



# SmartLivingPlat

Plataforma Tecnológica de la Domótica  
y las Ciudades Inteligentes



## Boletín de Vigilancia Tecnológica

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SMART BUILDINGS  
SMART CITIES  
INDUSTRIA 4.0

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GOBIERNO  
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## NOTICIAS

### How the Best Low-Code Tools Use AI for Impressive Results

Publicada en <https://www.salesforce.com>, 25/08/2021.

Low code is the most valuable player of our new digital age. In fact, 83% of IT leaders today plan to increase their use of low-code development tools. And as access to and building with low code has gotten easier, in some ways it has gotten harder. Too many choices gives us decision fatigue. And testing out each solution may negate the time savings of the technology.



[ver más...](#)

### Fundamental Considerations In Building The Metaverse

Publicada en <https://www.forbes.com>, 22/08/2021.

There is a great deal of excitement about the future of the metaverse! But there is still a considerable amount of work to be done to build it for individuals, businesses, brands, and communities. There are many fundamental considerations we need to contemplate for a vital and thriving metaverse that offers benefits and opportunities for the broadest possible impact.



[ver más...](#)

## UK aims to boost solar by predicting cloud movements with A.I.

Publicada en <https://www.bloomberg.com>, 19/08/2021.

The U.K. is turning to artificial intelligence to better predict when clouds affect its generation of solar energy, potentially helping to reduce its reliance on fossil fuels as a backup power source. The country's National Grid ESO is teaming up with nonprofit Open Climate Fix to design a tracking system that matches cloud movements with the exact locations of solar panels. The tool seeks to provide much greater precision than current weather forecasts.



[ver más...](#)

## Project launch: Building regional food systems through artificial intelligence

Publicada en <https://www.dfki.de>, 16/08/2021.

The joint project "Stadt-Land-Fluss" (SLF) funded by the Federal Ministry of Food and Agriculture (BMEL) started on 1 June. The Eberswalde University of Applied Sciences (HNEE), together with 19 other partner organisations, is researching the strengthening of the regional food system through the development of digital data platforms for economic and nutritional data using artificial intelligence (AI) methods.



[ver más...](#)

## Artificial intelligence for emergency management - spell project researches ai platform for rescue control centers

Publicada en <https://www.dfki.de/>, 07/08/2021.

In the future, artificial intelligence will help control the flood of information in emergency operation centers and provide important data from a wide variety of sources in a new way. An ambitious consortium of research, application and development partners led by the German Research Center for Artificial Intelligence (DFKI) aims to develop a platform that will serve as the basis for novel services and test the use of new AI tools.



[ver más...](#)

## Blockchain Implementation Challenges in 2021

Publicada en <https://limechain.tech/>, 05/08/2021.

Blockchain has come such a long way since its inception that it's sometimes easy to forget that the technology is still relatively young. While a decade in the blockchain space may seem as an eternity, such a rapid growth is typical for projects that are still early in their development. So blockchain technology still has a lot of growing pains to go through before it could unlock its full potential. In addition, the tech needs to achieve wider adoption, especially among enterprises.



[ver más...](#)



## How an AI-Applied Supply Chain Enables Efficiency

Publicada en <https://epsnews.com>, 27/07/2021.

Today's supply chains are laden with inefficiencies, as most companies rely on antiquated practices to oversee and manage how goods get from place to place. The supply chain is delicate — even one disruption among suppliers, buyers, and logistics providers can have a trickle-down effect that causes waste, time loss, and increased carbon emissions.

[ver más...](#)

## From basic research to market readiness – DFKI Laboratory Niedersachsen develops innovative AI technologies in GAIA-X

Publicada en <https://www.dfki.de>, 26/07/2021.

An ecosystem based on the values of Europe for the secure, sovereign and manufacturer-independent exchange of data – that is the goal of the European cloud initiative GAIA-X. In projects, consortia and technology working groups, the German Research Center for Artificial Intelligence (DFKI) actively contributes to the establishment and further development of the major project. At the DFKI Laboratory Niedersachsen, all four research departments are now involved in the development of key technologies based on artificial intelligence (AI) in different GAIA-X application domains. These are characterized by a wide range of applications and high innovation potential.



[ver más...](#)

## AI@Education - Teaching and Learning with Artificial Intelligence

Publicada en <https://www.dfki.de>, 05/07/2021.

Many modern educational technologies already contain aspects of artificial intelligence (AI) - in applications for school organisation as well as for teaching and testing and for learning and practising. Examples are learning platforms or learning apps that adapt the task programme to the learner's competence profile.



[ver más...](#)

## COALA Digital Intelligent Assistant in Quality Control of White Goods – Whirlpool Use Case

Publicada en <https://www.coala-h2020.eu>, 24/06/2021.

Enrica Bosani, Manufacturing R&D Project Manager of Whirlpool Corporation, presented COALA's solution at the 2nd Smart Manufacturing Summit, organised by Berry Professionals, on 20-21 May 2021.



[ver más...](#)

## Extended Reality In Tourism: 4 Ways VR And AR Can Enhance The Travel Experience

Publicada en <https://www.forbes.com>, 11/06/2021.

Travel is a sector that I'm particularly passionate about, and one that's suffered immensely in the wake of the COVID-19 crisis. As the industry looks to the future, one of its biggest concerns will be how to improve the whole travel experience and reduce some of the "pain points" that come with travel. I believe VR and AR could help with this.

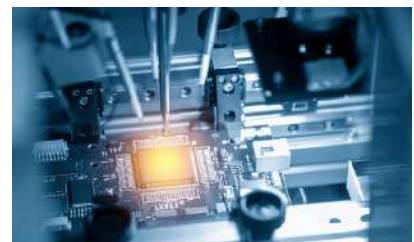


[ver más...](#)

## Artificial Intelligence May Be Better Than Humans at Designing Microchips

Publicada en <https://insidescience.org/>, 09/06/2021.

AI algorithms design chips of equal or greater quality in far less time, according to new research from Google. Artificial intelligence can design computer microchips that perform at least as well as those designed by human experts, devising such blueprints thousands of times faster. This new research from Google is already helping with the design of microchips for the company's next generation of AI computer systems.

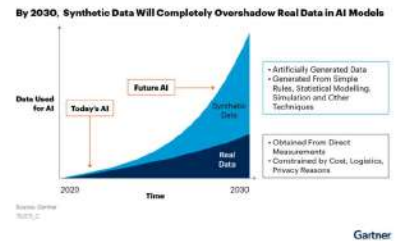


[ver más...](#)

## What Is Synthetic Data?

Publicada en <https://blogs.nvidia.com/>, 08/06/2021.

Synthetic data is annotated information that computer simulations or algorithms generate as an alternative to real-world data. Put another way, synthetic data is created in digital worlds rather than collected from or measured in the real world. It may be artificial, but synthetic data reflects real-world data, mathematically or statistically. Research demonstrates it can be as good or even better for training an AI model than data based on actual objects, events or people



[ver más...](#)

## Vehicle-to-Grid Technology Market to Grow Nearly 48% through 2027

Publicada en [altenergymag](https://www.altenergymag.com/), 07/06/2021.

The vehicle-to-grid technology market is expected to reach a market size of US\$ 17.43 Billion by the end of 2027 and register a high revenue CAGR of 48% from 2020 to 2027.

[ver más...](#)

## EMPRESAS Y MERCADOS

### Sunverge Announces Strategic Partnership with Simply Energy, Nissan Australia and Wallbox to Deliver Electric Vehicle-to-Home and Electric Vehicle-to-Grid Services

Publicada en [altenergymag](#), 25/08/2021.

Integrated solution will provide an advanced electric vehicle to home (V2H) capability with intelligent, dynamic and grid-aware energy management of Australia's growing fleet of electric vehicles, allowing for holistic real-time flexible multi-asset load management, co-optimized with multi-service VPP offering that now includes EVs, enhanced resiliency and backup power.

[ver más...](#)

### VinFast eyes fast-charging battery tech for EV units

Publicada en <https://futureiot.tech>, 25/08/2021.

Vietnamese electric vehicle (EV) manufacturer VinFast is looking at an extremely fast charging technology that would allow an EV battery to charge to 80% in four to five minutes.



[ver más...](#)

## RoboSense ushers mass production of smart LiDAR sensors

Publicada en <https://futureiot.tech>, 23/08/2021.

Shenzhen-based RoboSense is producing at scale its second-generation intelligent solid-state LiDAR RS-LiDAR-M1 (M1), the first company to mass produce solid-state LiDAR sensors in the world. It is a milestone in the commercialisation of advanced autonomous driving technology.



[ver más...](#)

## Switch2 to demonstrate next generation residential heat network solutions at Housing 2021

Publicada en [altenergymag](#), 19/08/2021.

District and community heating specialist Switch2 Energy will show residential heat network providers how next generation technologies can help them get ahead on net zero and regulatory compliance at Housing 2021 (7-9 September 2021).

[ver más...](#)

## Facebook launches VR remote work app, calling it a step to the 'metaverse'

Publicada en <https://www.reuters.com>, 19/08/2021.

Aug 19 (Reuters) - Facebook Inc (FB.O) on Thursday launched a test of a new virtual-reality remote work app where users of the company's Oculus Quest 2 headsets can hold meetings as avatar versions of themselves. The beta test of Facebook's Horizon Workrooms app comes as many companies continue to work from home after the COVID-19 pandemic shut down physical workspaces and as a new variant is sweeping across the globe.



[ver más...](#)

## Leeds City Council partners with Switch2 to comply with Heat Network Regulations

Publicada en [altenergymag](#), 18/08/2021.

Leeds City Council is partnering with Switch2 Energy to achieve compliance with the updated Heat Network (Metering & Billing) Regulations. Switch2 has been Leeds City Council's metering and billing partner for more than 20 years - serving 1,400 properties across 9 sites with heat networks. This includes the provision of smart meters and pay-as-you-go and credit billing services.

[ver más...](#)

## IoT sensors enable urban farming in Singapore

Publicada en <https://futureiot.tech>, 17/08/2021.

AbyFarm belongs to Singapore's emerging group of urban farmers who are using technologies such as IoT, blockchain and machine learning to help the city state be self-sufficient in growing its own food in spite of shortage of land for cultivation.



[ver más...](#)

## Smart pole deployed to reduce traffic casualties in Japan

Publicada en <https://futureiot.tech>, 16/08/2021.

Toyota Tsusho recently began operating a newly developed ITS (intelligent transport system) smart pole at the traffic junction of Showamachi 1-chome in Toyota City. The multi-function utility pole – equipped with cameras and sensors – are designed to detect cars and people in the vicinity.



[ver más...](#)



## Kerry Logistics introduced robot to F&B operations

Publicada en <https://futureiot.tech>, 13/08/2021.

Kerry Logistics Network has installed robotic arms to handle large volumes of chilled food products at a customer's regional distribution centre located in Hong Kong. Kerry Logistics has been managing the distribution on behalf of the customer – one of UK's leading retailers – since 2011.



[ver más...](#)

## Detecting Small Barcode Labels on Large Areas

Publicada en <https://www.baslerweb.com>, 09/08/2021.

In the production, packaging and shipping process, 1D and 2D data matrix and bar codes form the basis for continuous tracking of packages. One challenge for vision systems is to find and decode the small codes on large packages as well as small packages inside. The Basler boost camera with high-resolution 45 MP XGS sensor and CXP-12 interface solves this task excellently through a large definable field of view of e.g. two by one meter. Combined with the single-channel CXP-12 interface card 1C, the application also benefits from low latencies, a low CPU load, and high data throughput.



[ver más...](#)

## OCADO: How we improve forecasting and availability with neural networks and deep learning

Publicada en <https://www.ocadogroup.com>, 27/07/2021.

Being able to forecast demand accurately has been the lifeblood of retailers for years. In the world of groceries, where the freshness of goods and nuances in customer behaviour add complexity, it's even more critical. Retailers face a constant challenge. If they don't order enough stock, customers won't receive the items they ordered, leading to lower customer satisfaction. But if they order too much, they have to contend with the lower profitability and stock wastage.



[ver más...](#)

## Growatt unveils new high power inverter for commercial and industrial sector at SNEC 2021

Publicada en [altenergymag](#), 07/06/2021.

Leading Chinese inverter manufacturer Growatt has launched a new high power inverter at SNEC 2021 in Shanghai, China. At the three-day tradeshow, the company exhibited a vast range of products and solutions for on-grid, off-grid and hybrid solar, energy storage and smart energy management.

[ver más...](#)

## Stem, Inc. Announces Collaboration with Ameresco on New Smart Energy Storage Project for Holy Cross Energy

Publicada en altenergymag, 02/06/2021.

Colorado-based electric cooperative to install 15MWh battery storage system focused on providing sustainability, savings, and resilience. Stem, Inc. ("Stem" or "the Company") (NYSE: STEM), a global leader in artificial intelligence (AI)-driven clean energy storage services, today announced the Company will provide smart energy storage services to Ameresco, Inc

[ver más...](#)

## AI in rail: Automatically generated explanations of machine-driven decisions in railway operations

Publicada en <https://www.dfki.de>, 02/06/2021.

The DFKI and its partners DB System GmbH, Siemens Mobility GmbH and TU Braunschweig are developing a concept which aims to solve general problems related to AI methods in railway operations.



[ver más...](#)

## Video: Faradite Launch New TAP Volt Free Smart Home Switch

Publicada en Automated Home, 01/06/2021.

Faradite have announced a new, improved version of their smart home switch in both 5 gang and 1 gang varieties. To ensure maximum compatibility with...



[ver más...](#)

## Microsoft, GPT-3, and the future of OpenAI

Publicada en <https://venturebeat.com>, 01/06/2021.

One of the biggest highlights of Build, Microsoft's annual software development conference, was the presentation of a tool that uses deep learning to generate source code for office applications. The tool uses GPT-3, a massive language model developed by OpenAI last year and made available to select developers, researchers, and startups in a paid application programming interface.



[ver más...](#)

## PATENTES

### Computer-implemented systems and methods for implementing transfers over a blockchain network

Publicada en Patentscope\_Domótica, 30/08/2021.

Solicitante: NCHAIN HOLDINGS LIMITED

The invention provides improved Simplified Payment Verification (SPV) solutions for blockchain-implemented transfers. It is suited for, but not limited to, implementation in one or more SPV wallets, or on smart cards etc. In accordance with one embodiment, a method, system or resource(s) is provided which enables Alice to transfer an asset to Bob.

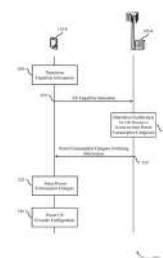
[ver más...](#)

### Network control and signaling for power circuitry configuration

Publicada en Patentscope\_Domótica, 30/08/2021.

Solicitante: QUALCOMM INCORPORATED

The described techniques provide for the identification and utilization of different power consumption categories by a user equipment (UE) in wireless communications system. A power consumption category may correspond to a power consumption level (e.g., a powered circuitry configuration) of the UE. For example, a power consumption category may configure an analog-to-digital conversion (ADC) resolution, a digital-to-analog conversion (DAC) resolution, a number of antennas



[ver más...](#)

## Emergency Lighting System

Publicada en Patentscope\_Domótica, 27/08/2021.

Solicitante: Legrand Australia Pty Ltd

An emergency lighting system for a building is disclosed wherein a plurality of emergency luminaires receives control signals directly from a control node across a long range wireless communications network.

[ver más...](#)

## AC/DC bulk power grid dynamic security risk situation rolling prospective early warning method and system

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: JINAN SHENGDA INTELLECTUAL PROPERTY AGENCY CO.,LTD.

Disclosed are an AC/DC bulk power grid dynamic security risk situation rolling prospective early warning method and system. The method comprises: constructing an original feature set of a TTC rapid evaluation model; generating a training sample set of the TTC rapid evaluation model on the basis of a power grid topological structure and prediction information in a future period of time

[ver más...](#)



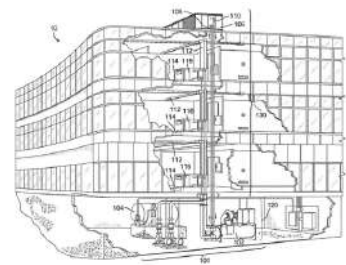
图 1

## Building management system with searching using aliased points from equipment definitions

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: Johnson Controls Technology Company

A building management system includes (i) one or more building systems including equipment configured to serve one or more spaces in a building and (ii) one or more circuits. The one or more circuits are configured to receive an input to invoke a control strategy to modify a condition of the one or more spaces; define an output of the control strategy where the output relates to a modification that impacts at least one of a location,



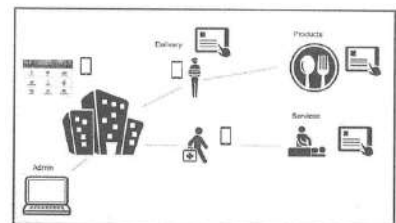
[ver más...](#)

## Home automation and concierge system and method for a physical community or neighborhood

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: Devcore Group

The present invention provides a home automation and concierge system and method for a community. A user may access an interface to control home systems and device or use the concierge service to purchase goods and services available for at home delivery.



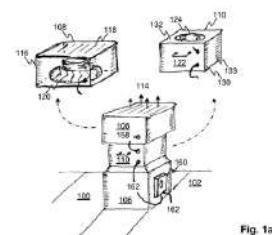
[ver más...](#)

## Installation frame of an exhaust blower of a building and exhaust air control system

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: KOLSTER OY AB

In the solution put forth, there is a frame structure (122) and an inner surface structure (124) in an installation frame (110) of an exhaust blower (108) of a building (100). A bottom part (130) of the frame structure is intended to be installed towards a lead-through (106) of the building, and a top part (132) towards the exhaust blower installed over it.



[ver más...](#)

## Method of configuring a central control unit belonging to a home automation system

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: OVERKIZ

A method for configuring a communication terminal for the command of a central control unit or of a home-automation device belonging to a home-automation installation, the method being implemented by the communication terminal, an initial configuration of the communication terminal comprising at least one container application, the method, implemented by the communication terminal

[ver más...](#)

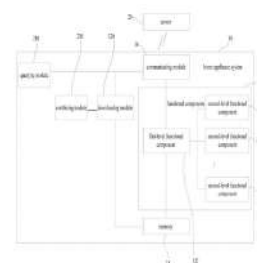


## Online upgrade control method for home appliance system, and home appliance system

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: GD MIDEA AIR-CONDITIONING EQUIPMENT CO., LTD.

A home appliance system and an online upgrade control method for the home appliance system are provided. The home appliance system has multiple functional components. The home appliance system is in communication with a memory. Pursuant to the online upgrade control method, a server is queried with respect to all the functional components to determine whether there is an applicable software update.



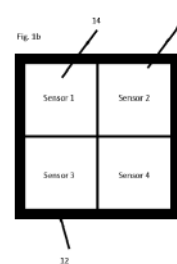
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## Smart switch suitable for a smart home environment

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: Deutsche Telekom AG

The present invention relates to a switching unit for controlling smart home appliances, comprising a current source which is designed to supply the further components of the switching unit with energy, a plurality of mutually offset independent movement detectors and/or a movement detector with a movement direction detection function for detecting movements of a user, a processor which evaluates the detected movements and assigns commands to the movements which are stored in a memory of the switching unit, a signal transmitting unit which is designed to transmit the commands in the form of signals to the smart home devices.



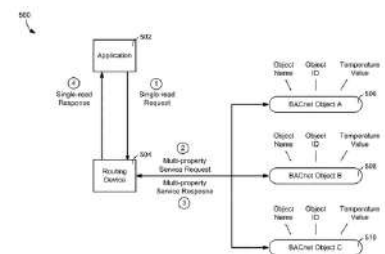
[ver más...](#)

## Systems and methods for optimizing data routing in hvac networks

Publicada en Patentscope\_Domótica, 26/08/2021.

Solicitante: Johnson Controls Technology Company

A building management system (BMS) for optimizing network traffic. The system includes a user device that includes a user interface that is configured to display a control application for the BMS. The system further includes a routing device comprising a processing circuit, the processing circuit configured to receive an application request from the control application,



[ver más...](#)

## Method and apparatus for beam management for multi-stream transmission

Publicada en Patentscope\_Domótica, 20/08/2021.

Solicitante: SAMSUNG ELECTRONICS CO., LTD.

The present disclosure relates to a communication method and system for converging a 5th-Generation (5G) communication system for supporting higher data rates beyond a 4th-Generation (4G) system with a technology for Internet of Things (IoT). The present disclosure may be applied to intelligent services based on the 5G communication technology and the IoT-related technology, such as smart home, smart building, smart city, smart car, connected car, health care, digital education, smart retail, security and safety services.

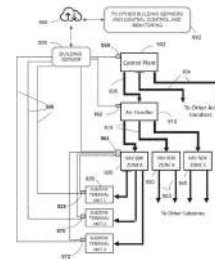
[ver más...](#)

## Building occupant comfort network

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: Thomas HARTMAN

In a commercial building, individual occupant thermal comfort is achieved with optimal cost and energy efficiency through the integration of a variety of local thermal comfort components into a communication network that employs emerging optimization principles to meet individual preferences for the thermal environment on a workstation basis while reducing building energy use and operating in accordance with any constraints on the energy grids that serve the buildings



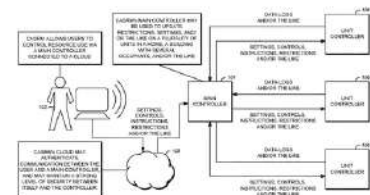
[ver más...](#)

## Cloud-authenticated site resource management devices, apparatuses, methods and systems

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: Schneider Electric Buildings, LLC

The CLOUD-AUTHENTICATED SITE RESOURCE MANAGEMENT DEVICES, APPARATUSES, METHODS AND SYSTEMS (“CASRM”) transforms resource-use, weather, and user settings inputs into resource management schedule and control outputs. The CASRM achieves data transformation via using a building automation management device, comprising at least a processor a memory storing processor-executable instructions to receive, at a virtual cloud network controller, a data packet from a source building resource control device and to access a virtual routing table corresponding to a local virtual network associated with a control entity.



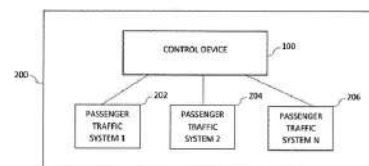
[ver más...](#)

## Control device for passenger traffic system

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: KONE Corporation

According to an aspect, there is provided a control device. The control device is configured to receive data from a passenger traffic system configured in a building, the data comprising information associated with operations for transferring passengers of the passenger traffic system



[ver más...](#)

## Device, system and method for controlling environmental devices at a smart building to assist a first responder

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: MOTOROLA SOLUTIONS, INC. [US]

A device, system and method for controlling environmental devices at a smart building to assist a first responder is provided. A public-safety computing device determines a context of a first responder at a smart building. The public-safety computing device is in communication with a smart-building control device. The context comprises one or more of: an objective to be achieved by the first responder in the smart building; and an object-of-interest in the smart building for which evidence is to be collected.

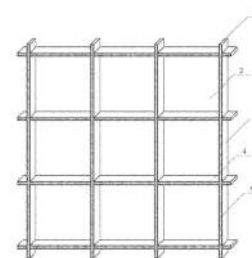
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## Facade construction with integrated led light sources

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: Andrey Vladimirovich MATVEEV

The present invention relates to the field of industrial and civil engineering, more particularly to translucent facade constructions of buildings and structures, which can be installed during the construction and reconstruction of buildings. The main elements of the device are panels and a framework in the form of vertical struts and horizontal girders covered by profiled decorative covers.



[ver más...](#)

## Method and apparatus for defining ue behavior in restricted service area

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: Samsung Electronics Co., Ltd.

The disclosure relates to a communication method and a system for converging a 5th-Generation (5G) communication system for supporting higher data rates beyond a 4th-Generation (4G) system with a technology for Internet of Things (IoT). The disclosure may be applied to intelligent services based on the 5G communication technology and the IoT-related technology, such as a smart home, a smart building, a smart city, a smart car, a connected car, healthcare, digital education, a smart retail, security and safety services.

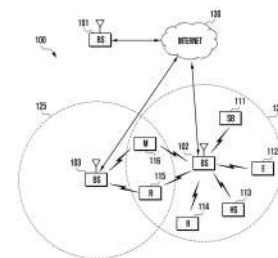
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## Method and apparatus for reduced PDCCH monitoring

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: YOON & LEE INTERNATIONAL PATENT & LAW FIRM

The present disclosure relates to a communication method and system for converging a 5th-Generation (5G) communication system for supporting higher data rates beyond a 4th-Generation (4G) system with a technology for Internet of Things (IoT).



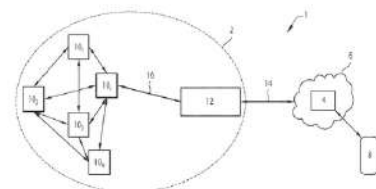
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## Method and system for sharing communication between connected home-automation devices and a remote device

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: SOMFY ACTIVITES SA

Disclosed is a method and a system for sharing communication between connected home-automation devices belonging to a first communication network and a remote device connected to a second communication network, the first communication network being connected to the second communication network by a network device



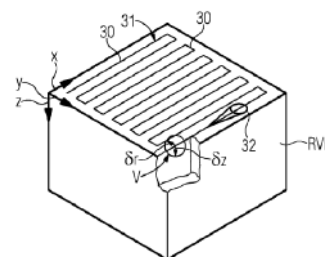
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## Method for Determining Building Instructions for an Additive Manufacturing Method, Method for Generating a Database with Correction Measures for Controlling the Process of an Additive Manufacturing Method

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitante: Siemens Aktiengesellschaft

Various embodiments include a method for additive manufacturing of a building structure on using a simulation comprising: accessing a data set for the building structure describing the building structure in layers; calculating a global heat development in previous layers based a building history and heat input by an energy beam



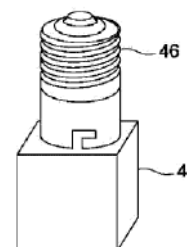
[ver más...](#)

## Smart kitchen monitoring system and methods

Publicada en Patentscope\_Domótica, 19/08/2021.

Solicitantes: Nicole Cora Ehrlich, Catherine Cora Ehrlich, John Stump

A smart home solution can help reduce fires in the home, such as in the kitchen, by permitting a user to see, on a portable electronic device, whether a stove was left on or if there is an unexpected elevated temperature on the kitchen stove.



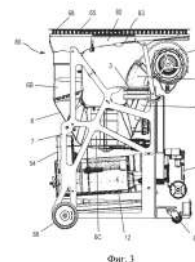
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## Air-purifying apparatus

Publicada en Patentscope\_Domótica, 17/08/2021.

Solicitante: SOLIDEA S R L

invention relates to a portable air-purifying apparatus, in particular, for premises inside buildings. The air-purifying apparatus (1) for purifying the air inside a building using a liquid (2) comprises a body (6) equipped with: an inlet part (6A) and an outlet part (6B) for air; an intermediate flushing chamber



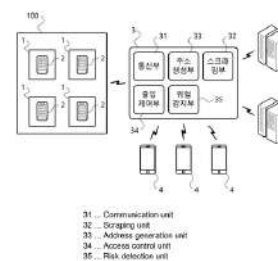
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## Complex building management platform system, complex building management method using same, and computer program for same

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: HANGANG IP LAW FIRM

A complex building management platform system may comprise: a communication unit configured to communicate with at least one access control device installed in each of at least one unit of a complex building and with at least one user device corresponding to a tenant of the at least one unit; a scraping unit configured to receive authentication information corresponding to the tenant of the complex building and to collect transaction details



[ver más...](#)

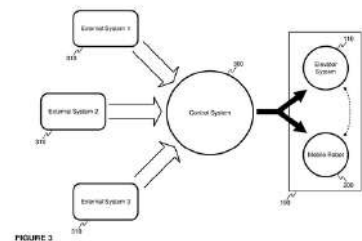


## Generation of control signals

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: KONE CORPORATION [FI]

The present invention relates to a method for generating, by a control system (300), mutually synchronized control signals to an elevator system (110) residing in a building (100) and to at least one mobile robot (200) operating in the building (100). The method comprises: receiving (510) a service request from an external system



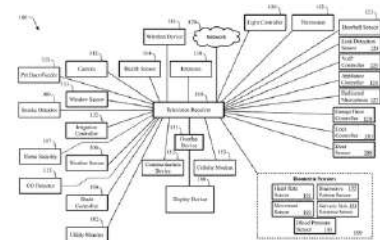
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## Home security response using biometric and environmental observations

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: DISH Ukraine L.L.C

Various arrangements for handling a potential security situation using a home automation system are presented. A biometric measurement of a user may be received. An alert from a home automation device in wireless communication with the home automation host system may be received. If the biometric measurement is associated with the alert, a security response action may be performed.



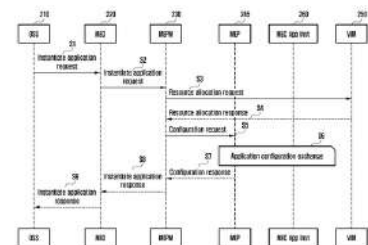
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## Method and apparatus for improving a multi-access edge computing (mec) network

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: SAMSUNG ELECTRONICS CO., LTD. [KR]

The present disclosure relates to a communication method and system for converging a 5th-Generation (5G) communication system for supporting higher data rates beyond a 4th-Generation (4G) system with a technology for Internet of Things (IoT). The present disclosure may be applied to intelligent services based on the 5G communication technology and the IoT-related technology



[ver más...](#)

## Method and apparatus for managing dormant bandwidth part in next-generation mobile communication system

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: Samsung Electronics Co., Ltd.

Disclosed are a communication scheme and a system thereof for converging IoT technology and a 5G communication system for supporting a high data transmission rate beyond that of a 4G system. The disclosure can be applied to intelligent services (for example, services related to a smart home, smart building, smart city, smart car, connected car, health care, digital education, retail business, security, and safety) based on the 5G communication technology and the IoT-related technology. The disclosure discloses a method and an apparatus for efficiently operating a dormant BWP.

[ver más...](#)

## Smart city modules and system

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: Champion Optical Network Engineering, LLC

The present invention relates to a system to provide a smart city platform for urban areas by utilizing module units that contain multiple types of technology and equipment. A smart city platform is created with a multiplicity of module units installed throughout a cityscape. The module units house various equipment, such as various antennas, cables, brackets and other equipment, to enable smart city connectivity and services and may be additionally fitted with service station units to provide extra capabilities and services to communities.



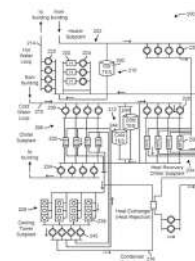
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## Systems and methods of zone-based control via heterogeneous building automation systems

Publicada en Patentscope\_Domótica, 12/08/2021.

Solicitante: Johnson Controls Technology Company

A method for zone-based control of devices within a building management system (BMS) includes receiving a request to control a zone in a building. The method includes identifying a plurality of available zones in the building. The method includes receiving a selection to control a first zone from the plurality of available zones. In response to the selection, the method includes generating a password to restrict control of at least one device in the first zone



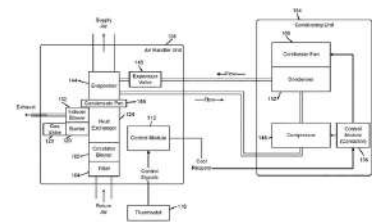
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## Coordinated control of standalone and building indoor air quality devices and systems

Publicada en Patentscope\_Domótica, 05/08/2021.

Solicitante: EMERSON CLIMATE TECHNOLOGIES, INC.

First and second IAQ sensors are located within a building and are configured to measure first and second IAQ parameters, respectively, the first and second IAQ parameter being the same one of: relative humidity; amount of particulate; amount of volatile organic compounds; and amount of carbon dioxide.



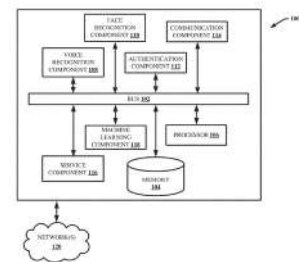
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## Facilitating automating home control

Publicada en Patentscope\_Domótica, 05/08/2021.

Solicitantes Resilience Magnum IP, LLC

Systems, computer-implemented methods and/or computer program products that facilitate automating home control are provided. In one embodiment a computer-implemented method comprises: using a voice recognition component to identify user identification by analyzing voice signatures; using a face recognition component to determine user identification by analyzing facial features



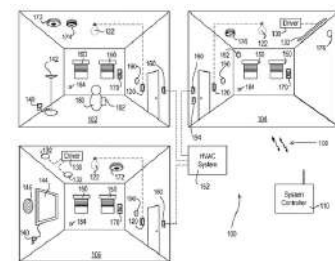
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## Load control system responsive to location of an occupant and mobile devices

Publicada en Patentscope\_Domótica, 05/08/2021.

Solicitante: Lutron Technology Company LLC

A load control system may control an electrical load in a space of a building occupied by an occupant. The load control system may include a controller configured to determine the location of the occupant, and a load control device configured to automatically control the electrical load in response to the location of the occupant.



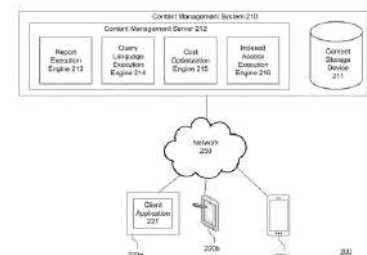
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## Motion detection system and method of a building automation system

Publicada en Patentscope\_Domótica, 05/08/2021.

Solicitante: enLighted, Inc.

There is described a motion detection system of a building automation system comprising a motion sensing component and a processor. The motion sensing component is configured to generate a raw signal. The processor is configured to establish first-order difference signals based on the raw signal.

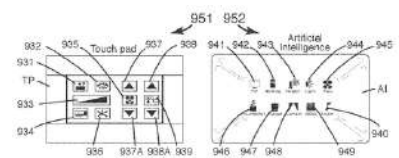


[ver más...](#)

## Self-set home automation and method for operating the home automation

Publicada en Patentscope\_Domótica, 05/08/2021.

A self-set home automation and method for handling the self-set home automation and the related devices including cascading intelligent support boxes and plug-in devices to provide simple to install and operate, with less wiring wherein the cascaded devices are optically linked, to include separated low voltage grid and related devices, and a converter for communicating RF, wifi and IR.



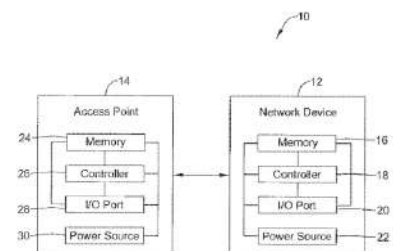
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## System for communication with devices on a network to minimize power consumption

Publicada en Patentscope\_Domótica, 05/08/2021.

Solicitante: Ademco Inc.

A system of controlling one or more building automation devices. The system may incorporate communicating over a first network with one or more network connected devices. An access point for the first network may be utilized to facilitate communication among the network connected devices. One or more of the network connected devices may be a low power device that has a first mode and a second mode.



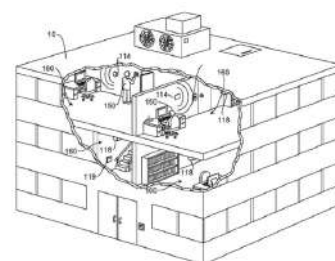
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## Systems and methods for software defined fire detection and risk assessment

Publicada en Patentscope\_Domótica, 05/08/2021.

Solicitante: Johnson Controls Technology Company

One or more non-transitory computer-readable storage media having instructions stored thereon that, when executed by one or more processors, cause the one or more processors to implement a software defined alarm control unit (SDACU) to augment an existing fire panel,



[ver más...](#)

## A system for generation of alarm and detection of face in breakage of social distancing

Publicada en Patentscope\_Domótica, 30/07/2021.

Solicitante: UNIVERSITY OF PETROLEUM AND ENERGY STUDIES [IN]

The present invention provides a system for generation of alarm and detection of face in social distance protocol breaking. The system comprising a video camera, a processor (Raspberry pie or beagle bone), a speaker, and a control board. The CCTV camera or any HD video camera can be installed at a height of 10 feet or more where it can capture the bird view of people gathered or moving at a place.

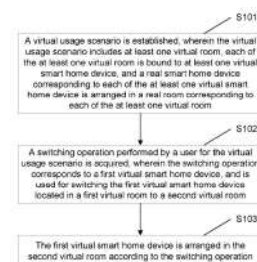
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## Control Method for Smart Home Device and Terminal Device

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: Gree Electric Appliances, Inc. of Zhuhai

Disclosed in the present disclosure are a control method for a smart home device and a terminal device. The control method comprises establishing a virtual usage scenario, wherein the virtual usage scenario comprises at least one virtual room, each of the at least one virtual room is bound to at least one virtual smart home device, and a real smart home device corresponding to each of the at least one virtual smart home device is arranged in a real room corresponding to each of the at least one virtual room



[ver más...](#)

## Lighting control system configurable by control device

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: ENLIGHTED INC

There is described a lighting control system (100) of a building environment comprising a control device (108) and a lighting device (106). The control device (108) is capable of detecting an activation of a configuration mode of the lighting control system (100) and controlling illumination for the building environment in response to command inputs received at a user interface (160)

[ver más...](#)

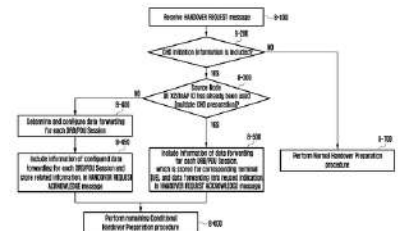


## Method for supporting data forwarding during conditional handover and dual stack protocol handover in next-generation mobile communication system

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: SAMSUNG ELECTRONICS CO., LTD. [KR]

The present disclosure relates to a communication method and system for converging a 5th-Generation (5G) communication system for supporting higher data rates beyond a 4th-Generation (4G) system with a technology for Internet of Things (IoT). The present disclosure may be applied to intelligent services based on the 5G communication technology and the IoT-related technology,



[ver más...](#)

## Mobile device and systems for wireless people flow management in a building

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: KONE Corporation

According to an aspect, there are provided a mobile device for wireless people flow management. The mobile device comprises at least one processor; at least one memory; and a near field communication, NFC, reader; wherein the at least one memory comprises program code which, when executed on the at least one processor causes the mobile device to receive, from the NFC reader, information encoded in an NFC tag associated with a specific location in a building

[ver más...](#)

## Security in a smart-sensored home

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: Google LLC

This patent specification relates to apparatus, systems, methods, and related computer program products for providing home security objectives. More particularly, this patent specification relates to a plurality of devices, including intelligent, multi-sensing, network-connected devices, that communicate with each other and/or with a central server or a cloud-computing system to provide any of a variety of useful home security objectives.



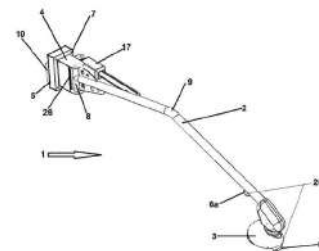
[ver más...](#)

## Self-supporting system and a method for the mass communication and distribution of content and digital advertising in public spaces

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: Ricardo Adolfo BERNAL BERNAL

The invention relates to a self-supporting system for the mass communication and distribution of content and digital advertising in public spaces, which comprises: a mechanical structure that sets the system on a building and supports the other components of the system; a control system comprising a module for controlling peripherals and a connectivity module; a peripherals module comprising sensors and actuators; one or more human-machine interfaces; and a power source



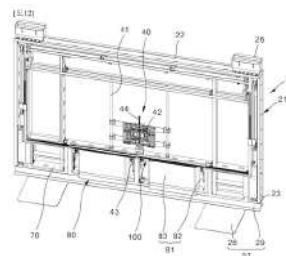
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## Smart wall

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: LG ELECTRONICS INC.

A smart wall is disclosed. The smart wall of the present invention can comprise: a skeleton-shaped frame part having a plurality of mounting spaces for mounting home appliances; an air purification part which is provided inside the mounting space, and which suctions air outside the frame part so as to remove foreign substances therefrom



[ver más...](#)

## Synchronization signal block and physical downlink control channel search space monitoring based on user equipment beamforming capability

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: QUALCOMM INCORPORATED

Methods, systems, and devices for wireless communications are described. Generally, the described techniques provide for transmitting, from a user equipment (UE) to a base station, a report indicating a beamforming capability of the UE, receiving, from a base station, a configuration for a plurality of control resource sets (CORESETs) based at least in part on the report

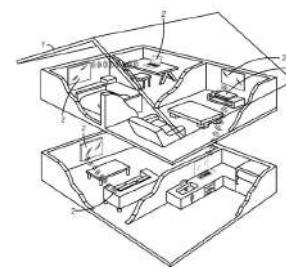
[ver más...](#)

## System, method, and computer-readable recording medium of detecting wireless home digital interface devices and configuring parental control for each

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: ARRIS Enterprises LLC

A system, method, and computer-readable recording media implementing detection of wireless home digital interface (WHDI) devices and the configuration of parental control for each. Authenticating through a set-top box (STB) at least one end device (ED), being a WHDI device, on a wireless network. The STB includes a database that provides access codes/set of pins for each ED that is added to the wireless network.



[ver más...](#)

## Traffic light control method and apparatus, computer device, and storage medium

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: ADVANCE CHINA IP LAW OFFICE

A traffic light control method and apparatus, a computer device, and a storage medium. The method comprises: obtaining a high-precision map, and building a simulated scene according to the high-precision map, wherein the high-precision map comprises a lane, a stop line, and a traffic light, there is an association relationship between the lane, the stop line and the traffic light, and the stop line carries position information;

[ver más...](#)

## Unmanned aerial vehicle return-to-home control method, device, movable platform and storage medium

Publicada en Patentscope\_Domótica, 29/07/2021.

Solicitante: SZ DJI TECHNOLOGY CO., LTD. [CN]

An unmanned aerial vehicle return-to-home control method, an apparatus, a movable platform and a storage medium. The method comprises: acquiring a first environmental image on a return-to-home direction of an unmanned aerial vehicle (S101); if the first environmental image includes an obstacle which does not affect ordinary flight of the unmanned aerial vehicle, responding to a first flight control instruction, causing the unmanned aerial vehicle to fly according to a first pre-determined means

[ver más...](#)

## Systems and methods for community-based cause of loss determination

Publicada en Patentscope\_Domótica, 27/07/2021.

Solicitante: STATE FARM MUTUAL AUTOMOBILE INSURANCE COMPANY

Methods and systems for determining a cause of loss to a property for damage associated with an insurance-related event based upon data received from a second property. A smart home (or other building) controller and/or an insurance provider remote processor may generate a time sequence of events for damage associated with an insure-related event.

[ver más...](#)

## Control method and device for home device and storage medium

Publicada en Patentscope\_Domótica, 23/07/2021.

Solicitante: BEIJING XIAOMI MOBILE SOFTWARE CO., LTD.

The present disclosure provides a control method and device for a home device and a storage medium. The control method for the home device includes: monitoring (S101) an action of a user through a radar wave emitted from the radar wave sensor; and controlling (S201) the home device to perform a function corresponding to the action of the user in response to monitoring that the action of the user matches a preset action

[ver más...](#)

## Systems and methods for sanitizing home by utilizing artificial intelligence

Publicada en Patentscope\_Domótica, 23/07/2021.

Solicitante: MESBRO TECHNOLOGIES PRIVATE LIMITED

The invention gives a family unit clever cleaning system and method and identifies with the field of shrewd home. The system is described in that the system includes an activity robot, a control system and a sensor gathering; the activity robot is in signal association with the sensor gathering and the control system; the control system is in signal association with the sensor gathering and a cleaning robot. The system is high in intelligentization degree, is adapted and is acceptable basically.

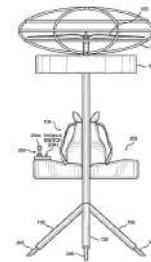
[ver más...](#)

## High-Rise Building Escape Drone

Publicada en Patentscope\_Domótica, 22/07/2021.

Solicitante: Jaffer Shurie

A high rise building escape drone is shown and described. The high rise building escape drone includes of a frame. The frame has a spine secured to an upper housing. The upper housing secures a motor and a CPU operably connected to the motor. The motor is rotatably coupled to at least one propeller.



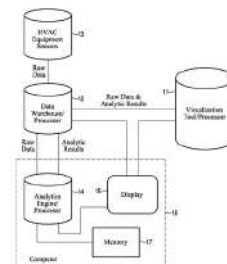
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## Interactive navigation environment for building performance visualization

Publicada en Patentscope\_Domótica, 22/07/2021.

Solicitante: Honeywell International Inc.

A tool for providing a visualization of a system may reveal an interactive navigation environment for building performance observation and assessment. The tool may be associated with a processor. The environment may incorporate a treemap, a graph pane, a treemap filter, a graph pane selector, a selected units box and a date/time control mechanism.



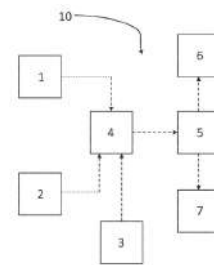
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## Method and system for controlling air quality in an indoor environment of a building

Publicada en Patentscope\_Domótica, 22/07/2021.

Solicitante: FBP S.r.l. [IT]

A method of controlling air quality in an indoor environment of a building is described. The method utilizes a system that comprises a carbon dioxide sensor configured to detect an instantaneous value of carbon dioxide concentration in the air of the indoor environment of the building, a control unit in signal communication with the carbon dioxide sensor, a communication unit for establishing signal communication between the carbon dioxide sensor and the control unit, and a storage unit in signal communication with the control unit.



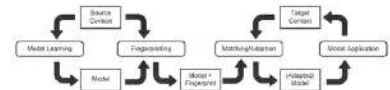
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## Method for providing an evaluation and control model for controlling target building automation devices of a target building automation system

Publicada en Patentscope\_Domótica, 22/07/2021.

Solicitante: ABB Schweiz AG

A method for providing an evaluation and control model for controlling target building automation devices of a target building automation system includes: providing a plurality of pre-trained source evaluation and control models for controlling source building automation devices of a source building automation system; generating for each pre-trained source evaluation and control model a semantic based description of a context in which the model was trained



[ver más...](#)



## PUBLICACIONES CIENTÍFICAS

### Real-Time Residential Demand Response

Publicada en Tecnologías Inteligentes, 30/08/2021.

This paper presents a real-time demand response (DR) strategy for optimal scheduling of home appliances. The uncertainty of the resident's behavior, real-time electricity price, and outdoor temperature is considered. An efficient DR scheduling algorithm based on deep reinforcement learning (DRL) is proposed. Unlike traditional model-based approaches, the proposed approach is model-free and does not need to know the distribution of the uncertainty. Besides, unlike conventional RL-based methods, t[...]

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### ASaP - integration platform for smart services in intelligent environments

Publicada en Tecnologías Inteligentes, 30/08/2021.

Die Entwicklung von mit vernetzten Sensoren und Aktuatoren ausgestatteten Wohnungen, sogenannten Smart Homes, ist ein wichtiger Zukunftstrend in Deutschland. Laut aktuellen Studien wird die Zahl der Smart Homes in Deutschland bis spätestens 2020 die Millionenmarke erreicht haben. Das übergeordnete Forschungsgebiet von Smart Homes sind Intelligente Umgebungen, welche im Allgemeinen alle räumlichen Umgebungen umfassen, die dem Benutzer eine Form von intelligenter Assistenz und Unterstützung bereit[...]

[ver más...](#)

## **Modeling and Simulation of Reconfigurable Intelligent Surfaces for Hybrid Aerial and Ground-based Vehicular Communications**

Publicada en <https://arxiv.org>, 29/08/2021.

The requirements of vehicular communications grow with increasing level of automated driving and future applications of intelligent transportation systems (ITS). Beside the ever-increasing need for high capacity radio links, reliability and latency constraints challenge the mobile network supply. While for example the millimeter-wave spectrum and THz-bands offer a vast amount of radio resources, their applicability is limited due to delicate radio channel conditions and signal propagation characteristics. Reconfigurable intelligent surfaces (RISs) as part of smart radio environments (SREs) of future ITS infrastructure promise improved radio link qualities by means of purposeful cultivation of passive reflections

[ver más...](#)

## **Development and Evaluation of Smart Home IoT Systems applied to HVAC Monitoring and Control**

Publicada en *Tecnologías Inteligentes*, 28/08/2021.

This work describes the development and evaluation of two smart home-based Internet of Things (IoT) systems applied to HVAC (Heating, Ventilation and Air Conditioning) monitoring and control, including parameters such as temperature, humidity, air quality, smoke detection, and human presence. These systems are based on a flexible hybrid wireless network architecture combining Bluetooth Low Energy (BLE) and IEEE 802.11/Wi-Fi, in order to adapt to the requirements of different types of sensor and [...]

[ver más...](#)

## **Análise Comparativa de Protocolos em Smart Home: Considerações em Conectividade**

Publicada en Tecnologías Inteligentes, 27/08/2021.

TCC(graduação) - Universidade Federal de Santa Catarina. Centro Tecnológico. Sistemas de Informação. ; Smart Home é a casa que conecta todos os tipos de dispositivos eletrônicos entre si através da internet, permitindo que eles sejam remotamente controlados, monitorados ou acessados. Smart Home já faz parte de 0,77% das famílias em todo o mundo em 2016, espera-se crescer para 2,97% até 2020, aproximadamente 44,1 milhões de famílias, trazendo a convergência de uma série de áreas como: entretenime[...]

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## **Smart-Building Applications:Deep Learning-Based, Real-Time Load Monitoring**

Publicada en Tecnologías Inteligentes, 25/08/2021.

Google's Director of Research, Peter Norvig said that "We don't have better algorithms than anyone else, we just have more data". This inspiring statement shows that having more data is directly related to better decision making and having the foresight about the future. With the development of the Internet of Things (IoT) technology, it is now much easier to gather data. Technological tools such as social media websites, smartphones, and security cameras can be considered as "data generators". [...]

[ver más...](#)

## **Automated Environmental Monitoring Intelligent System Based on Compact Autonomous Robots for The Sevastopol Bay**

Publicada en <https://arxiv.org>, 25/08/2021.

This paper proposes an intelligent system concept for automatic monitoring of aquatic environment main parameters in order to detect their anomalies and assess quantitative and qualitative indicators, including the determination of the field under study spatial and temporal characteristics. The system is built on the basis of a small autonomous surface robots network. A conceptual model of a monitoring system for the implementation of environmental parameters automated integrated monitoring throughout the entire observation field is proposed.

[ver más...](#)

## **Long-Term, in-the-Wild Study of Feedback about Speech Intelligibility for K-12 Students Attending Class via a Telepresence Robot**

Publicada en <https://arxiv.org>, 24/08/2021.

Telepresence robots offer presence, embodiment, and mobility to remote users, making them promising options for homebound K-12 students. It is difficult, however, for robot operators to know how well they are being heard in remote and noisy classroom environments. One solution is to estimate the operator's speech intelligibility to their listeners in order to provide feedback about it to the operator.

[ver más...](#)

## Development and Evaluation of a Security Agent for Internet of Things

Publicada en Tecnologías Inteligentes, 21/08/2021.

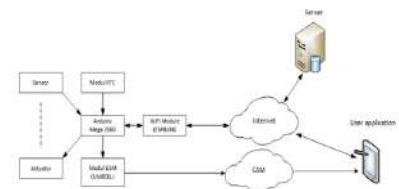
The proposed security agent, Internet of Things Active Management Unit (IoTAMU), provides confidentiality of IoT networks via the following capabilities: (1) authentication, (2) firewall, (3) encryption, and (4) spoofing. To test the spoofer's effect, an Identical Device Model Classifier (IDMC) is developed, which measures the similarities of the observed network signatures of each pair of devices, and recognize identical model devices. The IDMC performs well in baseline network settings without[...]

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## Smart Home System Berbasis IoT dan SMS

Publicada en Tecnologías Inteligentes, 18/08/2021.

Pada umumnya, pemilik rumah merasa cemas ketika meninggalkan rumah dalam jangka waktu yang lama. Kemajuan teknologi pada saat ini memungkinkan pengembangan perangkat IoT untuk melakukan pengawasan dan pengendalian berbagai peralatan elektronik kapan saja dan mana saja. Pada makalah ini, kami telah merancang dan merealisasikan smart home system berbasis IoT dan SMS untuk mengendalikan dan mengawasi peralatan elektronik rumah serta mengirimkan pemberitahuan kejadian penting kepada pemilik rumah me[...]



[ver más...](#)

## Generating Cyber Threat Intelligence to Discover Potential Security Threats Using Classification and Topic Modeling

Publicada en <https://arxiv.org>, 16/08/2021.

Due to the variety of cyber-attacks or threats, the cybersecurity community enhances the traditional security control mechanisms to an advanced level so that automated tools can encounter potential security threats. Very recently, Cyber Threat Intelligence (CTI) has been presented as one of the proactive and robust mechanisms because of its automated cybersecurity threat prediction.

[ver más...](#)

## Blockchain technology applications for Industry 4.0: A literature-based review

Publicada en <https://www.sciencedirect.com>, 12/08/2021.

Industry 4.0 involves innovations with upcoming digital technologies, and blockchain is one of them. Blockchain can be incorporated to improve security, privacy, and data transparency both for small and large enterprises. Industry 4.0 is a synthesis of the new production methods that allow manufacturers to achieve their target more rapidly. Research has been conducted on various Industry 4.0 technologies like Artificial Intelligence (AI), Internet of Things (IoT), Big data, and Blockchain, and how they could create significant interruptions in recent years.



[ver más...](#)

## Quantum Artificial Intelligence for the Science of Climate Change

Publicada en <https://arxiv.org>, 28/07/2021.

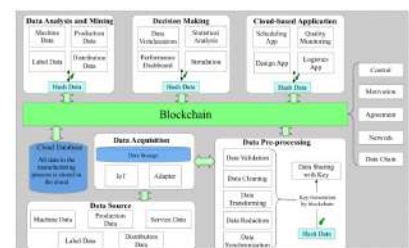
Climate change has become one of the biggest global problems increasingly compromising the Earth's habitability. Recent developments such as the extraordinary heat waves in California & Canada, and the devastating floods in Germany point to the role of climate change in the ever-increasing frequency of extreme weather. Numerical modelling of the weather and climate have seen tremendous improvements in the last five decades, yet stringent limitations remain to be overcome. Spatially and temporally localized forecasting is the need of the hour for effective adaptation measures towards minimizing the loss of life and property.

[ver más...](#)

## SoK: Applying Blockchain Technology in Industrial Internet of Things

Publicada en <https://eprint.iacr.org>, 07/07/2021.

The proliferation of the Internet of Things (IoT) technology has made ubiquitous computing a reality by broadening Internet connectivity across diverse application domains, thus bridging billions of devices and human beings as well for information collection, data processing, and decision-making. In recent years, IoT technology and its applications in various industrial sectors have grown exponentially. Most existing industrial IoT (IIoT) implementations, however, are still relying on a centralized architecture, which is vulnerable to the single point of failure attack and requires a massive amount of computation at the central entity.



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