

Commission III
Monday, 26th March

Chairman: Roger Lenard

Acting Secretary: Emeline DeAntonio

Final Compilation: Chair Commission III

Agenda: See attachment

List of participants: See attachment

- **Study Group 3.14** Ken Davidian indicated that the report was to be published by the Chinese over a year ago. For about a year, there had been some requests from the Chinese publisher, but Ken hasn't heard anything for about 6 months. Report inactivity to SAC.
- **SG 3.15** Also awaiting publication by Chinese - report to SAC
- **SG 3.18** No representative.
- **SG 3.19** A verbal report on SG 3.19 was given by the Chair, Commission III at the request of Susan McKenna Lawlor, who is the Chair, Commission I.
- **Study Group 3.21:** no representative.
- **Study Group 3.22:** research devoted to complex problems of space development. Space robotics and space intelligent systems, mechanisms and legal team. It would involve specialists from all around the world and professional organizations. Study not completed, not enough material. To be submitted in Bremen. The team is going to submit two patents for inventions from private persons. First patent: spaceflight mechanisms, special orbit: so called « locally synchronized orbit ». It minimizes, to provide services for the satellite. Second patent: construction on the satellite system based on the first results. To be submitted to Commission for review in Bremen. Verbal report, no attachment.
- **Study Group 3.23:** we officially confirmed that the Study Group 3.23 is cancelled due to inactivity by the SG on obtaining UN interaction.
- **Study Group 3.24:** PPT slides. To be reviewed before Bremen Committee meeting. See attachment.
- **Study Group 3.25:** PPT slides. Status of report. Final report due by September in Bremen. Prepositioning of supply before the crew arrives should be mentioned in the Presentation. For supportability. See attachment.
- **Study Group 3.26:** PPT slides. Space Mineral Resources. National benefits. National authorization and supervision. In line with UN sustainability goals. Propellant on the surface of the Moon – What is commercially possible now? Create specific infrastructure in space. 2nd draft under development. IAA Workshop in LA (with NSS-ISDC). Expect to have Commission III draft for review in June 2018. Legal section detailing strategies for implementing OST Article VI. Profitable infrastructure with entrepreneurs? SMR for the benefit of Humanity. MVA and SG 3.26 with common interests.
 - Announcement: The Hague Space Resources Governance Working Group. Since Phase 2, there is a technical panel made of industry. Giuseppe Riebaldi would like to invite that the Chairman of this working group comes to the 23–24th of April in Leiden. First face-to-face meeting. Allocate 20 min in Agenda for this IAA WG to present at this Working group. Framework has been discussed but now technical for the building

blocks. The Executive secretary to this Working group is Mr. Giuseppe Reibaldi.

- Write a book for legislator, regulators, politicians, how to have a business that is self-financing. Trade study that we are doing. Go to Mr Bigelow.
- See attachment
- **Study Group 3.27:** Moon and Mars. Roger Lenard to be added. Giuseppe Reibaldi and John Mankins from the MVA now added to the study. ISRU, 3D Printing of buildings, Electromagnetics radiation shielding of building (and spacecraft). The list of the chapters and the persons in charge will be sent, so that if anybody wants to send their materials they can send it to the responsible. First Draft in Bremen. Another Meeting in Torino for the New Space Exploration Symposium at beginning June 2019. Contact with the MVA has been established. We hope that for this meeting we will have the final draft. For the MVA, we will have a meeting May 23th, to start the Italian Branch of the MVA. Team from Yuri for 3D printing of buildings. Verbal report.
- **Study Group 3.28:** PPT Slides. Strategy of Large-scale and Low-cost Access to Space in Future. Plan to finish the final draft report Aug. 2018 and in Oct. 2018 finish the commission review. In 2019, ready for publishing as a book. See attachment
- **Study Group 3.29:** No representative.
- **Study Group 3.30:** Utility of space sensors for Understanding Climate Change. Ask for UN IPCC representatives to Giuseppe Reibaldi. Right now space temperature sensing is done, but this study wants to enlarge the research with other alternatives other than temperature measurement. IAF committee on Earth Observation. See attachment
- **Study Group 3.31:** PPT Slides. Space Solar Power. May 2018: Kick off Workshop at SPS-2018 and Symposium on the Moon. To be completed in March 2021. Verbal report.
- **Study Group 3.32:** Proposed Study on ISS Privatization. Report to SAC. Roger Lenard. No slides, but draft request for IAA study.

- **Proposal for Forming an IAA Study Group:**

Overall Goal of the paper: Position Paper for recommendation to the ISS Member countries. How ISS is transferred into privatized operation by Mr. Yoji Isikawa.

New systems or assets to be shown in the Draft? Our focus is system technologies. If this study is not focusing on it then no. Final report will be done at the Meeting in March. It is more a position paper. People should not reinvent the wheel. The agency has to say what they are doing. Example of OtherCast, the Canadian was given. Final decision: approved by Commission III as a co-sponsor, but not responsible for the study. Commission IV would be the lead.

- **IAA Conferences to be planned: 3rd Symposium on Private Human Access to Space, 19-21 Nov. 2018, Hsinchu, Taiwan**

Symposia and Session Status: Issue is D4 and D5. We have transferred studies to the interactive presentations. Maximum studies decided is 17. 8 papers moved to the interactive sessions. Giuseppe Reibaldi suggested that there is room for extra papers in session D4.4 . Cut down the number of abstracts to 8. Means 8 slots available in our

session within the present allocated capability. No remote decision to be taken, decision to be taken after a face-to-face discussion on Thursday, 29th March.

D4.5 is always on Friday morning or afternoon. Giuseppe Reibaldi will have a few words in French with the responsible parties.

- **Commission conclusions: The IAC must do something about the D4.5 meetings always being on Friday. This is unacceptable and it was told to the Chair, Commission III that the meetings would not be on Friday in Bremen, this was untrue, because the meetings are still on Friday.**
- **Chairman adjourned meeting.**