Visual Document User Interface System

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ABSTRACT
A visual document user interface system, including methods and apparatuses, for displaying in a graphical user interface, a collection of documents having associated document attribute data. A method for such display comprises generating a geographic representation of the document collection with documents being positioned at respective locations within the geographic representation according to the associated document attribute data. The geographic representation may include multiple display levels respectively having different levels of detail associated with the documents. The method further comprises rendering at least a portion of the generated geographic representation on a display device and overlaying related information for the documents on the rendered portion of the geographic representation. Overlaying related information may include identifying interrelated documents and visually connecting the interrelated documents on the display device. In visually connecting the interrelated documents, a document review path may be defined for a user to utilize in reviewing the interrelated documents.

PROBLEM TO SOLVE
Enabling users to navigation and find content of large and complex references libraries on the internet is a tough challenge. Classic presentation approaches such as "table of contents" don't really scale to this environment and number of documents, presenting users with incredibly lengthy lists of terms.

This invention adapts existing geographic information system metaphors to represents the same library data visually and spacially.

For example, routes for GIS are usually the short distance between points. In documentation this loosely correlates to relevancy. Routes also include paths – granular points of relevancy. For example, searching for System.Xml and Reader should return a search result or route that contains code samples or documentation with these two relevant words. Results with close proximity would consider the granular paths between the routes.

Navigation on sites that have an associative set of information (collection) can use this same approach for their sites.

For example, on Amazon.com, the super node or hierarchy view would be the different products that it sells, Books. Another example is the ability to map and navigate CAD drawings. This would be the high level view of the car, the outside body. Then as you would zoom into the car, the layers would be removed to show parts. This gives the ability to map certain points on the car, such as parts. Then part provider could represent attributes of the part to the user. The collection in this instance is the car, the parts or pieces of the car represent the items in the collection. Another example is the ability to view manufacturing systems, and then drill down in to the status of specific points in the process.

CURRENT STATUS
Prototype under development, Patent application is almost complete.

Please let me know if you have any additional questions. I realize that the requirement is for a 4 page paper – but due to the status of the patent application, I'm unable to provide additional details, but will be able to before the conference itself.