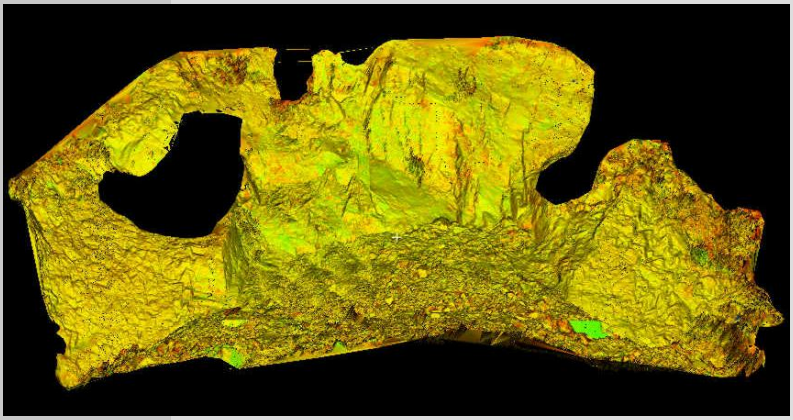
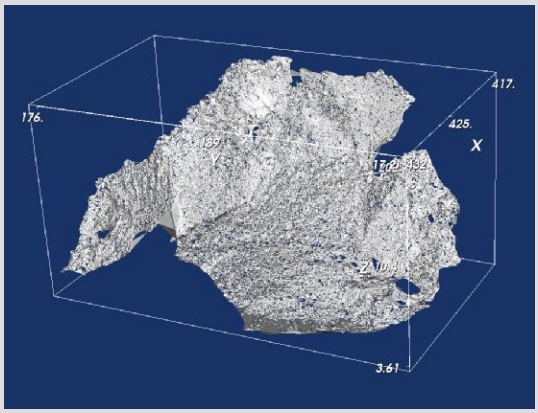
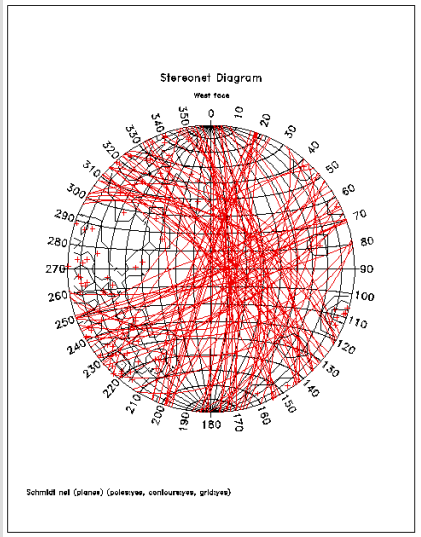
Laser scanning and defect mapping

Laser scanning is used to capture the topography and geological structure of rocky outcrops where access is limited or dangerous. Global Surveys from Auckland were contracted to scan this rockfall site in Wellington using a Leica (Cyrax 2500) scanner. A number of scenes were scanned and composited in one model. The data were delivered as a geo-referenced file for analysis with Cyclone software. Other outputs included DXF and ASCII XYZ. There were more than 1,000,000 points captured for this model.





Using 'Cyclone' the vegetation elements were removed and points defining rock fracture planes were digitised from the model. Each set of points describing these planes was coded with a unique identifier. These sets of points were then passed through a proprietary IRBA program to determine the best fit surface which produced a dip and dip direction value for each fracture. Finally, a steronet of the 'virtual-mapped' fracture planes were produced with the 'Stereo' program in the TECHBASE software suite.



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