ENERGY EDITOR

UNMANNED territory

State leaders are poised to launch drone research, development efforts

Above: Warren Thomas, managing partner of Tinker Business and Industrial Park, talks during the meeting about drone research and development in Oklahoma while pointing to a map of Green Valley Farms near Lexington.

PHOTOS BY PAUL B. SOUTHERLAND, THE OKLAHOMAN/ ILLUSTRATION BY CHRIS SCHOELEN THE OKLAHOMAN GRAPHICS

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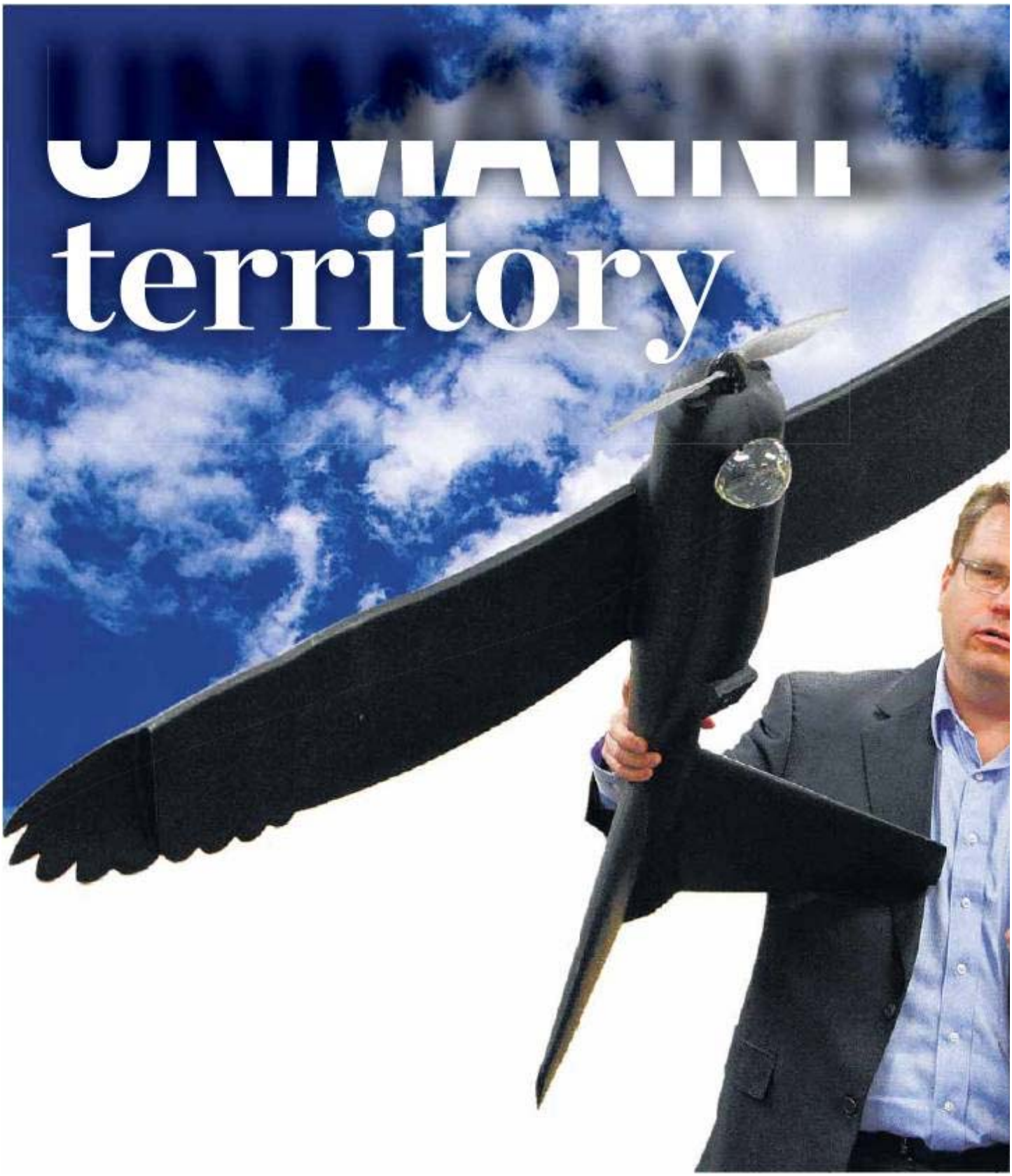

Top: James Grimsley, president and CEO of Design Intelligence Incorporated, holds up an MK4 mode tunnel tests while talking during an April 28 meeting at the Tinker Business and Industrial Park.

With restrictions expected to soon ease on one of the country's newest industries, a group of Oklahoma business and state leaders are preparing to

take full advantage of what they call the newest land rush.

“We have all these companies lined up, ready to go into the unassigned territory of commercial airspace, and we’re waiting for the starting gun ” said Stephen McKeever, the state’s secretary of science and technology.

Unmanned aircraft, or drones, are poised to quickly move from the military domain to an array of commercial applications. For now, however, the industry is restrained by strict Federal Aviation Administration regulations that ban most business use. Unmanned aircraft have become increasingly inexpensive and available throughout the country. Remote controlled helicopters with mounted cameras are available for less than $100. Any 10-year-old who’s grown up on a PlayStation can handle even the most difficult operations. But what a 10-year-old can do for fun is illegal for almost any commercial application. FAA regulations allow for business use only when the aircraft is controlled by an FAA-certified pilot. If the aircraft travels out of sight, it must stay in range of ground observers with Class 2 Medical Certification.

“The FAA is treating these like manned aircraft ” said Warren Thomas, managing general partner of the Tinker Business and Industrial Park. “The companies I’ve been in contact with have used a four-pound foam aircraft

— something a 12-year-old kid could operate — but it took six people, including two FAA pilots”

And if the four-pound plastic toy were to crash, the FAA requires the same treatment as if it were a manned aircraft.

Safety, privacy concerns

In recent months, the FAA has sent cease-anddesist notifications and threatened litigation against businesses throughout the country that have tried to use drones in commercial applications.

Earlier this month, the agency said it would investigate an Arkansas TV station that used an unmanned aircraft to shoot video of tornado damage.

The main concerns are safety for the country’s existing air traffic system and

concerns over privacy, as many of these aircraft will include cameras or infrared sensors.

The FAA has said it will begin relaxing unmanned aircraft restrictions later this year.

The process likely will be completed in phases beginning with rural areas and moving into cities.

Drones in Oklahoma

To best take advantage of the reduced restrictions, the Tinker Business and Industrial Park has created the Unmanned Systems Innovation Center, which will test business and other uses for drones in the state. The center is focusing on uses in agriculture, oil and natural gas pipelines, utilities, emergency first responders and weather forecasting.

“When the Air Force began to train more pilots on unmanned systems than manned systems, that was the acid test in what the future holds” Thomas said. “We became convinced that what we need is a sense of place, a place you can congregate and collaborate different elements of an industry in a single location ”

The research center hopes to build on the experience the state already has enjoyed with unmanned aircraft.

The U.S. Department of Homeland Security in 2012 chose Oklahoma for its unmanned aircraft testing and training facility.

The Oklahoma Training Center-Unmanned Systems facility near Elgin tests systems to aid in public safety drone missions.

The state last year missed out on becoming home to one of six FAA test sites for unmanned aircraft.

“The state plan we have developed and outlined did not include being selected as an FAA test site. We did make the effort because we could see it would be an added bonus, but the fact we were not selected is not going to

deviate us from the strategy we started upon ” McKeever said.

“We have worked with other federal agencies. We are looking at discussions with FAA and Homeland Security about the next phase of the Homeland Security test program ”

While McKeever and his team had hoped the state would be selected for an FAA site, he said there are some advantages to having been passed over.

“Those six test sites will be focused on developing technologies and procedures for safe integration into the national airspace ” McKeever said. “We can now focus on the application of the technology. We will develop the applications and be in position to take advantage of that when it opens up”