



# **INTERAGENCY OPERATIONS ADVISORY GROUP**

## **IOAG-15b Minutes**

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**Prepared by: Barbara Adde, Secretariat**

**IOAG-15b Mini-Meeting/Teleconference**  
**Tuesday, 12 June, 2012**  
**Minutes**

**Participants:**

Chair:

Jean-Marc Soula

Secretariat:

Barbara Adde, Stephanie Wan, AJ Oria

Members:

ASI: Not present

CNES: Jean-Marc Soula

DLR: Martin Pilgram, Rolf Kozlowski

ESA: Michael Schmidt, Klaus-Juergen Schulz, Gian-Paolo Calzolari

ISRO: Not present

JAXA: Kaneaki Narita, Kaguri Nakamura

NASA: Phil Liebrecht, John Rush, Les Deutsch, Jim Schier, Nate Wright, Bernie Edwards,  
Wallace Tai, James Costrell, Kim Cashin, James Miller

RFSA: Not present

Observers:

KARI: Dr. Ahn

UK-SA: Excused

Liaison:

CCSDS: Adrian Hooke, Mike Kearney, Eric Barkley, James Afarin

ICG: James Miller

SFCG: Excused

Agenda:

The meeting agenda is attached and is also available on the IOAG public website: [www.ioag.org](http://www.ioag.org).

1. Introduction/Opening

The Chairman opened the meeting and the agenda was approved by all participants.

2. Approval of IOAG-15, 15a, CSSM Minutes

The minutes for IOAG-15, having only recently been distributed by the Secretariat, remain under review and are due by the end of June 2012. The members approved the IOAG-15a minutes; the Secretariat will place them on the public website. With ESA's approval of the disposition of their comments to the CSSM minutes, these were also finalized and will be placed on the public website as well.

### 3) OLSG Report & Discussion of Next Steps

On behalf of the OLSG, Mr. Schulz began his presentation with a review of actions from IOAG-15, followed by a presentation of the latest findings of the group. He also provided a review of the OLSG's four recommendations. There were extended discussions resulting in the following outcomes:

- Suggestion that astronaut eye safety and LEO satellite sensor safety (including accommodations for LCH) be investigated as well as collectively contacting ICAO for pilot eye safety considerations;
- Suggestion that reference to Demo Flights should be limited to first missions for what regards the lessons learned;
- Suggestion that the number of recommended technical solutions should be reduced as much as possible for each of the scenarii, with the objective of easier cross support implementations;
- Suggestion that in the guidance on standardization, the requirements should be prioritized so as to enable initial definition of standards, wherever the results from demo missions are not needed;
- Suggestion that OLSG explore the ground station coordination and operations concept for optical communication missions further, including long term and short term scheduling, inter-station weather information flow, short term reconfigurations, etc.;
- Suggestion to include uplink data as part of the standardization guidance; and,
- Suggestion to investigate if adaptive modulation/coding should be included as part of standardization guidance.

**AI 15b-01:** Reword the OLSG recommendations so as to reflect the comments made by the IOAG. Due date: 28 June, 2012. Assigned to the IOAG chairman and the OLSG co-chairs.

The Chairman encouraged the Agencies to continue and/or extend their participation to the OLSG, in particular with the objective to study operational concepts.

### 4) Any Other Business: Use Ka-band for Earth Observation

At the request of ESA, the Chairman diverged from the agenda to take up a new issue: use of Ka-band for Earth observation. Mr. Schmidt proposed that there is a role for IOAG to share experience and identify best practices, in order to provide guidance to CCSDS on this matter. Mr. Hooke suggested this activity should be conducted in CCSDS, the final product being a CCSDS Best Practice standard. Mr. Schmidt agreed that it would require the development of another subgroup within IOAG, to develop the right level of input document for CCSDS works. Mr. Schulz provided an overview of the Ka-band aspect.

**AI 15b-02:** Develop and present a plan and charter for this subgroup at IOAG-15c. Due date: 20 September, 2012. Assigned to: Mr. Schultz/ESA, Mr. Pilgram/DLR, and Mr. Liebrecht/NASA.

##### 5) CCSDS Liaison Report

Mr. Hooke lodged a protest for the delay in the scheduled CCSDS presentation, for which the Chairman expressed regret.

Mr. Barkley provided presentations on the status of CCSDS activities. He mentioned that the inputs from IOAG on the Service Management refactoring have been taken into account by the Working Group. This allowed him to identify priority tasks that may be achieved in the short term, while an evaluation is still to be made on the resources needed to complete all activities.

Mr. Hooke then provided presentations on the status of CCSDS activities relative to the SSI Architecture. He reported on the good progress made by CCSDS in the definition of this architecture and the supporting standards (DTN). Answering a question from the Chairman, Mr. Hooke recommended that the SISG be revived in the November-December timeframe and all agencies be invited to participate.

**AI 15b-03:** Confirm participation and participants to the SISG to be revived in the November – December timeframe, in order to prepare for the IOP-3. Due date: 20 September, 2012.  
Assigned to: All Delegates.

On behalf of Mr. Calzolari who had to leave the teleconference, Mr. Kearney reported that the ICPA is 90 percent complete in preparation for validation by the agencies. The IOAG and CMC should conduct a parallel review and validation of the ICPA, once it is ready for that.

**AI 15b-04:** CCSDS to provide to the Secretariat a date to for review of ICPA by both IOAG and CCSDS agencies. Due date: 28 June 2012. Assigned to: Mr. Kearney/CCSDS and Mr. Calzolari/CCSDS.

The Chairman recommended that due to the extended length of this meeting, the remainder of the agenda items be postponed to another teleconference to be held at the end of June.

The Secretariat noted that the e-poll to approve the mission model did not pass due to a lack of a quorum. It was agreed that the Secretariat would re-initiate the e-poll on 29 June with a two week response required.

The Secretariat reminded all representatives planning to attend the IOAG-16 meeting in Cape Canaveral, Florida to provide completed foreign clearance forms for NASA as soon as possible, and to notify her if a letter of invitation will be required.

The Chairman apologized for the long meeting, thanked all the participants, in particular those in teleconference, and closed the meeting.

**IOAG-15b Follow-on Teleconference**  
**Thursday, 28 June, 2012**  
**Minutes**

**Participants:**

Chair:

Jean-Marc Soula

Secretariat:

Barbara Adde, Irene Tzinis, AJ Oria

Members:

ASI: Not present

CNES: Jean-Marc Soula

DLR: Martin Pilgram, Rolf Kozlowski

ESA: Michael Schmidt, Gian-Paolo Calzolari

ISRO: Not present

JAXA: Shigeta Tsutomu

NASA: Phil Liebrecht, John Rush, Wallace Tai, Madeline Butler

RFSA: Not present

Observers:

KARI: Dr. Ahn

UK-SA: Peter Allan

Liaison:

CCSDS: Mike Kearney, James Afarin

ICG: James Miller

SFCG: Excused

Introduction:

The Chairman opened the meeting with a review of the OLSG actions from the previous teleconference and assigned due dates (see above agenda item 3). He informed that AI 15b-01 was closed with a rewording of the OLSG recommendations elaborated by him and the OLSG co-chairs. This document is available with the 15b meeting document.

**AI 15b-05:** Review and comment on the amended OLSG recommendations. Assigned to: All Delegations. Due date: 9 July, 2012.

1. Report from ISECG, ICG, SFCG

Mr. Liebrecht and Ms Adde reported that they presented a paragraph regarding the roles of the IOAG and CCSDS at the 25 May meeting of the International Space Exploration Coordination Group (ISECG) in Washington, DC. The paragraph, which had been approved by both the IOAG and CCSDS chairs, will be reviewed by the ISECG member agencies for inclusion in their Global Exploration Roadmap version 3, due in fall 2012, which will bring these three

organizations into closer coordination regarding space exploration. Mr. Kearney and Mr. Afarin also attended this meeting. The Secretariat will inform members of any revisions to the text coming from the ISECG. The next ISECG meeting is scheduled for Oct. 9-12, 2012.

**AI 15b-06:** Review text of ISECG paragraph and provide any comments to the Secretariat for discussion at IOAG-15c. Assigned to: All Delegations. Due date: 31 July, 2012.

Mr. Miller reported on the ICG Working Group B meeting he had attended in Vienna, Austria the week of 4 June, at which ESA presented its Space Service Volume (SSV) activities. He noted that the delegation from China was quite large and very active. Mr. Miller recommended that the IOAG have a strong presence at the next ICG annual meeting in November, which will be the first since IOAG became an observer to the ICG. Mr. Schmidt noted that he would not be able to attend the ICG meeting, but he will be in close contact with the ESA ICG representative. Mr. Soula has taken note of this invitation. Mr. Liebrecht and Mr. Miller tentatively confirmed their attendance.

**AI 15b-07:** ICG liaison to provide ESA's SSV report, ICG's WG-B meeting report, and ICG distribution list to the Secretariat to be uploaded to the website. Due date: 13 July, 2012.  
Assigned to: James Miller/ICG.

The Chairman reminded members of AI 15-17, which requests members to coordinate with their agencies' ICG representatives. The AI 15-18 due date was changed to the next teleconference.

The Chairman also noted that he had been informed by SFCG liaison, Mr. Enrico Vassallo, that he will provide a status report to the IOAG at its next teleconference in September. He also reminded members that input is required to the mission models for the SFCG. The Secretariat will re-initiate the e-poll to approve the mission model on 29 June, with a due date of 13 July. Mr. Pilgram noted that DLR will provide its input within a week.

## 2. IOAG-16 Preparation/Logistics

Mr. Liebrecht provided a presentation on plans for IOAG-16, which will be held 12-14 December at Cape Canaveral, Florida. It was agreed that lunches may be either at the local cafeteria or hosted by a non-government speaker. The IOAG and CCSDS Secretariats will work to best coordinate the Kennedy Space Center tour to provide ample meeting time for both groups. The Secretariat reminded all members to provide their foreign clearance forms for all attendees, as well as any requirements for letters of invitation. The Chairman stated that IOAG-16 will focus on CCSDS the first day, while the CCSDS in at KSC for their meeting on 10-12 December, and then will turn to preparations for IOP-3. The agenda for the IOAG-16 meeting will be finalized at the IOAG-15d teleconference.

After general discussion, it was agreed that the dates for the next IOAG meetings would be:

IOAG-15c teleconference on 21 September, 2012

IOAG-15d teleconference on 20 November, 2012

IOAG-16 annual meeting on 12-14 December, 2012 at NASA's Kennedy Space Center

IOAG-17 face-to-face meeting baselined for the week of 13 May, 2013, to be hosted by UK-SA IOP-3, baselined for no earlier than mid-June 2013 in Toulouse. The exact dates of this meeting will be determined by the IOP delegates.

The Secretariat will note these new dates on the IOAG public website calendar and as an announcement on the home page of the website, as well as in an email to all heads of delegation.

**AI 15b-08:** Provide name and contact information for agency's IOP representative to the Secretariat. Assigned to: All Delegations. Due date: 21 September, 2012.

**AI 15b-09:** Contact CNSA, CSA, INTA and ISRO to confirm their attendance to IOP-3. Assigned to: Secretariat. Due date: 21 September, 2012.

### 3. IOP-3 Preparation

With the decision to hold the IOP-3 in mid-June, the IOAG took up discussion on agenda and decisions for this meeting. It was agreed that the MOSCG should be reconvened five months in advance; therefore, Mr. Kearney will put a call out to previous participants, as well as all participating agencies, to re-join. The MOSCG will participate in IOAG-16 in order to assign objectives and tasks. It was also agreed that the SISG would also participate in IOAG, with a preparatory meeting to begin preliminary steps.

**AI 15b-10:** Secretariat to conduct an e-poll for nominations to co-chair the MOSCG with NASA. Assigned to: Secretariat. Due date: 21 September, 2012.

Mr. Kearney noted that the draft IOP agenda did not allow sufficient time for both the CCSDS and SFCG to report, and requested additional time. It was agreed that the liaison from CCSDS and SFCG would present at the IOP; an IOAG representative will present for ICG and ISECG and the co-chairs of the SISG and MOSCG will present for their working groups. NASA volunteered to present for ICG. It may also be necessary to add half-hour presentation for the to-be-formed working group on ka-band to inform the IOP on these planned activities. The last day would be to finalize a communiqué with any decisions and guidance to the IOAG.

The Chairman reminded all participants that there is an open action to provide comment on the draft agenda, which he would appreciate. He also said that there will be a template for the agency reports in order to better provide homogenous information to the IOP representatives.

### 4. Miscellaneous:

**Chairmanship:** The Chair reminded members that the new Chair should be named by IOAG-16 so that the outgoing and incoming Chairs could present at the IOP-3. He requested the Secretariat conduct an e-poll for nominations.

**AI 15b-11:** Secretariat to conduct an e-poll for nominations for IOAG Chairman, with results available for the IOAG-15d teleconference on 20 November. Assigned to: Secretariat. Due date: 27 August, 2012.

Other Actions: The following actions were modified:

- AI 15-4: Closed, noting that other agencies may be indicated as information is provided to the mission model.
- AI 15-6: Closed, noting that the Secretariat will provide mission model procedure manual to heads of delegation, as well as the link on the IOAG website. Any questions should be directed to the Secretariat.
- AI 15-7: Due date for infusion table moved to 21 September, 2012.
- AI 15-8: Secretariat to confirm that this action is complete.
- AI 15-9: Closed. Removing old data from tables will be a continuous task of the Secretariat.
- AI 15-15: To be closed at the initiation of the e-poll on 29 June.
- AI 15-16: Provide status to SFCG after close of mission model e-poll in mid-July.
- AI 15-24: The Chairman provided a draft letter to the IOAG management and IOP delegation, with review provided by Mr. Tai and Mr. Schmidt. This letter will be distributed to all heads of delegation for their review, comment and concurrence. It was agreed that the SpaceOps paper and 2011 Annual Report would be attached to the letter to each representative.

**AI 15b-12:** Review, comment and concur on Chairman's draft letter to the IOAG management and IOP delegation regarding IOP top priorities. Assigned to: All Delegations. Due date: 9 July, 2012.

- AI 15a-01: Due date changed to 21 September, 2012.
- AI 15a-03: Due date changed to 31 August, 2012.
- AI 15b-01: Closed (see introduction of the present session).
- AI 15b-04: Closed (see below).

ICPA: As an answer to AI 15b-04 (to be closed). Mr. Calzolari reported on the current status of the ICPA and proposed steps forward:

(1) ICPA review: Assigned to --

- Mr. Calzolari, Mr. Hooke, Mr. Tai, Mr. Schmidt;

-CESG for check and introduction of CCSDS comments (especially from Area/WG Chairs); and,

- IOAG and CMC as "work in progress" for information/high level comments.

Due date: 20 July.

(2) Draft ICPA complete, ready for initial formal review by IOAG and CMC: 30 July

(3) Initial review complete, ready for CMC and IOAG vote by IOAG and CMC: 15 September

(4) IOAG vote complete by IOAG and CMC by 30 September, in preparation for Fall 2012 Meetings

The Secretariat will distribute minutes for the 2-part IOAG-15b mini-meeting/teleconference by 9 July, 2012.

The Chairman thanked all the participants for their contributions to the IOAG-15b mini-meeting and teleconference, and adjourned the meeting.

**IOAG-15b Meeting / Teleconference**  
**Tuesday, 12 June, 2012; 16:00 – 18:30 UTC/18:00 – 20:30; Stockholm Waterfront Congress**  
**Centre, “Room 23 Tokyo” Room**

**Thursday, 28 June, 2012; 12:00 – 15:00 UTC; Teleconference / Webex**  
**AGENDA**

<b>Time (UTC)</b>	<b>Presenter</b>	<b>Agenda Item</b>	<b>Action Items</b>
16:00 – 16:05	Soula	1. Introduction/Opening	
16:05 – 16:10	All	2. Approval of IOAG-15, 15a, CSSM minutes	
16:10 – 17:55	Schulz/Rush	3. OLSG Report & discussion of next steps	
17:55 – 18:30	CCSDS Liaison	4. CCSDS Liaison Report (Including ICPA, SSI documents, CSSM Status, Priorities / resources) & discussion on revival of SISG & MOSCG	
18:30 – 18:45	Schmidt	5. Miscellaneous – Ka-Band	
<b>Thursday, 28 June</b>		<b>Complementary teleconference / Webex</b>	
12:00 – 12:15	Soula	Opening	
12:15 – 12:45	Adde, Miller, Soula	1. Report from ISECG, ICG, SFCG	AI 15-17, -18, -14
12:45 – 13:30	Liebrecht  Soula	2. IOAG-16 Preparation / Logistics - Schedule/Agenda - Intermediate meetings (15c, 15d) - Member Status (Including CSA, INTA)	
13:30 – 14:15	Soula	3. IOP-3 Preparation : Schedule / Agenda / Participants / Host & IOAG-17 in 2013 : Schedule / Host / Objectives	AI 15a-02, -03
14:15 – 14:45	Soula	4. Miscellaneous - Status of reference tables - Other actions - AOB – Chairmanship	AI 15-04, -06, -07, -08, -24 AI 15a-01, -04, -05
14:45 – 15:00	Soula	5. Summary/ Closing	Review any new actions

## **IOAG-15b Action Items**

**AI 15b-01:** Reword the OLSG recommendations so as to reflect the comments made by the IOAG. Due date: 28 June, 2012. Assigned to the IOAG chairman and the OLSG co-chairs.

**AI 15b-02:** Develop and present a plan and charter for this subgroup at IOAG-15c. Due date: 20 September, 2012. Assigned to: Mr. Schultz/ESA, Mr. Pilgram/DLR, and Mr. Liebrecht/NASA.

**AI 15b-03:** Confirm participation and participants to the SISG to be revived in the November – December timeframe, in order to prepare for the IOP-3. Due date: 20 September, 2012.  
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**AI 15b-04:** CCSDS to provide to the Secretariat a date to for review of ICPA by both IOAG and CCSDS agencies. Due date: 28 June 2012. Assigned to: Mr. Kearney/CCSDS and Mr. Calzolari/CCSDS.

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