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

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RC: Details of data transmission speed should be given in subsection 4.4. And in that case, does it possible for real-time data transmission? AR: In order to evaluate the real transmission speed, we uploaded the acquired data file using each of the CUGB-CS48DAS in Figure 11. Because we think upload transmission speed is more important than the download speed. The average transmission speed turned out to 192.32kbps, 206.53kbps, 189.84kbps, 182.06kbps, 226.50kbps respectively. And in this case, real-time acquisition data transmission is actually not available, because theoretically the CUGB-CS48DAS record 140kB of data in a second with a sampling rate of 1kHz.

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Discussion paper

RC: Details of the 5 test points should be given in subsection 4.4 AR: CUGB48-1 was placed under a tree with relatively lighter occlusion. CUGB48-2 was placed near a big statue on the grass. CUGB48-3 was placed in the bush near a road. CUGB48-4 was placed in the laboratory near the window. And the last CUGB48-5 was placed right in an open area.

RC: 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” AR: The sentence is revised to “CUGB-CS48DAS can solve the ambiguity problem in geophysical prospecting by implementing joint seismic and electrical exploration” as suggested.

RC: The paragraph of 6 Conclusion (4) is hard to follow. Clearer description and analysis are expected to use. AR: The paragraph is revised as “CUGB-CS48DAS can solve the ambiguity problem in geophysical prospecting and achieve joint geophysical seismic and electrical prospecting. As the single method of present geophysical prospecting has ambiguity problems and thus cannot be refined. Therefore, this new centralized data collection system is proposed to provide technical means of solving ambiguity problems while offering useful exploration for joint geophysical prospecting. As the result, the proposed CUGB-CS48DAS becomes a novel supporting equipment with high synchronization precision and acquisition accuracy for joint geophysical seismic and electrical prospecting.”

RC: 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.” AR: The sentence is revised as “The acquisition systems should be able to meet project performance requirements.”

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

The mistake has been corrected.

RC: P. 8, line 29, the explosives should be seismic sources rather than a seismic source. AR: The expression has been modified as suggested.

RC: P. 10, line 31, “on campus” is supposed to be used instead of “in the campus”. AR: The expression has been modified as suggested.

RC: P. 15, line 4, the font of “Internal structure” is not in accordance with that of the entire manuscript. AR: The font has been modified.

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