INTERAGENCY OPERATIONS ADVISORY GROUP

IOAG-15c Minutes

Document Number: IOAG.A.MN.2012.15c.V2

Prepared by: Barbara Adde, Secretariat

Attendance

Chair:
Jean-Marc Soula

Secretariat:
Barbara Adde, Stephanie Wan

Member Agencies:
ASI: Absent
CNES: Jean-Marc Soula
DLR: Martin Pilgram, Rolf Kozlowski
ESA: Michael Schmidt, Ricardo Abello, Klaus-Juergen Schulz, Josep Rosello
ISRO: Absent
JAXA: Tsutomu Shigeta, Takanori Iwata
NASA: Phil Liebrecht, John Rush, Madeline Butler, Wallace Tai
RFSA: Absent

Observer Agencies:
KARI: Excused absence
UK-SA: Peter Allan

Liaison:
CCSDS: Mike Kearney, Nestor Peccia, James Afarin
SFCG: Excused absence
ICG: Excused absence

Agenda
See Attachment 1. Charts are used by IOAG participants and are available on the internal IOAG website.

Minutes

1) **Introduction/Opening**

The Chairman opened the meeting, noting that a quorum had been reached. The objective of today's meeting is to review the status of the ongoing activities and to receive reports from subgroups and liaison. Mr. Schmidt requested moving item 7 up in the agenda (LEO26SG) to

allow subgroup members to leave. This was agreed to the extent that item 5 in the agenda remain before, due to similar constraint with the CCSDS liaison.

2) Approval of Minutes

Members voted and approved the minutes of IOAG-15 and IOAG-15b. The minutes for IOAG-15a and CSSM teleconferences were approved at IOAG-15b. The Chairman requested that the Secretariat place these minutes on the public IOAG website.

3) OLSG Report & Discussion of Next Steps

Mr. Schulz reported on the status of the Optical Link Study Group, including contacts established with NASA and ICAO regarding eye safety and predictive weather concept. He stated that retransmission methods are under consideration. The final report has not been started. Their next steps include:

Videoconference 4 – to be held on 29 October
Face-to-face meeting – to be held at ESOC on 12-14 November

Mr. Schulz stated that the final addendum would be completed by 3 December and will be presented to the IOAG at the IOAG-16 meeting. The OLSG will also be prepared to present its report to the IOP-3 in the spring 2013 timeframe. In response to Mr. Soula's question regarding recommendations in terms of acquisition, modulation and coding, he replied that it would be unlikely that all this would be included; the OLSG would like to see more demonstrations with results so that evaluations of different views would be available, as originally proposed. Mr. Soula noted this is consistent with the schedule presented at the last CCSDS meeting.

4) CCSDS Liaison Report

ICPA
Mr. Peccia provided a verbal report on the status of the CCSDS. He stated that the IOAG-CCSDS Product Agreement (ICPA) database is under an e-poll for the CMC, with a due date of 2 October, which is the same date as the e-poll for the IOAG. He also noted that there have been discussion regarding the Solar System Internetworking documents, and CCSDS is coordinating on a magenta book on architecture and a green book on the cross support reference model, which will be discussed at their upcoming meeting in Cleveland, Ohio. There are issues, however, with three of the books, requiring additional coordination. Mr. Kearney reminded the participants that the ICPA is designed to be loosely coupled; the IOAG can update its side any time, as can the CCSDS. Alerts will go to the IOAG when there is a change; this should improve efficiency of communication. The Secretariats will only be involved if a new document needs to be added.

Cross Support Service Management
Mr. Peccia also reported that the Cross Support Service Management updated charter is also with the CMC for an e-poll. He stated that it is best to wait for project descriptions before the CCSDS

sends them to the IOAG. The new charter may be handed over to IOAG members some time after the Cleveland meetings.

Subgroups
Mr. Peccia asked the IOAG for specific guidance regarding the revival of the SISG and the MOSCG, and requested that the agencies don't assign the same resources from within CCSDS to these IOAG subgroups, due to excess workload. The Chairman acknowledged this point, and noted that there had been an e-poll conducted to name a co-chair to the MOSCG to serve with Mr. Kearney, and that co-chairs also needed to be named to the SISG.

A vote was held and approved unanimously the selection of Mr. Camino-Ramos to serve as co-chair of the MOSCG with Mr. Kearney.

All five members also voted affirmatively in approval of Mr. Schulz and Mr. Rush to serve as co-chairs of the SISG, as they had previously.
Mr. Rush requested that the CCSDS architecture documentation be provided to the SISG co-chairs; Mr. Kearney took the action. Mr. Rush noted that he and Mr. Schulz will put together a plan during their upcoming OLSG meeting. The Chairman said that update will be required from the agencies on the progress they made during the past 1-1/2 years.

The Chairman recommended that the IOAG should develop objectives and a timeline for these subgroups for their IOP presentations. Mr. Kearney noted that he had prepared a presentation for the IOAG-15b teleconference that he had not presented during that meeting on questions to be addressed for the IOP-3. The Chairman asked that each revived subgroup prepare preliminary plans to present at the IOAG-15d teleconference. Mr. Kearney provided his presentation which was uploaded to the IOAG website.

Action Item 15c-01: Prepare objectives, plans of work and draft decisions expected from the IOP, concerning the work of the SISG. [Assigned to: SISG co-chairs. Due date: 20 November, 2012]

Action Item 15c-02: Prepare objectives, plans of work and draft decisions expected from the IOP, concerning the work of the MOSCG. [Assigned to: MOSCG co-chairs. Due date: 20 November, 2012]

Action Item 15c-03: Comment on the presentation prepared by Mike Kearney on his ideas concerning the work of the MOSCG. [Assigned to: All IOAG delegates. Due date: 12 November, 2012]

The Chairman stated that he will issue an action at the IOAG-15c teleconference for all agencies to nominate participants for the MOSCG.

5.) 26GHz Ka-Band LEO Study Group Plan and Charter

Mr. Abello, the ESA co-chair, provided an overview on their draft Terms of Reference (or charter), which has been distributed to all members, although their input has not been received yet. The goals for this subgroup are to:

1. Facilitate the use of this band in the frame of cross support
2. Develop a high level ops concept and a preliminary architecture
3. Develop a business case approach

The draft Table of Contents of the interim report will be sent to the working group next week. Mr. Abello stated that the goal is to have an interim report by 30 November for IOAG-16 and the final report for IOAG-17 and the IOP. It was agreed that this may be an overly ambitious schedule; it may be necessary to provide an interim report to the IOP and request approval to study during the next period.

Following a remark from the Chairman who reminded that the Terms of Reference had not been approved, Mr. Liebrecht recommended that the new 26GHz subgroup begin its work based on the draft charter. Mr. Peccia concurred, noting that he would like to have operations expert representation in this subgroup. Mr. Kearney noted that at this point there is a large amount of discussion required, but not a lot of work.

The Terms of Reference have been placed on the IOAG website. It was agreed that the subgroup may begin work based on the draft; it will be discussed and approved at the IOAG-15c teleconference. It was also agreed that this group will begin with LEO and could look into MEO and GEO later, if decided at the IOP-3.

6.) Discussion on ISECG, ICG, SFCG

ISECG
The Chairman reported that the ISECG held a meeting at the end of August and approved the paragraph regarding the IOAG and CCSDS, and their relationship with the ISECG. The final wording was slightly amended by ISECG, to include the SFCG.

Action Item 15c-04: Contact ISECG to obtain final wording approved for the ISECG's Exploration Roadmap Version 2. [Assigned to: Secretariat. Due date: 20 November, 2012]

Another ISECG meeting is planned in January to approve this version 2 Exploration Roadmap. The Chairman noted that it is still premature for the IOAG and CCSDS to present our vision for exploration missions.

ICG
The Chairman stated that he has received an invitation to ICG7 which is in preparation for 4-9 November. However, he cannot attend. Mr. Liebrecht tentatively confirmed his attendance

pending approval of NASA's FY13 travel budget. The Chairman reminded members of Action Item 15-17, which requires members to interact with their agency's ICG representative. Mr. Schmidt stated that he has been in contact with the ESA representative, and Mr. Liebrecht works closely with Mr. Miller, NASA's representative. He will ensure that the current list of ICG representatives is sent to the heads of delegation and provided on the website. Mr. Pilgram questioned the relevance to IOAG beyond ICG's Working Group B. The Chairman asked all members to provide input to Mr. Liebrecht, as the tentative IOAG representative at the ICG regarding their agency's requirements for this domain, with a mission model for Global Navigation Satellite Systems from each agency.

Action Item 15c-05: Send mission model for Global Navigation Satellite Systems Space Service Volume to NASA and Secretariat for coordinated presentation at ICG-7. [Assigned to: All delegates. Due date: 19 October, 2012]

The Chairman requested a debriefing by the ICG liaison, Mr. Miller, or Mr. Liebrecht at the IOAG-15d teleconference.

SFCG
The Chairman reported that he had had a teleconference with the SFCG liaison, Mr. Vassallo, who is not able to participate in today's meeting. Mr. Vassallo has not yet reviewed the approved IOAG mission model available on the public website, but he will shortly. He has been working with the ITU on protecting critical radiofrequency bands and will notify the IOAG if it can be of any assistance in this effort. Mr. Vassallo will have report at the IOAG-15d teleconference.

7. IOAG -16 Preparation/Logistics

Mr. Liebrecht presented NASA's plans for the IOAG-16 to be held at the Kennedy Space Center in Cape Canaveral, Florida, and reviewed the draft agenda. During this discussion, Mr. Schmidt noted that the lack of input from various IOAG member agencies is causing a continued problem with the mission models. The Chairman acknowledged this, stating that each of the outstanding agencies had been contacted several times by both the Chairman and Secretariat, with only one response from one of those agencies, ISRO, but no further action. Regarding possible new member or observer agencies he said that he will contact CSA about their attendance at IOAG-16.

In response to Mr. Pilgram's query about a template for the agency report, the Chairman agreed to propose a template to be used at each year's meeting. He also asked delegates to send any information regarding flight constraints, agenda changes or other details to both him and the Secretariat; he also requested that each delegate register his or her attendance at all teleconferences and meetings on the IOAG website to assist in planning.

8) IOP-3 and IOAG-17

IOAG-17
Mr. Allan proposed holding the IOAG-17 meeting at the Rutherford Appleton Laboratory, which is located about 15 miles south of Oxford. It offers a large space science department and ample conference rooms. He has reserved a conference room for the week of 13-17 May that can easily hold 25 people in a round table format, with room for up to 80 in classroom style. Sometime during the meeting the IOAG delegates can visit the International Space Innovation Centre (ISIC) which is on the Harwell Campus and only 10 minutes walk from the conference room, and see their operations facility. This was gratefully accepted by the Chairman.

IOP-3
The Chairman shared the list of agency representatives to the IOP-3; there is no response from the several agencies. Mr. Kearney will supply the name of the CCSDS representative from the same agencies who will attend the IOP-3. Action 15b-09 for the Secretariat to contact agencies about their attendance to the IOP was extended to ASI and RFSA. The Chairman confirmed the attendance of the SFCG liaison, Mr. Vassallo.

The Chairman also noted that he had prepared a draft letter which will be sent to all IOP representatives as they are named, with the SpaceOps paper as attachment. The draft letter, which is on the website, has been amended according to comments received and is ready to be sent. This closes Action Item 15b-12.

The Chairman pointed out that an amended draft agenda of the IOP-3 is available in the meetings documents, to serve as reference for future discussions. The Chairman reminded the delegates of Action Item 15a-03, providing comments to this draft IOP-3 agenda which is a living document on the IOAG internal website; the Action Item was closed but he encouraged all to continue the review and to provide their input.

Other Meetings
The Chairman suggested the possibility of an IOAG-16a teleconference in the March timeframe, based on the schedule of upcoming meetings, including the ISECG meeting in January, the CCSDS Working group meetings in April and IOAG-17 on 13-17 May. The IOP-3 meeting is tentatively scheduled for 24-28 June in Toulouse. There is also a SpaceOps Workshop in Baltimore, Maryland on 11-13 June, during which time an IOAG-17a mini-meeting/teleconference could be held. It was agreed to wait until IOAG-16 to confirm dates for these intermediate meetings.

9) Miscellaneous

Chairmanship
There is an open e-poll for nominations for IOAG Chairman. The Chairman said the Chair can be transitioned at the IOAG-16, IOAG-17 or IOP-3 meeting, as the group would like.

Annual Report and Work Plan
Mr. Liebrecht reminded the delegates of the need to produce the Annual Report and Work Plan. The Chairman said he would produce these, as he has in the past, with ample contribution from the future Chairman and other members.

Reference Tables
The Chairman reminded everyone of the ongoing action to update all reference tables before the annual meeting. The tables will also incorporate the cross support table and the commercial providers or agencies that aren't IOAG members who provide cross support services. He noted that the infusion table is still pending and will be postponed until a later date.

Other Open Action Items
AI 15a-01(ISS Mission Model): Mr. Kearney reported that he is continuing to work on this with NASA. Once he establishes the right contacts, it can become an ongoing part of keeping the mission model maintained.

10) Summary/Closing

Mr. Shigeta introduced a new senior manager, Mr. Takanori Iwata, who will be attending IOAG-16. Mr. Masayuki Sugawara has moved to another department within JAXA and will no longer be participating in IOAG. The Chairman and members welcomed Mr. Iwata.

The Chairman requested the Secretariat to provide a summary of action items opened and closed during this meeting in the minutes, which will be provided to him by 5 October for his review prior to distribution to the other delegations. (See Attachment 2).

The meeting was adjourned.

Attachment 1

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IOAG-15c Meeting / Teleconference
Friday, 21 September, 2012
12:00 – 15:00 UTC

DRAFT AGENDA

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Time (UTC)	Presenter	Agenda Item	Action Items
12:00 – 12:05	Soula	1. Introduction/Opening	
12:05 – 12:10	All	2. Approval of IOAG-15, 15a, CSSM minutes	
12:10 – 12:15	Schulz/Rush	3. OLS report & discussion of next steps	
12:15 – 12:30	Secretariat	4. Status of e-poll	AI15b-10
12:30 – 13:10	CCSDS Liaison	5. CCSDS Liaison Report (Including ICPA, SSI documents, CSSM Status, Priorities /resources) & discussion on revival of SISG & MOSCG	AI 15b-03
13:10 – 13:40	Soula	6. Discussion on ISECG, ICG, SFCG	AI 15b-06, 15-17, 15-18, 15b-07, 15-16
13:40 – 13:55	Abello	7. 26GHz Ka-Band LEO Study Group Plan and Charter 7.1. Plan of work, schedule, participants	AI 15b-02
13:55 – 14:15	Liebrecht	8. IOAG-16 Preparation / Logistics - Schedule/Agenda - Intermediate meetings (15d)	
14:15 – 14:25	Soula	9. IOP-3 Preparation (Schedule/Agenda /Participants IOAG-17 in 2013 (Schedule/Host /Objectives)	AI 15a-03, 15b-08, 15b-09, 15b-12
14:25 – 14:30		10. Miscellaneous - Status of reference tables - Other Open Actions	AI 15b-08 AI 15-07, 15a-01
14:30 – 15:00	Soula	11. Summary/ Closing	

Attachment 2

IOAG-15c Action Items

Action Item 15c-01: Prepare objectives, plans of work and draft decisions expected from the IOP, concerning the work of the SISG. [Assigned to: SISG co-chairs. Due date: 20 November, 2012]

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Action Items Closed at IOAG-15c

Action Item 15-08: Closed.

Action Item 15-17: Superseded by 15c-05.

Action Item 15-18: Superseded by 15c-05.

Action Item 15a-03: All IOAG delegates to review and comment the proposed IOP-3 agenda, for discussion at IOAG 15c. Closed and updated agenda available.

Action Item 15b-02: Develop and present a plan and charter for this subcommittee (Use Ka-band for Earth Observation) at IOAG-15c. Closed and presented.

Action Item 15b-12: Review, comment and concur on Chairman's draft letter to the IOAG management and IOP delegation regarding IOP top priorities. Closed.

Attachment 2 (cont'd)

Action Items Modified at IOAG-15c

Action Item 15a-01: Delayed until 20 November, 2012.

Action Item 15b-09: Extended to ASI and RFSA.