

ALTERNATIVE DISSEMINATION METHODS

(Submitted by WMO)

Summary and purpose of document

To inform CGMS of the latest status and activities related to Alternative Dissemination Methods (ADM).

ACTION PROPOSED

CGMS Members are invited:

- (1) to note ongoing and planned implementations of the Alternative Dissemination Methods (ADM) concept.
 - (2) to note that the ADM concept also allows for a seamless addition to the operational information of data and products from relevant R&D environmental satellites.
 - (3) to indicate actions enabling global networking of the ADM implementations in view of a smooth exchange of specific ADM contents among differing ADM systems.
 - (4) to consider the FWIS concept (notion of DCPC, catalogue/metadata standards, protocols) when changing/implementing processing and dissemination systems.
 - (5) to consider WMO Core Metadata profile within the context of the ISO Standard for Geographic Metadata (ISO 19115).
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Potential Benefits of ADM

1. It is recalled that, having regard to requirements for a cost-optimized access to all necessary meteorological data/products, a proposal was developed to extend the Direct Broadcast (DB) concept to ADM access to satellite data and products. In other words, access to satellite data and products by WMO Members should be through a composite service comprised of both DB from satellite systems and ADM. ADM would be the baseline while DB reception would serve as backup as well as for those WMO Members unable to take advantage of ADM.

2. The ADM branches are open to merging with the other meteorological data streams. In particular, this evolved concept will allow for a seamless inclusion of data/product sets from polar and geostationary operational satellites as well as from relevant R&D environmental satellites. It is expected that the most demanding application in need of data would be NWP, and that NWP requirements could thus be taken as a benchmark for sizing the data communication means.

3. ADM is likely to bring significant advantages mainly in the following areas:

- High performance allowing high data rates of several Mb/s;
- Availability of standard user terminals, which make data access affordable for a larger number of users;
- By making the data available to a wider audience, the use of ADM could alleviate the need for further internal redistribution of very large volumes of data;
- Flexibility allowing enhancement of dissemination during the lifetime of a satellite generation not included in the initial design of a system;
- Capability to include data from spacecraft that were out of the visibility of the user in order to produce multi-satellite composite products;
- Facilitate smooth transition between different satellite generations, support contingency planning, extend the lifetime of satellites.

4. It is also recalled that the Inter-Programme Task Team on Future WMO Information Systems (FWIS) included the ADM-DB concept in its vision, which was approved by Cg 2004. ETRP (and inter alia the Virtual Laboratory for satellite meteorology) activities were also added to FWIS as another programme with growing needs for information exchange. CGMS members are advised: to consider FWIS (notion of DCPC, catalogue/metadata standards, protocols) when changing/implementing processing and dissemination systems. Also, CGMS should consider WMO Core Metadata profile within the context of the ISO Standard for Geographic Metadata (ISO 19115), i.e., data and product catalogues used by space agencies and WMO have to be interoperable.

CGMS Perspective

5. It is noted that several CGMS members are implementing or are having plans to implement ADM. For the time being the most advanced implementation appears to be EUMETCast by EUMETSAT. EUMETCast already disseminates data from polar and geostationary satellites, as well as from other meteorological data sources. By using K_u- and C-band DVB services it alleviates potential reception problems at very reasonable cost to EUMETSAT and the users.

6. The apparently rapid evolution of ADM is heavily impacting on the way data services are provided and accessed by its users on a global scale. CGMS is invited to indicate actions enabling global networking of the ADM implementations in view of a smooth exchange of specific ADM contents among differing ADM systems.

Conclusion

7. ADM will spread and become the baseline for dissemination of satellite data/products (complemented by DB as a backup). Regional ADM implementations will be networked. There is an urgent need for coordination and recommendations on networking standards, in particular at the data/product format level.

Figure 1 - Conceptual Design of the Composite Data Access Service for Satellite Data and Products

