

CLAIMS

1. A method for displaying ship locations on a map, the method comprising:
 - generating a database query for ship locations requested in a scatter data request received from a client device via a network, wherein the generated database query is for ship location scatter data, the ship location scatter data being Automatic Identification System (AIS) location data for one or more ships over a period of time represented as a series of points on the map;
 - optimising the database query using data warehousing and de-normalisation;
 - retrieving results of the query from a location database using the optimised database query, the results including the requested ship locations, wherein the location database contains a plurality of AIS location records and each record includes at least information identifying a ship and a location of the ship;
 - determining whether the data volume of the results of the query exceeds a predetermined threshold;
 - if the data volume of the results of the query exceeds the predetermined threshold, packaging the results of the query in one of Keyhole Markup Language (KML) and compressed KML (KMZ) format;
 - if the data volume of the results of the query does not exceed the predetermined threshold, packaging the results of the query in a geographical information system (GIS) application programming interface (API) format; and
 - sending the packaged results of the query to the client device.
2. The method according to claim 1, wherein the method is performed by a web application.
3. The method according to claim 2, wherein the web application is an application for a browser-based mapping GIS tool.
4. A system for displaying ship locations on a map, comprising:

a location database containing a plurality of Automatic Identification System (AIS) location records, each record including at least information identifying a ship and a location of the ship;
and

an application adapted to access the location database;

wherein the application is adapted to:

receive a scatter data request from a client device via a network;

generate a database query for ship locations requested in the scatter data request,
wherein the generated database query is for ship location scatter data, the ship location scatter data being AIS location data for one or more ships over a period of time represented as a series of points on the map;

optimise the database query using data warehousing and de-normalisation;

retrieve results of the query from the location database using the optimised database query, the results including the requested ship locations;

determine whether the data volume of the results of the query exceeds a predetermined threshold;

if the data volume of the results of the query exceeds the predetermined threshold, package the results of the query in one of Keyhole Markup Language (KML) and compressed KML (KMZ) format;

if the data volume of the results of the query does not exceed the predetermined threshold, package the results of the query in a geographical information system (GIS) application programming interface (API) format; and

send the packaged results of the query to the client device.

5. The system according to claim 4, wherein the application is a web application.

6. The system according to claim 5, wherein the web application is an application for a browser-based mapping GIS tool.

7. The system of one of claims 4 to 6 further comprising the client device, wherein the client device is adapted to:

generate the scatter data request based on information entered into the client device by a user;

send the scatter data request to the application via the network;
receive the packaged results of the query from the application via the network; and
render the packaged results of the query as a map to be viewed by the user.

8. The system of claim 7, wherein the client device includes a browser and the browser is adapted to generate the scatter data request and render the packaged results of the query.