



the **American**
Surveyor

MAY/JUNE 2021

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JAVAD GNSS

One year on

History of RTK

Research breakthroughs

Augmentation

Satt-based corrections

MAKING THINGS RIGHT

MISSION PLANNING AT JAVAD GNSS

Following the passing of industry icon and JAVAD GNSS founder Dr. Javad Ashjaee last year, many are wondering about the future of his namesake endeavor and some of the more recent technologies developed over the arc of his 40+ year career.

From the beginning, Javad's passion consumed every aspect of the organization. It's not a stretch to draw parallels to Apple and the late Steve Jobs—a boundary-pushing multi-decade relationship between a brand and technology mastermind, beset by an untimely passing—leaving many to question whether the firm could continue innovating in the absence of its visionary founder.

In either case, the potential for derailment had far reaching consequences.

Both firms held a wide array of patents and other developments in various stages; in Javad's case, products of a restless mind bent on wringing every last bit of computable precision and accuracy out of the global navigation satellite system.

Still, the question remains whether the company can navigate such a juncture—what to do without Javad?

» MARC CHEVES, PS

**NEDDA
ASHJAEI**
CEO

“If you can see the path ahead of you, you’re likely treading someone else’s track.”

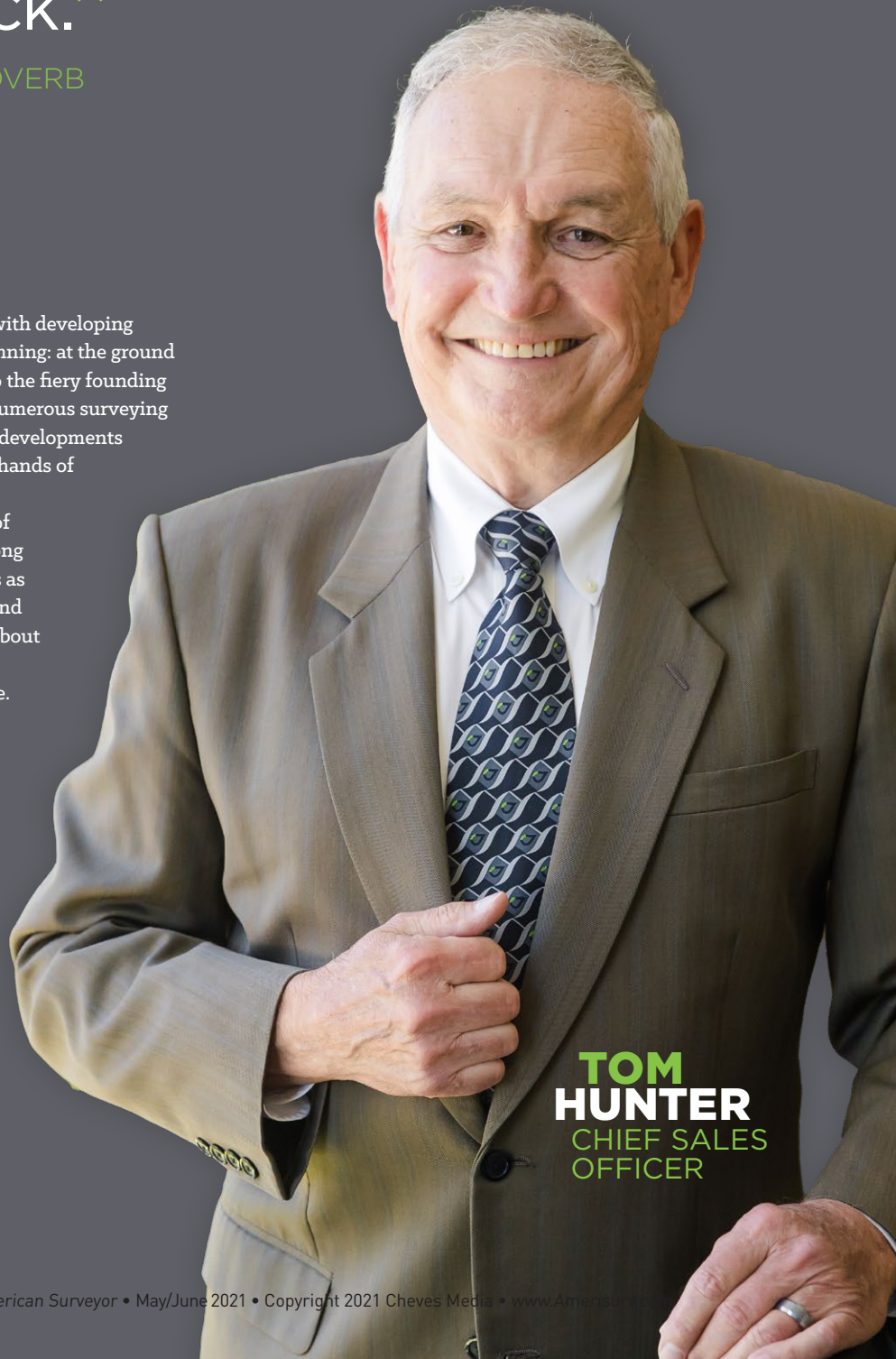
—AMERICAN PROVERB

Succession Planning

As we’ve detailed before¹, Javad was involved with developing GPS for surveying and mapping from the beginning: at the ground level with Charlie Trimble in the 1980s, on into the fiery founding of his first namesake firm, Ashtech, charting numerous surveying industry firsts, and laying the groundwork for developments that would eventually place his designs in the hands of surveyors around the world.

Over the years Javad retained a close circle of confidants and talented lieutenants, chief among them daughter Nedda, who has taken the reins as CEO. Through multiple phone conversations and Zoom sessions we learned much from Nedda about the company’s forward plans that affect more than 200 employees in offices around the globe.

After burying her father, one of Nedda’s first action items was to put product development on a brief pause. With a 100+ person engineering operation—many personally mentored by Javad—this was important as some time had passed since the company had formally revisited its company roadmap. Of equal importance was a review of the many standing contracts and agreements. “Previously, we rarely went after anyone,” Nedda explained, speaking of potential infringements on contracts common to a global enterprise. “Good agreements prevent problems, they shouldn’t create them.”



**TOM
HUNTER**
CHIEF SALES
OFFICER



900 Rock Avenue, home to JAVAD GNSS operations in the USA. In the heart of California's Silicon Valley, the company headquarters contains vast manufacturing facilities that run 24/7.

“My father’s curiosity was endless, something he instilled in all of us... there’s always something we can enhance or do better.”

—NEDDA
ASHJAE

Nedda has held various roles in the JAVAD group of companies for more than 30 years (since Ashtech) and is familiar to all who conduct business with the firm. For a brief period, she departed to UCLA to acquire a Bachelor of Science degree in Biology, returned to Javad’s side full-time in 1999, and subsequently acquired an MBA at Santa Clara University. By 2009 the firm had expanded in both Russia and San Jose. At the time Javad announced that “Silicon Valley was back to build,” unveiling impressive OEM/board manufacturing lines, rare for a stateside operation, that have since quadrupled production.

As CEO and a proud mother of her two boys Nedda, who was born in Iowa, confided, “My father’s curiosity was endless, something he instilled in all of us; that and the refusal to be satisfied with current development because there’s always something we can enhance or do better.”

Mission Planning

A key component of this year’s restructuring involved the hire of long-time lieutenant

Tom Hunter, who returned to the firm as Chief Sales Officer in January 2021. Prior to a short retirement to care for his aging parents, Tom’s history with Javad goes back to December 1987 as one of seven members of the founding team at Ashtech and continuing through all three companies. Prior to joining Ashtech, Tom had an illustrious career in the aerospace and mapping industries. His company, Hunter Systems, subcontracted with Rockwell Collins, one of the first GPS satellite and equipment manufacturers.

“After a couple years,” said Tom, “I realized that retirement is not all that it’s cracked up to be—Nedda’s offer of joining a newly built J-CORE team was too good to pass up.” Nedda added, “Tom is key to our operations. I am looking forward to re-igniting this group of companies and continuing our four-decade tradition of bold innovation. Who better to do this with than the person who helped my father build the original company in the first place?” Tom will oversee sales channel development in support of an all-new market-driven roadmap developed by J-CORE.

The J-CORE team has spent the last 12 months restructuring the business plan. According to Nedda the emphasis has been on technology and innovation. A large library of patents has been generated, GNSS development has continued, and the company has an engineering team that was personally mentored by Javad.

In a virtual gathering of global JAVAD dealers, technicians, and other personnel, Nedda mentioned Walter Isaacson's biography of Einstein, one of Javad's heroes. Isaacson reveals that innovators aren't necessarily extra smart or powerful, but rather that they have endless curiosity. Javad's unique Cinderella Program that allows a user to satisfy their own curiosity by trying out a feature before purchasing it has been successful. The majority of users who try it end up buying the product.

Javad's enduring goal was to make his gear the "iPhone of GNSS." With that in mind, he once told us that he believed in the power of online sales. We argued (fancy that, for those of you who knew him) that most surveyors wanted in-person demos, questions answered and general handholding, at least when it came to robust survey systems. Javad argued that while this may have been the case 20 years ago, his vision with the Triumph-LS² was many years ahead, modeled in tribute of the touchscreens so many of us have come to utilize. The interface Javad developed for the Triumph was in itself unprecedented, opening a world of previously hidden commands, features, even the act of surveying itself, to any surveyor willing to make the leap. The system could be purchased directly, via the website, same as an iPhone.

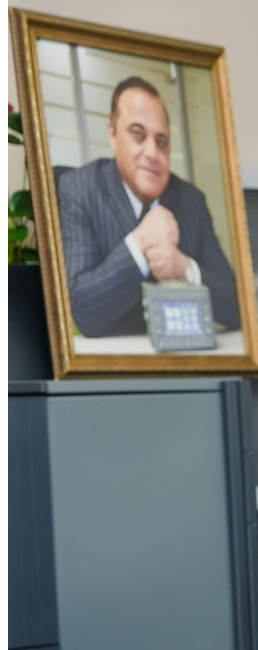
The company is poised to compete in the new economy. They are signing up new dealers, the latest being in Taiwan. Virtual



Dr. Javad Ashjaee, 1941-2020

workshops are held the last Thursday of every month and are developing all the online tools today's customers demand. From Javad's tireless efforts to make GLONASS an everyday tool to a receiver that will do everything a surveyor wants to do, he left the company in excellent shape, ready to face the future.

"If you're a surveyor or other positioning professional working with GNSS, you owe a debt of gratitude to Javad,"



“Those who speak of GNSS maturation show the limits of their imagination.”

—JAVAD
ASHJAEI



San Jose (California)-based production continues for a wide range of OEM applications, prime for strategic partnerships and private labeling.

said Tom. “The man dedicated his life to developing GNSS for the high precision marketplace. You can see his hand in nearly every major GNSS survey system on the market today.”

He went on to say, “As we continue to develop and introduce new products in support of the surveying and reference station markets, we will use our exceptional technology and our US-based

world-class manufacturing facility to focus on new OEM applications and opportunities including strategic partnerships and private labeling.” Tom added, “We will expand our dealer distribution network for more global presence and establish a US distribution channel with qualified businesses.”



Triumph-LS, Javad’s 864 channel RTK surveying masterwork, the culmination of 40+ years of precision GNSS innovation.

“If you’re a surveyor or other positioning professional working with GNSS, you owe a debt of gratitude to Javad.”

—TOM HUNTER

The (unwritten) rules of the market

Those that knew Javad quickly developed a sense of his complexity, a duality born of considerable struggle and once-in-a-generation ability. Geomatics professionals are fortunate that he opted to focus his considerable talents on precision GNSS. Javad once remarked “Those who speak of GNSS maturation show the limits of their imagination.” From the beginning, it was about the challenge. The world has lost a remarkable innovator although his designs live on, unencumbered and supported by a team with an intuitive understanding of the marketplace, poised to support those that utilize them. ■

Marc Cheves is editor emeritus of the magazine.

¹ https://archive.amerisurv.com/PDF/Professional_Surveyor_Magazine_Javad_Interview.pdf

² https://archive.amerisurv.com/PDF/TheAmericanSurveyor_Garner-TriumphLSReview_August2017.pdf