

THE FOUNDATION

# COMMERCIAL SPACE REPORT



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Dear Subscriber:

You no doubt notice a change in the format of the Commercial Space Report. This new layout has been adopted for several reasons. First, a market survey among our readers and potential readers reveals most of you are interested in our opinions about the news in the space industrialization field, since you already have been generally informed about the opportunities of the future. In other words, you already know that there are going to be large platforms in geosynchronous orbit about the earth, and you have a good idea about the potential capabilities of such large structures. But more to the point...how will these platforms get there?...who will pay for them, and who should pay for them?...what can we really expect them to be used for? These are the type of questions that we are going to attempt to answer for you in the coming months and years. Second, in order to report specific news about space industrialization to you quickly, without the delays necessarily caused by typesetting and art layout, we have adopted this new format allowing our in-house computer to create the printed copy. This should mean that you can expect to receive the Report faster than in the past, once the inevitable start-up delays have been eliminated. There are other reasons for the new format as well, but we will only mention a final one to you now. Many other magazines and newsletters have sprung up since the Report was started three years ago. Taken together, they do an adequate job of reporting concepts and NASA plans for the future. But there is no place for discussion of private enterprise interest in space industrialization, and this is the need we have long sought to fill.

This all means that there will be less discussion of technical matters in this newsletter than there has been in the past. We must begin to focus upon the goals of future space industries and the means for attaining these goals. However, we will not abandon the technical base of innovation which we have used to get us this far. A clever technical idea may do more to hasten the day of space industrialization than all the bankers in the world by lowering the price of admission to the space environment or by making it easier to make a profit there. It is time that technologists realize, however, that perceptive businessmen and entrepreneurs are needed desperately to find ways to employ technical innovations in concert with sound marketing and financing plans to bring about sought after goals.

## Goals

Just what are the goals we have in mind? Consider the prospect. Space is a vast treasure trove...we have all been told this at one time or another. Just what kind of treasure, anyway? Energy and matter, of course. And where are the markets for this treasure? On earth.

There's the rub. Space industrialization has a different set of goals than other space projects, for example, space colonization, because of the

fundamental nature of the link with earth.

If we were interested in merely setting up colonies in space the task would perhaps be no less difficult than industrializing space, but it is certainly a different sort of problem with different requirements. We have all read or heard of the studies which discuss the technical means necessary to build space settlements. In all these studies the question of who is going to pay for them and what the colonists are going to be doing has either been ignored or addressed as an afterthought. We have to define the problem of space industry goals.

The goals of those interested in space industrialization might be given as follows:

1) Obtain inexpensive access to and from space, and all points in the Solar System which it is necessary to reach.

2) Find enterprises which can be conducted in space, and whose products or services can be returned to the marketplace (earth), that are competitive with earth-based services (or unique to space, and thus totally new answers to existing or future market needs on earth).

3) Seek means to capitalize the desired enterprises.

4) Establish distribution channels for the goods and services produced in space.

In the last several years there has been quite a bit of effort on point two. Studies funded by NASA and with private money have given us a good start on answering the question. Although we don't have all the answers, the information in hand has helped us define the need for low cost transportation throughout near earth space as well as into deep space. Even though fewer people are working on point one, progress is being made in the field of low cost transportation as well, as this newsletter has reported in the past. But a vanishing small amount of effort has been expended on points three and four.

We can all see the problem here. Without understanding of the most elementary principles of marketing and financing, all of the good ideas for space industry will remain just that: good ideas. They will join the tens of thousands of new ideas which are conceived every year by thousands of clever technologists who are not clever salesmen.

Many times each month we are asked (during the presentation of a particularly good idea from the past which has gotten nowhere): If this is such a good idea, why hasn't someone already used it? So far, we have resisted the temptation to answer: Because everyone always asks that question. The real answer is: Generally because the original holder of the idea was a good (if not great) technologist or scientist but a lousy salesperson. Few of the people who are daily inventing new ideas to take us into space or to make money there have any but the most naive understanding of points three and four.

### Achieving Goals

Before we attempt to give a brief answer to the question: How do we achieve our goals in space industrialization?, it is appropriate to ask what

motives we have for the attainment of the goals.

The most complex answer is that we wish to change the world to some indefinable better place by throwing open the space frontier. The simplest answer is that we wish to make money. The truth will be found somewhere in between.

It is important to realize that the answer to that question will change how we go about attaining the goals defined in points three and four. If one has an idealistic rationale for being in the space industry business it is all too likely that the approach to capitalization and operation of a space enterprise will be regarded as unimportant affairs: "Let the government pay for it, or set up a U.N. Corporation to do it...". On the other hand, if we are in this game to make a profit, then the attitude we must take toward the business is much different. For example, the establishment of space colonies might be regarded as capital wasting if earth-to-space transportation is cheap enough to allow commuting to and from space enterprises.

There is another matter. What if there is no practical way to get the government or the U.N. or someone else to treat space as a philanthropic exercise? What if the only way to achieve these goals is by interesting industry in the establishment of a space industrialization based future?

If you have been a regular reader of the Report over the past years you know our position on this. We do not think that NASA, the Federal Government or the present aerospace community is going to be behind the push into space that must come in the next decades. Both the justification (profit) and the means (capital) are in the hands of the private sector. To achieve our goals, then, means that we must put more attention on the topics which will justify the capitalization of these future space endeavours by that sector. Because we have been lax in this regard for nearly a decade now, we have much catching up to do. It will be the purpose of this newsletter to offer suggestions and answers in the catching up process during the next year.

No doubt this means that many readers will disagree with the opinions expressed here monthly. (To those readers and to any who feel that they are not well served by this discussion, for whatever reason, we offer a pro-rata refund of their subscription. Please write us.) But we feel that this matter addresses the very future of a credible space industry "movement" and must be treated with at least the same depth that the technical side of the movement has already received.

The means to achieve the desired goals can be easily summarized: Decide why you want to achieve them, and plan accordingly. Learn to understand the reasons why projects are started in the private sector. Modify the planned project to take advantage of your new understanding. Follow through. Succeed.

#### Philosophy and the Future

Beyond this brief introduction we do not propose to return to the question of approach to the achievement of space industrialization goals or for that matter, the goals themselves. Unless we get some new insight in this matter we are content to let the paragraphs preceding stand as our position.

We do plan on addressing the question of who should be responsible for the capitalization and operation of space activities, both industrial and scientific,

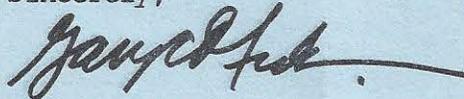
in next month's Report however. Hopefully, that will eliminate the need to repeat the performance in the future.

This year we must also address darker matters than how to make money in space and what products or services are worth investigating. It takes no special insight to appreciate that the political climate in the nation and the world will be the determining factor with regard to the ultimate feasibility of space industrialization. The technology we have nearly in hand. The business we will begin to understand in the next few years. But will we be permitted to use what we have learned in actually bringing the positive future of space industry to pass?

We cannot hide from the fact that the international political climate has begun to turn, more and more, against the sort of future that private space enterprise offers. The abomination of the moon treaty is but a single facet of the manifold problem which must be handled, and handled soon. A proactive rather than a reactive strategy must be developed by those organizations and individuals who hope to make a future in space business. Aggressive stands will be needed to secure some measure of freedom for the private sector to work in space. Most worrisome is that the large bulk of the private sector does not even realize the need, as yet.

The next year will be decisive in shaping events which will dictate the future of space in our lives. Let's use all our technical innovative skill and invent solutions which will make it a future we can be happy to meet.

Sincerely,



Gary C. Hudson,  
Editor

(News Notes will appear in future issues. Issues will generally run four to six pages in length. Your comments are welcome.)

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