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(54) **Title:** METHOD AND SYSTEM FOR INTELLIGENT CRANE LIFTING

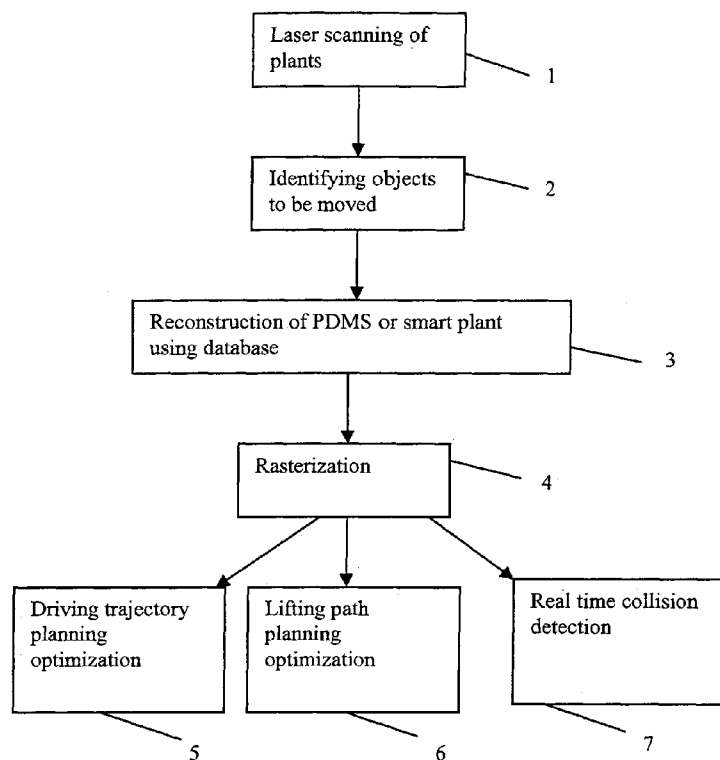


Fig. 1

(57) **Abstract:** A method is proposed for automatically generating a crane lifting path describing the motion of a crane. The method includes: laser scanning a plant to generate one or more point clouds; using the point clouds to identify objects to be lifted by the crane; rasterizing the laser scanned point clouds to generate digital data describing the plant and in a format for input to a Graphics Processing Unit (GPU); and iteratively optimizing a crane lifting path, including using the GPU and the digital data to detect collisions between one or more cranes and the plant if the crane follows the crane lifting path.



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