

Summary

Sliver polygons are areas that appear in edges of other polygons due to a wrong compilation or when overlapping of layers with polygons with no matching edges is done.

Sliver polygons are a significant problem in the geographic databases not only in the map presentation but in the numerical results obtained.

The solutions of this problem are, on the one hand, not create them by means right compilation or, on the other hand, eliminate them once they have been created.

In many cases is very difficult to avoid creating them, especially when we overlap layers from different sources or scales. Therefore we often need to eliminate them once they have been created.

The main problem when we try to eliminate created slivers is to locate them. Sliver polygons can have different shapes and although in most cases they are small they can also be large.

In this thesis, traditional methods for sliver characterization described in ISO19138 are analysed and evaluated.

Besides, other posible methods for locating sliver polygons are analysed such as shape indexes.

Finally, a different method is proposed (maximum inscribed circle to a polygon) as a method to locate sliver polygons. This method has been used with official cartography and the improvement from other methods is shown.