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## **THIRD UNITED NATIONS CONFERENCE ON THE EXPLORATION AND PEACEFUL USES OF OUTER SPACE**

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Vienna  
19-30 July 1999

### **Technical Report of the Space Generation Forum**

1. In December 1997, the Secretariat invited the International Space University to organize a youth forum as part of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III). The International Space University then solicited alumni volunteers to plan, organize and conduct the Space Generation Forum, in parallel with other UNISPACE III activities. Thus, the Space Generation Forum was planned, organized and conducted by young space professionals.
2. The 160 participants in the Space Generation Forum were from 60 nations. Their expertise covered all fields of space, including science, technology, law, ethics, art, literature, anthropology and architecture, and many other fields relevant to space.
3. The participants in the Space Generation Forum were encouraged from the beginning to think in terms of a broader perspective, encompassing all humanity, and to disregard national agenda. All participants spoke only as concerned individuals, guided by their conscience and a belief in the power of space to change humanity in positive ways.
4. The meetings of the Space Generation Forum were conducted in three parallel sessions. The first session, called "Human Minds", focused on issues such as education, ethics and the arts. The second session, called "International", focused on issues of universal concern, such as the environment, international cooperation and international security. The third session, called "Science and Technology", included discussions about space science, access to space and commercialization. A total of 14 topics were discussed in the three sessions, along with special interest topics chosen by the participants themselves.
5. The three parallel sessions were held on all three days of the discussion: from 20 to 22 July 1999. On 20 July, the three sessions were given the theme "Individual: Space Benefits to Human Lives". The questions for discussion focused on how space could benefit every person as an individual.
6. On 21 July, the theme for discussion was "Society: Global Benefits of Space Applications". Participants were encouraged to think of how space could benefit society at large or all of humanity.
7. On 22 July, the discussion was on the theme "Cosmos: Space Science and Exploration". Participants were encouraged to look far into the future and speculate on the steps that might be taken at present to prepare for human expansion into the solar system and, ultimately, the universe.
8. On each day, all of the small discussion groups within each parallel session put forward recommendations, from which about five were chosen; thus, about 15 recommendations were

chosen per day and a total of 49 recommendations were chosen during the entire Space Generation Forum.

9. On 23 July, the participants had before them a document containing the 49 recommendations (A/CONF.184/L.8 and Corr.1). The participants were asked to choose the 10 best recommendations. After a brief discussion, consensus was achieved concerning the selection of the 10 recommendations. The 10 recommendations are contained in the document entitled "Space Generation Forum: visions and perspectives of youth" (A/CONF.184/C.1/L.11 and Corr.1), and strategic implementation plans of those recommendations are contained in the annex to the present report.<sup>1</sup>

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<sup>1</sup> The annex is available only in the language of submission.

*Technical Report of the Space Generation Forum (Annex)***Contents**

|  |           |
|--|-----------|
| <b><i>Declaration of the Space Generation.....</i></b>                           | <b>4</b>  |
| <b><i>Universal space education.....</i></b>                                     | <b>7</b>  |
| 1. Global education curriculum.....  | 7         |
| 2. Global space prize.....   | 9         |
| <b><i>Meeting basic needs ethically.....</i></b>                                 | <b>12</b> |
| 1. Priority access to mobile satcom network for emergency disaster relief.....   | 12        |
| 2. Action plan for meeting the world's basic needs through space technology..... | 13        |
| <b><i>Cooperation among nations.....</i></b>                                     | <b>15</b> |
| 1. International space authority.....  | 15        |
| 2. Creation of an international space chamber of commerce.....                   | 16        |
| <b><i>An enduring human presence on Earth and in space.....</i></b>              | <b>19</b> |
| 1. Recognition of outer space hazards and dangers that threaten our planet.....  | 19        |
| 2. Establishment of an international project for space medicine.....             | 21        |
| <b><i>Maintaining accountability to these objectives.....</i></b>                | <b>24</b> |
| 1. UN COPUOS space youth advisory council.....                                   | 24        |
| 2. Space Generation Forum Continuation.....                                      | 26        |
| <b><i>Future Visions.....</i></b>  | <b>28</b> |
| 1. G e n e r a t i o n        M a r s        w o r k i n g<br>g r o u p.....     | 28        |
| 2. L a t i n        A m e r i c a        w o r k i n g<br>g r o u p.....         | 30        |

## ***Declaration of the Space Generation***

*The Space Generation Forum convened at the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held in Vienna from 19 to 30 July 1999.*

We, the Space Generation, representing the worldwide visions of youth, commit ourselves to ensure the future of humankind.

The beauty of the Cosmos continually inspires wonder and curiosity. Throughout history, space has provided humanity with both practical benefits and fertile grounds for the imagination. In ancient times, the lights in the sky guided us to navigate ships, to plant crops and to determine the seasons.

The combination of human ingenuity and the rich province of space has yielded benefits which we had not imagined possible only a century ago. Through our increased insight and resourcefulness, we have made the first steps toward visiting some of the celestial bodies which once guided our way. Together with future generations, we will be the next explorers to unravel the mysteries of the Universe.

In leaving the Earth's cradle in the quest for understanding our place in the Universe, we are entrusted by the next generations with the sustainable development of the planet for our peaceful future.

We, the Space Generation, regardless of culture, language and creed must ensure that space exploration will improve the quality of life for the benefit of all humankind.

We express the hope and the conviction that our common future ought to proceed *ethically*, with an *understanding* of the long-term consequences of our actions, and with *all of humanity* walking forward together as one.

***Therefore, we declare*** that the following elements should form the basis for humanity's further peaceful exploration and equitable utilisation of space:

### ***I. Universal space education:***

1. OOSA and UNESCO should promote the integration of space into education curricula of UN member states. This dissemination of resources and knowledge should be a cooperative effort between corporations, Non-Governmental Organizations, and Governments on both domestic and international levels to improve literacy, space knowledge, public awareness and support. It is possible that the International Space University could play a moderator role.
2. A Space Prize should be introduced with the equivalent stature and status of the Nobel Prize. This prize is intended for the recognition of outstanding achievements for the implementation and promotion of international cooperation, through communication and transfer of knowledge in promoting peaceful application of space for the benefit of society. It is then envisaged this prize will:
  - a. Advocate the peaceful uses of space;
  - b. Highlight the awareness of achievements of bringing space closer to society;
  - c. Promote international cooperation through professional interaction;

### ***II. Meeting basic needs ethically:***

1. The UN and the mobile satellite communication operators should work together to establish a memorandum of understanding for priority access to mobile satellite communication networks during disasters and emergencies;
2. Given many programs throughout the world currently exist with the ideal of reaching developing countries with need-solving space technologies, we recommend a UN endorsed strategic plan which would implement these technologies with cultural and ecological sensitivity in exchange for the discontinuation of globally harmful activities;

### **III. *Cooperation among nations:***

1. An international space authority should be constituted to allow:
  - a. Facilitation of international cooperation for optimal management of global challenges in space, such as space debris, remote sensing standards, detection of land mines from space, protection of the space environment and legal frameworks for space investments;
  - b. Improved access for all peoples to the material benefits and knowledge and understanding enabled by the exploration and use of space resources;
2. An international space chamber of commerce should be created to maximize the economic value of all space activities. This is to be achieved by facilitating long term investments to accelerate space exploration and development, promoting the emergence of new markets, and stimulating developing nations to establish space infrastructure. This organisation will serve to bring commercial, national and academic organisations together, encouraging self-standardisation, allowing all nations to benefit from current and future space technologies, and to increase worldwide public awareness;

### **IV. *An enduring human presence on Earth and in space:***

1. The UN is appealed to, to recognize the outer space hazards and dangers which threaten our planet and take adequate, proactive measures to mitigate and prevent the risks;
2. An international centre for space medicine should be established, to provide a sound basis for the creation, distribution and implementation of state-of-the-art space medicine and its applications for the benefits of humankind on Earth and in space;

### **V. *Maintaining accountability to these objectives:***

1. Given that we have a responsibility to take an active role in the promotion and development of space, we recommend that a youth advisory council be granted as part of the UN Committee for the Peaceful Uses of Outer Space;
2. The Space Generation Forum should be held every 5 years, with an annual revisit. The link with the International Space University should be maintained, and the annual revisit should be held in parallel with the annual IAF conference.

## ***I. Universal space education***

### ***Recommendation 1 – A global space curriculum***

#### **Introduction**

The current perception of space is that it is a magical topic, one to be understood only by a select few. This is unfortunate, as space has the potential to act as a common language of the world. Our vision is to transcend political boundaries and provide access to knowledge to six billion people, anytime, anywhere.

#### **Recommendation**

We recommend that OOSA and UNESCO should promote the integration of space into education curricula of UN member states. This dissemination of resources and knowledge should be a cooperative effort between corporations, Non-Governmental Organizations, and Governments on both domestic and international levels to improve literacy and space knowledge.

#### **Strategic Plan**

##### ***A. Planning Phase***

The planning phase includes the work conducted at the Space Generation Forum, along with all follow-up actions. This will be updated and continued throughout all phases below.

##### ***B. Information Gathering Phase***

1. What does each nation have in terms of space education material?
2. Where are each nation's space programs heading?
3. What are each nation's needs?
4. Can current resources meet our request?
5. Input on national and regional implementation, based on existing educational structure, is required.

This information may be gathered from national educational institutions as well as space education departments. A space education roadmap should be one of the two outputs of this process. The second would be the national input to the space information index. This centralised international space information index, under the responsibility of COPUOS, would establish full access to each national database and to ensure periodic national updates. It has already begun in some nations with space education archives.

##### ***C. Public Awareness and Access***

###### ***Space Information Index***

The goal of a space information index is to provide the world with all possible ways to access space material. The purpose of the local or national information gathering projects will be to pool each UN member nation's space resources into one national database, to be connected to the international network. The well-identified entities should be approached for all types of space material and "know how."

##### ***D. Informing Decision and Policy Makers***

After a preliminary information gathering phase in each nation, an invitation to UN member states' national or regional education ministers will be issued to attend a preparatory conference on the benefits and interdisciplinary nature of space education at all age levels. It is recommended that an organisation such as the International Space University, through their Professional Development Program, could coordinate this. This conference would be followed by national discussions for preparing a roadmap on space education, and ending with a signatory conference, whose goal would be to commit political support for incorporating space into their general educational curriculum. For the case of developing nations, the issues should surround the benefits of space for basic terrestrial needs (e.g. location of water by satellite). This would be co-ordinated by UNESCO and OOSA and possibly form an International Working Group on Space Education (IWGSE).

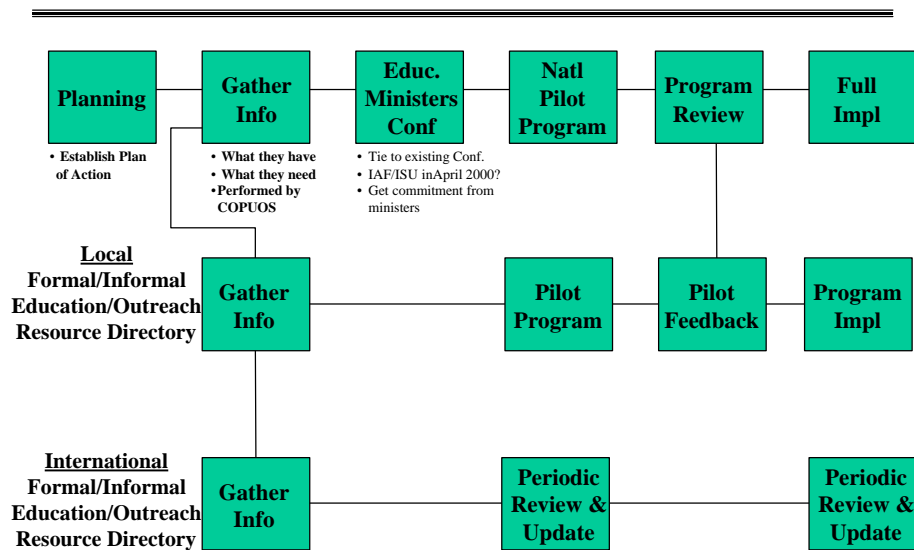
##### ***E. Pilot Projects***

A space immersion program will be introduced to update the education system to incorporate space and satellite research and applications into the teaching of many educational disciplines. Through this "Space Immersion," it is envisaged that governments and industry may favourably promote their space development activities.

#### *F. Implementation*

1. Establish for each "traditional" subject new ways of teaching by incorporating space, i.e. learning through "Space Immersion"
2. Selection of one trial school per UN Region to facilitate a diverse study
3. Gain input from teachers at the school regarding their requirements and any issues regarding local education policy
4. Establish a tailored program addressing any identified regional issues
5. Establish a method to test the effectiveness of the space immersion concept. Testing before, during and after the program will be included. In addition, assessment of control groups will be conducted to validate the study
6. Teach the teachers about using space and space technology in their classrooms
7. Conduct the program over three years, incorporating feedback to build better ways of educating
8. At the completion of the three year study, an analysis will determine if this is an effective teaching method to increase awareness about space
9. Upon completion of the 6 pilot studies, make observations and recommendations regarding the space enhanced curriculum, with a view to expanding the programme worldwide

## Schedule



#### *Clarifying Funding Issues*

Funding the integration of space into education curricula of UN member states will be accomplished using existing funds from existing organizations. Existing educational and committee budgets, in cooperation with space agencies resources, will be used to pursue this project, both on a national and international level.

#### *Recommendation 2 – Global Space Prize*

*It is proposed that a Global Space Prize be initiated.*

**Purpose of the prize**

The prize will recognise outstanding projects, ideas or achievements of global significance in the peaceful uses of space that leads to enhanced international co-operation: improved living conditions on earth; better management of our environment: or critical breakthrough, in space science and technology.

**Conditions**

In all circumstances, the Global Space Prize recipients must be selected by the Global Prize council every twelve months from the date of Global Prize inception. Recipients can not successively receive awards for the same category. Each prize denomination must only be presented to those members mentioned in the above applicable paragraphs.

The following areas will discuss in detail the allocation, qualification and award of the three categories of this prize.

**School**

*A. Qualification*

There will be an allocation of one scholarship per country detailed in the United Nations. This section of the prize is intended for the award of a scholarship, for students within their final two years of secondary study. It will take the form of an International Space Program Camp in a destination, designated by the Global Space Prize Council, for that particular year.

*B. Selection*

There will be a board of representatives consisting of a member from each United Nations Country. Each member can propose a single candidate for attendance at the selected space camp. It is suggested this member be the existing member of the United Nations.

It is the responsibility of the respective countries to provide opportunities for the candidates in order to establish a high calibre representative.

*C. Prize allocation*

This selection of the award shall be based upon students' enthusiasm in the promotion of space education and the devotion of the individual in the pursuit of further application to space knowledge.



## **University**

### *A. Qualification*

This section of the award shall be presented for outstanding achievement in the promotion of space to youth and/or interdisciplinary cooperative development/research into the peaceful uses of space science and technology.

### *B. Selection*

The university prize will be made available to only one member from each of the six United Nations regions. All applicants shall be assessed and selected according to a consensus vote from each of the regions.

### *C. Prize Allocation*

This prize is intended for presentation to final year university students. It will take the form of an International Space University Summer Session Scholarship.

## **Technology/Social**

### *A. Qualification*

This section of the prize will recognise the purpose of the prize in its entirety (see Purpose of the prize). As this section encompasses many facets of the space industry, it is beneficial that the details are outlined for individual and/or cooperative recognition. It should also be noted that there can exist only one prize in this area, either technology or social.

### *B. Individual Awards*

In defining an individual, it is appropriate to recognise companies of size no larger than 250 employees and/or individual persons. Individual prizes shall be awarded to the individual.

### *C. Cooperative Developments of Technology*

As there may be many parties involved with cooperative endeavours, there can be no single company or individual identified as the key winner to receive such a prize. Hence in these situations, it is deemed the prize be applied to the further development of the respective technology area these companies or conglomerations have excelled at to be considered for the award.

### *D. Selection*

Each of the members of the United Nations General Assembly can bring forward a prospective candidate. A board of advisors and selected members of the UN will convene. The advisors shall be independent representatives from industry, universities and/or research institutes. From the candidates this board will select the respective winner of the prize.

### *E. Prize Allocation*

This prize carries the major assignment within this fund. It will take the form of a monetary reward of at least thirty-three percent of the fund or the interest from the Global Space Prize Fund for the financial year, whichever is the greater.

*F. United Nations Requirements*

As per the UNISPACE III Report para 219, support is requested from the United Nations in the form of human resources and the associated expenses of the members of the delegation. Support will also be sought from NGOs of the UN.

## **II. Meeting basic needs ethically**

### **Recommendation 1 – Priority access to mobile satcom networks for disaster emergency relief**

It is recommended that UN should initiate discussions and help with the preparation for prioritizing access to remote sensing and mobile satellite communication networks for disaster relief. In addition, the UN should use its own experience to help institutions and companies with the implementation.

It is further stressed that the concerned entities shall work together to establish a Memorandum of Understanding (MoU) for priority access to satellite networks in order to achieve a quick-delivery response during disasters and emergencies.

#### **STRATEGIC PLAN**

##### **Definition of the problem**

A functional network of telecommunication as well as remote sensing services does exist around the globe. Every day a number of orbiting satellites fly across every corner of the Earth, taking pictures or listening to the radio waves. In some of these places there are individuals, groups, or even whole nations that need help. Due to the lack of cooperation among telecommunication companies, operators of remote sensing satellites, national governments, and relief and aid agencies, people suffer or even die.

The following are examples of situations concerning natural and man-made disasters that would have to be addressed, namely: refugees, oil spills, floods, fires, typhoons, tsunamis, attack of pests to agricultural areas, earthquakes, volcanic eruptions and the like.

To address these needs, the requirements are: Real-time data access and an Implementation plan for a meaningful use of remote sensing data, free communication lines and a priority access to all kinds of resources, every subject involved must be prepared to any expected situation. They should work out a number of implementation plans and coordinate it with the implementation plans of relevant subjects.

Therefore, there exists a need to establish an agreement or MoU among the satellite network operators, national and international organizations under the general auspices of the United Nations that will provide the concerned entities priority access to mobile networks. The steps to be taken are as follows:

1. A round table conference to bring relief /aid agencies to discuss needs of intervention
2. Develop a disaster response plan to be utilized by the local officials for public awareness and actual delivery of goods and services.
3. Develop a training plan for the rescue teams, local officials and for the general public to expand their capabilities in handling such disasters/emergency situations.
4. Identify technical requirements that would have to be achieved for priority access.
5. Incorporating GEDIS (Global Environment Disaster Information Network)

#### **Institutions (National and International) to be contacted to put proposal in place**

International Organizations: UN, WB, ADB, FAO, USAID, Space Agencies

National Organizations: Government Agencies, NGOs and Academic Institutions

#### **SGF delegates representing various sectors and countries that would be willing to contribute to the implementation.**

##### **Implementation plan and schedule**

1. Acceptance of the recommendations by the member states within a year (July 2000).
2. A working forum and conference will have to be formed by United Nations Space Applications department three months after the acceptance in coordination with the UN-IDNDR (International Decade for National Disaster Reduction) to work out modalities of prioritizing satellite capacity.
3. Commitment of resources will be done by the concerned subjects to prioritize the access in four months.
4. Lessons learned for further improvement

#### **Potential financial costs and sources of funding**

A. Potential financial costs incurred will be spent for the working committee, conference resources, priority access commitment and operations cost.

B. Sources of Funding will be from the National Governments, National Space Agencies, Telecommunication agencies and International funding agencies

## ***Recommendation 2 - Action plan for meeting the world's basic needs through space technology***

### **Introduction**

The purpose of this recommendation is to propose an action plan for existing organisations which seek solutions for meeting basic needs of the developing countries through space-based technology.

The solutions will be achieved in collaboration with those for whom the technology is intended (local communities, cultural group and local authorities) by studying the current cultural situation.

The scope of this action will be to bridge the gap between developing countries and developed countries with advanced technology in a solution that would be beneficial to both. Space technology corporations as well as any technology providers will gain through an increased visibility in terms of public relations and marketing. This will also give a good opportunity to increase public awareness of the benefits of space technology for the developing countries, which will boost public support for space activities.

In order to be most efficient, the process should involve a small, manageable number of areas (defined as countries or cultural groups) in each implementation cycle. As more areas are studied, the process will lend itself to self-evaluation and improvement.

### **Data gathering**

#### *A. Compiling existing information*

Every effort shall be devoted to gather as much information as possible from existing space technologies. A literature study and investigation of currently, under-used and old space technologies will complement an on-going updated database. Sources for information on the cultural groups in consideration may also include existing organisations with a long-term presence in developing countries, such as the Red Cross, Peace Corps, OXFAM, Medecins Sans Frontieres, etc...

The needs of the different nations, countries or villages are very different from place to place and should be addressed on a case by case basis. Therefore, in order to adequately assess their needs it is necessary to contact local people, humanitarian organisations, non-governmental organisations, space agencies, and any institution that is aware of the situation and the actual needs in a given area.

#### *B. Assessing the basic needs of the developing countries*

When the information is compiled on the specific cultural groups, a group of specialists will prepare to go out into the field. They will use the information, especially the contacts in the existing organisations, to begin the assessment. Interviewing local people on a personal basis is the most important job of the field team. The team should include technical and social scientists.

### **Achieving a solution**

Once the needs are assessed, a unique solution for a specific problem or need should be proposed with the help of those for which the technology is intended and all supporting groups. This solution will benefit the local community in a culturally and ecologically sensitive manner. As part of an ongoing process, it is important to evaluate the impact of the technology to be implemented.

### **Implementation of the solution**

In order to implement any solution in an efficient way, it is crucial that the local people be included in the implementation process.

It is important to publicise the information acquired. The database of information will be important for governments, NGOs, and non-profit organisations. Publication should include, but not be limited to the Internet and journals.

### **Funding and Staffing**

The following is advice for acquiring the financial support needed to implement this strategic plan.

- Foster Country Plan. A developed nation will choose developing nations to which they normally give financial aid as “foster countries.” Companies within the developed nation will receive tax shelter or other financial incentives to invest in or involve the developing nations.
- Shared Risk Investments in Technology. Industries and local governments take advantage of a lower risk because it is shared while profiting from the “high-risk” dividends.
- Sponsorship From Service Providers. Aspects of their technology could be devoted to the developing country, for example, unused channels in satellite communication.

The following is advice for acquiring staff at low cost for organizations implementing this plan.

- Educational Curriculum. University curricula could include involvement in such programs, for example for dissertation work.
- Loan Forgiveness. A program similar to Americorps would grant loan deferral or even forgiveness in exchange for work in the program.

### **Conclusion**

It is important to assess the success of the plan for future reference. This will be achieved through carefully recording every phase of the process, in order to develop an effective working methodology. This is not a proposal for an organisation. It is a proposal to make existing organisations more efficient and effective while ensuring their work is culturally sensitive.

### **III. Cooperation among nations**

#### **Recommendation 1 - International Space Authority (ISA)**

##### **Why an ISA – Needs and Benefits**

The UNISPACE III Draft Report specifies needs to develop “a mechanism for the elaboration of necessary and appropriate principles and rules regulating outer space.” (Page 54, Section IV. H. 2. (b) paragraphs 317-321.

Specifically, the COPUOS report encourages the development of mechanisms which address Commercial Aspects (property rights, insurance, liability), Space Debris, Remote Sensing, and gaining wider accession to the Moon Agreement. The report further specifies the UN Convention on the Law of the Sea, Agreement on the Implementation of Part XI, as a model to help encourage wider accession to the Moon Agreement. Part XI specifically treats the creation and operating principles of the International Seabed Authority and its associated mining enterprise.

##### **An SGF Proposal to Model an International Space Authority**

Space Generation Forum members will be mobilised to do the “leg work” of creating and detailing a provisional model to accomplish the above specified objectives. The SGF ISA working group proposes inclusion in the UNISPACE III report, A/CONF.184/3 Section H Promotion of International Cooperation, 2. International Space Law, (B) Issues and Objectives a new paragraph to follow par. 321 as follows:

“In recognition of the above-mentioned need to develop mechanisms to strengthen and elaborate necessary and appropriate principles and rules regulating outer space, and specifically in recognition of the considerable talents, youthful energy, and long-range focus of the members of the Space Generation Forum, Committee on the Peaceful Uses of Outer Space encourages that members of the Space Generations Forum begin the on-going task of a provisional detail and design of an International Space Authority, to be modeled on the International Seabed Authority established under the United Nations Convention on the Law of the Sea, per Part XI of that Convention.”

Should a national delegation not have opportunity to champion the timely inclusion of this paragraph, SGF members will propose to take up this task in coordination with members of the Legal Subcommittee of COPUOS.

##### **High-Level Action Steps**

1. Internet-based upload of relevant materials
2. SGF Members Internet-based working forum, in conjunction with Space Generation Youth Advisory Council working groups and the International Space University (ISU)
3. Virtual meetings transforming to regional face-to-face meetings
4. ISU project(s)/placement exercises to tighten and evolve the Model
5. Space Generation Events to Develop (in 1 year) and Present (in 2 years) an International Space Authority Model, Ready for COPUOS consideration
6. Virtual funding through projects, papers and piggy-backed events.

##### **Initial Ideas for Implementation**

Members of the Space Generation Forum propose, in consultation with its sponsors, the ISU, the OOSA, and national and industry concerns the following actions:

- SYAC interfaces with COPUOS
- Internet Based Discussions among SGF members and other
- Links to ISU
- Development of ISU projects and placements
- Interface with OOSA
- Establish contact with Michael Shieh of the OOSA at Vienna
- Work with infrastructure of regional offices
- Identify perceived gaps
- Seek Observer status for ISA working group members
- OOSA contacts member states, Org. etc.
- Obtain studies and documents relevant to Moon Agreement, ISA, etc.

- Develop dialogue through ISA working group members {SGF, SYAC, ISU} with international organizations, corporations, etc. to identify current performance and opportunity gaps with special attention to avoiding duplication of functions.
- Create first draft study
- Share and facilitate study with national space agencies and appropriate government bodies
- Throughout the process the SGF International Space Chamber of Commerce will be closely consulted, involved, and be encouraged to fully participate in the ISA working groups.
- Annual working meetings target at presentation to COPUOS in two years time.
- ISA Working Group members would then coordinate and advocate both within their own constituencies and among sponsors.

## ***Recommendation 2 - Creation of an international space chamber of commerce***

### **Mission**

To found an international space chamber of commerce to increase the efficiency of existing space markets and the stimulation of new space markets.

### **Recommendation**

The International Space Chamber of Commerce should be established at the dawn of the new millennium to support the space industry in its efforts to establish new markets for the benefit of all humanity.

### **Preamble**

No existing entity is charged with maximising the potential commercial value of all space activities; increasing the necessary synergies between industry, academia, non-and inter-governmental organisations, and the existing government and space agencies that first carried humanity into space. In addition, there exists an opportunity to decrease overlaps and duplications of effort that lead to missed opportunities and increased costs. The International Space Chamber of Commerce (ISCC) is proposed as a service entity to stimulate national and international space activity by creating an environment that facilitates communication between all parties interested in the ascent to space. The ISCC will fulfil this need by facilitating long-term investments, accelerating the emergence of new markets in human exploration and space development. Furthermore, it will provide emerging nations with the necessary infrastructure to benefit from existing and future space technologies. The ISCC will link near-term development of the space industry with long-term commercial profitability and sustained human presence in space.

### **Current Status**

Today, space activity is fragmented across nations and industry sectors. Due to limited co-operation between industry, government and academia, the most effective utilisation of resources (physical, information and capital) is yet to be fully realised. The potential to improve the public image of space related enterprise and to minimise duplication of effort presents unique opportunities to overcome existing geographic, political, economic and sociological obstacles with sustained collaborations. In addition, developing nations have little or no space commerce at present, relying on more developed nations to provide space-based services, often at full commercial rates. The specific needs of developing nations are often not addressed.

### **Strategic Responsibilities**

Through the mounting of a co-ordinated global public awareness campaign and the facilitation of collaborations between existing agencies, industry, government and other organisations, the ISCC will assist space industry to meet the needs of society for expansion during the next century. By promoting the establishment of industry standards, the development of a coherent and effective space infrastructure will be stimulated.

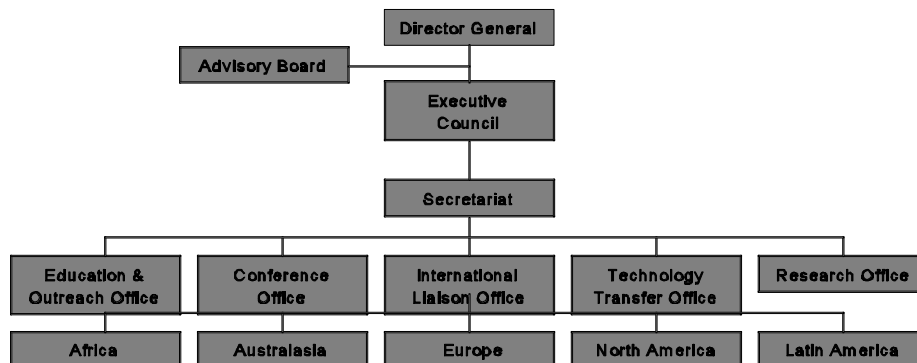
Additionally, the ISCC would hold the potential to develop links between the currently disparate sectors of industry, academia and government at national and international levels, to benefit all humanity and

encourage the promotion of space commerce within emerging space nations.

#### A. Organizational Structure

##### B. Financial Resources

The organisation's financial resources will be drawn from the subscription dues paid by members. These are envisioned as being tiered based on the financial capability of the member. Membership will be open



to industry and academia in addition to non-governmental and inter-governmental organisations. Government and agency representation will exist within the membership. Voting rights will be made available to all members, with policy and voting decisions made at local level and represented at international level by an elected representative.

#### Tactical Implementation

The primary goals of ISCC are to increase the effectiveness of existing space markets and to forge new markets. There will be dedicated programmes to spread the benefits of space technology to developed and emerging space nations and to also serve as a source of information and experience to start-up companies and organisations. Increasing awareness of duplication of efforts, both complimentary and conflicting, will drive a reduction in costs and increase in efficiency. Promotion of international co-operation and technology transfer programmes from the developed world to the developing will ensure that the peaceful uses of outer space are available to all nations.

Education and public awareness of the peaceful uses of outer space are also envisaged to be essential activities of the ISCC. Professional level activities would include industry conferences, colloquia, professional development courses and the initiation of research and studies to assess the status of the space industry and community. Other proposed activities would include, for example, the branding of space developed products to raise public awareness of space industry pervasiveness in everyday life. Public outreach activities would include education activities within schools and colleges as well as general public programmes.

#### Implementation Plan

Support and interest from national delegations at the UNISPACE III suggests that the time is right to implement the ISCC. With strong support from the national agencies it is believed that the ISCC is fully realisable within a short time scale and proposed implementation plan is presented below:

1. Creation of an SGF Working Group dedicated to the establishment of initial infrastructure and formation of the ISCC
2. Preliminary industry presentation and generation of feedback at UNISPACE III
3. Selection of 'seed' sponsor to promote and initiate ISCC programme
4. Establishment of ISCC interim web presence
5. Formation of cross-sectoral Advisory Task-Force to assist SGF Working Group
6. Development of initial conceptual business plan, including market research and finance opportunities



7. Presentation of business plan for consideration by space community at IAF99 (October)
8. Recommendation to ISU as next available Design Project topic
9. In-principle endorsement of key players
10. Development of detailed strategic plan for full implementation

#### ***IV. An enduring human presence on Earth and in space***

##### ***Recommendation 1 – Recognition of outer space hazards and dangers that threaten our planet***

The Space Generation recommends that the UN recognize the outer space hazards/dangers that threaten our planet, and take proactive measures to assess and mitigate the risks.

##### **Identified Need**

Collisions from near earth objects have played a significant role in the evolution of the earth exemplified by the evidence of the Chicxulub impact 65 million years ago that caused the extinction of more than 75% of the species. In 1908, a small body exploded in the sky of Tunguska (Siberia), releasing an energy equivalent to about 1000 Hiroshima bombs and causing a destruction of more than 2000 square kilometers of tundra. More recently, in 1994, Comet Shoemaker-Levy 9 impacted Jupiter and demonstrated the growing evidence of the real possibility of catastrophic collisions of asteroids and comets with planets in our solar system. The odds of a near-Earth object collision with Earth in the near future is very small. However, a non-zero probability, higher than estimated 20 years ago, exists that in the future a collision of global strength will occur. Thus our assessment and mitigation efforts of these Near Earth Objects could be critical to our continued existence.

##### **Background**

Since the mid-1980s there has been significantly increasing effort to identify and monitor the near-Earth objects that potentially threaten Earth. In March of 1996, the Space Guard Foundation was founded with the following goals:

- To discover all NEOs greater than 1km
- To discover the majority of smaller objects
- Compute and model the motion of these objects
- To identify the next impact before it might occur

However, there has been little international effort towards the development of mitigation techniques to the threats that face us. That is the significance of this recommendation. It recognizes the importance of observation, but stresses the component of mitigation to successfully avoid the threat.

- Observation: This includes optical and radar based detection, monitoring, tracking, cataloging, and threat assessment [Torino Scale for NEO impact already developed].
- Mitigation: Active long term protection of the physical earth through appropriate infrastructure and technologies.

##### **Benefits**

###### *Direct Benefits*

- Increased probability of NEO avoidance
- Better scientific understanding of the dynamics of our solar system
- Increased understanding of the real probabilities of NEO impacts

###### *Indirect Benefits*

- International Cooperation and Collaboration
- Technological advancement

## Challenges to Implementation

The challenges that confront this recommendation hinder its progress in official delegate discussions.

This is because of the inference of space weapons that could be a possible result

- Political reluctance to enter global defense strategy as a international cooperation
- Current treaties exist that constrain solution possibilities of NEO impact mitigation
- The possibility of mitigation technology being used as weapons
- The technology that is developed must be controlled very carefully to prohibit the use against humanity

## The Implementation Plan

In order to implement the above recommendation, it is required that the following organizations and stakeholders be consulted and addressed on the goals and objectives for further review and refinement.

### A. The Organizations

The following organizations are directed at the observations and monitoring of NEOs and will be of considerable use to accomplishing the first task of threat assessment.

Spaceguard  
 Minor Planet Center of IAU  
 NEO Dynamics Site (University of Pisa)  
 NEO Program Office of NASA-JPL  
 Asteroid Observing Services (Lowell Obs)  
 European Asteroid Research Node

### B. The Stakeholders

The success of this recommendation will require the support of many stakeholders. These stakeholders include 1.) Scientists, 2.) Engineers, 3.) Public, and 4.) Policy Makers. It is critical that each be convinced on the importance of this issue and the priority it should be given.

#### Scientists

Scientists are very involved with the assessment and the probabilities that exist for Earth collisions with NEOs. They are currently involved in the observation and tracking of NEOs through a network that needs increased resources and effort.

#### Engineers

Engineers should implement the engineering solutions to address those risks identified by the scientists. They are encouraged to experiment in space for technology demonstrations that might be utilized.

#### Public

The education of the public in terms of the risks of near earth objects must be maintained while emphasising the real possibility of collisions but not elevating the topic to the arena of mass hysteria or fiction. In addition to the education of the public, the support of the public will be necessary for politicians to allocate funding toward the assessment and mitigation of these objects. A possible entity to facilitate the awareness of the importance of this topic is through the Office Of Outer Space Affairs Space Applications Affairs.

## Policy Makers

There are two ways to influence the policy makers to come to agreement on this recommendation. The first is to initially gain and retain public opinion and the second is to convince individual policy makers the importance of the recommendation, such that they lead in the effort as a champion.

### *E. Business Case*

The financial backing of an international mitigation system will probably be the most difficult aspect in achieving the success of this recommendation. The actual funding of the effort is still under discussion but some possible implementations include:

- Explain and educate the public to the importance of this idea.
- Public/private partnership for technological advancement and development while provide authority to the UN Security Council whose mission is to “determine the existence of a threat to the peace and to recommend what action should be taken”.

### *B. Milestones*

#### Technical Implementation of Assessment Process

1. Extend Global Observation Capability.
2. Develop and Support Space Missions for NEO Observation, possibly including lunar observatory base and space constellation observation.
3. Implement global autonomous tracking of near earth objects.
4. Develop protocol of dissemination of information on possible collisions.
5. Conduct Threat Assessment on the composition and other necessary information for increased likelihood of success.

#### *Technical Implementation of Mitigation Process*

1. Mitigation Studies (1996--): definition of technologies that could be used either for destruction of approaching object or avoidance of impact, e.g. NEO might be destroyed by or deflected from impact flight path by using a nuclear explosion.
2. Development of mitigation technologies (2005--): this includes the development of different propulsion and explosion systems in order to fly to NEO's and even for moving the NEO. Further different rendezvous and landing technologies have to be identified.
3. Production and testing of mitigation technologies through earth based, ISS, lunar based, and asteroid based approaches. (2010---)
4. The implementation of a prototype mitigating infrastructure and technologies by 2015
5. Operation of mitigating system (2015---). Mitigation shall be semi-automated, but humans have the last decision to perform mitigation measures.

## ***Recommendation 2 – Establishment of an international project for space medicine***

### **Mission Statement**

The mission of this program is to establish an International Project for Space Medicine (IPSM) to provide a sound basis for the creation, distribution and implementation of state of the art space medicine and its applications for the benefits of humankind on earth and in space.

### **Plan of Events**

#### *Step 1 (3-6 months)*

A group of SGF delegates (to be appointed) will act as the steering committee for the IPSM. Upon our return to our respective countries, this network will be expanded to include young professionals from various backgrounds. Furthermore, various institutions will be informed of our endeavours (Space Agencies, Medical Schools, Research Institutes, International Space University etc.) Little funding will be required.

#### *Step 2 (1 year)*

The first goal we wish to achieve in establishing the IPSM is to promote and initiate both fundamental and clinical research in the field of space medicine. Some of the actions we plan to take to accomplish this goal include:

- Giving lectures on the effects of microgravity and the space environment on human physiology to medical schools worldwide. Minimal funding is required and shall be provided by various scholarship programs.
- Acting as advisers to UN youth groups for discussions related to issues in space medicine.

Through this we hope to stress the strong tie between medicine and space activities.

*Step 3 (3-6 months)*

Our next goal in the establishment of the IPSM will be to facilitate communication and co-operation among the various scientists worldwide. Our preliminary actions needed to accomplish this goal may be to simply set up a forum on our webpage thus allowing researchers/scientists to transfer ideas, brainstorm, and collaborate on any issues in the field of space medicine. Of course, once our project becomes more established, our centre will act as an archive for all space medicine reports/research papers. No funding will be required.

*Step 4 (5 years)*

A further goal of the IPSM involves improving awareness and access to space education material and various technological applications for people with special needs. Some of the actions to be taken to accomplish this goal include:

- Act as a liaison between hospitals, general public and the various space technology-engineering firms.
- Encourage space agencies from around the world to develop education and public outreach material for disabled people (e.g. Braille solar system charts, books-on-tape about space, etc...)

*Step 5 (10-20 years)*

Once the IPSM succeeds in accomplishing the above goals, we will seek financial and in-kind investures from various member organisations. Furthermore, other sources of funding will include technology transfers as well as medical licensing and certification. This funding will ensure the realisation of our long-term goals.

- Promote research at a higher level, e.g. by providing a space medicine specialisation facility
- Act as an advisory board for biomedical issues relating to space medicine
- Facilitate the transfer of space technology to benefit humankind, especially in developing countries. (i.e. telemedicine)
- Act as a legal board for liability issues in space medicine
- Set medical standards for health certification of future space tourists
- Encourage research for the future creation of space "hospitals"

## **Conclusion**

The fundamental conclusion is that the overall space community should become more aware of the benefits of space medicine on humankind on earth and in space. It is our hope that the International Project for Space Medicine will contribute to this end, and that our recommendations may serve to assist decision-makers around the world under the auspices of the UN.

## **V. Maintaining accountability to these objectives**

### **Recommendation 1 - United Nations COPUOS Space Youth Advisory Council**

#### **Mission and Objectives**

The mission of this Council will be to support the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), through raising awareness and the exchange of fresh ideas by youth. The vision is to employ the creativity and vigour of youth in advancing humanity through the peaceful uses of space.

Amongst the objectives of this organisation, the following are seen as key :

- Facilitate a substantial youth input in local, national, regional and global space policy.
- Support the COPUOS in achieving its goals by increasing youth participation in the development of national space policy; dialogue within the COPUOS' areas of concentration; and strengthening the global space youth movement by promoting open communication and networking among space youth organisations.

#### **Activities**

By providing a council of youth representatives supporting COPUOS, the Space Youth Advisory Council (SYAC) will create bidirectional communication and cooperation links between the COPUOS' member governments, organise annual meetings, internet exchanges and joint regional or global events.

The Council will strengthen the work of global, national and local community level youth space initiatives. It will provide information and support to both young individuals interested in space and their local youth space organisations. It will participate and organise in youth space activities and contribute to COPUOS initiatives.

#### **Structure**

The SYAC shall be part of COPUOS. It shall work closely with COPUOS' Communications and Public Information (CPI) branch and regional offices, as well as COPUOS' other divisions. It shall report to CPI with copies to the regional offices.

#### **Associate Advisors**

Associate advisors are representatives of youth space organisations or initiatives. Advisors are selected for participation in the SYAC with respect to regional and field balance, diverse types of space experience, and/or their organisation's record of participation.

#### **Regional Advisors**

The existing voting members will elect 12 youth (2 per UN region) biennially, to represent youth and youth space organizations who have shown responsibility and commitment to the COPUOS goals. The advisory position requires at least 10 hours a month including communication between COPUOS and other members of the SYAC.

1. Board of Mentors: Fifteen mentors, nominated by the youth advisors, shall be elected by the participants of the SYAC.
2. Co-Facilitators / Chairs: Two youth volunteers, one from the north and one from the south, will be selected by current SYAC voting members to act as co-facilitators. They shall assist to seek funding for COPUOS SYAC programmes and assist the SYAC to co-ordinate reports and activities.

#### **Other Levels of participation**

The SYAC can establish or support national and regional youth space networks. This will include the working groups, committees, task teams, etc. of the SYAC and COPUOS. In addition anybody shall be able to participate in the online discussions after a registration procedure.

## Working Groups

The structure of the council will incorporate six groups which will focus on specific aspects of space. There follows a brief description of each of these groups : Policy, law and commercialisation; Science, technology and environment; Philosophy, ethics, religion, social science, arts and humanities; International co-operation and peace-keeping; Outreach, public awareness, education and youth opportunities; Space for Sustainable Development and Meeting Basic Human Needs.

**2000 vision** – within the first year the SYAC would aim:

- To have elected the first official committee after 6 months.
- To have initiated the working groups
- To have convened the first session of SYAC in parallel to a OOSA / COPUOS meeting
- To be familiar with the workings of the OOSA / COPUOS structure
- To develop a web site to host ongoing discussion fora as per the Space Generation Forum
- To establish a database of contacts with all relevant organisations and to nurture relations between them
- To encourage the establishment of youth space interest groups where there are currently none and to provide a online forum for information exchanges and co-operation

**2005 vision** – within the first five years, the SYAC would aim:

- To have determined and implemented a number of core proposals
- To have established direct exchange and liaison with all COPUOS delegation
- To direct youth input and involvement with local decision makers/governments on space issues

## Financial Plan

The envisaged programme expenses would depend on the particular project brought forward by the working groups and adopted by the SYAC. Such programmes/projects adopted by the council would be funded in conjunction with an industry sponsor.

Several potential sources of funding for SYAC have been identified, including : the United Nations (funding could be “in kind”); corporate sponsorship, by means of advertisement, sponsoring events, donation of facilities etc; and humanitarian / NGO / charity organisations.

## Action Plan

We have established a procedure for electing an interim Council (to be replaced at the first SYAC plenary) and have initiated links with various organisations, including UNISPACE III national delegations, OOSA and COPUOS. We hope to establish links with all space agencies, governments, youth space organisations and other relevant bodies from around the world.

## ***Recommendation 2 – Space Generation Forum Continuation***

### **Current Status**

The first Space Generation Forum (SGF) is in progress, and all early indications show it to be a success. Upon finalisation of this document, the first SGF will be coming to a close. Preliminary reports from delegates, staff and outside sources all indicate that this forum has provided a relevant and a substantial vision to the peaceful exploration of space for the benefit of humanity. It is helping to accomplish the goals that UNISPACE III set out to achieve.

### **Proposal Overview**

With such resounding support, it is proposed that the SGF not be a one time or just a singular event, but that it be continued as a recurring forum to support the advancement of humanity's space endeavors. The SGF has provided the youth of the world, the current space generation, an opportunity to have input and a voice about the future of humanity in space. The reoccurrence of the Space Generation Forum will provide future space generations with a similar opportunity to be actively involved and have an input to the plans for the future of human kind. In order to guarantee that this next generation will have the same chance to make an impact on the future of humanity in space, it is proposed that the SGF become a recurring event, one where visionary students and young professionals will have a venue to share their enthusiasm of space. At this event they have the potential to submit their views and ideas about space to the leaders of the world through the auspices of the United Nations.

### **Setting Up the SGF**

The continuation of the SGF in either its existing state or in an evolved form, requires joint collaboration between many of the different organizations of the world (e.g. the UN, government, industry, academic, NGO). This participation could take many forms, from a simple sponsorship of a participant all the way to the larger organizations providing monetary contributions and technical personnel to assist with the forum. These institutions should be comprised of non-profit organizations, governments, and industry representatives. The coordination and organisation of the SGF will primarily be done by volunteers from previous SGF events, academic institutions, and with the possible inclusion of technical experts from government, industry, and space related organizations. The next SGF forum could potentially take place during or before the next UNISPACE conference. This allows for a substantial amount of time to set up and execute a more structured and formalised process by which the next SGF shall come to pass. A process which will have an outcome being a functional and integrated forum that will enable the youth of the world, the next space generation, to have a direct role in the future course of space endeavour. For this process it will be necessary for a network of up and coming space professionals, students, academics, and visionary individuals to be involved in setting up and coordination of the SGF, all of whom are representative of the youth of the UN member nations.

Since this proposal is being created during the first SGF in history, the necessity for experienced people is clearly critical. Therefore it is strongly suggested that any SGF committee consist, at least in part, of prior SGF participants. This can take the form of an advisory committee or members of the organising committee. Volunteers would be recruited at a time following the end of an SGF event by whatever means are available (e.g. survey, word of mouth, nomination, etc...).

### **Recommendation**

It is proposed that the Space Generation Forum not be a one time or just a singular event, but that it be continued as a recurring forum to support the advancement of humanity's space endeavours. The reoccurrence of the Space Generation Forum will provide future space generations with a similar opportunity to be actively involved and have an input to the plans for the future of all humanity.

Suggested Timeline (the following is an example of a 5 year plan, starting July 1999):



**Preliminary work**

|   |                             |
|---|-----------------------------|
| Acceptance of SGF continuation proposal                         | July 1999                   |
| Gather volunteer base (organisers and moderators)               | August 1999 – August 2002   |
| Coordinate with Youth Advisory Council (if they are accepted)   | August 1999 – August 2002   |
| First SGF data gathering (problems, successes, budgets, etc...) | August 1999 – December 1999 |
| Recruitment of sponsors   | August 1999 – July 2004     |
| Investigate locations (meetings and hotel)                      | August 1999 – August 2002   |
| Develop preliminary budget                                      | September 2001              |

**Forum Preparation**

|  |                            |
|--|----------------------------|
| Finalise organisational committee                              | February 2001              |
| Calendar of events for organisational meetings/teleconferences | February 2001              |
| Finalise location  | 31 January 2002            |
| Develop agenda/program   | January 2002 – August 2002 |
| Finalise predicted budget                                      | July 2002                  |
| Update website/start web discussion forum                      | August 2002                |
| Gather distinguished lecturers/speakers                        | January 2003 – June 2004   |

**Final Preparations**

|                                    |                             |
|------------------------------------|-----------------------------|
| Advertising                        | 1 February 2003             |
| Call for applications released     | 1 July 2003                 |
| Review and select delegates        | 1 April 2004 – 15 June 2004 |
| Send out final registrant packages | 15 June 2004                |
| SGF registration                   | 17 July 2004                |
| Hold SGF                           | 18 July 2004 – 30 July 2004 |

## ***Future Visions***

### ***Generation Mars Working Group***

#### **Introduction**

The SGF's 'Generation Mars' Visions for the Future Working Group aimed to educate and provoke discussion on issues related to the human exploration of Mars.

The reasons for SGF consideration of human Mars exploration are manifold. Consideration must begin with the realisation that our generation is the first with a real chance to travel to the Red Planet. Compounded with this essential fact is the observation that success will fundamentally alter humanity. What exactly this effect will be is predicated on two crucial issues: *why* we go and *how* we go.

These two issues are ones that are essential for delegates of the SGF to address, for if we do not, then we run the risk that other groups without the interests of all humanity in mind will shape history.

The Working Group decided that several reasons provided strong justification for human exploration of Mars. These included the following:

- Global involvement in the journey to Mars will bring us closer together on Earth.
- Learning about the Martian environment will teach us about our own.
- The endeavour's inspirational nature will invigorate the spirit of our generation, and of future generations.
- Such inspiration, as with the Apollo moon program, will lead to increased student interest in science and technology.
- Exploration of Mars is the first step to becoming a multi-planet species, thus protecting against catastrophic planetary disaster.
- The unforeseen promise of a new human frontier is intrinsically valuable.

#### **Science**

Science will drive the near-term exploration of Mars. Thus, the Working Group devoted substantial effort to laying out why Mars is interesting scientifically. All of the planets and moons in our solar system are of interest geologically, chemically, and physically. Mars, however, distinguishes itself through the current existence of water in solid and gaseous forms, and the past existence of liquid water.

Water is the keystone of life here on Earth; wherever we find liquid water on this planet, we also find life. Whether it be in the ocean depths, in near-boiling hot springs, or hidden in the water of the polar caps, life not only finds a way to survive - it thrives.

For roughly one billion years (from 4.5 Gya to 3.5 Gya), Mars and Earth shared a similar past. Science here on Earth has revealed that life began on this planet at least as far back in time as 3.9 Gya. From these studies, the question naturally arises: Did the processes of life proceed in a similar manner on Mars? If life did arise, what form did it take and how did it respond to its changing environment? To what end was, has, or will life play in the future of the Red Planet? These are questions that will be addressed through the robotic exploration of Mars, but ultimately we see human presence on Mars to be the most effective way of thoroughly addressing these questions.

### **Ethical considerations**

The human exploration of Mars will present novel mission planning, policy, ethical, and philosophical challenges. Balancing the value of possible or known primitive Martian life forms with the value of human migration is an example of the challenges we look forward to. We embrace these challenges with pro-active and thoughtful deliberation. We embrace the vigorous and responsible exploration of Mars for the benefit of all.

### **Colloquium**

Generation Mars held a colloquium on July 27<sup>th</sup> to present an overview of some of the motivations for sending humans to Mars and to solicit opinions from SGF delegates on the issue. The presentations also covered the scientific rationale for human exploration, as well as the technologies that would be required to go, and the ethical issues that would have to be confronted. The colloquium concluded with each of the 30 attendees each briefly presenting their own vision of how they felt about the possibility of Martian exploration, and each summarised this perspective in a single word or phrase. The words submitted were:

Perspective; New Human Society; Challenge; Opportunity; Survival; Inspiration/Diversity; Transformation; Individual Life; Dreams; Evolution; Because We Can; Curiosity; It's There/Explore; Global Adventure; Global Participation; Freedom; Discovery; Giant Leap; Fulfillment; Hope; Best Choice for Exploration; Baby Step- Carefully Done; Risky – In a Good Way; Logical; Dispersal/Dissemination; In Our Genes; Next Frontier; International; Risk and Energy.

At this meeting, many of the assembled delegates added their names to the following formal declaration:

### **Vision for the Human Exploration of Mars**

July 27, 1999; Vienna, Austria

*Assembled on the occasion of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), we 72 delegates, a group within the Space Generation Forum representing 40 nations and 6 continents, here affirm our commitment to the human exploration of Mars.*

*We believe the attainment of this long-dreamed goal, and the global effort leading toward it, will profoundly effect the way in which we live together on Earth.*

*As the first generation able to go, it falls to us to ensure that we reach Mars for the good of all humanity.*

*We commit ourselves to the task because, working together, Mars will inspire all our hearts, teach us about the planet that we all share, and help us understand the very nature of life itself.*

*With our signatures below, we accept this challenge.*

### **Continuing Involvement**

To request a copy of the declaration and to add your name to the list of signatories, please e-mail: [generationmars@mail.com](mailto:generationmars@mail.com)

### *Latin America Working Group*

The objectives of this proposal is to create within the Space Generation Forum a group that examines space-related problems concerning the Latin American nations. The delegates participating in this group identified several problems, which include:

- The lack of communication between government institutions and the public, regarding space activities and education programs
- Lack of public awareness of space activities and the direct benefits to their community and their daily lives
- Absence of young people taking part in the local decision-making process related to space activities

Our recommendation is to create a group of young Latin American professionals and students interested in the area of space as an international, non-governmental organisation with the following purposes:

1. To create awareness of the benefits that space activities can bring to people, especially those living in developing nations
2. To create a fluid communication channel with the media in order to keep them informed of space-related events
3. To create a permanent list of scholarship and internship opportunities for space studies and training for young professionals, which would be dedicated to applicants from Latin American countries
4. To offer consulting services to governments of Latin America that do not have national space agencies
5. To offer consulting and information services to companies and private organisations which need space products and services, as well as the benefits space technology can provide to improve their products and processes
6. To organise space-related talks and conferences to educational institutions involving extensive use of multimedia
7. To provide a voice and point-of-contact with the UN and other international organisations

The way to implement this would be:

1. To advertise the creation and purposes of this group through local media in Latin American countries
2. To establish communication channels between SGF delegates
3. To create a website that will be a reference/discussion place, and that will contain information in Spanish, Portuguese and English about space-related activities, opportunities and scholarships, applications of space technology, and links to existing sites of interest, especially those regarding programs in the Latin America regions
4. To search for cooperation and communication agreements with universities and other organisations

We have set a first group of goals to be met in an 8-month period (due March 2000):

1. To contact young professional and students in the Latin-American countries that were not represented in the Space Generation Forum
2. To establish the Space Generation Forum Latin American Group website
3. To gain a presence in the local media, the United Nations, the Space Conference for the Americas (International Support Group), local space agencies, governmental and non-governmental organisations, and educational institutions

***SGF Documentation Produced and Presented to UNISPACE III***

*Proposals of the Space Generation Forum* – A/CONF.184/L.8  
- the list of the 49 Proposals, indicating the 10 favoured proposals

*Space Generation Forum: visions and perspectives of youth* – A/CONF.184/C.1/L.11  
- the speech delivered to Conference I of UNISPACE III

*Technical Report of the Space Generation Forum* – A/CONF.184/L.14  
- the procedure of the SGF with an annex containing strategic implementation of our recommendations

To obtain documentation of the SGF, you can do one of three things:

1. Visit the Office of Outer Space Affairs Website

[www.un.or.at/ooasa](http://www.un.or.at/ooasa)

2. Fax the Office of Outer Space Affairs

+43-1-260-60-5830

3. Mail the Office of Outer Space Affairs

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