



Reprocessing of old data - override of data acquisition settings

September 16, 2020

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Document Number: IMS-NOTE-ADCOVERRIDE-202007-DMv2

1 Introduction

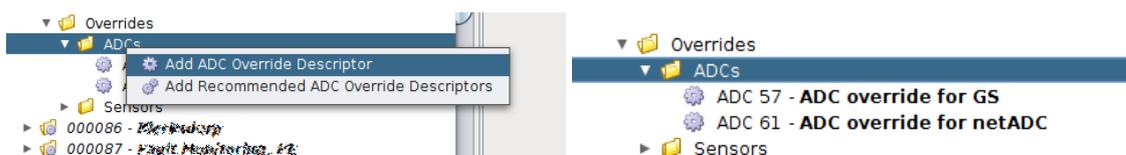
In 2016 it was discovered that impedance values set in configs for some ADC units (specifically ID 57 “GS geophone A/D” and ID 61 “netADC ADC”) are not correct. This affects the effective gain for some sensor types and therefore corrupts the measurements of ground motion. Whilst for the majority of combinations (sensor + ADC) the effect is minor, the particular combination of 14 Hz geophone with GS can underestimate recorded ground motion approximately 2-3 times.

The fixing of settings in global configs is not a safe solution of the problem as it does not impose control regarding when the changes were applied. Therefore an alternative solution (ADCs Override) was developed. This is based on extra settings in the local configs which are applied to the newly recorded data and also can be applied to historical data in a batch mode.

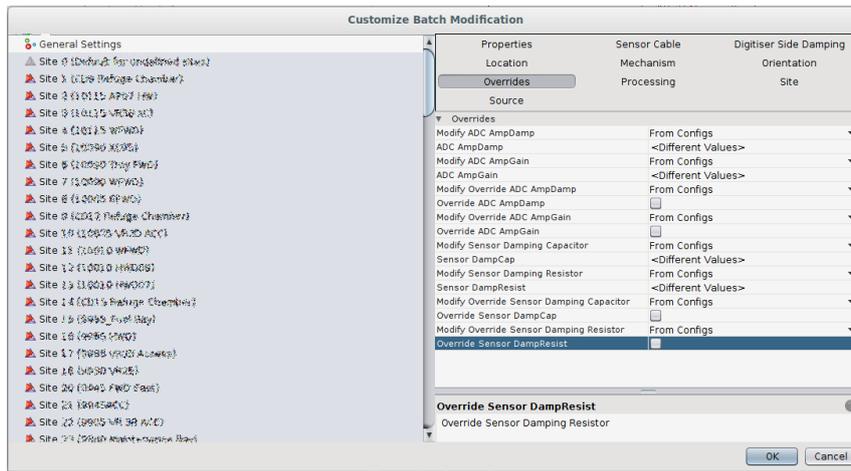
Ideally the change in configs (which will affect future data) needs to be synchronised with batch reprocessing of historical data (to exclude a step in source parameters). The aim of this document is to provide an instruction for such a reprocessing.

2 Override procedure

- Check that local configs have recommended Overrides -> ADCs:

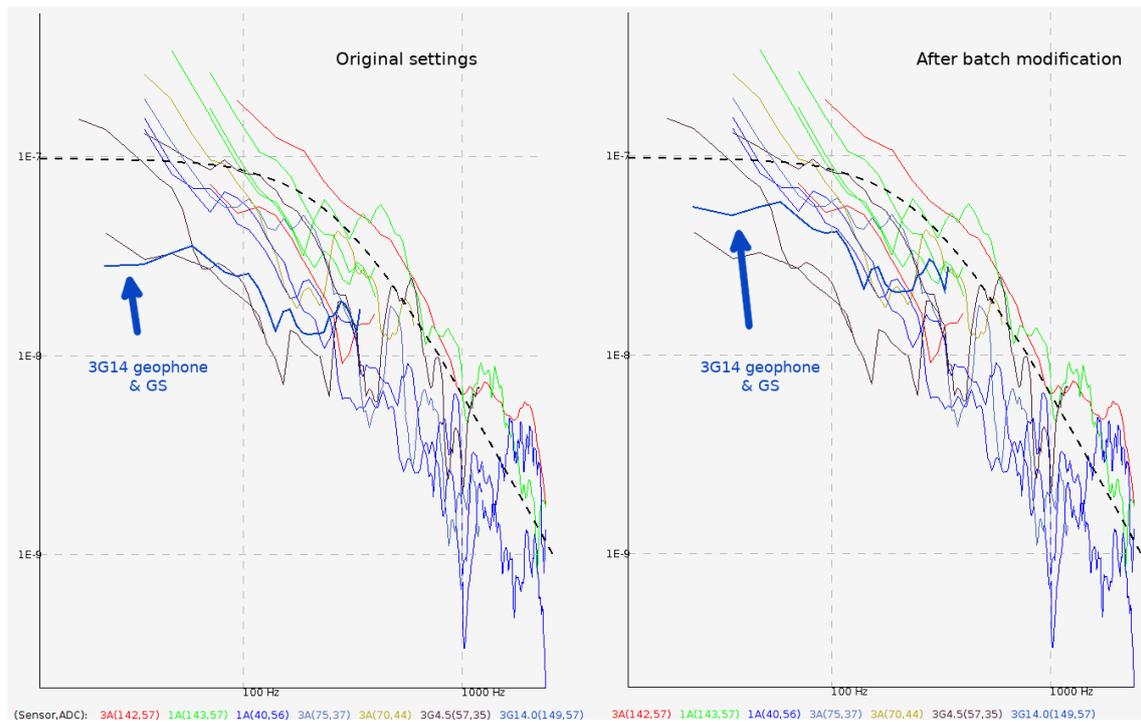


- Select all sites in Batch Event Modification and choose “From Configs” for all settings under “Overrides”:



- Do manual or batch recalculation of source parameters.

Figure below compares source spectra for P-waves for an example event. The spectral amplitudes for tri-axial 14 Hz geophone connected to GS has increased after the application of the override settings.



Date	Description	Revision
2020/07/07	Original document	0
2020/07/30	Anonymised version	1
2020/09/16	Correction of text regarding the past data for IMS services customers	2

Table 1: Change record