

Obstacle-aware On-demand 6G Networks using Vision-aided Autonomous Platforms

Wireless Networks - WiN



5G networks have introduced a novel set of orthogonal performance requirements, enabling enhanced mobile broadband, ultra-reliable, and low-latency communications for a massive number of connected devices on a shared network infrastructure. Future 6G networks aim at going one step further, enabling ubiquitous connectivity through the dynamic reconfiguration and positioning of wireless communications cells on-demand, while leveraging the power of Edge intelligence.

In addition to meeting the network performance demanded by emerging communications services and applications, the 6G paradigm aims at reducing the costs associated with fixed communications infrastructures. To accomplish this, autonomous platforms with sensing and vision capabilities, such as drones and ground robots, will play a crucial role. Equipped with communications nodes on-board, these platforms will provide obstacle-aware wireless connectivity anywhere and anytime.

With 6G on the horizon, the future of mobile networks promises to offer unparalleled flexibility, enhanced performance, and cost savings for both businesses and customers alike.