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# **COMITY IN SPACE**

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# **ABSTRACT**

Space is a political void and Space Treaty law tends to perpetuate that status. Comity cannot exist in outer space until a government entity is created and maintained for that territory. This would fill up that void with a civilian governance regime. Without Comity, there is no full faith and credit. Corporate charters, for example, would not receive recognition in outer space, thereby presenting a risk of liability for shareholders. Many such problems are identified.

A space governance regime is proposed: the Regency of United Societies in Space, ROUSIS, would fill in the political void in outer space with a civilian governance entity consisting of several hundred Regents. This entity would recognize corporate charters on Earth and expect Earth Nations to recognize its corporate charters, and other official acts. How this entity will come into being and expect to operate is described.

A bonus is provided to Nations and Corporations that care to participate. Space money grants are available to those who establish a space agency and commit to a space development plan, recognize ROUSIS, and upgrade environmental protection as a priority governance program. This new approach to space development would not only provide more habitats for our expanding population; it will also provide a likely way to escape extinction of our human race.

## INTRODUCTION

Comity is the key to curing at least three of the Top Ten problems in outer space development. These problems are: 1

- 1. Lack of political focus and government support
- 2 .Lack of adequate financing for outer space missions.
- 3. Lack of international cooperation in space projects.

By requiring comity, the proposed new government in and for outer space will extend its own influence. The first priority political focus that it gives to outer space will radiate worldwide to all nations, and all interested parties. The money that it issues to pay for establishment of its own infrastructure will be recognized worldwide. The international cooperation that it expects to generate will create a rising tide of participation internationally by financing a new form of international cooperation, i.e. co-development status.

As time passes and the international community recognizes the "Regency of United Societies in Space", ROUSIS, as the space governance entity, space money will be recognized also. This is a form of comity that is basic to the relationship among all nations: full faith and credit to official acts. <sup>2</sup>

The final expression of outer space comity will be the protection of domestic, national, and international laws, institutions, and official acts of States on Earth as space development occurs. In other words, space will no longer be a political void: legal reciprocity can be manufactured legally and enforced judicially.

This benefit to Earth nations should not be underestimated; it is substantial. For example, space money issued by the new government for space will be recognized in every quarter. If nations X, Y, & Z accumulate space money by participating in the ROUSIS Space Development Plan, nations A, B, C, and others will be required to recognize, accept, and trade in those space dollars. The reason is that ROUSIS otherwise will not recognize A, B, & C's money in space, and X, Y, & Z could boycott it.

The uses for space money may be influenced by ROUSIS. It would pay nations to focus on outer space development, maintain a space agency, and cooperate in a lunar habitat project. In order to qualify for large sums of money for this kind of activity, international standards for environmental protection at home may be required by ROUSIS as a condition of doing business in space. Lessons learned above will be transported back to Earth, in order to save Earth and society, as we know it. <sup>3</sup>

# WHY SPACE

**FRONTIER.** Space is our final frontier. The need to explore, develop and settle space is something simply grafted onto the human fiber. <sup>4</sup>

If we go into space, it is not acceptable to go there disorganized. We will require a basic level of space governance to organize the people, manage the space resources, and guarantee a civilian, rather than military, presence on the high ground. Each component of the off world estate needs to be coordinated lest anarchy result. Society may enjoy watching movies about the American Wild West, but it would not tolerate another such debacle overhead and on such a dangerous scale. Remember, space is less than 200 miles up there.

If space is developed, then space Governance must be put in place first. No logical system would allow otherwise. If space governance is permitted at all, it will need to be equal to all nations so it may have integrity as a governance entity. Any other system would leave it open to become an agency of another, a formula that was rejected by treaty. <sup>5</sup>

**EXTINCTION.** Perhaps the most compelling feature of outer space exploration and development is that extinction of the human race is the alternative to not doing so. Our sun has a life of about 10 billion years. Our Earth was formed almost 5 billion years ago at the same time as our sun. The main sequence of our sun is approximately half way completed. The problem is that the end of the main sequence will result in a Red Giant and all life on Earth will end by force of fire and radiation at that inevitable time, the coming of the Red Giant.

The prediction of when that time will occur is not certain. In fact, the science of Astrology has a known margin of error of 50%. That means that the 10 billion year rating for our sun could be 5 billions years or 15 billion years, a 5 billion year swing either way. Because of this known margin of error, Earth is now at risk of burning to death every living thing on, or near, its surface. <sup>6</sup>

# **WHAT IS COMITY?**

COURTESY. Perhaps the best word of international understanding to describe comity is that of common "courtesy". Sovereign nations may not be compelled to follow international rules. Indeed, Treaties are not enforceable in any technical or legal sense because the signatories are always sovereign nations that rest upon immunity from litigation. Nevertheless, there are legally significant ways to obtain conformity to standards internationally under rules of comity.

The history of comity as a legal tool of international importance is relevant. We can predict that outer space comity will fit into this preconstructed mode of national behavior under the proposed ROUSIS plan. If any nation so recognizes ROUSIS, all will have incentive to do so also. The reason for this is that space money will be negotiated to those nations who recognize ROUSIS. Money is not recognized as a matter of

treaty, but only as a matter of comity. Therefore, once any recognition of Governance is impressed on space money, common courtesy will require universal recognition. <sup>7</sup>

DIFFERENT LEVELS. "Constitutional comity" is demonstrated in the constitution of the United States of America, Article IV, and in 100 or more national constitutions world wide that have copied this model. Enforcement is made by the Supreme Court and the inferior courts of America and such nations. This basic level of comity is binding as a matter of law on all states in the union. It is typically provided in the constitution.

"International comity" is different. Sovereign states voluntarily administer this through their state departments and as part of international diplomacy. In the narrow areas of contracts, treaty compliance, criminal law administration, and requests for extradition, the Judicial Departments of each state are predictably reliable. Otherwise, international comity is by far the least developed and most unpredictable area of international law. 8

"Municipal comity" has not developed because cities are typically within the same nation. City to state comity is considered only as constitutional or international and city to city comity is not recognized at all as a body of reported law. However, it is utilized and practiced on an informal basis daily.

Outer space comity does not exist. Space is a political void. The five space treaties are silent on the subject of whether or not international comity will expand into outer space. They do not state any basis for comity in space per their terms. The absence of any stated rule perpetuates the political void in this particular and this applies to all five space treaties. 9

If a nation or a recognized government existed in or for space, then there would be a traditional way to extend international comity into space. If the space nation had affiliated states within it and they

operated under a constitution, then all of space would be recognizable as one political unit for comity purposes. This convenience has merit and it is recommended.

For example, corporate shareholders of a Colorado Corporation may want to have their state statute on limited liability recognized in all space venues. There is no mechanism for that. Space comity will need to be created in order to protect such shareholders, and space corporate shareholders, in the future. Investors will require this legal protection against liability.

# HOW WOULD SPACE COMITY WORK?

# THE ALIEN NATION ANALOGY

In the event that aliens are here and they occupy near and deep space, they may seek to extend their political presence into our solar system. Let's pretend that they place a city or two on our moon, several cities on Mars, and even more cities in orbit around Mars, the Moon, the Earth, and our Sun. This Alien Nation may be called ANA, (Alien Nation Above). Because of the unfamiliarity and uncertainty, Earth nations may be nervous, if not frightened, about this.

In order to coexist in a political sense with ANA, or any other association of sentient beings in that foreign territory know as outer space, we would look for the following things:

1 . GOVERNANCE EXISTANT.

We would require that the cities in space be a government and that they be bound under civil law in space. It would be inconvenient to have two or more competing governments, (of aliens or of humans), so close to our Earthly borders. It would be frightening to permit a potential Star Wars structure to exist with Earth directly in the middle of

- the peril. Civilian Government is needed.
- 2. <u>ONE GOVERNMENT</u>. One Government for space requirement also serves the purpose of promoting good relations, as well as that of avoiding bad relations. That is also why we would want ANA to be a civilian rather than military type of government. If there are separate alien nations in the vicinity, we would want them to become affiliated, or, at the very least, Treaty partners, so the rules of living in space are clear and equally applicable to all that occupy that territory. Within a federation, there may be civil war from time to time, but civil wars tend to stay within their territory. A legal promise to that effect is sought.
- 3. STATE DEPARTMENT. Next we would want to see the government of ANA feature a State Department, one that could deal with our State Departments on Earth and/or the United Nations. This implies that ANA should have a foreign policy and that Earth Nations and our United Nations will have an Alien Nation Policy: Perhaps expanded commerce and tourism into space, with eventual settlement following soon. Without a professional and political point of contact there may be a peril because of unclear or conflicting messages. Also, the policies of ANA could not be implemented through any sort of traditional diplomacy, unless a traditional structure existed.
- 4. <u>LEGISLATURE</u>. ANA must have a body of laws that we on Earth could learn and appreciate and follow when we are in space

- as tourists, or as settlers. A legislative forum must be existent. But for this staple of civility, we could not evaluate that nation's true purpose and plan and activity.
- 5. COURT SYSTEM. ANA will need a court system so we on Earth can effect comity in a traditional way. Absent this branch of Government there would be no way to transmit our values into theirs and vise versa.
- 6. MONEY. In order to have a commercially viable method of trading, rather than rely entirely on old-fashioned barter, ANA will need to have money. The value of this money must be compared to Earth nation money. Then, for each and every money transaction the purest form of comity must be exercised: each party must recognize the money of the other party at the fair value it represents.
- 7. TREATIES. ANA must have a procedure for signing and ratifying treaties. The UN will not be able to trust a foreign country with no diplomacy channels and no treaty capacity. As more and more problems arise in the next millennium with the aliens, a treaty procedure must be possible.
- 8 . CUSTOMS, IMMIGRATION, AND DISEASE CONTROL.

  ANA must be able to regulate with Earth nations such day to day matters as customs, immigration, and disease control between Earth and Space. Citizens of both venues will need to know the rules of passage and be able to comply without any fear of reprisal, capture, or quarantine. This important function presupposes a medical

infrastructure in space, as well as political base large enough and experienced enough to have policies in this particular. Comity comes into play when Earth nations and ANA actually respect and enforce each other's rules of passage to and from space.

9. UN. Our Earthly way of relating to sovereign states is to meet and talk and try to arrive at a consensus. Without a foreign ministry that is directed by a civilian government, ANA would not be able to participate in United Nations affairs. importance of the UN may be disputed by some, but the importance of consensus is not challenged. For example, we have no environmental laws that extend into space. If ANA or any society were to take residence in space, a need for consensus on space environment would rise up to high priority. We would need a UN model within which to negotiate for a solution by consensus to that end. If the UN failed to act, then the space governance model should be required to provide that service.

#### THE HUMAN EXPERIENCE

If space is settled by humans rather than by aliens, the need for comity in a formal sense is even more important. Will and Areal Durant, (Historians and Authors of a series called "The Age of .......), have reminded us in every volume that our history on earth is marked mostly by warfare. It is calculated that our world is at peace only 10% of the time. It is written that the Global World of human species has seen only 360 years of peace in 3,600 years of recorded history. Our propensity to fight

each other is a sure and certain part of our nature.

Another concern is that we tend to fight those amongst us who are somehow different. To the extent a people not only look different but, also, have a very different culture, religion, education, commercial sense, and family value, then, to that increased extent, the potential for warfare is increased. This observation is implicit in the human experience.

Spacekind will be different from Earthkind. If aliens reside here or if we settle space ourselves, the people will become different. The change from 1 g. to 0 g. and the absence of pressure atmosphere, and vegetation in the wild may cause our own species in space to become quite "different". This expected mutation might exacerbate our potential for warfare or not. In every event, however, it will cause each new subspecies to be less trusting of the others. This infers a need for more formal legal relationships than otherwise may be needed of settlers in space.

#### THE OUTER SPACE TERRITORY

Comity in the outer space territory will require obvious adjustments based solely on the circumstance that outer space is a unique territory that is not yet ready for the full measure of self governance. The UN Treaty of 1947 gives special recognition to these kinds of territories by calling for a transition stage before full UN membership is granted. <sup>10</sup>

The transition stage in this case will need to focus on the following facts and circumstances inherent in the nature of this newly recognizable territory called outer space:

1. NO CITIZENS. Although there a r e s e v e r a l astronauts/cosmonauts living and working in space at any given moment, all are citizens of their own nations on Earth. Mission

Rules of America's NASA and Russia's Space Agency impose American and Russian rules inside of the NASA shuttle and the Russian MIR pursuant to a specific treaty procedure: Earth nation sovereignty is extended into outer space inside space vessels by Treaty. 11 This feature precludes the competing concept of independence for space residence at this time. In turn, this also precludes independent citizenry in outer space until settlements of a more permanent nature are established. It may take about a century of concerted construction to achieve a physical estate in outer space suitable for truly independent citizens. Until then, there should be no independent citizenship permitted in outer space. The development stage is Earth's business.

2. NO SPACE NATION. Without any suitable facilities and no resident citizens, there could be no sovereign state in space, i.e. no "space nation." This tends to require a special sort of comity because the international community could not be expected to salute a flag that is not flying, so to speak. Here the UN Treaty of 1947 comes into focus. There is a traditional kind of nationhood provided to territories not yet ready for the full measure of self-governance. Perhaps a Regency of 100 years could be asserted to govern space as a recognized political venue, but not as a mature nation. The concept of comity has been effective for lesser statehood status in the past, particularly of absentee managers like President Charles DeGaule of Free France

living in England during World War II. The French Franc was printed in London and recognized by the free world. despite the fact France, as a territory, was not occupied by DeGaule. Also, the UN recognized territories all have had their own form of money during colonial rule. Full recognition of that money was received worldwide.

3. MORE MONEY REQUIRED. Before a space nation can be established, immense amounts must be spent on engineering, development and infrastructure. But Earth Nations have other priorities and other financial commitments and no basis for repairing that on any large scale and international basis. Space is a void vacuum that can kill humans who are not protected by proper planning, engineering, and construction. This suggests a budget far in excess of Earth Nation capacity to provide. The inherent dilemma, therefore, is how to make more money to develop our human estate off world before any space nation could be located in space to issue more money for that purpose. The lack of money is the chronic problem that prevents humans from residing in space. That also can not be provided at all, it would seem, until our estate is in fact built in space. The chicken and the egg problem is our dilemma and that must be solved in order to provide money for space development. The Regency must be able to issue space money.

# THE REGENCY PROPOSAL

#### **TRANSITION**

UNITED SOCITIES IN SPACE, INC., a Colorado Non-Profit Corporation, has sponsored the Regency Governance proposal for comity in outer space. Its principal mission is to build an off world estate with a traditional space governance capacity within 100 years. A convention is called for August 4, 2000 AD in Denver to establish the Regency and it, in turn, would prepare a more democratic and in situ convention in space on August 4, 2100 AD. The transitional government would operate on earth and all of the participants, including the astronauts who are born in space during that 100 years would keep their nationality. or that of their parents.

The basis for transition is based on the premise that the Regency, affectionately called "ROUSIS," ("The Regency of United Societies in Space"), is a government. As such, it can issue money to pay for its own infrastructure. A group of 200 to not more than 2000 Regents will be elected to this Regency by convention in Denver, Colorado, on August 4, 2000 AD. An international character is sought so the transition may be recognized as a worldwide effort to solve the larger problem that comity is needed in the outer space venue during the 100 year Regency period, in order to ratify tradability in space money. 12

A copy of the second reading version is attached hereto as Exhibit A. It was approved at Countdown Conference No. 3 at Stanford University on August 21, 1999. The third reading will be at the Hilton Hotel, Albuquerque, New Mexico, on March 20, 2000 AD, at Countdown

# 2 Conference. Notice that it is limited to a duration of 100 years, has no citizens, acts as a trustee for all, and plans to issue money in order to effect the exact transition needed

for humanity to live and work in outer space.

Three sub-authorities are already established and working on plans for the Moon, Mars, and Cycler Orbits. USIS has taken the lead in this activity so some experience may be gained prior to the Denver Space Convention, 2000 AD. The international character and legal kind of authority for these engines of space development are traditional and feasible for the purposes intended; no objection has been voiced by any Earth nation. <sup>13</sup>

## **SPACE GOVERNANCE**

The sine qua non of money is the sponsorship by a government. Here the Regency features an international group of legislative, executive, and judicial personnel committed to space governance for the benefit of all humanity. It asserts jurisdiction over space resources and extends the common law into space as a territory. All of the characteristics of a government are provided in a problemsolving manner. This is detailed in three exhibits attached to the ROUSIS Proposal as follows:

- 1. Exhibit A-1 is a model treaty on jurisdiction in outer space. This will be referred to the Regency for debate and eventual ratification after August 4, 2000 AD. It clearly calls for space governance by the new entity.
- Exhibit A-2 is the UN Declaration of Human Rights of 1947. The first 20 paragraphs call for inalienable rights for space settlers.
- 3. Exhibit A-3 is a treatise published by the UN-1.A.F. entitled "Space Governance". It details how the ROUSIS space governance entity will display comity.

## **SPACE MONEY**

With such a solid and practical and traditional approach to governance in space, money issuance should be recognized by Earth nations. Indeed, much of the new space money will be issued to Earth nations so they might participate in the space development plan. USIS, Inc. maintains an industry barter club called "The SPACE MONEY CLUB". Any member of USIS and every person, company, and country can and should support this precursor paradigm for currency in space. There are 600 large barter clubs worldwide and all of their money is recognized internationally per rules of comity and per domestic statutes of taxation. This early use of space money in a club setting will establish precedent for uses in outer space. The Club has set a budget of 2 quadrillion dollars for space development.

## **CONVENTION PRESET**

U.S.I.S. has preset a Denver Space Convention for August 4, 2000 AD. It will need help in various forms. Delegates will be needed from all nations, particularly Russia and America, the only two nations with human rated launch facilities. <sup>14</sup>

It will also need to assemble a slate of Regents with international qualifications and outer space experience. The slate must be ready for publication at the Albuquerque, NM, USA meeting on March 20, 2000 AD. (If you can nominate someone, please contact the author).

A web site is established at <a href="https://www.USIS.org">www.USIS.org</a> for future reference. After Jan 1, 2000 AD, specific delegates and voting instructions will be posted. Please tune in and participate lest the world miss out on our last clear chance to conquer our final frontier during a life in being, i.e. during the next 100 years. Scholarships will be available.

## **CONSEQUENCES OF FAILURE**

If this proposal fails, our species may become sentenced to stay on Earth forever. The window of opportunity to transition from Earthkind to Spacekind having a spacefaring civilization that can exceed the bounds of our mother planet is closing. Unless we achieve the next phase of maturity as a species, we will extinct our species and not survive at all.

Dr. Robert Zubrin has detailed the required maturation of civilization for survival as follows: 15

<u>Type I:</u> Global civilization achieves commerce in Low Earth Orbit. (We have reached this level already).

Type II: Spacefaring civilization that has people on the Moon, at Mars, in orbit, and exploring our outer solar system. (This is our next step).

Type III: Galactic civilization that carries humanity beyond the Oort Belt and into the Galaxy, far beyond our own solar system.

When the main sequence of our sun expires, Earth will die and our species on Earth will become extinct. The timing of this true disaster is impossible to measure very accurately: the margin of error in such matters is 50%. The question is no longer "when should we plan on leaving earth?" It is now a question only as to "How do we transition to Type II, a spacefaring civilization?" Population expansion into space is our next societal step; such expansion is needed for social survival.

The space open window is only 100 years or less. We enjoy a "HELENISTIC" society with a healthy economy and limited warfare. This will change during the next 100 years when fossil fuels are rationed or exhausted. The civilian unrest could prevent any civil space program and drop our priority for space budgets even farther down the political scale of emergency. Remember, NASA's budget has gone down for five years in a row so political clout is

already small. No nation has yet challenged America's leadership and that is unfortunate.

# **CONCLUSION**

For these reasons, space governance needs to be reorganized. The principal problems of lack of political focus on space, the lack of adequate budgets for space development, and the lack of whole world international cooperation in space affairs require a solution during the next 100 years.

The ROUSIS proposal addresses these concerns. It also provides a basis for creating more money. If comity is part of the constitution of the new political paradigm, then space money will be recognized worldwide. That could solve the problem of space governance as well as help every participating Earth nation. ROUSIS would simply pay people, companies, and nations to participate in developing that territory known as outer space, our final frontier.

Comity is the key to unlocking the solution. It is a traditional tool of international courtesy that has legal parameters. It works for all nations and is rejected by none. In order to preserve our species, advance to the Type II spacefaring civilization, and avoid warfare in the territory of space, the Regency proposal is recommended to support the comity called for herein.

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<sup>&</sup>lt;sup>1</sup> O'Donnell, D.J., "the Top Ten Problems in Space Policy at 1995," Space Governance Journal, 1995, p. 40. These three are chronic and pandemic for 30 years.

<sup>&</sup>lt;sup>2</sup> "Full Faith and Credit" is expressly provided in the American Constitution at Article IV and in the ROUSIS proposed Constitution at Article IV, also. It is implicit in International Comity under custom and practice, a well as based on the UN Charter, 1947.

<sup>&</sup>lt;sup>3</sup> Mayur, Rashmi, "Space is the Place for Synergy," Space Governance Journal, 1995, p. 24. Also, see O'Neill, G.K., <u>The High Frontier</u>, Space Studies Institute, Princeton, NJ, 1998, describing how the limits to growth on Earth require development of outer space because no other venue could accommodate exponential population increases.

<sup>&</sup>lt;sup>4</sup> Zubrin, R., and Wagner, R., <u>The Case for Mars</u>, The Free Press, N.Y., 1996, Forward by Arthur C. Clark, p. xi: "The challenge of the great spaces between the worlds is a stupendous one; but if we fail to meet, the story of our race will be drawing to its close."

<sup>&</sup>lt;sup>5</sup> The Outer Space Treaty, 1967, Article II, preventing nations from extending their sovereignty into space.

<sup>&</sup>lt;sup>6</sup> O'Donnell, D.J., "Metaspace: A Design for Governance in Outer Space", Space Governance Journal, 1994, p. 8, quoting Dr. Henry Cheung, Laurence Livermore National Laboratories, Senior Scientist, (retired).

<sup>&</sup>lt;sup>7</sup> 15 Corpus Juris Secundum 364: "The word 'comity' is defined generally as meaning complaisance, courtesy, respect, the granting of a privilege and not of a right, but of good will, (internationally)." See, <u>Gross vs. Irving Trust Co.</u> 53 U.S. S. Ct. 605, 289 Us 342; 77 L. Ed. 1243, 90 ALR 1215. Also see p. 366: "It has been observed that the field of conflict of laws is the most undeveloped in American Jurisprudence from a practical stand point." See p. 372: "There is a presumption that all laws are territorial and not intended to apply beyond those borders, (but for the laws of comity)".

<sup>&</sup>lt;sup>8</sup> Ibid, p.366.

<sup>&</sup>lt;sup>9</sup> The five space treaties are: (1) Treaty on Principles Governing the Activities of States in the Exploration and Uses of Outer Space, including the Moon and Other Celestial Bodies, known as the Outer Space Treaty of 1967; (2) Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space, known as the Rescue and Return Treaty of 1968; (3) Convention on International Liability for Damage caused by Space Objects, known as the Liability Treaty of 1972; (4) Convention on Registration of Objects Launched into Outer Space, known as the Registration Treaty of 1975; and, (5) Treaty Governing the Activities of States on the Moon and Other Celestial Bodies, known as the Moon Treaty of 1979.

<sup>&</sup>lt;sup>10</sup> The UN Treaty, 1947, Charter 11, Section 74, calls for a Council of Trustee Nations to sponsor territories not yet ready for the full measure of self governance.

<sup>&</sup>lt;sup>11</sup> Outer Space Treaty, 1967, Article 8.

<sup>&</sup>lt;sup>12</sup> The Constitution of the Regency of United Societies in Space as proposed by USIS, Inc. is attached as Exhibit A hereto (without its 3 exhibits: The model Treaty on Jurisdiction in Outer Space; The Declaration of Human Rights by the UN; and the UN published article, (Space Governance: A New Institution is Proposed for the Management of Space Resources").

<sup>&</sup>lt;sup>13</sup> Formal objection by any nation would challenge the desired ROUSIS consensus. Sputnik's orbits of Earth in 1955 changed space law to permit air space trespass by space objects because no UN objections were lodged by Earth nation members of the UN.

<sup>&</sup>lt;sup>14</sup> Alifanov, Oleg, "Space Governance and Russia," Space Governance Journal, 1997. Dr. Alifanov, Director of the Moscow Aviation Institute, observes the fact that we have very little time until August 4, 2000 AD. He also urges that the Space Government purchase its own launch facilities rather than plan on taking over those of Russia or America. (A launch purchase program could be used also since money will no longer be the problem).

<sup>&</sup>lt;sup>15</sup> Zubrin, R., Entering Space: Creating a Spacefaring Civilization, Penquin Putnam, NY., 1999, in Passim.