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(57) Abstract :
7. ABSTRACT The smart drone rooftop and ground airport system revolutionize drone operations with a network of strategically positioned docking stations and advanced ground infrastructure. The ground control station receives unmanned vehicle mission information and provides a plurality of instructions to the unmanned vehicle to execute a mission including a take-off procedure and a landing procedure. A plurality of micro-services process requests from a controller and at least one charging station provides a docking point for the plurality of unmanned vehicles. The charging station provides a power source to the plurality of unmanned vehicles and receives mission information from the ground control station, wherein the unmanned vehicles are operable to deliver a good to a remote location. It enables efficient and secure drone operations through features like automated charging, real-time monitoring, and collision avoidance. The system integrates centralized control software for optimized coordination and resource allocation. Robust security protocols ensure authentication, encryption, and data integrity. Weather monitoring technology enables proactive decision-making for safe operations. The user-friendly interface provides comprehensive control and incident management. Overall, this system offers efficient, secure, and seamless integration of drones, transforming the way drone operations are conducted. The figure associated with abstract is Fig.1.

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