

User	Run							ITR [bit/min]	
	1	2	3	4	5	Average	Best	Average	Best
#1	60%	80%	40%	20%	40%	48%	80%	2.26	9.60
#2	0%	40%	100%	80%	100%	64%	100%	5.27	18.58
#3	20%	20%	0%	40%	80%	32%	80%	0.46	9.60
#4	20%	20%	20%	20%	40%	24%	40%	0.06	1.21
#5	0%	40%	40%	80%	60%	44%	80%	1.70	9.60

Table 1: Vowel spelling accuracies and ITRs of each user obtained in the EEG experiments

the same as for the VBAP experiment. HRIR based modality produced better results than the VBAP based modality for both the average and the best score.

4 Conclusions

The EEG results presented confirm the P300 responses of BCI-naive users. The mean accuracy was not very good owing to the short ISI, but the accuracy tends to improve when the number of run increases. Therefore, more attention training or interface using practice may be necessary for BCI-naive users. The ITR scores were higher compared (no significance analysis due to different user groups) with our previous study using HRIR stimuli, and also compared with the previously reported VBAP-based spatial auditory BCI. Nevertheless, the current study is not able to compete with the faster visual BCI spellers. Furthermore, it is necessary to improve the ITR for a more comfortable spelling. We plan to continue research with larger numbers of sound stimuli, a better suited ISI, and more complex spatial sound patterns.

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