VISUALISING LARGE WEB APPLICATION DATASETS IN GOOGLE EARTH

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ABSTRACT

Presented herein are two methods for visualizing large geographic datasets in Google Earth. The problem is presented in the context of a typical geographic web application. Web applications are generally subject to constraints not found in other client-server system architectures. The nature of the world wide web is such that careful consideration must be made in order to facilitate rich applications such as Google Earth. Either method presented in this work can be applied to any geographic dataset.

The first method is a simple approach which makes no allowance for network conditions or topology. A geographic dataset is converted to the most basic KML which legally represents it.

RegionSplit is a more complex method but is designed to efficiently use network resources. It uses a quadtree data structure which enables the size of an average server response to be optimized. Both methods are described and compared and possible usage scenarios are mentioned.