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- (71) **Applicant** (for all designated States except US): **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).
- (72) **Inventors; and**
- (75) **Inventors/Applicants** (for US only): **SEAH, Hock Soon** [SG/SG]; 408E Pasir Panjang Road, Singapore 118749 (SG). **TAI, Xue-Cheng** [NO/SG]; Nanyang View 57A, Singapore 639647 (SG). **QIU, Jie** [CN/SG]; 462 Corporation Road, #02-05, Parc Vista, Singapore 649816 (SG). **HAHN, Jooyoung** [KR/SG]; 238 Westwood Avenue, The Floravale, #09-41, Singapore 648363 (SG). **SUGISAKI, Eiji** [JP/SG]; Blk 649B, Jurong West, St 61, #01-302, Singapore 642649 (SG). **JIA, Lei** [CN/SG]; Boon Lay Avenue, Blk 217, #05-83, Singapore 640217 (SG).
- (74) **Agent:** **WATKIN, Timothy Lawrence Harvey**; Marks & Clerk Singapore LLP, Tanjong Pagar, P O Box 636, Singapore 910816 (SG).

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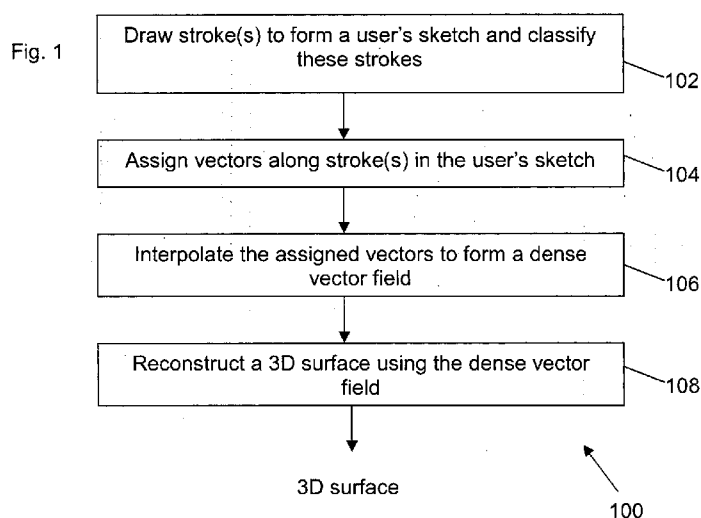
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(54) **Title:** A METHOD FOR RECONSTRUCTING A 3D SURFACE FROM A 2D SKETCH



(57) **Abstract:** The present invention relates to a method for reconstructing a three-dimensional surface in a domain wherein the three-dimensional surface is reconstructed from a two-dimensional sketch comprising at least one stroke with a vector field assigned to the at least one stroke. The method comprises the steps of: interpolating the vector field to form a dense vector field; and reconstructing the surface using the dense vector field; wherein interpolating the vector field comprises minimizing a non-linear functional of the vector field with a curl-free constraint on the dense vector field, the non-linear functional of the vector field involving terms defined over the domain and a term defined over the at least one stroke, and wherein the non-linear functional of the vector field is minimized using an augmented Lagrangian method.