J EGER J E HOWARD P J	Composite bait material for pest control device useful for controlling termites comprises cellulosic food material pieces palatable to termites embedded within a matrix comprising termite-edible or termite-displaceable polyurethane foam
WO2010019109 A3	KODALFA BILGI VE ILETISIM TEKNOLOJILERI SAN TIC AS TICARET LTD S WILLIAMS D E	Wireless remote climate monitoring and control system for greenhouses used in agricultural industry, has central computer which performs remote climate measurement storage and control using a wireless sensor network
WO2010017577 A9	SENVIRO PTY LTD	Horticultural system for use in plant nurseries, has control unit that controls supply of irrigation water to container and/or reservoir based on amount of water in reservoir and electrical conductivity of water in reservoir
WO2010011128 A2	MIMOS BERHAD	Wireless sensing apparatus for measuring and monitoring chemical and biological properties used in water environment, has sensing element that is attached to housing with one end and other end is let out for contacting sample
WO2010009016 A1	KATES L	Multi-zone sprinkler system for watering plants in e.g. watering zone, has controller controlling adjustable spray pattern such that water is applied in portion of zone when moisture data indicates that portion of zone needs water
WO2010004489 A1	KONINK PHILIPS ELECTRONICS NV	Illumination arrangement for illuminating horticultural growth in climate-controlled room e.g. greenhouse has control unit that processes sensor signal to produce control signal
WO2009158702 A3	UNIV MARYLAND BALTIMORE COUNTY	Wireless sensor system for monitoring environmental parameter e.g. oxygen, has sensor node comprising sensor for monitoring environmental parameter, and watertight buoyant enclosure for housing electronics associated with sensor
WO2010001432 A1	IST SUPERIORE DL SANITA	System for environmental monitoring and toxicology self-control in food chain comprises detecting unit having biosensor probes to detect specific toxicity parameter, data collecting unit, and processing unit to provide warning in parameter
WO2010002249 A1	NEDERLANDSE ORG TOEGEPAST NATUURWETENS CH	Radio frequency tag for wireless sensing of e.g., moisture, electrical conductivity, pressure and temperature in soil used in flower and plant cultivation, comprises receiver for radio frequency waves, converter, signal circuit and coupler
WO2010002745 A1	UNIV COLORADO STATE RES FOUND SOLIX BIOFUELS INC	System for growing algae comprises photobioreactor having environmental conditions and parameters that are adjusted to affect algal growth in media

WO2009158671 A3	ATTUNE RTD DAVIS S WILLIAMS D E	Irrigation system for vegetation field, has ground sensors for measuring water flow and water absorption readings within irrigation zone, and controller for regulating water flow to irrigation zone based on readings from ground sensors
WO2009146571 A3	MINING SYSTEMS SA	System for controlling and monitoring irrigation for leaching heap, has several sensors which wirelessly transmits information to repeater antenna and each valve enables information to be wirelessly actuated
WO2009149384 A1	MONSANTO TECHNOLOGY LLC	Index raster file e.g. vegetation index raster file, generating method, involves selectively displaying one of soil brightness index raster file and two vegetation index raster files via display
WO2009153304 A1	UNIV FACULTE SCI AGRONOMIQUES GEMBLOUX UNIV KANGNUNG WONJU NAT IND ACAD COOP GR	Weeds and crops e.g. carrots, differentiation method for agricultural application, involves determining corrected plant height at plant data points, and differentiating weeds and crops by comparing corrected plant height with crop height

[...ver más](#)

REDES DE SENSORES PARA ENTORNOS URBANOS O PÚBLICOS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO2010018887 A1	KMW INC	Lamp i.e. camera-integrated lamp, for surveillance camera-attachable streetlight, has power distributor for distributing power received through commercial connector to bulb portion and camera module
WO2010013023 A1	MESO LTD	Measuring and monitoring device for air quality levels in atmosphere, has display unit which displays measured air quality levels as cigarette equivalent or in readable and understandable format
WO2010010493 A3	KONINK PHILIPS ELECTRONICS NV	Processing method for setting up luminaire, involves providing light scenario for ranked neighboring luminaires depending on their respective ranks
WO2010008544 A2	GREENE M	Person's number and location assessing system for use in e.g. office building in event of terrorist attack, has remote central hub providing real time indication of number and location of persons in building to responders
WO2010005610 A1	CBRNE GROUP INC FULTON D R HAWES GROUP LTD HAWES P A LALLY K S STI TECHNOLOGIES	Acoustic monitoring system for locating acoustic event i.e. threat, in e.g. urban environment, has position sensor detecting absolute global position of microphone pair, and command unit placed in communication with microprocessor
WO2009151166 A1	KOREA MARITIME&OCEAN ENG RES INST LALLY K S	Active emergency control system for guiding passenger to safe evacuation route in huge cruise ship, has active exit guiding light displaying safe evacuation direction based on evacuation information transmitted from central control unit
WO2009147329 A3	MESURE&SUIVI MESURE&SUIVI SARL	Automatic measuring, monitoring, active supervising and remote supervising function realizing system for movement of structure, has centralized processing and control devices remotely monitoring final results

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REDES DE SENSORES PARA DETECTAR INCENDIOS FORESTALES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
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WO2010015742 A1	SPS SMART PACKAGING SOLUTIONS	Forest fire detecting system, has calculator including simulator software for predicting displacement of fire from detection of fire outbreak in advance with respect to physical time based on parameters related to terrain
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OTRAS REFERENCIAS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO2010027278 A1	POWREGGZ LTD	Method of crediting users in usage of commodity e.g. water heater, involves determining forbearance of user and crediting user based on calculated forbearance
WO2010028936 A1	SIEMENS AG	Method for cryptographic secure transmission of data between sensor nodes of wireless sensor network that is utilized for monitoring and control of e.g. chemical process, involves encrypting and decrypting data transmitted in to message
WO2010021451 A1	SK TELECOM CO LTD	Quality of service supporting system for ubiquitous sensor network, has nodes for creating quality of service data frame with set priority and for transmitting quality of service data frame in quality of service data transmission period
WO2010021880 A3	SCHLUMBERGER CANADA LTD WESTERNGECO LLC ANDERSON V COMBEE L GECO TECHNOLOGY BV	Marine seismic data acquisition assembly such as streamer, has cable, seismic sensors located along cable, and filler material comprising hydrocarbon-based liquid and agent to cause filler material to have rheological property
WO2010021810 A1	VETCO GRAY INC GECO TECHNOLOGY BV	Subsea environment operating conditions monitoring system for hydrocarbon production, has optical transceiver transmitting and receiving optical signals, and controller coupled to acoustic transceiver and optical transceiver
WO2010019345 A3	COZART K S GROONWALD R L ORBITAL TECHNOLOGIES CORP KEERS H	Off-road all-terrain fire fighting apparatus for fighting e.g. aircraft fires, has exhaust fans that are stacked on cooling shroud so as to draw air out of cooling shroud through radiators
WO2010008874 A1	GEORGIA TECH RES CORP GROONWALD R L	Passive sensor for monitoring environmental condition of perishable goods, has sensing material that is arranged between microstrip transmission line and ground plane
WO2010007563 A2	KONINK PHILIPS ELECTRONICS NV GROONWALD R L	Method for preventing overhearing of private conversations in public spaces e.g. hotel lobby environment, involves changing degree of sound masking and/or sound absorption to suit assessed social situation
WO2010009479 A3	EDSA MICRO CORP	Real-time predictions making system for e.g. factory, has analytic engine monitoring output, and arc flash simulation engine utilizing virtual system model to forecast aspect of arc flash event e.g. direct current arc flash event
WO2010004485 A1	KONINK PHILIPS ELECTRONICS NV	Measured sensor data management system for security system has policy engine that enforces policy rules on first sensor data in accordance to policy rules being associated to matched user identity data
WO2009156437 A2	SHELL INT RES MIJ BV	Selected area screening method for presence of emission of e.g. methane, into atmosphere, involves selecting source flux model whose synthetic concentration data adequately matches concentration data
WO2009142402 A3	UNIV KANGNUNG NAT IND ACAD COOP UNIV KANGNUNG WONJU NAT IND ACAD COOP KRISTIANSEN O	Wireless sensor network, has gateway connected between synchronized node and control server to transmit and receive data, where stored data is transmitted from relay node to control server through relay gateways
WO2010019962 A2	EDSA CORP	Real-time prediction making system for power usage efficiency of electrical system i.e. power generation and/or distribution system, for wireless mobile device e.g. laptop, has simulation engine forecasting power usage efficiency
WO2009156823 A3	CHESS VAN DER WATEREN F	Communication system in ad-hoc distributed wireless network, has communication frame that includes time division multiple access (TDMA) schedule with several TDMA slots for active communication between wireless nodes
WO2009141465 A1	UNIV ALMERIA	Multipurpose autonomous vehicle for use in greenhouses, is equipped with chassis designed to receive different implements, where rolling system is provided for electronically controlling hydrostatic transmission