



HAKUTO

Google
LUNAR XPRIZE

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For Immediate Release:

TWO GOOGLE LUNAR XPRIZE TEAMS ANNOUNCE RIDESHARE PARTNERSHIP FOR MISSION TO THE MOON IN 2016

Team HAKUTO (Japan) and Team Astrobotic (U.S.) Plan Cooperative Launch in Pursuit of \$30 Million Prize to Land a Private Spacecraft on the Lunar Surface

TOKYO, Japan (February 24, 2015) – HAKUTO, the only Japanese team competing for the [\\$30 million Google Lunar XPRIZE](#), has announced a contract with fellow competitor, Astrobotic, based in Pittsburgh, Pa., to carry a pair of rovers to the moon. Astrobotic plans to launch its Google Lunar XPRIZE mission on a SpaceX Falcon 9 rocket from Cape Canaveral, Fla., during the second half of 2016. HAKUTO's twin rovers, Moonraker and Tetris, will piggyback on Astrobotic's Griffin lander to reach the lunar surface. Upon touchdown, the rovers will be released simultaneously with Astrobotic's Andy rover, developed by Carnegie Mellon University, travel 500 meters on the moon's surface and send high-definition images and video back to Earth, all in pursuit of the \$20M Google Lunar XPRIZE Grand Prize.

Last month, both teams were awarded Google Lunar XPRIZE Milestone Prizes: HAKUTO won \$500,000 for technological advancements in the Mobility category, while Astrobotic, in partnership with Carnegie Mellon University, won a total of \$1.75M for innovations in all three focus areas—Landing, Mobility and Imaging. Throughout the judging process, all three rovers, Moonraker, Tetris and Andy, demonstrated the ability to move 500 meters across the lunar surface and withstand the high radiation environment and extreme temperatures on the moon.

This partnership between the teams demonstrates a new phase of collaboration within the Google Lunar XPRIZE competition. Both sides will benefit with HAKUTO obtaining a ride to the moon and Astrobotic securing an important customer for its long-term lunar delivery service venture. This joint contribution would be reflected in a share of the prize purse.

The target area for this landing will be the Lacus Mortis region, located in the northeastern part of the moon. Images from spacecraft orbiting the moon suggest that Lacus Mortis holds a pit or a skylight, and could potentially be an entrance to a lunar cave. These caves are thought to be lava tubes and could prove scientifically important in explaining the moon's volcanic past. Longer-term, they have potential to house habitats that would protect humans from the hostile lunar environment.

Google Lunar XPRIZE and Astrobotic representatives joined HAKUTO yesterday at the National Museum of Emerging Science and Innovation in Tokyo to announce the partnership and report on the recent Google Lunar XPRIZE Milestone Prize awards.

"I am very excited to announce this rideshare contract with Astrobotic", said Takeshi Hakamada, HAKUTO team leader and CEO of ispace. "This is the next major step for HAKUTO toward our lunar mission after we won the Mobility Milestone Prize. This contract enables HAKUTO to actually send our rover to the moon, which is important because HAKUTO is only concentrating on rover development. Astrobotic Technology is developing a lander which has capability to open up a new era of lunar transportation services, and I have no doubt that they will be the first team to land on the moon."

"Astrobotic is thrilled to welcome HAKUTO aboard our first mission," said John Thornton, CEO of Astrobotic Technology Inc. "We envision a 'NASCAR on the Moon' scenario, where competing teams land together, and countries can cheer on their team to the finish line. HAKUTO is the first team signed to fulfill our dream of the first race beyond Earth's orbit."

"We are delighted that two of our teams have engaged in this partnership for their Google Lunar XPRIZE missions," said Andrew Barton, director of technical operations, Google Lunar XPRIZE. "Stimulating new business ecosystems is one of the core goals of any XPRIZE competition, and this joint venture is an excellent example of how humanity's commercial and economic interests will expand into space in the coming years. This announcement builds on the progress seen during the recent Google Lunar XPRIZE Milestone Prize awards, and we look forward to the teams furthering this momentum with the news of a confirmed launch contract."

This past December, the [deadline](#) for the Google Lunar XPRIZE was officially extended until December 31, 2016. This partnership between HAKUTO and Astrobotic is a positive step towards fulfilling the criteria required for all teams to move forward in the competition, which includes at least one team providing documentation of a scheduled launch by December 31, 2015.

About Astrobotic

Astrobotic Technology Inc. is a space logistics company that delivers payloads to the moon for companies, governments, universities, non-profits and individuals. Astrobotic's spacecraft accommodates multiple customers on a single flight, offering flexibility at an industry-defining low price. Astrobotic is a NASA contractor, and is also an official partner with NASA on the Lunar CATALYST program. With its partner, Carnegie Mellon University, Astrobotic is pursuing the \$30M Google Lunar XPRIZE and is planning to launch the first mission in 2016. Astrobotic was founded in 2008 and is headquartered in Pittsburgh, Pa. For more information, visit <https://www.astrobotic.com>.

About HAKUTO

HAKUTO, operated by ispace technologies, Inc., is the only team from Japan competing for the \$30M Google Lunar XPRIZE. The development of the Moonraker and Tetris rovers is led by Professor Kazuya Yoshida (Prof. at Tohoku University and CTO of ispace technologies, Inc.). For more information, visit <http://team-hakuto.jp/>.

About HAKUTO's Pre-Flight Model Rovers

HAKUTO has developed a small and lightweight dual-rover system, utilizing Japanese expertise in miniaturization. HAKUTO also rigorously tested and incorporated many off-the-shelf commercial products to keep costs to a minimum, in order to fulfill the requirements of the \$30M Google Lunar XPRIZE.

About the Google Lunar XPRIZE

The \$30M Google Lunar XPRIZE is an unprecedented competition to challenge and inspire engineers and entrepreneurs from around the world to develop low-cost methods of robotic space exploration. To win the Google Lunar XPRIZE, a privately funded team must successfully place a robot on the moon's surface that explores at least 500 meters and transmits high-definition video and images back to Earth. For more information, visit <http://lunar.xprize.org/>.

About the Google Lunar XPRIZE Milestone Prizes

XPRIZE and Google have incorporated Milestone Prizes into the Google Lunar XPRIZE in order to reward teams who achieve key milestones on their way to ready their subsystems for launch. The Milestone Prizes, totaling \$6M, are for demonstrating (via actual testing and analysis) robust hardware and software to overcome key technical risks in the areas of Imaging, Mobility and Lander systems—all necessary to achieve a successful Google Lunar XPRIZE mission. For more information, visit <http://lunar.xprize.org/about/milestone-prizes>.