

EVA Interviews Will Pomerantz about the Google Lunar X PRIZE

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Welcome to the second in a series of Lunar Editions of EVA Interviews: The Business of the new Space Age™. In the first of this series, EVA went directly to the source and [interviewed the Moon](#) about its expectations for future lunar commercial activities. Coming back down to Earth, this next interview focuses on the organization whose actions and incentives are helping to make business on the Moon a reality. My guest is [William Pomerantz](#) Senior Director of Space Prizes for the X PRIZE Foundation. With 19 teams now entered into the competition for the Google Lunar X PRIZE, these contestants and this prize are at the forefront of expanding commerce beyond Earth, and to the Moon.

EVA: Hi Will, I'm delighted to have you here at EVA Interviews and Out of the Cradle. I often assume that everyone is familiar with the [Google Lunar X PRIZE](#), as you have received a great deal of publicity so far. In case that assumption is incorrect (or as a refresher, if true), could you please tell us how the Google Lunar X PRIZE came in existence and what the [X PRIZE Foundation](#), and [Google](#), are hoping to achieve with this prize?

Will Pomerantz: Happy to be here! The Google Lunar X PRIZE was first announced in September of 2007, but work on the prize began more than a year prior to that. A Lunar X PRIZE had been one of our top targets for a new space-related X PRIZE ever since we started thinking about follow-on projects to the Ansari X PRIZE, and we were actually hired by NASA to conduct a study of such a potential prize in the summer of 2006. A few months of study confirmed our suspicion that a Lunar X PRIZE would likely provide a sufficient incentive for teams to do some pretty remarkable things—even though at the time we were talking about a smaller prize purse that would be available only to American teams. This data was also backed by an independent study conducted for NASA by a well respected engineering firm.

So, we were quite confident that a Lunar X PRIZE would be technically feasible and that it would have a significant impact, and there were individuals within NASA who were extremely keen on having NASA fund the purse. But the process of finding the funds was non-trivial, to say the least, so we started also looking at other sources of funding. Around this time, we discovered that the co-founders of Google—who are both supporters of the X PRIZE Foundation—were interested in lunar missions... and [the rest is history](#).

As for what we hope to accomplish: I could talk about that for ages. But to quickly summarize, we are hoping to:

- spur the development of a new generation of vehicles that can explore the Moon for 1/10th of the cost of previous lunar missions

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- inspire people around the world to get interested in and excited about lunar exploration in particular and Science, Technology, Engineering, and Mathematics in general
- and open the door to new industries and markets for lunar commerce that we haven't even begun to dream of yet.

We think we're helping to open a new era of lunar exploration—"Moon 2.0"—that will have a much greater level of participation and, as a consequence, will be much more sustainable than the first Moon race.

EVA: The fact that you already have 19 teams participating (none of which are, or are allowed to be, government funded) is revealing of that interest, desire for participation, and the determination of the team members!

What is your role Will, and that of the X PRIZE Foundation/Google Lunar X PRIZE Organization, while the teams work towards the prize?

Will Pomerantz: One thing I really enjoy about my job is that my specific responsibilities really change a lot throughout the course of a given prize lifecycle. I'm a graduate of the [Masters program](#) at the [International Space University](#), and I've been fortunate enough to find a job where I really use the interdisciplinary nature of my education. At various points in a prize, my job involves engineering (developing a prize concept, evaluating registration applications, writing the prize rules), business development (sizing the prize purse, establishing the expiration date, writing the rules), law (writing the Master Team Agreement), education (ongoing), public outreach (ongoing), fundraising (ongoing), and more. It keeps me from ever getting bored.

At this point in the Google Lunar X PRIZE, we're really focused on three main things.

- We try to find ways to fairly and responsibly help all of our teams accomplish their missions.
- We use the prize as an educational tool to get people inspired about space travel, and to help people realize how they can directly benefit from the technologies and capabilities that will arise from the competition.
- And we work to spread the word of the competition to people of all ages, all around the planet.

I'm in charge of a very small team that is absolutely devoted to doing all of those things (and to running our other space prize, the [Northrop Grumman Lunar Lander Challenge](#))—right now, there are only two of us, though we have job openings for two more.

EVA: *Job openings? Readers – if you have the skills and the passion, perhaps you might want to apply!* 😊

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“Competition” is a word many people seem to dislike. Yet competition is an integral part of nature, and of human nature. It brings out the best in (most of) us – our creativity, our innovation, our passion, our capacity for hard work and our sense of play or fun. What do you think are the most important aspects of competition and how are you seeing these emerge so far in the Google Lunar X PRIZE?

Will Pomerantz: You are right in that “competition” and, even more so, “competitive” are somewhat loaded words that don’t always evoke the most positive emotions. But at the same time, some of the best of human endeavours have been fuelled by competition. Anyone who has played competitive sports, for example, knows that competition can push us farther and faster than if we are left to ourselves.

One of the key things that make incentive prizes in general demonstrate the “good” kind of competitiveness, I think, is that fact that the sense of competition is bolstered by a set of shared goals. For the most part, although each of the teams competing for something like the Google Lunar X PRIZE certainly wants to win, their top goal is actually just to see the prize won. They do not want to succeed at the expense of their fellow teams—instead, they want to make a contribution to a growing industry. It’s because of this that we often see extraordinary cross-fertilization between teams, where these innovators and entrepreneurs are freely sharing ideas, lessons, and even equipment with their competitors in an effort to stimulate rapid progress.

EVA: I think that must be one of the most exciting aspects of your position, to get those early glimpses and insights, into the cross-fertilization of ideas and strategies. I’m very interested to see the developing commercialization aspects! Anything you can share with us about those? By the way, do you know if any of the cross-fertilizations from the [Ansari X PRIZE](#) have had a lasting or residual effect?

Will Pomerantz: We’ve seen a number of examples, large and small. Some of the best ones have come from the Northrop Grumman Lunar Lander Challenge, which is probably the most open competition we’ve run to date, in terms of the way the teams share data. I think Armadillo Aerospace—one of the first teams to sign up for that competition, and the only one to claim a prize thus far—helped to set that tone by being incredibly open with the community at large, including their fellow competitors, from Day One. In addition to their highly detailed blog, they also communicate directly with others at Team Summits, via email, and on public mailing lists. A number of our other teams in that Challenge do the same. Through these various media, they directly share ideas: here’s what worked, here’s what didn’t, here’s the results of our latest tests, here’s our hypothesis, here’s a trustworthy supplier we’ve found. It’s even been carried to the point where teams are sharing equipment and are even selling products to each other!

We also see some of this happening on places like the [Google Lunar X PRIZE online forum](#). That venue doesn’t have quite the level of quality we’d like it to have—and we’re working on ways to change that—but on several occasions, I’ve

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seen ideas evolving in real time thanks to conversations there. The “spiral rover” thought experiment that team SELENE has blogged about recently, for example, originated with someone’s questions and suggestions on the forum. I think the amount to which we see this will only increase as we acquire more and more Open Source advocates both on our teams and in our online communities.

Lastly, we’re seeing some fertilization between prizes. Look at a group like the Google Lunar X PRIZE team Synergy Moon. They are made from the combination of two of our Google Lunar X PRIZE “Letter of Intent” teams, plus one of our Ansari X PRIZE veterans, InterOrbital Systems.

EVA: Will, Thank you very much for giving us an overview of the Google Lunar X PRIZE and for sharing the observations you’ve gleaned from your insider position! As you and I have discussed, our next step in the Lunar Editions of EVA Interviews: The Business of the new Space Age™ is to interview the teams. Your colleague, Nicole Jordan, will soon be sending out five questions (identical) for each Google Lunar X PRIZE team to answer. I will look very forward to posting their replies as we receive them back. I hope all of the teams will participate! They are engaged in an exciting, unique opportunity. The process of trying to create a successful lunar enterprise is one we will be very interested to learn about!

One last question for you: Assume we are continuing this conversation as we bounce around Moon, ([*See FAQs](#), but since this interview is part of the Lunar editions, bouncing would be more representative of a lunar EVA than floating) what impact and additional actions would you or the Google Lunar X PRIZE like to have taken to make the vision of Moon 2.0, or our exodus out of the cradle, a reality?

Will Pomerantz: X PRIZES are all about proving unproven technologies and unproven markets. In an ideal world, the Google Lunar X PRIZE will have done exactly that. Moon 2.0 is going to be much more diverse than the first era of lunar exploration, both in terms of the people that are involved and the markets and missions that are served—which ultimately will make it much more sustainable. We hope that our prize will really open the eyes of people all around to world to the potential of Moon 2.0.

Investors need to learn that there are practical business markets for commercial lunar services; kids need to see that careers in STEM fields can be a heck of a lot of fun; space agencies need to see that commercial companies can help them accomplish their agency’s goals under budget; and tax payers need to get excited about their contributions to publicly funded space exploration once again. On top of that, hopefully this prize and the stories that come out of it will reach and inspire people we’ve never even considered as audiences for lunar exploration, and they will come up with creative ideas of how to both contribute to and benefit from further exploration of the Moon and beyond.

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EVA: Thank you so much again Will! We look forward to hearing from the teams and following all of your progress!

For those readers who love Twitter (like Will and I do) you may want to follow the Google Lunar X PRIZE at [@glxp](#), Will [@pomerantz](#) (and EVA [@EVA_interviews](#)) or read their updates at [The Launch Pad](#), their blog.

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