

Unmanned Aerial Vehicle

Representative Patent 01

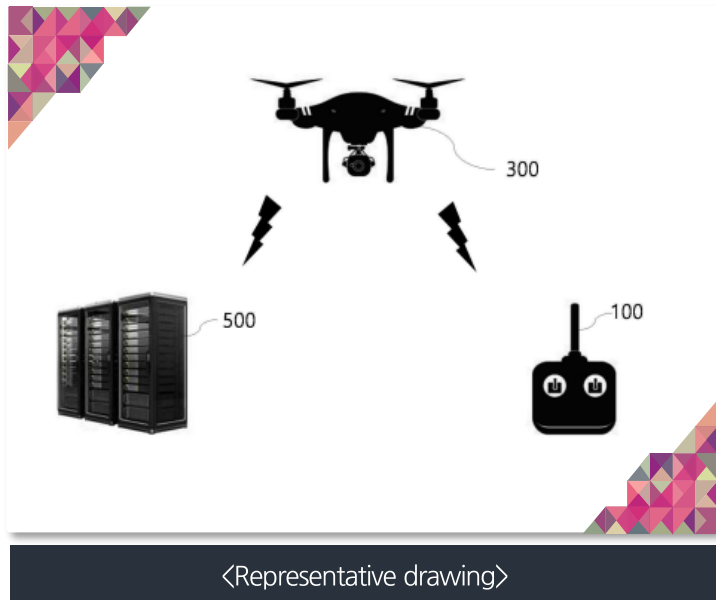
- ❖ Title of Invention : **A restricted zone intrusion prevention system for unmanned aerial vehicle**
- ❖ Application Number. : KR2018-0132085

Application of Technology and Field of Use

◆ Prevention of intrusion by unmanned aerial vehicle

◆ There is a need for a system that can prevent an unmanned aerial vehicle from intruding in a restricted zone.

- Although there is a restricted zone where the UAV cannot enter, it is difficult to distinguish the restricted zone in the sky.
- Even in the case that the UAV enters the restricted zone due to inexperienced operation of the UAV, the management may detonate the UAV.



Features of Technology

- At least one UAV configured to fly over a specific area and transmits current state information including current location information to the outside
- A control server configured to receive the current status information from the UAV to monitor the UAV and update restricted zone information in real time
- An emergency control unit installed on the UAV or control server and configured to determine whether to control the UAV according to the restricted zone information and the current state information of the UAV
- A base station configured to control the UAV by transmitting a flight path that connects the origin and destination to the UAV in a general situation where the emergency control unit does not control the UAV

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Technical Effects

◆ Possible to effectively prevent intrusion of unmanned aerial vehicle in restricted zone

- The restricted zone information that is updated in real time can be obtained through the configuration of the control server.
- By the emergency control unit configured to determine whether to control the UAV based on the restricted zone information, it is possible to prevent intrusion of the UAV in a certain area.

◆ Possible to prevent intrusion into restricted zone in advance

- If the UAV is located within a certain range of the restricted zone, it is possible to prevent the UAV's intrusion in advance by transmitting a modified flight path through the configuration of the base station.

◆ Possible to identify leaked security information and base station of UVA

- In the case an UAV intrudes in the restricted zone, data stored in the UAV is transmitted to a security data unit through the emergency control unit, so that leaked security information and a base station of the UAV can be identified.



Social, Environmental, Economical Effects

◆ Possible to prevent leakage of confidential information

- It is possible to prevent an UAV from intruding into the restricted zone and leaking confidential information inside by taking pictures thereof.

◆ Possible to effectively transmit restricted zone information

- In the case that the emergency control unit is installed in the UAV, effective transmission of the restricted zone information is possible by allowing the control server to transmit to the UAV only the restricted zone information within a certain distance centering on the current location information of the UAV.