Analysis of Topography using "Rainbow Contour Map" (RCMap) and its applications

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Recently, it became easely to get digital elevation model (DEM) with the airplane laser measurement.There are various methods for the terrain representation method using the DEM.(Yokoyama et al.,1999, et al.)

Although it is possible to create it by processing with GIS application, it is actually a work that everyone can easily do.

Rainbow Contour Map (RCMap) can be created and perform with Kashmir-3D.

The RCMap can be visually grasped by coloring the contour map like rainbow and expressing the change of the topography as a striped pattern.

However, when a sudden change in color tone is applied to the elevation value, when the contour width becomes dense, it becomes black and the change becomes difficult to understand.

On the other hand, when gradually changing the color tone to the elevation value, it becomes difficult to distinguish the change of the terrain represented by two adjacent colors.

So we tried to gray in a gently colored color with a width of 0.5 m. By doing so, the outline of the contour was emphasized, making it easy to find the change in two adjacent colors.

In addition, the gray band looks like a shadow when looking over the three-dimensional model, and it is easier to specify the inclination direction even with a micro topography with a small amount of topography change.

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