

XV PMT meeting on the EADC-ADNI Harmonization of Protocols for Hippocampal Segmentation

Wednesday, January 30, 2013

Participants:

Giovanni B. Frisoni (GBF)	– IRCCS S. Giovanni di Dio - Fatebenefratelli, BS, Italy
Marina Boccardi (MB)	– IRCCS S. Giovanni di Dio - Fatebenefratelli, BS, Italy
Martina Bocchetta (MBocch)	– IRCCS S. Giovanni di Dio - Fatebenefratelli, BS, Italy
Clifford R. Jack (CRJ)	– Mayo Clinic, Rochester, MN, USA

(Simon Duchesne (SD) – Laval University, Québec City, Canada
discussed same issues on Jan 29)

Benchmark Label Expansion

Updates on the Benchmark Label (BL) Expansion project were provided. The project will be funded by AA (50%) and other 6 private companies. BLs will be obtained from 135 different ADNI subjects. The platform will be implemented in order to allow certification for automated algorithms. A larger panel of experts beyond funders may be proposed by Simon and involved if approved, for defining consensual solutions to technical issues.

Tracers for the Expansion are being defined.

No embargo will be applied, and BLs will be available to the public at the completion of the project (defined in 3 months from the received funding).

On the other hand, the labels obtained in the Harmonized Protocol project will not be released until adequate quality check (through statistical or visual evaluation of compliance examination) will not be carried out. CJ suggested to carry out statistical analyses when we have 50% of the labels, and define certification criteria that can be used to the other 50% of labels.

CJ suggests to submit an abstract to AAIC/AIC to announce the release of BLs (or other labels from the SOPs Validation).

The issue of releasing the ADNI images paired to the correspondent labels may be solved by SD suggestion to apply a (back-)transformation to the labels so that they will fit the native ADNI image. Users will then need only the (back-)transformed label and the ADNI image codes.

CJ notes that the ADNI images that we believe to be “native” may have undergone pre-processing (LONI collects images from ADNI MRI centres, Mayo takes these images and carries out distortion and inhomogeneity correction). CJ is then investigating which kind of processing was applied on the MINC images that we used/are using for the project (he already asked Karen karen.crawford@loni.ucla.edu).

Training/qualification of tracers on the certification platform

10 tracers so far have completed the Training in 3 rounds, and the Qualification. All of them proceeded to the Validation phase since we do not have qualification criteria yet, and we will only use their data for setting criteria for next tracers.

Two tracers already completed Validation phase 1. One is working on Validation phase 2. CJ agreed on involving Greg Preboske in Validation phase 2.

Hypotheses for the Qualification criteria have been discussed, with images corresponding to different Jaccard indices, where different levels of compliance with the HP is clearly visible. (Best performance by Michel Grothe from Stefan Teipel's lab was considered: his possible involvement in the Expansion project has been discussed.) setting of criteria will need a large statistical analysis, that may be carried out by Laval's group.

A questionnaire might be set to investigate users opinion regarding the platform and the HP.

Publications

Submitted abstracts and papers in progress were mentioned. CJ suggests to submit an additional abstract to announce the release of the data of the mentioned projects at the AAIC meeting in Boston, July 2013. GBF also mentioned the idea of SD to launch a MICCAI challenge using the BLs at Nice, June-July 2013.