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CivInSAR(TM) Quake Assessment: An integration of differential SAR interferometry into a GIS to assist in earthquake risk management

R. Capes, M. Haynes	The NPA Group
G. Lawrence	TREICoL
A. Smith	Phoenix Systems
J.P. Muller	UCL
B. Parsons, P. England, P. Clarke	Oxford University

Abstract

Differential SAR interferometry has the capability to provide inexpensive, holistic and timely maps of seismic displacements that can be used to assess actual and potential economic risk. Though the science is proven, the methods of communicating the advantages from the complexity of SAR interferometry are still immature. To make such information useful to non-specialist decision makers requires novel techniques in visualisation that can be supported by Geographic Information Systems (GIS). The CivInSAR(TM) Quake Assessment product is a GIS that relates and integrates results from differential SAR interferometry with other satellite and ground data to provide a classified risk map that may be used by the non-specialist on-site. The aim is to place such systems into earthquake prone regions to assist in the management of associated risks. The GIS demonstrated is based upon the Geneva region of Northern Greece where a M=6.6 earthquake occurred on May 13th 1995.

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