Geophysical Research Abstracts
Vol. 14, EGU2012-11286, 2012
EGU General Assembly 2012

Architecture analysis for European Long-Term Archiving EO systems

I. Garcia Gil (1), R. Perez Moreno (2), O. Perez Navarro (3), and R. Leone (4)

(1) GMV, Madrid, Spain (igarcia@gmv.com), (2) GMV, Madrid, Spain (rfperez@gmv.com), (3) GMV, Madrid, Spain (operez@gmv.com), (4) ESA-ESRIN, Frascati, Italy (Rosemarie.Leone@esa.int)

Over the last ten years there has been a strongly increased need for access to historical Earth Observation (EO) data series, mainly for long term science and environmental monitoring applications. As the contents of EO space data archives increases from a few years duration to a period of decades their scientific values increases dramatically.

The main objective of this Long Term Data Preservation(LTDP) initiative is to guarantee the long term preservation of the data from all EO ESA and Third Parties ESA managed missions, while also ensuring their accessibility and usability, as part of a joint and cooperative approach in Europe aimed at preserving the EO European data from member states' missions.

To allow the maximum value to be extracted from the data, it is well recognized that there is a need to preserve this data without time limitations, while keeping all archived data accessible and exploitable. This will be even more of a challenge in the coming years, as the large number of upcoming Earth Observation missions will lead to a major increase in the available volume of EO data

The LTDP Impact Analysis and Architecture Definition project (for simplicity known as LTDP-IMPACTS) aims to define and consolidate the architecture of European Long-Term Archiving EO systems, especially in the context of ESA PDGS.

To do this, we shall perform a complete assessment of the impacts of implementing the guidelines from the LTDP initiative. This assessment will be over all timescales, short, middle and long-term, and must take into account all systems involved, from the point of view of "System of System" (SoS), and their data flows, data sets and their related operational policies for LTDP implementation

The LTDP guidelines, and the standards adopted as a result, will have various impacts on the legacy and future long term archiving systems, the systems used to access them, and on the overall operational concept. This will particularly apply to the ESA PDGS environment.

The definition of the architecture is linked to the study of the operational concept, so another driver for the architecture definition will be minimizing the cost for long-term operations, both at European and ESA PDGS level.