

Overview of the Image Data Dissemination

This paper reports on the overview of the image data dissemination through both the satellite and the Internet.

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The Japan Meteorological Agency (JMA) updated the plan on image data dissemination both through the satellite and the Internet in consideration of the current status of GMS-5 and the perspective on the launch of MTSAT-1R/2, besides wide popularization and rapid development of the Internet technology, particularly in recent years.

JMA has considered to take advantage of the Internet as a backup dissemination service of the direct broadcasting from the satellite, as data dissemination through the Internet with use of off-the-shelf components would allow users to easily adapt to the current and future growth in the dissemination system and also would become one of the solutions to the actions enabling the Alternative Dissemination Method (ADM) implementation.

The plan on image data dissemination through both the satellite and the Internet is summarized as below.

1. Broadcasting to Medium-scale Data Utilization Stations (MDUSs) from the satellite

The image data broadcasting to MDUSs from the satellite will be resumed at the start of the service of MTSAT-1R, though the Stretched-VISSR (S-VISSR) data broadcasting from GMS-5 is suspended during the backup of GMS-5 with GOES-9 in cooperation with NOAA/NESDIS. The High Resolution Imager Data (HiRID) will be broadcasted in place of the S-VISSR data at the start of the service of MTSAT-1R, and besides, the High Rate Information Transmission (HRIT) service will also be started on the same radio frequency as HiRID on a time-shared broadcasting schedule at the start of the service of MTSAT-1R or after. No transition period from S-VISSR to HiRID is planned due to an upper compatible format of HiRID with the S-VISSR data of GMS-5. HiRID service will be ceased in a certain period. The transition period from HiRID to HRIT is considered to be three years or so.

2. Broadcasting to Small-scale Data Utilization Stations (SDUSs) from the satellite

The image data broadcasting to SDUSs from the satellite will be continued. The Low Rate Information Transmission (LRIT) service will be started in addition to WEFAX picture broadcasting service on the same radio frequency as WEFAX on a time-shared broadcasting schedule at the start of the service of MTSAT-1R. The WEFAX service will be ceased in a certain period. The transition period from WEFAX to LRIT is considered to be three years or so.

3. Provision to NMHSs through the Internet

The image data provision to the National Meteorological and Hydrological Services (NMHSs) through the Internet will be continued until the start of the service of MTSAT-1R. Since December 2002, JMA has provided the S-VISSR data to NMHSs registered to JMA through the Internet as a backup dissemination service of the direct broadcast service from the satellite. (For details, please refer to the CGMS-XXXI JMA-WP-11)

4. Provision to the public through the Internet

JMA will newly implement an imagery provision service to the public including the users of SDUSs through the Internet as a backup dissemination service of the direct broadcasting from the satellite due to the increase of orbital inclination of GMS-5. Since May 2003, the WEFAX pictures produced from GVAR data obtained with GOES-9 have been broadcasted to SDUSs from GMS-5. However, the difficulty in receiving WEFAX signal will arise sometime at SDUSs without antenna tracking function, because the North-South movement of GMS-5 around the nominal stationary position has been increasing gradually as the north-south station keeping maneuvers of the spacecraft are no longer carried out due to lack of fuel. Therefore, JMA plans to make available imagery corresponding to the WEFAX pictures currently broadcasted from GMS-5 to the public on the JMA's web site. This service is expected to be started in the coming May. During the backup of GMS-5 with GOES-9, imagery produced from GVAR of GOES-9 will be provided. After the start of the service of MTSAT-1R, this service will be continued with the use of image data obtained with MTSAT-1R in place of GVAR of GOES-9.

The implementation schedule of image data dissemination on MTSAT-1R/2 is shown in the Attachment.

Attachment

Plan of Satellite operation and data dissemination (Draft)

