Working Group I: Global Issues on Satellite Systems and Telecommunication Coordination

CGMS 44

WG-I

Coordination Group for Meteorological Satellites

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CGMS

Topics of Interest to Plenary

Topics covered by WG-I during CGMS-43 (20 Working papers):

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I/2	**Frequency management matters: SFCG, ITU and WRC activities**	√
I/3	**Optimisation/harmonization of direct readout dissemination (CGMS DB global specs)**	√
I/5	**Data Collection Systems**	√
I/6	**Best practices for operators support to LEO local processing (Direct Readout/DBNet/RARS)**	√
I/7	**HLPP and Inter-Sessional meetings towards CGMS-44**	√

Topics of Interest to Plenary

I/2 Frequency management matters: SFCG, ITU and WRC activities

- Increasing importance of SFGC liaison in support of technical frequency management aspects for CGMS
- WG I agreed on the need to closely monitoring the band around DCS uplink as it is increasingly attracting attention for other applications and services..(WRC-19 contains on Agenda 1.7)
- Recommendation CGMS agencies to inform their Freq Managers on the space weather activities to ensure the necessary protection and coordination at Freq level

Aspects for HLPP and WRC19

DCS related

- 1.2 Introduction of power limits in the frequency band 401-403 MHz (Issue: Protection of the Data Collection System (DCS) band from small satellites);
- 1.3 Upgrade of the secondary allocation to the MetSat and EESS service (space-to-Earth) to primary status in the frequency band 460-470 MHz (Issue: Improvement of the status of the ARGOS use in this band against other services allocated to this band);
- 1.7 Identification of spectrum needs for telemetry, tracking and command in the space operation service for non- GSO satellites with short duration missions, including potential new allocations in specific
- bands below 1 GHz (Issue: Protection of the band 400.15-403 MHz used for DCS systems);

Topics of Interest to Plenary

Ka Band downlink (25.5-27 GHz) related

- 1.13 Identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis (Issue: Protection of the EESS downlink band 25.5-27 GHz and protection of a number of passive sensing bands above 30 GHz from out-of-band emissions from mobile broadband systems);

Protection of passive sensing bands from adjacent bands under various agenda items

SCATs at 5 GHz

- 1.16 Consideration of issues related to wireless access systems, including radio local area networks (WAS/RLAN), in the frequency bands between 5150-5925 MHz, and take the appropriate regulatory actions, including additional spectrum allocations to the mobile service (Issue: Protection of the active sensing instruments using the 5 GHz range);

GEO

GEO representative indicated the support of GEO to these actions and recommendation and recommends to bring to GEO plenary (as dedicated intervention by CGMS Sec for example) to help in propagating the information within the GEO members.

Space weather related

- Recommendation WG-I.4.xxx.CGMS agencies to inform their Freq Managers on the space weather activities to ensure the necessary protection and coordination at Freq management level

Topics of Interest to Plenary

I/3 Optimisation/harmonization of direct readout dissemination (CGMS DB global specs)

- For future: → Simplify the global specification of formats used for product deliver to users for future missions and instruments (based on use of existing standards) and as much as possible based on:
  - the HRIT/LRIT global specification as it is presently defined,
  - BUFR or GRIB as defined by WMO, or
  - netCDF and HDF as specified by their respective governing bodies.
- When data volume is critical for dissemination, instrument dependant formats may be developed, such as JMA's HSD format for Himawari-8/9 data. Software tools supporting the conversion of these data to one or more of the standard data formats should be made available to users. This could be captured as a best practice .

Topics of Interest to Plenary

I/3 Optimisation/harmonization of direct readout dissemination (CGMS DB global specs)

- Specific details of the data format need to be given in the Mission Specific Implementation. A link to the Mission Specific Implementation documents should be made available and referenced in this Section. This could be captured as a best practice .

- For current → HRIT/LRIT Global Specification is to be maintained (in its current state).

- Inter-sessional meetings are agreed for progressing on the detailing of the different formats and the consolidation of the draft best practices for being presented to CGMS -45

Topics of Interest to Plenary

I/5 Data Collection Systems

- SATCOM Forum participation and splinter during SATCOM Forum to consolidate IDCS mid term plans.

- Inter-sessional meetings are agreed for progressing on the mid-term plans of IDCS for being presented to CGMS-45

Topics of Interest to Plenary

I/6 Direct broadcast/readout services

- WGI endorsed (with the following amendments) the proposed (WMO, NOAA, NWP-SAF, EUM), Best Practises (BP 1, 2, 3, 4, 5, 6) for operational agencies with Direct Broadcast satellites (noting the need to make sure this is clearly understood to be only relevant to operational DB missions).

- Agreed amendments:
  - *Best Practice BP.04: Each LEO satellite operator should therefore ensure that:*
  - *….*
  - *Source code should be made available to comply with the security standards of the satellite operators.*
  - *Docs and S/W releases shall be made available at least in English*
  - *…*
- WGI considered the potential of the additional topics proposed for consideration as Best Practices (Section 8 of EUMETSAT-WP-07) and considered this to be a topic to be progressed by dedicated Inter-sessional meetings before CGMS-45.

Topics of Interest to Plenary

I/6 Direct broadcast/readout services

- Action WG-I.44.xxx. CGMS agencies with DB missions and RO occultation missions to assess the technical feasibility of a RARS/DBNet RO occultation service in support of the Space Weather community.
- Action from WG-I.43 still open:

  WMO to assess the impact of improved data latency from polar orbiters on NWP (WMO Impact Workshops) and other applications.

Recommendations

- Recommendation WG-I.4.xxx.CGMS agencies to inform their Freq Managers on the space weather activities to ensure the necessary protection and coordination at Freq management level

- Recommendation WG-I.4.xxx. All CGMS DCS operators to consider making all DCP messages available in the GTS.

- Recommendation: CGMS-44 plenary to endorse the CGMS Agencies Best Practices in support to Local and Regional Processing of LEO Direct Broadcast (as reviewed and amended by WG-I in the CGMS-44 meeting)

Back up slides

Actions

FREQ

Action WG-I.44.xxx. SFCG liaison officer to bring to SFCG/WMO the possibility of migrating the SFCG Remote Sensing Disaster Database (RSDD) into OSCAR from the following perspectives:

- Identify the level of overlap between the two databases;
- Possibility for WMO to introduce, and maintain, the delta elements of the SFCG RSDD into OSCAR;
- Level of support of SFCG members to migrate the SFCG RSDD into OSCAR or preference to retain a separate database;
- Arguments for retaining a stand-alone SFCG RSDD, if any.

Action WG-I.44.xxx SFCG liaison officer to provide a report to WGI on the outcome of SFCG by Q3 2016 (as part of the CGMS-45 WPs)

Action WG-I.44.xxx. SFCG liaison officer to propose to SFCG that SFCG members will report yearly to SFCG on regional/national regulatory changes/issue (e.g. to repurpose spectrum currently in use or planned for use by meteorological satellites (both active and passive spectrum bands)).

Action WG-I.44.xxx. SFCG liaison officer then to report to CGMS WGI as a permanent section of his yearly SFCG outcome report to WGI updates (relevant) on proposed regulatory changes to repurpose spectrum currently in use or planned for use by meteorological satellites (both active and passive spectrum bands).

Action WG-I.44.xxx.CGMS agencies to provide prior to CGMS 45 a report on the space weather activities (including spacecraft and instruments) of relevance on Freq Management and freq protection topics.

Actions

DCS

Action WG-I.44.xxx.CGMS Secretariat to distribute to CGMS members (PoC for SATCOM Forum at least) the questionnaire on IDCS (included in EUM-WP-06) end June 2016

Action WGI.xxx CGMS agencies to reply (end of August) to the questionnaire and to confirm attendees to the splinter meeting on IDCS during the next SATCOM Forum (Sept 2016 in Madrid)

DB/RARS/DBNet

Action WG-I.44.xxx. CGMS agencies with satellites with DB and RO sensors to assess the technical feasibility of a RARS/DBNet RO service in support of the Space Weather community.

Open action from CGMS 43 on WMO to assess the impact of improved data latency from polar orbiters on NWP (WMO Impact Workshops) and other applications

HLPP and Inter-Sessional Meetings

HLPP

- HLPP reviewed during WG-I meeting and dedicated presentation on HLPP organised by CGMS Secretariat (for all HLPP topics)

Inter-Sessional meetings to prepare for CGMS 45

WGI addressed the need of achieving progress in the HLPP and preparing for CGMS-45 through dedicated Inter-Sessional meetings and it was agreed to group them by themes as follows:

A. WGI-IS-DB. Theme is Direct Broadcast Best Practices (organised quarterly)
   - *Sept-16 (7 September, 13:00 CET), Dec-16 (7 December, 13:00 CET), March-17 (8 March, 13:00 CET)*

B. WGI-IS-DCS. Theme is DCS and SATCOM Forum Direct (organised quarterly)
   - *Sept-16 (during the SATCOM Forum), Dec-16 (14 December, 13:00 CET), March-17 (15 March, 13:00 CET)*

C. WGI-IS-Formats. Theme is Data formats and Formatting standards (organised every 4 months)
   - *October-16 (5 October, 13:00 CET) , February-17 (15 February, 13:00 CET)*

WG-I nominations for CGMS 44 (proposed to plenary)

- Co-chairs:
  Vanessa Griffin (NOAA)
  Sergey Uspensky (Roshydromet)

- Rapporteur:
  J. Gonzalez (EUMETSAT)

- CGMS Liaison officer with SFCG
  M.Dreis (EUMETSAT)

- CGMS Representative at SATCOM Forum
  S. Burns (EUMETSAT)