



## Digital Technology for Geological Field Mapping

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The amount of time that students and professionals spend in the field has reduced over the past 25 years (Gibbs, 2012). Recent advances in technology are changing the way students and professionals are able to conduct geological field study. Applications such as Midland Valley Exploration's FieldMove Clino now allow the geologist to use their smartphone as a fast, georeferenced measuring device compared with a traditional compass-clinometer.

Although we support the view that an understanding of field mapping and model building, taught at university level, is essential to give the geologist the ability to think in three and four dimensions, new technologies that automate the ability to digitise and visualise data in the field lead to a better appreciation of the geometry, scale, and evolution of geological structures and trapping mechanisms that will be encountered during a career in industry.

The majority of future industry professionals own a smartphone or tablet device: A recent study found that four-fifths of new students own a smartphone and one-fifth own a tablet device (UCAS Media, 2013). This figure is increasing with each new intake of geoscience students. With the increased availability and affordability of smartphone and tablet devices, new techniques are being examined for digital data collection in the field. If the trend continues that geoscience students are likely to spend less time in the field than their predecessors, then the time available must be spent as effectively as possible. Digital devices allow students and professionals alike to optimise the time spent in the field, allowing more time to think about geological relationships, and highlighting areas of uncertainty that can be studied further.

This poster will examine the use of new digital smartphone and tablet devices for the collection of geological field data.