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- (71) Applicant: **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).
- (72) Inventors: **LING, Tong**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG).
LI, Huakun; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG).
- (74) Agent: **DAVIES COLLISON CAVE ASIA PTE. LTD.**; 10 Collyer Quay, #07-01, Ocean Financial Centre, Singapore 049315 (SG).

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(54) Title: PHASE-RESTORING TRANSLATIONAL SHIFTING OF MULTIDIMENSIONAL IMAGES

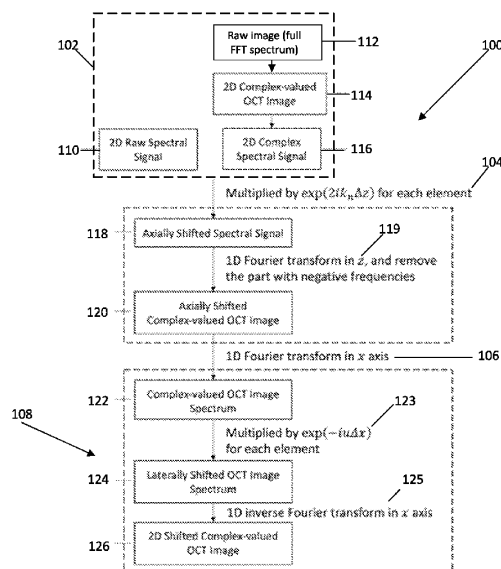


Figure 1

(57) Abstract: Disclosed is a method for phase-restoring translational shifting of a multidimensional image. The method comprises computing a first shifted, complex-valued image by converting a spectral signal (corresponding to the multidimensional image) to a shifted spectral signal and transforming the shifted spectral signal along a first axis. A spatial frequency component of the multidimensional image is then computed by transforming the first shifted, complex-valued image along at least one further axis perpendicular to the first axis. Thereafter, a phase-restored image is produced by converting the spatial frequency component of the multidimensional image to a shifted spatial frequency spectrum and applying an inverse transform in each second axis. Also disclosed is a system for performing the above method.

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