CLAIMS

What is claimed is:

1. A method for rendering GIS point data, wherein the method comprises:

receiving a rendering instruction that carries a geographic region range to be rendered;

selecting GIS point data corresponding to the geographic region range;

generating a canvas object corresponding to the selected GIS point data by execution of a canvas object generation thread; and

displaying the generated canvas object on a current screen by execution of a display thread, and continuing to obtain a further GIS point data, and generating a further canvas object corresponding to the further GIS point data by execution of the canvas object generation thread, when or after the canvas object is displayed,

wherein the step of generating the canvas object comprises steps of:

classifying the obtained GIS point data according to a preset classification into provincial capital cities and non-provincial capital cities; and

obtaining a set corresponding to a classification of the obtained GIS point data, and selecting a graphic file corresponding to the obtained set; and

encapsulating the graphic file with each GIS point data in the sets corresponding to the classifications to obtain the canvas object,

characterized in that

the method further comprises steps of:

determining, when a zoom instruction is received, a degree of adjustment of image corresponding to the zoom instruction;

obtaining an original graphic size of each of the graphic files corresponding to the sets;

adjusting the original graphic size according to the degree of adjustment of image to obtain a new graphic file; and

replacing the original graphic file with the new graphic file.

2. The method according to claim 1, characterized in that, the step of continuing to obtain the further GIS point data and generating the further canvas object corresponding to the further GIS

point data by execution of the canvas object generation thread comprises steps of:

obtaining a new GIS point data from the further GIS point data in an ascending order of distance from the geographic region range by execution of the canvas object generation thread; and

generating a new canvas object according to the obtained new GIS point data.

3. The method according to claim 1, characterized in that, after the step of displaying the generated canvas object on the current screen by execution of the display thread, the method further comprises steps of:

storing the canvas object displayed on the current screen in a memory;

after the step of selecting the corresponding GIS point data according to the geographic region range, the method further comprises steps of:

determining whether the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory; and

reading the corresponding canvas object from the memory directly when the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory; or continuing to generate the canvas object corresponding to the selected GIS point data by execution of the canvas object generation thread, when the GIS point data corresponding to the geographic region range does not correspond to the canvas object stored in the memory.

4. The method according to claim 3, characterized in that, the step of determining whether the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory comprises steps of:

comparing the geographic region range with a geographic region range corresponding to a stored canvas to obtain an overlapped region;

determining whether there is a GIS point data in the overlapped region; and

extracting, if there is the GIS point data in the overlapped region, the canvas object corresponding to the GIS point data in the overlapped region from the memory and continuing to query whether there exists a canvas object corresponding to a GIS point data in an unoverlapped region in the memory.

5. The method according to claim 3, characterized in that, before the step of determining whether the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory, the method further comprises steps of:

determining whether all canvas objects corresponding to the GIS point data have been generated; and

reading the canvas objects corresponding to the GIS point data from the memory directly, if all canvas objects corresponding to the GIS point data have been generated.

6. A computer device, comprising a memory and one or a plurality of processor(s), the memory stores a computer readable instruction, that, when being executed by the one or plurality of processor(s), causes the one or plurality of processor(s) to perform following steps of:

receiving a rendering instruction that carries a geographic region range to be rendered;

selecting GIS point data corresponding to the geographic region range;

generating a canvas object corresponding to the selected GIS point data by execution of a canvas object generation thread; and

displaying the generated canvas object on a current screen by execution of a display thread, and continuing to obtain a further GIS point data and generating a further canvas object corresponding to the further GIS point data by execution of the canvas object generation thread, when or after the canvas object is displayed,

wherein the one or plurality of processor(s) is/are configured to execute the computer readable instruction to realize the step of generating the canvas object by:

classifying the obtained GIS point data according to a preset classification into provincial capital cities and non-provincial capital cities; and

obtaining a set corresponding to a classification of the obtained GIS point data, and selecting a graphic file corresponding to the obtained sets; and

encapsulating the graphic file with each GIS point data in the set corresponding to the classification to obtain the canvas object,

characterized in that

when executing the computer readable instruction, the one or plurality of processor(s) is/are

further configured to perform following steps of:

determining, when a zoom instruction is received, a degree of adjustment of image corresponding to the zoom instruction;

obtaining an original graphic size of each of the graphic files corresponding to the data sets;

adjusting the original graphic size according to the degree of adjustment of image to obtain a new graphic file; and

replacing the original graphic file with the new graphic file.

7. The computer device according to claim 6, characterized in that, the one or plurality of processor(s) is/are configured to execute the computer readable instruction to realize the step of continuing to obtain the further GIS point data and generating the further canvas object corresponding to the further GIS point data by execution of the canvas object generation thread by:

obtaining a new GIS point data from the further GIS point data in an ascending order of distance from the geographic region range by execution of the canvas object generation thread; and

generating a new canvas object according to the obtained new GIS point data.

8. The computer device according to claim 6, characterized in that, after the step of displaying the generated canvas object on the current screen by execution of the display thread, the one or plurality of processor(s) is/are further configured to execute the computer readable instruction to perform steps of:

storing the canvas object displayed on the current screen in a memory;

wherein after the step of selecting the corresponding GIS point data according to the geographic region range, the one or plurality of processor(s) is/are further configured to perform steps of:

determining whether the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory; and

reading the corresponding canvas object from the memory directly when the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the

memory; or continuing to generate the canvas object corresponding to the selected GIS point data by execution of the canvas object generation thread, when the GIS point data corresponding to the geographic region range does not correspond to the canvas object stored in the memory.

9. The computer device according to claim 8, characterized in that, the one or plurality of processor(s) is/are configured to execute the computer readable instruction to realize the step of determining whether the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory by:

comparing the geographic region range with a geographic region range corresponding to a stored canvas to obtain an overlapped region;

determining whether there is a GIS point data in the overlapped region; and

extracting, if there is the GIS point data in the overlapped region, the canvas object corresponding to the GIS point data in the overlapped region from the memory, and continuing to query whether there exists a canvas object corresponding to a GIS point data in an unoverlapped region in the memory.

10. The computer device according to claim 8, characterized in that, before the step of determining whether the GIS point data corresponding to the geographic region range corresponds to the canvas object stored in the memory, the one or plurality of processor(s) is/are further configured to execute the computer readable instruction to perform steps of:

determining whether all canvas objects corresponding to the GIS point data have been generated; and

reading the canvas objects corresponding to the GIS point data from the memory directly, if all canvas objects corresponding to the GIS point data have been generated.