

Poster PE-2

Better estimation of "sum-of-squares" to improve the reconstructed image quality in Sensitivity Encoding (SENSE)

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목적 : In SENSE, division process is used in order to get a raw sensitivity map. This process requires denominator which is estimated by "sum-of-squares". However, this image does not have uniform brightness because of the non-symmetrical property of RF coil arrays. Thus, this study is focused on better estimation of the denominator image.

대상 및 방법 : * Before calculating the "sum-of-squares", homomorphic transform is applied to the reference images so that the sensitivity information is removed as much as possible. The "sum-of-squares" image is taken after that.

* Homomorphic filtering is performed as follows

1. Calculate cepstrum (Homomorphic transform) of the reference image
2. Apply a low pass filter
3. Apply the exponential operation (Inverse homomorphic transform)

결과 : The new "sum-of-squares" suggested above showed more uniform brightness than that by previous methods. This resulted in better quality and more uniform brightness in the reconstructed image.

결론 : The quality of the reconstructed image in SENSE could be improved.

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