The application of digital elevation model for the Klang Valley geological structure.

ABSTRACT

Purpose – The purpose of this paper is to utilise the interactive view capability of the geographical information system (GIS) for the geological interpretation in Klang Valley, Malaysia.

Design/methodology/approach – Topographical map scale of 1:10 000 was used to generate digital elevation model (DEM). The geological map was draped over the DEM to create a 3D perspective view. The geological interpretation was undertaken using the 3D capability of the GIS software.

Findings – From the study, five lineaments which could possibly be the newly identified faults and one lithological boundary have been delineated.

Research limitations/implications – Although these findings need to be rechecked in the field, they show the capability of the DEM application in structural geology interpretation.

Practical implications – The results obtained from this study demonstrate the capability of utilising a geological map draped over DEM for structural geological interpretation. Thus the technique may increase the interpretation accuracy.

Originality/value – The major outcome of this research is the possible use of DEM in the application of geological study.

Keyword: Geological analysis; Geomorphology; Malaysia; Topography.