

Symposium Summary

Code and title of symposium

IEI 02-04 Data Capture and Acquisition

Convenors:

Colm Jordan, British Geological Survey, UK

Mary Carter, Geological Survey of Ireland, Ireland

Number of presentations:

Eleven oral and seven posters

Symposium summary

The 'Data Capture and Acquisition' symposium was an amalgamation of three sessions covering the following topics:

1. IEI-02 Advances in digital data capture in geological mapping
2. IEI-03 The increasing contribution and opportunities presented by remotely sensed data
3. IEI-04 Putting new life into old data – digital conversion and exploitation of paper records.

The demands for up-to-date geoscientific data, information and knowledge in these times of climate change awareness, regional natural disasters and high natural resource prices are increasing. Valuable historical data are becoming more accessible with advances in semi-automated scanning systems, and traditional occupations such as field mapping are being enhanced by rapidly changing technology. New airborne and satellite sensors are being deployed and are providing geoscientists with datasets that are changing the way we see the world. The challenge that the geological community has set itself in this period of rapidly developing technology is to utilise efficiently the existing analogue records, whilst developing and deploying new effective digital techniques to collect, manage, manipulate and disseminate results to each other and our customers.

The symposium began with presentations that demonstrated that Tablet PC and PDA digital field mapping systems have built upon recent IT developments, and Surveys are now using such systems in mapping projects across the globe. Rather than simply replicating the traditional pen and paper techniques, these new systems provide greater functionality to the field geologists whilst also ensuring that obligatory data are collected, and that international standards are met.

The move to digital techniques was also described by organisations who are continuing to develop and implement efficient ways of digitising existing paper records and maps and converting them to database and digital map format. A combination of semi-automated scanning and digitising has enabled new geological maps of large territories to be produced quickly, and at low cost. These new maps are being made available to geoscientists and the public via a variety of web portal interfaces.



We were also shown how remote sensing data such as Digital Terrain Models (DTMs), geophysics and a variety of airborne and satellite imagery are being integrated efficiently into surveys, both in the desk study and the field mapping stages. These are providing our geoscientists with a new suite of tools with which to interpret and map our environment.

In summary, the 'theme' of the session evolved to show how Surveys are successfully embracing and developing digital techniques to make better use of existing paper records, to collect new (field) information, and to produce a new generation of outputs including new 2D and 3D map formats. The digital era has enabled Surveys to grasp new opportunities for collection, manipulation and dissemination of data, information and knowledge.

The symposium was very well attended with over 120 participants in the early afternoon, and approximately 70 returning after the coffee break. Despite possible language barriers, the presentations were of a consistently high standard with lively discussions following many of the oral presentations. The posters were also very well-attended and this encouraged discussion to continue after the formal symposium had ended. Furthermore, the presenters from the British Geological Survey and the Geological Survey of Finland who described their respective digital field data capture systems during the symposium each provided live demonstrations of their systems at their respective stands at the conference centre the following day. The feedback from this format was very positive as it allowed conference attendees to inspect the systems closely and assess their true qualities.