

# Ideas on Time Series Online Data Access

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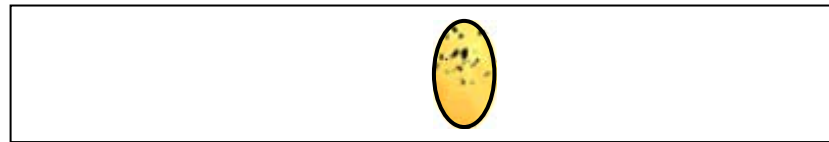
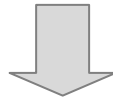
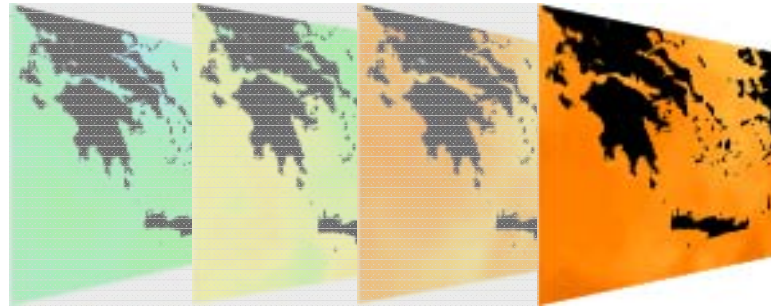
# Examples for EO Data Time Series

- Regular systematic acquisition
  - geostationary platforms
  - e.g. MSG: one full product every 15 minutes
- Aggregation of L2 products to composites
  - daily composites (aggregating all products of one day)
  - e.g. low/medium resolution optical (NOAA AVHRR, MODIS) with minimized cloud cover
  - e.g. daily coverages of atmospheric spectrometers (ENVISAT/SCIA, MeTop/GOME2)
- Assimilation of L2 products to full coverages
  - daily, weekly, monthly, seasonal full coverages
  - e.g. derived vegetation index, surface temperatures, atmospheric trace gas
- Subscriptions for regional monitoring
  - frequently repeated (but temporally irregular, with high spatial resolution) acquisitions on restricted geographic area
  - low orbit or airborne platforms

# Expectations for Online Data Access on Time Series

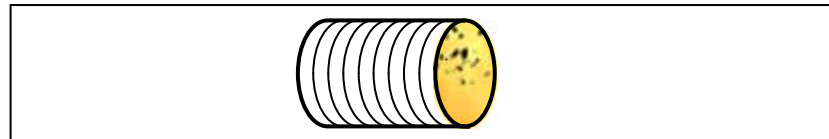
- Reference systems including the time dimension
- Data formats with time dimension support (combination of geo and video?)
- WCS supporting the retrieval of time series in one step, e.g.
  - GetCapabilities returning also time resolution and time coverage of dataset
  - GetCoverage request parameters: dataset, spatial selection, temporal selection as
    - point in time
    - time range (startTime, stopTime)
    - regular intervals (startTime, stopTime, repetition)
    - calendar intervals (startTime, day/week/month/..., repetition)
    - irregular intervals ((start, stop), (start, stop), ...)
- Extension: moving target support (e.g. iceberg/ship motion monitoring, ocean currents monitoring) via 3D vector track for spatio-temporal selection
- Computation of spatial and temporal aggregations/assimilations usually requires domain expert knowledge and therefore is not expected to be supported by WCS

# WCS GetCoverage Request on Time Series

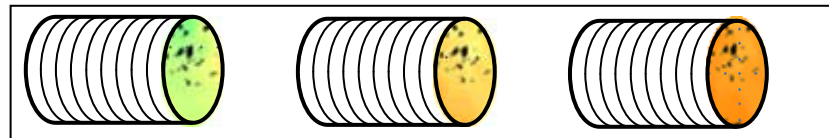


GetCoverage request for

➤ point in time

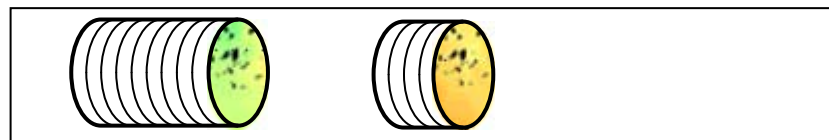


➤ time range



➤ regular intervals

➤ calendar intervals



➤ irregular intervals