ANTENA TECNOLÓGICA®

PLATAFORMA DE VIGILANCIA TECNOLÓGICA E INTELIGENCIA COMPETITIVA

Boletín de novedades

Octubre - Noviembre 2016

TIC - Agro y Agroindustria

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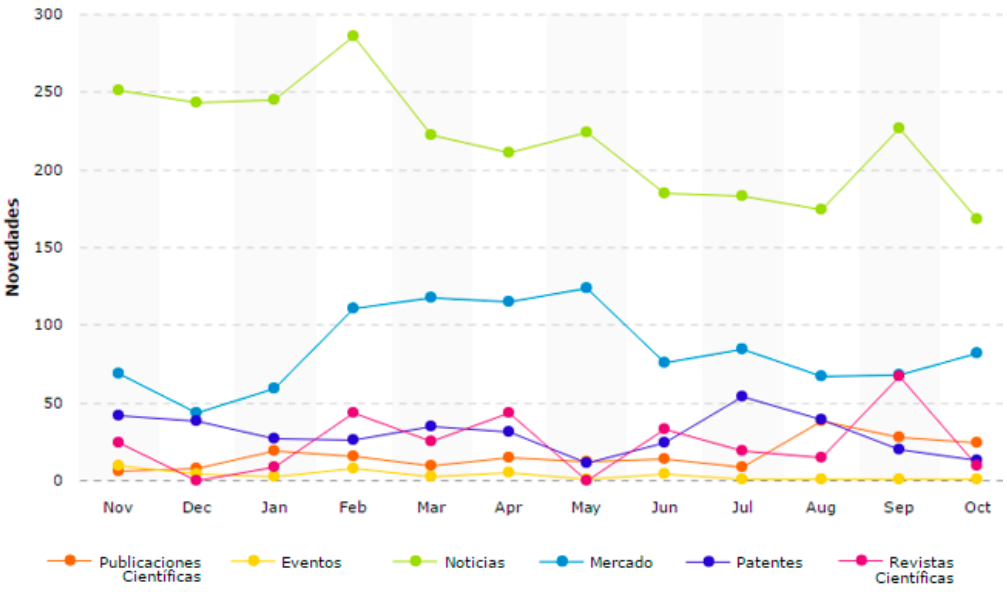
Inteligencia Competitiva

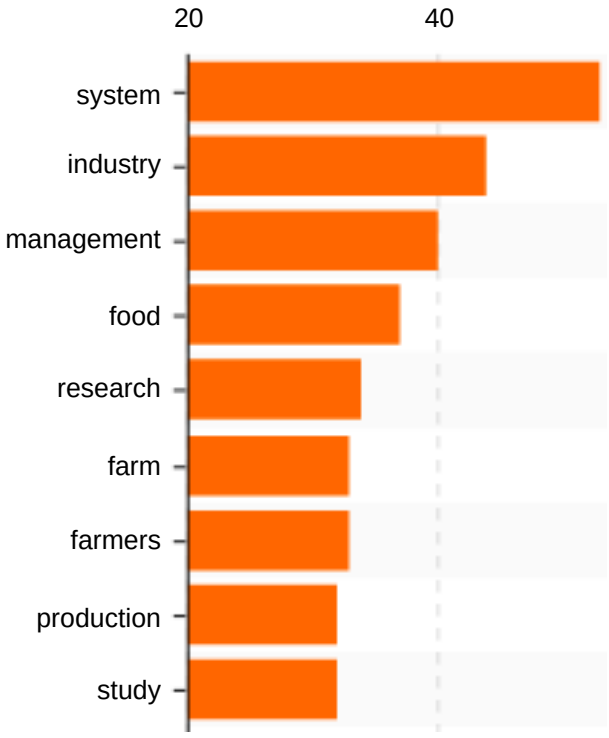


La gráfica de tendencias presenta la cantidad de novedades recolectadas en cada proceso de monitoreo de la Plataforma TIC, diferenciada por categoría/tipo de información, en el transcurso de un año. En este sentido, la gráfica siguiente muestra que entre noviembre de 2015 y octubre de 2016, la categoría más activa en el Sector TIC-Agro corresponde a Noticias, con más de 150 novedades los mensuales.

El análisis de grupos temáticos (Clúster) permiten determinar el énfasis o las relaciones internas que no son obvias, así desde los contenidos textuales es posible trabajar con un vocabulario que visualice las de mayor frecuencia. En este sentido, las TIC aplicadas al sector de la agricultura muestran una mayor frecuencia de términos vinculados a sistemas para gestión y operación de la industria, destacando entre ellos los sistemas automatizados de cultivo, los sistemas autónomos para detección de fallas de equipos (https://goo.gl/ykXIrI)., los sistemas de monitoreo en tiempo real de la maquinaria, etc.

Haciendo una revisión detallada de las novedades, y en línea con lo mencionado anteriormente, también se logra apreciar un vínculo con la gestión de datos, por ejemplo: aplicaciones web para el análisis de costos (https://goo.gl/ShlnXH) y cloud computing para el apoyo a la toma de decisiones (https://goo.gl/OTT27f), entre otros.

(Ref: IALE Tecnología SpA)



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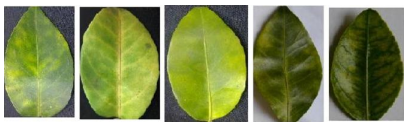
REVISTAS CIENTÍFICAS

Detección de enverdecimiento de cítricos utilizando imágenes de espectro visible y C-SVC

Publicada el 11/11/2016

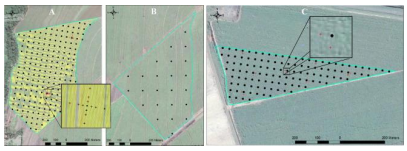


Publication date: 15 November 2016. Source: Computers and Electronics in Agriculture, Volume 130 Author(s): Xiaoling Deng, Yubin Lan, Tiansheng Hong, Junxi Chen Citrus greening, also named citrus huanglongbing (HLB) is a very destructive disease in citrus production that has caused massive economy damage all over the world. Early and accurate detection of HLB infected tree is a critical management step to control the spread of this disease. However, the leaves of HLB infected citrus trees are alike the one of nutrient deficiency and other diseases.

ver más...

Entorno computacional para el apoyo de la investigación sobre cultivos de caña de azúcar

Publicada el 16/10/2016



Publication date: 15 November 2016 Source: Computers and Electronics in Agriculture, Volume 130 Author(s): Carlos Driemeier, Liu Yi Ling, Guilherme M. Sanches, Angélica O. Pontes, Paulo S. Graziano Magalhães, João E. Ferreira Sugarcane is an important crop for tropical and sub-tropical countries. Like other crops, sugarcane agricultural research and practice is becoming increasingly data intensive, with several modeling frameworks developed to simulate biophysical processes in farming systems, all dependent on databases for accurate predictions of crop production.

ver más...

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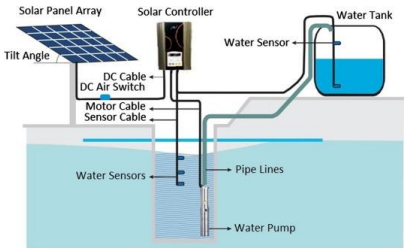
Energía inteligente para riego inteligente

Publicada el 30/09/2016



Publication date: 1 November 2016. Source: Computers and Electronics in Agriculture, Volume 129 Author(s): Antonia Nasiakou, Manolis Vavalis, Dimitris Zimeris This paper investigates the possibility of reducing the cost of irrigation by utilizing techniques, methods and practices that are common to the smart energy systems.

ver más...

Algoritmo optimizado de despliegue de nodo de sensores para monitoreo agrícola inteligente

Publicada el 01/09/2016

Publication date: September 2016 Source: Computers and Electronics in Agriculture, Volume 127 Author(s): Zou Sai, Yang Fan, Tang Yuliang, Xiao Lei, Zhao Yifong This paper searches for a deployment method with minimum sensor nodes to achieve agricultural intelligent monitoring. Because of the various features, topographies and complicated weather conditions, the selection of the location for deploying sensor nodes is difficult, especially in hilly areas. This paper puts forward a sensor node deployment algorithm for agricultural intelligent monitoring based on an optimized theory. It first develops a mathematical model for the node location selection.

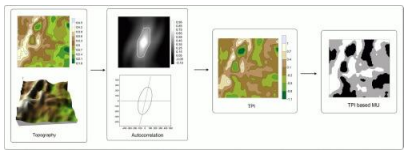
ver más...

Volver al índice

Boletín TIC Agro

Delineación de unidades de gestión para sitios específicos utilizando un índice de posición topográfico en La Pampa, Argentina

Publicada el 01/09/2016

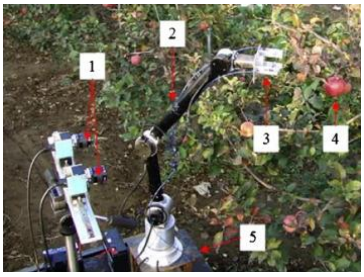


Publication date: September 2016. Source: Computers and Electronics in Agriculture, Volume 127 Author(s): María Soledad Mieza, Walter Rubén Cravero, Federico Darío Kovac, Pablo Gastón Bargiano In this work we propose the use of the topographic position index (TPI), which takes into account the local topography for a given neighborhood, to delineate management units (MU) for site-specific systems. This study was performed in the province of La Pampa, in central Argentina, an area with sandy soils where the main limiting condition for crops is soil moisture.

ver más...

Revisión de técnicas clave de control de visión para robot cosechador

Publicada el 01/09/2016



Publication date: September 2016. Source: Computers and Electronics in Agriculture, Volume 127 Author(s): Yuanshen Zhao, Liang Gong, Yixiang Huang, Chengliang Liu Although there is a rapid development of agricultural robotic technologies, a lack of access to robust fruit recognition and precision picking capabilities has limited the commercial application of harvesting robots. On the other hand, recent advances in key techniques in vision-based control have improved this situation. These techniques include vision information acquisition strategies, fruit recognition algorithms, and eye-hand coordination methods.

ver más...

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Boletín TIC Agro

PUBLICACIONES CIENTÍFICAS

Sistema de monitoreo en tiempo real de información sobre operaciones de maquinaria agrícola basado en ARM11 y GNSS

Publicada el 29/10/2016

Publication date: 2016. Source: IFAC-PapersOnLine, Volume 49, Issue 16 Author(s): M. Xiang, S. Wei, M. Zhang, M.Z. Li In order to measure the information of agricultural machinery working condition in real time, a monitoring system based on ARM11 and GNSS (Global Navigation Satellite System) was developed. The system includes three parts, including data receiving module, data processing module and UI (User Interface) screen display module. Furthermore, it not only can display and store the information such as the position coordinates, the boundary of operating area and the real-time working path, but also can calculate the area of the total field, the completed area, the operating speed and so on.

ver más...

Adaptación de protocolo de automatización industrial para el monitoreo remoto de maquinaria agrícola: Cosechadora con Internet de las Cosas

Publicada el 26/10/2016

Publication date: 2016 Source: IFAC-PapersOnLine, Volume 49, Issue 16 Author(s): Timo Oksanen, Raimo Linkolehto, Ilkka Seilonen Remote monitoring of any mobile machine requires radio technology, Internet technology, protocols and applications. Mobile cellular networks provide both radio and communication for Internet services while the protocols for IoT are under development. A protocol used in industrial automation for connecting machine automation to production process control is OPC (Open Platform Communications).

ver más...

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Boletín TIC Agro

Diseño de robot agrícola modular reconfigurable a base de tareas

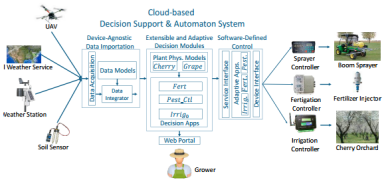
Publicada el 26/10/2016

Publication date: 2016. Source: IFAC-PapersOnLine, Volume 49, Issue 16 Author(s): Mark Levin, Amir Degani This paper presents a new method for designing an optimal harvesting agriculture manipulator. The novelty in our approach is the re-configurability of the robot's joints, i.e., the ability to assemble a given set of joints in a variable order to form different manipulators for different harvesting tasks. This way, we provide the farmer with the ability to change the robot's construction before each harvesting period to achieve maximal use of the robot throughout the year.

ver más...

Sistema de apoyo de decisiones y automatización basado en la nube para agricultura de precisión en

Publicada el 26/10/2016



Publication date: 2016. Source: IFAC-PapersOnLine, Volume 49, Issue 16 Author(s): Li Tan Recent technological and commercial developments make cloud computing an affordable, scalable, and highly-available platform technology. Meanwhile, precision agriculture is showing its potentials by improving agricultural operations through better data-driven decision making. Nevertheless, further development of precision agriculture requires better technology and tools to process data efficiently at a reasonable cost, and to translate the data to better decisions and actions in a field. We developed a framework for cloud-based Decision Support and Automation systems that can acquire data from various sources, synthesize application-specific decisions, and control field devices from the Cloud.

ver más...

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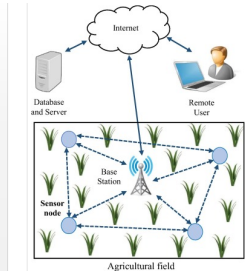
Boletín TIC Agro

Protocolo de redes de sensores eficientes energéticamente a base de lógica difusa para agricultura de precisión

Publicada el 17/10/2016



Publication date: 15 November 2016 Source: Computers and Electronics in Agriculture, Volume 130 Author(s): Sonam Maurya, Vinod Kumar Jain Today's, wireless sensor network have become a more emerging technology in precision agriculture. This paper proposes a novel approach based on sensor network technology to control the irrigation in agricultural field automatically. All sensor nodes deployed in the field, continuously sense soil temperature, soil moisture and air humidity of the agricultural field and transmit this information to base station only when the user defined periodic timer or sensed attributes values exceed desired threshold.

ver más...

Sistemas agrícolas ciber-físicos

Publicada el 17/09/2016

Publication date: 2017. Source: Cyber-Physical Systems Author(s): W. An, D. Wu, S. Ci, H. Luo, V. Adamchuk, Z. Xu In this chapter, agriculture cyber-physical systems (ACPSs) are presented as the key technology to achieve precision agriculture. First, a typical architecture of ACPSs is explained. Then, some existing ACPSs and their applications, such as, soil moisture monitoring for irritation scheduling, soil mineral content monitoring for fertilization scheduling, weather monitoring for frost prevention, crop growth monitoring for disease prevention and harvest management, are reviewed.

ver más...

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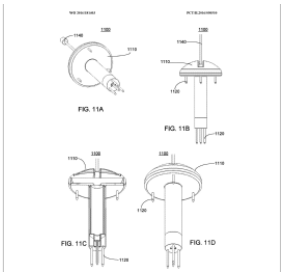
Boletín TIC Agro

PATENTES

Sistema y método para cultivo agrícola diferencial adaptativo dinámico automatizado

Publicada el 18/11/2016

An automated dynamic adaptive differential agricultural cultivation system, constituted of: a sensor input module arranged to receive signals from each of a plurality of first sensors positioned in a plurality of zones of a first field; a multiple field input module arranged to receive information associated with second sensors from a plurality of fields; a dynamic adaptation module arranged, for each of the first sensors of the first field, to compare information derived from the signals received from the respective first sensor with a portion of the information received by the multiple field input module and output information associated with the outcome of the comparison.



ver más...

Aparato de seguridad biológica para lavar vehículo y método

Publicada el 28/10/2016

The present disclosure relates generally to drive-over vehicle tire and undercarriage sanitizing systems. More particularly, the present disclosure relates to methods and systems for promoting safety and reducing contamination in vehicles after having transported or passed through areas potentially contaminated with a biological security threat.

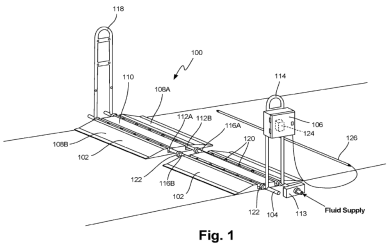


Fig. 1

ver más...

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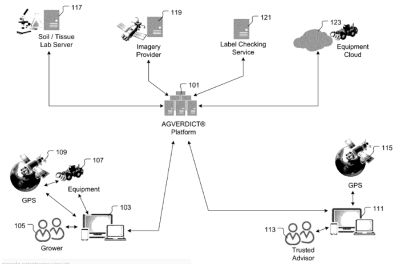
Boletín TIC Agro

Sistemas y métodos para procesamiento y gestión de datos agrícolas en la nube

Publicada el 21/10/2016

A cloud-based system for integration of agricultural data with geolocation-based agricultural operations is provided. The system receives agricultural-related data associated with a given geographic area and transforms the received data into an analysis-ready format. The system processes the received data through one or more algorithms to determine at least one operation to be performed within the given geographic area.

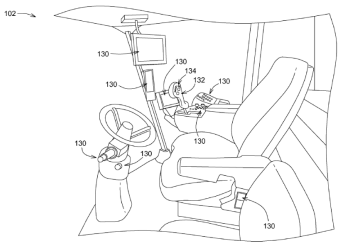


ver más...

Vehículo agrícola con sistema de reposicionamiento automático

Publicada el 30/09/2016

In accordance with an example embodiment, an agricultural vehicle may include first and second harvesting devices connected to the agricultural vehicle. The agricultural vehicle may include a sensor which detects whether the agricultural vehicle is traveling in an operational or non-operational direction. The agricultural vehicle may include a lift controller in communication with the sensor and the first and second harvesting devices.



ver más...

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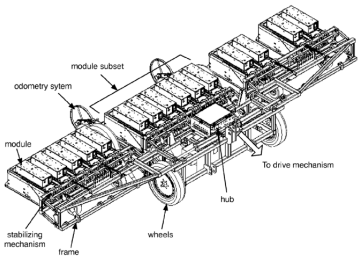
Boletín TIC Agro

Sistema modular para agricultura de precisión

Publicada el 16/09/2016

A modular system includes a hub and a set of modules removably coupled to the hub. The modules are physically coupled to the frame relative to each other so that each module can operate with respect to a different row of a field. An individual module includes a sensor for capturing field measurement data of individual plants along a row as the modular system moves through the geographic region.

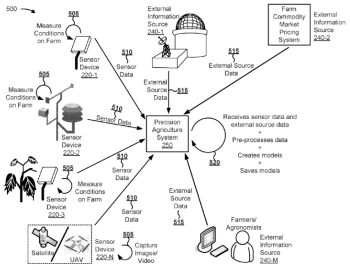


ver más...

Sistema de agricultura de precisión

Publicada el 02/09/2016

A device may receive sensor data from a sensor device located on a particular farm. The device may identify an alert, associated with the particular farm, based on the sensor data and using a model. The model may be created based on imagery data and numeric data relating to a group of farms. The device may determine, using the model, a recommended course of action to address the alert, and provide, to a user device associated with the particular farm, the recommended course of action.



ver más...

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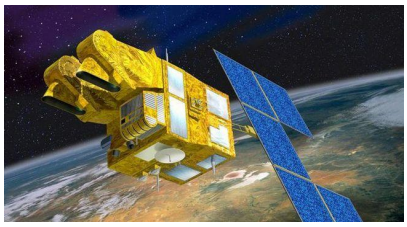
Boletín TIC Agro

NOTICIAS

Drones y satélites al servicio de la agricultura

Publicada el 02/11/2016



Michel Feuga est directeur programmes et services applicatifs chez Airbus Defense & Space. Il animera ce soir à 18 heures au grand auditorium de la médiathèque José Cabanis une conférence intitulée «Drones et satellites au service de l'agriculture». Explications.

ver más...

France Agricole se interesa en el principal fabricante de drones de Francia

Publicada el 28/10/2016

« Delta Drone en partenariat avec Drone Air Fly, Delair-Tech qui rachète Gatewing, Drone agricole qui devient Wanaka et Airinov qui développe une nouvelle offre… Cet automne, le secteur français du drone est en pleine restructuration.

ver más...

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Boletín TIC Agro

La agricultura de precisión en el Parlamento Europeo

Publicada el 14/10/2016

Il donne un état des lieux de l'Agriculture de Précision en Europe sur divers aspects: agronomiques et technologiques mais aussi ses impacts politiques, économiques et environnementaux. L'un des objectifs est d'anticiper les impacts de l'agriculture numérique sur la politique agricole Européenne.

ver más...

Desafío 3ieme Innov'Agro : Agricultura numérica y agroecología

Publicada el 10/10/2016

Le 3ième challenge Innov'Agro se déroulera du 31 octobre au 4 novembre prochain à Montpellier SupAgro. Les étudiants présenteront leurs projets devant un jury de professionnels le 16 novembre à l'occasion du salon Agri-connect.

ver más...

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Boletín TIC Agro

Tecnología meteorológica ayuda a agricultores africanos a planificar el futuro

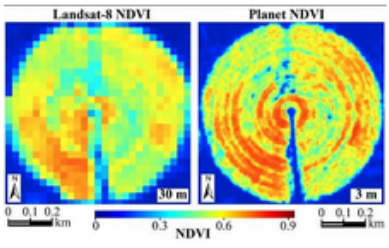
Publicada el 10/10/2016

Indigenous people such as Bedouin tribesmen and African farmers have long depended on traditional knowledge to help them coax food from the earth. Now a researcher hopes to meld this with science to create a drought-busting tool. Muthoni Masinde grew up in Kenya and currently works in South Africa as a weather scientist using advanced data-collecting tools to help to predict rain patterns.

ver más...

Los primeros pasos de nanosatélites en agricultura de precisión

Publicada el 04/10/2016



Les nanosatellites sont des satellites dont la masse n'excède pas 10 kg. Ils ont initialement été conçus pour optimiser le volume des lanceurs.

ver más...

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Boletín TIC Agro

Rendimiento inteligente y de alta precisión con fusión de sensores

Publicada el 30/09/2016

The GEO-FOG 3D inertial navigation system (INS) uses sensor fusion to deliver reliable, high-accuracy navigation and control to a wide variety of unmanned, autonomous and manned aerial, ground, marine and subsurface marine applications and platforms. Other applications include navigation and control, positioning and imaging, georeferencing, land surveying, robotics, underground navigation, stabilization and orientation.

ver más...

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Boletín TIC Agro

MERCADO

SST Software se integra a centro de operaciones de John Deere

Publicada el 11/11/2016

Summit, SST Software's desktop tool, is offering John Deere Operations Center users the ability to integrate asset monitoring into their program.

ver más...

Peco InspX estrena SHIELD, el sistema de inspección más confiable para alimentos, bebidas y productos farmacéuticos

Publicada el 08/11/2016

Peco InspX is pleased to introduce the SHIELD Solo side-view X-Ray inspection platform at this year's Pack Expo. The SHIELD platform represents a major step forward in high reliability, high precision food and beverage inspection.

ver más...

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Boletín TIC Agro

Agronegocios responden a bajos precios de materias primas apostando a la tecnología agrícola

Publicada el 25/10/2016

A wave of startup activity in agriculture technology (agtech) has promoted unprecedented levels of investments by agribusiness companies and venture capital firms. Yet more than 80% of executives say that their investments are primarily intended to defend or enhance their core businesses, rather than to create a new business.

ver más...

Fortune 500 Global AgTech se estandariza con tecnología Heliospectra

Publicada el 19/09/2016

Heliospectra AB, a world leader in intelligent lighting technology for controlled environments horticulture, is proud to announce its fourth order from a Fortune 500 global agricultural technology company. This order, valued at $220,000 (1.9M SEK), adds to a previous two orders from this client in 2015 and another in June 2016, bringing the total light count deployed to approximately 1,000 Heliospectra high-efficiency E60 LED grow lights.

ver más...

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Boletín TIC Agro

Anuncian inversionistas para nuevo acelerador de tecnología agrícola

Publicada el 30/08/2016

Agriculture Technology Business Accelerator Will Spur Growth in Central Iowa's Entrepreneurial Ecosystem by Focusing on Companies in Key Industry of Agriculture

ver más...

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EVENTOS

Sensornets 2017.

Publicada el 26/09/2016

February 19 - 21, 2017. Portugal. Current developments show that in the near future the wide availability of low cost, short range radio technology, along with advances in wireless networking, will enable wireless adhoc sensor networks to become commonly deployed.

ver más...

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Para más información:
Programa Nacional de Vigilancia Tecnológica e Inteligencia Competitiva (VINTEC)
Dirección Nacional de Estudios (DNE) · Subsecretaría de Estudios y Prospectiva
Ministerio de Ciencia, Tecnología e Innovación Productiva de la Nación
Godoy Cruz 2320 3 piso · (C1425FQD) · Buenos Aires · Argentina
Tel: (011) 4899-5300 int. 3004 · vintec@mincyt.gob.ar · www.mincyt.gob.ar

Entidades que colaboraron:

fundación SADOSKY
Investigación y Desarrollo en TIC

Trabajo realizado por:

Secretaría de Planeamiento y Políticas
Ministerio de Ciencia, Tecnología e Innovación Productiva
Presidencia de la Nación