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## Paper Session I-B - The Real Space Tourism Industry

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**39th Space Congress Paper Abstract**

**Title of paper: The Real Space Tourism Industry**

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**Abstract**  
The Real Space Tourism Industry  
Improving Two of Florida's Most Important Industries

In the entire world, there are numerous space launch sites, but only one in which the casual visitor can go with any real expectation of watching a space launch: Cape Canaveral. Other launch sites are simply too inaccessible, have too low a launch rate, or are geographically configured so as to make launch viewing highly difficult.

In contrast to other sites, Florida's Cape Canaveral has a nearby thriving tourist industry, superb multi-modal transportation facilities, and is laid out in a manner that enables viewing.

However, while people do vacation in the Cocoa Beach area with at least some hope of seeing a launch, this fact is not treated as big factor at present. Launch viewing is not particularly encouraged or enabled. From the launch industry standpoint, facilitating launch viewing is more a nuisance than a source of pride. In terms of safety, launch viewing is a concern because of the concentrations of uncontrolled personnel. For the local communities, the traffic associated with launch viewing can be a major stressor of the road network.

The biggest problem is one of information. We need a better system of letting the public know of launch viewing opportunities, one that does not rely on just newspapers or the internet. We need a better way of providing real time information on the status of the launch operation, both to facilitate viewing and to convey the excitement of the process. Modern communications systems offer inexpensive means of achieving these goals.

By taking a new approach to enabling launch viewing, the launch and tourism industries can complement one another and the local economy. Launches can be both a more effective tourist attraction and a clear source of pride for the community. At the same time, safety can be improved and the traffic situation handled more efficiently. This paper deals with an approach to address this current issue and potential resource.

# The Real Space Tourism Industry

The flight of Dennis Tito, a private American citizen, aboard a Russian spacecraft on a mission to the International Space Station on 28 April 2001 started an international buzz about space tourism. Some claim that space tourism is a promising new industry and that the U.S. is about to lose it to overseas competition the way we lost cameras and VCRs. In reality, the importance and potential of the *real* space tourism industry has never been recognized fully, not even in the place where it is most common.

The classic notion of space tourism, i.e., public travel to and through space, has been studied on several occasions. A recent report [1] outlines several scenarios that rely on development of more reliable and efficient space transportation systems. It projects that up to half a million tourists per year, paying about \$10,000 each, would be needed to establish a commercially viable industry. This capability corresponds to NASA technology development plans culminating in the 2040 timeframe. In the meantime, a tremendous "space tourism" market - launch viewing - remains untapped, right at the outskirts of one of the world's largest spaceports.

The technical challenges that must be met to enable significant numbers of tourists to visit space utterly dwarf the actual challenges associated with loading people into the spacecraft. For this reason, the impact of that type of space tourism will always be insignificant in terms of launch base planning. By the time the technical and operational problems are solved so to enable very low cost access to space on a regular basis, the problem of handling the relatively small numbers of passengers feasible in the foreseeable will seem trivial.

In contrast, there already exists a significant and potentially much larger "space tourism" industry that the Cape Canaveral area is uniquely well positioned to take full advantage of. While there are many active launch sites in the world, few are suitable for launch viewing. Most launch sites are fairly inaccessible, especially by the general public, such as ESA's Kourou, Russia's Plesetsk and Baikonour, and China's Xichang. Others have very low launch rates, such as NASA's Wallops Flight facility. Even those that are relatively accessible, such as Vandenberg AFB in California, are geographically configured so to make launch viewing difficult at best, and often impossible. Only Florida's Cape Canaveral has the advantage of accessibility, nearby attractions that are tourist draws in their own right, and a layout that enables people to view the launches. In addition, Cape Canaveral has the rare attraction of manned launches as well as the somewhat less exciting but still unique Space Shuttle landings.

Despite this unique resource, Florida has done little to develop the potential associated with it. A great deal more can be done, at a modest cost, that would both enhance the attraction offered by launch activity and better enable the community to handle the associated challenges.

## The Problem

A casual drive through the cities of Cocoa Beach, Cape Canaveral and Titusville will give little or no indication that the observer is adjacent to the U.S. most important and active spaceport; that has to change. The community has to display a new attitude, and display it openly and proudly. We have to advertise and back up that advertising with a commitment to deliver a unique product.

Visitors are not usually aware of scheduled launches, don't know where to get information about them, and don't know where the best viewing areas are. There are ways to obtain all of this information, but none of them are obvious. Furthermore, even when a launch is well known, such as certain space shuttle launches, their attempts to view it clog the roads and even create concerns relative to safety. While range safety procedures protect the public against falling debris and the worst blast effects, a catastrophic failure could send toxic vapors in hazardous concentrations toward dense concentrations of launch viewers. The capability exists to predict these conditions, but there is no real ability to either evaluate the actual number of people put at risk or to communicate quickly and easily with those in the area of concern.

Better communication with the public about viewing areas will both encourage viewing and enable problems associated with such sightseeing to be averted.

In order to facilitate launch viewing, and in order to make it abundantly clear to such visitors that such viewing will be facilitated, multiple information sources must be provided, and at a great many locations. In fact, it should be the objective to immerse the visitor – and therefore necessarily the local population – in the launch experience. Merely visiting the Cape area should make it clear where you are and what goes on there.

## **The Answer**

The currently used openly available sources of information are fine, but do not go far enough, especially for people on vacation, who may not buy a paper, have easy access to the Internet, know which radio station to listen to, or even have any idea of where to go to see a launch. This problem is a big one, but technology has made it easy to fix.

Lighted marquee-type signs installed in prominent locations can be used to advise even casual passers by of upcoming launches. The intersections of 520 and A1A in Cocoa Beach, 529 and A1A in the Port Canaveral area, the KSC Visitors' Center, the Melbourne and Orlando International airports, and possibly even the Central Florida theme parks would provide a useful and eye-catching source of information. During actual launch operations the signs could serve to direct traffic to viewing areas and provide updates of the launch status.

In the best viewing areas, low power AM and/or FM broadcast band transmitters could provide the actual countdown net and other status information in real time.

The Air Force already uses the NOAA weather broadcast from Melbourne on 162.55 MHZ to warn boaters of the launch hazard. This could be expanded by using the Airport Terminal Information Service broadcasts from Patrick AFB and Melbourne Airport as well as the planned Automated Weather Observation System broadcasts at Spaceport Executive and Merritt Island Airports. Aside from more widely disseminating information, this would help pilots know about the launch hazards, a particularly important factor in this time of increased security precautions.

Every store and hotel in the Cape Canaveral and Cocoa Beach area could have a countdown clock installed that could be seen from the front door. The clock would begin counting down in a synchronized manner at around T-10 minutes for each launch.

Area hotel TV systems could have a channel devoted to relaying launch views and status, including NASA Select and local TV launch data.

All of this could be done easily. A central information console at the ROCC could control all of the information sources and a variety of data transmission approaches, from phone lines to microwave and lasers, could relay the data.

To support all of this and ensure safety, an analysis can be conducted using existing modeling techniques to identify the preferred viewing locations.

## **The Benefits**

The most obvious and important benefit is that people will come to see the area as a place to view launches. This will encourage tourism and add new dimensions to other tourist attractions. People visiting the area for a day at the beach or for a cruise could be encouraged to stay over to view a launch if they knew schedules and could be assured of being able to see it. Those attending theme parks and the attractions at the KSC Visitor's Center would be aware of the option of viewing a launch, confident that they would have access to information they would require to enhance the experience. The economic benefits of such enhanced "space tourism" are obvious, but they are not the only advantages.

The tourist seeking recreation is not the only customer for launch viewing. U.S. space launch companies are aware of the fact that while the Cape does a great job of launching satellites, the amenities offered to senior officials from the launch customer companies leave much to be desired. Developed in the era of ballistic missile testing when personal comfort and convenience was not a design factor, much of the Cape remains an unattractive and uncomfortable environment for such VIPs, especially in comparison to the modern customer-oriented used by Arianespas. And aside from the senior personnel, visiting technicians and engineers are sometimes faced with the problem of what to do with the family members that accompany them while they are working the launch. Think of how much more comfortable it would be for all of these visitors if they had easily and widely available information on the launch activity.

Another benefit is improved safety. Better communication with the launch viewing public will enable a better assessment of numbers of personnel in public viewing areas, a crucial factor under some weather conditions. Also, the ability to communicate with the viewing public more readily will enable better response to emergency situations.

## **Techniques**

The best way to ensure rapid, accurate control of all of the means of keeping the public informed is by an official centralized source. A special control console, located in the Range Operations Control Center, could be used to control the countdown clocks, the electronic signs, and the radio messages. Such a console would have to be designed and interfaced with the various information dissemination systems, but is not an especially technically challenging task and is well within the state of the art.

## **Security Aspects**

An obvious issue is that of how the post-Sept 11 2001 security environment affects the recommendations made in this paper. In fact, the new security precautions add impetus to the need for such a system.

No one has suggested that a tight security curtain be created to encompass launch activities for a good reason: it won't work. There are simply too many indicators of an upcoming launch for such tight security to be effective. The Air Force's abandonment of the security policies of years past was as much due to recognition of the futility of such actions as it was to a reduction in threats. And in any case, within no more than a few days of even a classified launch the requirements to issue Notices to Airmen and Mariners advising the public of the launch hazard clear zones make security a mostly moot point.

In fact, the increased security precautions make better information dissemination concerning launches more important not less. Better means are needed to inform pilots and boaters of the clear zones; the proposed system can do that very well with no additional effort.

### **Local Community Plans and Interests**

Enhanced tourism for launch viewing is obviously of economic benefit to the local community, but it is also fully in accordance with the planning being done by the local municipalities. For example, the city of Titusville is planning a new visitor's center, a hotel, and other commercial real estate projects as part of a substantial redevelopment effort. This activity, linked to a recent \$15 million parks referendum, is planned for the Sand Point Park area, an ideal site for launch viewing adjacent to Space View Park.

During shuttle launches today, visitors to Space View Park have a magnificent view of the launch, but their total experience at the park is limited to chaotic parking, T-shirt vendors and perhaps a hot dog stand. Recently, a live NASA video and audio system has been set up, which significantly enhances the experience for these visitors. However, development leaders are considering a grander vision to expand this park, together with the Sand Point project, along the waterfront to include Gemini, Apollo, and space shuttle monuments. Some of these exhibits would include interactive kiosks. Combined with the Warbird Museum, the Enchanted Forest, Space Walk of Fame, the planned Police Museum, National Seashore and National Wildlife Refuge, this area serve as a staging point for tourist activities in the area.

The Titusville Community Redevelopment Agency is in the process of updating their redevelopment plan to draw on eco-tourism and space center tourism to boost local tourism. Several projects, including the visitor center, upgrade projects for downtown Titusville, and the Sand Point project are part of this plan. Ties between agency leaders and the space center government and contractor community need to be strengthened to define and fulfill the potential synergy among these efforts.

Access corridors to space tourism and launch viewing sites need special attention as well. The state road 405/407 corridor is unkempt and almost completely devoid of attractive destinations for tourists. The state road 50 corridor begins with a terribly unattractive intersection at Interstate 95 and concludes with a magnificent - but completely undeveloped - view of the Indian River and NASA's vehicle assembly building. The U.S. highway 1 corridor becomes a patchwork of individual landowners hawking launch viewing parking spaces with hand-painted signs and T-shirt stands on the side of the roadway. Comprehensive plans for turning these corridors into tourist magnets - during shuttle launches and otherwise - are needed as part of a

fundamental new way to approach the real space tourism opportunity. Upscale restaurants and hotels, national chain restaurants, and other tourist attractions would transform these corridors into destinations themselves, retaining the tourist in the area overnight and providing a larger market for the attractions and businesses already situated along these corridors. Without these developments, tourists will continue to view launch viewing and the KSC visitor center as day trips from Orlando – when they even consider such trips at all.

### **Other Economic Development**

NASA and the state of Florida are constructing a 400 acre space research office park near the KSC Visitor Center. Anchored by a 100,000 square foot state-of-the-art research facility, this park could draw thousands of visiting researchers, business people, and customers every year. These visitors will seek to stay in area hotels, eat in local restaurants, and explore local tourist attractions. Business growth at the park could also lead to new companies, new jobs, and a greater demand for a quality lifestyle in central and north Brevard County. The Titusville-Cocoa Airport Authority could consider a future vision where local air transportation would be available. Coordination with the Canaveral Port Authority related to cruise promotion could also lead to mutual benefits. The economic development energy of the research park leads to expanded tourism opportunities for the communities that anticipate and meet the needs of this new demographic.

### **Conclusions**

In retrospect it is rather remarkable that the Space Coast has not made a more concerted effort to better associate its two major industries and enable them to reinforce and aid one another. Technology now makes this easy. Economic interests now make this imperative. It is time the Space Coast became known as the Space Tourist Coast.

[1] "Forecast of Space Tourism," Economic Research Associates, 13809B. See [http://www.yourspaceport.com/13809B\\_EB.pdf](http://www.yourspaceport.com/13809B_EB.pdf). April 2001.