

A Color-Shaded Relief Map created with Multiple Light Sources by three primary colors (CMY) synthesis

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In order to make full use of the high-precision DEM data, various terrain representation methods has been proposed. These methods are specialized for clarity fine unevenness that can't be expressed by the conventional Color Shaded Map, therefore often different from the natural colors.

Then, we have devised "A Color-Shaded Relief Map created with Multiple Light Sources" synthesized shaded-map from a few light sources and color relief map, as more extended terrain representation method.

For simplification of the method, we have set 3 directions of the light sources with a fixed depression and azimuth, and examined a method for synthesizing them. Assign three primary colors (Cyan, Magenta, Yellow) to these shade-maps and synthesize process, we could recognize getting the near impression of shaded-map from upper left light source.

"A Color-Shaded Relief Map created with Multiple Light Sources" is made by combination with color relief map to thus the shade-map. In comparison with conventional Color Shaded Map, we can notice small unevenness, and it is possible to suppress the emphasis in height direction, so we can express natural terrain representation on this map.

Keywords: Multiple Light Sources, Color-Shaded Relief Map, three primary colors