DYNAMIC MAPS FOR EXPLORING AND BROWSING OF IMAGES (Ramot)

code: 4-2013-532

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Technology

Our technology enables navigating over a collection of high dimensional entities (such as images, videos, text documents and more) in an interface similar to online map navigation interfaces. The map is ordered such that similar entities are put next to each other, so the browsing experience is continuous. It is dynamic in the sense that the map is not pre-computed in its entirety; instead, the user navigation directs the construction of the map. The dynamic map is therefore tailored for the specific user, which can navigate towards preferred elements to see similar search results.

The Need

In recent years there has been a vast increase in the availability of online images, videos, documents and other high dimensional elements. Searching such massive datasets usually requires browsing a large number of elements. To this end the user is often forced to go over long lists of results that are unordered and have no contextual relations among them.

Using our technology, users are able to quickly browse a large number of elements, and navigate in the direction of preferred elements to discover additional similar elements.

Potential Application

Our method can be applied for refinement of search queries of images, videos, 3D shapes, text documents and more.

Stage of Development

Early development; we have an existing prototype which allows browsing one million images downloaded from the web. In addition, we have a prototype which allows browsing of several thousand 3D shapes, also downloaded from the web.

Supporting Publications

Dynamic Maps for Exploring and Browsing Shapes,
Eurographics Symposium on Geometry Processing 2013 (Currently in review)

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