

## **A Real-Time Process and Continuous Comparison System of Mining Transient Electromagnetic Prospecting Method for Disastrous Water**

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**Abstract** Drivage face, a position where water disaster occurred most frequently in the mine, is mainly forecasted by mining geophysical method, drilling and other methods. Compared with other geophysical methods, transient electromagnetic prospecting is much more convenient and effective. Hence, it is widely used for forward looking prospecting during the tunneling of work face and obtains the good geological effect. However, during the traditional production, data acquisition and interpretation require professionals to complete. And for the reason, it cannot realize real-time forecasting for water bearing of roof and floor. Based on windows CE platform, we develop the real-time process and continuous comparison system. The real-time process and continuous comparison system has been installed into equipment of transient electromagnetic and has realized the realtime processing and imaging of the data. In addition, it will automatically show the indication if there are some anomalous result. Besides, the current result can be compared with previous results; hence, it is very convenient for unprofessional workers. Finally, it is confirmed by the practice that the real-time process and continuous comparison system of mining transient electromagnetics can process and interpret the data in time and provide technical support for the safety of roadway excavation in coal mine.

**Keywords** real-time forecasting, continuous comparison system transient eletromagnetics



# **Geoinformatics**

