

## DESIGN INTELLIGENCE INC. (DII)

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### NASA's moon walk still inspires Oklahoma aerospace engineer

When astronaut Neil Armstrong stepped onto the surface of the moon on July 20, 1969, more than 125 million Americans were watching, including a certain preschooler from Atoka.

A young James Grimsley was glued to the family's black-and-white television set as Armstrong made history with his one small step for a man, one giant leap for mankind.

The televised image of the first men to walk on the moon was a pay-it-forward moment for NASA. It sparked interest in all things related to science, technology, engineering and mathematics (STEM) for Grimsley and millions of other young Americans.

Grimsley's interest never waned.

Today, Grimsley is an aerospace engineer with undergraduate and graduate engineering degrees from the University of Oklahoma.

"I am a product of the Apollo era," Grimsley, 50, said. "Even as a very young kid, I recognized how significant the moon landing was. It had a huge impact on STEM education. That's why I've always been a strong proponent of NASA constantly pushing the envelope of discovery."

Grimsley also is CEO of a Midwest City-based company called DII LLC, which he founded to pursue innovative new technologies for unmanned aerial vehicles, or drones.

DII explores alternative power sources such as solar that can be converted to energy to keep drones in flight much longer than current technology. The company's Eternas D Solar drones promise hours of uninterrupted flight on clear, sunny days.

Applied research grants from the Oklahoma Center for the Advancement of Science and Technology, or OCAST, early in DII's history provided "bridge" funding that helped the company subsequently be awarded millions of dollars in federal Small Business Innovation Research (SBIR) grants. DII has been awarded four Phase 1 SBIR grants and two SBIR Phase 2 grants.

Grimsley calls OCAST a "hidden jewel" for Oklahoma with a value that far exceeds its role as a funding source.

"The biggest value of OCAST is that it is a one-stop shop for information for a business like DII that is trying to navigate the complexities of the federal government or commercial sector," he said. "It has



always been the single phone call we can make to get the answer or be directed to the right people. And it is working to diversify Oklahoma's economy."

Before starting on the entrepreneur's path, Grimsley worked as a civilian engineer for the Air Force at Tinker Air Force Base and was later an Assistant Vice President at Science Applications International Corporation. He also is co-founder of the Unmanned Systems Alliance of Oklahoma, a statewide organization promoting unmanned aerial vehicle or UAV research.

Grimsley predicts drones will have a major impact on weather research, helping scientists make faster, more accurate forecasts that will save lives. OU and Oklahoma State University are testing how drones assess conditions in the lower atmosphere more precisely, he said.

"I think we are going to do ground-breaking work with weather research in the next five years," he said. "It's exciting because we are going to be able to analyze the lower levels of the atmosphere in a very controlled and safe way. For this application, UAVs are going to be transformative."

Grimsley first developed an interest in unmanned flight in the 1980s, not long after NASA ended the Apollo program and moved on to the Space Shuttle.

"A lot of us longed for the next big thing," he said. "I started to realize that unmanned aerial systems is kind of the next leap in innovation and technology in aviation."NASA's Apollo program is still paying it forward.

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