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SPACE MUSEUM 2.0: CREATING A NEW SPACE MUSEUM WITH THE INVOLVMENT AND PARTICIPATION OF THE GENERAL PUBLIC

Abstract

The paper will explore the methodology of establishment of a new space museum in Israel, as a part of International Space Center, currently under advanced planning. The opportunity of creating a new museum is also an opportunity to reach out the community - through the internet and new media, competitions among students - from K-12 to university students in architecture, design and science teaching. There is no limit to "space education and outreach" and through smart use of new media the museum will affect the general public years before it will open its gates. One of the innovative outreach activities of the new museum and science center is to use the new media as a tool to reach the general public - from kindergarten students to adults, and make them partners in the design process, with influence on the thematic aspects of the museum, collections, and desired attractions.

Introduction

Designing a space museum from scratch is a rare opportunity, one that is usually a "once in a lifetime" experience. To do it in a small country, with no other dedicated space museum, is a unique opportunity. After involvement with space education, exhibitions and outreach activities since 1990, it is a dream becoming a reality for me – with experience of curating several international space exhibitions, design of space related artifacts for science museums and planetariums for more than 25 years, including years of experience as the

director of a special science museum for kids and 15 years of developing curricula for the Weizmann Institute of Science "Garden of Science - an outdoor interdisciplinary science museum.¹ To curate a space museum that is an important part of a large scale project of an education driven international space center – is even better.

¹ And see the author's paper, SPACE EXHIBITION AT A GRAND SCALE – A SPACE EDUCATION EXTRAVAGANZA: LESSONS FROM THE "SPACE MANIA" EXHIBITION, IAC-15 E.5.6.1

The International Space Center

The International Space Center (ISC) is an initiative started back in 2012. It is organized by a not-for-profit Association, established specifically for this project. The ISC is allocated and designated to be a space complex, comprise of a wide range of activities related to space science and exploration, to be established in an area of over 5.0 hectares. The ISC undertakes to be the largest and most advanced Center of its kind, encompassing divers space related subject matters including but not limited to, astronomy, aeronautics, aviation, incubators, and astronauts training sciences, R&D, and space exploration. The ISC complex amalgamates interactive, experiential activities alongside education both in formal and in non-formal capacity, encompassing both a rich experiential and a unique learning and research center. The ISC is going to be one of its kinds in the Middle East Region, presenting equal benefits and opportunities to all.²

One of the main elements of the ISC will be the space museum.



Fig. 1: General layout of the International Space Center

Space Museum: what, why, how?

There are many space museums all over the world. And there were space related exhibitions in Israel over the years. Many Israelis traveled to the US and visited the National Air and Space Museum (NASM) or one of NASA's visitor complexes (many visited the KSC). So it is understandable that the purpose of the space museum here won't be to educate the public about space "from the beginning" – the audience is well aware of the subject. So what will the new space museum will be?

There are many approaches to build a space museum, and many museums around the world are trying to tell a story – humanity's quest for space, from ancient times, through current days and with visions for the future.

The new space museum will be modest in terms of budget in comparison to museums in the US or Europe, but we will not be compromised on the quality of the artifacts, exhibits and technical infrastructure. This is why the museum will grow over time, and will not be completed with all departments and

² For a detailed account on the International Science Center, see IAC-15, E1, 7,8, THE INTERNATIONAL SPACE CENTER ASHDOD - ISC (ISRAEL)

exhibition halls from the opening to the public.

It is my personal belief that a space museum is about an EXPERIENCE. I want to give the visitors an interesting, educational, fun, interactive experience, in order to tell the story about the amazing adventure of space exploration, travel and utilization. This will be done with a mixture of actual space hardware, documents, art collection, models, simulators, planetarium and cinema, augmented reality, outdoor park and more. The museum will be self-explanatory but a trained staff of guides will interact with the visitors.



Fig 2: the space museum
(Preliminary design)

Themes for the museum

The main themes of which the museum will be built upon are:³

- Space in ancient times
- Mankind's quest for space – before 1957
- The space race
- **The story of Israel space program**

³ This is a tentative list. Not all the sections will open at once, unless sufficient budget will be available.

- Bringing space down to Earth
- Manned spaceflight
- Visions of the future

As can be seen, the museum will present the 30+ years of Israeli space activities, and will do so with the help of the aerospace industries in Israel that will donate artifacts, documents and models for the museum's permanent exhibition.



Fig 3: "Manned space program" hall
at the "space mania" exhibition,
curated by the author in 2013(Tel
Aviv, Israel)

Engaging the public

After defining the general themes for the museum, it is my intention to engage the general public in the design process – through special website, social media (Facebook, Twitter and alike) and cellphone applications. The general idea is to ask the public – for whom the museum will be built for) what they would like to see in the museum. And, we will get the general feeling of the popularity of our suggestions – for the themes, exhibits, interactive exhibits and other parts.

Of course, we will not be able to please ALL the potential visitors, BUT, we will have a sense of the reaction towards the vision.



Fig. 4: The author with full scale models of Israeli satellites, at the Space Mania exhibition he curated, 2013.

Major part of the new museum will be devoted to Israeli space programs

Special attention will be given to the views of YOUNG future visitors of the museum. This will be done through dedicated platforms, in cooperation of the Israeli Space Agency and the Ministry of Education (of which the author has decades long history and cooperation) – and educators.

Learning from others: Standing on the shoulders of giants

We started a long learning process of the experience of other space museum and visitor centers, and a visit to prominent museum is now under preparation.

We will do our best effort to cooperate and collaborate with leading space museums around the world, in various

ways – from exhibits exchange to curating ideas; we want to establish an International Board of Advisors for the museum, and to include representatives from many space museums and organizations, including the International Astronautical Federation.

To the best of my knowledge, this process of engaging the general public on one hand, and to create on an international team of advisers was not done before.

Source of the exhibits

We plan to have exhibits donated to the museum from various Israeli aerospace firms (including IAI – prime contractor for the satellites and launch vehicle), RAFAEL (contractor of the launch vehicle's third stage), ELBIT (manufacturer of space cameras) and others. Additional source will be the Heinlein Prize Trust – of which the author is a consultant, and already loaned for extended periods of time original Soviet spacesuits and spacecraft (currently on display in Israel). Additional source will be the US Space and Rocket Park at Huntsville, AL, that was the source for major exhibits of the Space Mania exhibition, including a full scale mockup of the core module of the MIR space station.

Some exhibits will be costume built for the museum, including models of launch vehicles, control stations and many others.



Fig. 5: The Excalibur-Almaz spacecraft – on loan to a space theme exhibition in Israel, 2016.

It is my hope to be able to give a progress reports in the coming years. The author is a member of the space museums and science center's committee of the International Astronautical Federation, and through this committee and the IAF, it is my hope to gain from the experience of fellow college curators and directors - and create a true international space museum which will reflect the IAF motto: connecting space people.