Issue 2 dated November 2013



Procedures Manual

For the

Interagency Operations Advisory Group (IOAG)

Issue 2 dated November 2013

Foreword

The first international Inter-Operability Plenary (IOP-1) was held in June 1999 at ESA Headquarters in Paris. As a result of that meeting, the Interagency Operations Advisory Group (IOAG) was established in order to more closely coordinate space mission operations planning across the international community and to expand the levels of space communications and navigation interoperability.

Since the IOAG's first meeting in 2000, Agency membership has expanded, the complexity of the work has increased, and the need for international cross-support has grown ever greater. The Second Inter-Operability Plenary (IOP-2) meeting in December 2008 charged the IOAG to improve its efficiency of operation by appointing a Chairman for a term as specified in paragraph 4.1 and by establishing more efficient operating procedures.

After the IOP-2, the IOAG's Terms of Reference (ToR) have been re-drafted and many of the processes and procedures contained in its Annex have been incorporated into this IOAG Procedures Manual. At this occasion the Manual was enhanced to cover Roles and Responsibilities of Key Personnel, Procedures, External Communications, and the use of Technical Consultants and Special Subgroups.

The IOP-3 meeting in June 2013 confirmed the basic role of the IOAG and introduced a few updates related to the functions of the IOAG, which are reflected in this version of the document.

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1.0 INTRODUCTION

This *Procedures Manual* contains the processes and methods for the operation of the Interagency Operations Advisory Group (IOAG). It documents the objectives, organization, participation, and operations of the IOAG. It has been prepared and will be maintained by the IOAG Secretariat

1.1 Purpose

The purpose of this document is to:

- a) Define the relationship between the IOAG and other organizations.
- b) Describe the organization and operation of the IOAG.
- c) Delineate the procedures used during meetings and for communications.

1.2 Scope

This Procedures Manual (Manual) is intended to guide the operation of the IOAG, its meetings, publications, and membership.

1.3 Definitions

- CCSDS: Consultative Committee for Space Data Systems. CCSDS was formed in 1982 to provide a forum for discussion of common problems in the development and operation of space data systems. It is currently composed of ten member agencies, twenty-three observer agencies, and over 100 industrial associates. For further information about the CCSDS please see their website at: http://www.ccsds.org/
- 2. Cross Support: an <u>agreement</u> between two or more organizations to exploit the technical capability of interoperability for mutual advantage, such as one organization offering support services to another in order to enhance or enable some aspect of a space mission. It is a goal to achieve plug-and-play operations where all that is required is for each of the systems to use an agreed communications medium, after which the systems configure each other for the purpose of exchanging information and subsequently manage such exchange automatically.
- ICG: International Committee on Global Navigation Satellite Systems. A committee
 under the umbrella of the United Nations to provide voluntary cooperation on matters
 of mutual interest related to civil satellite-based positioning, navigation, timing and
 value-added services.

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4. ILN: International Lunar Network. An initiative for a robotic network on the surface of the Moon, which is proposed to be called the International Lunar Network (ILN), intended to provide significant scientific value to the exploration of the Moon. The Space Agencies who signed in July 2008 the ILN Statement of Intent expressed their willingness to explore ways in which to structure a partnership of space agencies to maximize the scientific return to all of the participants in the ILN concept. Among others, interoperable spectrum and communications standards will be coordinated.

Note: The ILN has not interfaced to the IOAG for some time and there are currently no activities ongoing that require an interaction in the near future.

- 5. **Interoperability:** the <u>technical capability</u> of two or more systems or components to exchange information and to use the information that has been exchanged.
- 6. Inter-Operability Plenary (IOP) Meeting: The IOAG Member Agencies' Senior Management Group that formed and is responsible for the IOAG. The initial IOP was convened in June 1999 to discuss interagency interoperability policy, at which meeting the IOAG was established. The IOP was also held to learn the status and views of participating agencies towards achieving space communications interoperability. Subsequent IOPs are held periodically and should be identified as Second, Third, etc.
- 7. IOP Delegates: Delegates of record to the IOP meeting held most recently.
- 8. ISECG: International Space Exploration Coordination Group. ISECG was created by fourteen Space Agencies at the Global Exploration Strategy meeting in Berlin in November 2007. The purpose of ISECG is to work collectively toward the further development and implementation of the Global Exploration Strategy. The expected benefits of establishing the ISECG are to increase robustness, safety and cost effectiveness of individual and collective exploration goals, and to facilitate the ability of Participating Agencies to engage in productive bilateral or multi lateral discussions, while preserving their autonomy.
- 9. Interagency, Tracking, Communications, and Operations Panels are bilateral strategic meetings convened to address space communications policy, procedures, and high-level requirements for the mutually beneficial operation and utilization of partner agency resources. Another ITCOP objective is to coordinate bilateral efforts necessary to resolve high-level technical, operational, administrative, and financial matters raised by either agency.
- 10. Liaison: The Liaison refers to a close cooperation between IOAG and other organizations that foresees also the participation of representatives to the relevant meetings.

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- 11. Quorum: The minimum number of Full Member Agencies that must be present at an IOAG meeting in order to reach final decisions. A quorum is present if there are one or more representatives from at least 60 percent of the Full Member Agencies.
- 12. **SFCG**: Space Frequency Coordination Group. SFCG was formed in 1979 to establish unified space agency positions in matters under consideration by the International Telecommunications Union (ITU) at their World Radio Conferences (WRCs). For further information see: http://www.sfcgonline.org/

When used in these Procedures, the following words mean:

- a. Shall or will states a requirement for an action or a mandatory provision.
- b. Should indicates a preference for an action or outcome.
- c. May implies that an action is optional.
- d. *He, His, or Him* are gender-neutral and shall be construed as neither masculine nor feminine.

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2.0 AGENCY RELATIONSHIPS

The IOP formed the IOAG in 1999 and is the senior management authority of the IOAG. The IOAG is responsible for achieving interoperability among member Agencies' communication assets. However, the IOAG shall not develop technology or standards to implement that interoperability. Rather, the IOAG was instructed to use existing organizations, specifically the CCSDS and the SFCG. That directive created a relationship between the IOAG and these other organizations. IOAG Agencies review their current capabilities, develop a roadmap leading to interoperability, identify areas where standards are needed and communicate this information to the CCSDS and SFCG. In that regard, the IOAG documents its desired needs for standards, priorities and need dates for the individual CCSDS products, i.e., blue books and some others, on the IOAG-CCSDS Products Agreement (ICPA), maintained by the CCSDS.

The relationships between the IOAG and other organizations are shown in Figure 1 below.

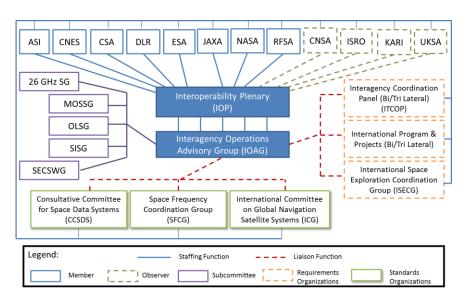


Figure 1 Organizational Relationships

Apart from the initial organizations (CCSDS and SFCG), three new organizations have been identified with which the IOAG should develop relations. These are the International Space Exploration Coordination Group (ISECG), the International Lunar Network (ILN) and the International Committee on Global Navigation Satellite Systems (ICG). Plans have been made for the IOAG to collect and consolidate communication and navigation system requirements from these groups and forward them to the CCSDS and SFCG.

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3.0 IOAG MEMBERSHIP

Membership in the IOAG is open to all international, civilian space agencies having a substantial scientific space program, which maintain significant communication assets, and wish to be interoperable with other agencies. Admission of a space agency that does not have significant communication assets may be made on a case-by-case basis, provided that its space program includes missions which lie within an area of interest of several IOAG Agencies and where coordination or cross-support are important objectives. Current IOAG member Agencies are identified on its website at http://www.ioag.org.

3.1 Membership Types

There are two types of membership: Full Members and Observer Members.

3.1.1 Full Members

Full Members meet the criteria set forth in Paragraph 3.0 above. Full Members have unfettered voting rights and their views must be considered in reaching an IOAG decision. Full members have the same rights, whether they are charter Members or admitted Members.

3.1.2 Observer Members

Agencies not having a substantial scientific space program or which do not have significant owned communication assets, which are applying for membership in the IOAG may be admitted as Observer Members. Agencies may also elect to apply as Observer Members. Observer Members do not have voting rights; however, their views may be considered in reaching an IOAG decision.

3.2 Admission to IOAG Membership

A Space Agency may become a member of the IOAG in two ways: Application and Invitation.

3.2.1 Application for Membership

A Space Agency may apply for membership in the IOAG by contacting the IOAG Secretariat in writing and requesting membership in the IOAG. The Secretariat shall convey the request to the Agency Heads of Delegation of the applicants' formal request. If no objection is received from the Head of Delegation of any current member within 21 days after such notification has been sent, the IOAG Secretariat shall invite the applicant Agency to participate as an Observer at the next regularly scheduled IOAG meeting and to make a presentation on its programs, communication assets and its interest in cross support. The Secretariat shall also

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schedule the application for consideration by the IOAG at its next regularly scheduled face-to-face meeting.

3.2.2 Invitation

The IOAG at a regularly scheduled meeting (teleconference or face to face) may determine, upon deliberation that it is in the IOAG's best interests to extend an invitation of membership to a Space Agency. When such a determination is made, the IOAG Secretariat shall prepare a Letter of Invitation to that Space Agency, which provides information about the IOAG and which explains the reasons why it would be beneficial for that Agency to become an IOAG member. The letter should also include an invitation to that Agency to participate as an Observer in the next regularly scheduled IOAG meeting.

3.2.3 Admission

The admission of a new member to IOAG shall require an approval by at least 60 percent of the Full Members.

3.3 Duties of Members

By becoming a member of the IOAG, Agencies undertake certain duties and obligations. It is presumed that an Agency becomes a member of the IOAG to achieve international interoperability. Interoperability permits one Agency's communication assets to cross-support another Agency's spacecraft. Accordingly, there are certain expectations placed on member Agencies:

3.3.1 Duty to Attend Meetings

The IOAG cannot function unless it has a quorum. Accordingly, it is incumbent on Full Members to attend regularly scheduled IOAG meetings. If the regular IOAG Delegate is unavailable for a meeting, the Agency should send an alternate. Alternates should be of sufficient stature that they are empowered to express opinions and take positions on behalf of their Agency and should not have return to their Agency for ratification of decisions. Every effort should be made to schedule meetings at a time and place where all Delegates can attend. Failure by a Full Member to attend two consecutive meetings may lead to the decision to downgrade that Agency to the status of Observer Member. An Observer Member has no strict obligation to attend IOAG meetings.

3.3.2 Duty to Abide by IOAG Decisions

The IOAG is dedicated to the mutual benefit of members by enabling cost saving through cross-support. Interoperability is the cornerstone on which the ability to cross-support rests. It is expected that Agencies participating in the IOAG subscribe to these principles. Therefore, it is important that Full Member Agencies

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participating in the IOAG agree to follow the decisions recorded in IOAG Recommendations. An Observer Member has no strict obligation to follow IOAG recommendations while he is encouraged to do so in view of potential future cross supports with Full Members.

Acceptance of this duty does not obligate an Agency to expend resources to create an infrastructure for which it has no internal need. It does mean that when cross-support is requested or offered, it will be obtained and provided in a manner consistent with IOAG Recommendations, unless the corresponding IOAG Resolutions do no cover the type of requested cross support. In this case, the matter shall be brought to the attention of the IOAG with a request to pursue a decision on a corresponding new IOAG Recommendation.

Agencies having no need of cross-support should reconsider their membership in the IOAG.

4.0 IOAG CHAIRMAN

Historically, the hosting Agency provided the meeting Chairman. While this worked well for meetings, it created a vacuum between meetings when significant work could have been accomplished. Accordingly, it has been decided by IOAG Delegates attending the IOP-2 meeting that a Chairman should be appointed for a period of 2 years to ensure continuity between meetings.

The IOAG Chairman will be a senior person belonging to one of the Member Agencies, involved in his agency in Operations, Communications and Navigations activities, and who is cognizant and experienced with the IOAG organization, objectives and procedures.

4.1 Term of IOAG Chairman

The IOAG Chairman shall be appointed by the Delegates at an IOAG meeting for a period of two years with an option for renewal for a third year by agreement of the Delegates and acceptance by the standing Chairman.

Before the end of the Term and well in advance of the last IOAG meeting to be chaired by the departing Chairman, the IOAG Secretariat will issue a call for candidates so that they are known by the Heads of Delegations and a new Chairman may be appointed at that meeting.

Such nomination and any potential renewal shall require an approval by at least 60 percent of the Full Members.

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4.2 Responsibilities of the IOAG Chairman

The IOAG Chairman is responsible for the smooth functioning of the IOAG. In doing so, he can delegate tasks to the IOAG Secretariat. Generally speaking, the responsibilities of the IOAG Chairman are to:

- Elaborate an IOAG Work Plan directly derived from the resolutions of the most recent IOP meeting and that addresses the tasks and actions decided by the IOAG.
- Consult with IOAG Agencies to prepare the Agenda for IOAG meetings.
- Determine the duration of an IOAG meeting based on the Agenda.
- Ensure the completion of the Action Items defined in the Work Plan or those assigned during the meetings in a timely manner.
- Call for inter-sessional teleconferences and/or videoconferences on more focused subjects.
- Preside over IOAG meetings.
- Tabulate the opinions of IOAG Agencies in order to reach an IOAG decision.
- Ensure that work between meetings progresses in an orderly and timely fashion.
- Represent the IOAG vis-à-vis the international organizations, with which it maintains relationships.
- The chairman can nominate a representative of one of the member organizations to represent the IOAG in specific areas and to take over certain tasks regarding the corresponding relationships, e.g. maintenance of ICPA. In case a liaison is not found, IOAG will assign a person who is responsible for this liaison and report to the IOAG. This appointment will be done during an IOAG meeting. In case the IOAG Chair was appointed to represent IOAG in specific areas, he can delegate this duty on occasions to one of the heads of delegation.

4.3 Duties of the IOAG Chairman

The IOAG Chairman has a duty to ensure that IOAG meetings progress in accordance with recognized parliamentary procedures. He shall have the authority to end or postpone discussion or debate as he deems appropriate.

4.4 Neutrality of the IOAG Chairman

Since the IOAG's formation and before the present procedures became applicable, the Chairman has always been the Head of Delegation of the Hosting agency. The IOAG Chairman is in a unique position of being responsible for the orderly progress of business during and between meetings. Nevertheless, he has no voting right or final decision associated to his position. Therefore, it is desirable that the Chairman has the appearance of neutrality but may also serve as his Agency's Head of Delegation.

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5.0 IOAG SECRETARIAT

The IOAG shall maintain a Secretariat to assist the Chairman in the orderly functioning of the IOAG. The Chairman may delegate as many of his duties and obligations as he wishes to the IOAG Secretariat.

5.1 Agency Providing IOAG Secretariat Function

Since the IOAG's formation, NASA has provided the IOAG Secretariat. The term of the Secretariat shall be indefinite; however, at any time during a regular IOAG meeting the IOAG Members can choose to move the Secretariat function to a different Agency, provided that Agency is a Full Member of the IOAG.

5.2 Responsibilities of the IOAG Secretariat

The IOAG Secretariat is responsible for assisting the Chairman in the operation of the IOAG. In particular, the IOAG Secretariat will:

- Schedule and prepare the organization of the meetings and inter-sessional teleconferences and/or videoconferences, in support of the Chairman and the Hosting Member.
- Prepare the Minutes of IOAG meetings.
- Prepare and/or maintain such other documentation that the IOAG generates.
- Circulate the Draft Minutes to IOAG Heads of Delegations for review, revision, and concurrence.
- Oversee the IOAG website and its operation, including public and secure areas.
- Organize electronic balloting in between meetings, as required.
- Provide communications to the IOAG Members, the IOP and the IOAG liaisons.
- Undertake such ad hoc tasks as the Chairman shall delegate.
- Maintain the IOAG Mission Model by requesting periodic updates from IOAG Members and providing the updated Mission Model on the IOAG website.
- Maintain the IOAG Communications Asset summary by requesting periodic updates from IOAG Members and providing the updated summary on the IOAG website.
- Maintain the IOAG Standards Infusion by requesting periodic updates from IOAG Members and providing the updated Standards Infusion on the IOAG website.
- Maintain the IOAG Terms of Reference, Procedures Manual, and Work Plan.
- Provide limited support to the IOAG sub-groups, which is to be agreed on a caseby-case basis. This limited support can include the maintenance of the action items. However, it should not include the generation of minutes of the sub-group meetings.

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5.3 Duties of the IOAG Secretariat

In addition to assisting the Chairman with the day-to-day operation of the IOAG, the IOAG Secretariat shall serve as an advisor to the Chairman and to the IOAG at large. It is the duty of the Secretariat to be thoroughly familiar with the procedures outlined in this document and to advise the IOAG as to the correct procedures to follow in all situations. It is the responsibility of the IOAG Secretariat to provide continuity during and between meetings.

5.4 Neutrality of the IOAG Secretariat

When acting as the IOAG Secretariat, the IOAG Secretariat does not serve any Agency or espouse any position relative to the positions taken by an Agency, the IOAG, or the IOP.

5.5 IOAG Website

The IOAG shall maintain a website under the control of the IOAG Secretariat. This web site shall have a public section open to anyone with access to the internet and a secure section available to only IOAG Full Member and Observer Member Agencies. User names and passwords shall be kept simple and assigned on an Agency-by-Agency basis by the IOAG Secretariat. It is the responsibility of each Head of Delegation to determine who shall have access for its delegation. As a matter of IOAG policy, the public part of the site should contain all final non-confidential materials, reserving the secure section for those items still in a draft form or to be kept in confidence. The IOAG website can be found at: http://www.ioag.org.

6.0 HEAD OF DELEGATION

Each Agency attending a regularly scheduled meeting shall designate a Head of Delegation.

6.1 Requirements to Serve as a Head of Delegation

The Head of Delegation will usually be the most senior Agency person attending an IOAG meeting who is authorized to speak for, and make commitments on behalf of, the agency which he represents. Every meeting shall have one Head of Delegation for each Agency attending the meeting. Agencies are encouraged to nominate a permanent Head of Delegation, in order to ensure continuity in the discussions and debates. Each Member and Observer shall notify the Secretariat of any change in Head of Delegation.

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6.2 Responsibilities of an Agency Head of Delegation

An Agency's Head of Delegation is the lead representative from his Agency. As such he will:

- Serve as the Delegation leader from his Agency
- Have the ability to state positions and make commitments for his Agency
- Execute any documents required by the IOAG on behalf of his Agency
- Provide a single point-of-contact between meetings for his Agency
- Select the members of his Agency's Delegation to an IOAG meeting
- Respond to the Chairman's inquiry regarding his Agency's position on a matter
- Be responsible for the regular update of the Mission Model, Communications Assets and Standards Infusion of his Agency
- Be responsible for ensuring that his Agencies' delegates conduct themselves in accordance with recognized parliamentary procedures.

6.3 Duties of an Agency Head of Delegation

Recognizing that a Head of Delegation may change periodically, this person shall serve as the single point-of-contact between meetings. Communications by and between Agencies shall be through the Head of Delegation who shall then be responsible for distributing such material to the members of his Delegation.

Likewise, the Head of Delegation shall collect and distill the views of his Agency and communicate that position to other Heads of Delegation as well as to the Chairman and Secretariat by whatever medium is appropriate under the circumstances. In particular, he will make sure that his Delegation will:

- a. Identify and report on the future missions in the Agency that are candidate for cross-support and maintain the Mission Model of his agency
- b. Provide a list of interoperable Communications Assets, Standards Infusion and services operated by the Agency, including future implementation plans.
- c. Submit the operations concept of the Agency in terms of operations and systems management and contribute to the elaboration of common related policies and agreements.
- d. Contribute to the definition of requirements and testing needed to ensure interoperability of space Agencies facilities.
- e. List the developments made in the Agency and evaluate the possibilities for distribution of software to other member Agencies.
- f. Monitor and report on the status of the requirements from missions in which the Agency is involved (through ITCOP or other bi/trilateral agreements) and in which cross-supports are planned for the agency, either as a service user or as a service provider.

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- g. Coordinate at the technical level with the operations coordination groups, to inform them of the Agency's network status and planned changes, as reported at the IOAG meetings.
- h. Monitor the status of the work of relevant standards organizations and identify the areas not or not sufficiently covered, considering the requirements of the upcoming missions.
- i. Coordinate at the technical level with the representatives of its Agency in the relevant standards organizations in order to inform them of the outcomes of the IOAG in terms of priorities or implementation difficulties.

These functions of each member of the IOAG should contribute to the preparation of the advice to the IOP, through coordination with the other members of the IOAG and through a common understanding of the status, needs and mission constraints of each Agency.

6.4 Neutrality of an Agency Head of Delegation

While assembling an Agency position, the Head of Delegation is well advised to project the appearance of neutrality vis-à-vis his delegation. However, once an Agency decision is reached, the Head of Delegation should become an advocate for that position.

7.0 MEETINGS

IOAG Agencies shall meet at a time and place of their choosing.

7.1 Frequency and Location of IOAG Meetings

The IOAG shall meet periodically, not less frequently than once every 12-month period. More frequent meetings are encouraged, in accordance with the IOAG Work Plan or when the workload or schedule so demand. At the proposal of the IOAG Chairman, teleconferences or videoconferences may be held to deal with urgent or focused subjects.

At the conclusion of a regularly scheduled IOAG meeting, an IOAG Member Agency may volunteer to host the next regularly scheduled meeting at a specific time and place, with the intention to rotate between the IOAG Member Agencies. Delegates to the meeting at which such offer is tendered should decide upon the meeting time and location. Such location and time should be recorded in the Meeting Minutes by the Secretariat.

If at all possible, a longer term schedule of the IOAG meetings will be established, including the period when the meeting should take place and its location, if a candidate hosting Agency has been identified.

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7.2 IOAG Meeting Facilities

An Agency offering to host an IOAG meeting should be prepared to provide a room sufficiently large to accommodate Delegates from all Full Member and Observer Member Agencies. Tables with seating should be provided with sufficient space for Delegate's laptop computers and other meeting materials. Electrical outlets should be available to power laptop computers. A public address system with one microphone for every two delegates is highly desirable. A solid state-projection system, capable of displaying charts from laptop computers in a size so that all in the room can see is required. Internet access should be provided to all delegates in the meeting room or in its vicinity.

The hosting Agency should also have duplication facilities available. It is also desirable to have a second room capable of seating 10-12 people available for breakout sessions that may be required.

7.3 IOAG Meeting Procedures

The following procedures are applicable to regularly scheduled IOAG Meetings:

7.3.1 Quorum

To transact official business and reach a decision a quorum of IOAG Member Agencies must be present. A quorum is defined in Section 1.3. above. In case an IOAG meeting is held in the absence of a quorum, discussion and tentative decisions may be made, subject to later ratification by a sufficient number of Member Agencies.

In this case, post IOAG meeting ratification shall be undertaken in written form by the IOAG Secretariat using a suitable means of transmission. Agency replies to requests for ratification should be made to the IOAG Secretariat with a copy to the Chairman. The IOAG Secretariat shall tabulate the responses and inform the Chairman of the ratification results. If an Agency fails to reply to a Request for Ratification within 45-days of the date that the Request for Ratification was sent, the IOAG Secretariat shall record that Agency as abstaining, which will be construed as acceptance of the decision.

If a member abstains his vote is still considered for the quorum but the vote doesn't affect the 60 %.

7.3.2 IOAG Member Agency Positions

Member agencies are encouraged to submit to the IOAG Secretariat draft proposals for decisions to be made by the IOAG, as established on an individual or multilateral

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agency basis, as applicable. Such proposals should include a short description of the rationale and a draft wording of the decision. The IOAG Secretariat will circulate this proposal to the Heads of Delegation and will make sure, together with the IOAG Chairman, that this subject will be on the agenda of the next meeting.

When a matter requiring a decision comes before the IOAG, Agency Delegates should meet and reach a decision, which shall be expressed by the Agency's Head of Delegation. This does not foreclose the expression of opinions and discussion by all Delegates to an IOAG meeting; however, the Chairman shall have the authority to terminate such discussions in the interest of efficiency and to request the Head of Delegation for each Agency to state that Agency's position.

7.3.3 IOAG Decisions

The IOAG shall make every effort to reach decisions by consensus. However, there will be times where that will not be possible. In those circumstances, the Chairman shall poll the Agency Heads of Delegation, requesting each Agency's position.

The IOAG can take decisions during the meetings and using the e-vote tool. In case the e-vote system is used, a sufficient time, typically 3 weeks, is to be given to the delegations to take their decision. If this is not sufficient the concerned head of delegation is to inform the chairman and the secretariat and should ask for an extension.

Except otherwise stipulated in the present Procedures Manual, any decision by the IOAG requires that 60 percent of the Full Members approve the wording of that decision.

When an IOAG decision is required, the Chairman shall clearly state the issue in a way that permits a *yes* or *no* voice vote. If time permits, he may open the matter for discussion by all delegates. He shall terminate the discussion after a reasonable period and ask Agency Heads of Delegation for their Agency's decision. Agency Heads of Delegation can state their Agency's position in one of four ways:

7.3.3.1 Approve

Here, an Agency votes yes for the matter before the IOAG. It should be used when an Agency agrees with the proposition as stated by the Chairman.

7.3.3.2 Abstain

This is neither accounted as a yes or no vote. It should be used when an Agency does not have an immediate or foreseeable future interest in the matter before the IOAG.

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7.3.3.3 Opposition

This is essentially a *no* position. When an Agency disagrees with the proposition before the IOAG, they should vote to oppose the proposition.

7.3.3.4 No Vote

This is interpreted by default as "approved" so that decisions are not delayed due to lack of participation.

7.4 IOAG Meeting Publications

Several types of publications may be prepared by the IOAG depending upon their purpose and the intended recipient. These include a record of meetings as well as communications to other organizations.

7.4.1 IOAG Meeting Minutes

The IOAG Secretariat shall prepare Minutes of each regularly scheduled IOAG meeting within 30-days of the meeting. Such Minutes shall document all important discussions and decisions as well as providing the rationale for such decisions. The IOAG Secretariat shall send the completed Draft Minutes to all Heads of Delegation for comment by their Agency. Heads of Delegations shall provide comments and corrections to the Minutes to the IOAG Secretariat within 30-days of the date that such Draft Minutes were distributed. Agencies not replying to the IOAG Secretariat within the 30-day period shall be deemed to have accepted the Draft Minutes as written. Upon acceptance, the Minutes and the set of presentations made at the IOAG meeting shall be posted on the secure part of the IOAG website.

As soon as the list of actions is consolidated it should be distributed even if the corresponding minutes are not yet finalized.

7.4.2 IOAG Recommendations

The IOAG may adopt Recommendations leading to increased interoperability. Such Recommendations are addressed to IOAG Agencies as well as to other Agencies wishing to be interoperable with IOAG Agencies. Recommendation format should follow that established by the International Telecommunications Union (ITU) and should include Considerings providing the rationale and Recommends stating the directive. IOAG Recommendations shall be tables at the time of decision, i.e., within the IOAG Meeting, and state if they are voted or still subject to post IOAG meeting ratification. Recommendations shall be placed on the public part of the IOAG website.

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7.4.3 IOAG Resolutions

The IOAG may also adopt Resolutions. These are frequently used for IOAG internal decisions or for communications with other organizations such as the CCSDS or SFCG. Resolutions are a succinct statement of an IOAG decision or position. Here the format can be in brief paragraph form. IOAG Resolutions shall be tabled at the time of decision, i.e., within the IOAG Meeting, and state if they are voted or still subject to post IOAG meeting ratification. Resolutions shall be placed on the secure part of the IOAG website.

7.4.4 IOAG Communiqué

A Communiqué is a letter directed toward a specific organization or group. It is used frequently when communicating with a superior organization, such as the IOP. The Communiqué's format should follow the format customarily used for such documents. It should contain sufficient background information so that the recipient understands the nature of the communication. A Communiqué can also serve as a transmittal instrument for IOAG Recommendations or Resolutions. IOAG Communiques shall be tabled at the time of decision, i.e., within the IOAG Meeting, and state if they are voted or still subject to post IOAG meeting ratification. IOAG Communiques shall be placed on the secure part of the IOAG website.

7.4.5 IOAG Liaison Statements

A Liaison Statement is a communication with another organization of equal authority. Typically, its format is similar to a letter and is of sufficient length to articulate a position, to make a request or provide a reply to a previous question. It should contain sufficient background information so that the recipient understands the nature of the communication or request. IOAG Liaison Statements shall be tabled at the time of decision, i.e., within the IOAG Meeting, and state if they are voted or still subject to post IOAG meeting ratification. Liaison Statements shall be placed on the secure part of the IOAG website.

8.0 CONSULTANTS AND TECHNICAL SUBGROUPS

Periodically, the IOAG will be in need of special expertise and technical advice. While the CCSDS and SFCG normally supply this expertise, there may be situations where new standards are premature. Such situations could arise while the IOAG is developing requirements to provide to the CCSDS or SFCG. Accordingly, it may become advisable to seek the advice of specialized technical experts.

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8.1 Technical Consultants

When a specific technical subject is calendared for discussion at an IOAG meeting, IOAG Agencies may elect to bring technical experts to an IOAG meeting.

When this is the case, they should inform the Chairman, Secretariat, and host Agency of the additional needs for seating. Comments by such persons should be limited to the specific topic for which they have specific expertise. The IOAG is not responsible for any contracting requirements external consultants may place on the inviting Agency.

8.2 Technical Subgroups

For larger topics or also while undertaking special tasks requested by other organizations and which have been accepted by at least 60 percent of the IOAG member Agencies, the IOAG may elect to form Subgroups of member Agencies, who are parties-in-interest to these tasks, to complete the work.

Space Inter-networking is an example of such a subject and the Space Internetworking Strategy Group (SISG) was formed by the IOAG for this purpose.

Such groups operate autonomously from the IOAG and upon completion of their task issue a report for endorsement by the IOAG. The scope of work and the schedule for the work is established by the IOAG, including the periodical reporting of that group to the IOAG. On occasions, subgroups may also report to the IOP.