EO use cases & services needs

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Contents

- EO use cases
- Extensions to HEPCAL basics

Use cases

- Complementary with the ones defined in HEPCAL.

- 11 extra use cases identified

- Possible overlap with other use cases (open for discussion)

- Modeled according HEPCAL doc.

- See the document for the details
  (see the AWG agenda)

Note:

EO community is very large;

More discussion on use cases in the EO domain are needed

Extensions to HEPCAL basics

- Actors: "**Consumer**"

- Jobs:
  - **NRT job**:
    needs to be finished within x time after input data is available.

  - **Time constraint job**
    needs to be finished before y time

  - **Parallel job (e.g. MPI)**

Extension to HEPCAL basics

Logical Collection definition:

- Any user defined collection of files
  on which a user can perform middleware commands
  (e.g. register, unregister, replicate, delete)
- A Logical Collection can be a DS (see use case)

Security: should be defined more clearly by AWG in separate micro use cases (ACLs, VOMS)

Priority list of requirements must be fit in somewhere

Backup slides

Earth Observation use case

GOAL :

The processing, archiving and validation of GOME ozone profile products using two different algorithms and ground based measurements for validation form the basis of this use case.

This use case is an example of common EO data usage and EO science: the 'raw' data is processed into products, using different algorithms. The outcome is then validated using ground-based measurements.

Earth Observation Use Case

Raw satellite data
from the GOME instrument
(~75 Gb - ~5000 orbits/y)

Level 1

(example of 1 day total O_3)

LIDAR
data (7 stations,
2.5Mb per month)

ESA(IT) – KNMI(NL)
Processing of raw GOME
data to ozone profiles.
2 alternative algorithms
~28000 profiles/day

IPSL(FR)
Validate some of the
GOME ozone profiles (~10^6/y)
Coincident in space and time
with
Ground-Based measurements

Level 2

**DataGrid
environment**

Visualization
& Analyze

Lidar
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