

Facebook spent more than \$22m (£19.4m) on Mark Zuckerberg's personal security in 2018 – more than double the amount spent the previous year, records have shown.

First black hole image: What can we really see?

Not a photo

This week, scientists produced the first real image of a black hole, in a galaxy called Messier 87.

The image is not a photograph but an image created by the Event Horizon Telescope (EHT) project, the Guardian wrote.



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Using a network of eight ground-based telescopes across the world, the EHT collected data to produce the image. The black hole itself is unseeable, as it's impossible for light to escape from it; what we can see is its event horizon. The EHT was also observing a black hole located at the center of the Milky Way, but was unable to produce an image. While Messier 87 is further away, it was easier to observe, due to its larger size.

Event horizon

The golden ring is the event horizon, the moment an object approaching a black hole reaches a point of no return, unable to escape its gravitational pull. Objects that pass into the event horizon are thought to go through spaghettification, a process, first described by Stephen Hawking, in which they will be stretched out like a piece of pasta by gravitational forces.

Hole in the center

Heino Falcke, professor of radio astronomy and astroparticle physics at Radboud University in Nijmegen, and chair of the EHT science council, says the image shows a silhouette of the hole against the surrounding glow of the event horizon, all of the matter being pulled into the hole. At the center of the black hole is a gravitational singularity, where all matter is crushed into an infinitely small space.

How big is the black hole?

The black hole lies 55 million light years away from us. It is around 100 billion km wide, larger than the entire solar system and 6.5 billion times the mass of our sun.

What does this mean for physics?

Through creating an image of a black hole, something previously thought to be impossible, the EHT project has made a breakthrough in the understanding of black holes, whose existence has long been difficult to prove. The image will help physicists to better understand how black holes work and images of the event horizon are particularly important for testing the theory of general relativity.

Giant Stratolaunch jet flies for first time in California

A giant six-engine aircraft with the world's longest wingspan completed what company officials called a superb initial flight over California's Mojave Desert, bringing to life a dream held by the late Micro-soft cofounder Paul G. Allen.

Stratolaunch Systems Corp. Chief Executive Jean Floyd said Saturday the aircraft made a "spectacular" landing that was on the mark. The Associated Press reported.

Stratolaunch, which was founded by Allen, is vying to be a contender in the market for air-launching small satellites. He died in October.

"It was an emotional moment for me, to personally watch this majestic bird take flight, to see Paul Allen's dream come to life in front of my very eyes," Floyd told a teleconference briefing.

Floyd said that as the plane lifted off, "I did whisper a 'thank you' to Paul for allowing me to be part of this remarkable achievement."

The behemoth, twin-fuselage Stratolaunch jet lifted off from Mojave Air and Space Port shortly before 7 a.m. Saturday and climbed into the desert sky 70 miles (112 kilometers) north of Los Angeles. The jet flew two-and-a-half hours, achieving a maximum speed of 189 mph (304 kph) and altitudes up to 17,000 feet (5,181 meters), the company said.

Test pilot Evan Thomas of Scaled

Composites LLC, which built the aircraft, said the flight overall was "fantastic" and for the most part the plane flew as predicted.

"The airplane very nicely, smoothly rotated and really just lifted off the ground," he said. "It definitely was ready to fly and wanted to fly and climbed out quickly."

meters) — a longer wingspan than any other aircraft.

At an altitude of 35,000 feet (10,668 meters), the rockets would be released, ignite their engines and soar into space.

The advantages of such air-launch systems include being able to use numerous airports and avoid the limitations of fixed launch sites which can

Stratolaunch dropped plans to develop its own type of rocket engine and a family of launch vehicles, focusing instead on getting the giant plane airborne and launching Northrop Grumman's proven Pegasus XL.

The Stratolaunch aircraft emerged from its Mojave hangar for the first time in May 2017 and proceeded through ground tests, including taxiing and rolling down a runway at near-takeoff speeds.

Powered by the same type of engines used by Boeing 747s, the aircraft is designed to take off at a maximum weight of 1.3 million pounds (589,676 kilograms). Its twin fuselages — sort of the airplane equivalent of a catamaran — are 238 feet (72.5 meters) long.

The previous wingspan leader was Howard Hughes' World War II-era eight-engine H-4 Hercules flying boat — nicknamed the Spruce Goose. Surviving in an aviation museum, it has an approximate wingspan but is just under 219 feet (67 meters) long.

While Stratolaunch calls its aircraft the world's largest, other airplanes exceed it in length from nose to tail. They include the six-engine Antonov AN-225 cargo plane, which is 275.5 feet (84 meters) long, and the Boeing 747-8, which is just over 250 feet (76.3 meters) long.



GENE BLEVINS/REUTERS

The world's largest airplane, built by the late Paul Allen's company Stratolaunch Systems, makes its first test flight in Mojave, California, the US, on April 13, 2019.

Thomas said there were "a few little things that were off-nominal but really for a first flight it was spot-on." He did not specify what those things were, and briefing participants did not take questions.

The aircraft is designed to carry as many as three satellite-laden rockets at a time under the center of its enormous wing, which stretches 385 feet (117

be impacted by weather, air traffic and ship traffic on ocean ranges.

Allen, the cofounder of Microsoft, founded Stratolaunch Systems Corp. in 2011 after emerging in aerospace by funding the development of the experimental air-launched SpaceShipOne, which in 2004 became the first privately built manned rocket to reach space. After Allen's death in October 2018,

ly 320-foot (97.5-meter) wingspan but is just under 219 feet (67 meters) long.

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Microsoft webmail services breached by hackers with support agent's credentials

Hackers compromised Microsoft's web-based email services, including Outlook.com accounts and MSN and Hotmail addresses, for months by using a customer support agent's credentials.

In an email sent to affected users, Microsoft said that the hackers were possibly able to access email addresses, subject lines of emails, folder labels,

The hackers were able to carry out the security breach, which happened from January 1 to March 28, by compromising the credentials of a customer support agent. Microsoft has identified the credentials that the hackers used and disabled them.

Microsoft warned that affected users may receive more spam emails, and

theft purposes.

It is unclear how many users were hit by the data breach, and who the hackers behind the attack are. It appears that at least some of the affected accounts are from the European Union, as Microsoft is offering the contact information for the EU's data protection officer.

"Please be assured that Microsoft takes data protection very seriously and has engaged its internal security and privacy teams in the investigation and resolution of the issue, as well as additional hardening of systems and processes to prevent such recurrence," Microsoft said in the letter.

The attack on Microsoft webmail services follows a much bigger data breach that was discovered in January. Troy Hunt, the security researcher behind Have I Been Pwned, found what is now known as Collection No. 1. The assemblage of data contained more than 773 million records, including more than 21 million unique passwords, across 12 separate folders, with a total size of 87GB.

It might not be as bad as Collection No. 1, but people with Microsoft web-based email accounts should still follow the recommendation and change their password, just to be safe.



GERARD JULIEN/AFP

and the names of other email addresses that the user contacted, digitaltrends.com reported.

Fortunately, the content of emails, including attachments, were not compromised, nor were login credentials such as passwords.

may be on the receiving end of phishing attempts. Affected users should stay vigilant against such attacks, and are still advised to change their passwords even if the contents of their emails were not compromised because hackers may be able to use the addresses for identity

Samsung Galaxy Note 10: Not all models will be created equal

Samsung typically launches a number of different versions of its flagship Galaxy S smartphone model.

In the past, this has included a separate curved "Edge" model, like the Galaxy S6 Edge, while the latest generation divides up into three: Galaxy S10e, Galaxy S10, and Galaxy S10 Plus, T3 magazine reported.

However, in recent years, Samsung has avoided releasing different models of its flagship Galaxy Note series. Until now.

According to a new report out of South Korea, Samsung looks set to follow the lead of its Galaxy S10 series and launch multiple models of the Galaxy Note this year.

Sources speaking to ET News claimed Samsung is hoping to replicate the success it has enjoyed with the new entry-level Galaxy S10e, which ditches a few features found on the pricier Galaxy S10 to bring down the SIM-free price of the handset.

The so-called Galaxy Note 10e looks set to sport the same 6.4-inch AMOLED display found on the Galaxy Note 9 launched last year, while the costlier Galaxy Note 10 will boast a more expansive 6.7-inch display.

Aside from the Galaxy Note 10e and Note 10, the report from ET



IP/TIC

News claimed we could also see two distinct variations on the 5G-enabled Note 10, too. For those who failed GCSE maths, that brings the total number Note 10 models set to launch this year to four. That's a lot of extra choice.

The 5G-enabled models will purportedly differ on screen size, 6.28-inches and 6.75-inches, as well as the number of cameras in the rear-mounted system, with one favoring a triple-camera that sounds very similar to the Galaxy S10 Plus, while the other will top for the depth-sensing quadruple version set to launch on the S10 5G.

Elsewhere, the devices will

remain pretty much in sync with the other two Note 10 models, the report claimed. We're likely to see the new models powered by the latest-generation Qualcomm Snapdragon 855 system-on-a-chip or the Exynos 9820, depending on region.

There's some debate about whether the rear-mounted camera will rotate to double-up as the selfie camera, like the Samsung Galaxy A80, too.

As always, none of this is set in stone until Samsung mobile chief DJ Koh makes the announcement on-stage in August. Before then, expect to hear a flurry of additional reports and rumors on the forthcoming flagship.