February 4, 2008

Pouring Whiskey On a House Fire

ROBERT T. BIGELOW

Although I applaud any attempt to address America's counterproductive and irrational export control regime, U.S. President George W. Bush's administration's recent directive for reform is wildly off target. I have the misfortune of being quite familiar with this issue since, second only to gravity, the International Traffic in Arms Regulations (ITAR) had the greatest potential to keep Bigelow Aerospace's Genesis 1 and 2 spacecraft from ever leaving the ground.

The inability of our existing export control regime to distinguish between widely available commercial technologies and militarily sensitive hardware represents a fundamental flaw in the system. Unfortunately, the administration's directive completely fails to address this critical issue, and by doing so, the recommended cure has nothing to do with the actual disease.

Adding more bureaucrats and spending more taxpayer dollars is not a solution. The number of civil servants is not the problem, it's what they are spending their time on. Congress' original intent was to control the sale of advanced communications satellites. This rudimentary goal has since been perverted to create the situation today where components that can be purchased at your local Radio Shack fall under the auspices of ITAR and the U.S.Munitions List.

A wonderful example of the irrationality of the current regime is the "technical stand" from our Genesis campaigns. This simple aluminum stand is composed of a circular base with several legs sticking out. If you were to turn the stand upside down it would literally be indistinguishable from a common coffee table. However, under the current export control regime, the stand was considered "ITAR hardware" and we were required to have two security officers guarding the stand on a 24/7 basis while at our launch base in Russia. I can only imagine the dire repercussions of the Russians gaining unauthorized access to this table technology. If sold to the Chinese or the Iranians they could subsequently serve coffee, or, in a worst case scenario, even tea on it. It took my Washington office several months and two general correspondence letters to get these requirements dropped for our stand. Yet unfortunately, there is nothing in the president's directive that would prevent similar problems from occurring in the future. The answer lies not in hiring more civil servants to expedite the review of coffee tables, but to stop treating metal coffee tables as ITAR in the first place.

It should come as no surprise that since the Bush administration has failed to recognize the fundamental nature of the problem that the recommended solution is, at best, irrelevant, and, at worst will only further aggravate the problem. Throwing more money and bodies at a broken export control regime is like trying to put out a house fire by pouring whiskey on it. Superficially, fighting a fire with liquid seems like a good idea, but in the end the alcohol will only make an already bad situation worse.

As I've said many times before, it's not that myself, Bigelow Aerospace, or anyone else in the industry is against export control. Far from it, we're the first to recognize that there are sensitive military technologies that justifiably require enhanced scrutiny and government control. What we're against is wasting our own time and money as well as the government's by monitoring metal coffee tables.

By reviewing and updating the now obsolete U.S. Munitions List and instructing the Directorate of Defense Trade Controls (DDTC) to apply provisos in a judicious and common sense fashion, we can allow DDTC and the Defense Technology Security Administration (DTSA) to focus their efforts on technologies that really do require monitoring, and stop distracting them with systems that can be purchased by anyone in the international marketplace. In other words, no additional personnel or resources would be necessary if the ITAR were limited to advanced communications satellites and related technologies, which is what Congress wanted in the first place.

The worst possible result of this directive is for the administration to declare victory and wash its hands of the export control reform issue. This directive is just a start, and a very modest one at that, toward the ultimate goal of achieving substantive progress.

If a serious effort is not made to address the fundamental flaws of the export control regime and we continue down our current path, I doubt that export control will be much of a problem since in the not too distant future America will have fallen so far behind our international competition that we will no longer have any aerospace technology worth exporting.

Robert T. Bigelow is president and founder of Bigelow Aerospace.

The NewSpace Liability Myth: Why Lawyers Will Not Scuttle the Industry

DOUG GRIFFITH

We've all heard the mantra: In today's litigious society, a nascent industry engaging in something as revolutionary, but as hazardous, as rocketing fare-paying citizens into space, is doomed from the launch pad. One or two catastrophic accidents, and the promise of the commercial human spaceflight industry, or "NewSpace," will be forever gutted by greedy lawyers, entitlement-obsessed plaintiffs, and run-amuck juries.

I don't think so.

The legal liability atmosphere awaiting NewSpace, while certainly a reality to be dealt with, is not a black cloud of despair. As in the aviation industry, the responsible and professionally-run NewSpace companies will endure the occasional lawsuit resulting from an accident.

There are practical reasons why the NewSpace company should incorporate this perspective of optimism into its business strategy. First, keeping liability concerns in their proper perspective means devoting only a rational amount of the company's resources to legal precautions, rather than permitting an overly lawyer-centric mindset to dominate engineering and economic advancement. The Wright Brothers resorted to lawyers to protect their novel wing-warping design from competitors, while Glenn Curtiss concentrated on building better airplanes —undoubtedly content to see the Wright Brothers' business stall in the courtroom rather than soar in the skies.

Second, recognizing that lawsuits are just another predictable and controllable part of doing business encourages the NewSpace entrepreneur to take the necessary steps to fortify the enterprise against attack. With the input of legal counsel, the company can begin to engineer its destiny in the courtroom, well in advance of an accident, through the implementation of a risk management architecture consisting generally of five modules: a documented culture of safety; disclosure-oriented communications with customers; consideration of the state(s) in which to base operations; responsible image-making and public relations; and if accessible, liability insurance.

A Documented Culture of Safety:

This core module of a risk-management architecture is not as abstract as it might seem. Any organization involved in putting people in rockets will face decisions impacting safety on a daily basis. A documented culture of safety is created — or not — depending on how those everyday decisions are made. When a catastrophe hits, it will be imperative to the company's survival of the ensuing lawsuit that it be able to demonstrate to the jury, in evidentiary form, that every decision impacting safety was made through the lens of an overarching safety program or philosophy.

Invariably there are going to be times when the absolutely safest course yields to other concerns rooted in engineering or economic realities. The main thing is that the company be able to establish that the safety decision being scrutinized by the jury was reasonable based on what was known at the time. If it is unable to do this (for example, because it consciously avoided creating a paper trail about safety decisions), the jury will likely conclude that the company was negligent, or worse, reckless.

Disclosure-Oriented Communications with Customers:

This is not a mere "CYA" tactic. In the eyes of the legal system that will ultimately be judging the company, it is simply the right thing to do.

The premise is simple: a company should not be legally responsible for injury or death that was caused by a danger of which the company made the customer fully aware, and in the face of which the customer chose to voluntarily proceed. It is this basic tenet that underlies the enforceability of waivers and releases, the "assumption of the risk" doctrine, the disclosure rules in the Federal Aviation Administration's human spaceflight regulations, and state-based industry protective statutes like the one recently enacted in Virginia.

Thoughtful Consideration of the State(s) in Which to Base Operations:

The law varies from state to state on such issues as who is entitled to sue for a given accident, the standard for negligence, recoverable damages, the enforceability of waivers and releases, and statutory immunity. Thus, how a company fares in accident litigation can be affected by which state's law governs. Although there are no guarantees, a company can hope to secure a given state's law by basing its operations there.

Obviously other, arguably more important factors go into a NewSpace company's decision about which state(s) to operate in, including business climate, legislative accommodations, launch facilities, weather and geography, and accessibility and attractiveness in the eyes of the company's target customer base. In a close call between two states, however, considerations of local law can tip the balance.

Responsible Image-Making and Public Relations:

The public face that a company creates for itself both before and in the aftermath of an accident can bear significantly on its fate in any litigation. A NewSpace company that seeks to build and capitalize on a daredevil, ultra-thrill seeking persona will find it challenging to later convince a jury that underneath its edgy ad campaign was a responsible, safety-conscious company who respected the lives of its customers.

As the airlines have learned, public relations following an accident can have a dramatic impact as well. The enlightened post-accident media plan shuns the old (and often devastating) tactic of avoiding the press, public and grieving families out of "liability concerns." As TWA failed to observe in its handling of its major crash in 1996, and as SwissAir firmly grasped following its accident in 1998, the best lawsuit mitigation

SEE *GRIFFITH* PAGE 21

ON THE MOVE

■ Northrop Grumman Corp. names **JOSEPH J. ENSOR** (above) as vice president and general manager of the newly-created space and intelligence, surveillance, reconnaissance systems division within the company's electronic systems sector.

In this role, Ensor is responsible for programs and operations at facilities in Baltimore; Azusa, Calif.; and Boulder and Colorado Springs, Colo.

■ Space insurance broker International Space Brokers (ISB) appoints **JARED BALL** director of risk engineering based in Washington.

Ball has more than 10 years of experience in a variety of satellite system engineering roles with Boeing Satellite Systems, Space Systems/Loral, Sirius Satellite Radio and most recently Intelsat.

■ **LAURA LUKE** has joined Science Applications International Corp. (SAIC), San Diego and Mclean, Va., as vice president of media relations.

In this role, she will develop strategic and proactive media programs to support specific business objectives and serve as SAIC's primary media contact.

■ Ball Corp., Broomfield, Colo., names **JOHN A. HAYES** executive vice president and chief operating officer.

Hayes previously served as senior vice president of Ball and president of Ball packaging Europe. All five of Ball's operating units will report to Hayes.

Ball's board of directors elects **ROBERT W. ALSPAUGH,** former chief executive officer of KPMG International, to the board.

Alspaugh is on the boards of Autoliv Inc. based in Stockholm, and Fritz Institute, a non-profit organization based in San Francisco.

■ The Boeing Co. names **NAVEED HUSSAIN** vice president of engineering and technology in Boeing's India headquarters in New Delhi.

Hussain has held numerous positions at Boeing over the past two decades. Most recently as director of flight engineering for Boeing integrated defense systems.

■ Raytheon Company's space and airborne systems business, Mckinney, Texas, names **W. TIMOTHY CAREY** vice president for its intelligence, surveillance and reconnaissance (ISR) systems organization.

He will succeed **MICHAEL L. PROCH** who is retiring after 34 years with the company.

In this new position, Carey assumes overall responsibility for the business operations and strategic direction of the ISR systems group, which produces and supports electro-optical and infrared sensors, active electronically scanned array and scanning radars.

Comments: Tom Wiseman, twiseman@space.com

GRIFFITH FROM PAGE 19

technique can be the execution a preplanned disaster response procedure that elevates concerns for the emotional well-being of the victims over any fear of litigation.

Liability Insurance:

Liability insurance protects a company in two ways: it pays a judgment or settlement against the company up to the coverage limit of the policy; and it provides the company with paid-for attorneys for the defense. Considering that a catastrophic space tourism accident could result in an expensive lawsuit with potential judgments in the tens of millions of dollars, the benefit of insurance is obvious.

While it is presently unknown whether the insurance market will be ready to provide this line of insurance any time soon, no risk management architecture is complete until the company has done its due diligence in trying to obtain affordable insurance.

In any event, both the unavailability of liability insurance, or, if it is available, the requirements of the insurance company, dictate that the NewSpace company implement a well-conceived risk management architecture addressing the other four components.

The potential for litigation arising from accidents in the NewSpace industry does not present an insurmountable threat. It is, simply, a reality that will remain an accepted and managed part of the business environment from the dawn of the industry through its maturation. The successful company with a solid business model that incorporates the foregoing risk management principles into its operations will weather the occasional lawsuit and perhaps emerge from each stronger than before.

Doug Griffith, a Marine Corp veteran with air combat experience, is a Los Angeles based aviation and spaceflight attorney with an extensive background in catastrophic air crashes.

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VICE PRESIDENT/PUBLISHER
William A. Klanke
01-703-750-8651
E-mail: bklanke@hq.space.com

REPRESENTATIVES

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Tony Kingham
KNM Media LLP
Unit 1, Brooksmarle Farm,
Ham Lane, Burwash,
East Sussex, TN19 7ER, UK
Tel: +44 1435 884027
E-mail:tony.kingham@worldsecurity-index.com

FRANCE, ITALY, SPAIN
Defense and Communication
Fabio Lancellotti
Emmanuel Archambeaud
Melanie Villard
48 Boulevard Jean-Jaures,
92110 Clichy, France
Phone: +(331) 47307180
Fax: +(331) 47300189
E-mail: earchambeaud@wanadoo.fr

JAPAN
Shinano International, Inc.
Akasaka Kyowa Building
1-6-14, Akasaka, Minato-ku
Tokyo, Japan
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