

# Structure Safety Inspection System Using Multiple Sensors and PTZ Camera

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*Abstract*— In recent years, those aging buildings such as the high-rise buildings and the chemical plant structures generate many social and economic issues due to crack, fire and collapse. Furthermore, these social and economic issues will lead to national loss. The aforementioned problems cannot be resolved through human eye or human power. This thesis proposes the structure safety inspection system using a small aircraft equipped with multiple sensors in order to address these problems. This small aircraft saves and manages the data obtained through the structure inspection and also provides efficient information. The purposes of this thesis are to synchronize, save and manage multiple sensor data, video and thermos graphical data that are transmitted from a small aircraft and also to implement the safety inspection integrated management system that provides inspection results and history information..

*Keywords*— Multi-Sensor, Small Flying Vehicles, Sensor Fusion, Monitoring System, PTZ.



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