Reviewer’s report

Title: The impact of image dynamic range on texture classification of brain white matter.

Version: 1 Date: 17 April 2008

Reviewer: Fabio J Ayres

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Major Compulsory Revisions

- It is my understanding that in each of the pattern classification scenarios in the present work (i.e. for each combination of graylevel quantization and COM computation strategy) ten features are selected for further linear discriminant analysis. Given that the authors have only 30 ROIs, it would be appropriate to analyze the classification performance of the method using cross-validation, perhaps a leave-one-out cross-validation given the relatively (to the number of features) small size of the dataset.

- The statistical performance of most classifiers presents a trade-off between higher sensitivity and higher specificity. It is recommended to present the results of an experiment involving pattern classification using Receiver Operating Characteristics (ROC) analysis.

Discretionary revisions

I’d like to suggest a few points which I feel that would be beneficial for the understanding of the paper:

- Add a figure showing a typical ROI for each type of tissue (T, PtWm, Dwm)
- Add a figure showing the COM for each level of quantization, to illustrate the effect of different quantizations in the COM.
- Proofreading, preferably by a native English speaker.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.