

Interactive comment on “Development of a New Centralized Data Acquisition System for Seismic Exploration” by Feng Guo et al.

Anonymous Referee #1

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This manuscript gave a detailed description of a centralized seismograph. As is introduced in the manuscript, extensional functions of electrical data acquisition and NB-IoT had also been added to improve the functionality and novelty. In fact, a single piece of equipment that can deal with seismic and electrical data acquisition is difficult to find. Thus, the proposed instrument seems to be a good choice of joint exploration in engineering and geological prospecting. Besides, the result of field test was also provided to show the performance of the proposed instrument in electrical data acquisition. However, there are still a couple of technical points that should be refined and there are also several spelling and writing mistakes need to be corrected. Given that, I recommend that the manuscript under review could be accepted after minor revision.

Details of data transmission speed should be given in subsection 4.4. And in that case,

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does it possible for real-time data transmission?

Details of the 5 test points should be given in subsection 4.4. According to the current description, it is not clear where those instruments are placed. Because the signal intensity must be different if the instrument is placed in varies kinds of environments, thus the effect of real-time communication could not be the same.

p. 12, line 25, the sentence “CUGB-CS48DAS can solve the ambiguity problem in geophysical prospecting and achieve joint geophysical seismic and electrical prospecting.” is suggested to express as “CUGB-CS48DAS can solve the ambiguity problem in geophysical prospecting by implementing joint seismic and electrical exploration.”

The paragraph of 6 Conclusion (4) is hard to follow. Clearer description and analysis are expected to use.

P. 8, line 7, the sentence of “The acquisition systems should be able meet project performance requirements.” is supposed to correct as “The acquisition systems should be able to meet project performance requirements.”

P. 9, line 30, the 8(d) is mistakenly labeled, and it should be replaced by 9(d).

P. 8, line 29, the explosives should be seismic sources rather than a seismic source.

P. 10, line 31, “on campus” is supposed to be used instead of “in the campus”.

P. 15, line 4, the font of “Internal structure” is not in accordance with that of the entire manuscript.

Please also note the supplement to this comment:

<https://www.geosci-instrum-method-data-syst-discuss.net/gi-2019-26/gi-2019-26-RC1-supplement.pdf>