AzurİA achieves breakthrough in B5G pilot within IMAGINE-B5G Open Call 3

AzurİA successfully completed its participation in IMAGINE-B5G Open Call 3, testing **5G-enhanced CamİA, the real-time detection Case** at the French facility (EURECOM) over a 6-month period. The trials demonstrated real-time smoke detection, ultra-low-latency alert transmission and HD video streaming via a standalone 5G network, showcasing the potential of 5G enabled AI for PPDR operations.

IMAGINE-B5G is a Horizon Europe / SNS JU initiative that provides an advanced end-to-end 5G/B5G platform enabling large-scale trials and pilots across Europe. The project federates experimental facilities in Norway, Spain, Portugal, and France, offering SMEs, start-ups, academia, and industry access to test innovative vertical applications and platform extensions. **5G-FIRE** (5G Firefighters' Instant Remote Eye) was one of the 15 projects selected in Open Call 3.

The project aimed to address the critical need for faster, more reliable wildfire detection, especially in remote or difficult-to-reach areas, where current 4G/Wi-Fi-based systems lack the bandwidth and latency performance to support real-time remote camera control and HD video validation.

AzurİA deployed its CamİA detection case integrating 5G, a PTZ turret and UAV platform, using the EURECOM facility to test low-latency alert delivery, uplink video throughput, mobile connectivity during drone flight, and edge-vs-onboard AI inference pipelines. The methodology included validation of detection through controlled smoke. The project achieved the following results :

- Ultra-low latency (≈21 ms) and high throughput (up to 160 Mbps DL / 37 Mbps UL) enabling smooth HD video streaming in motion.
- Reliable real-time smoke detection from a drone at 50 m altitude, with alert reception on AzurİA's user interface.
- Successful validation of two AI pipelines (onboard inference and edge inference).
- Environmental benefits demonstrated through Life-Cycle Assessment, with only 28kg CO_2 over five years.

The project contributed to advancing 5G adoption in PPDR, demonstrating how network slicing, standalone 5G, and edge computing support mission-critical operations. These results demonstrate the readiness of 5G-enhanced CamİA for commercial deployments with firefighting units, UAV operators, and public safety authorities, strengthening Europe's position in the B5G ecosystem.

AzurİA plans to scale up the solution in partnership with PPDR stakeholders, industrialize the 5G-enabled CamİA, and explore additional deployments across Europe.