

HIGH HOPES AND LOW ESTIMATES: NEW SPACE'S ROCKY CONTRACTUAL ROAD

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INTRODUCTION

In the 1960s, at the height of the space race, Pan Am created a waiting list for people wishing to travel to the moon.¹ There was so much public interest that 80,000 people joined the list.² However, because a successful space program costs billions of dollars to develop and operate, space transportation activities remained within the government sector.³ Then, in February 2010, President Obama announced a new space policy, taking an unprecedented shift away from using National Aeronautics and Space Administration (NASA) vehicles for spaceflight and towards relying primarily on commercial low-Earth orbit (LEO) space transportation systems.⁴ Half a century after Pan Am's waiting list, there is a groundswell in the American private sector expecting to deliver space tourism activities, crew transpor-

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¹ *Commercial Space Flight: A Real Starship Called Enterprise*, THE ECONOMIST, Dec. 12, 2009, at 67. Pan Am was an American airline. *Id.*

² *Id.*

³ W.J. Hennigan, *Space Vacation Anyone? As NASA's Shuttle Program Winds Down, Private Companies Race to Fill the Void*, LA TIMES, Jan. 31, 2010, at 1.

⁴ See generally Joint Statement, *Launching a New Era in Space Exploration*, Feb. 1, 2010, available at http://www.nasa.gov/pdf/421063main_Joint_Statement-2-1.pdf [hereinafter Joint Statement]. The retirement of the space shuttle program is very likely to provide a similar push toward the privatization of the space industry that the U.S. Postal service did for the aerospace industry. Mike Schneider, *High Finance: Space Luring Private Sector NASA Plans to Outsource Next Shuttles*, FT. WAYNE JOURNAL GAZETTE, June 26, 2006, at 8D. The Postal Service started flying mail in 1918. *Id.* In 1927, the Postal Service turned over its routes to private companies. *Id.* Walter Folger Brown, President Hoover's Postmaster General, started a policy of providing bonuses to companies that would offer seats to passengers in addition to transporting the mail. *Id.* Consequently, the amount of commercial air traffic increased from 6,000 passengers in the late 1920's to 450,000 passengers in 1934. *Id.*

tation, and cargo transit at a fraction of the price of NASA: the new space industry.⁵

One of the most visible and thus far successful ventures in the new space industry is space tourism.⁶ In the past, Russia monopolized the business of transporting private citizens into outer space, charging a hefty \$35 million for a seat aboard its Soyuz spacecraft.⁷ However, entrepreneurs believe that recent technological advances will make rocketry and space tourism more affordable.⁸ Beginning in 1996, the X-Prize Foundation announced that the first team to build and launch a spacecraft capable of carrying three passengers 100 kilometers above the earth's surface, twice in the period of two weeks, would win the \$10 million Ansari X Prize.⁹ On October 4, 2004 Scaled Composites' *SpaceShipOne*, designed by Burt Rutan and financed by Paul Allen, claimed the Ansari X-Prize after the ship's second voyage.¹⁰ *SpaceShipOne's* successful flight proved that commercial spaceflight did not have to rely solely on the Russian government and subsequently initiated \$1.5 billion of public and private financial support for this new space industry.¹¹

On the heels of his success of the Ansari X Prize, Scaled Composites' founder Burt Rutan, partnered with Virgin Galactic's owner, Sir Richard Branson, to form the Spaceship Com-

⁵ John Swartz, *With U.S. Help, Private Companies Press Their Case: Why Not Us?* N.Y. TIMES, Dec. 30, 2008, at D4.

⁶ Sam Howe Verhovek, *In 2010, The Civilian Space Industry Finally Takes Off*, POPULAR SCIENCE, Dec. 6, 2009, available at <http://www.popsoci.com/technology/article/2009-12/space-inc>.

⁷ *Id.*

⁸ Hennigan, *supra* note 3.

⁹ X-Prize Foundation, *Ansari X Prize*, <http://space.xprize.org/ansari-x-prize> (last visited Mar. 15, 2010). The Ansari family and the X-Prize Foundation modeled the Ansari X Prize on the Orteig Prize, won by Charles Lindberg in 1927 for flying non-stop from New York to Paris. *Id.*

¹⁰ *Id.*; Press Release, Scaled Composites, *SpaceShipOne Flies Again Within 14 Days – Wins \$10 Million X-Prize* (Oct. 4, 2004), http://www.scaled.com/news/spaceshipone_flies_again_within_14_days_-_wins_10m_x_prize. Twenty-six teams from seven different countries entered into the competition for the X Prize. X-Prize Foundation, *supra* note 9. The twenty-six teams combined spent more than \$100 million to win the prize. *Id.*

¹¹ *Id.*

pany.¹² The jointly owned company, whose purpose is to manufacture spaceships and launch equipment, created the Virgin Space Ship (VSS) Enterprise, the first commercial manned spaceship.¹³ Virgin Galactic expects the VSS Enterprise to send up to six commercial passengers at a time into space as early as 2011.¹⁴ Virgin Galactic, which has become the preeminent sub-orbital space tourism company, is charging \$200,000 per voyage into space.¹⁵ While a spacecraft that can carry commercial passengers is an enormous innovation in the new space industry, the VSS Enterprise is only capable of suborbital not orbital flight.¹⁶

With the retirement of the *Space Shuttle* program, the tasks of ferrying cargo and scientific experiments to and from the international space station, hoisting and repairing satellites, and cleaning up the increasing amount of orbiting “space junk,” are going to shift to the private sector.¹⁷ Because these tasks are so important to United States space program goals, NASA has rewarded contracts, potentially worth billions of dollars, to private companies to deliver cargo to the *International*

¹² Press Release, Virgin Galactic, The Spaceship Company (Jul. 7, 2007), <http://www.virgingalactic.com/news/item/the-spaceship-company/>.

¹³ *Id.*; Press Release, Scaled Composites, Virgin Galactic Unveils SpaceShipTwo, the World's First Commercial Manned Spaceship (Dec. 7, 2009), <http://www.scaled.com/images/uploads/news/VGPressRelease12-07-09.pdf> [hereinafter Virgin Galactic Unveils SpaceShipTwo]. The VSS Enterprise had the working title of *SpaceShipTwo*. *Id.* The VSS Enterprise's mothership is named *EVE*, after Richard Branson's mother. *Id.* The Company plans for *EVE* to carry the VSS Enterprise to above 50,000 feet before the spaceship is dropped and fires its rockets to launch into space. *Id.*

¹⁴ Virgin Galactic Unveils SpaceShipTwo, *supra* note 13; John Swartz, *supra* note 5.

¹⁵ Dan Barry, *A New Exit to Space Readies for Business*, N.Y. TIMES, Feb. 22, 2010, at A10.

¹⁶ Swartz, *supra* note 5. There are also plans for orbital space tourism. Stuart McDill, Space Hotel Says It's on Schedule to Open in 2012, REUTERS, Nov. 2, 2009, at <http://www.reuters.com/article/idUSTRE5A151N20091102>. The Galactic Suite Space Resort is a Spain-based company planning to launch a pod-style space hotel in 2012. *Id.*; Pascale Harter, *Fly Me to the Moon: Space Hotel Sees 2012 Open*, REUTERS, Aug. 10, 2007, http://www.reuters.com/article/idUSL1089156420070810?loomia_ow=t0:s0:a49:g43:r1:c1.000000:b30317152:z0. Galactic Suite Ltd. wants to start with a single pod capable of holding four guests. McDill, *supra* note 16. The company plans to use Russian rockets launched from a spaceport in the Caribbean to reach the boutique hotel. *Id.* It will cost guests approximately \$4.4 million for a three night stay. *Id.* Critics of the project proclaim that the time frame is unreasonable and question its financing. *Id.*

¹⁷ Verhovek, *supra* note 6.

Space Station (ISS).¹⁸ Meanwhile, without the shuttle, the U.S. is going to have to rely upon Russia for crew transportation to the *ISS*, until the American commercial space industry is capable of taking Russia's place.¹⁹ For this reason, NASA intends to invest \$6 billion over the next five years to help jumpstart the capability of private companies to supply crew transportation services to the *ISS*.²⁰ Although, the technology to fly to low-Earth orbit has existed for fifty years, not a single commercial firm has independently launched a manned spacecraft into orbit.²¹

The Obama Administration's shift in space policy and front page headlines garnered by space tourism have brought the new space industry to the public's attention. However, very little is known about the fledgling industry. This case study follows some of the legal problems of Rocketplane Kistler (RpK) in an attempt to draw attention to some of the potential pitfalls awaiting companies in the new space industry. In addition, this paper will highlight problems specific to the company and discuss the validity of privatizing LEO space transportation services.

Note that the cases examined in this paper are primarily related to legal claims under classical contract law.²² While it is an interesting academic endeavor in its own right, a thorough discussion on the jurisprudence of American contract law would not reveal any novel issues to the new space industry. Moreover, the facts and allegations contained in the filings of the *Abercrombie & Kent Space v. Rocketplane Kistler, Inc.* case have yet, as of this writing, to be established in a court of law.

RpK is the quintessential example of a new space industry entity because it decided to pursue both suborbital space tour-

¹⁸ *Id.*; Swartz, *supra* note 5.

¹⁹ Verhovek, *supra* note 6; *see generally* Joint Statement, *supra* note 4, at 2.

²⁰ Clara Moscowitz, *No Moon Trips, Obama's Space Vision a 'Paradigm Shift'*, SPACE.COM, Jan. 28, 2010, available at <http://www.space.com/news/obama-nasa-space-plan-reactions-100128.html>.

²¹ *Id.*

²² *See generally*, Complaint, *Abercrombie & Kent Space v. Rocketplane Kistler, Inc.*, (Aug. 27, 2007) (on file with author) [hereinafter Complaint]; Answer, *Abercrombie & Kent Space v. Rocketplane Kistler, Inc.*, (Nov. 7, 2007) (on file with author) [hereinafter Answer].

ism and LEO cargo transport services simultaneously.²³ Therefore, this study begins with an examination of the historical development of the company in order to provide a context for the subsequent discussions of the legal issues.

This paper continues with an examination of the NASA Commercial Orbital Transportation Services (COTS) program pursued under the Bush Administration's space policy.²⁴ The objective of COTS was to form agreements with the private sector for LEO transport services, an early precursor to the Obama Administration's space policy.²⁵ Rocketplane Kistler was awarded one of the original two COTS Space Act Agreements (SAA) for their work on the *K-1*.²⁶ The terms of the Space Act Agreement formed between RpK and NASA are also discussed, as well as an analysis of Rocketplane Kistler's failure to meet milestones outlined in the agreement and the holdings of the subsequent GAO decision.

Next, the paper examines the filings of the current lawsuit against RpK for breach of contract concerning marketing and advertising services with Abercrombie & Kent Space. Finally, this paper provides an analysis of lessons to be learned from RpK and a discussion of the increased role of the private sector in the United States space program.

²³ *See generally* Press Release, Rocketplane Global Inc., Two Commercial Space Companies Join Forces (Mar. 7, 2006), *available at* <http://www.rocketplane.com/press/20060307a.html>. [hereinafter *Companies Join Forces*].

²⁴ Press Release, White House, President Bush Announces New Vision for Space Exploration Program (Jan. 14, 2004), *available at* <http://history.nasa.gov/SEP%20Press%20Release.htm> [hereinafter *President Bush Announces New Vision for Space Exploration Program*]; *see also* Tiphany Baker Dickerson, *Patent Rights Under Space Act Agreements and Procurement Contracts: A Comparison by the Examination of NASA's Commercial Orbital Transportation Services (COTS)*, 33 J. SPACE L. 341, 342 (2007).

²⁵ Press Release, NASA, NASA Invests in Private Sector Space Flight with Space-X, Rocketplane-Kistler (Aug. 19, 2006), *available at* http://www.nasa.gov/exploration/news/COTS_selection.html [hereinafter *NASA Invests in Private Sector Space Flight*].

²⁶ *Id.*

I. THE DEVELOPMENT OF ROCKETPLANE KISTLER

A. *Rocketplane Ltd., Inc.*

Rocketplane Ltd. Inc was a small company focused on the space tourism niche of the new space industry. Formed in 2001, this Oklahoma City based company was the successor company to Pioneer Rocketplane, Inc.²⁷ It opened its first office in 2004 with just three employees.²⁸ Rocketplane's business model focused on developing a suborbital spaceplane for commercial space tourism.²⁹ In return for bringing jobs and space tourism to Oklahoma, the State granted the company an \$18 million tax credit and gave the company exclusive tenancy rights in the Oklahoma Spaceport in Burns Flat.³⁰

The *Rocketplane XP*, Rocketplane's suborbital spaceplane that was in development, was being built from the fuselage of a Learjet 25 series.³¹ Rocketplane expected the project to cost \$30 million, in total.³² The company projected that flights on the *XP* would last less than an hour from take-off, with three to four minutes of weightlessness.³³ Rocketplane anticipated its first commercial flight would commence in 2006, but it had to be pushed back to 2007, and then again to 2010.³⁴

B. *Kistler Aerospace*

Whereas Rocketplane was focused on commercial space tourism, Kistler Aerospace was focused on orbital cargo trans-

²⁷ Companies Join Forces, *supra* note 23. As Pioneer Rocketplane, the company had been involved in an unsuccessful attempt to win the Ansari X Prize. Prize Foundation, *Pioneer Rocketplane*, available at <http://space.xprize.org/ansari-x-prize/pioneer-rocketplane> (last visited Mar. 10, 2010).

²⁸ Rocketplane Global, Inc., *About Rocketplane*, http://www.rocketplaneglobal.com/our_company.html (last visited Apr. 2, 2010).

²⁹ Companies Join Forces, *supra* note 23.

³⁰ Rusty Surette, *Aerospace Company Deserts Oklahoma Leaving Questions*, NEWS 9 available at <http://www.news9.com/global/story.asp?s=10806368> (last visited Apr. 4, 2010).

³¹ Leonard David, *Have Spaceplane Will Travel*, USA TODAY, Feb. 24, 2005.

³² *Id.*

³³ Rocketplane Global, *Model XP Mission Profile*, http://www.rocketplaneglobal.com/mission_profile.html (last visited Apr. 21, 2010).

³⁴ David, *supra* note 31.

port. The Kirkland, Washington based company was developing the *K-1*,³⁵ a two-stage, reusable liquid fueled rocket.³⁶ Kistler expected the *K-1* to be capable of transporting payloads into orbit and carrying cargo to and from the *ISS*.³⁷ In fact, the C.E.O. of Kistler Aerospace, Dr. George Mueller, stated that Kistler's goal was to become the "UPS of space transportation."³⁸ Under Dr. Mueller's leadership, Kistler calculated that the *K-1* would cut LEO launch prices for consumers in half and would cost the company approximately \$500 million to develop.³⁹

Kistler's aspiration to develop a more affordable reusable launch vehicle did not go unnoticed by the business community. Kistler received backing from many major aerospace companies in the development of the *K-1*, including: Northrop Grumman, Lockheed Martin, GenCorp Aerojet, Honeywell, Draper Laboratory, Oceaneering, Irvin Aerospace, ATA Engineering, and RS&H.⁴⁰ Thus, the company was able to raise solid financing for its endeavors in excess of \$600 million.⁴¹

However, while Kistler Aerospace was able to complete almost seventy-five percent of the *K-1*,⁴² it was plagued with financial problems.⁴³ In 2003, Kistler Aerospace filed for Chapter

³⁵ Brandice L. Armstrong, *Rocketplane & Kistler Aerospace to Merge, Move Out of Oklahoma*, JOURNAL RECORD, Mar. 10, 2006.

³⁶ *Id.*

³⁷ Jim Banke, *Kistler Aerospace Files for Chapter 11 Bankruptcy Protection*, SPACE.COM, Jul. 23, 2003, http://www.space.com/news/kistler_bankruptcy_030723.html; Armstrong, *supra* note 35.

³⁸ James Wallace, *Kistler's Rocket Dreams Fade*, SEATTLE PI BLOGS, Oct. 3, 2007, <http://blog.seattlepi.com/aerospace/archives/122981.asp> (quoting Dr. George Mueller, the C.E.O. of Kistler Aerospace and former head of NASA's Apollo manned space program).

³⁹ *Id.* However, when the *K-1* project was under development at Kistler Aerospace in the late 1990's, many experts were skeptical of the company's budget projections. *Id.* John Pike, director of space policy for the Federation of American Scientists, addressed Kistler's attempt to develop a reusable rocket on such a paltry budget, "[w]hen you are talking spaceships, that's just rounding-off money. It's money lost in seat cushions. There are not enough zeros in their budget." *Id.* Critics pointed to a recent near-billion dollar contract received by Lockheed Martin to develop a reusable rocket prototype, which was not intended to reach orbit. *Id.*

⁴⁰ *Kistler Aerospace Corp. K-1*, GLOBALSECURITY.ORG, <http://www.globalsecurity.org/space/systems/kistler.htm> [hereinafter *Kistler, K-1*].

⁴¹ Ron L. Rains, *Rocketplane's Majority Owner Buys Kistler*, SPACE.COM, http://www.space.com/news/rocketplane_022606.html.

⁴² *Kistler, K-1, supra* note 40.

⁴³ *Business Briefs*, SEATTLE TIMES, July, 31, 2003, at E1.

11 bankruptcy.⁴⁴ In the original court filing, the company asserted it had \$6.3 million in assets and \$603.9 million in secured and unsecured liabilities.⁴⁵ Kistler Aerospace also claimed it would need an additional \$650 million in financing to complete the original *K-1*.⁴⁶ During Kistler's restructuring, NASA announced that it was interested in buying pre-/post-flight data from a series of *K-1* demonstrations.⁴⁷ On March 29, 2005, the Bankruptcy Court in Seattle, Washington entered an order confirming Kistler's Plan of Reorganization, indicating Kistler could start moving out of Chapter 11.⁴⁸

C. Rocketplane Kistler

In February 2006, George French, the majority owner, President, and CEO of Rocketplane, purchased Kistler Aerospace for an undisclosed amount of money.⁴⁹ The two companies merged to form a single company, Rocketplane Kistler (RpK).⁵⁰ RpK continued to pursue development of the *Rocketplane XP* for space tourism, as well as the *K-1* for commercial transportation services of space cargo.⁵¹ Accordingly, the company attempted to achieve financial success by combining both major activities in the new space industry, space tourism, and LEO cargo transportation.⁵² In fact, RpK viewed its project diversity to be so unique that it did not consider itself to have any comparable competitors.⁵³

⁴⁴ *Id.*

⁴⁵ *Id.* Some of the company's creditors included Saudi Arabian investors and various aerospace firms Kistler had collaborated with while building the K-1. Banke, *supra* note 37. Kistler owed Aerojet, a company that Kistler contracted with for Russian designed engines, \$99 million. *Id.*

⁴⁶ *Business Briefs*, *supra* note 43.

⁴⁷ Brian Berger, *NASA Contract Could Jumpstart Rocket Start Up*, SPACE.COM, Feb. 3, 2004, http://www.space.com/news/kistler_nasa_040203.html.

⁴⁸ *Kistler, K-1*, *supra* note 40.

⁴⁹ Rains, *supra* note 41.

⁵⁰ Companies Join Forces, *supra* note 23.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Rocketplane Kistler, RpK Business Plan – Executive Summary, 35 (2006), available at http://www.nasa.gov/centers/johnson/pdf/162330main_SPACE_ACT_AGREEMENT_FOR_COTS.pdf [hereinafter RpK Business Plan].

RpK did not consider itself a company that built launch systems.⁵⁴ Instead it distinguished itself as a “provider of space transportation services.”⁵⁵ RpK viewed this as an important distinction because the purpose of its company was to build reusable space vehicles.⁵⁶ The reusability of its hardware and the associated low cost were the key to RpK’s business plan.⁵⁷

Shortly after the acquisition of Kistler Aerospace, RpK projected that the *K-1*’s design was 94% complete.⁵⁸ The company also estimated that work on the vehicle was 75% complete, approximately the same as when Kistler Aerospace entered bankruptcy.⁵⁹

French did not say how much he paid to acquire Kistler.⁶⁰ However, the reason French purchased Kistler is quite clear; he intended to submit a proposal for NASA’s Commercial Orbital Transportation Services program.⁶¹

II. ROCKETPLANE KISTLER, NASA, AND THE COMMERCIAL ORBITAL TRANSPORTATION SERVICES (COTS) PROGRAM

A. Background of COTS Program

In 2004, President Bush announced a new policy promoting commercial participation in the United States’ space program.⁶² In the Vision of Space Exploration, a compendium of recommendations to implement President Bush’s space policies, the President’s Commission declared that outdated business standards established during the *Apollo* era governed the majority of NASA’s interactions with the private sector needed to be

⁵⁴ *Id.* at 31.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ RpK Business Plan, *supra* note 53, at 30.

⁵⁹ *Id.*

⁶⁰ Rains, *supra* note 41.

⁶¹ *Id.*

⁶² President Bush Announces New Vision for Space Exploration Program, *supra* note 24; *see also* Dickerson, *supra* note 24, at 342.

changed.⁶³ In response to this finding, the Commission recommended that “NASA recognize and implement a far larger presence of private industry in space operations with the specific goal of allowing private industry to assume the primary role of providing services to NASA.”⁶⁴ Furthermore, the Commission concluded that the preferred method for NASA’s future operational activities would be through competitively awarded contracts to the private sector; and NASA’s role should be limited to areas where it is proven that only the government can perform that activity.⁶⁵ Specifically, the best way to achieve this policy would be to establish competitive performance-oriented goals and allow the private sector to compete with each other to achieve NASA’s objectives.⁶⁶ The Commission believed that if the private sector played a greater role in NASA’s operations it would, “allow us to do more scientific work in space sooner, reduce government investment, and make long-term goals more affordable.”⁶⁷

In response to the President’s new space policy and the Commission’s findings, NASA implemented the Commercial Orbital Transportation Services Program.⁶⁸ The program challenged the private sector to develop space transportation capabilities for both cargo and crew to the *ISS*.⁶⁹ First, COTS invited proposals from companies who believed that they could successfully complete a commercial orbital transportation services demonstration.⁷⁰ NASA would then award a contract to the company, or companies, with the best proposal and would subsequently require the company to successfully complete an Earth-to-orbit space flight demonstration.⁷¹ Furthermore, NASA

⁶³ PRESIDENT’S COMMISSION ON IMPLEMENTATION OF UNITED STATES SPACE EXPLORATION POLICY, REPORT: A JOURNEY TO INSPIRE, INNOVATE AND DISCOVER (June 2004), 19, available at http://www.nasa.gov/pdf/607336main_M2M_report_small.pdf.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.* at 20.

⁶⁷ *Id.*

⁶⁸ Dickerson, *supra* note 24, at 342.

⁶⁹ Press Release, NASA, NASA Seeks Proposals for Crew and Cargo Transportation to Orbit (Jan. 19, 2006), available at http://www.nasa.gov/home/hqnews/2006/jan/HQ_06029_Crew_Cargo_RFP.html [hereinafter NASA Seeks Proposals].

⁷⁰ *Id.*

⁷¹ *Id.*

awarded \$500 million in financing to two companies to fund the development of reliable, cost effective access to low-earth orbit.⁷²

While the first phase of COTS was merely a demonstration phase, NASA expected to competitively purchase the services of the companies after a successful demonstration.⁷³ COTS was a major step to significantly increasing the private sector's role in NASA.⁷⁴ Scott Horowitz, NASA's associate administrator for Exploration services announced, "[w]e look forward to being able to purchase services for routine access to space, as NASA explores the Moon, Mars, and beyond."⁷⁵

Historically, NASA issued detailed requirements and specifications of its flight hardware and took ownership rights of any vehicles or hardware produced.⁷⁶ COTS, on the other hand, was a significant departure from NASA's traditional way of doing business.⁷⁷ Instead of detailed specifications, the agency provided the companies with high level goals and objectives, and gave them decision-making authority concerning the design, development, and operation of the vehicles.⁷⁸ Additionally, the companies would retain ownership of their transportation systems.⁷⁹ Therefore, NASA did not fully finance the project; but instead, encouraged the participants to seek private financing for the space vehicles.⁸⁰

An enormous response from the private sector ensued.⁸¹ More than a hundred companies expressed interest, and twenty companies submitted full proposals.⁸² NASA then narrowed the applicants down to six: Andrews Space, SpaceDev, SpaceHab, Transformational Space Corporation, Space Exploration Tech-

⁷² NASA Invests in Private Sector Space Flight, *supra* note 25.

⁷³ NASA Seeks Proposals, *supra* note 69.

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ NASA Invests in Private Sector Space Flight, *supra* note 25.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ NASA Invests in Private Sector Space Flight, *supra* note 25.

⁸² *Id.*

nologies (SpaceX), and Rocketplane Kistler.⁸³ Eventually, NASA selected SpaceX and Rocketplane Kistler to be the first participants in the COTS demonstration program.⁸⁴ SpaceX received \$278 million, the larger of the two COTS awards;⁸⁵ and Rocketplane Kistler secured \$207 million to complete the *K-1*.⁸⁶

B. Antitrust Law and the Increased Privatization of Space

According to classical economic theory, both economic regulation and antitrust principles aim to accomplish the same set of economic objectives: keep prices roughly equivalent to incremental costs, maintain efficient production processes, and foster innovation.⁸⁷ Economic regulation seeks to achieve these objectives *directly*.⁸⁸ The typical pattern for regulation involves agencies, like NASA, using a formulaic pattern of rules and orders to make offers to private firms, which ideally increases efficiency and innovation.⁸⁹ The writings of John Maynard Keynes, in particular, had a major influence on regulation theory.⁹⁰ From the early 1950's to the 1980's, including the *Apollo* era, the dominant macro-economic model utilized in the United States stipulated that some form of government control was required to

⁸³ Brian Berger, *SpaceX, Rocketplane Kistler Win NASA COTS Competition*, SPACE.COM, Aug. 18, 2006 available at http://www.space.com/news/060818_nasa_cots_wrap.html.

⁸⁴ NASA Invests in Private Sector Space Flight, *supra* note 25.

⁸⁵ *SpaceX, Rocketplane Kistler Win NASA COTS Competition*, *supra* note 83.

⁸⁶ *Id.*

⁸⁷ Stephen G. Breyer, *Antitrust, Deregulation, and the Newly Liberated Marketplace*, 75 CAL. L. REV. 1005, 1006 (1987). As prices get closer to incremental costs, theoretically, there are buying and production decisions that lead to less economic waste. *Id.* Generally speaking, efficiency is the maximization of output. Kenneth G. Elzinga, *The Goals of Antitrust: Other Than Competition and Efficiency, What Else Counts?*, 125 U. PA. L. REV. 1191, 1192 (1977). Efficiency occurs when output of goods is equal to consumer demand and minimizing production costs at the same time. *Id.*

⁸⁸ Breyer, *supra* note 87, at 1006. When using the term regulation or deregulation, it is used synonymously with economic regulation, which concerns issues of prices and profits and entry. See Panel Discussion, *The Cutting Edge of Anti-trust: Lessons from Deregulation*, 57 ANTITRUST L. J. 723, 724 (1988). The term is also used reference to health-safety-environment regulation. *Id.*

⁸⁹ Breyer, *supra* note 87, at 1006.

⁹⁰ See generally DANIEL A. YERGIN & JOSEPH STANISLAW, *THE COMMANDING HEIGHTS: THE BATTLE BETWEEN GOVERNMENT AND THE MARKETPLACE THAT IS REMAKING THE MODERN WORLD* 127 (1998).

achieve economic well-being and improve the standard of living.⁹¹ The overwhelming rationale justifying government control is potential “market failure.”⁹² In other words, some desired outcomes, such as landing a man on the Moon, required degrees of coordination that competition and the private sector could not muster on their own.⁹³

The academic antithesis to Keynes and his heavy-handed government control is Friedrich von Hayek.⁹⁴ Hayek was a strict classical economist who believed that the free market and competition were the keys to achieving lower prices, greater efficiency, and innovation.⁹⁵ Antitrust principles, in support of a strong market theory, as advocated by Hayek, seek to achieve economic objectives *indirectly* through prohibiting anti-competitive market behavior.⁹⁶ Antitrust law has been summarized as promoting “competition so that competition itself can bring us economic benefits.”⁹⁷ Therefore, trends in antitrust policy veer toward decentralized private decision-making and individual freedom from excessive government control.⁹⁸

Classical economists believe that the objectives of lower prices, greater production efficiency, and innovation are best achieved through market competition, thus giving credence to antitrust legislation.⁹⁹ Further, classical economists attack entities, such as government sponsored monopolies, for having

⁹¹ *Id.* Governments influenced by Keynesianism, or mixed economies, used five tools to achieve market control: regulation, planning, state ownership, industrial policy, and Keynesian fiscal management. *Id.*

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.* at 141-45. He described Keynesianism as, “the wildest farrago of nonsense.” *Id.*

⁹⁵ *Id.* at 141-45. Hayek did the some of his research concerning how free markets influence the price system. *Id.* at 143. He explained the price system, “[t]he miracle is that in a case like that of a scarcity of one raw material, without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly; that is, they move in the right direction.” *Id.*

⁹⁶ Breyer, *supra* note 87, at 1006.

⁹⁷ *Id.* at 1006.

⁹⁸ Elzinga, *supra* note 87, at 1200.

⁹⁹ Breyer, *supra* note 87, at 1006.

many systemic flaws that patently prevent them from matching the innovation achieved through competition.¹⁰⁰

In 1890, Congress passed the Sherman Antitrust Act, the first, and perhaps the most significant, American antitrust legislation.¹⁰¹ Congress passed the act in order to protect the market by fostering competition and barring unreasonable restraint on trade.¹⁰² The purpose of the Antitrust Act is not to protect individual businesses or government from the workings of the market.¹⁰³ Rather, the act was designed to protect competition in the market as a whole.¹⁰⁴ The first section of the act prohibits all conduct, conspiracies, and other anti-competitive behavior that act in restraint of trade.¹⁰⁵ The second section of the Antitrust Act forbids monopolistic behavior.¹⁰⁶ Taken as a whole, the act prohibits both the ways (conduct and conspiracies in constraint of trade) and means (monopolies) of anti-competitive behavior.¹⁰⁷

While the Sherman Antitrust Act targets anti-competitive behaviors, it is not directed at government activities that are acrimonious to free markets.¹⁰⁸ For instance, when a state is acting in its regulatory capacity and not as a market participant, its behavior is not subject to scrutiny under the Sherman Act.¹⁰⁹ Moreover, immunity for state action is limited to state govern-

¹⁰⁰ *Id.*

¹⁰¹ 54 AM. JUR. 2D *Monopolies and Restraints of Trade* § 1 (2010).

¹⁰² *Id.*

¹⁰³ *Id.* § 2.

¹⁰⁴ *Id.*

¹⁰⁵ 15 U.S.C. § 1 (2004) (“Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal”).

¹⁰⁶ *Id.* § 2 (“Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 if a corporation, or, if any other person, \$1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court”).

¹⁰⁷ *Id.* §§ 1-2.

¹⁰⁸ *California Retail Dealers Liquor Ass’n v. Midcal Aluminum, Inc.*, 445 U.S. 97, 103, 105-106 (1980) (holding that a state’s involvement in a wine pricing scheme is insufficient to bring it into the realm of “state action” under *Parker v. Brown*).

¹⁰⁹ *Parker v. Brown*, 317 U.S. 341, 350-51 (1943) (finding “nothing in the language of the Sherman Act or in its history which suggests that its purpose was to restrain a state or its officers or agents from activities directed by its legislature”).

ments and does not apply to the federal government.¹¹⁰ Nonetheless, the federal government and its agencies, also remain outside the scope of the Sherman Act.¹¹¹ Essentially, U.S. government agencies are allowed to create government monopolies and engage in anti-competitive behavior that otherwise would be prohibited.¹¹²

C. The COTS Space Act Agreement

Under the COTS program, NASA entered into a Space Act Agreement (SAA) with Rocketplane Kistler in 2006.¹¹³ NASA's authority to enter into the COTS SAA is granted by section 203(c)(5) of the 2004 Coordination of Aeronautical and Space Activities Act which authorizes NASA "to enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate."¹¹⁴ Consequently, SAAs "are legally enforceable promises between NASA" and the signing party.¹¹⁵ Moreover, SAAs are formulated under NASA's "other transactions," and therefore, are legally distinct from procurement contracts.¹¹⁶ Space Act Agreements allow NASA to have a broad range of freedom to negotiate and tailor the terms of the agreement to a specific mission or private partner.¹¹⁷

¹¹⁰ N.C. *ex rel.* Edmisten v. P.I.A. Asheville, Inc., 740 F.2d 274, 277 (4th Cir. 1984) (holding "the state action immunity doctrine, by definition, is restricted to conduct undertaken under the aegis of a state rather than the federal government").

¹¹¹ Sea-land Service, Inc. v. Alaska R.R., 659 F.2d 243, 246 (D.C. Cir. 1981) (finding "that the United States, its agencies and officials, remain outside the reach of the Sherman Act").

¹¹² *Id.*

¹¹³ NASA, Space Act Agreement Between National Aeronautics & Space Administration & Kistler Aerospace Corporation & Rocketplane Ltd, Inc. for Commercial Orbital Transportation Services Demonstration, 29, *available at* http://www.nasa.gov/centers/johnson/pdf/162330main_SPACE_ACT_AGREEMENT_FOR_COTS.pdf. [hereinafter Space Act Agreement]

¹¹⁴ 42 U.S.C. § 2473(c)(5) (2010).

¹¹⁵ Dickerson, *supra* note 24, at 347.

¹¹⁶ Rocketplane Kistler, B-310741, 1 (USGAO Jan. 28, 2008) *available at* <http://www.gao.gov/decisions/bidpro/310741.pdf> [hereinafter GAO Decision].

¹¹⁷ Dickerson, *supra* note 24, at 348.

The 2006 agreement concerned the Crew/Cargo Project Office at Johnson Space Center.¹¹⁸ One of the objectives of the Crew/Cargo Project Office is to “implement U.S. Space Exploration Policy with an investment to stimulate commercial enterprises to space.”¹¹⁹ The office is also focused on creating a market where commercial space transportation is available to both government and private sector purchasers.¹²⁰

The purpose of the COTS agreement was to conduct the development and demonstration phases of the *K-1*.¹²¹ During the process, NASA paid Rocketplane Kistler according to RpK’s ability to demonstrate NASA designated performance capabilities and fundraising milestones.¹²² Rocketplane Kistler was responsible for developing an “end-to end” space transportation system, including ground operations, launch, proximity operations, docking, orbital operations, reentry, and safe disposal or return.¹²³ According to NASA’s objectives, Rocketplane Kistler needed to show that the *K-1* was able to perform external cargo delivery and disposal, internal cargo delivery and disposal, internal cargo delivery and return, and crew transportation.¹²⁴ The crew transportation objective was the only major objective where performance was optional.¹²⁵

RpK and NASA’s responsibilities were divided into objectives and milestones, making Rocketplane Kistler accountable to complete each element of the project on time.¹²⁶ The first three objectives contained fifteen milestones for RpK to complete. The

¹¹⁸ Space Act Agreement, *supra* note 113, at 1.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *Id.* at art. 2 (A), 2.

¹²² *Id.*

¹²³ *Id.* at art. 2 (C), 2.

¹²⁴ *Id.* at art. 2 (A), 2. External Cargo delivery and disposal was defined by NASA as: “delivers cargo (payloads) that operate directly in the space environment to a LEO test bed and provided for its safe disposal.” *Id.* Internal cargo delivery and disposal required RpK to deliver “cargo (payloads) that [operate] within a volume maintained at normal atmospheric pressure to a LEO test bed and [provide] for its safe disposal.” *Id.* The third required capability stipulated RpK, “delivers cargo (payloads) that operated within a volume maintained at normal atmospheric pressure to a LEO test bed and provides for its safe return to Earth.” *Id.* The optional crew transportation capability was defined as, “delivers crew to a LEO test bed and provide for safe return to Earth.” *Id.*

¹²⁵ *Id.* at art. 2 (A), 2.

¹²⁶ *Id.* at art. 3 (A), 2.

objectives were: external cargo delivery and disposal, internal cargo delivery and disposal, and internal cargo delivery and return.¹²⁷ Each milestone also contained an objective, target completion date, success criteria, and the stipulated NASA payment.¹²⁸ The optional crew flight objective had its own set of milestones, which were included as a price option to the Agreement.¹²⁹ NASA, in turn, was obligated to make milestone payments as RpK completed the project.¹³⁰ Hence, NASA was only obliged to pay funds according to the agreement, or by amendment to the agreement.¹³¹ NASA also reserved the right to incrementally supplement the funds in the agreement.¹³²

Furthermore, NASA emphasized that the agreement was non-exclusive.¹³³ Meaning, NASA had the right to enter into similar contracts for the same purpose as the COTS SAA with Rocketplane.¹³⁴

Significantly, the SAA could be terminated at anytime based on the parties' written consent.¹³⁵ Alternatively, the

¹²⁷ *Id.* at Appendix 2, 46.

¹²⁸ *Id.* at Appendix 2, 46-49. Rocketplane Kistler's milestones were as follows:

Milestone 1: Program Implementation Plan Review

Milestone 2: Financing Round 1

Milestone 3: System Requirements Review

Milestone 4: Financing Round 2

Milestone 5: Pressurized Cargo Module Critical Design Review

Milestone 6: Unpressurized Cargo Module Critical Design Review

Milestone 7: ISS Readiness Review

Milestone 8: Rendezvous Software Test Readiness Review

Milestone 9: Financing Round 3

Milestone 10: PCM Test Readiness Review

Milestone 11: K-1 Complete and Shipped to Woomera

Milestone 12: Certification of Flight Readiness

Milestone 13: Pre-Demo 1 Risk Reduction Flight

Milestone 14: 1st Demo Flight

Milestone 15: 2nd Demo Flight

Id. The amount of financing required in financing rounds one, two, and three have been omitted from public record. *Id.*

¹²⁹ *Id.* at art. 14 and at Appendix 2, 50-53. RpK could have netted \$200 million in NASA funding by successfully completing the crew objective. *Id.*

¹³⁰ *Id.* at art. 3 (B), 3.

¹³¹ *Id.* at art. 5 (A) (1), 3.

¹³² *Id.*

¹³³ *Id.* at arts. 8, 6.

¹³⁴ *Id.*

¹³⁵ *Id.* at art. 17 (A), 25.

agreement could also be terminated for failure to perform.¹³⁶ NASA reserved the ability to terminate the SAA with RpK for failure to perform within 30 days of written notice.¹³⁷ Failure to meet a prescribed milestone qualified as a breach of performance,¹³⁸ and the company would not be entitled to any additional payments from NASA.¹³⁹ NASA also had the right to unilaterally terminate the COTS SAA under certain circumstances, such as: Congress declares war, the President declares a state of national emergency, or where NASA is forced to terminate due to circumstances beyond its control.¹⁴⁰

Finally, the process for dispute resolution under the SAA required all disputes of law or fact to be referred to the NASA Administrative Contact and RpK Administrative Contact.¹⁴¹ If the Administrative Contacts were unable to reach an agreement, then the dispute would be addressed by the JSC Commercial Crew Cargo Project Manager and the CEO of RpK.¹⁴² If still unable to reach a resolution, the Associate Administrator for Exploration Systems Mission Directorate would attempt to resolve the dispute and, if necessary, issue a final written decision which would qualify as the official Agency opinion.¹⁴³ This opinion would be final for all purposes, including seeking official review of the decision.¹⁴⁴

¹³⁶ *Id.* at art. 17 (B), 25.

¹³⁷ *Id.* at art. 17 (B) (1), 25.

¹³⁸ *Id.* at art. 17 (B) (1), 25.

¹³⁹ *Id.* at art. 17 (B) (2), 25.

¹⁴⁰ *Id.* at art. 17 (C) (1), 25. "Reasons beyond NASA's control include but are not limited to, acts of God or of the public enemy, acts of the U.S. Government other than NASA, in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or unusually severe weather." *Id.*

¹⁴¹ *Id.* at arts. 19, 26.

¹⁴² *Id.*

¹⁴³ *Id.* at arts. 19, 26.

¹⁴⁴ *Id.*

D. Performance of the COTS SAA

Rocketplane Kistler was able to successfully complete its first three milestones.¹⁴⁵ However, in May 2007, RpK missed the fourth milestone, the requirement to conduct a second round of private sector financing.¹⁴⁶ In September 2007, NASA officially notified Rocketplane Kistler of its failure to perform under the Agreement.¹⁴⁷ After notification, NASA decided it was not in the Agency's best interest to pursue the COTS program with RpK, and terminated the SAA.¹⁴⁸

Less than twenty-four hours after NASA terminated the Agreement, RpK began the appeals process.¹⁴⁹ Ultimately, however, NASA committed to reinvesting the \$175 million, not earned by Rocketplane Kistler, into a new COTS competition, where another company would be awarded a similar milestone-oriented SAA.¹⁵⁰

E. GAO Decision

Still smarting from the loss of the COTS contract, Rocketplane Kistler appealed to the Governmental Accountability Office (GAO).¹⁵¹ RpK disputed the form of the agreement in order to bring their protests within the jurisdiction of the GAO.¹⁵² In general, the GAO reviews alleged violations or misconduct concerning procurement contracts.¹⁵³ However, the GAO determined

¹⁴⁵ NASA, Rocketplane-Kistler (RpK), *available at* <http://www.nasa.gov/offices/c3po/partners/rpk/index.html>. Rocketplane Kistler was over a month late on the second milestone, which was the first round of financing. *Id.*

¹⁴⁶ Press Release, NASA, NASA to Open New Competition for Space Transportation Seed Money (Oct. 18, 2007), *available at* http://www.nasa.gov/home/hqnews/2007/oct/HQ_07228_COTS_competition.html [Hereinafter NASA to Open New Competition].

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ Brian Berger, *Rocketplane Kistler Appeal NASA Decision to Terminate COTS*, SPACE.COM, Oct. 22, 2007, at <http://www.space.com/business/technology/071022-sn-cotsappeal.html>.

¹⁵⁰ NASA to Open New Competition, *supra* note 146.

¹⁵¹ GAO Decision, *supra* note 116, at 1.

¹⁵² *Id.* at 1, 3.

¹⁵³ *Id.* at 3.

that SAAs are not procurement contracts.¹⁵⁴ Moreover, the GAO established that it does not review award protests that fall outside their bid protest jurisdiction.¹⁵⁵ RpK asserted that NASA was utilizing a non-procurement instrument for procurement purposes in order to circumvent procurement statutes and regulations.¹⁵⁶ The company further argued that the solicited services were for research and development and can only be acquired through a procurement contract not an SAA.¹⁵⁷

The first phase of COTS, which Rocketplane competed in, was the demonstration phase.¹⁵⁸ It was geared at developing commercial space transportation capabilities that would be desirable to private industry and the government.¹⁵⁹ The second phase, which has yet to be completed by any company, was described by NASA as, “planned competitive procurement of orbital transportation service to resupply the [*International Space Station*] with cargo and crew.”¹⁶⁰

Under Federal law, an agency must use a procurement contract when:

- (1) The principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the United States Government; or
- (2) The agency decides in a specific instance that the use of a procurement contract is appropriate.¹⁶¹

RpK argued that the direct purpose of the COTS program was to obtain research and development services for the direct benefit of NASA.¹⁶² However, NASA asserted that it received no direct benefit through goods and services from the contract be-

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 1.

¹⁵⁸ *Id.* at 2.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 4 (quoting 31 U.S.C § 6303 (2000)); *see also* FAR § 35.003(a) (“Contracts shall be used only when the principal purpose is the acquisition of supplies and services for the direct benefit of the Federal Government”).

¹⁶² GAO Decision, *supra* note 116, at 3.

cause the administration obtained no vehicles, supply service, prototypes, etc. from the program.¹⁶³ Instead, NASA said that the purpose of the COTS program is to “encourage the growth of a future U.S. commercial market in which space transportation services will be available for commercial and Government customers.”¹⁶⁴

The GAO found NASA’s argument persuasive because the record sufficiently showed that the purpose of the COTS program was to support the development of a market for commercial space transportation services, from which NASA could eventually buy orbital transportation services.¹⁶⁵ While the development of a commercial space transportation industry supports NASA’s space exploration policies, supporting the growth of the market as a matter of public policy does not equate the administration’s acquiring services and goods for its direct administration benefit, as contemplated by the statute.¹⁶⁶

III. ABERCROMBIE & KENT SPACE V. ROCKETPLANE INC.

A. *The Origins of the Lawsuit*

While RpK was pursuing the COTS program with NASA, the company was also attempting to establish itself as a mainstay in suborbital space tourism.¹⁶⁷ On December 22, 2006, Rocketplane Kistler entered into an Exclusive Sales and Marketing Agreement with Abercrombie & Kent Space, an Illinois based company that promoted and advertized space tourism.¹⁶⁸

1. Terms of the Contract

Per the agreement, *Rocketplane Kistler* was responsible for building the *Rocketplane XP* suborbital flight program.¹⁶⁹ RpK’s

¹⁶³ *Id.* at 4.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 5.

¹⁶⁶ *Id.*

¹⁶⁷ See generally Companies Join Forces, *supra* note 23.

¹⁶⁸ Complaint, *supra* note 22, at ¶ 1, 3.

¹⁶⁹ Exclusive Sales and Marketing Agreement, Abercrombie & Kent & Rocketplane Kistler, Dec. 22, 2006, at 1 (on file with author) [hereinafter Agreement].

responsibilities included suborbital flights, mission control, flight simulation, facility, specialty meals for passengers, and building viewing rooms for spectators.¹⁷⁰ In other words, Rocketplane Kistler agreed to develop all aspects of the suborbital flight program that was to be marketed and promoted by Abercrombie & Kent.¹⁷¹ In addition, RpK was responsible for the management, administration, and operation of the commercial flight participant training program.¹⁷²

Rocketplane Kistler appointed Abercrombie & Kent to be the exclusive seller and marketer of all RpK's commercial suborbital space flights worldwide.¹⁷³ Abercrombie & Kent was also accountable for planning all pre and post-flight programs in relation to both the training program and the suborbital space tourism.¹⁷⁴

The contract also discussed RpK's financing of the *Rocketplane XP* stating, "It is understood by both parties that currently R[p]K does not have financing in place to complete the *Rocketplane XP* suborbital space vehicle."¹⁷⁵ Similar to the COTS SAA, RpK committed to meeting specified benchmarks in the development of the *XP*, and raising \$520 million in funding. Specifically, the contract provided:

1. The first round of financing is anticipated to raise \$40 million in equity and is completed.
2. The second round of financing is anticipated to be a \$150 million equity round that will close near the end of February 2007.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ *Id.* at 2 ("[Abercrombie & Kent] will be responsible for all marketing and promotional activities and associated expenses, including but not limited to micro-website, printing brochures, brochure design, production, distribution, and fulfillment.")

¹⁷⁴ *Id.* at 2. The types of programs Abercrombie and Kent were in charge of were, "airport meet and greet, transfers, hotel accommodations, meals, and celebrations." *Id.*

¹⁷⁵ *Id.* at 9.

3. The third round of financing is anticipated to raise \$330 million, in a combination of debt and equity which would occur near the end of 2007.¹⁷⁶

2. Performance of the Contract

According to the plaintiff's brief, in April 2007, Rocketplane Kistler's Board of Directors (BOD) decided that pursuing space tourism did not offer enough potential profit.¹⁷⁷ Instead of finishing development on the *Rocketplane XP*, the BOD decided to pursue promotion of the *K-1* project. The BOD instructed all RpK's employees to cease work on the *XP* on May 4, 2007.¹⁷⁸ Thereafter, Rocketplane terminated most of its employees working on the *XP*¹⁷⁹ and stopped fundraising efforts for the *XP* project.¹⁸⁰

B. Abercrombie & Kent's Allegations

Abercrombie & Kent alleged that ceasing work on the *XP* was a termination of the agreement.¹⁸¹ Abercrombie & Kent further alleged, in addition to failing to complete the *Rocketplane XP* and program, RpK failed to complete the second round of financing in February 2007.¹⁸² In June 2007, Abercrombie &

¹⁷⁶ *Id.* The parties also agreed to these additional benchmarks:

4. First Commercial flight in 2009.
5. Thereafter, commercial flights at least once every two weeks (subject to demand).
6. No casualties, serious injuries, or crashes.
7. Pricing competitive with other suborbital products, if any.

Id. (Numbering resumed from benchmarks above, same numbering that exists in the contract.)

¹⁷⁷ Complaint, *supra* note 22, at ¶ 8.

¹⁷⁸ *Id.* at ¶ 9(a).

¹⁷⁹ *Id.* at ¶ 9(b). The employees fired that were working on the *XP* project included employees in charge of inside sales, outside sales, the vice president of operations, the office manager, and an engineer. *Id.*

¹⁸⁰ *Id.* at ¶ 9(c).

¹⁸¹ *Id.* at ¶ 10.

¹⁸² *Id.* at ¶ 19 (a) – (h). Abercrombie & Kent also claimed the Agreement was breached by:

- a. Abandoning or purporting to suspend the *XP* project, which is the subject of the purpose of the agreement
- b. Failing to engage in the development, administration, and operations for Rocketplane *XP* suborbital flight . . .
- c. Failing to create and provide the elements of the suborbital flight product . . .

Kent demanded that Rocketplane Kistler pay \$3.4 million in damages under the agreement.¹⁸³ In response to Abercrombie & Kent's request for damages under the contract, Rocketplane agreed to attend mediation at the plaintiff's request.¹⁸⁴ Abercrombie & Kent scheduled mediation for August 2007, but Rocketplane Kistler unilaterally canceled the mediation.¹⁸⁵

C. Subsequent Filings

Although the complaint was filed in August 2007, the case has yet to go to trial.¹⁸⁶ Unfortunately for lawyers following the case, Rocketplane Kistler¹⁸⁷ was successful in keeping the discovery documents confidential.¹⁸⁸ Moreover, the case has had a

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- d. Failing to provide A&K Space with the specific details of an astronaut training program . . .
 - e. Failing to provide A&K Space with current technical data and support for the development by A&K of a brochure, sales collateral, digests, and a marketing plan . . .
 - f. Failing to work toward developing an XP product with a first revenue flight expected by January 1, 2009 . . .
 - g. Failing to provide A&K Space with selected images of the now-planned Rocketplane XP and related information . . .
 - h. Filing [sic] to complete a second round of financing by the end of February, 2007 . . .

Id.

¹⁸³ *Id.* at ¶ 11.

¹⁸⁴ *Id.* at ¶ 14-15.

¹⁸⁵ *Id.* at ¶ 15. Due to Rocketplane's failure to mediate, Abercrombie & Kent incurred another \$3, 025 in damages, bringing the total amount of damages claimed to \$3,403,025. *Id.* at ¶ 16 In response to Abercrombie & Kent's complaint, Rocketplane Kistler claims the plaintiff had breached the agreement by failing to work on the civilian astronaut program, plan the pre/post land trips, produce pre-trip materials for the public, perform promotional activities, be responsible for public relations, promote suborbital flights, develop a space travel micro-site, and establish a production schedule for marketing activities. Answer, *supra* note 22, at Affirmative Defenses ¶ 2 (a) –(h). RpK also counterclaimed that the contract had failure of consideration. *Id.* at ¶ 4-6. RpK asserted Abercrombie & Kent had unclean hands, specifically related to the alleged breach and lack of consideration. *Id.* at ¶ 7-8. Furthermore, RpK alleged that the amount of damages claimed by Abercrombie & Kent was an unlawful penalty because it did not correlate with the amount of efforts the advertising firm put into the contract. *Id.* at ¶ 11.

¹⁸⁶ See Complaint, *supra* note 22, at 1; Order Granting Mot. for Continued Tr., Dec. 14, 2009 (resetting the trial date to Apr. 26, 2010).

¹⁸⁷ During the course of litigation Rocketplane Kistler changed its name to Rocketplane Global Inc.

¹⁸⁸ See generally, Def. Mot. (Consented to) for Entry of Protective Order & To Extend Discovery ¶ 1-7 (Mar. 11, 2008); Stipulated Protective Order, (Mar. 11, 2008)..

long and nasty discovery process.¹⁸⁹ RpK's original legal representation, *Burker, Warren, MacKay & Serritella*, withdrew from the case citing multiple reasons under Model Rule of Professional Conduct 1.16.¹⁹⁰ The law firm alleged that "Rocketplane and its principals have rendered it unreasonably difficult for the firm to carry out the employment effectively and have acted in a manner that has created irreconcilable difference between Rocketplane, its principals, and the [f]irm."¹⁹¹ After their designated law firm withdrew from the case, the court entered an order of default judgment against RpK.¹⁹² Subsequently, discovery was extended repeatedly with general allegations that *Abercrombie & Kent* were "unaggressive in attempting to conduct discovery."¹⁹³

¹⁸⁹ See generally, Pl.'s Mot. to Compel Production of Documents (Jul. 11, 2008).

¹⁹⁰ Def. Mot. for Leave to Withdraw ¶ 3 (Jul. 15, 2008) (on file with author). The Model Rule of Professional Conduct that RpK's lawyers utilized to withdraw from representation states in pertinent part:

- (a) Except as stated in paragraph (c), a lawyer shall not represent a client or, where representation has commenced, shall withdraw from the representation of a client if:
 - (1) the representation will result in violation of the rules of professional conduct or other law;
 - (2) the lawyer's physical or mental condition materially impairs the lawyer's ability to represent the client; or
 - (3) the lawyer is discharged.
- (b) Except as stated in paragraph (c), a lawyer may withdraw from representing a client if:
 - (1) withdrawal can be accomplished without material adverse effect on the interests of the client;
 - (2) the client persists in a course of action involving the lawyer's services that the lawyer reasonably believes is criminal or fraudulent;
 - (3) the client has used the lawyer's services to perpetrate a crime or fraud;
 - (4) the client insists upon taking action that the lawyer considers repugnant or with which the lawyer has a fundamental disagreement;
 - (5) the client fails substantially to fulfill an obligation to the lawyer regarding the lawyer's services and has been given reasonable warning that the lawyer will withdraw unless the obligation is fulfilled;
 - (6) the representation will result in an unreasonable financial burden on the lawyer or has been rendered unreasonably difficult by the client; or
 - (7) other good cause for withdrawal exists.

MODEL RULES OF PROF'L CONDUCT R. 1.16 (a) – (b), available at http://www.abanet.org/cpr/mrpc/rule_1_16.html.

¹⁹¹ Def. Mot. for Leave to Withdraw, *supra* note 190, at ¶ 3.

¹⁹² Order Granting Default Judgment, Aug. 20, 2008 (on file with author).

¹⁹³ Def. Response to Pl.'s Mot. to Conduct Additional Discovery ¶ 3 Oct. 19, 2009 (on file with author) ("At plaintiff's request, discovery has repeatedly been continued in this

IV. ANALYSIS

*A. Rocketplane Kistler and Individual Firms
in the New Space Industry*

Rocketplane Kistler entered into the new space industry brimming with confidence.¹⁹⁴ However, less than two years after formation, the venture was trapped in a legal quagmire filled with terminations of contracts and lawsuits.¹⁹⁵ As of yet, the company still has not conducted a successful demonstration of a spaceship in either suborbital or LEO flight.

One of the most obvious similarities between the COTS SAA and the Exclusive Sales and Marketing Agreement with Abercrombie & Kent Space, is the identical use of milestones to gauge RpK's performance.¹⁹⁶ More importantly, RpK was unable to meet the second private financing milestone under both agreements.¹⁹⁷ While the amount of private funding required by the COTS SAA financing milestones is not available to the public, RpK committed to raising \$150 million in financing for its suborbital flight program. RpK's inability to meet its financial milestones indicates that the primary hindrance to the completion of its obligations was lack of equity.¹⁹⁸ However, a rather confusing piece of Rocketplane Kistler's financial puzzle is that the company had a single offering of preferred stock in 2006 where it sold over \$46 million in stock to five investors.¹⁹⁹ While issuing preferred stock is fairly common in privately held companies, it is odd, to say the least, that the company only had a single offering if it was making good faith efforts to raise financing to adhere to its contracts.²⁰⁰ RpK was never able to prove the

matter. On January 13, 2009, the court entered an order establishing a discovery cut-off on March 13, 2009. On March 4, 2009, the court continued the discovery cut-off to June 15, 2009. On June 25, the court extended the discovery cut-off to September 21, 2009." *Id.* at ¶ 2.).

¹⁹⁴ See *supra* text accompanying notes 49-53.

¹⁹⁵ See discussion *supra* pp. 73-79.

¹⁹⁶ See *supra* text accompanying notes 121-125, 176.

¹⁹⁷ See *supra* text accompanying notes 145-148, 182.

¹⁹⁸ See discussion *supra* pp. 73, 77.

¹⁹⁹ Rocketplane Kistler Inc., Notice of Sale of Securities (Form D), at 4 (Nov. 16, 2006), available at <http://www.sec.gov/Archives/edgar/vprr/06/9999999997-06-047742>.

²⁰⁰ *Id.*

technical merits of either its *Rocketplane XP* design or the *K-1*, because it never reached those milestones in their agreements.²⁰¹ However, it can be reasonably inferred that if the company believed in the success of its projects, it would have made more public efforts to raise the necessary funding, whether through taking out additional debt or pursuing more equity offerings.

Another possibility for the company's inability to meet financial milestones is its overly ambitious business plan.²⁰² While the company openly and proudly proclaimed that it had no competition in the market because it was pursuing the dual projects of suborbital and LEO transportation services, perhaps they had no competition from similar companies in the new space industry because it was inefficient, both financially, and as far as achieving labor utility, to pursue both projects at the same time.²⁰³ If the allegations in the Abercrombie & Kent Space complaint are true and RpK abandoned its suborbital space tourism enterprise in April 2007, then it shows the company's acknowledgement of its diverse business strategy. In any case, it indicates a lack of organization on the part of the company to pursue private funding of both projects simultaneously. While Rocketplane Kistler struggled to meet its milestones on both of its projects, SpaceX, the company awarded the other funded COTS SAA, was able to meet all of its financial milestones on time.²⁰⁴

Moreover, a paradoxical problem is posed by the structure of the COTS program.²⁰⁵ NASA designed the COTS program in order to develop a market for commercial space transportation services. As a result, instead of paying for the entirety of the project, as the administration would with a procurement contract, NASA provided partial funding for its COTS partners.²⁰⁶ The benefit of this arrangement was that, if successful, the partners would remain the owners of their launch systems and

²⁰¹ See *supra* text accompanying notes 145-193.

²⁰² See discussion *supra* p. 62.

²⁰³ *Id.*

²⁰⁴ See NASA to Open New Competition, *supra* note 146.

²⁰⁵ See *supra* text accompanying notes 113-140.

²⁰⁶ See *supra* text accompanying note 80.

could contract with the private sector for LEO transportation services.²⁰⁷ While NASA publicly stated its intention to enter into Phase II contracts with companies who successfully completed demonstrations, these COTS contracts were not guaranteed.²⁰⁸ The lack of a guaranteed contract in Phase II would certainly deter private investors whose funding was necessary to meet NASA's milestones.²⁰⁹ But, if NASA was to eliminate the financial milestone requirements, it would have no means of keeping its partners financially on track. Alternatively, if NASA was to fully fund the research and development of its COTS partners, it would essentially be operating a less efficient shuttle program through procurement contracts. Furthermore, requiring NASA to commit to a Phase II contract with its COTS partners would require the agency to commit to spending millions of dollars of tax payer money on heretofore unproven technology.

Another persistent theme in Rocketplane Kistler's company history is unrealistic timeframes and financial goals. Kistler Aerospace originally expected the *K-1* to cost the company \$500 million to develop.²¹⁰ After raising \$600 million in financing for the project, Kistler Aerospace filed for bankruptcy.²¹¹ When the company emerged from bankruptcy, it forecasted that the project would cost an additional \$650 million.²¹² Rocketplane Kistler estimated that the design for the *K-1* was 94% complete and the hardware was 75% intact.²¹³ In other words, completing a quarter of the *K-1* project would cost the company over 100% more than it originally predicted. A second example of the company's unrealistic financial goals was the development of the *Rocketplane XP*. In 2005, the company informed *USA Today* that it would cost approximately \$30 million to finish the suborbital vehicle.²¹⁴ However, in the contract with Abercrombie & Kent,

²⁰⁷ See *supra* text accompanying note 79.

²⁰⁸ See discussion *supra* pp. 73-75.

²⁰⁹ See *supra* note 128 and accompanying text.

²¹⁰ See *supra* text accompanying note 39.

²¹¹ See *supra* text accompanying note 40.

²¹² See *supra* text accompanying note 46.

²¹³ See *supra* text accompanying notes 58-59.

²¹⁴ See *supra* discussion accompanying note 32.

Rocketplane stipulated that it had already raised \$40 million in private financing for the *XP*.²¹⁵ The company planned to raise another \$480 million for completion of the project.²¹⁶ Furthermore, RpK was unable to meet its own deadlines. Rocketplane predicted its first commercial passenger flight would be in 2006, but the first projected flight was pushed back until 2007, and then again to 2010.²¹⁷

RpK has been consistently and significantly inaccurate in its predictions of the cost and timelines of its projects, but the greater question is why? One reason could be that the company was trying to lure in investors and publicity with puffery of its own expectations. Conversely, Rocketplane Kistler's persistent inability to follow through with their ambitious goals may have repulsed potential investors after a certain point. Another reasonable explanation is the nature of the new space industry is such a nascent industry, that making accurate predictions regarding the future is next to impossible. However, NASA has been able to run a successful shuttle program for decades under the governance of an Executive budget, most likely providing a template for the expectations of the new space industry.

B. The Increased Privatization of Space

President Obama's new space policy requires a transition from using NASA vehicles for spaceflight towards relying primarily on commercial space transportation.²¹⁸ As evidenced by the discussion on antitrust law, the Federal government is not required to open itself up to competitive market forces.²¹⁹ If the American government wanted NASA to be a model for regulation, then it could legally make NASA a federal government owned space transportation monopoly.²²⁰ Nevertheless, since the

²¹⁵ See *supra* text accompanying note 176.

²¹⁶ *Id.*

²¹⁷ See *supra* text accompanying note 34.

²¹⁸ See *supra* text accompanying note 4.

²¹⁹ See discussion *supra* pp. 66-68.

²²⁰ See *supra* text accompanying note 112.

Bush administration, there has been a push for NASA to help create a commercial space transportation industry.²²¹

Private sector competition has been hailed as the panacea for the high price of space transportation.²²² First and foremost, in order to replace the shuttle program, the private sector must be capable of consistently and safely delivering the LEO transportation services. In order to be an economically viable alternative to the regulation-heavy current shuttle program, it must be able to meet the significant economic objectives of prices roughly equivalent to incremental costs, efficient production processes, and innovation.²²³

As for the capability of private companies to replace the shuttle program, they cannot—not yet.²²⁴ The COTS program gave NASA a chance to experiment with making SAAs with the private sector on a small scale. Recall that the GAO determined the purpose of the COTS SAAs was to “encourage the growth of a future U.S. commercial market in which space transportation services will be available for commercial and Government customers” and not to procure research and development for NASA.²²⁵ Now, as the COTS program winds down, hindsight reveals the successes of NASA’s COTS partners in the primary run of the program. Rocketplane Kistler was unable to meet the fourth milestone. While SpaceX has had some recent success with its Falcon 9, the company had three failed rocket launch attempts of the rocket.²²⁶ In addition to the COTS partners’ inconsistent performance, no private company has successfully launched a manned spaceship into space.²²⁷ In other words, the Obama Administration is attempting to put the future of the

²²¹ See *supra* text accompanying note 62.

²²² See discussion *supra* p. 63.

²²³ See discussion *supra* pp. 65-68.

²²⁴ See discussion p. 57.

²²⁵ See *supra* note 165 and accompanying text.

²²⁶ Stephen Clark, *SpaceX Rocket Countdown a ‘Great Success’*, SPACE.COM, Mar. 3, 2010, available at <http://www.space.com/missionlaunches/spacex-falcon9-launch-rehearsal-sfn-100303.html> (recounting SpaceX’s successful launch countdown); Tariq Malik, *SpaceX Traces Third Rocket Failure to Timing Error*, SPACE.COM, Aug. 6, 2008, available at <http://www.space.com/news/080806-spacex-falcon1-update.html> (relating the Falcon 9’s three consecutive launch failures).

²²⁷ See *supra* notes accompanying note 21.

United States space program in the hands of a market that, for all intents and purposes, does not currently exist.

Furthermore, NASA and the Obama Administration expect that opening up LEO transportation services to the private sector will result in “more scientific work in space sooner, reduc[ing] government investment, and mak[ing] long-term goals more affordable.”²²⁸ While this is a worthy goal, it is unproven that the private sector will be able to deliver these objectives more efficiently than the shuttle program. While many industries, like the airline industry, have flourished as a result of privatization, others, like the electric power industry, have been much less successful.²²⁹

Moreover, it is likely that within this new private sector initiative, a single company will develop the capabilities of supplying LEO transportation services, while the rest of the market is still developing. This would subject NASA to monopolistic pricing for some time, with the Russian government as the Agency’s alternative supplier.²³⁰ Until a private space company emerges with crew transportation capabilities, and without the shuttle, the United States will have to rely exclusively on Russia for transportation to the *ISS*.²³¹ While international cooperation with Russia with regard to the *ISS* is an admirable goal, especially compared to the countries’ poor relationships during the Cold War era, political hot button issues like Georgian independence and the Iranian nuclear weapons program could put the United States’ seats on *Soyuz* spacecraft in jeopardy.²³²

It is important to note that the current model for economic regulation seeks to lower prices, increase efficiency, and give rise to innovation.²³³ In this author’s opinion, the Obama Administration should have waited for a more viable American commercial market to develop before deciding not to extend NASA’s use of the shuttle program.

²²⁸ See *supra* text accompanying note 67.

²²⁹ See *supra* note 4 and accompanying text; see generally, David B. Spence, *Can Law Manage Competitive Energy Markets?*, 93 CORNELL L. REV. 765, 776-791 (2008).

²³⁰ See *supra* discussion accompanying note 11.

²³¹ See Verhovek, *supra* note 6.

²³² *Id.*

²³³ See *supra* text accompanying note 87.