

STATUS AND PROBLEMS OF THE IDCS

**This document reports on the performance of the
International Data Collection System (IDCS).**

CGMS Members are invited to take note.

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1. INTRODUCTION

This document presents a status report on the performance of the International Data Collection System (IDCS).

2. STATUS OF IDCS

As of the beginning of September 2005, there were 144 International DCP (IDCP) registered worldwide for use with the IDCS, using 10 of the 33 channels available (see below). The following DCP programmes use the International channels for regional purposes:

- 52 DCP allocated on channels I23 and 24, operated by the Aeronet programme.
- 20 DCP allocated on channels I25 and I26, operated by ROSHYDROMET.
- 181 DCP allocated on channels I27-I33, operated by WMO agro-meteorological and hydro-meteorological networks.

Globally, the total number of IDCP allocated on individual IDCS channels is:

Channel	06	07	10	12	13	14	15	16	18	20	23	24	25	26	27	28	29	30	31	32	33
No.	12	26	10	17	6	9	9	34	9	12	30	22	20	0	45	29	12	31	31	14	19
	Regular IDCS										Aero		ROS		WMO Networks						

During September 2004, EUMETSAT processed 10,901 messages from 144 IDCP transmitting in the Meteosat field of view. In addition, there were 51,867 Aeronet messages and 6,215 WMO network messages. The Aeronet DCP messages have significantly increased from the last report (March 2004), mainly due to new DCP allocations. There were 915 ROSHYDROMET messages received, all of which could not be recognised or rebroadcast due to inappropriate ID information. EUMETSAT was informed at CGMS XXXI that future IDCS allocations will contain correct ID information.

It will be recalled that channels I23-I24 (Aeronet), I27-I33 (WMO networks) and I25-I26 (Planeta/ROSHYDROMET) are being used within the Meteosat IDCS, on a temporary basis, with the special agreement of CGMS.

It should be noted that to use the increased bandwidth and reduced frequency separation of the MSG DCS, users must use DCP transmitters that have been certified for use with the MSG system. Currently two manufacturers have DCP transmitters that are certified. The DCP that are currently allocated for regional use on the international channels are not certified for MSG use, therefore could only be allocated to the MSG-only channels when replaced by certified DCP transmitters.

It will be recalled that following the failure of an SSPA on board MSG-1, it is currently not possible to operate the direct broadcast services, nor the IDCS mission. However, EUMETSAT plans to implement the baseline Data Collection and Retransmission Service with MSG-2 and 3. DCP messages acquired via Meteosat-7 are re-broadcast via EUMETCast as well as via the Meteosat-7 DCRS.

3. IODC DCS

In response to the Asian Tsunami in December 26th 2004, EUMETSAT activated the DCP transponder on Meteosat-5 in March 2005. This allows more frequent transmissions than is possible on either Meteosat-7, which has limited capacity. Several tidal gauges operated by the PTWC (Pacific Tsunami Warning Centre) were reallocated to International channels 8, 9 and 11 with the agreement of CGMS, transmitting every 15 minutes via Meteosat-5. The DCP messages are relayed as bulletins to the GTS via the Fucino ground station and EUMETSAT control centre in Darmstadt. In addition these DCP messages are retransmitted via Meteosat-7 DCRS and via EUMETCast.

PTWC currently plan to have 14 DCPs operating in the Indian Ocean region by the middle of 2006. Gauges are being deployed as far East as 115°E, which is outside of the field of view of Meteosat-7. In addition the IOTWC (Indian Ocean Tsunami Warning Centre), currently being established, will almost certainly make use of the DCS, for transmission of tidal gauge data.

Support to the Tsunami Warning Systems lead to a long-term requirement to support a DCS over the Indian Ocean, however the following constraints exist:

- Meteosat-7 will be relocated to the IODC position around 63°E during 2006 to take over from Meteosat-5, which will be reorbited in 2007. Meteosat-7 cannot support the DCS service during the eclipse period (up to 2 hours per day for the two 42 day eclipse seasons), due to a satellite amplifier limitation. Meteosat-5 can act as the back-up during these periods until it is reorbited in early mid 2007, however an alternative strategy is required following the reorbiting.
- The capabilities of the Chinese, Japanese, Indian and Korean Data Collection Systems to potentially act as a back-up to Meteosat-7.

4. FUTURE OF THE IDCS

The following issues exist concerning the future use IDCS:

- Future requirements for the amount of channels dedicated to IDCS - Many satellite operators now use the IDCS channels for regional purposes, ostensibly on a temporary basis. There are far fewer truly mobile DCPs using more than one satellite on the international channels.
- The common certification procedure - Several satellite operators are moving away from 100bps DCPs to higher-bit rates, in line with evolving user requirements.
- IDCS Coordination - The common IDCS database maintained by EUMETSAT has not been used in recent years, mainly due to the lack of new dedicated International DCP allocations.

5. INTERFERENCE TO THE IDCS

During the last twelve months the levels of interference affecting users of IDCS channels within the Meteosat telecommunications field of view has been higher than in previous years, with interference detected on channel I30 and I33.

6. CONCLUSION

CGMS Members are invited to take note of the status and performance of the IDCS.

CGMS members are invited to discuss the issues concerning the future support to the IODC DCS and the issues concerning the future of IDCS.

If required an ad-hoc DCS group, comprising DCP experts from the CGMS members could be set-up to analyse these issues in detail outside of the CGMS meeting.