

The Mobile Laser Scanning in Detail Visual Inspection of Roads

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SUMMARY

The Detailed inspection (DET) in general represents an intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. The Detailed Visual Inspection (DVI) detects measured areas or lengths for a wider range of more closely defined defects on the road. The maximum length that can be recorded depends on the cross-section position method that is being used. The linear defect is considered for length larger than 1 m, while the area defect is considered for the area larger than 0.1 m². There are wide range of types of defection. For example, major and minor fretting, cracking, chipping loss, local settlements, transverse joint cracking, joint faulting, loss of texture, patching, etc. For successfully conduction of detail visual inspection, the highly precise and accurate spatial data are required. The most often used technology is one of the laser scanning - aero, mobile or terrestrial.

This paper gives a brief overview of detection of different types of deformations on road. The data are collected using mobile mapping system. The product, obtained point cloud is then matched and prepared for post-processing. At first, the area of defect is marked with polygons, after which the required attributes are assigned. The paper showed how useful mobile mapping system technology is, not only for road infrastructure extraction, but for different and minor detection as well.