

The New Mexico Computing Applications Center (NMCAC) while located in the Southwest, is located in a non-traditional aerospace industrial complex and has deep roots in the aerospace and the space race efforts as a result of White Sands Missile Range and its expansion on V2 rocket R&D and testing which led the US into the space race. As well as three key Air Force Bases, Lovelace Space Medicine Center, and the "Star Wars" and Ballistic Missile Defense Systems efforts related to national defense.

New Mexico hosts a number of leading aerospace companies exploring both commercial and military aircraft applications as well as applications outside of our atmosphere. These companies have capabilities in rotorcraft, electronic and defense systems, missiles, rocket engines, satellites, launch vehicles and advanced information and communication systems.

The list reads as a Who's Who of fifty three companies, Boeing, Honeywell International, Lockheed-Martin, Northrop Grumman, Raytheon, TRW, SAIC, and many other companies. The reach of these companies extends to over a 145 other countries.

The engineering and scientific applications attributed to these companies range from -

- Computational fluid dynamics
- Finite element methods
- Thermal analysis
- Lead-edge composites materials
- Structural designs
- Stress analysis to mention just a few applications

The NMCAC and the Encanto high-performance computing system is ideally suited to provide the computing capabilities of the complex challenges of these applications and market segment, with a 172 TFlops of compute power and suitable storage capabilities, as well as the support talent to provide assistance and a new look at these applications with its partnerships to the National Labs and three world-class universities. Encanto is currently being used in a number of aerospace related applications.

The most recent development following on the X-Prize achievements, visionaries are developing both vertical and horizontal launch vehicles, this time stimulated by the power of free-market enterprise. As the world's first purpose-built commercial spaceport, Spaceport America, located in Southern New Mexico, is designed with the needs of the commercial space business in mind. Unique geographic benefits and the tradition of New Mexico space leadership are coming together to create a new way to travel into space.



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