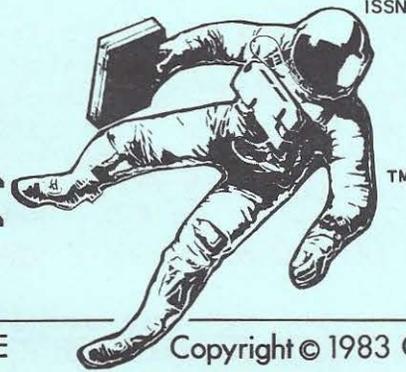


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Dear Subscriber:

Space Commerce Act

H.R. 1011, introduced by Rep. Daniel K. Akaka of Hawaii, outlines a proposed licensing procedure for private space launches. Similar in intent to an act submitted last year by Senator Howard Cannon (C.S.R. June, 1982, p. 1), H.R. 1011 is intended by its authors to assist private enterprise by "streamlining" the approval procedures required by assorted Federal agencies for a private launch. This would be done by setting forth one agency as a single point of contact for the launch applicants. This agency would then coordinate and facilitate all federal actions pertinent to private launches.

Space Services, Inc. is in part responsible for the introduction of this particular legislation. The company was obliged to obtain permissions from a number of different Federal agencies ranging from NORAD to the Bureau of Alcohol, Tobacco and Firearms before proceeding with a simple suborbital shot over the ocean (C.S.R. Nov. 1982, p. 1). This reportedly set SSI back over a quarter of a million dollars in legal fees and six months in time. Having to deal with a single agency would supposedly be easier on private launch companies, hence the pressure for this new legislation. Other companies also had some input, including Arc Technologies, Spacetrans, and Transpace Carriers, Inc. As yet, none of these companies has commented on whether the language of the final bill meets with their expectations.

The selection of the licensing agency has been a problem. The Federal budget will not stand for the creation of yet another new bureaucratic agency, so an existing one had to be used. Cannon's bill recommended the F.A.A., which has considerable experience in regulating commercial transport. However, private launches from military facilities would be beyond F.A.A. jurisdiction. This could exclude such systems as Spacetrans' Titan, Transpace Carriers' Delta, and Pacific American's Phoenix, which all have such facilities as possible launch sites. H.R. 1011 instead specifies the Department of Commerce.

The policy of the C.S.R. is basically libertarian, i.e. the involvement of government in space should be solely to guard the freedoms of the private entities taking part in the exploitation of this new frontier. However, despite wishful thinking, it is not likely that the government will allow the space industry to go along without some form of regulation. Therefore, during this early legislative stage, it is important for those who will be affected by such regulation to get involved in order to ensure that the legislation approaches the free market ideal as closely as is possible.

Toward this end, it is recommended that a copy of this bill be obtained in order to examine the legislation in detail. H.R. 7411 (submitted in 1982, and identical to H.R. 1011) can be found on page E 5377 of the December 21, 1982 Congressional Record. Copies can also be obtained by writing the House Document Room, Congress of the U.S., Washington, DC 20515.

Two points of concern which may require further industry input:

First, the act may simply add an additional layer of bureaucracy, since, according to the bill, all of the same approvals may still be required from all of the same agencies. The only difference would be that the Dept. of Commerce would do the legwork instead of the launch company. On the plus side, as already mentioned, this "streamlining" is intended to make things easier on the company, which would have only one agency to deal with.

On the minus side, the financial and man-hour burden of the process could be simply transferred to the taxpayer, with no real increase in total efficiency. Another important factor is that the people dealing with the multitude of agencies would be Federal employees, who, lacking a personal stake in the matter, may not be as enthusiastic, as expeditious, or as persistent in presenting the private company's case as would the company itself.

Second, the bill seems aimed at existing, non-reusable systems, with approval procedures appropriate to such "ammunition-style" systems. Some examples from the text: A 180-day lead time is required to file for a license. Individual payload approval is required for each launch. Specific launch times must be submitted. The time required to obtain a response from the agency, after application, is at least ninety days.

Present day launch systems, such as the space shuttle and the Ariane, (not to mention the systems proposed by those companies which were instrumental in preparing the bill) generally have lead times for launches that are extremely lengthy. Launch dates, operations and payloads are scheduled and fixed months or years ahead of time. Such operations may be quite comfortable with the licensing procedures presently outlined in the bill. However, the day-to-day airline-type of space transport operation, with its rapid turnaround times and large variety of payloads, could not.

Transportation is the key to space. This has been stressed many times in the C.S.R. We have also gone on record as supporting technologies which would allow space operations to be as routine as airline operations presently are.

The bill needs clarification or change, particularly on the second point mentioned above. Fortunately, sources in Washington indicate that the people involved with this legislation are willing to work with private industry, and are honestly eager to see successful commercial space endeavors. It may simply be a matter of bringing the operational characteristics of advanced launch systems to their attention. The best way of handling this is to keep the example of the commercial airline industry in front of them. Although the F.A.A. may not be an ideal regulatory agency for space transport, we believe that it may serve as a workable template for whichever agency does end up regulating commercial space operations.

News Items

Federal Express has joined Prudential as a Spacetrans investor. Spacetrans is the company with plans to exploit a fifth shuttle orbiter and/or the Titan 34D as commercial launch systems (C.S.R., May 1982, p. 1; June 1982, p. 3; Dec. 1982 p. 1). At present, it appears that Federal Express and Prudential control about 20% each of Spacetrans. At this time, no major policy or management changes have been announced.

TranSpace, Inc. sees American Samoa as a possible launch site for its "Space Van" reusable launch system (C.S.R., Nov. 1981, p. 1). Although remote, the U.S. territory has a number of advantages including proximity to the Equator (slightly closer than Hawaii) and existing airport facilities ("Space Van" requires airstrips for its 747 piggyback booster and for landing the winged orbiter). Response from Samoan representatives has reportedly been positive.

TranSpace has published a 30-page booklet describing the technology and marketing strategy for the Space Van system. Illustrated and detailed, the booklet is available by writing: TranSpace Inc., P.O. Box 57373, Washington, DC 20037. Please include \$1.50 to cover mailing and handling charges.

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Space Commercialization Seminar: Part One

The Terra-Mar seminar on "getting down to business up in space," held on January 12, drew about 75 participants from all across the country. Represented were large and small industries, scientists, space interest groups, and financial organizations. A number of presentations were given, all of which delivered important technical, financial and marketing information to the attendees. The C.S.R. will not attempt to cover all of the presentations in detail--hopefully transcripts of the proceedings will be made available. If so, information on acquiring such transcripts will appear here in the future.

In this issue and the next, we will report on three of the many presentations, which were selected as being representative of the promise and the problems of business endeavors in the field of space industry. This month: a free-flying space factory proposed by Fairchild Space and Electronics.

The Leasecraft Project

Morton Cohen, (Senior Director, Space Products Marketing, Fairchild Space and Electronics Co.) presented a concept for "Leasecraft", an unmanned, self-contained satellite which would be able to support payloads in space for long periods of time.

Leasecraft would be launched by the shuttle into orbit. Customers could then lease the satellite's services. This would be done by first using the shuttle to bring up the customer's payload. The payload could consist of experiments, materials processing facilities, science packages, or any other system requiring a space environment. The self-propelled Leasecraft would then rendezvous with the waiting shuttle in the shuttle's low earth orbit. The shuttle would gather the Leasecraft in with its remote manipulating arm, and place it on a

berth for servicing and attachment of the customer's payload. The Leasecraft would then leave the shuttle, and propel itself to whatever orbital station the payload requires.

The satellite would be composed of standardized, modular units. Among these units would be: One or more power modules incorporating solar panels and batteries, a 6000 lb. hydrazine propulsion system, 3-axis attitude control, data handling and transmission equipment, and other systems required to handle the customer's needs.

The power modules can be combined to generate up to 6 KW. The propulsion system is capable of sending the satellite between low earth orbit and a 300-nautical-mile orbit six times. All systems are designed to be servicable from the shuttle using standard remote manipulator procedures.

Any payload that can fit in a shuttle bay can be attached to the Leasecraft. Users would be charged for services such as time in orbit, expendables used, or other special handling. Leasecraft would assume responsibility as soon as the payload is off the shuttle and coupled to the satellite.

Optional services could include building and designing payload modules (especially for non-sophisticated users), additional data capacity, extra power modules, non-scheduled repairs. Secondary payloads could be incorporated into some of the satellite's modules for smaller users.

A satellite called the Solar Maximum Mission, or SMM, was launched in Feb. 1980. This satellite incorporated the same type of servicable modular units that will be used in Leasecraft. The SMM developed an attitude control problem that rendered it useless. In April of 1984, NASA plans a shuttle mission to attempt a repair. This procedure, if successful, will go a long way toward proving the Leasecraft concept.

The Leasecraft project, estimated to cost \$100 million, is aimed at two major markets: data collecting and handling (for military, earth resources and astrophysics users, among others) and materials processing. A major part of the latter market is processing of pharmaceutical products, which will be examined in detail next month in the second part of this article.

Until next time,



The Commercial Space Report (C.S.R.) is published monthly, and endeavors to report and analyze developments in the field of private initiatives in the exploration and exploitation of space.

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