



INTERAGENCY OPERATIONS ADVISORY GROUP

2014 Annual Report

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Prepared by: Michael Schmidt, Chairman

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Overview

This 2014 Annual Report of the Interagency Operations Advisory Group (IOAG) provides an overview of the activities conducted over the past year, with reference to the objectives defined in the IOAG 2014 Work Plan. It is intended to keep all stakeholders and partners informed of the IOAG's work and achievements in the domain of space communications, in line with the mandate given by the second Interoperability Plenary (IOP-2) held in Geneva at the end of 2008 and the third Interoperability Plenary (IOP-3) held in Toulouse in June 2013.

The focus of the work of the IOAG in 2014 was on the execution of the activities agreed during IOP-3. Though several working groups finished its work with the report at the IOP-3 there are still several active groups. Some groups continue on a low level to follow the progress of the triggered activities, such as the Optical Link Group. Some other groups, mainly the Mission Operations Systems Strategy Group (MOSSG) and the S/C Emergency Cross Support Working Group (SECSWG), are currently active.

Since CSA became a new member of IOAG the IOAG activities are currently actively supported by the following member space agencies: ASI, CNES, CSA, DLR, ESA, JAXA, NASA, and the following observer space agencies: UKSA and KARI. In addition RFSA is a member agency and participated in the face-to-face meeting in Rome but is not closely involved in the ongoing activities. CNSA and ISRO have an observer status. While CNSA (through a CAST representative) is following the telecons ISRO does not participate in the IOAG activities (telecons, meetings and working groups).

The IOAG had one face-to-face meeting at ASI in Rome in February, which was mainly used to put in place the activities that were agreed during the IOP-3 meeting. In addition, several teleconferences were held in the course of the year to keep the momentum.

The IOAG activities covered several areas:

- The basic task of providing a discussion forum regarding interoperability aspects for the participating agencies including the maintenance of the mission models and tables of communications assets.
- The coordination with various international working groups, which are the Consultative Committee for Space Data Systems [CCSDS], the International Space Exploration Strategy Group [ISECG], the Space Frequency Coordination Group [SFCG] and the International Committee on GNSS [ICG].
- The guidance of various working groups that were kicked off in the context of the IOAG, which were the Mission Operations Systems Strategy Group [MOSSG] and the Spacecraft Emergency Cross Support Working Group (SECSWG).

The participating space agencies have provided their agency reports for the face-to-face meeting, which are available for information via the IOAG website. The website can also be used to access the mission models and the list of communication assets. These tables are also made available to the SFCG.

Interface to International Groups

The IOAG maintains a close relationship with the CCSDS. The “IOAG-CCSDS Product Agreement” (ICPA) was maintained by both sides. This ICPA identifies the priorities and the required target dates of the various space agencies regarding the future cross support standards. This ICPA together with the two Service Catalogues that were produced in the past years provide the guidance to the CCSDS considering the evolution of the various standards. The CCSDS liaison participated regularly in the IOAG meetings and teleconferences.

The IOAG also maintained a close relationship with the SFCG, whose liaison participated in the meetings and teleconferences.

The interaction with the ISECG was less intense as the work status of the ISECG does not yet require a close involvement of the IOAG. The role of the IOAG is ensured through a statement in the Global Exploration Roadmap (GER) that is produced and maintained by the ISECG. This is to ensure that the achievements of the IOAG will also be used in the context of the ISECG products, which might be produced in the future. There is some discussion ongoing how far the IOAG can be used to assess certain technical issues that need to be clarified in the context of the ISECG technology roadmap.

The interface to the ICG has been maintained. The reason is to inform member agencies, who are not involved in the ICG, about the progress within the ICG, e.g. regarding the Space Service Volume, and to forward requirements to the ICG if applicable. The IOAG chairman has participated in the ICG meeting in Prague in November. In addition the IOAG has created a database, which contains data of missions of the IOAG member agencies that have a GNSS related payload on-board. This database has been made available to the ICG.

Status of the IOAG Working Groups

Most of the IOAG working groups have concluded their work in 2013 and presented their achievements to the IOP. The regular work of the working groups have stopped but some WGs will be kept alive at low level in order to have a forum for discussions and to follow the progress when requested.

The Space Internetworking Strategy Group (SISG) has stopped the work because it achieved the defined objectives and the subsequent work will be performed at the level of the CCSDS. The progress of the corresponding work within the CCSDS (conversion of the concept into relevant standards) will be checked regularly by the IOAG.

The Optical Link Strategy Group (OLSG) has stopped the active work because it achieved the defined objectives at this stage. The chairmen will follow the evolution of the corresponding technology. Relevant progress reports will be given to the IOAG.

The LEO26SG has not been active during the reporting period but is kept formally alive in order to provide a forum for the regular exchange of information if required.

The Mission Operations Services Coordination Group (MOSCG) was converted into the Mission Operations Systems Strategy Group (MOSSG) that is to continue the work on the Mission Operations Services and to provide guidance to the corresponding CCSDS WG. Since the resources that were made available by the agencies to follow the work were limited

the progress of the groups is less than expected. Nevertheless priorities regarding the services have been defined and discussed with the CCSDS WG.

The S/C Emergency Cross Support Working Group (SECSWG), which was formed based on a recommendation of the IOP, is supported by several agencies. It is working on a report to define guidelines to simplify the cross-support between the member states in case of spacecraft emergencies.

Future Work

The IOAG has increased the number of participating space agencies. CSA has joined the IOAG as a full member and CNSA / CAST participated in the recent teleconferences as observer. In addition it is expected that SANSA will join IOAG as an observer.

The main active work will concentrate on the S/C Emergency Cross Support Working Group and on the Mission Operations Systems Strategy Group. The SECSWG should provide recommendations for an improved cross-support in emergency cases between the member agencies that should be endorsed by the management of the participating agencies. The MOSSG should follow closely the work of the corresponding CCSDS WG.

In addition some progress is expected in the area of optical communications as several member agencies show an interest in this field. Progress reports are expected for the next face-to-face meeting.

The next face-to-face meeting will be organized by KARI and will take place in Daejon in May 2015.

For any further information please consult the IOAG web site (www.IOAG.org) or contact the IOAG Secretariat (Barbara.Adde@nasa.gov) or the IOAG chairman (Michael.Schmidt@esa.int).