

USE CASE

ELISTAIR DRONE TETHER FOR PUBLIC SAFETY

2019 Champions League Final - Permanent Live Aerial Video Support



Context

For the 64th season of Europe's premier club football tournament, Madrid welcomed 200 000 fans in its streets and more than 67 000 in the Wanda Metropolitano Stadium.

In response to the heightened terrorist threat level in Spain, authorities conducted the largest security operation for any sporting event in the Spanish capital.

The response included 4700 police officers, civil protection teams, firefighters and paramedics on standby and for the first time, a drone piloted by UMILES Global Solutions teams, and tethered to Elistair Safe-T station.

Police Director Francisco Pardo said this was probably the largest deployment ever made to ensure public safety, and that aerial control of the surroundings and coordination in real time via a drone was a unique capability.

National Police needed eyes in the sky to control the Stadium surroundings during the 8 hours deployment. The tethering system was the key to achieve this mission.

José Calcedo, UMILES Group Commercial Director

1 Safe-T Tether

To overcome the need of changing batteries 20 times and landing the drone every 30mn.



200k Attendees

Gathered in Madrid from all over the world to attend one of the most prestigious tournament in the world.



8 hours non-stop

The tethered drone was airborne for 8 consecutive hours before, during, and after the game.



Mobile Solution

Easy to transport, the whole system is useful in case of required sudden mobility and implies little logistical footprint.



Aerial Viewpoint

The drone operated at a height of 50 meters, hovering at a safe distance from the stadium and spectators.



UGCS, Live Video

A Universal GCS was used to monitor flight parameters and a video link was provided to the National Police for live video feed.



ISSUES & NEED

Uninterrupted Live Aerial Video

With 200,000 supporters expected, The Champions League Final was the biggest event in Spain this year. To ensure the public security, the National Police needed a permanent day-night video feed, before, during, and after the game, with no risk of crash in the crowd, or fly away near the airport and public buildings.

Population and airport proximity: With thousands of people in the vicinity, and Madrid airport 2 kms away, only a tethered drone solution was authorized as being reliable and with the lowest possible logistical footprint.

Long duration of the event: Uninterrupted flight is key to ensure optimal situational awareness capabilities. The tethered drone kept its position for 8 hours with no need to land to change batteries.

Wide surface or the area: With its unique aerial position, the tethered drone can cover any risk or traffic issue, easily, allowing the security forces to respond quickly and with live information.



Due to airspace restrictions, a secured tethered system was essential for buzzing vicinities' security monitoring.



National Police was able to monitor main highways and streets leading to the stadium as well as crowd and car movements.

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SOLUTION

Tethered to Elistair's Safe-T station, the drone maintained its altitude for 8 hours, providing authorities with immediate images of the crowd and vehicles movements, facilitating the decision-making and coordination of security teams.

Versatile: The manufacturing of a special module for UMILE's U06 drone allowed it to be compatible with the Safe-T tether station.

Mobile: The plug-and fly and automated micro-tether technologies allowed flexibility during the mission. The teams were able to set up the equipment and start the flight in a matter of minutes.

Efficient: As long as the drone is tethered to the Safe-T, there is no need to land every 30mn and change batteries, The station allows for a persistent surveillance and secured data transfer possible with the patented micro-tether.

FEEDBACKS

UMILES obtained the authorization to fly in controlled airspace from the AESA and UNAIRE, the tether system being an efficient mitigation and more importantly, a safer solution preventing all risks of fly away.

Set up: UMILES was allocated a 50m² safe space for all maneuvers. Two pilots oversaw the flight: one for the drone, and one for the camera.

Video feed: As the camera was controlled by the pilot, the National Police requesting certain vantage points, AESA consultants and journalists even received video feed on their mobile phone and tablets.

Results: With no technical issues and a permanent eye on the vicinity, UMILES and the Spanish National Police judged the tether system to be an ideal solution to better manage large events' security.