

Standardising geochronological data

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Just as the need to standardise geochronology measurement techniques to enhance precision has been recognised, so there is also a need to standardise data formats to enhance access to information and efficiency of data transfer.

Data-rich integration is becoming the norm for geological research and the need to precisely describe and exchange those data between researchers, service providers and industry clients is becoming critical. Because geochronology provides a fundamental dataset to geological research it is imperative that geochronological researchers become aware of and involved in the development of concepts and tools that enable effective data description and transfer. At a broader level, research funding agencies world-wide are beginning to examine how the output from publicly funded science is managed in order to maximise the utility of those data in the emerging e-Research framework [1].

Although there are several resources for storing and accessing geochronological data, there is no standard format for exchanging geochronology data among users. Current systems are an inefficient mixture of comma delimited text files, Excel spreadsheets and PDFs that assume prior specialist knowledge and force the user to laboriously – and potentially erroneously – extract the required data manually. With increasing demands for data interoperability this situation is becoming intolerable.

Geoscience Australia and partners are developing a standard data exchange format for geochronological data based on XML (eXtensible Markup Language) technology that has been demonstrated in other geological data applications and is an important aspect of emerging international geoscience data format standards [2]. This presentation will discuss developments at Geoscience Australia and the opportunities for participation.

References

[1] Arzberger P., Schroeder P., Beaulieu A., Bowker G., Casey K., Laaksonen L., Moorman D., Uhlir P., and Wouters P. (2004) Promoting Access to Public Research Data for Scientific, Economic, and Social Development. *Data Science Journal* **3**, 135-152.

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[2] Cox S.J.D., and Richard S.M. (2005) A formal model for the geologic timescale and GSSP, compatible with geospatial information transfer standards; *Geosphere* **1**, 119-137.