

Utilization of UAV (Unmanned Aerial Vehicle) for a Smart City Modeling of Tsuru City

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Abstract

Tsuru City in Yamanashi Prefecture, Japan is planning to be a smart city. In the smart city modeling, there have been several trials for a new energy system, traffic system and forest managing system and environment protection system.

In the forest managing system, forest resources are investigated by a fixed wing UAV including a specific communication capability with phased array antenna. It shows an effective data acquisition capability for identifying each tree in the forest.

In the environment protection system, a multicopter UAV is employed for investigating a density of contaminant such as PM2.5 in the air and for tracking animals in the forest. The animal tracking provides a remarkable protection against a black bear attack.

This paper reports those new actual use cases of UAV from their technical point of view.