

Investigation of Optical Requirements for Power System Assets Monitoring with Unmanned Aerial Vehicles

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Abstract : The significance of UAS in scientific applications has been amply demonstrated in recent years. The combinations of portability and quasi-static positioning by means of flying in close loop path make them versatile and efficient in the inspection of power systems infrastructure. In this paper, we critically assess several platforms and sensor capabilities to identify their pros and cons in relation to the power systems assets to be monitored. In this respect, it is paramount the flights to be conducted by using UAS which bear certain suitable features, such as responsive and easy control, video capturing in real time, autonomous routing of pre-planned flight programming with differentiating payloads. The outcome of this research is a set of optimal requirements for power system assets monitoring with UAS.

Keywords : platforms, power system, sensors, UAVs

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