Test Submission 1: Wavefield signal apparition: A seismic shift for simultaneous source separation

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Abstract

Discrete Sampling

A new method for discrete sampling of signals with applications to separation of interfering wavefields is presented. By utilizing a periodic sequence of source signatures along one source line, the wavefield becomes separately visible in different parts of the spectral domain where it can be isolated from interfering signals, processed, and subtracted from the original recordings, thereby separating the wavefields from each other.

A seismic apparition on a finitedifference modelled simultaneous source acquisition example.

Example is shown below in figure 1, which represents......

\[ H(n) = \frac{1}{N} \sum_{m=-N}^{N} f(m) e^{j2\pi \frac{m}{N}} = \frac{1}{2} \left[ 1 + A \right] f(n) + \frac{1}{2} \left[ 1 - A \right] f(n - N). \]

Fig 1. Illustration of wavefield signal data gathers. (left): Conventional acquisition. (right) Acquisition following the principles of signal apparition.

Fig 2. Simultaneous source example. Left: Firing time perturbations. Middle: Simultaneous source common receiver gather. Right: Separated data for one of the sources

Results

This section will talk about results

Conclusions
This conclusion will conclude the abstract and summarise.

References


Presenter Biography

Sir Isaac Newton PRS was an English mathematician, astronomer, theologian, author and physicist who is widely recognised as one of the most influential scientists of all time and a key figure in the scientific revolution.