

**United Nations / United Arab Emirates  
Symposium on Basic Space Technology  
“Small Satellite Missions for Developing Space Nations**

**Zayed University Conference Center, Dubai Academic City, 20 - 23 October 2013**

**Panel Discussions**

A panel moderator who will introduce the overall topic and the panel participants leads each panel discussion. The panel moderator can choose his own way to run the panel. One suggested approach is to first invite all panel participants to speak on a specific item related to the topic (max. 3-5 minutes/person) and then to open the floor for questions/discussions before proceeding to the next issue/question. The moderator should also conclude the panel with a short summary of the major issues discussed, findings and possible recommendations that should be reflected in the Symposium report.

**Panel 1: 20. October**

**Topic:** Requirements and Conditions for Enabling and Sustaining Space Technology Development Activities in Support of National and Regional Development Priorities

**Participants:**

- Shinichi Nakasuka (Japan, Moderator)
- Irfan Aslam (Pakistan)
- Amer Al Sayegh (EIAST)
- Klaus Schilling (Germany)
- Danielle Wood (US)

**Proposed discussion items:**

- What are the most important requirements and conditions that enable space technology development activities (e.g. funds, human resources, infrastructure (to be discussed in detail on 21 October), governmental/institutional support...)
- Each of the requirements and conditions could then be discussed in more detail, e.g.
  - Funding of space technology development (e.g. cost, funding sources, etc.)
  - Human resources (e.g. training of staff, retaining staff, education and job opportunities)
  - Infrastructure (do not discuss in detail, but refer to panel on 21 October)
  - Government/institution support (e.g. how to obtain support and sustain it...)

**Panel 2: 21. October**

**Topic:** Best practices for establishing infrastructures for basic space technology development

**Participants:**

- Omran Sharaf (EIAST, Moderator)
- Alim Rustem Aslan (Turkey)
- James Barrington Brown (South Africa)
- Mengu Cho (Japan)
- Jordi Puig-Suari (US)

**Proposed discussion items:**

- What are the minimum infrastructure requirements for basic space technology development (e.g. for CubeSat project, for 50 kg satellite project)?
  - Machine/electrical workshop
  - Clean room
  - Testing facilities
- What needs to be purchased/procured, what can be developed in-house (e.g. makeshift clean room..)
- What is the approximate cost of such facilities?
- Which of these facilities are essential and which are optional? (e.g. testing at external testing facilities, rental of facilities...)

**Panel 3: 22. October**

**Topic:** Prospects for Space Technology Development Activities and Regional and International Cooperation in Western Asia

**Participants:**

- Ayman El-Sherbiny (ESCWA, Moderator)
- Sarah Amiri (EIAST)
- Kamel Besbes (Tunisia)
- Ala El Din Hassan Mohamed Elnahry (Egypt)
- Awni Moh'd Kasawneh (Regional Centre for Space Science and Technology Education for Western Asia)
- Saleh Said Al Shidhani (Oman)

**Proposed discussion items:**

- History of space technology development efforts in Western Asia.
- What is the present status and what are prospects, plans and visions for the future?
- Where are the opportunities and what are potential show stoppers?
- Role of regional cooperation in space technology development among the countries in the Western Asia region?