

Land Use/Geographical Data

Representative Patent 04

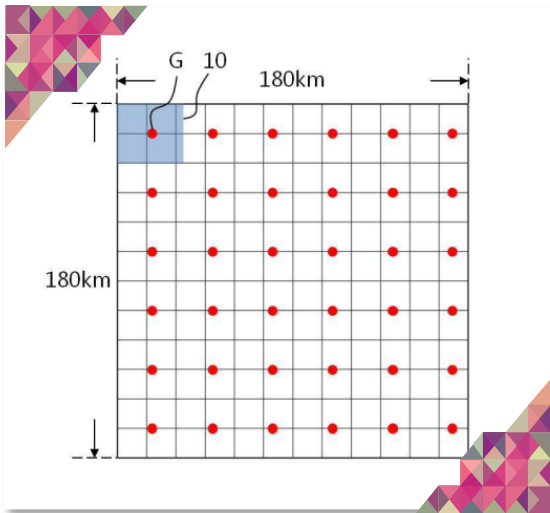
- ❖ Title of Invention : **Method and apparatus for constructing high precision 3d gis data using lattice type gcps**
- ❖ Application Number. : KR2017-0149228

Application of Technology and Field of Use

◆ Earth Surface Spatial Information, Urban Planning

◆ High cost required to increase accuracy of Earth surface spatial information

- The more ground reference points, the higher the accuracy of the satellite image.
- Since the cost required to increase the ground reference point increases, high cost is required to increase the accuracy of the satellite image.



<Representative drawing>

Features of Technology

- (a) Extracting the same point of an image taken from a first satellite and a numerical map, and constructing a first reference layer by inputting coordinate information of the extracted point into the first satellite image
- (b) Constructing a second reference layer by tie-point matching an image taken from a second satellite and the first reference layer
- (c) After applying a plurality of rectangular grids having a certain area to the second reference layer, constructing a third reference layer, in which a positional accuracy of the second reference layer is improved by applying a single ground control point located inside each grid

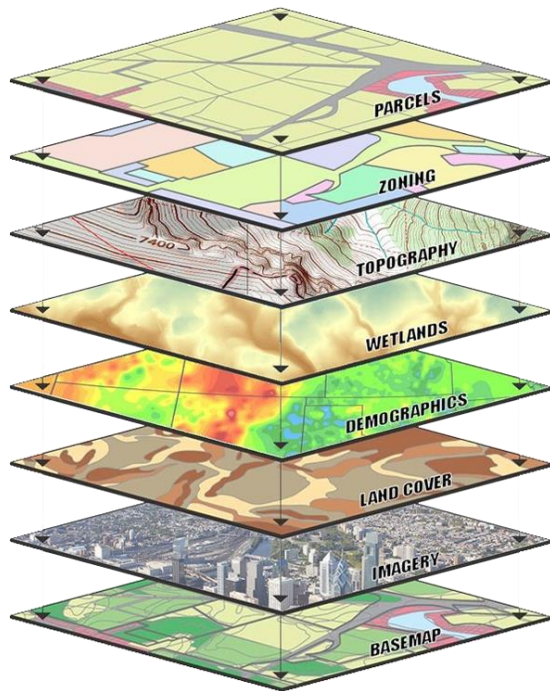
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Technical Effects

◆ Possible to provide spatial information with overall uniform accuracy

- It is possible to provide spatial information with uniform accuracy by constructing the second reference layer and applying the ground control point by matching the image taken from the second satellite to the first reference layer through tie-point matching.



<Geographic information system (GIS)>

Social, Environmental, Economical Effects

◆ Possible to construct spatial information with high resolution at relatively low cost

- It is possible to construct high-precision spatial information at a relatively low-cost using ground reference points having a grid arrangement.

◆ Possible to be used based on various indicators utilization plans

- It is possible to use spatial information with uniform accuracy for urban planning, land use, landscaping, geological exploration, military information, etc.