OURS - The Orbiting Unification Ring Satellite
A Global Artwork in Space for the Year 2000
Communicating the Urgency of Outer Space Development

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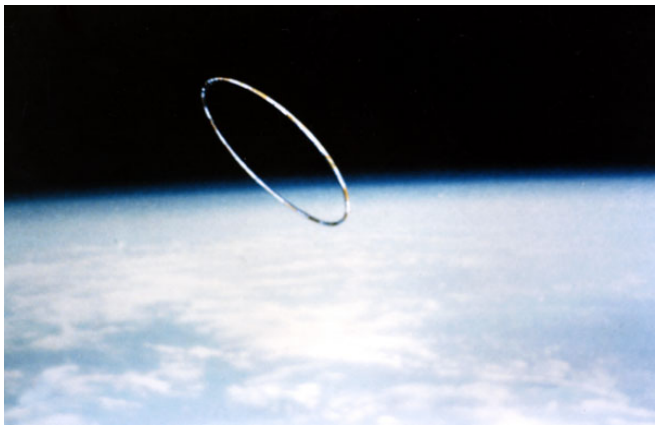
Arthur Woods
The OURS Foundation, Switzerland



Abstract

This paper concerns the concept, background, purpose and development of a monumental orbiting ring sculpture designed for realization in the outer space environment in the year 2000. Called OURS - the Orbiting Unification Ring Satellite, this artwork is being proposed to celebrate the beginning of a new millennium with a "circle in the sky" symbolizing planetary unity, wholeness and peace. This unprecedented cultural manifestation will attempt to focus world attention on the urgent need to develop the unlimited resources of outer space in order to address and solve the imminent political, economic and ecological crises that humanity is facing as this century and this millennium draws to a close. The OURS is conceived of as a global artwork. As such, its development will involve worldwide artistic participation and the entire population of the planet will witness its realization in space. At the center of the OURS sculpture will be an archive representing the planet's diverse cultures as they are during the year 2000. At a pre-designated time, the OURS is being designed to become a solar sail enabling it to leave Earth orbit, to travel and to remain in space forever as a monument of our time and as a gift to our future generations.

1.0 Introduction

As we approach the year 2000 we are becoming increasingly aware that the environmental and social problems resulting from human activities and an ever expanding population have become a serious threat to both our future and, to the rest of life on our planet. Although a percentage of humanity has attained an unparalleled standard of living through industrialization, massive exploitation of available resources and technological advancement, this has been achieved at considerable expense to the planet's environment. This situation may in turn, deny the rest of humanity a similar opportunity for development.

As a result, humanity is facing major issues at the end of this millennium. These are: perpetual hunger and poverty in many parts of the world, overpopulation, continued pollution of the

environment, ecological imbalances, increasing energy needs and the depletion of natural resources. Any of these issues has the potential to become a "mega-crises" in the immediate future. The outcome of any of these mega-crises is generally believed to be either one of catastrophe or one of a future of diminishing expectations. Most contemporary approaches to addressing these issues that are being proposed by world leaders today point to some form of "limits to growth" to future human activities. Invariably, all of these approaches are based on a perspective that is limited to viewing the Earth as the whole universe and, as such, limit the solutions to these problems to the level of the problems themselves. Yet, history has shown what we all know - the human species has an insatiable drive to expand, to explore, to develop and to command both its environment and its future.

Fortunately, there is an option that does not lead to catastrophe or to a sharing of the world's poverty and misery but instead, leads to wealth and prosperity. This opportunity, called the "space option" offers humanity an unlimited source of clean energy as well as new and unlimited natural resources. It also offers human society an alternative location for placing its most polluting industries - outside of the biosphere.

Developing the space option would result in an expanded arena for the advancement of human civilization, prosperity and a restoration of the planet's environment. It would also require an emphasis on increased planetary unity and unprecedented levels of global cooperation. The new political realities of the last years and the trend towards "globalization" of the world's culture through mass communications, travel and global marketing may be indications of the kind of sociological forces that are already preparing humanity for this task.

Unfortunately, humanity may be in a race with time. Even after 35 years of space activities the space option is not generally accepted nor recognized as a viable alternative neither by a large proportion of the world’s population nor by its leaders. Even worse, it has been pointed out that the opportunity for humanity to develop the space option may be very short as one or several of the potential mega-crises could occur before the space option has been sufficiently implemented. If this would happen, humanity would perhaps lose its material and sociological abilities to do so.

Thus, the fate of our civilization, the future of humanity and indeed, even the future of all life on our planet is being decided as we enter the next millennium. The challenge of our time is to identify those ways of working together that transcend our differences and that harness the magnificent technologies that we have created in order to exploit the space option. The development of outer space resources offers humanity the chance to solve its global problems and to create a safe, healthy and prosperous future.

What is needed at this moment is a global public awareness campaign addressing the dangers that we face with our present terrestrial based approaches to meeting the needs of humanity, a global program that promotes the alternatives and benefits inherent in the space option, and a powerful means to communicate this vision to the world's population. If this is done properly it may catalyze and motivate the kind of action necessary to implement its development.

To help meet this challenge, a monumental orbiting space sculpture is being planned for the year 2000. To be created through the global participation and designed to be seen and experienced by the entire world's population, it will celebrate our passage into the next millennium with a symbol of planetary unity, wholeness and peace. Its purpose is to create mass awareness of the importance of the "space option" and a global constituency for its development.

It is called: ***OURS - the Orbiting Unification Ring Satellite***

2. A Circle In The Sky

2.1 The Orbiting Unification Ring Satellite – OURS

The Orbiting Unification Ring Satellite has been proposed to celebrate our passage into the next millennium with a "circle in the sky" symbolizing planetary unity, wholeness and peace. To realize this celestial event a call is going out to the people of the world to invest their energies in a cultural manifestation of an unprecedented scale - one that is also designed to communicate a positive vision of the future and the pathway to its realization. The process of development on Earth and its deployment in space will be a signal that a safe and healthy future for humanity and all life on Earth is in the making.

The OURS will be an enormous orbiting space sculpture in the form of a toroidal ring with a diameter of approximately one kilometer. Artists representing every nation and culture of our planet will decorate its mirror-like surface in some form. At its center will be an electronic archive containing a record of the rich cultural diversity of our civilization as it enters the next millennium.

2.2 Launched in the Year 2000.

In the year 2000, the OURS will be launched into Earth orbit and, illuminated by sunlight, it will appear as a circle or an ellipse in the early morning and early evening sky. Visible to the naked eye, its symbolic message will be seen and experienced by the entire population of the world. At a pre-designated time the OURS will unfurl a reflective membrane across its circumference making it the most brilliant star in the night sky. Its light may be reflected to illuminate entire cities situated under its orbital path. The OURS star, now configured as a solar sail, will very slowly disappear from the night sky propelled only by the pressure of sunlight. Free from the gravity of Earth, it will travel the cosmos and remain forever as a monument of our time and as a gift to our future generations.

3. Why Space?

3.1 Awareness of the Space Option to Solve the Planet's Problems

Although activities in outer space have been going on for over 35 years, the importance of space development to the future of our planet is still not widely appreciated by the general public. Fascinated as they are by images of distant planets, of the thrill of rockets being launched and of the sophistication of global communication systems which affect their daily lives, for most people, including most policymakers, "space" is still out there. The immensity of the universe is something to be explored and developed when humanity has solved its terrestrial problems, when humanity has the necessary resources, or when humanity needs a new adventure. To most people, outer space

development can wait. It is not considered vital to solving our planet's immediate problems, nor is it considered extremely vital to the future of humanity. Yet, no other option for addressing our global problems has been put forward that provides for unlimited economic and social expansion for humanity and, at the same time, offers to preserve and restore the environment of our planet.

3.2 Space Resources and Our Future

For continued human development purposes the Earth is a closed system and, as in any closed system, natural resources are finite. Sooner or later the Earth's resources will be depleted to a level where the problems of energy production and environmental change will force either a reduction or a limit to future human development. It does not matter whether the population is increasing, exponentially or otherwise, or remains static. Nor does a policy of recycling manufactured goods and waste products, though desirable for other reasons, help avert this situation. Over a given period of time, long or short, the available resources of the planet will be consumed. Many of the complex issues or "mega-crises" confronting humanity at the end of this millennium are a direct result of the impact of its activities within the Earth environment. Food shortages and famine, energy crises, environmental pollution, overpopulation and ecological imbalances can all be traced to humanity's unrestrained exploitation of the Earth's natural resources.

Generally, the outcomes of these mega-crises are seen as either an eventual catastrophe or a future of decreasing expectations - the difference only being one of time scale - a sudden destruction vs. a drawn out state of disaster. Indeed, much discussion and propaganda has been molding public opinion to accept such a "limits-to-growth" future. As such solutions call for an equitable sharing of Earth's available resources, they inevitably result in accepting a reduction in the overall standard of living. Unfortunately, in such scenarios humanity, instead of sharing its wealth, ends up sharing its poverty. With this approach the aspirations of the poorer parts of humanity would be tragically cancelled forever and the richer peoples will end up fighting to keep what they have.

Our inability to find appropriate solutions that are just, practical and optimistic are primarily due to the fact that most of humanity still considers the Earth to be the whole universe. However, while the Earth is perceived of as a "closed system" in the 20th century, it need not remain so. Outer space provides our future with an infinite supply of energy and raw materials as well as place to park many of our most polluting industries. Once the exploitation of the resources of the Solar System is underway, then all constraints to further development will be removed and the living standards of all humanity will increase while the environment of the Earth can be restored to its natural splendor.

Many technologies for developing outer space have already been developed and many concepts for their utilization have been accepted by space scientists and engineers. Yet, the access to space is dominated by restrictive governmental policies and by their defense related space industries. Thus, the cost of implementing these technologies for the benefits of humanity is generally agreed to be prohibitive as long as there are still available resources to be exploited.

3.3 The Window of Opportunity.

The period of time available for humanity to seize this option is very short as the window to the Solar System may be open for only a limited time. The risk to humanity in the next century is that it may be overcome by one or several of its mega-crises before it has focused its priorities and the resources necessary to develop the space option. Thus, the urgency of the situation calls for dramatic public awareness measures.

Utilizing space technology and the space environment to gain the attention of the entire world's population, the Orbiting Unification Ring Satellite will serve as a vehicle to communicate the "space option" to everyone on Earth and as an example of how it may be developed.

4. The Symbol of the Circle

4.1 An Ancient and Universal Symbol

The form of the OURS is the circle. This ancient and universal symbol signifies the relationship between humanity and the rest of nature and between life and the rest of the cosmos. In whatever variation or context the circle appears, it always indicates the single most vital aspect of life and that is - its ultimate wholeness. Humankind has used this symbol since its beginnings of consciousness to understand and signify these relationships. For these reasons, this universal symbol has been chosen as the appropriate vehicle to symbolize the unity of the global community as well as to communicate the pathway to a more positive future.

4.2 Connecting the Past and the Future

Combined into the symbolic form of the OURS are the qualities of planetary unity and purpose, the idea of wholeness with nature and the vision of a peaceful and fruitful future. Communicating though this ancient and universally understood form, the OURS connects our past with our future. As such, it will be a signal to the present and future generations that we must work together in order to create the future we all want. This "circle in the sky" will attempt to focus the creative energies of the planet on the choices necessary to ensure its survival.

5. A Global Artwork In Space

5.1 The Artist and the Community

The artist and the community are profoundly interrelated. Traditionally, artists have been the channels for the tempo, the tone and the intensity of their society. The function of their art is to transmit feeling and to communicate understanding. In a genuine work of art one recognizes what is being shared by our common humanity. The great monuments of the past were celebrations of the human spirit in a communal vision. The OURS will follow this tradition into the future.
It is conceived as a global artwork resulting from a collaboration of artists, scientists and engineers from around the world that are dedicated to creating a better, safer and healthier planet. Since the beginning of our civilization and perhaps since the advent of human consciousness, the artist has been involved in communicating the nature of the universe. The task of communicating the importance of outer space development to the future of our planet and to the survival of our species cannot be overstated. All areas of human society must become aware and then become involved.

5.2 Artistic Participation

The integration of the global artistic community into the OURS will be carried out in various ways. The mirror-like surface of the one-kilometer ring sculpture will be decorated in some form by artists representing every nation and culture of the planet. Concepts of international participation involving children and the public have been implemented and other, newer means are being developed. The OURS Foundation is already active in networking the international artistic community by organizing exhibitions and workshops. As this «global artwork» develops through various forms of international artistic collaboration, these activities are designed to add a human touch to the technological appearance of the sculpture - adding to its meaning and purpose.

6. The Cultural Sphere

6.1 Representing the Cultural Diversity of Humanity

Since its inception, the OURS project has been concerned with integrating aspects of the global culture into its concept. Both, as an artwork that will be seen and experienced by the entire world's population and as a monumental object, the design of the OURS sculpture will represent the cultural

diversity of our civilization as well as the emerging unity of the human family. In this way the OURS will become a global artwork.

Culture is a living process. As we approach the end of this millennium, the entire cultural fabric of our planet is in transition. Developments unique to the 20th century have created an unprecedented cultural "sensitizing and synthesizing" process. Through mass communications, economic integration and increased travel, we have become more intimately cognizant of the diversity and richness of the cultural spectrum of our planet. Yet, these same forces are also having a "globalization" effect on all cultures and the emergence of a shared «global culture» is in the making. While we are experiencing the birth of this global culture, we may also be witnessing a "loss of cultures" that is similar to the "loss of species" that is resulting from the impact of the explosive growth of the human population. On the other hand, this emerging global culture may be what is necessary for humanity to address the immediate political, economic and environmental challenges on the planet. Such a development may also be an essential factor needed to develop the resources of outer space and to extend human civilization throughout the Solar System.

6.2 A Record of Our Diverse Cultures

The few years remaining between now and the year 2000 may be the last opportunity for humanity to witness, to experience and to make a record of its diverse cultural heritage. It is also the appropriate opportunity to celebrate the emerging unity of a united human family. It is anticipated that in the year 2000 global cultural events bringing together representatives and groups of all our diverse cultures will be organized. Such events will be a culmination of the process of witnessing the diversity of the world's cultures as well as a celebration of the unification of the global community. The circle, and therefore the OURS will be its symbol.

6.3 The OURS Archive

Integrated into the OURS will be an Archive that will be decorated to resemble the Earth. It will contain an electronic digital record of the current state of the world's diverse cultures. The OURS Foundation is cooperating with other organizations active in promoting international cultural manifestations. This record will be accumulated by recording a series of regional cultural events taking place worldwide leading up to a major event in the year 2000.

Before the OURS is launched into space this documentation will be stored in the Archive of the sculpture. The storage medium will be a collection of optical laser disks and an interactive player system. This will enable the archive to be accessed by future generations who may be able to visit the sculpture. The contents of the Archive will also be made available to the public during and after the year 2000. A digital archiving system with the capability to store pictures, sound and text has been developed for this purpose and is already in use by the OURS Foundation.

7. Technological & Environmental Considerations

7.1 Technical Definition of the OURS

As a reference configuration it is assumed that an OURS sculpture would be constructed out of a space rigidizable membrane, would have a crown diameter of 947.5 meters, a slenderness ratio of 281, an area mass of 0.45 kg/m^2 and would weigh approximately 5,000 kilograms. A sculpture utilizing this technology would be packed into the payload area of a typical launch vehicle capable of transporting this mass and placed into orbit.

Deployed by inflation into a toroidal shape, the wall of the sculpture would harden in the presence of sunlight and the expandable structure would become a structurally stable entity. Placed in a high inclination orbit, such a structure would be visible as a circle or an ellipse in the sky to the entire population of the planet. For an extended duration orbit and for the deployment of the solar sail an orbital altitude higher than 800 km will be chosen. At that distance the circular image would appear

to be approximately one-eighth the size of the Moon and its extension (under the most favorable conditions) would be as a quarter-Moon.

In a solar sail configuration, the OURS would weigh approximately 17,500 kilograms and have an area mass of 0.025 kg/m^2. Once the solar sail is deployed, control mechanisms will position the sculpture in relation to the Sun. During this phase the OURS could be used as a "night illuminator" demonstration where sunlight can be reflected on a specific area of the Earth that is about 300 km in diameter providing a luminance at best equivalent to three full Moons.

7.2 Environmental Impact

With reference to the criticisms raised by astronomers to orbiting artworks in space, it should be pointed out that in the coming years astronomers will have to contend with many visible objects deployed for scientific and other purposes. The OURS is designed to remain in Earth orbit for only a limited period of time. Control mechanisms will enable its orbit to be predictable. Concerning the issue of space debris, the OURS structure avoids the problem of disintegration by being designed as a solar sail which will remove its mass from orbit.

The OURS Foundation is dedicated to keeping the environmental impact of the OURS to a minimum while remaining a spectacular event. It should be pointed out that, due to the scale of the undertaking, its eventual realization in space will have been a result of global participation and consensus. Its purpose - to help make humanity aware that its only hope for a healthy and prosperous future rests with the urgent development of the space option, should justify any momentary environmental impact that the OURS will have. In environmental terms, the consequences of not developing the space option may be the worst that could happen to Earth.

8. The Purpose of the OURS

8.1 The Urgency of Developing the Space Option

The "window of opportunity" for humanity to develop the space option may be very short and, though there is a steadily growing technology base, the conditions for its further development may already be deteriorating under the combined political, economic and environmental stresses. As the space option has not yet become accepted as being vital to the future of our species, there is a real danger that humanity may postpone focusing its energies and technologies while it still has them or is still in a situation where it can do so. Even though many people in the space community are aware of this situation and though some are taking steps in the right direction, they have not been successful in communicating the space option to the global community - neither the benefits of space to our future nor the urgency of their development.

8.2 Meeting the Challenge

Avoiding the impending "mega-crises" is the challenge of our time. Developing the space option is the most optimistic means to do so. It is clear that the investment costs, the human and natural resources required will be enormous; setting the right priorities will be painful; but having the will is surely to be the most difficult. Thus, a powerful campaign of global awareness is necessary - a campaign that will involve all cultures and all areas of human society.

8.3 Using the OURS to Communicate the Future

OURS - the global artwork for the year 2000 can fulfill this task. Taking advantage of this unique point in time, a moment when the future of humanity will be discussed, debated and perhaps determined, the immediacy of the space option can be proposed. This message will be integrated into the public purpose of the OURS. Its high cost, scale, unprecedented concept will cause it to be a subject of global attention, discussion and controversy. This will result in having its purpose and message penetrate every corner of society.

Integrated into the goal of celebrating the year 2000, the real task, the ultimate purpose of the OURS, is for it to be a vehicle for communicating the space option to everyone on Earth and, as such, to also be an example of the kind of planetary cooperative activity necessary for humanity to seize and realize the space option. In this role, in the absence of any other program of global communication, the OURS may serve as the catalyst necessary for the space option to be accepted and implemented.

9. Project Background

9.1 The OURS Project's Beginning

The OURS project was begun in 1985 by this author, an artist who grew up in the vicinity of the U.S. space program in Merritt Island, Florida and, who later worked at the Kennedy Space Center during the Apollo era. In 1986 the OURS project was introduced to the international space community for the first time at Space Commerce '86 in Montreux, Switzerland. The project was joined in 1986 by Dr. Marco C. Bernasconi, a space engineer and recognized expert on inflatable space structures. In 1987 the OUR-Space Peace Sculpture project was initiated as a call for and a symbol of world peace. As a project, its purpose was to promote international cooperation in space. In 1988 a "Letter of Intent" was signed with Glavkosmos of the U.S.S.R. to deploy a sculpture to be built by the Swiss firm Contraves. In later negotiations, the Soviets, suggesting that their technology be used, built and delivered to the OURS Foundation a full-scale inflatable prototype of the OUR-Space Peace Sculpture in 1990. The flight sculpture, to be built by NPO Energiya was scheduled to be deployed from the Mir station by a cosmonaut during a space walk on Earth Day, 1992 of the International Space Year. The uncertain series of events in 1991 - the Gulf War, the dissolution of the Soviet Union and the worldwide economic recession resulted in funding difficulties and to the eventual cancellation of this project.

Since 1986, the OURS project has been regularly presented to the international space and art community at conferences and congresses including Space Commerce 86, 88, 90 & 92, the 40th & 41st International Astronautical Congresses (IAF) of 1989 and 1990, and at ART - the international art fair in Basle, Switzerland 1987, 1988, & 1989. Over 100 articles about the project have appeared in the international news media.

9.2 The OURS Foundation

In 1990 the OURS Foundation was chartered in Switzerland as a non-profit cultural and astronautical organization. The OURS Foundation has been active developing other projects for space and in organizing exhibitions and conferences on the topic of space art. It has recently initiated «Ars Ad Astra - the 1st Art Exhibition in Earth Orbit», the International Space Art Network and the Electronic Space Art Archive utilizing a computerized picture-database system.

9.3 The OURS Foundation Charter «Statement of Purpose»

«The exploration and development of outer space are contributing to a new awareness of humankind s place and purpose in the cosmos as well as creating new opportunities for its advancement and enrichment, both on and beyond its home planet Earth. Therefore, it is considered essential that a cultural aspect becomes integrated into these astronautical endeavors in order to insure their success and benefit to all present and future generations.

The primary purpose of the OURS Foundation will be to introduce, nurture and expand a cultural dimension to humankind's astronautical endeavors. This task will be manifested through the identification, investigation, support and realization of related cultural, astronautical, humanitarian, environmental and educational activities which may take place both on and off planet Earth, and which are deemed as beneficial to the development and advancement of human civilization in these new environments»

10. Costs and Development Plan of the OURS

10.1 The Costs of Space Development

As mentioned, the OURS in its full solar sail configuration would weigh about 17,500 kg. Based on existing programs, in the year 2000 there would be two commercially available launch systems capable of launching such a mass into orbit - the Titan 4 and the Ariane 5. A launch with either of these systems would cost approximately 250 million dollars today. Experience indicates that the space vehicle usually exceeds the launch costs. This gives some indication of the probable costs of the OURS.

There has been much discussion about the availability of competitive systems such as the Energiya or Proton from Russia, yet these have not yet been successfully marketed in the West. Our experience with the negotiating the former Soviet space agencies may indicate why. Although, they have advertised a price of US $ 25,000 per kg for an experiment flown on the Mir station, in reality the costs can be much higher. The OURS Foundation approached NPO Energiya with a simple project to fly a 1 kg binder of artworks on the Mir station called "Ars Ad Astra: the 1st Art Exhibition in Earth Orbit" in December 1990. The price quoted by NPO Energiya for this non-technical mission eventually reached US $380,000 as they felt our program could turn a large profit. This same organization offered to build, launch and deploy the OUR-SPS for approximately US $ 1 million. Also here, they expected to be able to further exploit the project commercially. Such practices made it very difficult for our organization to complete negotiations and to finance the project realistically. Similar stories have been reported by other organizations.

New systems, such as the NLS - National Launch System or Single Stage to Orbit (SSTO) promise to bring the costs of getting into space down from these levels. If so, the launch of the OURS will consider all available alternatives. The situation concerning its construction is very similar. Undertaken in a normal aerospace manner, its eventual costs will surely be very high. Unfortunately, the government dominated space industry is responsible for such costs, and as long as the governments are the main customers, such practices will prevail.

10.2 Cost Versus Value

The space option is too important to the future of our planet for the current situation to prevent its implementation. It is up to private initiative to develop real alternatives. For this to happen the economic, ecological and social benefits of outer space development must be communicated on a global scale and a consensus for their development created.

10.3 Justification of the OURS

As stated earlier, communicating this message and creating such a global consensus is integral to the OURS concept. If it is successful, its eventual cost, regardless of the sum, will be justified. It will be argued that the OURS may not be necessary to do this task. Yet, any other public relations campaign of this magnitude would encounter similar costs. It should also be pointed out that this paper is being written and presented during the 1992 International Space Year. With all of the numerous activities being organized by governmental space agencies and other organizations around the world, information about the space option and the urgency of its development is not reaching the general public. In the absence of any other focused program, the OURS project is being proposed as the vehicle for such a global public relations campaign.

10.4 Project Development 1992 - 2000.

Under the existing circumstances, the OURS Foundation's approach to realizing the Orbiting Unification Ring Satellite in the year 2000 has to be innovative and cost effective. It may serve as a

needed and appropriate experiment in getting the necessary hardware into space for the lowest possible price.

Building on the experience gained in promoting and developing the OUR-SPS and utilizing the infra-structure that has been already created, an outline plan has been developed that will lead to its realization. It consists of a combined public participation, corporate and institutional sponsorship. The organization will be directed by the nonprofit OURS Foundation chartered in Switzerland.

10.5 OURS Means "*Belonging to Us*".

As a global artwork, the OURS will be shared worldwide. The public will be given the opportunity to participate and to contribute to its realization in various ways. The most obvious and simplest method will be to purchase some "part" of the project such as posters, artworks, recordings, optical Compact Disks of OURS art and "Certificates of Participation". A toll telephone number may be set up to distribute information about the project and to receive contributions. This number may also be used to collect "messages" that will become a part of the OURS Archive.

The next level of public participation will enable people to become members of the OURS global network. Members may volunteer time or make other contributions to the project. They will be served with a newsletter and will contribute a yearly membership fee. Participation in the project will be publicized and advertised in periodicals and in all the project's literature.
10.6 Corporate Participation - the Potential

Popular support of the OURS project will build as the project proves itself by becoming the appropriate and endorsed vehicle to communicate the space option and to celebrate the year 2000. For this to occur, the participation and support of both the business and the space communities are essential. These activities are mutually supporting. The more public participation the more potential interest is generated from the business community and vice-versa.

Using advertising models such as the Olympics, which sold TV rights to NBC for $401 million or the baseball World Series in the US from which four years of TV rights to the play-off games was sold to CBS for $1.1 billion, substantial funds have been raised from the sale of TV rights. Air time of the Olympics is only two weeks and sponsoring benefits usually endure about six months to a year. The OURS will orbit the planet for many months before it deploys its solar sail and, as it leaves the planet's sky it will be visible for many more months. Using it as a "night illuminator" to demonstrate free energy from space, may also be a source of mass happenings in cities around the world.
In addition to TV rights, corporate sponsorships will generate further large amounts of funding. For example, Coca-Cola paid $30 million dollars to be a worldwide sponsor of the 1992 Olympics, which expects to attract more $400 million in total. The OURS should be at least as successful as it appeals to both mass marketers and to high-technology firms. The OURS will also have the attention of the public much longer.

Other current trends in corporate marketing should benefit the OURS. Environmental problems are receiving more and more attention in the world media. Consequently, environmental consciousness is on the rise and corporations are already seen shifting their advertising funds from the saturated sports events markets to specific environmental projects. Today there is already a trend that culture will replace sports as the number one leisure activity of western society by the year 2000. As the OURS project is both cultural and environmental, it could become the ultimate communicative vehicle of these trends.

As pointed out above, public and corporate participation should be mutually supportive. Thus, every attempt will be made to integrate and combine these aspects. Experience has shown that the public will support the project when it has some confidence that the project will actually take place. Likewise, the corporate community will want to be confident that the project has the interest of the public.

11. Step-By-Step Fund Raising

11.1 Yearly Goals

1992

Make the OURS 2000 project and message universally known to the world's space and art communities through exhibitions, conferences and direct mailing publicity. To seek small grants from industry to fund a staff of two to three full time persons and office facilities by the end of the year. Financial goal $200,000.

1993

Organize a conference including people from art, science, industry, government, entertainment and the media. The goal of the conference will be to publicize the project and to receive endorsements.

Seek cooperation with other year 2000 cultural projects in order to broaden appeal and to begin archiving activities. Seeking potential partners that are also planning year 2000 events will be a priority.

Perform a technical definition study of the OURS concept and begin construction of a "segment" of the torus for exhibition purposes.
Begin sales of project related products, software and services.

Sell global sponsorship "options" to high technology firms in the range of $50,000 each that will be upgraded yearly as the project develops. Initiate the toll telephone number service for fund raising purposes.

The financial goal is to raise more than $1 million by end of year and to expand staff to 5-7 planners and engineers.

1994

Set up a permanent OURS Center that can be easily visited by the public that will pay an admission fee. Included will be a project exhibition space of OURS related artworks, the Interactive Cultural

Archive of the world's cultures and the technical and administrative facilities. Volunteers will come as staff paying their own expenses in exchange for "hands on" experience.
Initiate a technical demonstration project of the OURS technology in space through the realization of a small prototype of related structure such as the "Cosmic Dancer".

The corporate sponsorships options will be converted into definite sponsorships and their value will increase to $250,000.

The OURS Global Network will be expanded at this stage and its products and services more widely distributed.

The yearly funding goal is $5 million. At this stage the staff would increase to 20 full time persons and 20 volunteers.

1995-1996

Invite world leaders and personalities to participate in a global conference concerning the status of implementing the space option by the world community.

Initiate the OURS Awards of $50,000 each to the persons or organizations that have contributed substantially to this cause.

Negotiate the launch arrangements through the purchase of options. Identify the technology supplier and initiate Phase A activities.

Begin the sale of exclusive TV and publishing rights for documentaries of the project leading to these exclusive options for the year 2000. With such publicity, public participation will surpass 1 million people and the value of corporate sponsorships will increase to $1 million.

At this stage project product offerings will be increased and yearly fund raising will be $50 million.

1997-1998

Select manufacturer and complete Phase B technical program and testing. At this point it may prove to be more cost efficient to set up project's own manufacturing facilities where the labor costs are less. Besides reducing costs, economic benefits could be passed on to a lesser-developed nation. Once this aspect has been decided, the construction of the OURS sculpture can begin.

At the same time construct a 1-to-l mock-up OURS sculpture on Earth. This would enhance the public's appreciation of the scale of the structure and would create much publicity. Using the same satellite materials (or cheaper but similar ones) this OURS structure could be inflated with helium and would float above ground.

Corporate sponsors would be represented by multi-media presentations. Live cultural performances related to the Cultural Archive would be performed. A concept for artists to decorate the OURS material would be initiated.

1999-2000

By this time it should be possible to finalize world publicity rights and identify ultimate corporate sponsors. Funding the project's costs should be guaranteed at this point.

Global participation by the public should reach 20 million. Visitors to the OURS center would be in excess of 100,000 yearly.

The launch service for the OURS is arranged.

Governments, especially those from the developing countries, will have endorsed the project and have made contributions of various forms towards its development.

Through the creation of global awareness of the space option, more and more space development activities will have been initiated. As a result, cheaper means of launching into space have been developed causing the launch price per kg to fall dramatically.

A book and a film about the OURS story is to be produced.

April 22, 2000 - The OURS is launched on Earth Day year 2000.

11.2 Project Status 1992

It is estimated that since 1986, more than 20 million people have been exposed to the OURS project in some way through media attention. Furthermore, major firms such as the Omega SA watch company, Sony (Switzerland) Corporation, Atari (Switzerland) Computer Corporation have made financial and in-kind donations to the project. Smaller, local firms have also supported the project with valuable assistance. The project has been regularly invited to participate in important international space and art forums and has been commissioned to organize exhibitions pertaining to art and space. The picture database system developed by Marvin AG of Zurich has been acquired and is on-line. Some of these cultural/astronautical activities have received the endorsement of the

International Academy of Astronautics. To date, all of the OURS Foundations activities have been funded by donations.

12. Conclusions

The time remaining until the year 2000 is short, but even shorter may be the time for humanity to decide its fate and future. In 1992, awareness of the possible mega-crises has signaled urgency for addressing some of the growing problems on a problem-to-problem basis. Yet most proposals and/or solutions are based on some variation of the "limits to growth" concept. This approach invariably calls for a lowering of the standard of living in the developed countries and condemns the developing countries to permanent misery. Worse than this, the deterioration of the biosphere will worsen as a result the expanding population and as more countries industrialize their economies and enter into the global market.

Any positive scenario for our future will depend on larger supplies of energy and natural resources. At the same time the disruption of the planet's ecology and the continued pollution of the environment must end. Thus, any attempt to solve these problems with the finite resources remaining on Earth will prove to be ineffective at best, and catastrophic at worst. We must look beyond the problems in order to find their solutions. Only the "space option" offers us this possibility. Yet, the opportunity for humanity to seize this option may be very short.

OURS - the Orbiting Unification Ring Satellite is being proposed to make the "space option" known to the entire population of the planet, and as such, to be vehicle or an example of the kind of global cooperative activity that will be necessary for humanity seize and embrace this option. The future of our planet is at stake; it is time to come to terms with our role and responsibility.

The OURS for the year 2000 is a mega-project, it is visionary, it is unprecedented, it is technically possible, it is expensive but most of all, it is necessary. With this paper a call is going out to the world community to help make it happen.

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