

Press Release MWC 2022

Spot Enterprise visits Telefónica's stand at MWC to showcase its 5G and Edge Computing capabilities

- The session '5G Robotics for monitoring industrial environments', offered at the Agora, showed Telefónica's key technologies to enable the remote operation of one of the most advanced robotic elements in the world: Spot Enterprise.
- The constant evolution of 5G technology, coupled with advances in robotics, opens new doors to the supervision, surveillance and remote operation of industrial environments, offering a complement to people in cases where their physical integrity is at risk.
- The ultra-low latency and high reliability 5G connection, coupled with Telefónica's Edge Computing capability, enables remote tasks and control using the most advanced service robotics.

Barcelona, 1st March 2022.- Telefónica, in collaboration with Alisys and TIS, has presented at the Agora of its stand at the Mobile World Congress (MWC) a 5G robotics success story for monitoring industrial environments. The constant evolution of 5G technology, coupled with advances in robotics, opens new doors to the supervision, surveillance and remote operation of industrial environments, also offering a complement to people in cases where their physical integrity is at risk. On this occasion, Telefónica's key technologies, such as 5G, Edge Computing and Network Slicing, are enabling the remote teleoperation of one of the most advanced robotic elements in the world: Spot Enterprise.

The Agora session, '5G Robotics for Industrial Environments', highlighted the contributions of Telefónica's 5G and Edge Computing technology with a live demonstration recreating a use case in an electrical substation. The ultra-low latency, high reliability 5G connection enables remote tasks to be performed using state-of-the-art service robotics in scenarios with potential physical risk to human personnel.

Thanks to the application of these technologies, the Spot Enterprise robot is controlled remotely and in real time from the operations centre located at Telefónica's offices in Barcelona (Torre Diagonal) using the Alisys robot fleet teleoperation platform, being able to climb steps and overcome unevenness. It also has an articulated arm that allows it to perform basic manoeuvres with high precision, such as opening doors, lowering levers or deactivating alarms.

The benefits of implementing this type of robotics include increased safety and fewer accidents in the workplace. These solutions can be used as a complement when

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moving to assess a possible unexpected risk situation in the field, making possible to take the appropriate decisions (detection of false alarms, requesting assistance from Security Forces and Corps, etc.), without the need to take risks by sending physical personnel to the site.

In addition, the ultra-wide bandwidth of 5G allows to send numerous video streams simultaneously, automate routine procedures by carrying out autonomous surveillance rounds, supported by a 360° camera (night vision cameras, thermal cameras, etc.) and the use of sensors that send critical information to the control centre. During the performance of these routine procedures, relevant information is obtained, which makes possible to enrich operations and even create synergies between internal processes.

With the reinforcement of Edge Computing, several sites can be remotely managed, allowing savings in the management and maintenance of their infrastructures. It is a transversal and versatile technology that is perfectly adaptable to the needs and characteristics of the sites and companies where this solution would be applied.

As Mercedes Fernández, Innovation Manager at Telefónica España, points out, "Telefónica's 5G and Edge Computing technologies offer the necessary bandwidth and response time so that, combined with cutting-edge robotics, new scenarios can be created in the remote operation and surveillance of industrial environments. This represents a paradigm shift that allows us to optimise our customers' processes, as well as being a determining factor in guaranteeing the physical safety of people in high-risk environments".

Rodolfo de Benito Arango, Director of Technology Evolution at Alisys, explains: "Having a 5G technology such as the one articulated by Telefónica on this occasion allows us to take our cloud platform for teleoperation of robots, drones and IoT devices a step further. We are witnessing a key moment in the development of service robotics thanks to the convergence of technologies such as 5G and Cloud Computing which, together with the right time in the market, allows us to predict an era in which robotics will really take off. For the first time we are connecting the Spot Enterprise robot to such an infrastructure through the platform and it can be considered as a key enabler for the real deployment of service robots in different industries".

Lorena Senador-Gómez Lázaro, commercial director of Telefónica Ingeniería de Seguridad, explains: "At Telefónica Ingeniería de Seguridad we are committed to robotics as the future of security, whether with ground robots such as Spot (UGV) or drones (UAV). We can carry out supervision and perimeter surveillance of facilities, infrastructure maintenance or inspection of confined/hazardous spaces, without exposing people to any risk. Being able to carry out remote, centralised and real-time verification of events or perimeter surveillance allows us to improve the efficiency of security operations, giving our clients a differential value in a multitude of environments".

For more information: [Telefónica at MWC 2022](#)

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