

# SpatioTemporal Asset Catalogs (STAC)

# Why STAC?



```
2926     colorCorrections:
2927       $ref: '#/definitions/ColorCorrection'
2928   OutputExportDefinition:
2929     type: object
2930     properties:
2931       rasterSize:
2932         type: integer
2933         description: desired tiff size after export
2934       crs:
2935         type: integer
2936         description: epsg projection code
2937       stitch:
2938         type: boolean
2939         description: stitch tiles into a single geotiff if possible
2940       crop:
2941         type: boolean
2942         description: crop stitched raster by provided mask if possible
2943       source:
2944         type: string
2945         format: uuid
2946         description: output export path
2947       render:
2948         $ref: '#/definitions/Render'
2949       dropboxCredential:
2950         type: string
2951         description: Dropbox token
2952   Render:
2953     type: object
2954     properties:
2955       operation:
2956         type: string
2957         description: currently useless Field
2958     bands:
2959       type: array
2960       description: bands in the exported geotiffs
2961       items:
2962         type: integer
```

organization	UUID for organization to filter by
string(\$uuid)	
(query)	
maxCloudCover	Only return results with cloud cover less than this number
number	
(query)	
minCloudCover	Only return results with cloud cover greater than this number
number	
(query)	
minAcquisitionDatetime	Only return results acquired after this datetime
string(\$datetime)	
(query)	
maxAcquisitionDatetime	Only return results acquired before this datetime
string(\$datetime)	
(query)	
minCreateDatetime	Only return results created after this datetime
string(\$datetime)	
(query)	
maxCreateDatetime	Only return results created before this datetime
string(\$datetime)	
(query)	
datasource	Only return results belonging to this datasource
array[string]	
(query)	
month	Only return results from this month

What is  
STAC?



## What is it?

- SpatioTemporal Asset Catalogs
- Language for geospatial catalogs and assets
- Focus on search and discovery
- Simple + Extensible
- Static catalogs and HTTP APIs



## What is not?

- Full-fledged metadata standard
- Single source of truth
- Covering all kind of datasets
- Replacement for ISO 19115, OGC CSW, ...



## The specification

- Catalogs
- Collections
- Items
- API
- all 1.0.0 except API (rc.1)
  - Primarily waiting for OGC API extensions to mature  
[so we moved them out of core](#)





## Catalogs and Collections

- Catalogs
  - Mostly for static
  - Basic grouping for Items, Catalogs and Collections (instead of pagination)
- Collections
  - Is a Catalog with rich metadata
  - e.g. Sentinel-2 L2A



## Items and Assets

- Items
  - A single scene or set of datafiles for a specific location at a specific date and time (or interval)
- Asset
  - A single data file for download



## Item Properties

- Core (Common Metadata)
  - datetime
  - created
  - updated
  - platform
  - instruments
  - constellation
  - mission
  - gsd
  - [...](#)
- Extensions (45+)
  - EO
  - Label (ML)
  - Point Cloud
  - Projection
  - SAR
  - Sat
  - Scientific
  - View
  - [...](#)



## API

- HTTP JSON API
- Discovery
- Search
- Extensible
- OGC API – Features based
  - aligned with many extensions, too



## STAC Index

<https://stacindex.org>

- Ecosystem tools
- Catalogs
- Tutorials / learning resources



**Questions?**

**Hand on!**