



Good evening, FANs! Well, this week, we're on time. The FANs Weekly Summary comes to you on its customary Friday evening and, for that, I'm personally proud to say. You see, it's taken the week to get back to a bit of a normal routine after a beautiful "big, fat, Greek wedding". Manny's son, Constantine married the love of his life, Jule Swerbinsky in a beautiful ceremony held at the Greek Orthodox church in Charlottesville, VA. Mother nature did us well for the entire weekend and everyone, yes everyone was all smiles, and we watched two families, the Swerbinskys and the Simantiras become one. What an amazing time for us! A few photos of the event will follow at the end of this communicate. But, with that, we sincerely hope that this finds you all well, healthy, and enjoying these first official days of summer 2022! In this issue, you'll find an eclectic mix of articles...not necessarily focused on a particular issue, but instead ones that we found to be of interest to us...and hopefully to you! So, sit back, relax, and "enjoy the [literary] trip!"

The real key to a strong password? Math

written and contributed by the Artemus Publishing Team

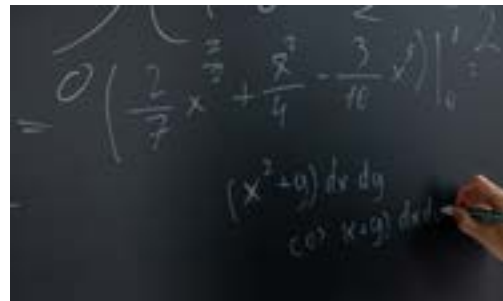
It's hard to imagine that three random words have the power to both map the globe and keep your private data secure. The secret behind this power is just a little bit of math.

What3words is an app and web-based service that provides a geographic reference for every 3-meter-by-3-meter square on Earth using three random words. If your brain operates more naturally in the English measurement system, 3 meters is about 9.8 feet. So, you could think of them as roughly 10-foot-by-10-foot squares, which is about the size of a small home office or bedroom. For example, there's a square in the middle of the Rochester Institute of Technology Tigers Turf Field coded to brilliance.brilliance.brilliance.inputs.

This new approach to geocoding is useful for several reasons. First, it's more precise than regular street addresses. Also, three words are easier for humans to remember and communicate to one another than, say, detailed latitude and longitude measurements. This makes the system well suited for emergency services. Seeing these advantages, some car manufacturers are starting to integrate what3words into their navigation systems.

ORDERED TRIPLES

Here's how three random words in English or any other language can identify such precise locations across the whole planet. The key concept is ordered triples.



Start with the basic assumption that the Earth is a sphere, recognizing that this is an

approximate truth, and that its radius is approximately 3,959 miles (6,371 kilometers). To compute the surface area of the Earth, use the formula $4\pi r^2$. With $r = 3,959$ (6,371), this works out to approximately 197 million square miles (510 million square kilometers). Remember: What3words is using 3-meter-by-3-meter squares, each of which contains 9 square meters of surface area. So, working in the metric system, Earth's surface area is equivalent to 510 trillion square meters. Dividing 9 into 510 trillion reveals that uniquely identifying each square requires around 57 trillion ordered triples of three random words.

An ordered triple is just a list of three things in which the order matters. So "brilliance.brilliance.inputs" would be considered a different ordered triple than "brilliance.brilliance.inputs." In fact, in the what3words system, brilliance.brilliance.inputs is on a mountain in Alaska,

not in the middle of the RIT Tigers Turf Field, like brilliance.bronze.inputs.

The next step is figuring out how many words there are in a language, and whether there are enough ordered triples to map the globe. Some scholars estimate there are more a million English words; however, many of them are very uncommon. But even using only common English words, there are still plenty to go around. You can find many word lists online.

The developers at what3words came up with a list of 40,000 English words. (The what3words system works in 50 different languages with independently assigned words.) The next question is determining how many ordered triples of three random words can be made from a list of 40,000 words. If you allow repeats, as what3words does, there would be 40,000 possibilities for the first word, 40,000 possibilities for the second word, and 40,000 possibilities for the third word. The number of possible ordered triples would then be 40,000 times 40,000 times 40,000, which is 64 trillion. That provides plenty of “three random word” triples to cover the globe. The excess combinations also allow what3words to eliminate offensive words and words that would be easily confused for one another.

PASSWORDS YOU CAN ACTUALLY REMEMBER

While the power of three random words is being used to map the Earth, the U.K. National Cyber Security Centre is also advocating their use as passwords. Password selection and related security analysis are more complicated than attaching three words to small squares of the globe. But a similar calculation is illuminating. If you string together an ordered triple of words – such as brilliancebronzeinputs – you get a nice long password that a human should be able to remember far more easily than a random string of letters, numbers and special characters designed to meet a set of complexity rules.

If you increase your word list beyond 40,000, you’ll get even more possible passwords. Using the “Corncob list” of 58,000 English words, you could generate more than 195 trillion “three random word”-style passwords.

It’s important to note that there are a fair number of trade-offs among the different approaches to

password selection and complexity rules. So, while “three random words” doesn’t give you a fail-safe for password security, the complexity of language does provide some amazing power in this realm as well.

AI’s Answer to Mass Shootings

contributed by FAN, Bill Amshey

With little Congressional progress on gun control, some envision next-generation weapons detection technologies as a deterrent to mass shootings, Joann reports.

Why it matters: If authorities could use artificial intelligence to quickly spot guns or identify potential shooters, they might be able to head off tragedies like the recent mass shootings in Uvalde, Texas, Buffalo, N.Y. and Oxford, Mich.

Given the nationwide spate of shootings over this past weekend, such solutions are more urgent than ever. Yes, but: Critics say AI surveillance systems are ineffective.



They also worry about other issues, including the technology’s record of bias, particularly against people of color.

How it works: Some companies are promoting AI technologies as a less obtrusive and more effective alternative to metal detectors and similar systems.

Evolv uses ultra-low frequency electromagnetic fields and advanced sensors to detect concealed weapons as people walk through a portal.

The high-speed screening system is already in use at sports arenas, entertainment venues and theme parks, the Washington Post reported.

North Carolina’s Charlotte-Mecklenburg school system is installing the scanners for \$1.7 million over three years.

It’s not foolproof, however: Evolv’s system generated false positives from some laptops, according to one analysis.

Hexwave, developed at a Massachusetts Institute of Technology lab, is a similar system using 3D imaging and AI.

It can detect both metallic and non-metallic objects, like 3D printed guns, and plastic or liquid explosives. It can also recognize ordinary objects like cell phones, wallets or keys, says Bill Frain, CEO of Liberty Defense Holdings, which licenses the technology. Trials will begin in August at five locations, including Toronto's Pearson International airport and Baltimore's Oriole Park at Camden Yards. ZeroEyes, used by schools in 18 states, integrates its AI software with existing surveillance cameras to identify guns in a camera's field of view.

Images are reviewed by a trained military veteran for verification.

Within about five seconds, ZeroEyes will issue an alert to school authorities, providing a description and location of the threat — often before any shots are fired, cofounder Mike Lahiff tells Axios.

The big question is whether these systems will prevent future shootings.

A "Weekly Chuckle" from FAN, Steve Jones



Why science teachers should not be given playground duty.

SR-71 Pilot tells the story of when his RSO Flipped Off a French Air Force Mirage III Pilot (Then They lit their Blackbird's Afterburners and Outran him)

contributed by FAN, Steve Page



One of the most entertaining stories about flying the SR-71 Blackbird comes from Lt. Colonel Jim Wilson who shares about a particular mission he flew with RSO Bruce Douglas over Lebanon back in 1982.

No reconnaissance aircraft in history has operated globally in more hostile airspace or with such complete impunity than the SR-71, the world's fastest jet-propelled aircraft. The Blackbird's performance and operational achievements placed it at the pinnacle of aviation technology developments during the Cold War.

During its operational lifetime, the SR-71 provided intelligence about the Yom Kippur War in 1973, the Israeli invasion of Lebanon in 1982, the US raid on Libya in 1986 and the revelation of Iranian Silkworm missile batteries in 1987. The USAF ceased SR-71 operations in January 1990.

One of the most entertaining stories about flying the SR-71 comes from Lt. Colonel William Burk Jr., who shares about a particular mission he flew [according to SR-71 pilot Stormy Boudreaux, Tom Henichek was Burk's RSO for that mission] over Lebanon back in 1982.

'In the fall of '82, I flew from Mildenhall on a mission over Lebanon in response to the Marine barracks bombing. President Reagan ordered photo coverage of all the terrorist basis in the region. The French refused to allow us overfly, so our mission profile was to refuel off the south coast of England, a Mach 3 cruise leg down the coast of Portugal and Spain, left turn through the Straits of Gibraltar, refuel in the Western Mediterranean, right turn into Lebanon and fly right down main street Beirut, exit along the



southern Mediterranean with another refueling over Malta, supersonic back out the straits, and return to England. Because Syria had a Soviet SA-5 missile system just west of Damascus that we would be penetrating (we were unsure of Syria's intentions in this conflict), we programmed to fly above 80,000 feet and at Mach 3 plus to be on the safe side, knowing that this advanced missile had the range and speed to nail us.

'As we entered Lebanon's airspace my Recon Systems Officer in the rear cockpit informed me that our defensive systems display showed we were being tracked by that SA-5. About 15 seconds later we got a warning of active

guidance signals from the SA-5 site. We couldn't tell whether there was an actual launch or the missile was still on the rails, but they were actively tracking us. We didn't waste any time wondering, but climbed and pushed that throttle, and said a couple of "Hail Kellys."

'We completed our pass over Beirut and turned toward Malta, when I got a warning low-oil-pressure light on my right engine. Even though the engine was running fine I slowed down and lowered our altitude and made a direct line for England. We decided to cross France without clearance instead of going the roundabout way.

'We made it almost across, when I looked out the left window and saw a French Mirage III sitting ten feet off my left wing. He came up on our frequency and asked us for our Diplomatic Clearance Number. I had no idea what he was talking about, so I told him to stand by. I ask my backseater, who said, "Don't worry about it. I just gave it to him." What he had given him was "the bird" with his middle finger: I lit the afterburners and left that Mirage standing still. Two minutes later, we were crossing the Channel.'

Click [HERE](#) to watch the video!

What FANs Are Buying

contributed by Artemus founder, Robert Wallace

Pictured right is Al Joe Wallace, brother of Artemus founder Robert Wallace, standing next to a new water well, stock tank and solar powered water pump on their jointly owned cattle pasture near Barnard, Kansas.

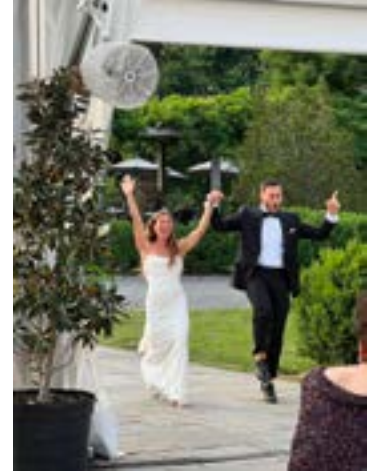


Resume: Sadruddin Rezaye

Sadruddin Rezaye and his family arrived in the US as a refugees last fall after the US withdrawal of military support of the Afghanistan government. After have worked for several months in a non professional position, he is now is looking for as an entry level accountant or financial opportunity for which he has substantial qualifications as reflected in his attached resume. Mr. Rezaye's contact information is included in the resume or contact me at artemuscg@yahoo.com and I can affect an introduction. Your review of the resume and any referrals would be sincerely appreciated. - Bob Wallace

View Mr. Rezaye's resume [HERE](#)

A Few Photos from the Wedding of Constantine Simantiras and Julie Swerbinsky, June 11



THIS WEEK IN THE ARTEMUS WEBSITE'S "ARTEMUS SPOTLIGHTS" PAGE



[These rechargeable batteries are more sustainable](#)



[MIT Researchers Discover New Flaw in Apple M1 CPUs That Can't Be Patched](#)



[China says it may have detected signals from alien civilisations](#)



[Authorities Shut Down Russian RSOCKS Botnet That Hacked Millions of Devices](#)



Thanks for reading! See you again in a couple of weeks!