

Limitations to use of OGC spatial web services

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Maps for the Web, September 2020

- The Discovery Problem
- GeoSeer
- Thoughts/Conclusions

The Discovery Problem

- **WMS** (Web Map Service)
 - Serves pre-rendered, pre-styled maps
 - 1.0 – April 2000
 - 1.3.0 (latest) – March 2006
- **WMTS** (Web Map Tile Service)
 - Serves pre-rendered, pre-styled maps tiles
 - For Basemaps
 - 1.0.0 (only) – April 2010
- **WFS** (Web Feature Service)
 - Serves raw vector data
 - 1.0.0 – May 2002
 - 2.0.2 (latest) – March 2014
- **WCS** (Web Coverage Service)
 - Serves raw raster data
 - 1.0.0 – Oct 2005
 - 2.1 (latest) – August 2018

Portal Type	Number	Appx. Number of Services
CKAN	194 Instances	10,000*
CSW	151 Instances	21,000
http://opendata.arcgis.com	-	800
http://inspire-geoportal.ec.europa.eu	-	13,000+
Spatineo	-	36,000
GeoSeer	-	186,170

Table shows the **approximate** number of live distinct Services that can be found within a certain data-portal or type of data-portal

* Over a third of these are the US NOAA

+ Over half of these are one German Agency (www.geoportal.rlp.de)

(Data from June 2019)

GeoSeer

GeoSeer

The spatial data search engine

Search over **1.8 million** distinct spatial GIS **WMS** (Web Map Service), **WFS** (Web Feature Service), **WCS** (Web Coverage Service), and **WMTS** (Web Map Tile Service) datasets hosted on over **220,000 live services** from around the world.

Search Tips

British Columbia or **geology Australia** or **rivers Asia** - Search spatially.

tree preservation 27700 - Include an EPSG code to prefer results in that projection.

arbol Spain - Not all layers are in English, try the official language.

wcs Germany chart - Search for a specific service (**wcs**, **wmts**, **wfs**, **wms**). We'd suggest only including one service in a search.

York - "New York" - Standard search features are supported too. *Exact phrase searching* (wrap with ") and *exclude* (prefix with -)

wms (Alps | Himalayas) - Boolean logic - by default GeoSeer puts an *AND* between all your search terms meaning **all terms are mandatory** in the result. You can use *OR* with the pipe: | instead to expand the search results, and brackets () for grouping.

Latest blog post: [2020-06-04 - What's the most deployed geospatial server software?](#)

Blog [RSS Feed](#) 

GetCapabilities Documents

```

<?xml version="1.0" encoding="UTF-8"?><WMS_Capabilities xmlns:inspire_vs="http://inspire.ec.europa.eu/
schemas/inspire_vs/1.0" xmlns:inspire_common="http://inspire.ec.europa.eu/schemas/common/1.0"
version="1.3.0" updateSequence="82548" xmlns="http://www.opengis.net/wms" xmlns:xlink="http://
www.w3.org/1999/xlink" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://
www.opengis.net/wms http://msmap1.atkinsgeospatial.com:8080/geoserver/schemas/wms/1.3.0/
capabilities_1_3_0.xsd http://inspire.ec.europa.eu/schemas/inspire_vs/1.0 http://inspire.ec.europa.eu/
schemas/inspire_vs/1.0/inspire_vs.xsd">
  <Service>
    <Name>WMS</Name>
    <Title>Scottish Government - Marine Scotland Maps - Web Map Service</Title>
    <Abstract>An OGC compliant Web Map Server used to deliver spatial data to the National Marine Plan
Interactive (NMPi) web mapping application and associated services. If using this service in desktop GIS,
you must ensure you have appropriate licences for any layers.</Abstract>
    <KeywordList>
      <Keyword>WFS</Keyword>
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      <Keyword>GEOSERVER</Keyword>
      <Keyword>MARINE</Keyword>
      <Keyword>SCOTLAND</Keyword>
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      <Keyword>NATIONAL</Keyword>
      <Keyword>PLAN</Keyword>
    </KeywordList>
    <OnlineResource xlink:type="simple" xlink:href="http://wms.marine.gov.scot"/>
    <ContactInformation>
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        <Address>1A(S), Victoria Quay</Address>
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        <StateOrProvince/>
        <PostCode>EH6 6QQ</PostCode>
        <Country>Scotland</Country>
      </ContactAddress>
      <ContactVoiceTelephone>0131 244 7479</ContactVoiceTelephone>
      <ContactFacsimileTelephone>0131 244 7163</ContactFacsimileTelephone>
      <ContactElectronicMailAddress>marinescotland@gov.scot</ContactElectronicMailAddress>
    </ContactInformation>
    <Fees>NONE</Fees>
    <AccessConstraints>This view service is provided for Marine Scotland Maps (maps.marine.gov.scot).
Consult Marine Scotland Information (marine.gov.scot) and metadata for licensing information</

```


	GeoSeer	CKAN	CSW
Number of Hosts	5,002	259 (5.18%)	461 (9.22%)
Number of Services	215,699	7,783 (3.61%)	7,971 (3.7%)
Number of Datasets	2,044,644	65,959 (3.23%)	130,065 (6.36%)

Only includes hosts/services/datasets that were live in December 2019.

Note: CKAN numbers *exclude* the USA' data.gov CKAN portal because their API is different from the other 190 out there.

From: https://www.geoseer.net/blog/?p=2020-01-10_dataportal_problems

Dataset Metadata - Abstracts

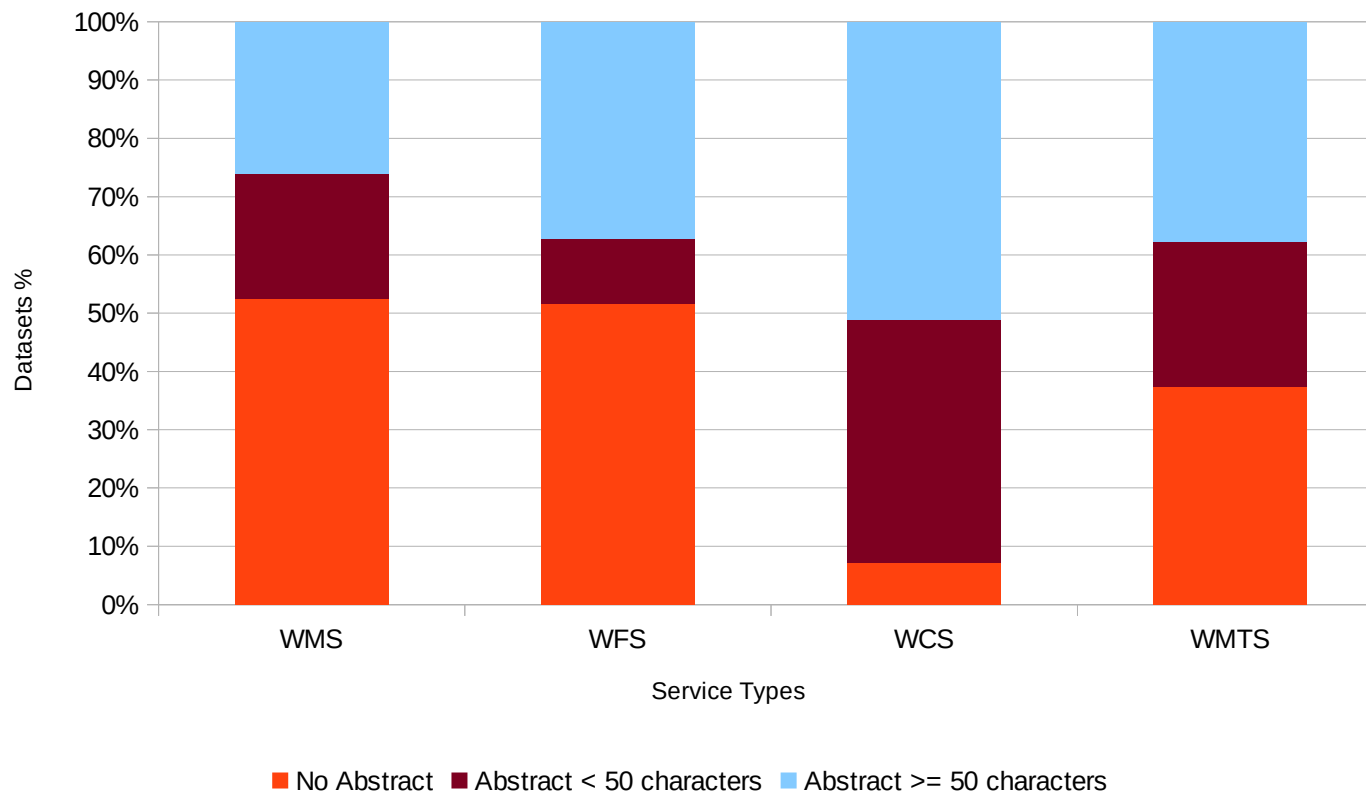
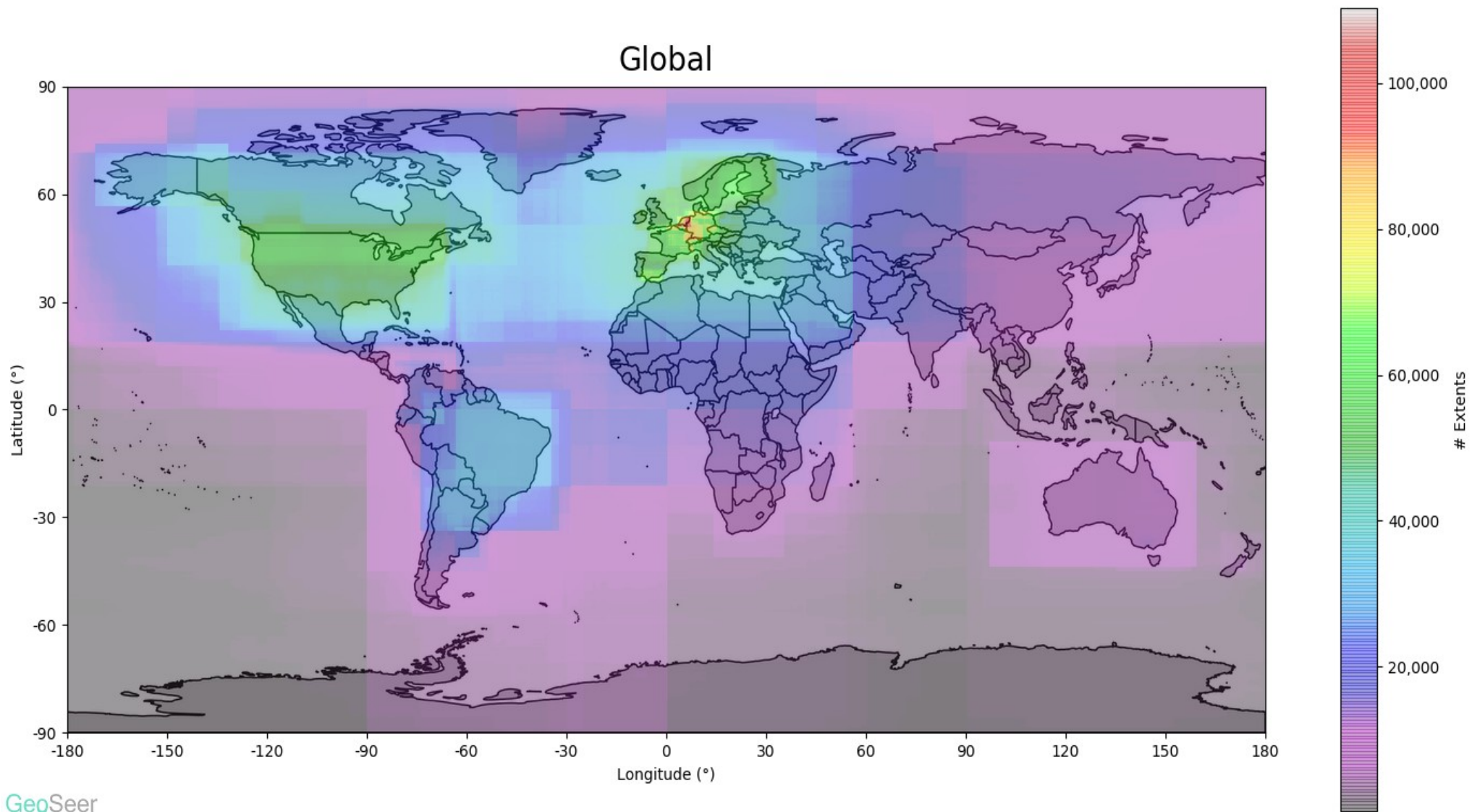


Table showing Dataset percentages with meaningful abstracts, grouped by Service Type



More @ <https://www.geoseer.net/stats/extents.php>

GeoSeer Usage

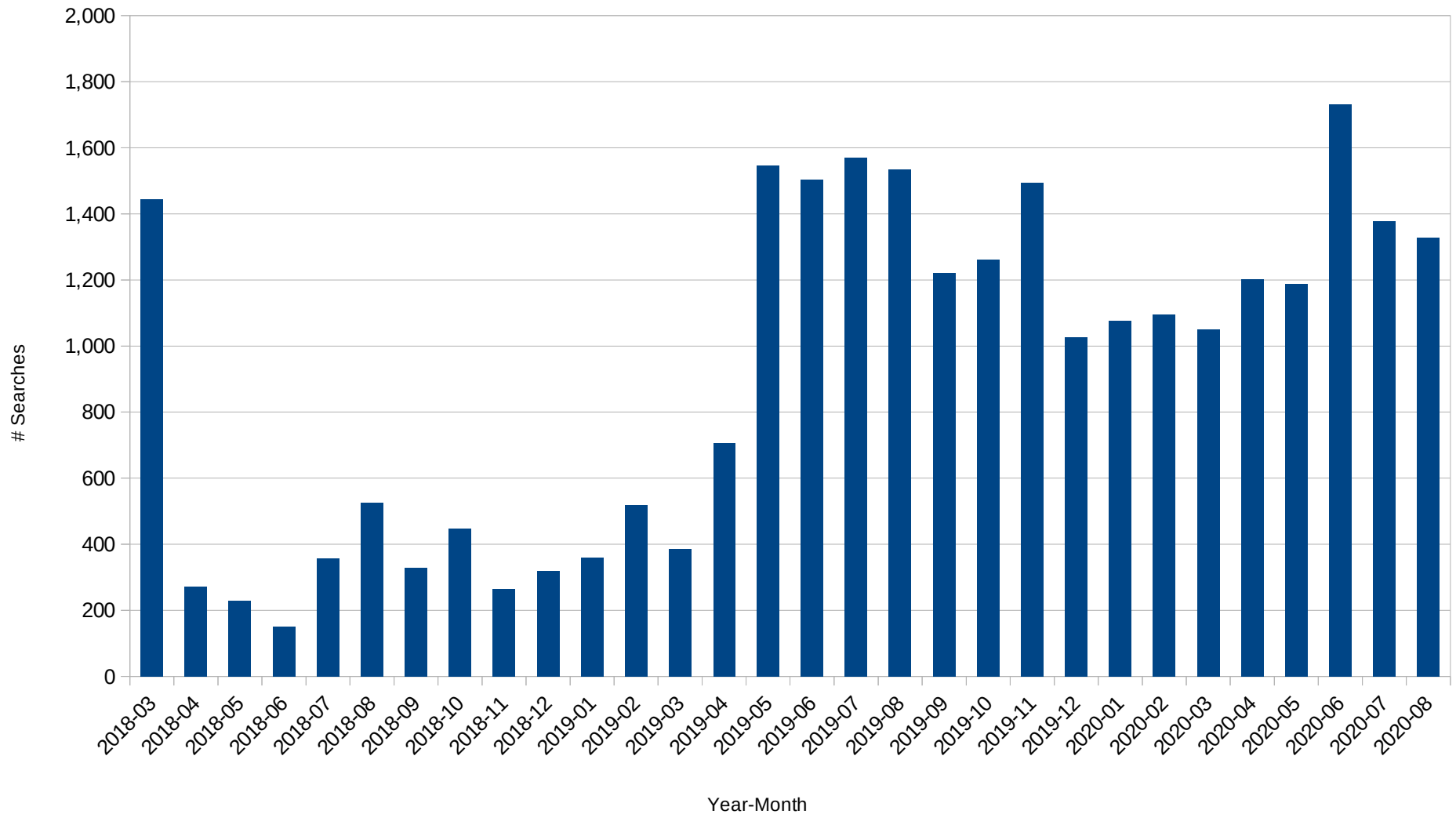


Table showing number of GeoSeer web searches
(Note: completely free)

Thoughts/Conclusions

- People are terrible at filling in metadata
- Little call for service/data discovery
- Federation of data portals = too many to be useful
- Question: How many services exist to “share”?
How many just for host data for own portals?

Questions, Comments, etc. Welcome!

GeoSpatial Web Service Search Engine:
www.geoseer.net

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