

Map-maker's last startup: Combat zones. This startup: Suburban homes

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[Randy Milbert](#)'s first tech startup guided soldiers through rugged off-road terrain before it was sold to [Polaris Industries Inc.](#) in 2013. His latest startup has a new mission: helping county assessors navigate constantly changing neighborhoods.

Milbert launched tech company Pushpin in 2015 after spending about two years at Polaris, where he led development of technology such as trail-finding mobile apps for off-road vehicle riders. Milbert joined Polaris after it [bought his previous company](#), St. Paul-based Primordial. That [business made navigation software for the military and built a crowd-sourced mapping application](#).

Primordial generated roughly \$2 million in annual revenue leading up to sale to Polaris. Terms of that deal weren't disclosed.

Milbert left Polaris with the goal of launching another startup, returning to a challenge he faced while developing Primordial's technology: the need to quickly extract accurate data from maps.

"A routing algorithm is only as good as the underlying data," he said. "At Primordial, we dabbled in techniques to automatically extract data from imagery. At Pushpin, we made that our prime focus."

Milbert isn't going after the military market this time, however. Instead, the Minneapolis-based company is plucking and analyzing data from aerial photos of properties. It uses artificial intelligence and other technology to determine how newer aerial images differ from older photos. The process can reveal key changes to properties, such as whether a homeowner built an addition.

County assessors — Pushpin's target market — use such information to determine whether a property's value may have increased.



ERIC MUELLER

Randy Milbert, founder and CEO of Pushpin

Pushpin is now starting to ramp up marketing after launching its product at a recent trade show. About a half-dozen counties have used the technology on a trial basis so far. Two of those are now paying customers, Milbert said.

The company's competitors include aerial-imagery company [Pictometry International](#), a subsidiary of Bothell, Wash.-based [Eagle View Technologies](#) Inc. Pictometry offers a service that generates change reports, revealing alterations to properties. However, much of the work is done by hand, making turn-around times long, Milbert said. Pushpin aims to compete by turning its reports around faster — often within five days or less — and at a lower cost. The company sells its product as a service, rather than a software tool that customers use independently.

Many aerial-photography vendors offer image-processing and interpretation services, some of which are more accurate than others, said Eric Bails, chief technology officer at the assessor's office in Maricopa County, Ariz. Maricopa — the fourth-largest county in the U.S. by population and 13th largest by geography — has tested out Pushpin's services on a trial basis.

Pushpin's use of artificial intelligence and machine learning make it unique in the market, Bails said. "It's that machine learning that shows a lot of potential. The more data their system crunches, the better it's going to get."

Pushpin's ability to turn around image analysis quickly also is important, as counties routinely have to meet tight and legally mandated deadlines, he said.

Milbert expects Pushpin will focus on the property-assessment market in the near term. However, he sees opportunities to expand into other industries. For instance, even hedge funds could analyze images of parking lots to track shopper traffic — and in turn revenue — at retailers.

Milbert has self-funded Pushpin so far, but may consider outside investment in the future.



Katharine Grayson
Senior Reporter
Minneapolis / St. Paul Business Journal