



Virtual World Enables Real Action

TSK integrates MOBOTIX cameras into its virtual reality solution

TSK, founded in 1986 and based in Spain, is a global company for sustainable development through innovative technologies. TSK offers solutions for various industries such as electrical infrastructures, industrial plants, conventional and renewable power generation plants, gas-to-power, water treatment plants, or storage and handling facilities for raw materials. The Gijón-based company employs more than 1,000 people and carries out projects in more than 50 countries with a turnover of approximately one billion euros.

The Challenge: “Virtual Meets Visual”

As virtualization experts, it was important for TSK to find a partner who could reliably deliver high-resolution video images, flexibility, and suitable interfaces to link them with virtual applications. With the help of VR glasses, remote users should get the impression that they are actually on site and moving in the natural environment.

The Solution: Reliability, Image Quality, and Interfaces

SIXPERIENCE from TSK is a virtual reality-based system for industrial operations and remote maintenance. The MOBOTIX cameras were used as a connecting element for interaction. While the MOBOTIX video systems show the live image, the virtual TSK technology, which is connected to the Internet, ensures that the viewer has the impression that he is moving through the scenery himself. He can even touch things (such as switches) and interact with them, which creates countless possibilities within virtual reality. For example, the SIXPERIENCE user can also control a robot, from which the MOBOTIX cameras provide a view of the real world and the robot’s surroundings. Thus, The user can carry out maintenance and operations safely from a distance while having the impression of being on-site, thanks to the virtual link.

The virtualization of buildings generates another area of application: the more efficient and transparent query of all security cameras on site, combined with further information from the building’s sensor and control systems. Everything can be controlled centrally and remotely from a single source and conveniently overviewed.

Key data

Branch

Industry & Production

Customer

TSK

Period

2007-2022

Solutions

p25
M16 Thermal
S16 / S74



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One of the most interesting areas where we are applying this video technology is vision in robotic missions.

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Saúl Castillo Valdés, Immersive Technologies Engineer, Digital Innovation Department at TSK

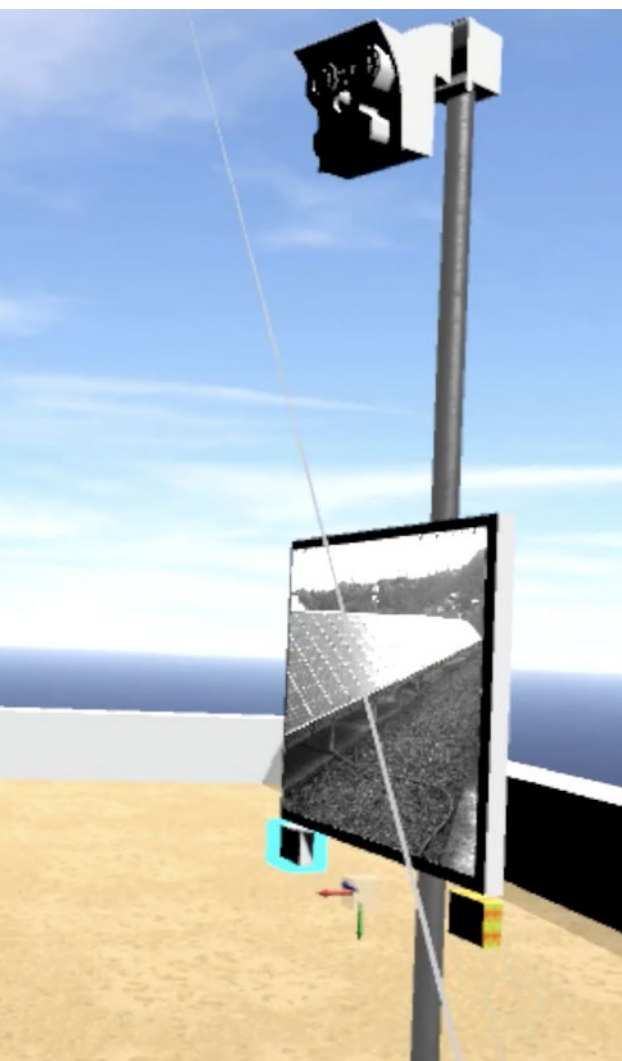
“An operator who wants to follow the path of a suspect doesn’t have to search for cameras that the person passes by or remember the name and location of each camera. Through integration with the virtual system, the cameras are contextualized with the environment,” adds Jairo Ramírez Ávila, artificial vision engineer at TSK. In the case of the solution applied to the video surveillance of a building, it provides the user with more information than the usual channel, mainly thanks to the contextualization of each camera in the space they are viewing.

Conclusion: Successful Integration is Being Expanded

Thanks to the excellent configuration and data access options of the MOBOTIX cameras, the integration was carried out conveniently and quickly within three months. The only critical point was the latency, which could be reduced as much as possible to ensure a smooth process.

Juan Luis Carús Candás, Innovation Manager at TSK Electrónica y Electricidad, summarizes: “We chose MOBOTIX because the camera is easy to customize and configure. In addition, the software and the HTTP API offer us many possibilities. Another important factor is the durability and resistance of the MOBOTIX cameras, which guarantee the best results even in the harshest environments.”

In the coming months, TSK will continue to work on integrating the cameras into virtual reality environments and deepen the development of embedded algorithms. This concerns the detection of anomalous events through the use of optical sensors in the visible spectrum as well as thermal imaging cameras. In addition, latency will be reduced to below 100 ms through the use of 5G technologies.



MD11

Building	TSK3
Place	PLANTA 0
Brand	MOBOTIX
Model	MINIDOMO MX-P25-BOD 01 + LENTE MX-O-SMA-S- 6D041

