Poster PE-1

A Tool for Reconstruction of the Sensitivity Encoded Data with Sensitivity Encoding (SENSE)

Sung Dae Yun[1], MyungSung Song[2], JunYoung Chung[1], HyunWook Park[1]

Dept. of Electrical Engineering, KAIST, Korea[1]

fMRI Lab., Brain Science Research Center, KAIST, Korea[2]

목적 : For fast MRI, the number of phase encoding steps has to be reduced. However, the reconstructed image is aliased if the phase encoding steps don't satisfy Nyquist sampling theory. SENSE is used in order to eliminate the aliasing effect as well as to reduce imaging time. SENSE is a linear algebraic technique applied to the multiple receiver data. In this study, we implement a tool to reconstruct the original image (SENSE image) with Sensitivity Encoding (SENSE)

대상 및 방법 : * Using the raw data from CMRR Lab, the university of Minnesota

* Algorithm

1. Read reference data
2. Calculate the sensitivity map from the reference data
3. Read noise data and calculate noise matrix
4. Read reduced data
5. Reconstruct the SENSE image from above information

결과 : From the raw data, reference images with 64*64, reduced images with 128*256, and noise images with 256*256 were produced. After the calculation of sensitivity maps, the SENSE image could be reconstructed. This program was developed with Visual C++ 6.0 on Windows XP.

결론 : A tool has been implemented to perform the functions announced above.

This research is supported by (02-9J3-PG6-EV07-0002).