

CALMS2 and PICRAM PPG SQI

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I. OBJECTIVE

- 1) To update the status of CALMS2 and PICRAM PPG SQI.

II. COMPLETED TASKS

A. Datasets

1) *CALMS2*: The data in .mat format are stored in 'bspprojects9\OURR\Calm2'. In ProgReport16, Med SQI for PPG of CALMS2 were mostly zero. In this report, the problem of sampling frequency has been solved. From the accelerated SQI (up to 10,000 rows each patient data), which is just for the overview, 89.6% (301 out of 336) shows median SQI of more than 0.8. Until this report is written 155 out of 336 patient data have been executed for 100% (i.e. all data) SQI. The graph for the SQI of one of the patient is shown in Fig.1. The Median SQI and IQR for Calms2 is shown in Fig.2.

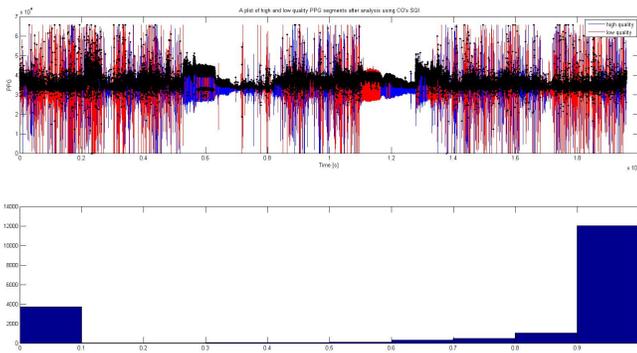


Fig. 1. PPG SQI for pt87 of Calms2

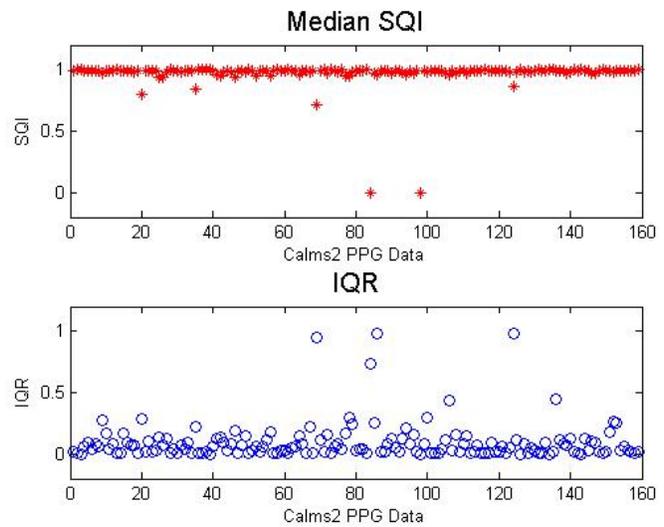


Fig. 2. PPG Median SQI and IQR for 155 Calms2 patient data

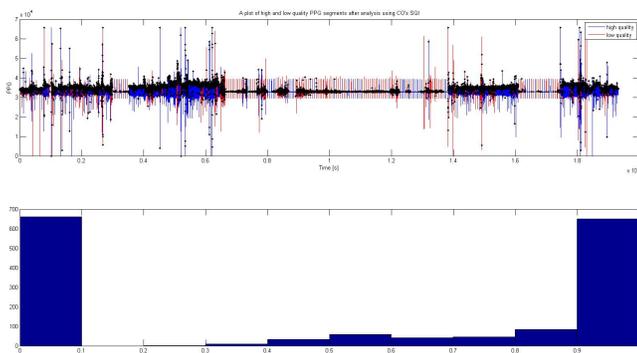


Fig. 3. Median SQI for randomly taken - Picram 013PPG.mat

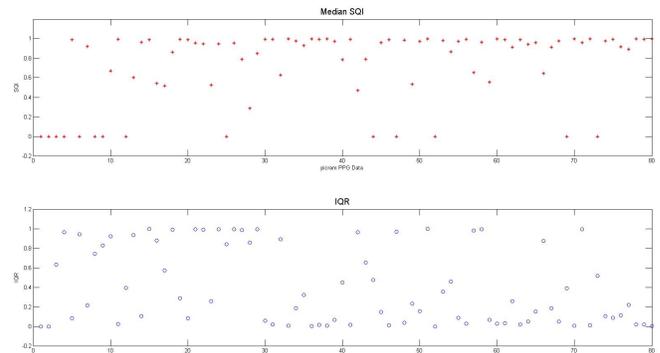


Fig. 4. SQI of 83 Oxford PPG data of PICRAM

2) *PICRAM*: In bspprojects9\OURR\Picram, the folders have been divided into Oxford and Reading. For Oxford, the 'PPG_only', locates all data of PPG, currently there are 83 out of 199 recordings. The formatting is still in progress for the data 84 until 199. The SQI for one of Picram patients dataset is shown in Fig. 3. The sampling frequency is 75 Hz. Th SQI and IQR for 83 patient data are shown in Fig.4.

III. CONCLUSION

From these preliminary results, 89.6% of Calms2 and 62.6% of Picram PPG data of Oxford have median SQI of more than 0.8. The data formatting and SQI will be completed soon. The respiratory rate estimation process will be carried out next. The challenging part is how to reduce the time for the searching of start and end of the windows for PPG SQI.