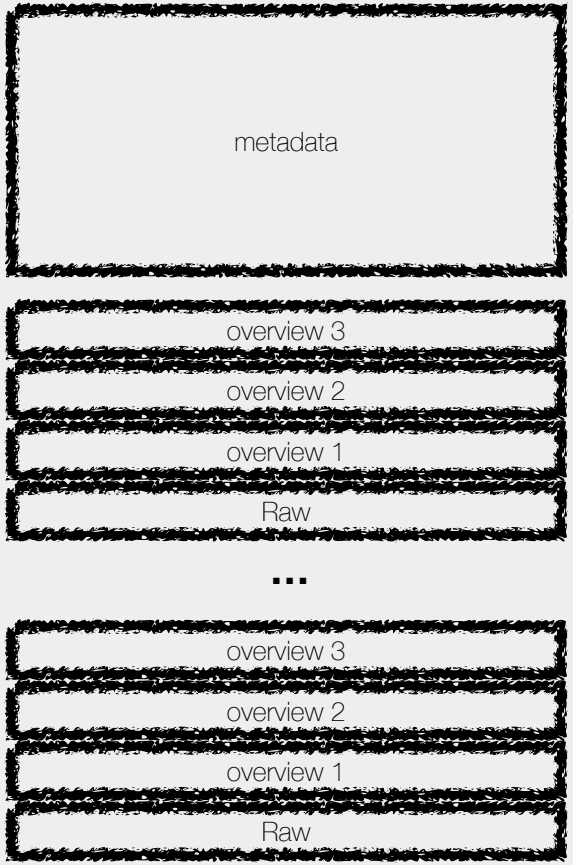

COG / STAC
Store and share Remote Sensing data
developmentSEED
Jan 2020

COG aka **COGEO** aka **Cloud Optimized GeoTIFF**

Definition

« A cloud optimized GeoTIFF is a regular GeoTIFF file, aimed at being hosted on a HTTP file server, **whose internal organization is friendly for consumption** by clients issuing HTTP GET range request ("bytes: start_offset-end_offset" HTTP header). »

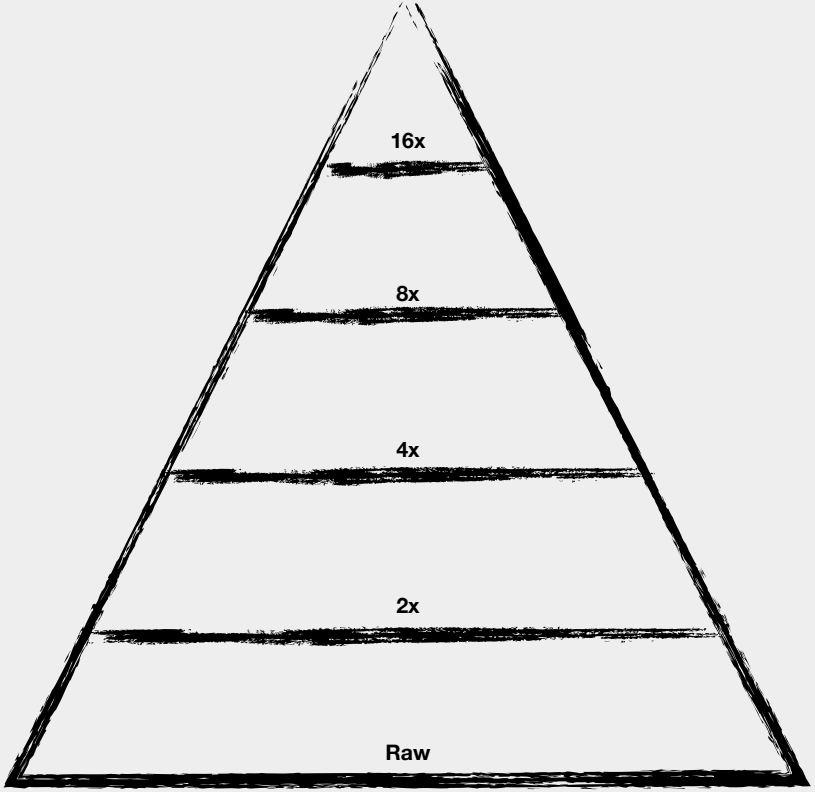
https://github.com/cogeotiff/cog-spec/blob/master/spec.md



developmentSEED

Features

- Metadata header
- Internal tiling
- Internal overviews



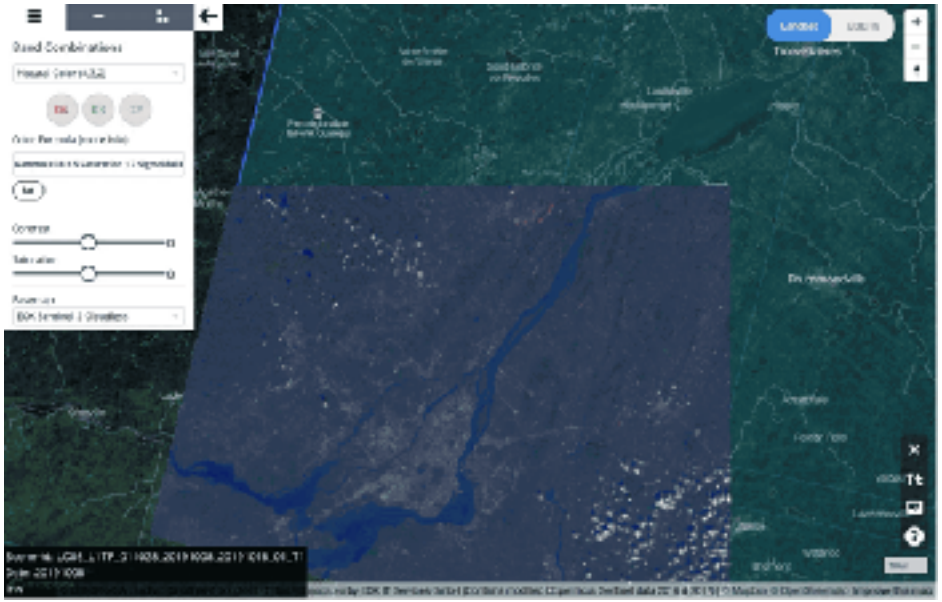
developmentSEED

Storage and fast access

- Reduce data transfer (compression + Range Request)
- Fast preview (with overviews)

Dynamic Tiling

- Create Web Map tiles from COG
- Allow user interaction with RAW data
- Ease ML processing



developmentSEED

Create and Validate

*$ pip instal **rio-cogeo***

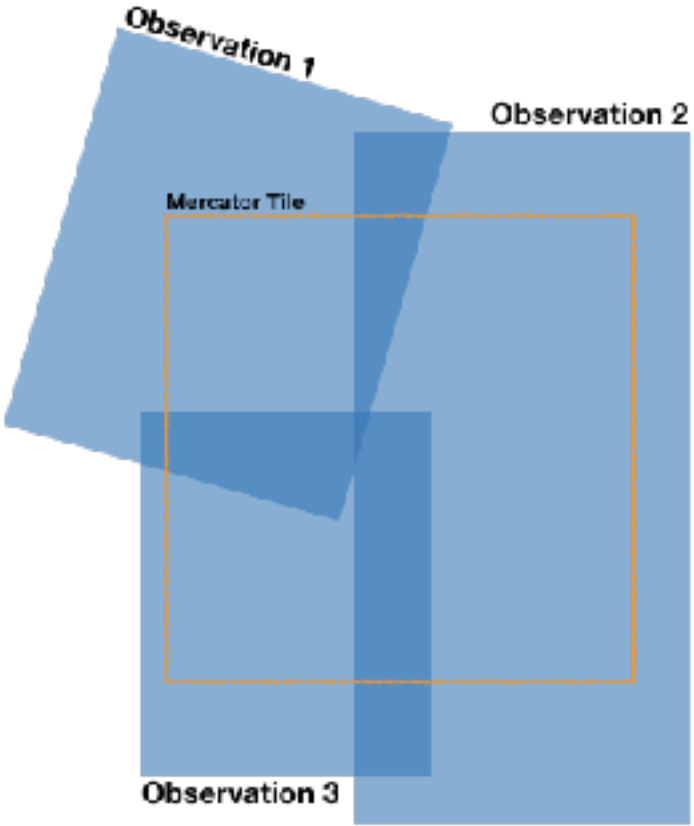
$ rio cogeo create my_file.tif my_cog.tif

$ rio cogeo validate my_cog.tif

https://github.com/cogeotiff/rio-cogeo

{ mosaic }

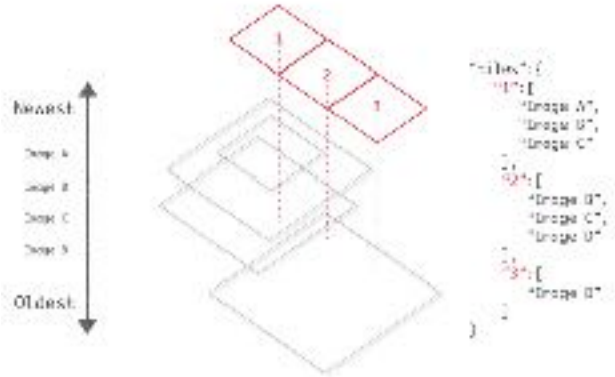
- mosaicJSON specification
- Spatial and temporal representation of a set of COG

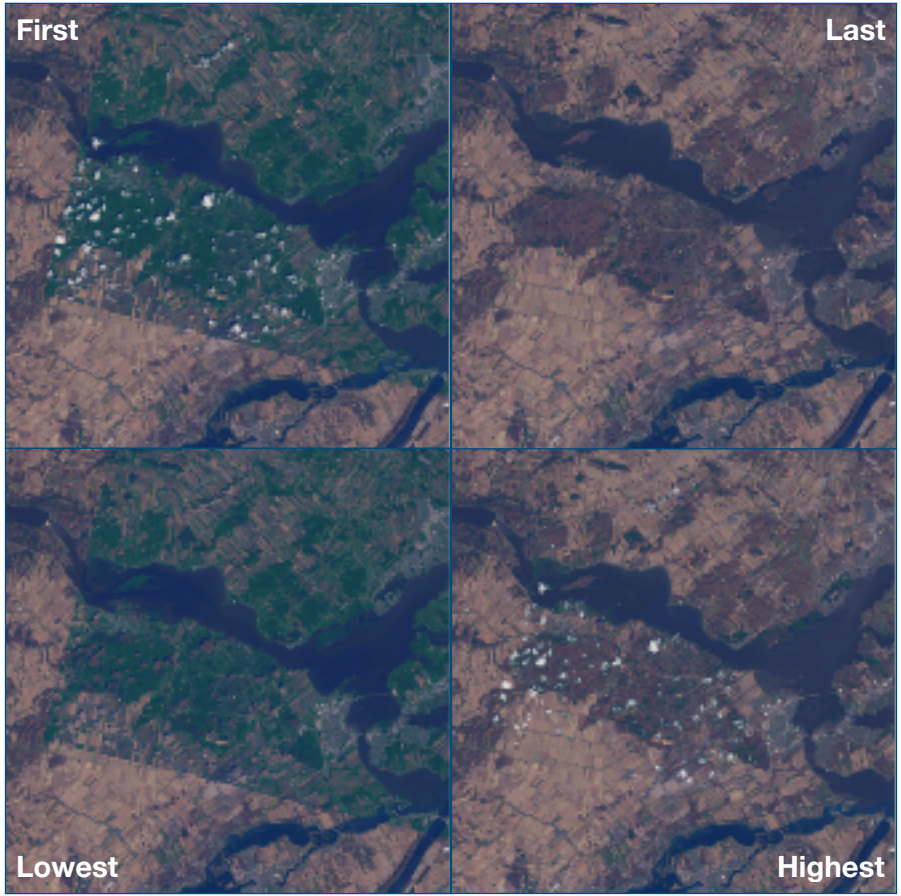


https://github.com/developmentseed/mosaicjson-spec

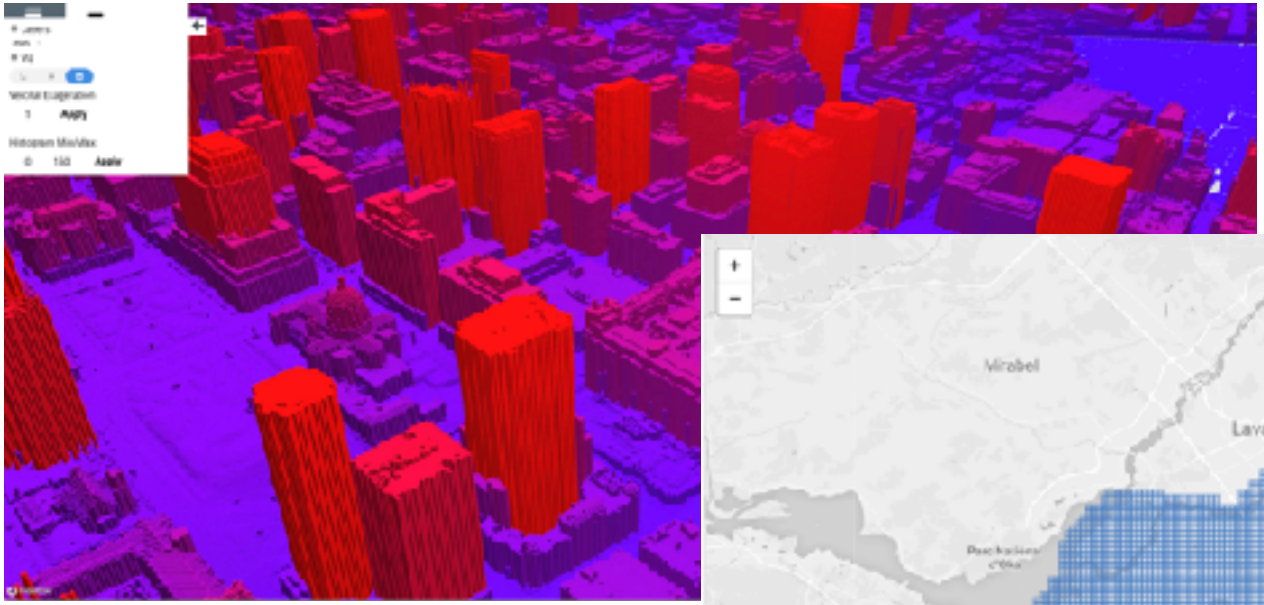
{ mosaic }

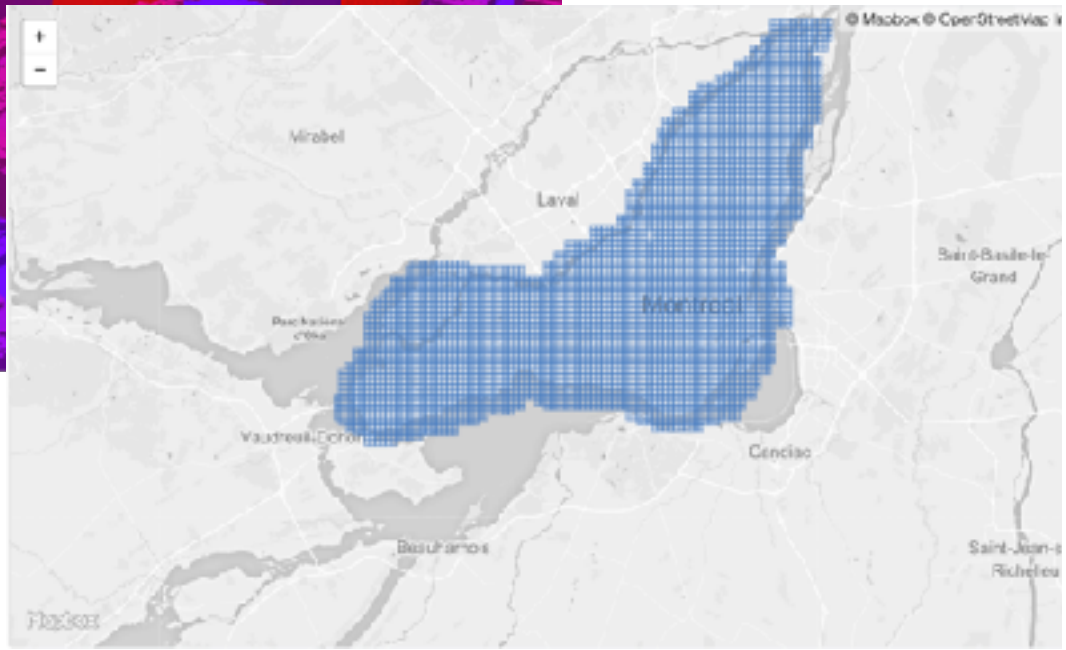
- Pixel selection on the fly
- Made for dynamic tiling





developmentSEED





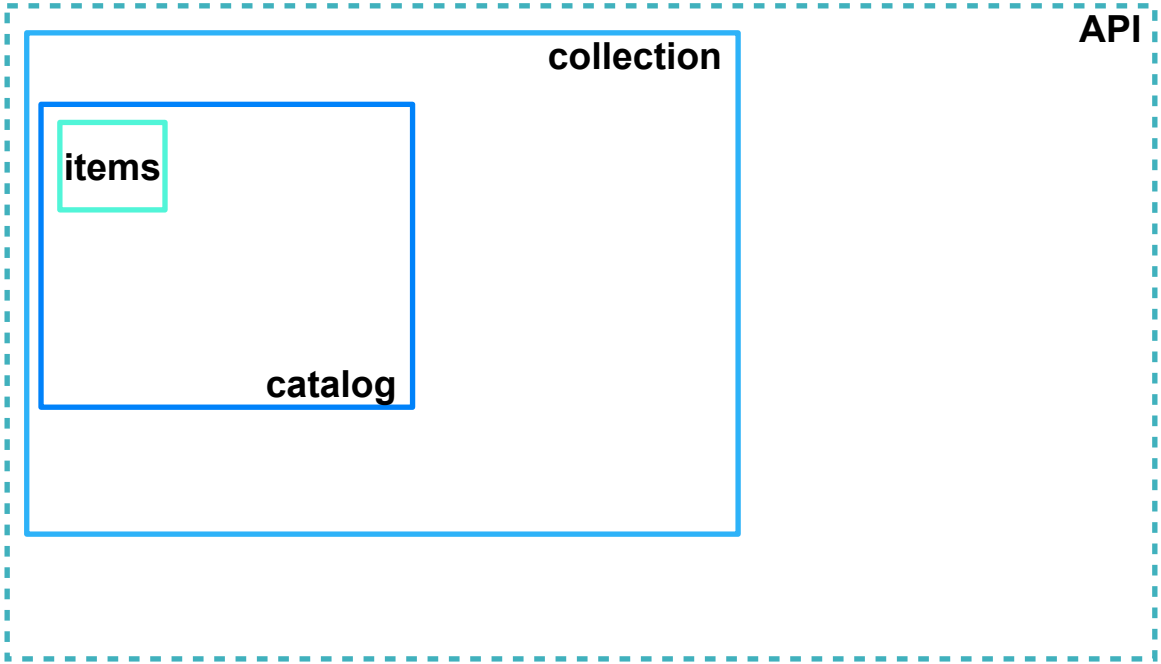
https://bl.ocks.org/vincentsarago/517590c8e738afa98758db2957cee44b

ABoVe: 31 Bands = 31 Years

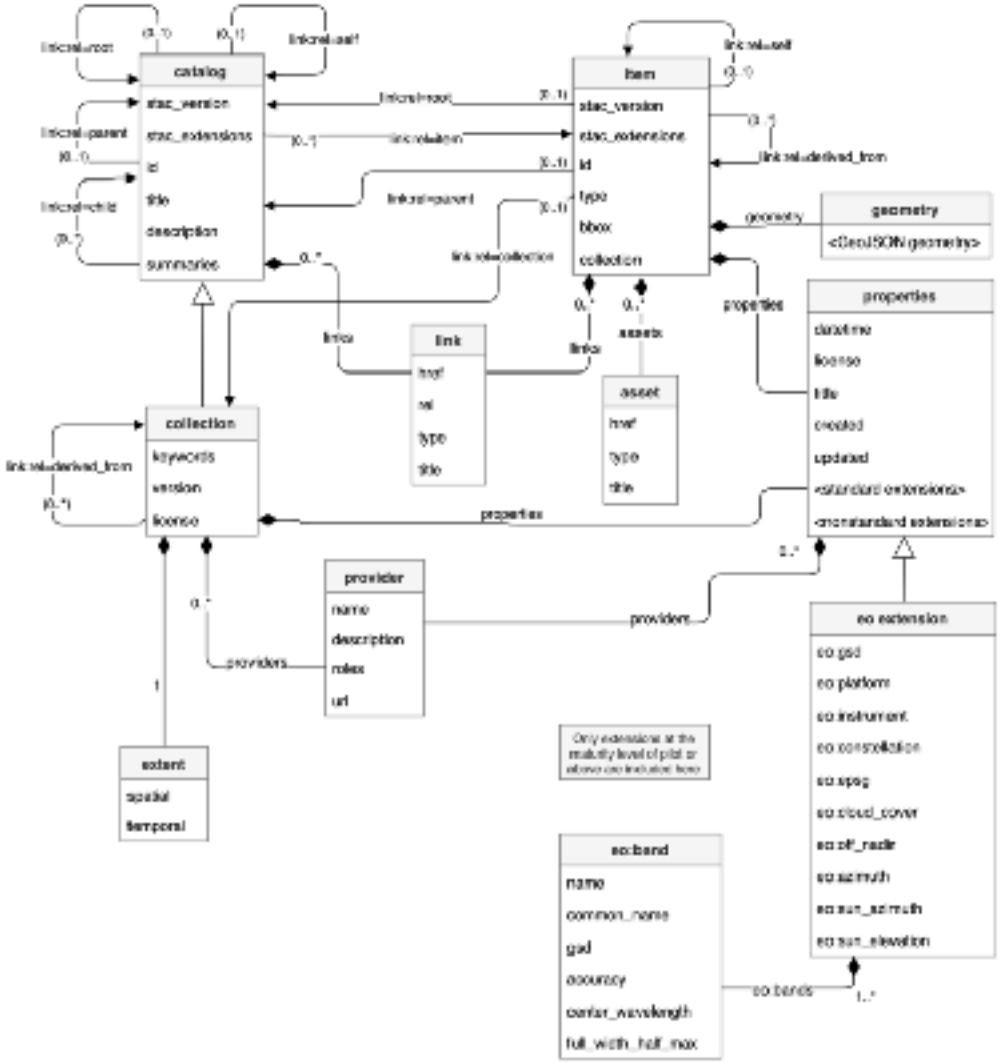
STAC aka SpatioTemporal Asset Catalog

development SEED

A specification for Db and API



https://github.com/radiantearth/stac-spec



developmentSEED

SpatioTemporal Asset Catalog

GeoJSON

$ curl https://sat-api.developmentseed.org/stac/search | jq -r