

The Real Space Tourism Industry

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ACTA

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The flight of Dennis Tito, a private American citizen, on the launch of a Russian booster 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 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 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 Baikanour, 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 a 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.

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.

