IOAG 13a Meeting Minutes
26 April, 2010
Huntsville, Alabama

Chairman: Jean-Marc Soula/CNES

Participants:

ASI – Luca Salotti*, Claudio Canu
CCSDS – Nestor Peccia/ESA, Adrian Hooke/NASA*
CNES – Jean-Marc Soula
DLR – Martin Pilgram, Rolf Kozlowski
ESA – Manfred Warhaut, Michael Schmidt, Klaus-Juergen Schulz
ISRO – Excused.
JAXA – Kaneaki Narita
KARI – S. Ahn*
NASA – Philip Liebrecht, James Costrell, Madeline Butler, Les Deutsch, James Miller, Alicia
Anderson, A] Oria*, Beryl Brodsky*
SFCG – Excused
UK Space Agency – Peter Allan
Secretariat: Barbara Adde/NASA

(*Participated by teleconference)

Actions:

ACTION ITEM 13a-01: Close Action Items 13-08, 09 and 010; close those open Action Items from 2009 Work Plan that will re-open as 2010 Work Plan Action Items. [Actionee: Secretariat; Due Date: 17 May, 2010]

ACTION ITEM 13a-02: Heads of delegation to provide comments and suggestions to Chairman and Secretariat on the draft 2010 Work Plan submitted by the Chairman two weeks ago. An e-poll will be held to approve the final Work Plan. [Actionees: Heads of delegations; Due Date: 17 May, 2010]

ACTION ITEM 13a-03: Submit the draft Service Catalogue #2 (SC #2) to Secretariat for distribution and review by Members. [Actionee: SISG co-chairs; Due Date: 30 June, 2010]

ACTION ITEM 13a-04: Submit a template to IOAG Heads of delegations that shows what is expected from the delegates regarding their report on SC #2 and that provides for homogenous reports among the members. This is expected to facilitate a synthesis that the Chairman will distribute before the IOAG-14 meeting. [Actionee: Chairman; Due Date: 30 June, 2010]

ACTION ITEM 13a-05: Review and provide comments to Chairman and Secretariat on the draft SC #2 and prepare and submit a statement on agency’s position, according to the proposed template for reporting on SC #2. The statement should also provide an indication of
opportunities and time scales for implementation of each of the services and supporting standards in SC #2, identifying missions that may need cross-support based on SC #2, as well as longer term plans when full implementation of those services will be required. This may distinguish between experimental and operational applications. [Actionees: Heads of delegation; Due Date: 15 September, 2010]

Note: There is no commitment behind this action, but will be used to develop a preliminary IOAG roadmap in preparation for IOP-3.

**ACTION ITEM 13a-06:** Prepare a liaison statement to the Consultative Committee of Space Data Standards (CCSDS) to: submit Service Catalogue #1 (SC #1), indicating consensus of three services for which the IOAG recommends that CCSDS should start developing standards, and noting that more priorities will be provided at the end of the year, after IOAG-14. Provide the draft statement to the Heads of delegation for comment and approval before dissemination to the CCSDS Secretariat. [Actionee: Secretariat; Due Date: 10 May, 2010]

**ACTION ITEM 13a-07:** Review and provide comments to Chairman and Secretariat on the draft Operations Concept provided on the IOAG website. These comments will be relayed by the Secretariat to the Space Internetworking Strategy Group (SISG) co-chairs as they are made available. [Actionee: Heads of Delegation; Due Date: 31 May, 2010]

**ACTION ITEM 13a-08:** Process all comments and provide final version of the SISG Operations Concept to Secretariat for preparation of an e-poll on endorsement. [Actionee: SISG co-chairs; Due Date: 30 June, 2010]

**ACTION ITEM 13a-09:** Propose IOAG document naming convention. Coordinate with SISG representatives to provide proper transfer and archiving of all SISG documents on the IOAG website. [Actionee: Secretariat; Due Date: 30 June, 2010]

**ACTION ITEM 13a-10:** Provide overview at the IOAG-14 meeting of Positioning, Navigation, and Timing (PNT) and Space Service Volume (SSV), as well as an introduction to how the Global Navigation Satellite Systems (GNSS) are internationally coordinated, and how the IOAG may want to engage. [Actionee: Phil Liebrecht/NASA; Due Date: 30 July, 2010]

**ACTION ITEM 13a-11:** Provide template for agencies to use to prepare presentations on navigation and SSV at the IOAG-14 meeting. [Actionee: Phil Liebrecht/NASA; Due Date: 30 July, 2010]

**ACTION ITEM 13a-12:** Propose an agenda that can include the key issues that have been raised during IOAG-13 and IOAG-13a. [Actionee: Chairman and Secretariat. Due Date: 30 July, 2010]

**ACTION ITEM 13a-13:** Initiate an e-poll by which the agencies will announce if they have a candidate to serve as the IOAG Chairman from after the IOAG-14. [Actionee: Secretariat. Due Date: 30 June, 2010]
Minutes:

The Chairman opened the meeting with an approval of the agenda, including the addition of the end of term of the Chairman at the completion of IOAG 14 in November 2010.

1. Status of Actions: Secretariat

The Secretariat reviewed the open actions from IOAG-13. It was agreed that Action Item 13-010 can be closed. Action Items 13-08 and 13-09 are expected to be closed during this meeting. It was also agreed that all open Action Items from the 2009 Work Plan should be closed for those that will be re-opened as 2010 Work Plan actions.

**ACTION ITEM 13a-01:** Close Action Items 13-08, 09 and 010; close those open Action Items from 2009 Work Plan that will re-open as 2010 Work Plan Action Items. [Actionee: Secretariat; Due Date: 17 May, 2010]

**ACTION ITEM 13a-02:** Heads of delegation to provide comments and suggestions to Chairman and Secretariat on the draft 2010 Work Plan submitted by the Chairman two weeks ago. An e-poll will be held to approve the final Work Plan. [Actionees: Heads of delegations; Due Date: 17 May, 2010]

2. Status of Service Catalogue #1 and Next Steps: Chairman

The Chairman noted that the e-poll for Service Catalogue #1 (SC #1) has been successful in approving version 1.3. Two types of services are included – core and extended services – that respectively show the applicability to all IOAG Members or to bi-lateral agreements only.

The Chairman has produced a template that allows all agencies to report on their plans and status of their implementations. Full presentations by each agency will be expected at each of the next IOAG meetings on infusion status and plans, with the goal that at the end of each IOAG meeting, new core services may be identified and the catalogue may be updated. The same will later apply to the Services in Service Catalogue # 2 (SC #2).

The SC #1 will become a living document on the public IOAG website. The IOAG tables for mission cross support and communication assets already include indications of which services are available from or requested by the IOAG Members.

It was agreed that there was a common understanding of SC #1.

3. Status of Service Catalogue #2: Chairman

The Chairman noted that it had been expected to have SC #2 available for this IOAG 13a meeting; however, the draft is not available. Mr. Schmidt pointed out that good progress has been made on the draft and expects to be able to issue it for review by end of June.

The Chairman noted that there will be an open discussion at the IOAG-14 meeting, with each agency reporting on this subject. Mr. Warhaut recommended that the Chairman provide a synthesis
of input on where agreements may be, with one presentation on the subject at IOAG-14, so that the focus of the discussion can be on any outstanding areas of disagreement.

**ACTION ITEM 13a-03:** Submit the draft SC #2 to Secretariat for distribution and review by Members. [Actionee: SISG co-chairs; Due Date: 30 June, 2010]

**ACTION ITEM 13a-04:** Submit a template to IOAG Heads of delegations that shows what is expected from the delegates regarding their report on SC #2 and that provides for homogenous reports among the members. This is expected to facilitate a synthesis that the Chairman will distribute before the IOAG-14 meeting. [Actionee: Chairman; Due Date: 30 June, 2010]

**ACTION ITEM 13a-05:** Review and provide comments to Chairman and Secretariat on the draft SC #2 and prepare and submit a statement on agency’s position, according to the proposed template for reporting on SC #2. The statement should also provide an indication of opportunities and time scales for implementation of each of the services and supporting standards in SC #2, identifying missions that may need cross-support based on SC #2, as well as longer term plans when full implementation of those services will be required. This may distinguish between experimental and operational applications. [Actionees: Heads of delegation; Due Date: 15 September, 2010]

Note: There is no commitment behind this action, but will be used to develop a preliminary IOAG roadmap in preparation for IOP-3.

4. **Priorities for services for Service Catalogues # 1 and #2: Chairman**

The Chairman stated that the IOAG has endorsed SC #1; priorities need to be provided to the CCSDS regarding the work that the IOAG recommends that they should do on supporting standards. Regarding the TBW standards, all but NASA agreed on the priorities. The Chairman reminded that NASA also placed a condition on the approval of SC #1 that file transfer aspects will be discussed when prioritizing services in SC #2.

Mr. Liebrecht noted that NASA has established an architecture that relies on the network layer for future cross support and feels the solutions for file transfers should not only refer to services in SC #1 but also SC #2. The agency has a mission commitment to support; NASA is reviewing those programmatic decisions.

The Chairman noted that IOAG’s Terms of Reference indicate a majority vote is required within the IOAG. However, as CCSDS works on a consensus basis, it is preferable to try to establish a consensus for any message the IOAG may want to pass to the CCSDS Management Council (CMC). He recommended postponing decision on this issue until IOAG-14 if a consensus cannot be reached at today’s meeting.

Mr. Warhaut proposed providing CCSDS with a list with which all of the IOAG agencies could agree, including offline radio metric service, engineering data monitoring service, and Delta DOR service, all in the Cross Support Transfer Services area of CCSDS. Mr. Hooke noted that the CCSDS meeting next week is a Technical Meeting, not a CMC, which is the body within the CCSDS that receives guidance from the IOAG; therefore, a list for next week’s meeting is not necessary. Mr.
Costrell suggested that a future topic for IOAG consideration is prioritization of the CCSDS standards development portfolio, which is quite full at the moment. The Chairman agreed that this would be a good subject for the joint meeting in November but will require some upfront coordination within IOAG.

It was then concluded that a liaison statement would be prepared to submit SC #1 to the CMC, together with the priorities for the above mentioned three services and associated standards to be developed by CCSDS.

All agencies agreed to postpone discussion of file transfer services to the IOAG 14 meeting in the light of the then existing SC #2.

**ACTION ITEM 13a-06:** Prepare a liaison statement to the Consultative Committee of Space Data Standards (CCSDS) to: submit SC #1, indicating consensus of three services for which the IOAG requests that CCSDS should start developing standards, and noting that more priorities will be provided at the end of the year, after IOAG-14. Provide the draft statement to the Heads of delegation for comment and approval before dissemination to the CCSDS Secretariat. [Actionee: Secretariat; Due Date: 10 May, 2010]

5. **SISG: Status of Operations Concept: Michael Schmidt**

Mr. Schmidt reported that the draft Operations Concept is now available on the internal IOAG website for review by the delegates. In the process of establishing the current draft version, he has received comments from SISG and CNES; he now needs inputs from the SISG Issue Working Groups to finalize the Annexes. An Executive Summary is also being finalized. He reported that ten Issue Working Groups were formed as an output of the October 2009 SISG meeting at ESOC; each has finalized a report on its issue.

The next steps are for the IOAG delegations to provide comments on the draft Operations Concept as quickly as possible, so that a final document can be provided for the IOAG endorsement. The SISG also proposes that they are not disbanded until after the IOAG-14 meeting to ensure that the required expertise is still available should it be necessary before this issue is closed out. There was general consensus that this would be done. After IOAG approval, the IOAG should formally hand over the Operations Concept to the CCSDS with a request that CCSDS should produce the SSI Architecture and associated standards.

**ACTION ITEM 13a-07:** Review and provide comments to Chairman and Secretariat on the draft Operations Concept provided on the IOAG website. These comments will be relayed by the Secretariat to the SISG co-chairs as they come. [Actionee: Heads of Delegation; Due Date: 31 May, 2010]

**ACTION ITEM 13a-08:** Process all comments and provide final version of Operations Concept to Secretariat for preparation of an e-poll on endorsement. [Actionee: SISG co-chairs; Due Date: 30 June, 2010]
6. **Inputs to the CCSDS Meeting: Chairman**

The Chairman noted that this issue was already discussed in previous agenda items.

7. **Status of IOAG Tables: Chairman and Secretariat**

The Secretariat presented the revision status of the various IOAG tables in a format that is proposed to be used for subsequent meetings. The Chairman pointed out that many of the inputs to the various IOAG tables are outdated and insisted that current data be provided for the public website. He noted that he has received several comments that the information currently on the website is not reliable and he believes this is extremely bad for the image of IOAG.

Mr. Warhaut recommended that any field that is “Not applicable” in the report from the Secretariat should be reflected in white, to separate it from actions that are outstanding; the Secretariat agreed to follow this format.

There is general consensus that these tables should be updated once a year, prior to the annual IOAG meeting. If an agency has the need or interest to update their tables more frequently, the Secretariat is prepared to accept this input and update the tables appropriately.

However, according to the current status of the tables, the chairman insisted that all agencies should provide their updates in the upcoming two weeks.

8. **Status of 2010 Work Plan: Chairman**

The Chairman reported that the draft 2010 Work Plan had been distributed by the Secretariat to the Heads of delegation approximately two weeks ago; comments have been received from CNES, ESA and SFCG. He stated that while there are some changes in format from the 2009 Work Plan, it is a continuation of that Plan, with some new ideas; other ideas are welcome. He requested that the delegations agree to a quick turnaround to review and approve the Work Plan for this calendar year (refer to the above Action Item 13a-002).

9. **Other Business: Chairman**

The Chairman stated that the SISG has requested that the IOAG develop a document naming convention and that all SISG documents should be archived on the IOAG website. Mr. Warhaut requested that the naming convention not be cumbersome and that cover pages are included on all documents.

**ACTION ITEM 13a-09:** Propose IOAG document naming convention. Coordinate with SISG representatives to provide proper transfer and archiving of all SISG documents on the IOAG website. [Actionee: Secretariat; Due Date: 30 June, 2010]
10. Navigation and Space Service Volume: Phil Liebrecht

Mr. Liebrecht introduced the issue of Space Service Volume (SSV) as it relates to navigation to gauge the level of interest within the IOAG to more focused discussion at another meeting, such as IOAG-14. He stated that NASA is heavily engaged with the Global Positioning System (GPS) community to ensure that it continues to be a viable capability for space vehicles. Currently, it is mostly used for terrestrial navigation, rather than for space, and he suggested that this should be discussed. He proposed discussing with the international communities extending SSV to higher orbits and engaging in the various IOAG countries regarding space applications. He introduced James Miller, NASA’s Senior GPS Technologist, who provided further information on the Positioning, Navigation, and Timing (PNT) services that the Global Navigation Satellite Services (GNSS) provide.

There was general consensus to include this as a topic in IOAG-14 and for each agency to include navigation into its agency report.

**ACTION ITEM 13a-10:** Provide overview at the IOAG-14 meeting of PNT and SSV, as well as an introduction to how the GNSS are internationally coordinated, and how the IOAG may want to engage. [Actionee: Phil Liebrecht/NASA; Due Date: 1 Nov, 2010]

**ACTION ITEM 13a-11:** Provide template for agencies to use to prepare presentations on navigation and SSV at the IOAG-14 meeting. [Actionee: Phil Liebrecht/NASA; Due Date: 30 July, 2010]

11. IOAG-14 Joint Meeting with CCSDS: Chairman

The Chairman recommended that because the IOAG-14 is a joint meeting with the CCSDS, another mini-meeting or a full IOAG meeting should be held in the first quarter of 2011.

Mr. Allan confirmed that the CCSDS Technical Meetings will be held in London from 25-29 October, with the Joint CCSDS/IOAG-14 meeting being held also in London the following week, from 1-5 November.

It was agreed that the proposed agenda should be adjusted to reflect full IOAG meeting on Tuesday, 2 November, with the joint meeting on 3 November and adjourning on 4 November. A debrief on the joint meeting could be provided after the IOAG-14, giving the delegations time to fully absorb the information and prepare next steps.

It was agreed that a mini-IOAG could be held in the first quarter of 2011, depending on outstanding agenda items, and a full IOAG-15 would be held in the last quarter of the year. If an earlier feedback is required on topic(s) before the IOAG-15, it was agreed that the Chairman would call videoconferences.

**ACTION ITEM 13a-12:** Propose an agenda that can include the key issues that have been raised during IOAG-13 and IOAG-13a. [Actionee: Chairman and Secretariat; Due Date: 30 July, 2010]

The Chairman asked that agencies interested in hosting IOAG-15 should communicate with him and the Secretariat.
As a last topic, the Chairman noted that his term will expire at the conclusion of IOAG-14 and asked for nominees or volunteers for the next term. This will be reminded soon via an e-poll to be organized by the Secretariat.

When queried, he agreed that he would consider a follow-up term.

**ACTION ITEM 13a-13:** Initiate an e-poll by which the agencies will announce if they have a candidate to serve as the IOAG Chairman from after the IOAG-14. [Actionee: Secretariat; Due Date: 30 June, 2010]

The Chairman adjourned the meeting.