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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: LIDAR-BASED CLASSIFICATION OF OBJECT MOVEMENT

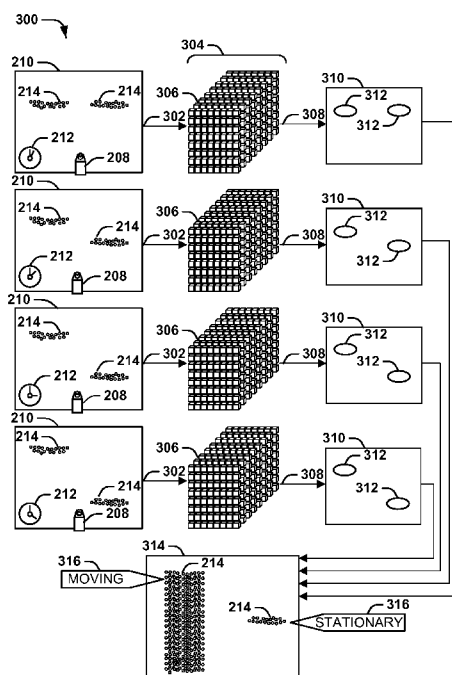


FIG. 3

(57) Abstract: Within machine vision, object movement is often estimated by applying image evaluation techniques to visible light images, utilizing techniques such as perspective and parallax. However, the precision of such techniques may be limited due to visual distortions in the images, such as glare and shadows. Instead, lidar data may be available (e.g., for object avoidance in automated navigation), and may serve as a high-precision data source for such determinations. Respective lidar points of a lidar point cloud may be mapped to voxels of a three-dimensional voxel space, and voxel clusters may be identified as objects. The movement of the lidar points may be classified over time, and the respective objects may be classified as moving or stationary based on the classification of the lidar points associated with the object. This classification may yield precise results, because voxels in three-dimensional voxel space present clearly differentiable statuses when evaluated over time.



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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
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- *with international search report (Art. 21(3))*