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(54) **GENERATING AND SERVING TILES IN A DIGITAL MAPPING SYSTEM**

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This patent is subject to a terminal disclaimer.

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**G01C 21/30** (2006.01)

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(58) **Field of Classification Search** ..... 701/207-213; 345/422, 426, 473, 474, 418, 432, 424, 425, 345/427, 582, 583, 630; 340/995.1-995.28

See application file for complete search history.

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(57) **ABSTRACT**

Digital tile-based mapping techniques are disclosed that enable efficient online serving of aesthetically pleasing maps. In one particular embodiment, an image tile-based digital mapping system is configured for generating map tiles during an offline session, and serving selected sets of those tiles to a client when requested. Also provided are solutions for handling map labels and other such features in a tile-based mapping system, such as when a map label crosses map tile boundaries. Various processing environments (e.g., servers or other computing devices) can be employed in the system.

**20 Claims, 8 Drawing Sheets**

