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# Application of Unmanned Aerial Vehicle in Urban Rail Transit Intelligent Inspection

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**Abstract :** Current method of manual-style inspection can not fully meet the requirement of the urban rail transit security in China. In this paper, an intelligent inspection method using unmanned aerial vehicle (UAV) is utilized. A series of orthophoto of rail transit monitored area was collected by UAV, image correction and registration were operated among multi-phase images, then the change detection was used to detect the changes, judging the engineering activities and human activities that may become potential threats to the security of urban rail. Not only qualitative judgment, but also quantitative judgment of changes in the security control area can be provided by this method, which improves the objectives and efficiency of the patrol results. The No.6 line of Chongqing Municipality was taken as an example to verify the validation of this method.

**Keywords :** rail transit, control of protected areas, intelligent inspection, UAV, change detection
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