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(54) **3D RECONSTRUCTION METHOD BASED ON ON-SITE EDGE-CLOUD COLLABORATION FOR CULTIVATED LAND**

(71) Applicant: **South China Academy of Natural Resources S&T**, Guangzhou (CN)

(72) Inventors: **Yueming Hu**, Guangdong (CN); **Chun Chen**, Guangdong (CN); **Chi Xu**, Guangdong (CN); **Rui Zhang**, Guangdong (CN)

(73) Assignee: **South China Academy of Natural Resources S&T**, Guangzhou (CN)

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Primary Examiner — Ryan McCulley
(74) *Attorney, Agent, or Firm* — SALIWANCHIK, LLOYD & EISENSCHENK

(57) **ABSTRACT**

The disclosure relates to a 3D reconstruction method based on an on-site edge-cloud collaboration for a cultivated land. An edge-cloud collaborative computing architecture is used, such that the edge computing device performs advance calculations after image data is acquired. The edge computing device measures performances of itself and a cloud data center, and arranges and deploys multiple 3D reconstruction containers in the cloud data center for the 3D reconstruction. Multiple reconstruction containers in the cloud data center perform reconstruction tasks in parallel to quickly obtain 3D reconstruction results, and provide them to the edge computing device for retrieval and download. This method is mainly oriented to agricultural project monitoring scenes, to reduce reconstruction time and a data transmission amount
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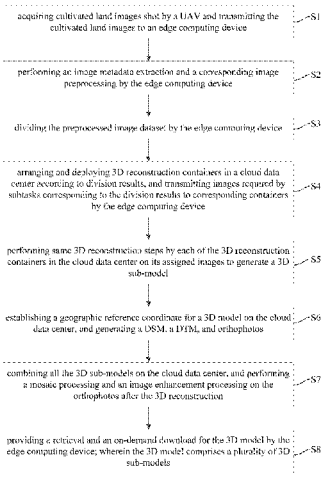

of 3D models, in order to improve a response speed and a quality of 3D reconstruction results, for large-scale on-site monitoring, acceptance, and review purposes of agricultural projects.

7 Claims, 8 Drawing Sheets

(58) **Field of Classification Search**
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See application file for complete search history.

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