



SDI Review Form 1.6

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2014_BJAST_14781
Title of the Manuscript:	EEG Feature Extraction in Brain-Mobile Phone Interfaces
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<u>Compulsory</u> REVISION comments	- The paper is poorly written. - The Methodology section was not clearly written and some important information was missing. Some examples are listed below: a) Which EEG system was used to acquire the EEG signals in this study? b) Why did the authors choose 10 seconds as the length for each trial? Why not 3 or 5 seconds? c) What was the data sample size used to compute the power spectral density? d) How many electrodes were used in the analysis/classification? e) How did the authors select the classification thresholds? f) The authors did not discuss how the data were split into training, cross-validation, and testing sets. Were the classification thresholds derived from the training sets and the classification accuracy obtained	- Agreed and modified accordingly. Section 2 for methodology is updated with more details - Agreed and updated in Section 2 - 10 seconds was taken in order to allow the test subject to completely remember the face of the known person, so that the EEG signal becomes richer with the needed information.; Updated the document accordingly - A data sample size of 2000 is taken for computing the PSD - 2 electrodes are used; Updated the document accordingly - A simple threshold classifier is used as the initial step of analysis. The other classification methods such as linear discriminant analysis and support vector machines are planned to be used



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	from the testing sets? g) Why a simple thresholding method was used to classify the EEG signals? Why other classification methods such as linear discriminant analysis and support vector machines were not considered? h) The authors claimed that the preprocessing step employed in the study remove physiological and non-physiological artifacts. However, the use of a low-pass filter 0-40 Hz would not be able to remove physiological artifacts such as ocular and muscle artifacts.	as a next step - Agreed and modified accordingly in Section 2
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<u>Compulsory</u> REVISION comments (cont.)	- The authors presented the results without any discussion. - The authors should discuss the limitations of their study. - The claim that EEG signals could be used to identify the face images of people is too strong. This study only looks into the classification of only two different face images. What are the advantages that the proposed system have over a BMI that uses P300 to recognize multiple face images? - The authors should give more details about how one can use the proposed BMI to dial a phone number.	- Agreed and modified accordingly. Discussions are added in different sections. - Agreed and modified accordingly. See section 4 - The test was repeated for different subjects in case of remembering his/her fathers's and mother's face. There is a clear uniqueness noted in the identified features in this case. In comparison with a P300 based system this method does not require visual stimuli for triggering an EEG signal. Instead, the EEG signals arising due to remembering the faces is studied, and hence the initiation of the telephone a call can be done though just a mental trigger by the physically disabled people. Similar study using other known people as well as the further advantages over the P300 based analysis is planned to be conducted during the next phase of the research - Agreed and modified accordingly. See section 2.4
<u>Minor</u> comments	Ethical issues:- The authors have not discussed whether the study was approved by any ethics committee and informed consents were provided by the participants.	- Agreed and modified accordingly. See section 2
<u>Optional/General</u> comments		