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Using State Research Capabilities To Expand Space Industry Activities Through The Florida Space Research Institute

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Introduction

Over the past fifty years the State of Florida has led the way for the United States' launch operations through the military, civil, and commercial activity in the Cape Canaveral area. Significant changes in the world's launch environment and in the government-industry relationship; however, are now bringing space-related industry needs as well as opportunities to a greater level of importance in Florida's future. As the nation seeks to increase and enhance the commercial tempo of space programs there are new roles for the State of Florida. . In addition, the State of Florida has sought methods of increasing Florida's place in commercial space. Harnessing the State of Florida's research capabilities not only supports the goal of increased commercialization of space, as the new century and millenium dawn, but also takes advantage of the significant growth opportunities in that field of operations. The State of Florida's public and private universities, together with government and industrial organizations will fulfill a vital role in this effort by virtue of their research capabilities.

In order to coordinate and focus State research and development initiatives which support commercial space activity and to provide an awareness of industry requirements to the research and development community, Governor Jeb Bush and the Legislature of Florida, established the Florida Space Research Institute. The Institute was established under Chapter 99-256 in the fall of 1999 as a 501c3 non-profit corporation. The primary focus of the Florida Space Research Institute shall be to expand and enhance space-related business opportunities and operations in the State of Florida through effective support of the State's research and development entities and through development of programs which enhance space-related commercial activity.

An early draft of a Memorandum of Agreement between the Florida Space Research Institute and Florida academic institutions in space research, engineering and education identified the following areas for the organization's activity:

- a). Pursuit of the development and application of technologies to benefit the space industry statewide.
- b). Facilitation of innovative collaborations between government and the private sector to meet their special space-related needs.
- c). To provide a focus for Florida's public and private academic capabilities toward increasing the State's share of federal space grants and programs.
- d.) To actively engage students at all levels.

- e.) To expand academic support to operations at the Cape Canaveral Spaceport.
- f.) To develop workforce training programs to meet industry and government needs.
- g.) To provide a mutually beneficial structure for multi-institution collaboration within facilities made available through the Spaceport Florida Authority, NASA, and other agencies

Structure

The Florida Space Research Institute's enabling legislation called for the organization to operate as a non-affiliated public/private partnership under a Board of Directors. The Board of Directors is currently composed of three "core members", four industry representatives, and two "ex-officio" members. The core members represent the Florida Spaceport Authority, Enterprise Florida Inc., and the Florida Aviation and Aerospace Alliance.

Spaceport Florida Authority

Established in 1989 and empowered under Chapter 331, Part Two, Florida Statutes, the Spaceport Florida Authority is responsible for statewide space-related economic and academic development, including regulatory and operational support to the space transportation industry. Spaceport Florida Authority provides infrastructure, access and operational support for launch vehicle programs. It also works with industry and government to support space-related programs and investment in Florida. It provides financing, advocacy, technical support, business incentives, and facility/infrastructure development for space projects. The Spaceport Florida Authority actively works with universities and colleges to increase their involvement in space research and education.

Enterprise Florida, Inc.

Enterprise Florida, Inc. is a not for profit entity headquartered in Orlando, Florida and mandated by the State of Florida. It has supplanted the former Florida Department of Commerce. Enterprise Florida, Inc. is a partnership between Florida's government and business leaders and is the principal economic development organization for the State of Florida. Enterprise Florida's mission is to increase economic opportunities for Floridians by supporting the creation of quality jobs, a well-trained workforce and globally competitive businesses. It pursues this mission in cooperation with a statewide network of economic development partners.

Florida Aviation and Aerospace Alliance

Established as the Aviation Aerospace Task Force in 1997, the Florida Aviation and Aerospace alliance was established as a private, dues paying non-profit corporation in 1998. The Florida Aviation and Aerospace Alliance is an organization of businesses throughout Florida which are active in the fields of aviation and aerospace. Its goal is to assist such companies to be more competitive, expand and retain business, take advantage of growth opportunities, and operate in a stable industry.

The three core representatives of the Florida Space Research Institute, together with the Board's chair comprise the "executive committee". The ex-officio members are representatives of the NASA John F. Kennedy Space Center and the State University System. The Board of Directors

meets at least quarterly to define policy for the Institute. Expansion of the Board of directors to include representatives by increasing the industry representation was discussed at the January meeting.

The actual day-to-day operation of the Florida Space Research Institute is the responsibility of the Institute's Executive Director who is a full time employee of the Institute. The offices of the Institute are to be located in conjunction with the Spaceport Florida Authority at Port Canaveral, Florida.

The Florida Space Research Institute will work together with the State's universities to pursue the Institute's goals. The goals and relationships between the Institute and the universities is outlined in the Memorandum of Agreement from which the seven goals listed above were taken.

Space Research in Florida

During the period in which Florida has led the nation in launch activity the State's universities have not taken great advantage of their proximity to the facilities and capabilities of the Cape Canaveral Spaceport. Although several universities have pursued individual programs in the Cape Canaveral area there have not been developed long-term programs that have successfully attracted significant government funds. In addition, the universities have not developed or supported significant research and development facilities devoted to space-related areas. Nor, with only a few exceptions, have significant academic collaborations with industry or government evolved.

At the Florida Space Summit, held at the John F. Kennedy Space Center on January 14, 2000 NASA Administrator Dan Goldin pointed out that although Florida ranked high among the American states in population, it did not hold a similar high position in regard to the agency's university research funding.

The establishment of the Florida Space Research Institute and its location as a permanent presence at the Cape Canaveral Spaceport will provide frequent opportunities for working-level interaction between researchers and industry representatives. This will lead to opportunities for the Florida Space research Institute to facilitate research, development, and engineering support to companies and agencies operating at the Cape. This, in turn, will develop a "critical mass" which will thereby establish a focus for other space-related business entities throughout the state.

Operations and Programs

The FSRI began to hold Board of Directors meetings in the Fall of 1999. The Institute has now held several quarterly meetings and has successfully completed the search for an Executive Director. Active program planning operations have begun at the Institute's Port Canaveral office.

Joint Grant Program

The Spaceport Florida Authority and the Florida Space Grant Consortium are exploring joining their matching research grant fundings so as to allow the support of more extensive goals of research in space industry expansion areas being to be developed within the parameters of the Florida Space Research Institute's objectives.

Space Experiment Research and Processing Laboratory

The SERPL is a joint federal and State of Florida project to bring a world-class research facility to the Cape Canaveral area. The Florida Space Research Institute will be a part of this effort and will be represented on the SERPL Board of Directors.

Workforce Training

The Florida Space Research Institute will be active in financially supporting workforce training and program development to supply trained workers in several areas.

Sub-orbital Rocket Launch Program

For a number of years the Spaceport Florida Authority has been engaged in carrying out education-related launches of Super-Loki sounding rockets at a number of geographical sites. Recently the State of Florida has received access to a Terrier-class suborbital launch vehicle capability. The Terrier and Super-Loki suborbital capability will be utilized by the Florida Space Research Institute in furtherance of its objectives to support research in space-related business areas.

As the Florida Space Research Institute has only recently been established, the full list of its programs is still under development. It is anticipated that as it continues through its first year of existence, further programs and areas of activity will be identified.

Summary

The establishment of the Florida Space Research Institute by the State of Florida represents an initiative which signifies that the State is serious about its wish to expand its role from that of merely a launch site. The interaction of the research community with the space business community will provide the State with the chance to enhance the level of space business in Florida. It will also provide a methodology to enhance the effectiveness and efficiency of existing space business-related activity. Further, by involving the universities, business and government into a coherent development effort the opportunity will be taken to make the State of Florida a world center for space research, development, commerce, and education. These efforts will reiterate the concept of Florida - the Place for Space.

References

1. Florida Space Research Institute Annual Report, December 1, 1999
2. Spaceport Florida Authority Website: <http://www.spaceportflorida.com>
3. Enterprise Florida Website: <http://www.floridabusiness.com>
4. FAAA Website: <http://www.faaa.org>