A Practical Deformation Monitoring Procedure and Software System for Cors Coordinate Monitoring

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SUMMARY

This paper illustrates the combination of continuous GPS measurement with robust method for deformation detection to GPS station position change. A software system named Continuous Deformation Analysis System (ConDAS) has been developed at Universiti Teknologi Malaysia. It was specially designed to work with high precision GPS processing software (i.e. Bernese 5.0) for coordinate monitoring. The main components of ConDAS are: parameter extraction (from Bernese output), deformation detection (via IWST and S-transformation) and graphical visualisation. Two assessments were included in this paper. Test results show that the system performed satisfactorily, significant displacement can be detected and the stability information of all monitored stations can be obtained. This paper highlights the architecture, the design of the software system and the results.

Paper 6838   1
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FIG Congress 2014
Engaging the Challenges – Enhancing the Relevance
Kuala Lumpur, Malaysia 16-21 June 2014