

International Academy of Astronautics (IAA)
Minutes of meeting - Study Group 3.24 "Road to Space Elevator Era"
3rd meeting in Seattle/WA, USA on August 20th, 2015



Date: Thursday, August 20th, 2015

Time: 13:00 – 17:00

Place: "Barnstorming Room" inside the Seattle Museum of Flight

Chair: Akira Tsuchida (CM2), Co-chair: Peter Swan, Ph.D. (M4), David Raitt, Ph.D. (M4)

Secretary: Ms. Sakurako Takahashi

Agenda:

1. Opening Remarks Peter Swan
 - Addition to the original agenda, which is listed at #3 below

2. Self-introduction All

3. ISEC's participation in the IAA study Peter Swan
 - ISEC research committee lead by John Knapman has the list of research topics (Appendix 2). If a member has possible discussion areas, ISEC wants to collect those ideas and all can share the information not to conflict with others but to do in parallel.

4. Report from Commission III meeting/SG3.24 2nd meeting in Paris in March 2015 Sakurako Takahashi
 - Commission III members are very interested in our activity and some of them emphasize the Space Elevator Prediction Feasibility Index (SEPMI). They recognize our activity to create SEMDD and SESRD is a good start point.

5. Space Elevator Mission Definition Document (SEMDD) Yoji Ishikawa
 - Yoji Ishikawa drafted SEMDD based on Obayashi Corporation's concept of space elevator.
 - Peter Swan had finished his first review of SEMDD and has two major comments. One is to define common terminologies to be consistent throughout the document. The other is to incorporate the report of previous IAA Study Group. He suggested to have both concepts in one document. IAA concept has one tether with less strong material, so it will be Initial Operation Capability (IOC). Obayashi's concept more tethers with stronger material, so it should be Full Operation Capability (FOC).
 - Takahashi (JAMSS) also has some comments mainly on the structure of the document. Also, the detailed system requirements should be mentioned in SESRD.
 - Takahashi will reflect JAMSS comment first and it shall be reviewed by the member

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of sub-group 5 and Chair/Co-chair before distributing it to the entire study group.

6. Space Elevator System Requirement Document (SESRD) Sakurako Takahashi
 - Some members from JAMSS and Takahashi used the draft SEMDD to start writing SESRD. MIL-STD-961E was used as the format of SESRD.
 - It is a good start point, but it might be better to focus on upgrading SEMDD first.

7. Space Elevator Prediction Feasibility Index (SEPMI) draft created ISEC's Research Topics and SESRD Peter Swan
 - Chair, Akira Tsuchida, has distributed a draft of SEPMI prior to the meeting in Seattle.
 - Peter Swan had proposed an idea to have two phases in SEPMI: phase one for on-orbit demonstration and phase two for a complete space elevator. He will try to re-write Akira's draft to see if his idea works.
 - Appendix 3 is Peter Robinson's paper for his presentation on the following day. In his paper, he has description of Near-Earth Development as project phase 1c and this matches with phase one of Peter Swan's idea.

8. SEMDD and SESRD First Review result Peter Swan
 - Already discussed above.

9. Next meeting schedule
 - Chair will announce a meeting in Jerusalem. He is going there and will report our activities to the Commission III members.