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(54) **Title:** METHOD FOR GENERATING A DATASET STRUCTURE FOR LOCATION-BASED SERVICES AND METHOD AND SYSTEM FOR PROVIDING LOCATION-BASED SERVICES TO A MOBILE DEVICE

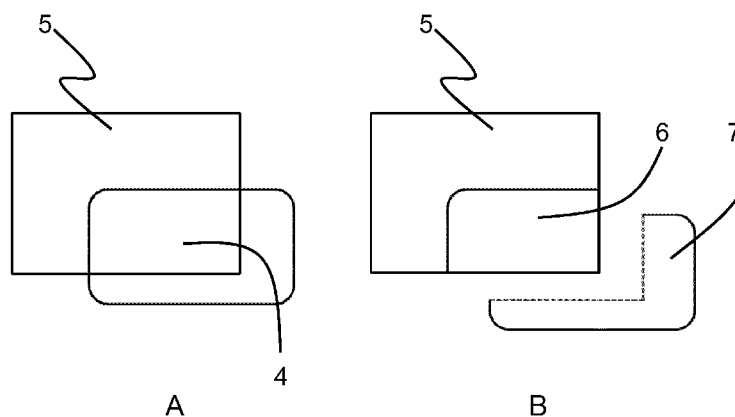


Fig. 4

(57) **Abstract:** A method for generating a dataset structure for location-based services is disclosed which comprises the steps: partitioning a geographical area into a plurality of preferably equal-sized tiles, wherein said geographical area comprises a plurality of area of interest, associating said tiles with multiple servers, wherein each tile is associated with at least one of said server according to a consistent hashing function, generating, for each tile, a first dataset which comprises areas of interest intersecting said tile, wherein the areas of interest of said first dataset are trimmed by edges of said tile or completely contained in said tile, generating, for each tile, a second dataset which comprises overflowed parts, wherein each of said overflowed parts is part of an area of interest of a first dataset, is trimmed by an edge of said tile and is located outside of said tile, and storing, for each tile, said first and second data-sets at the server/s associated to said tile. Additionally, a method and a system for providing location-based services using this data-set structures are disclosed.

