

GeoGratis is the name of Natural Resources Canada's web portal for open geospatial data and services. GeoGratis offers a diversity of data through multiple facilities. One of the important facilities is the [GeoGratis API](#), which is an Atom Publishing Protocol service, offering a catalogue of ISO 19115 Metadata – North American Profile metadata records linking to hundreds of thousands of open data sets.

The GeoGratis API uses a hypermedia approach to delivery of linked geospatial data. The core formats are extended from the standard AtomPub hypermedia formats. Each resource is offered in multiple formats either via standard content negotiation or via typed links to API query resources which are programmed to return the advertised format. Supported formats include the 'native' XML-based formats of AtomPub, as well as JSON, KML, ISO 19115 XML, RSS and of course HTML.

It is the latter format that is the dominant format in the world today, and it is the format that provides proof of the simplicity and interoperability of the architectural style of the Web, that is to say, Representational State Transfer, or "REST."

In designing the GeoGratis API, having attempted (and hopefully, succeeded) to tightly adhere to the constraints by which REST is defined, it has become clear that the benefit of the style will be realized through having a hypermedia format as 'community property'. In other words, the benefits of REST arise because REST-based hypermedia formats encourage, or even require, the loose coupling of clients and servers established through community-based hypermedia (and other) specifications.

In order to achieve such loose coupling, and hence success similar to that of HTML at global scale, 'linked geospatial data' SHOULD follow the hypermedia path, by defining a geospatially semantic format informed by REST. Based on the experience of developing the GeoGratis API, a namespace-free combination or integration of the Atom Publishing Protocol formats and OGC Geography Markup Language seems ideal.

In order to realize the full value and potential of linked geospatial data, the HTML Web SHOULD be extended to enable simple authoring and visualization of linked geospatial data as mashable, programmable maps via a platform-provided API, such as an extended DOM.

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