



**The Center for Space Commerce and Finance**  
**By Jeff Krukin and Tom Olson**  
**Board Members**

**Introduction**

If you've talked with a space entrepreneur, then you know our secret; we are driven to make things different, make them better. And we insist that regardless of the many challenges, this is best accomplished by humanity moving out to our solar system.

Perhaps Lunar visionary Kraft Ehrlicke said it best in 1970: *"While civilization is more than a high material living standard it is nevertheless based on material abundance. It does not thrive on abject poverty or in an atmosphere of resignation and hopelessness. Therefore, the end objectives of solar system exploration are social objectives, in the sense that they relate to or are dictated by present and future human needs."*

John Marburger, head of the Office of Science and Technology Policy (OSTP) during the George W. Bush Administration, said this in a speech at the 2006 Goddard Memorial Symposium: *"As I see it, questions about the Vision boil down to whether we want to incorporate the Solar System in our economic sphere, or not."*

In summary, space is a place, not a government program.

**The First Act: and So It Begins**

Although best known for the NewSpace Business Plan Competition (BPC), The Center for Space Commerce and Finance (CSFC) is also the home of the Space Investment Summit (SIS\*). These two landmark events were among the first to support space entrepreneurs. (\*This was a re-imagining of the Space Business Roundtable, a mix of National Space Society Advocacy, government, and contractors like Boeing.

The first tenuous stirrings of NewSpace Business Plan Competition (BPC) planning began in 2004/2005, and it became a project of the Space Frontier Foundation with the first BPC held in 2006<sup>(1)</sup> at the annual NewSpace Conference in Las Vegas. The Heinlein Prize Trust deserves a shout-out for being our first (and frequent) sponsor.

While the BPC was oriented toward mentoring space entrepreneurs to prepare them to pitch to investors, the Space Investment Summit (SIS) addressed the flip side of the investment coin... educating potential investors about the nascent NewSpace industry and investment opportunities. As with the BPC, creating the SIS was a learning experience (neither had ever been done for space entrepreneurs).

We hit the ground running in 2007, with the first (of three that year) held at the Ritz Carlton Hotel at Battery Park in New York, featuring NewSpace-themed sessions like *An Essential Enabler of New Markets: Transportation*, *A Major Initial Market: Activity in Earth Orbit*, and *Accelerating Start-Up Space Enterprises*<sup>(2)</sup>. The second SIS was a panel discussion at the National Space Society's annual International Space Development Conference in Dallas. The third SIS was in Silicon Valley, and was actually a hybrid SIS/BPC featuring these companies giving brief pitches to the investors:



Lumedyne Technologies	UniModal Transportation Solutions
XCOR Aerospace	TGV Rockets
Masten Space Systems	Consortium Neutron Systems
Transit Space Company	Rocketplane Global

The enthusiastic response to both events demonstrated not only a need, but a real hunger for ongoing events that would nurture and support space entrepreneurs. We knew we had something... something important, something necessary... something that must go on. And so we did, limping along for the next few years on strictly volunteer support and with small prizes for the BPC.

Today, with the cadence of SpaceX and Rocket Lab commercial launches, first flights of Virgin Galactic, Intuitive Machine's lunar lander, and many startup satellite operators in LEO, it's easy to forget how difficult it was to get to this point. As we frequently hear, space is hard. But I'll wager that many space entrepreneurs will tell you that pitching to investors and raising funds is harder. Remember XCOR Aerospace, Rocketplane, Kistler Aerospace, Rotary Rocket, Pioneer Astronautics, Kelly Space and Technology, or Universal Spacelines (to name a few) from the 1980s and 1990s? Gone.

In 2011, retired USAF General Pete Worden was the Director of NASA's Ames Research Center, and he made the Space Portal facility (run by Charles Miller) available for the BPC<sup>(3)</sup> for three years. That year Ames Research Center provided \$35,000 in prize money (a \$25,000 1<sup>st</sup> prize and \$10,000 2<sup>nd</sup> prize). The Heinlein Prize Trust sponsored a \$5000 third prize.

In 2012 and 2013, Ames Research Center provided \$150,000 in funding (each year). With the enthusiastic support of Alex McDonald, Dan Rasky, and Bruce Pittman, we held two BPCs at the Space Portal. Because of this significant funding, we were able to provide a \$100,000 1<sup>st</sup> prize and \$10,000 2<sup>nd</sup> prize (with the remaining funds used for expenses), and add a day-and-a-half Boot Camp to coach the finalists and help them prepare their pitch decks. Also in 2013, ATK sponsored additional prizes<sup>(4)</sup>:

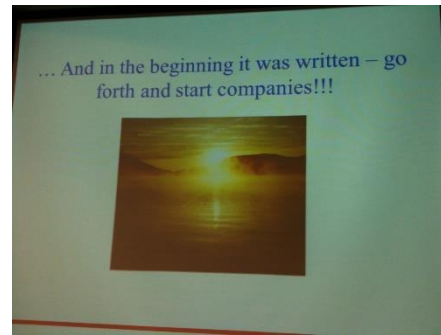
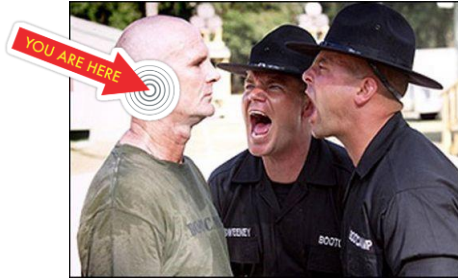
In conjunction with the NASA Emerging Space Office, ATK and the Heinlein Prize Trust, the Space Frontier Foundation is proud to announce this year's awards:

- \$100,000 Grand prize sponsored by NASA
- \$25,000 2nd prize sponsored by ATK
- \$5,000 3rd prize sponsored by NASA
- \$5,000 Market Sector prize sponsored by ATK

The Boot Camp was a vital part of BPC, and to this day we consistently receive positive feedback on even the shorter virtual Boot Camps, with finalists frequently telling us how valuable it was to participate. And you can see why, with these opening and closing slides and the agenda for the 2012 BPC Boot Camp (interspersed with each team doing multiple practice pitches after receiving feedback from each other and the coaches):



## NewSpace BPC Boot Camp



- Art of the Pitch
- Financing your startup
- Obtaining resources to grow your business
- What investors want to know: Exit Strategy
- Assessing your Business: Not Drinking Your Own Kool-aid

Here are samples of the feedback we received:

### Most useful part of Boot Camp

- Getting hammered by the coaches as a group. They have had a direct impact on how I see my own business model and this is *\*greatly\** appreciated.
- Great format. Forcing the presenters to stand and deliver to their competition is innovative and invigorating.
- Practicing pitches in front of a panel.
- Presentation practice and group coaches feedback

### Tell us how your Coach helped/hindered you and whether you would want him/her again

- *“Kevin did a superb job. In particular, he was strong at advising me in presentation of some very complex demonstration material. He earned my confidence early and often, worked like a champion, and I would be grateful for his media advice in the future. To be clear, I am very picky with whom I chose as mentors. Kevin’s advice was consistently on target, and I would definitely recommend him.”* – Jason Held
- *“Aaron is a great coach and helped distill our message down to fundamentals for clarity. Aaron’s enthusiasm and experience as a young entrepreneur were greatly appreciated.”* – Peter Matheu
- *“Mark was an amazing coach. He spent over an hour on the phone with me the week before the competition and provided feedback on the written plan. Being that familiar with my plan allowed him to provide great coaching during the Boot Camp. There was no hindrance from Mark whatsoever and I would POSITIVELY RECOMMEND him – welcome the opportunity to interact with him again at some point in the future.”* - Rick Sanford

As you can see, the funds and facility provided for three years due to Gen. Worden’s leadership had a significant positive impact. The BPC reached a new level of gravitas and respectability, and gained more visibility across the legacy space industry as ATK stepped-up to sponsor prizes for the 2013 and 2014 BPCs.



Just as the efforts to privatize the Russian Mir space station were seen by some at NASA Headquarters and legacy space companies as a threat to the proposed International Space Station, the now high-powered and industry-disrupting BPC was seen by some as a threat to the legacy space industry. Hence, word came down from on-high that Gen. Worden was to cease and desist with his support for the BPC.

As you can see, it has been a roller coaster of a ride for the BPC, with magnificent highs and devastating lows of funding. Throughout it all, our passion for moving humanity into the solar system endured... yet there's only so much you can do with a sparse bank account. Still, as measured with four criteria, the impact has been astounding.

**Criteria #1**

Funds distributed to space startups to date: ~\$400,000 to ~30 winners

**Criteria #2**

Number of companies accepted as finalists: ~121

**Criteria #3**

Number of events (BPC & SIS): 20

**Criteria #4**

Sample of finalists that have become successful\* companies:

(\*Defined as having customer revenue)

- Accion Systems (now Revolution Space)
- Altius Space Machines (acquired by Voyager Space Holdings)
- Astroscale
- BNNano
- Celestial Space Technologies GMBH
- CubeCab
- Final Frontier Design (acquired by Paragon Space Development Corp., 2022)
- Generation Orbit Launch Services (subsidiary of SpaceWorks, defense contractor)
- Kall Morris Inc.
- Rhea Space Activity
- Skylon
- Spire (previously known as Nanosatisfi)
- Terminal Velocity Aerospace

Also, since 2007, members of our network have participated in no less than 14 Space Investment Summits in both the US and Europe, setting a standard for information sharing and promotion of deal flow in the investment sector of the industry.

**The Second Act: creation of the Center for Space Commerce and Finance**

Meanwhile, both the leadership and culture of the Space Frontier Foundation was going through a massive change, and the BPC was spun out... and back into the funding wilderness we went. The solution? A new 501(c)3 educational non-profit was conceived in 2015 by Tom Olson, Michael Laine, and Meagan Crawford and established in Texas in 2016, and thus was born the Center for Space



Commerce and Finance. Its vision: communicate, capitalize, and commercialize humanity's push to settle the stars. Its mission: catalyze space commerce by educating founders and investors, and engineer financial tools for space industrialization, exploration, and settlement.

While we got our footing, the Heinlein Prize Trust continued to support us through 2019 so we could continue holding several regional BPCs across the US in conjunction with various conferences, including the Space Frontier Foundation and National Space Society annual events. In 2017 we held three events: a BPC in Salt Lake City, a BPC in St. Louis at the National Space Society's International Space Development Conference, and our first BPC at the New Worlds Conference in Austin. In 2018 we held our second BPC at the New Worlds Conference, and again in 2019.

Then came the the COVID pandemic, and every conference where we would normally sponsor a program was canceled, essentially grounding us for 2020.

In 2021, we announced a new partnership with the Foundation for the Future to hold three new all-virtual BPCs. The first was part of the Foundation's Blue Marble Week program, and the Foundation sponsored the \$5000 Grand Prize for the winner. The two subsequent all-virtual BPCs were part of the Foundation's monthly "Conversations for the Future" online conference. Due to its all-virtual nature, our finalists were no longer limited to North America. For the first time, we had finalists from Africa, the Middle East, and Australia.

Our first post-pandemic live event was in 2022 at the International Astronautical Conference in Paris, complete with a Boot Camp. This was our first live international event! The Center for Space Commerce and Finance sponsored the \$10,000 Grand Prize. Also, in 2022 (and again in 2023), we returned to the New Worlds Conference with the BPC (and Boot Camp) rebranded as Sharks in Space just for these conferences. In 2023, our \$5000 Grand Prize sponsor was Livingston Securities of New York City.

Due to our funding limitations, we've been unable to continue with day-and-a-half live Boot Camps. Still, this didn't mean the complete end of coaching, as you can see with these topics for 2023 presented during a half-day Boot Camp:

- On a Mission for Non-Dilutive capital? Pricing Strategy is Mission Critical
- Why Would Anyone Buy From You?
- What Investors Want
- Exit Strategies

We did what we could, but it certainly wasn't as topic-rich or coaching-intensive as our previous longer and in-person Boot Camps. Let's face it... the harsh reality is less funding means less support for our space entrepreneurs. And that's not only less coaching, it's also less money in their pockets.

But that wasn't the end.

### **The Third Act: the Center Enters a New Age**

We were running on fumes, but these were the fumes of a dream that stayed with us. And thanks to a generous donor who prefers to remain anonymous, the dream was once again given substantial form, and the Center begins its Third Act with \$100,000 in the bank. Even better... once we raise another



\$200,000, this donor has committed to match it, giving us a total of \$500,000. Here's how we would use these funds:

- Produce a minimum of four BPCs with full-length Boot Camps and two SISs over a two-year period
  - This includes continuing our global expansion with BPCs at the 2024 International Astronautical Congress (IAC) in Milan, and in Sydney in 2025
- Major website refurbishment
- Recruit interns
- Hire an Executive Director
- Trailblazing Space-startup Bootcamp Educator program for teachers
- "Summer Space Externships" at established NewSpace companies to connect them to/in the industry
- Publish white papers
- Produce a monthly video podcast and blog
- Further develop marketing channels to include social media podcast platforms

### **Help US Nurture Space Entrepreneurs**

Now, \$100,000 sounds like a lot of money... it is a lot of money!... but look again at how we want to use it and ask yourself, "Is it enough?" You know the answer... it isn't, not by a long shot.

So how will you contribute to our \$200,000 goal (leading to another \$200,000 from our generous sponsor)? But first, why would you make a tax-deductible contribution? A fair question, and here are my answers:

- If you are an investor, space startups are the key to commercially-driven space markets, and, as you read above, the Center has played a vital role in nurturing these entrepreneurs
- If you are an established space corporation, do what ATK did: fund BPC prizes targeted at startups that fit your business strategy
- If you are a climate change and/or sustainability philanthropist, satellites are critical to remedying the problems that you care about, and space startups are driving the use of satellites for this purpose
- If you are a veteran or currently serve in the armed forces, then you are attentive to and care about national security and intelligence matters, and you know that space is increasingly a competitive geopolitical domain
- Even if you do not fit one of the above categories, don't feel left out. For example, does your business rely on satellites? Does your company develop AI/ML or cyber technology? These are being used in the space industry.

How would your contribution be used?:

- Provide for operational expenses
- Sponsor our website refurbishment
- Sponsor Summer Space Externships
- Sponsor a Space Investment Summit
- Sponsor a Business Plan Competition
- Sponsor a Business Plan Competition Boot Camp
- Sponsor the space-startup Bootcamp Educator program for teachers



- Bring us your ideas; what is important enough to you that you would fund it?

All sponsorships will be acknowledged and receive visibility on all our platforms, and within their sponsored activities.

### **Conclusion**

Space is our future, and right now there is tremendous entrepreneurial motion towards that future. The Center for Space Commerce and Finance has a 15-year successful “flight heritage” in helping many deserving startups/early-stage companies get investor attention, traction, and find a path to the next level. But as a non-profit, the Center always needs support from many sources keep our great programs and new initiatives humming along, so this is a call to action. You too, can take that action.

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### **REFERENCES**

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