Docket #: S14-295

A method for rapid multi-contrast brain imaging

Stanford researchers have developed an improved imaging protocol for better visualization of the thalamus. This faster acquisition leads to a better delineation of structures due to the multiple dimensions of information. Since the contrasts are acquired simultaneously, the need for motion registration is obviated.

Applications

- Segmentation/delineation of the thalamic nuclei
- Detection of lesions
- Pre-op planning for thalamic ablation
- Improvement of brain segmentaion accuracy

Advantages

- This method uses a Cartesian acquisition scheme whereby the sampled points are confined to the Cartesian grid which reduces the hardware requirements and calibration needed for non-Cartesian methods.
- The reconstruction scheme uses simple view sharing, eliminating the need for complex regridding algorithms as well as offline reconstruction making deployment of this method across the installed base much easier, logistically and computationally.

Patents

- Published Application: 20160132746
- Issued: 9,454,709 (USA)

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