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## of “Open source architecture” and “Compress Sensing” makes next generation of geophysical equipment

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Aliasing is caused by discrete sampling below the Nyquist frequency. In order to recover the harmonics of shape in a signal, it is necessary to use a sampling rate at least twice the highest waveform frequency (Shannon Theorem). This means more volume of storage or more bandwidth for transmission. If we could overcome this limitation, we can reduce the sampling rate by less than twice the maximum frequency and the cost of storage media and bandwidth for data transmission would be reduced. It could also have an impact on reducing energy consumption.

The latest method to reduce the sampling rate is the Compress Sensing method to digitize analog data, which allows us to work with a sampling rate less than the number of maximum frequency.

On the other hand, manufacturing companies generally use arm or x86 architecture to develop their systems. Because software support is discontinued from a specific architecture within ten years, hardware manufacturers are also losing support for their systems, and the ultimate customer is paying the cost of this technology change.

A combination of open source architecture and compression sensing could start a revolution in the new generation of geophysical equipment.

### Promotional text

Combination of “Open source architecture” and “Compress Sensing” makes next generation of geophysical equipment

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