

An Accuracy Adjustment of GIS Data by Using A Data Fusion Method

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ABSTRACT

Nowadays, many companies and local governments have produced various GIS data. But most of them were shared or sold without a specification or a metadata. When those data overlaid with officially used high accuracy data, some errors appeared. Therefore, usually an uncertain GIS data, which does not have accuracy information, cannot be used with a high accuracy directly. In this study, the accuracy of the bridge database was adjusted by the intersections of rivers and roads data in officially used GIS data. Then distances between bridges and intersections of roads and rivers were calculated. If bridge length with positional accuracy is shorter than the distance between the bridge point and the nearest intersection, it was assumed that the bridge point does not have enough accuracy to be adjusted. By the GIS data fusion method, the accuracy of 60% of bridges over river was adjusted and obtained clear accuracy. The result of accuracy adjustment of the bridge database classified according to its road attribute, then the result of accuracy adjustment of the bridge database was assessed by the classification result. The result of accuracy adjustment by data fusion method was successfully assessed by the attribute data of the bridge database.