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SPACEX: REVOLUTIONIZING ACCESS TO SPACE

**Abstract**

SpaceX is among a select group of companies that is redefining space exploration. The company is only 10 years old but has already established itself as one of the most innovative and disruptive forces in the launch services industry. In September 2008, SpaceX made history when its Falcon 1 launch vehicle became the first privately developed liquid-fueled launch vehicle to reach Earth orbit. Less than a year later, the Falcon 1 placed into orbit its first commercial payload: Malaysia's RazakSat satellite. SpaceX built upon the successes of the Falcon 1 with the inaugural flight in June 2010 of its larger launch vehicle, the Falcon 9. Six months later, SpaceX launched the Falcon 9 again, on its first demonstration mission for NASA's Commercial Orbital Transportation Services (COTS) program. For this mission, Falcon 9 confirmed its capabilities and inserted into orbit the company's Dragon spacecraft, which was also designed and developed in-house by SpaceX. The company again made history as Dragon returned to Earth and SpaceX became the first private company to ever recover a spacecraft from Earth orbit. This paper provides an update on the Falcon 9 launch vehicle and Dragon spacecraft capabilities. In addition, status of the Falcon Heavy launch vehicle and other developments currently in work will be discussed.