



CGMS-35 EUM-WP-18
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Prepared by EUMETSAT
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Discussed in WG II

OAIS-RM and EUMETSAT UMARF

In response to CGMS action 34.19

Summary of the Working Paper

CGMS Action 34.19 invites CGMS members to explore the potential of the Open Archival Information System Reference Model (OAIS-RM) as a framework for long-term satellite information preservation for enhancing interoperability of current, future, and historical data sets, as well as for the GEOSS interoperability, and to report at CGMS 35 accordingly.

This document indicates how well the OAIS-RM maps to the EUMETSAT Centralised Archiving System.

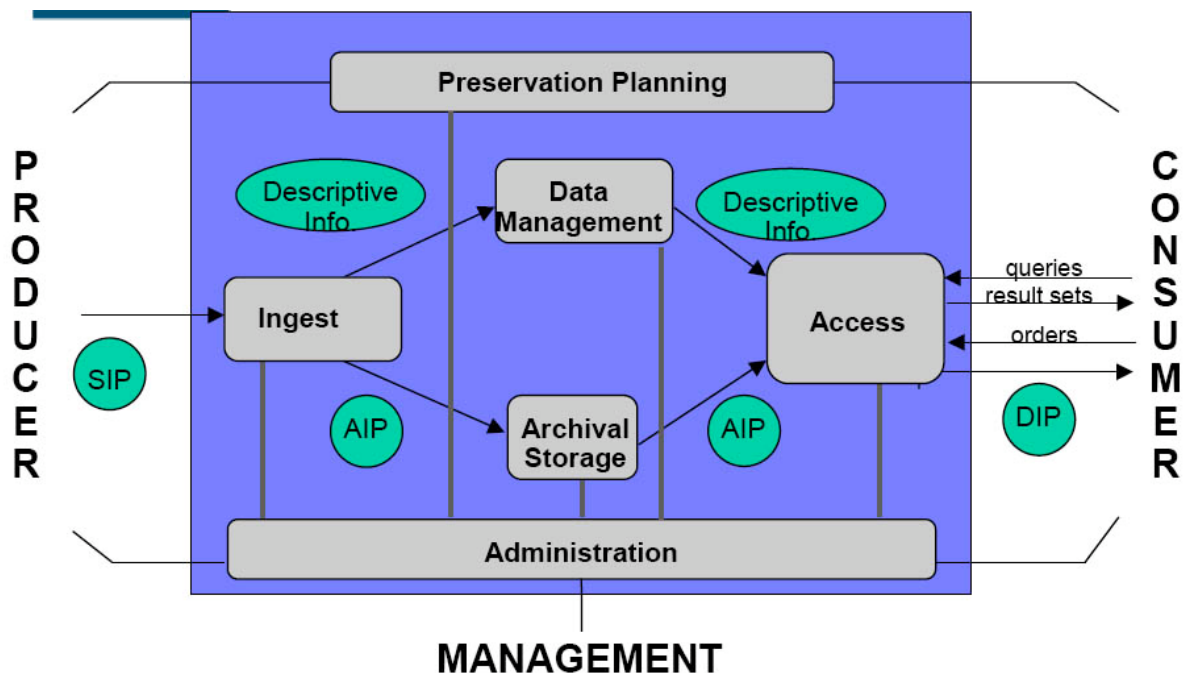
CGMS Members are invited to take note.

OAIS-RM and EUMETSAT UMARF

1 INTRODUCTION

The OAIS-RM [1] is designed as a conceptual framework for the understanding and increased awareness of archival concepts needed for Long Term digital preservation and access. The OAIS-RM is both a CCSDS recommendation and an ISO standard. The reference model detailed within the referenced document does not specify a design or implementation and allows actual implementations to group or break down functionality differently.

The figure below contains the six functional entities of the OAIS functional model.



Four of the above functional entities can be seen as vital functions associated with software functionality associated of an operational archive:

- Ingest
- Archival Storage
- Data Management
- Administration

2 The mapping of the EUMETSAT UMARF to the OAIS-RM

The EUMETSAT Unified Meteorological Archive Facility (UMARF) has been designed in a modular way mapping nicely to the OAIS-RM. The functionality required by the above four entities can be found in the UMARF design and architecture.

The requirements to the administration entity are covered by software providing reporting/ monitoring capabilities, as well as organisational wide standards for engineering and quality assurance.

The preservation planning is covered within mid term evolution plans of the organisation and tasks ensuring the preservation of data.

Aspects and importance of archive interoperability and federation is understood by EUMETSAT. Standards such as OGC, ISO or Dublin Core and are considered or already followed. It should be noted, that the OAIS specification being published in 2002, could not have tackled interoperability techniques such as Web Services (WS) and/ or Service Oriented Architectures (SOA). The OAIS-RM requires therefore urgently an update in order to serve as a guide for interoperability, while the functional model is still applicable. The OAIS-RM attached examples of archives are also outdated, since technology evolved quite heavily, since 2002.

3 CONCLUSIONS

CGMS is invited to take note.

[1] CCSDS 650.0-B-1, Reference Model for an Open Archival Information System (OAIS), CCSDS Blue Book, January 2002