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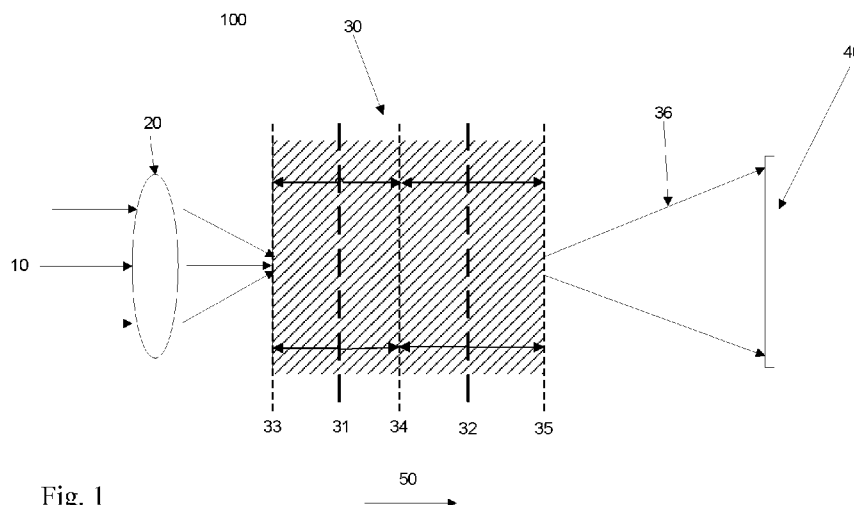


Fig. 1

(57) Abstract: A method of providing image data for constructing an image of a region of a three dimensional target object, comprising providing, from a radiation source, incident radiation directed at a target object, detecting an intensity of radiation scattered by the target object, and determining image data for each of a respective plurality of slices within the target object each indicating one or more characteristics of the target object at a respective depth within the target object, wherein the image data is determined based on the detected intensity of radiation via an iterative process wherein running estimates of the image data for each of the plurality of slices are updated step by step.