CLAIMS

What is claimed is:

1. A method of operating a server processing system for a map service, the server processing system coupled via a network to a client processing system and to a display device, the server processing system of the map service further coupled to a map service repository that maintains surveys, the method comprising:

receiving from the client processing system an API determined at the map service server processing system or at a second server processing system, the API being for a set of one or more areas, the set defined by a user, each area having an associated area of interest (“AOI”) and one or more associated dates;

querying AOIs and associated date ranges maintained in the map service repository, the querying including, for each area of the API, and for each AOI of said each area of the API, starting with a first AOI and continuing with the next AOI until all AOIs of all areas have been queried, finding surveys in the map service depository that intersect with the AOI and that have dates within the AOI’s associated date range of each area, and

generating and sending to the client processing system metadata that provides one or more respective map-display APIs for one or more respective areas in the set such that using any one of the provided respective map-display APIs obtains map imagery of the respective area of the one map-display API on the display device,

wherein the client processing system acts as a map service client for the map service, and

wherein said finding surveys causes the generated and sent metadata to be automatically updated by taking into account any new surveys made available in the service repository prior to the querying of the AOIs and associated data ranges.

2. The method of claim 1, further comprising:

accepting a getmap request or gettile request from the map service client, the getmap request or gettile request generated at the map service client from the metadata,

querying the service repository and creating a map image; and

sending the map image to the display device, the display device consequently displaying the map image.

3. The method of claim 1,

wherein the set defined by the user is for a user defined service for the set including a service name for the user defined service using a user-specified naming convention for services,

wherein each area of the user-defined service has a named associated AOI, and

wherein the one or more associated dates being a single associated date or an associated range of dates.

4. The method of claim 1, wherein each date includes a time of day.

5. The method of claim 1,

wherein the map service client is a Web Map Service (WMS) client, the map service is a WMS service, the map service server is a WMS server, and the determined API is in the form of a URL usable by the WMS client as a GetCapabilities request.

6. The method of claim 5,

wherein the metadata is in the form of an XML structure that provides the one or more respective map-display APIs,

wherein each respective map-display API is a respective URL for a WMS GetMap request,

such the determined API provides a mechanism for the WMS client to request and obtain from the WMS server responsive to the request metadata that provides one or more respective map-display APIs for each area to obtain map imagery using the provided respective map-display API.

7. The method of claim 1,

wherein the determined API is in the form an API template for the set, and the map service client populates the API template to form a populated API template.

8. The method of claim 7,

wherein the map service is a tiled map service,

wherein the populated API template is received by the map service server processing system,

wherein the provided one or more respective map-display APIs are for one or more respective areas in the set, and wherein using any one of the tiled map-display APIs obtains tiled map imagery of the respective area of the one tiled map display API.

9. The method of claim 8,

wherein the map service client is a Web Map Tile Service (WMTS) client,

wherein the map service server is a WMTS server,

wherein the populated API is in the form of a URL usable by the WMTS client as a GetCapabilities request,

wherein the metadata is in the form an XML structure that provides the one or more respective tiled map-display APIs, and

wherein each respective is a respective URL for a WMTS GetTile request.

10. The method of claim 8,

wherein the map service client is a Tile Map Service (TMS) client, and wherein the map service server is a TMS server, wherein the API template is in the form of a URL template,

wherein the TMS server receives the populated URL template and forms one or more tiled map-display APIs for one or more respective areas in the set,

wherein each of the one or more tiled map-display APIs is in the form of a respective URL for a TMS tiled map display request usable to obtain tiled map imagery.

11. The method of claim 1, wherein each area has one or more user-generated associated filters.

12. A processing system coupled via a network to a client processing system and coupled to a display device, the processing system comprising:

one or more processors; and

a storage subsystem comprising one or more non-transitory storage devices,

the processing system coupled to a map service repository that maintains surveys,

the storage subsystem including program instructions that when executed cause the processing system to operate as a map service server for a map service, to carry out the method of any one of claims 1 to 11.

13. A non-transitory machine-readable medium comprising instructions for processing a system for a map service, the processing system coupled via a network to a client processing system and to a display device, the processing system of the map service further coupled to

a map service repository that maintains surveys, the instructions when executed cause carrying out a method as recited in any one of claims 1 to 11.