



VIRTUAL ASSISTANT BASED ON ADVANCED GEOLOCATION FOR GUIDED MUSEUM VISITS

DESCRIPTION OF THE TECHNOLOGY

The AVIMUS Advanced Geolocation-based Virtual Assistant for Guided Museum Tours is a platform for the management of museums that includes an ecosystem of applications with a high degree of interoperability at different user levels.

On the one hand, AVIMUS provides museums with a dashboard that allows those in charge to manage the exhibitions held in their facilities, define points of interest, include additional multimedia information in a number of languages, provide the basic design elements (corporate image) that allow applications to be generated for mobile devices and offer advanced statistics on how visitors using the mobile application interact with the elements that make up the exhibition.

On the other hand, AVIMUS also provides the architecture and structure of the mobile application that is fed with the content introduced by the museum managers; thus, the museum decides at all times what type of information should be displayed, whether it is simply a digital copy of the exhibition element (e.g. a high-resolution image) or additional complementary information that is not available in the exhibition (e.g. videos related to the element on display). This application offers users a kind of interactive guide to the museum and/or its exhibitions which is also capable of suggesting a personalised route based on the context and user profile.

AVIMUS has been developed with the most

modern technologies available, including its own positioning system based on signals emitted by Wi-Fi devices (antennas, repeaters and routers), BLE beacons and GPS signals. The aim of this positioning system is to locate the user of the application with respect to the elements shown in the museum, which is essential for the user to be able to follow the guided tour.

The platform automatically selects the most suitable positioning technology from among all those available, depending on the environment. In addition, AVIMUS has a series of capabilities that inform managers of any possible incidents in the indoor positioning system, suggest where to install beacons in those areas where the location accuracy needs to be enhanced and recommend changes in their configuration.

Finally, the location algorithm runs on the device itself, so that the information needed to estimate the position does not require an Internet connection, nor is it recorded on any server external to the device. Although the time spent visiting and stopping at each element of the exhibition may be recorded for further analysis by museum managers (e.g. detection of those elements of the exhibition that are visited less frequently than expected), no data is collected that could compromise the user's security and privacy. In other words, no information that can be used to estimate the position of users is sent outside the environment in which the application is being used, i.e. the museum itself.

SECTORS FOR COMMERCIAL APPLICATION

- Museums
- Outdoor cultural spaces
- Universities
- Amusement parks
- Cultural promotion of cities, regions, etc.
- Commercial spaces
- Other areas



VIRTUAL ASSISTANT BASED ON ADVANCED GEOLOCATION FOR GUIDED MUSEUM VISITS

TECHNICAL ADVANTAGES AND COMMERCIAL BENEFITS

AVIMUS offers a comprehensive solution for museums, ranging from the dynamic management of exhibitions to indoor positioning. It is a generic, modular and adaptable solution rather than an ad-hoc solution for each museum.

- It does not depend on a single positioning technology and can operate in indoor, outdoor and mixed environments.
- Autonomous platform, with a modular design, that can be configured by the client.
- Completely self-managed platform. There is no need to rely on external companies to calibrate, set up and deploy transmitters for indoor location (Wi-Fi routers or BLE beacons). All content can be introduced and managed by the museum's own staff.
- The mobile application's indoor positioning module requires no Internet connection, so no sensitive information (such as the footprint of available Wi-Fi networks) is sent to any external server. Unlike other applications, we do not display the user's actual location, we simply collect statistics about the museum elements that are visited.

STAGE OF DEVELOPMENT OF THE TECHNOLOGY

Prototypes available.

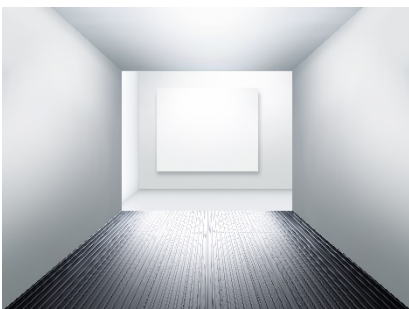
INDUSTRIAL AND INTELLECTUAL PROPERTY RIGHTS

Business secret.

COLLABORATION SOUGHT

Licensing agreement.

RELATED IMAGES



CONTACT DETAILS

César Viúdez
Oficina de Cooperación en Investigación y Desarrollo Tecnológico (OCIT)
Universitat Jaume I de Castelló
Tel: +34 964387669
e-mail: patents@uji.es
Web: <http://patents.uji.es>