

# TechLife

## NEWS

**STAR WARS VIII  
THE LAST JEDI**

THE MOST HIGHLY ANTICIPATED  
FILM OF THE YEAR

**UNIVERSITY  
THINKS BIG**

IN SMALL SPACES WITH  
TINY CLASSROOM

# BITCOIN

FUTURES SOAR AMID FRENZY OVER VIRTUAL CURRENCY



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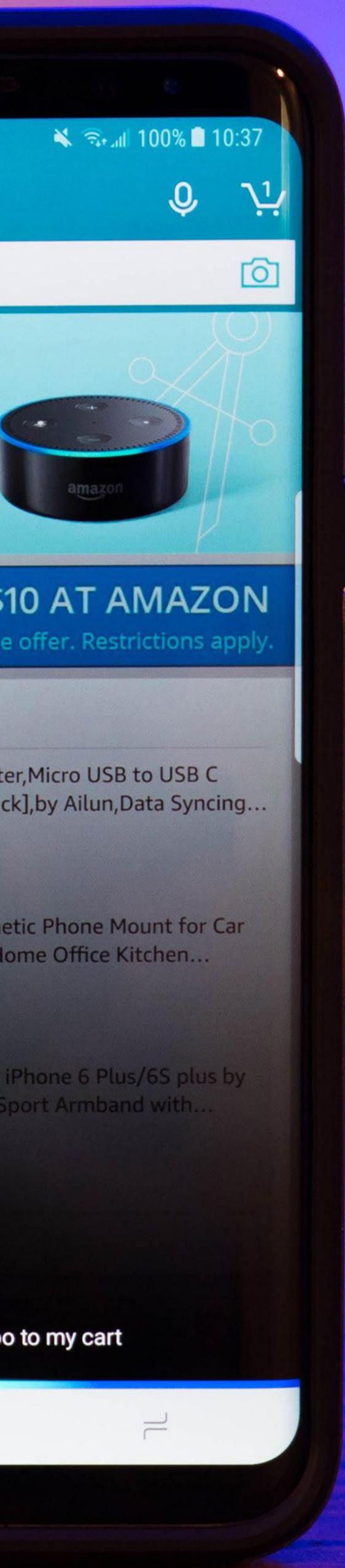


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# ALEXA, CAN I DO MY HOLIDAY SHOPPING THROUGH YOU?

It was a few weeks before Christmas and time to put my voice assistant to the test: Could I just shout out the gifts I needed to buy without having to get on a smartphone or computer?

Alexa, the virtual assistant inside my Echo Dot, is really good at reordering stuff I already bought on Amazon. But asking it to order new items was trickier: I had to be precise and know exactly what I wanted to buy. There were times I had to rephrase orders until it could understand me. And other times I just gave up and went to my phone to make an order.

Voice shopping is supposed to be the future, and Amazon — which was far ahead of its competitors in offering it — has pushed customers to use it this holiday season by offering earlier access to deals that way. Other

retailers are betting on voice shopping, too: Walmart, Target and dozens of others have teamed up with Google to sell merchandise through the technology company's voice-activated devices.

Shopping by voice has some pitfalls — like hindering the ability to research options and comparison shop for the best price, or changing your mind about something in your cart.

**Amazon.com** Inc. said “shopping with Alexa is really exciting” but it is still early on, and that it “continually learns and adds more functionality.” And Alexa did try to be helpful, sending photos to my smartphone or suggesting other products.

## PLAYING WITH WORDS

Toilet Trouble, the board game that sprays water on players from a plastic toilet, was on top of my niece's wish list. But Alexa didn't know what it was at first. When I said, “Alexa, order me Toilet Trouble,” it responded: “Amazon doesn't have the Toilet Trouble you previously bought.” I wasn't sure what that was about — I hadn't bought the game before and searched my past orders to make sure I wasn't mistaken.

Alexa offered to sell me another game called Yeti. “Would you like to buy it?” it asked. I said no, but it was pushy: “OK. You know, seeing is believing. Would it help to view this on Joseph's phone?” It sent me a link to the listing for Yeti through the Alexa app, but I still didn't want it. I tried another way to ask for the game: “Alexa, order me the Toilet Trouble board game.” That worked, and the \$10.76 game was at my door two days later.









## BUNGLED BOOK BUYING

I moved on to a children's book: "Alexa, order 'Should I Share My Ice Cream?'" It thought I needed my caffeine fix and tried to reorder something from Starbucks. So I asked in a different way: "Alexa, order the book 'Should I Share My Ice Cream?'" It again tried to buy something from Starbucks. On my third try I included the author's name, Mo Willems. That still confused Alexa: "I'm not quite sure how to help you with that."

I gave up and bought the book using my phone. This was a good illustration of how voice shopping can be slower than scanning a site and clicking.

## QUICK COOKER ORDERING

This was fast and easy: "Alexa, order me an Instant Pot Mini." It recognized the brand and size right away, gave me the price of the pressure cooker and asked if I wanted to buy.

## NO SWEATER FOR ME

Voice shopping is not for browsers. There was a blue cashmere sweater I had seen on Amazon that I wanted to buy, but couldn't remember the brand. "Alexa, order navy blue cashmere sweater." It read me the top result, but it was a women's sweater. I asked again, specifying it was for men. This time, Alexa wanted me to reorder a navy blue hoodie I bought in March.

Analysts have said voice shopping can work best when you don't have strong preferences about what brand of batteries or detergent you buy. In this case, I did care. So I'll buy the exact sweater I want from the app.

# 'MANNEQUIN SKYWALKER' RIDES BLUE ORIGIN'S NEW CREW CAPSULE

Blue Origin's 'Mannequin Skywalker' has rocketed almost all the way to space, just in time for the new Star Wars movie.

The aerospace company led by Amazon's Jeff Bezos launched its New Shepard rocket Tuesday from West Texas for the seventh time. It marked the first flight, though, of the latest version of Blue Origin's crew capsule, featuring big windows for future space tourists.

An instrumented test dummy was aboard, named Mannequin Skywalker and dressed in a blue — naturally — flight suit.

"He had a great ride," Bezos said via Twitter.



Image: Blue Origin





Image: Blue Origin







The New Shepard rocket, named after the first American in space, Alan Shepard, landed back on the ground following the 10-minute suborbital flight. The capsule reached a peak altitude of 99.39 kilometers above sea level or 61.7 miles, just shy of the 100-kilometer or 62.1-mile mark that's considered the start of true space.

Besides Mannequin Skywalker, the capsule carried a dozen experiments, including an Arduino Nano electronic computer board, designed and programmed by Colorado schoolchildren, and student artwork.

"Star Wars: The Last Jedi" opens in theaters Friday.

**Online: Blue Origin**



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# UNIVERSITY THINKS BIG IN SMALL SPACES WITH TINY CLASSROOM

Saint Francis University is digging into the tiny house trend as part of its Energy Technology and Policy program.

The typical American home is about 2,600 square feet, whereas the typical small or tiny house is between 100 and 400 square feet.

Saint Francis' tiny classroom, built in a shell purchased from 84 Lumber, is 160 square feet.

"The idea is to utilize the tiny house model to educate students and the community about renewable energy, efficient living and producing a smaller environmental footprint," said Allison Rohrs, director of the Institute of Energy at Saint Francis.





The tiny house is officially parked on campus with support from the Community Foundation for the Alleghenies and the West Penn Power Sustainable Energy Fund.

It's powered by six 280-watt solar panels that work even on rainy days. But it also can be electrically charged.

The tiny house consumes between 200 and 300 kilowatt hours per month, compared with a typical home that uses between 1,000 and 1,500 kilowatt hours, Rohrs said.

It's heated by a biomass wood stove that uses wood pellets for fuel. It relies on energy sources that are replenishable rather than fossil fuels, Rohrs said.

The Saint Francis University Institute for Energy's new tiny classroom serves as an educational resource for students on campus and surrounding communities. The house is on wheels, so it can be transported by a pickup truck.

To help support the unit in its travels to schools and events throughout the state, the Institute for Energy was recently awarded a \$20,000 grant from Constellation Energy. SFU was one of only 18 projects nationwide to receive a grant.

The tiny house trend is a growing movement that has inspired six national TV shows, according to the Associated Press. The tiny homes have been promoted as the solution to all kinds of housing needs — shelter for the homeless, an affordable option for expensive big cities and simplicity for people who want to declutter their lives, the AP has reported.



84 Lumber in Cresson started selling shells for tiny homes two years ago, company tiny homes sales coordinator Amanda Schmeltzer said.

Schmeltzer said the company has sold more than 20 shells to people in Pennsylvania, California, New York and Maryland.

She said people use them as “Airbnbs” and as backyard homes for their elderly parents.



The current interest in small houses follows a steady growth in the median size of homes, from 1,200 square feet in the 1940s to about 1,860 square feet in this decade.

As home sizes spiraled up, tiny house pioneers in the 1990s began promoting the austerity and frugality of spaces smaller than most garages.

The idea captivated millions of Americans, even those who remain in more spacious accommodations, the AP reported.

Penn State University also is exploring the trend.

The Penn State tiny home projects offer students of many disciplines the chance to gain hands-on experience with material re-use, advanced design and prefabrication, and solar energy systems, said David Riley, professor of the Department of Architectural Engineering.

“Tiny homes address design challenges that are important in many facets of buildings. They require you to essentialize space and be creative so you can reduce size, cost and expense,” Riley said.

“They also enable us to work with super-efficient energy and water systems, which are critically important in all buildings.”



# JUSTICE DEPARTMENT CONFIRMS CRIMINAL PROBE IN UBER CASE

UBER  
SelfDrivingUber

A recent letter from the U.S. Attorney's office confirms that the Justice Department has opened a criminal investigation connected to allegations that a former Uber executive stole self-driving car technology from a Google spin-off to help the ride-hailing service build robotic vehicles.

The letter unsealed Wednesday by a federal judge marks the Justice Department's first acknowledgement of the probe. The criminal investigation was mentioned in court hearings two weeks ago, but the Justice Department had declined to comment.

The U.S. Attorney's office in San Francisco unsuccessfully tried to keep its letter disclosing the investigation under seal to protect the inquiry's integrity.

The Nov. 22 letter didn't identify the targets of the investigation or the nature of the possible



Image: Eric Risberg



crimes. Google spin-off Waymo has alleged that one of its top self-driving car engineers, Anthony Levandowski, stole its trade secrets before founding a startup that he sold to Uber for \$680 million last year.

Uber has adamantly denied the allegations. Levandowski has exercised his right against self-incrimination while being questioned under oath in the case. Uber fired him in May for refusing to abandon that constitutional right and declining to cooperate with the company's defense against Waymo.

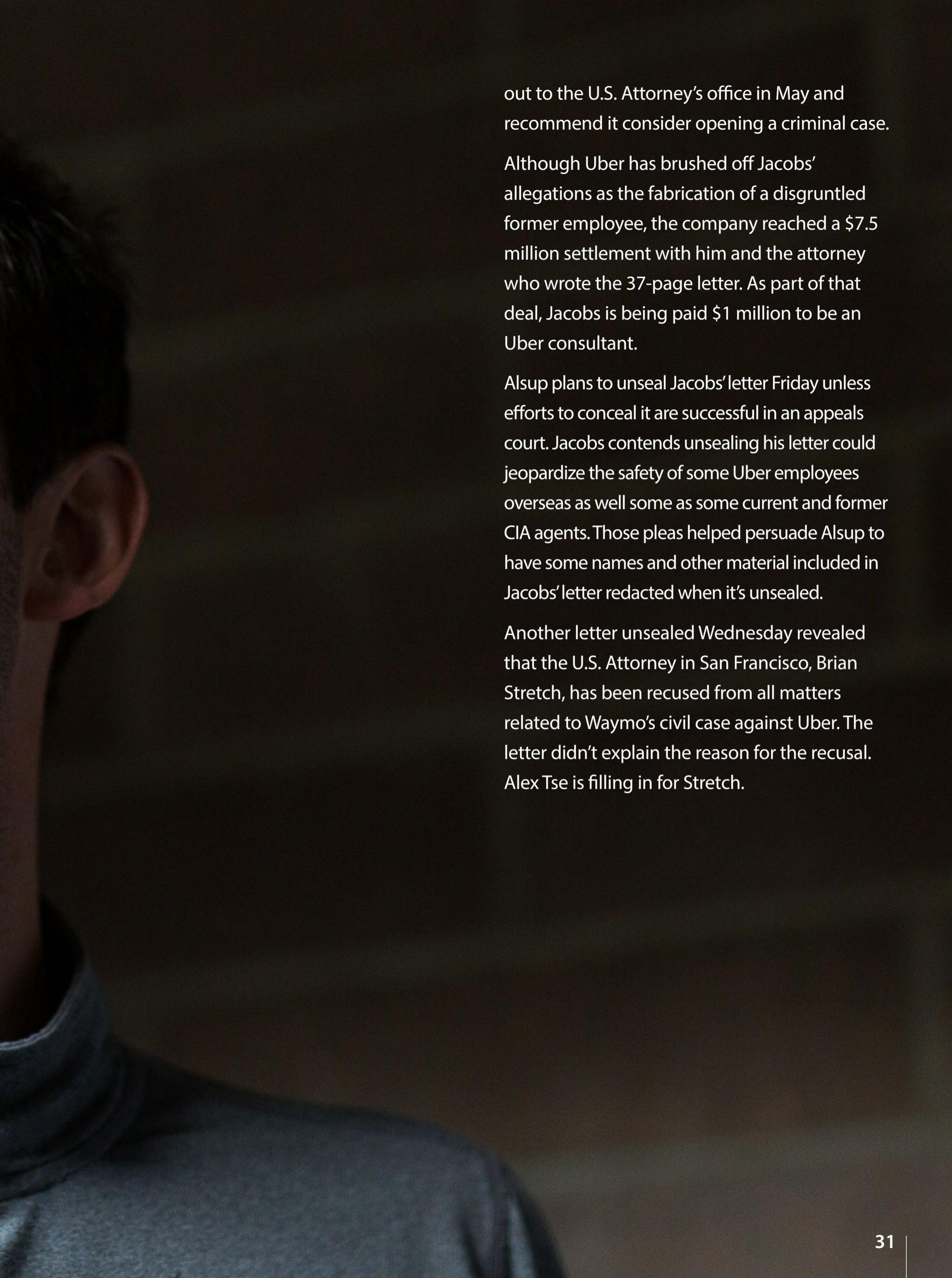
A jury trial over Waymo's allegations had been scheduled to begin last week, but U.S. District Judge William Alsup postponed it after the U.S. Attorney's office took the unusual step of sending him the letter to alert him about information that hadn't been revealed in the civil case against Uber.

The letter revealed that a former Uber security specialist had informed Justice Department investigators that the company had routinely used secret communications channels and devices that could help conceal the existence of any technology stolen from a rival.

The Justice Department also disclosed that the former security specialist, Richard Jacobs, had sent a 37-page letter to one of Uber's top lawyers alleging other misconduct, including the employment of an espionage team that tried to steal trade secrets from other companies, primarily overseas.

Uber didn't turn over Jacobs' letter during the evidence-gathering phase of the Waymo case, infuriating Alsup. The judge had already seen enough troubling evidence in the case to reach





out to the U.S. Attorney's office in May and recommend it consider opening a criminal case.

Although Uber has brushed off Jacobs' allegations as the fabrication of a disgruntled former employee, the company reached a \$7.5 million settlement with him and the attorney who wrote the 37-page letter. As part of that deal, Jacobs is being paid \$1 million to be an Uber consultant.

Alsup plans to unseal Jacobs' letter Friday unless efforts to conceal it are successful in an appeals court. Jacobs contends unsealing his letter could jeopardize the safety of some Uber employees overseas as well some as some current and former CIA agents. Those pleas helped persuade Alsup to have some names and other material included in Jacobs' letter redacted when it's unsealed.

Another letter unsealed Wednesday revealed that the U.S. Attorney in San Francisco, Brian Stretch, has been recused from all matters related to Waymo's civil case against Uber. The letter didn't explain the reason for the recusal. Alex Tse is filling in for Stretch.





# APPLE HAS ITS INVESTMENT SHOES ON THIS WEEK

Apple has made its second notable investment this week, the latest into the facial recognition technology company, Finisar.

The \$390 million investment announced Wednesday comes from Apple's \$1 billion Advanced Manufacturing Fund, created to finance the work of domestic manufacturers and create jobs in the U.S.

Apple announced the creation of the fund in May and plowed \$200 million into Corning Inc., the maker of the Gorilla Glass that is used in Apple's touchscreens.



The Finisar investment will help the company boost production of vertical-cavity surface-emitting lasers, which Apple uses for Face ID, Animoji and Portrait mode selfies with the iPhone X TrueDepth camera and the proximity-sensing capabilities of AirPods.

Finisar will open a manufacturing plant in Sherman, Texas, about an hour north of Dallas, creating more than 500 jobs. Finisar runs a plant in Allen, just outside of Dallas.

On Monday, Apple revealed that it had acquired Shazam. That company makes the song-recognition app that Apple's digital assistant Siri has already been using to help people identify the music playing on their iPhones.

The investment announced Wednesday is a huge lifeline for Finisar. The company's stock had tumbled nearly 40 percent this year after putting up disappointing numbers in its past two quarters.

Shares of Finisar Corp. leapt almost 30 percent at the opening bell.







# APPLE ORCHESTRATES DEAL FOR SONG- RECOGNITION APP SHAZAM

Apple has bought Shazam, the maker of a song-recognition app that Apple's digital assistant Siri has already been using to help people identify the music playing on their iPhones.

The companies didn't disclose the price of the acquisition announced early this week. Technology news site Recode previously reported Apple is paying about \$400 million for Shazam, citing three unidentified people familiar with the deal.

Apple Inc. issued a statement describing Shazam as "natural fit" with its services.

"We have exciting plans in store, and we look forward to combining with Shazam," Apple said. The Cupertino, California, company declined to say whether Shazam's app will still be available after the deal closes.

Some of Shazam's features conceivably could be blended into Apple's music streaming services, which has accumulated more than 27 million subscribers since the company created it in 2015.

Siri began drawing upon Shazam's technology to answer questions about songs as part of a 2014 update to the iPhone's operating system.

The Shazam deal marks Apple's biggest acquisition in music since paying \$3 billion for Beats Electronics' line of headphones and music service in 2014.

Digital services have been playing an increasingly important role for Apple as the sales of iPhones — the company's main moneymaker — have slowed. Software and other services generated \$30 billion in revenue during Apple's last fiscal year, a 23 percent increase from the previous year.

Shazam was founded in 2002 and made one of the first apps for the iPhone. It has about 250 employees working at its London headquarters and seven other offices in the U.S., Australia and Germany.



12:30

# My Shazam



32 FOLLOWING

142 SHAZAMS

PLAY ALL

IN PROGRESS

Auto Shazam





Image: David Paul



# INSIDER Q&A: PAYPAL FOUNDER TALKS DIGITAL PAYMENTS, BITCOIN

Max Levchin helped introduce the masses to the concept of a digital wallet when he co-founded PayPal in the late 1990s.

These days, he's still trying to use online services to reshape the world of finance. He is currently CEO of Affirm, a San Francisco startup that offers fixed-payment loans through the internet. It's an alternative to traditional credit cards, which can get consumers into trouble because small minimum payments they make each month can keep them in debt for decades.

Levchin, now 42, recently connected with media to discuss the state of digital payments, computer security and bitcoin, a cryptocurrency

whose value has ranged from about \$1,000 to more than \$19,000 this year as investors have bet on its future prospects. The interview has been edited for length and clarity.

**Q:** Are digital payments progressing as quickly as you hoped since you started PayPal?

**A:** They are moving at a good pace, adjusted for just how large and complicated the market is. It's highly regulated and there are a lot of things to be careful about. The elephant in the room for the last seven or eight years has been cryptocurrency. A big "what if" and "when if" has been surrounding bitcoin and its ilk.

**Q:** Why so?

**A:** The asset generally appreciated at such a blistering pace. Any time you acquire it, why not hang on to it? Because you just don't want to spend it yet. On the whole, it's a kind of transaction tool that is locked into areas where credit and cash don't really service the purpose. So you wind up finding it in somewhat darker corners.

**Q:** Do you invest in bitcoin?

**A:** I wound up with a lot of bitcoin as an early investor in one of the early bitcoin startups. But it wasn't a conscious decision to go buy a bunch of bitcoin.

I generally don't speculate. I am very old school in that sense. I try to understand how value is traded and what is going to happen to it in the very long term, not because I am a stranger to speculative investing. It's because I don't have time to time the market. So what I end up doing is committing to a stock or committing to a company.









**Q:** What are some of the most interesting areas of digital payments?

**A:** A good example is international remittances, where companies can pop up and do well. They're the guys who figured out how to do it much cheaper and much more transparently with much lower friction to both the recipient and the sender.

**Q:** Should we be concerned about hackers wreaking havoc with our financial system?

**A:** We should be worried broadly about our cybersecurity preparedness. I don't think it's specific to payments. It is just generally increasing the cost of doing business and reduces societal trust. And this is the first time in history where it's scary. Everything has got a chip. We are going to have to learn how to secure keys (secret codes for unlocking digital files and services).





# BITCOIN FUTURES SOAR AMID FRENZY OVER VIRTUAL CURRENCY

Bitcoin's debut on a major U.S. exchange is a hit so far, with the price of the first-ever futures contract for the virtual currency rising 16 percent.

The futures contract that expires in January was up \$2,440 to \$17,900 Monday afternoon on the Chicago Board Options Exchange. Trading began Sunday, and the price rose as high as \$18,850, according to data from the CBOE.

The CBOE futures don't involve actual bitcoin. They allow investors to make bets on the future direction of bitcoin.

The first session of futures trading fit right in with the frenzy surrounding bitcoin. Traffic to the CBOE website was so heavy right after the start of trading that the site experienced outages. The exchange also halted trading twice Sunday to stem volatility. The exchange operator has rules in place to stop trading after price swings of 10 percent.



Another large futures exchange, the Chicago Mercantile Exchange, will start trading its own futures on Dec. 18 but will use a composite of several bitcoin prices across a handful of exchanges.

The price of a bitcoin has soared since beginning the year below \$1,000, hitting a peak of more than \$16,858 Dec. 7 on the bitcoin exchange Coindesk. As of 12:30 p.m. CST, it was at \$16,510 on Coindesk.

Futures are a type of contract in which a buyer and a seller agree on a price for a particular item to be delivered on a certain date in the future, hence the name. Futures are available for nearly every type of security but are most famously used in commodities such as wheat, soy, gold, oil, cocoa and, as dramatized in the Eddie Murphy and Dan Aykroyd movie "Trading Places," concentrated frozen orange juice.

The futures signal greater mainstream acceptance of bitcoin but also open up bitcoin to additional market forces. The futures will allow investors to bet that bitcoin's price will go down — a practice known as shorting — which had been very difficult to do.

There have been other attempts to bring bitcoin investing into the mainstream. Tyler and Cameron Winklevoss, twin brothers who own large amounts of bitcoin, tried to create an exchange-traded fund based on bitcoin, but federal regulators denied their application.

How much actual investor interest there will be in these bitcoin futures is still up in the air. Many larger Wall Street brokerages and clearinghouses, including Goldman Sachs and JPMorgan Chase, are either not

allowing customers to trade bitcoin futures or only allowing select clients to do so. Other brokerages are putting restrictions on the amount of margin a trader can use in bitcoin futures, or putting limits on the amount that can be purchased.

The digital currency has had more than its fair share of critics on Wall Street. JPMorgan Chase CEO Jamie Dimon has called bitcoin “a fraud.” Thomas Peterffy, chairman of the broker-dealer Interactive Brokers Group, expressed deep concerns about the trading of bitcoin futures last month, saying “there is no fundamental basis for valuation of Bitcoin and other cryptocurrencies, and they may assume any price from one day to the next.”

Peterffy noted that if bitcoin futures were trading at that time, under the CBOE’s rules those futures likely would experience repeated trading halts because 10 percent or 20 percent moves in bitcoin prices have not been unusual in recent months.

Bitcoin is the world’s most popular virtual currency. Such currencies are not tied to a bank or government and allow users to spend money anonymously. They are basically lines of computer code that are digitally signed each time they are traded.

A debate is raging on the merits of such currencies. Some say they serve merely to facilitate money laundering and illicit, anonymous payments. Others say they can be helpful methods of payment, such as in crisis situations where national currencies have collapsed.





# CELLPHONE COMPANY T-MOBILE TO LAUNCH TV SERVICE NEXT YEAR

T-Mobile says it's launching a TV service next year, becoming the latest company to marry wireless and video.

The nation's No. 3 wireless carrier said this week that it bought cable-TV startup Layer3 TV to help it roll out its upcoming service. T-Mobile's press release has few details, but promises to address consumer complaints such as "sky-high bills" and "exploding bundles." T-Mobile didn't disclose how much it paid for Layer3, which is available in five U.S. cities.

T-Mobile's has shaken up the wireless industry by largely getting rid of two-year phone contracts and helping bring back unlimited-data plans.

T-Mobile has already taken steps to connect its wireless business to video as the telecom, tech and media industries grow closer together. For instance, many T-Mobile wireless customers are getting Netflix for free.



# STAR WARS

THE LAST JEDI





## THE LAST JEDI HAS ARRIVED

*The Last Jedi*, arguably the most highly anticipated film of the year, hit theatres yesterday, Friday 15 December. The blockbuster is a rollercoaster of emotions from start to finish and certainly does not disappoint. The movie has been labeled as gripping and exciting, yet funny and witty at the same time; jam-packed with everything a good Star Wars film should be. The Guardian sums it up best:

***“An old hope. A new realism. An old anxiety. A new feeling that the Force might be used to channel erotic telepathy, and long-distance evil seduction. The excitingly and gigantically proportioned eighth film in the great Star Wars saga offers all of these, as well as colossal confrontations, towering indecisions and teetering temptations, spectacular immolations, huge military engagements, and very small disappointments.”***

*The Last Jedi*, Episode VIII in the series, picks up where *The Force Awakens* (2015) left off, with Rey finally reaching the island of Ahch-To, where Luke Skywalker currently in a self-imposed exile. The film reunites the protagonists of Episode VII's *The Force Awakens*, Finn and Rey, and the reformed Stormtrooper and Jedi-in-training also reunite with the menacing Kylo Ren.

There is powerful character development throughout the film and breathtaking CGI effects that Disney has become known for. The parallel plot about the Resistance's military strategy is slightly less engaging and often distracts from the main plot, however, overall the film is an undeniable success. There are several new actors, including Kelly Marie Tran

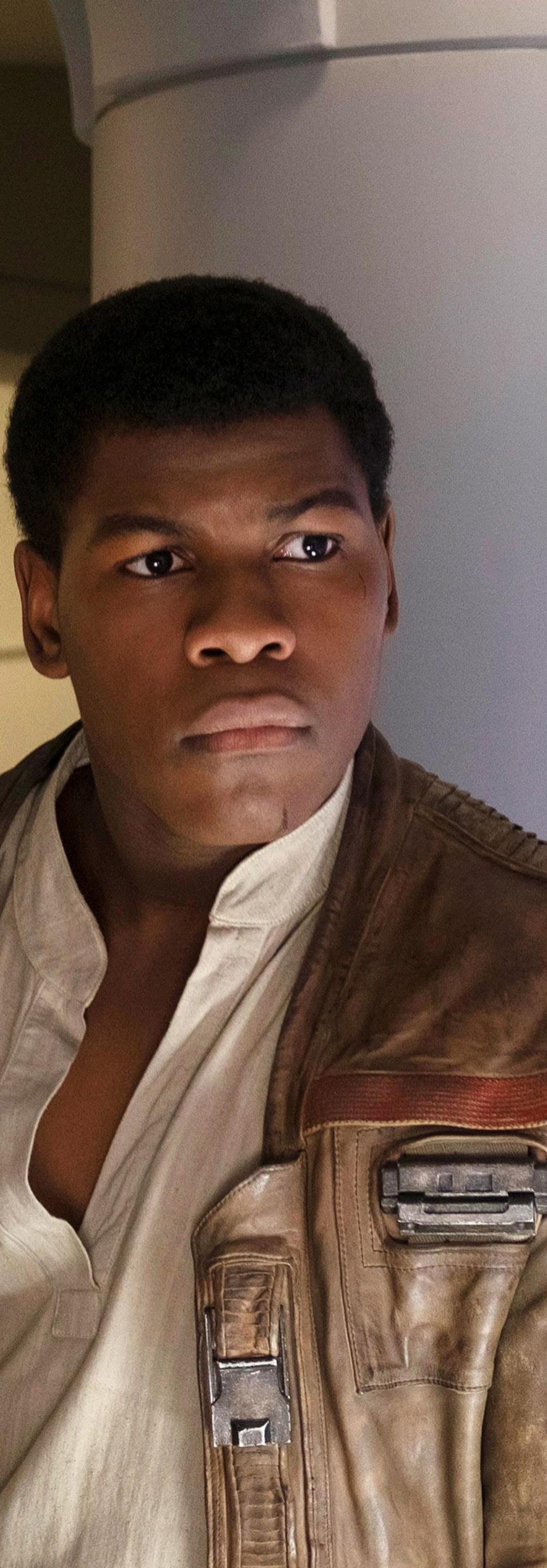












who, **Deadline commented in their review**, gives a very convincing performance as Rose Tico, a Resistance soldier.

The Telegraph believes the film will “leave fans beaming with surprise,” however, there has been some mixed opinions. **Variety commented** that it is “the longest and least essential chapter in the series” and it is “ultimately a disappointment” and “gives in to the same winking self-parody that is poisoning other franchises of late.”

### THE TWITTER CONSENSUS

With Disney placing an embargo on reviews until Tuesday, Twitter was awash with speculation and rumors were rife. However, lucky moviegoers and those who were offered early previews couldn't help but take to the social network right after (and, in some cases, during!) the screening.

Overall, initial reactions to the film were overwhelmingly positive, with some claiming it to be in the running for the best *Star Wars* film since *The Empire Strikes Back*. Los Angeles Times critic Jen Yamato took to Twitter to say: “The Last Jedi is so beautifully human, populist, funny, and surprising” and Mark Hamill is praised for his touching performance of the broken Luke Skywalker, the Last Jedi.

Anthony Breznican commented, “Luke was right: “This is not going to go the way you think.” #TheLastJedi will shatter you - and then make you whole again.” and Erik Davis couldn't praise the film enough: “#TheLastJedi is absolutely fantastic - gripping, touching, funny and powerful with gorgeous shots and the most badass battles. When it gets going, holy





crap does it get going. Hands down the best #StarWars movie since Empire”.

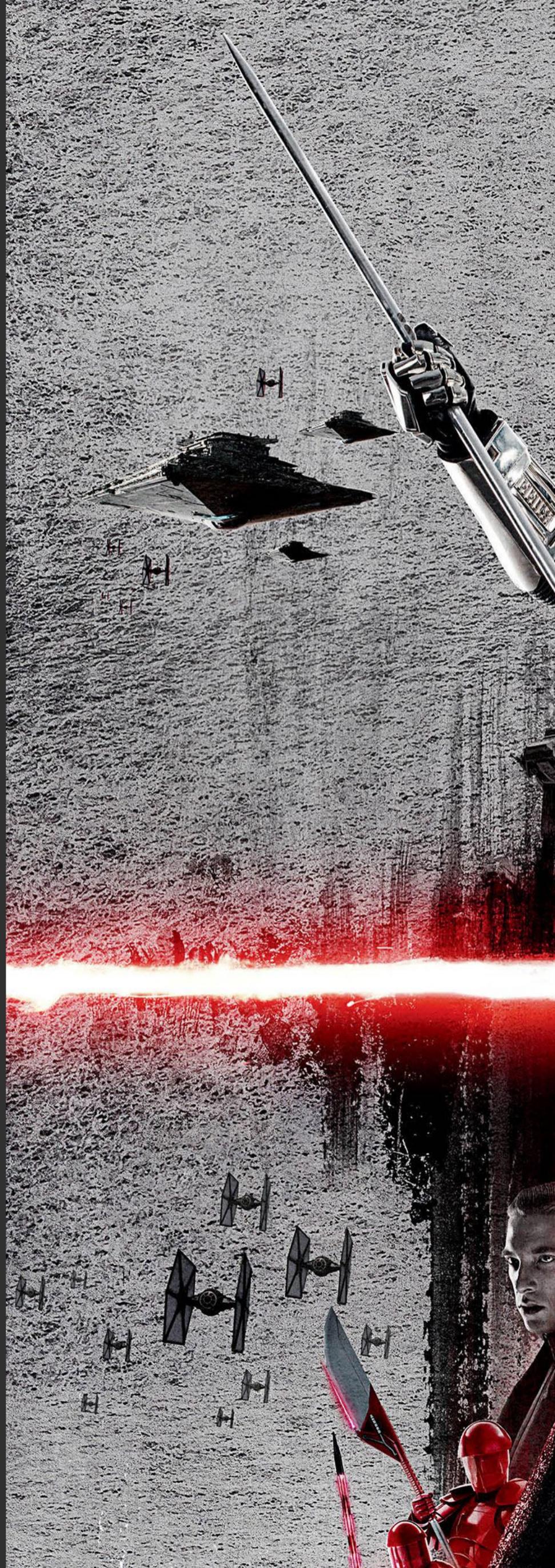
## RIAN JOHNSON STAYS TRUE TO THE STAR WARS FRANCHISE

The film was written and directed by Rian Johnson, the filmmaker behind *Brick*, *Looper* and some episodes of *Breaking Bad*, and it introduces several new characters, including Resistance fighters, played by Marie Tran and Laura Dern, and a new villain, played by Benicio Del Toro. The film has an incredible cast overall, and Johnson believes the series is so popular because of its ability to combine fun and drama, and he tried to maintain these two elements in the latest film. **In an interview**, he said the seriousness of the film is a big element, but it is important not to forget the other, more fun, side of the film. He **elaborated to say**:

“With the original trilogy and also with the prequels, it was that hero’s journey, something that everyone can relate to packaged in a fun adventure, a fun ride that just makes you come out of the theatre and want to grab your spaceship toys and run around the backyard...I think it’s the combination of those two things. I’ve said it’s like the balance between opera and bubble gum. The fact that Star Wars rides that balance just right is what makes it special.”

## THE WORLD PREMIERE: AN INSIDE LOOK

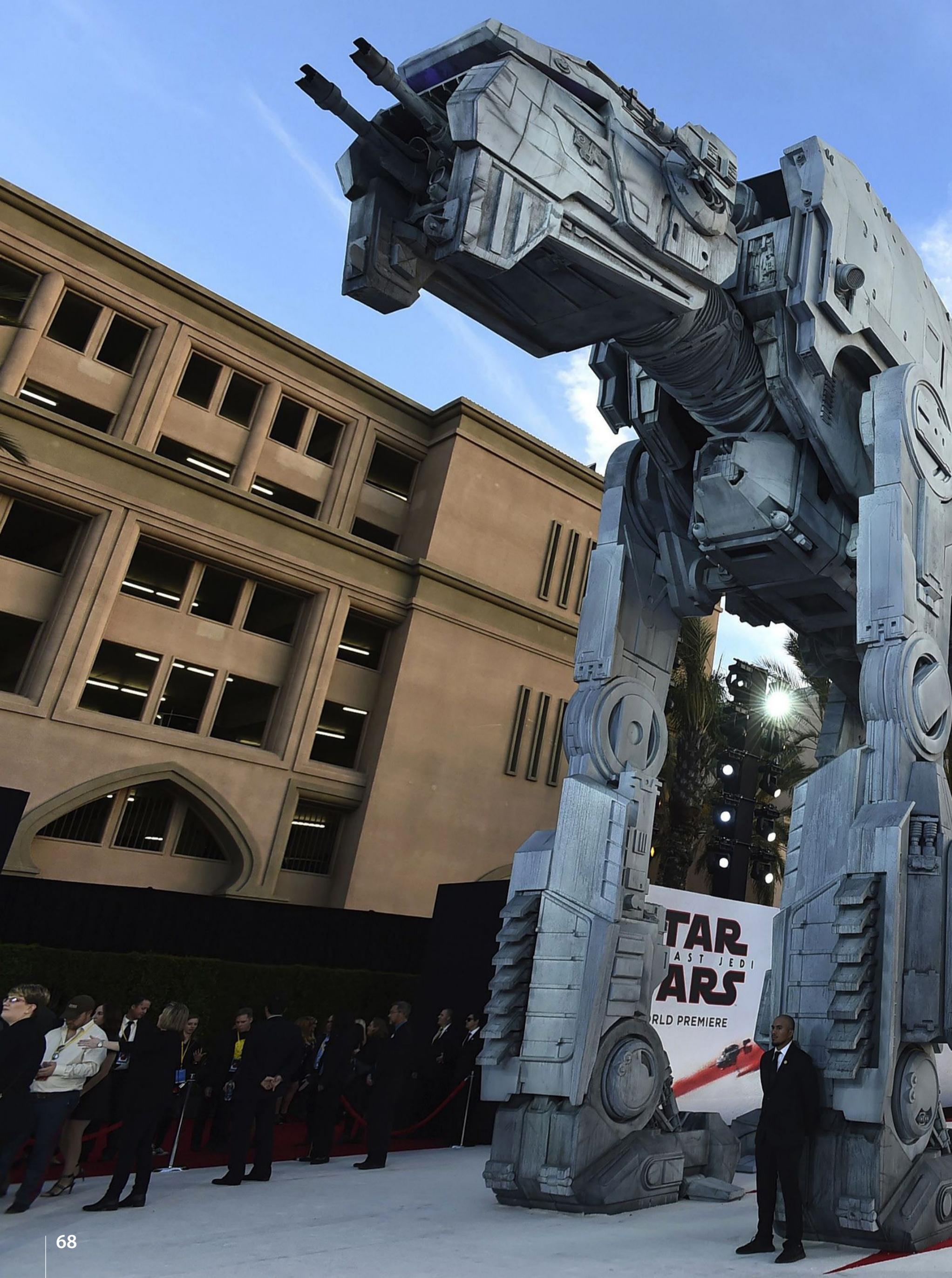
The world premiere of *The Last Jedi* took place in LA on 11th December at the Shrine Auditorium on the USC campus. A huge audience of 6,000 enjoyed the first ever showing of the film, after walking a red carpet, the entrance of which was flanked by giant AT-M6 walkers. **Attendees**











included actor Gwendoline Christie, Lupita Nyong'o, actor Domhnall Gleeson and even BB8 made an appearance. The audience then headed to the casino-themed after party at the Shrine's Expo Hall, where Storm Troopers were ready to take selfies with guests.

The premiere honored the late Carrie Fisher, who died unexpectedly late last year. Entertainment Weekly's Anthony Breznican commented that she has "some unforgettable moments as Leia."



## THE STAR WARS FRANCHISE

If you haven't seen any of the Star Wars films, you really must have been living in a galaxy far, far away. When the first Star Wars film was released in 1977 in just 42 theatres, no one could have predicted just how big the franchise would become.

According to Forbes, **the franchise is worth an eye-watering \$10 billion to Disney**, who acquired the rights from Lucas Graham in 2012 and has created millions of fans who have been dedicated to the series for decades. The first movie released, the fourth episode, made history and it remains one of the highest grossing movies of all time. The franchise has generated billions of dollars in box office receipts and has acquired an enormous fan base. **As Fortune notes**, the franchise is worth more than Harry Potter and James Bond combined, and the seventh episode alone totaled \$7.3 billion for global sales.

Star Wars merchandise is available in almost every form including t-shirts, mugs, costumes, gadgets, toys, replicas and now even bank notes as following the release of the latest film, **1,000 commemorative banknotes will be made available**. The total revenue from merchandise is astonishing. The revenue from toy licensing linked to Star Wars since 1977 was estimated at \$12 billion in 2015, the total revenue from video games at \$4.28 billion and the total from miscellaneous at \$43.65 billion. The **total revenue for the Star Wars films was estimated at \$41.979 billion in 2015**, a long way from **George Lucas' original estimate of \$8 million**.











There are at least three generations of Star Wars fans now, and some fans even take their love of the franchise a step further and **cosplay the characters**. One fan wore a **crystal Storm Trooper costume at this year's event in Orlando**, and others dressed up as Lady Lobot, Anakin Skywalker, and Queen Amidala.

## THE LAST JEDI IS NOT A FILM TO MISS

It's safe to say; The Last Jedi will not disappoint. If you're looking for a film that stays true to the rest of the franchise but pushes the boundaries, this is the film for you. It is gripping, exciting, funny and touching, all at the same time.

**Producer Ram Bergman sums up the latest film best, saying:** "It's very complex and very intimate and very emotional....It's one of those movies, you're going to say, I need to digest it, and I want to go see it again because there's just a lot of it. I think the movie is dense. It's complex, but it's a fun ride. It truly is a Rian Johnson movie."

by Benjamin Kerry & Gavin Lenaghan



# ADAM DRIVER SAYS KYLO REN ISN'T EVIL, HE JUST THINKS HE'S RIGHT

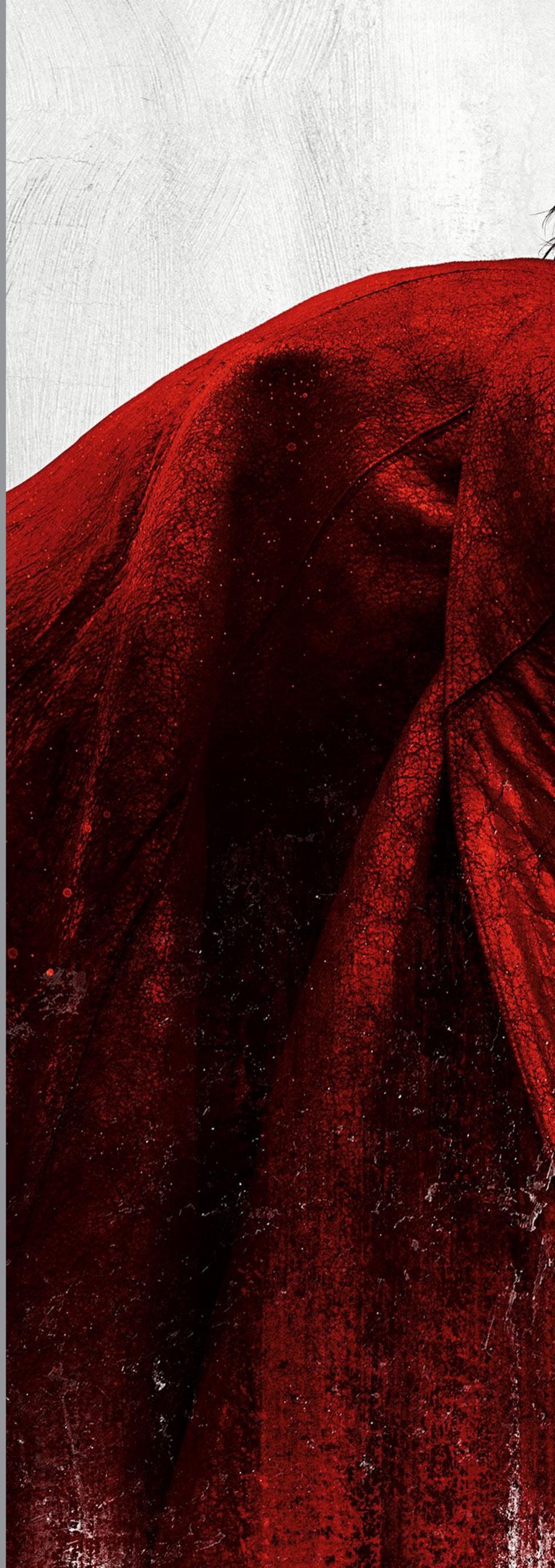
He might have callously killed his father Han Solo, but like all well-written "bad guys," Kylo Ren is the hero of his own Star Wars story.

"He is someone who doesn't think of himself as evil, but thinks of himself as right," says Adam Driver, who reprises his role as the conflicted Kylo Ren in "Star Wars: The Last Jedi."

"It's definitely more exciting to play because I don't think I know what pure evil is, nor does that seem to be something that sustains itself or is interesting to watch," Driver says.

"Watching people who feel kind of morally justified to behave the way they do is in a way more unpredictable and dangerous because there's nothing that they won't do to accomplish their mission because they feel empowered in being right."

Driver is more guarded than most about revealing anything about "The Last Jedi," which hits theaters Friday, or even discussing what Kylo Ren was thinking when he killed Han, or when he battled Rey at the very end of the "The Force Awakens."







"I don't think I can say what he saw (in Rey) but there is something familiar that he sees that hopefully he wrestles with in 'The Last Jedi,'" Driver says. "There is something about thinking you're on a singular journey and then kind of having your faith questioned by something new."

The 34-year-old actor, who had previously been best known for his role on HBO's "Girls," says his anonymity has mostly gone away since joining the Star Wars galaxy but that it's ok.

"Sometimes going places just requires more planning. But the scale of those movies, because they're so multi-generational,

or cross generational, the amount of people who come up to you and recognize you is kind of unpredictable," he says. "But the kid part of it is for me the most fun: Seeing kids, or people bringing their kids or supplying their kids with lightsabers. I love that part. But they're usually confused, like "Why is Kylo Ren wearing a jogging suit?"

The kids who are especially taken with Kylo give him slight pause, though.

"I worry about them," Driver laughs. "Especially if they're with their father."

# WITH A LIGHTSABER IN HAND, DAISY RIDLEY RETURNS TO STAR WARS

Daisy Ridley went from obscurity to international stardom when J.J. Abrams picked her to play the central character of the new Star Wars trilogy, and her character Rey quickly became a fan favorite and an inspiration to young girls around the world.

The 25-year-old British actress returns to the Star Wars, which picks up with Rey at the moment she finds Luke Skywalker on that lush cliff.

Ridley spoke to Media recently about playing Rey and getting on board with director Rian Johnson's vision.









**Q:** Did you feel like you had more of a handle on this having done it once before?

**RIDLEY:** It's hard, you would think going into the second one you'd be like, 'Oh yeah I've got this.' No. No. it was very much like new scene partner, new story, new...it was just a new feeling. New director. New writer. It was a lot of wrap my head around. And then things settle down as they always do, and you're like this is ok.

**Q:** Rian Johnson not only wrote but directed "The Last Jedi" as well — how did that change things for you?

**RIDLEY:** John (Boyega) and I had had a lunch meeting with him in August or September when he was close to at least finishing the story and then we were able to question him. That's the beauty of working with a writer/director. You can question things directly and things can happen very immediately. But also hilarious because Rian I don't think changed a thing. I was going, "Uh, I'm not sure about this." But he didn't change a thing because he didn't need to. It just took us all a second to be like "Ok, this is where the story is heading."

**Q:** At the end of "The Force Awakens" Rey has lost her mentor/father figure in Han Solo, been separated from her friend Finn and is on this new journey to find Luke. What is going through her head?

**RIDLEY:** I think she doesn't quite know what is going through her mind. She's been sent to do this thing and it goes beyond anything she's known. Everything has been her trying to do the right thing and her trying to help other people and she's not really stopped for a second. Even doing it, I didn't quite know. I was trying

to play hope and searching for an answer. But hilariously the first time around I didn't know where that was going to go. Anything that Rey is trying to catch up on, the audience is trying to catch up on with her. Why is she there? What's the force? What's this thing? And the greater sort of questions of the universe of good and evil and why people do the things they do.

**Q:** There were some funny photos of you and Mark Hamill on set and him riding on your back, like Yoda once did to him. What was it like working with him?

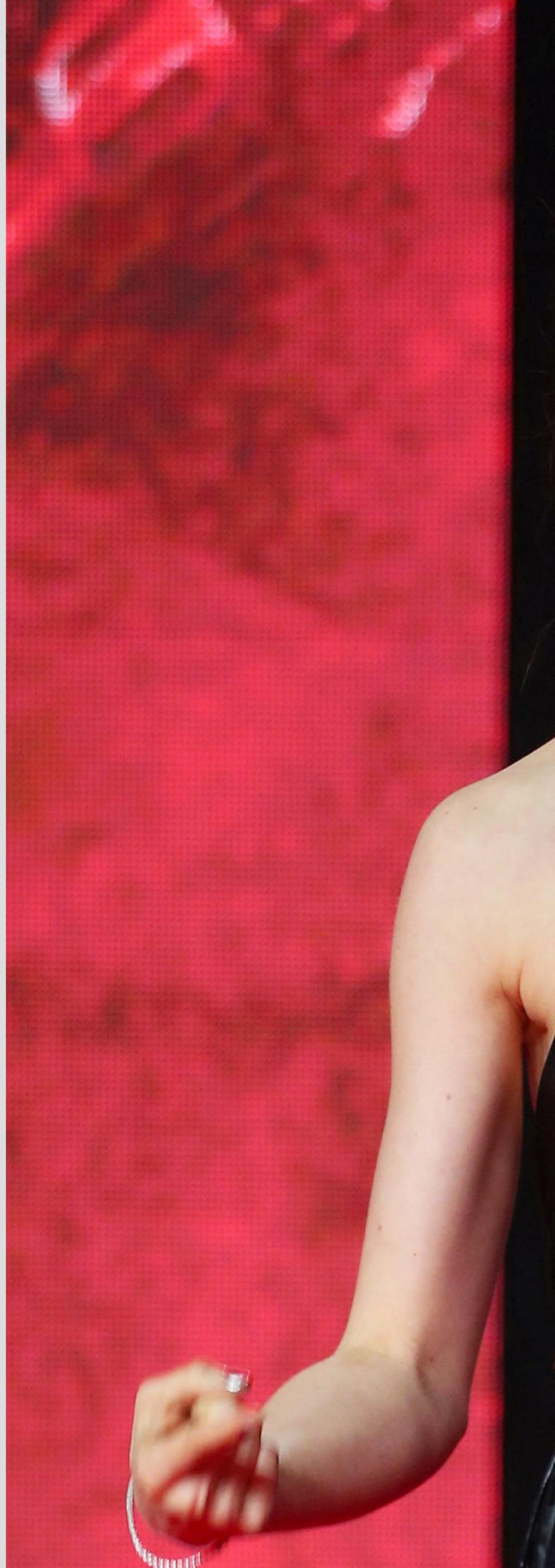
**RIDLEY:** He is goofy. It was comforting working with John because we were great friends and it was comforting working with Harrison (Ford) because he reminds me of my dad. And with Mark, his daughter is my age, so there is again, and I don't know maybe it's an older actor thing of just a comfort. He makes everyone on set feel really happy and included. I think what Mark and Harrison and Carrie (Fisher) do very well is make everyone feel like they're part of it.

**Q:** Has anything surprised you about the reception to Rey?

**RIDLEY:** What I actually do think is funny is a lot of people are going "Rey's Snoke," or "Rey's something else." Just let her be her! No, she's not anyone else, she's just her. No she doesn't have to be like Luke, she doesn't have to be like Leia, she's just doing her own thing. I don't think that would have been said about any of the male characters.

**Q:** What do you think of J.J. Abrams coming back to direct Episode IX?

**RIDLEY:** I literally burst into tears. I was like "Oh my God, oh my God, oh my God!" I emailed him and go "I'm literally crying." And he goes, "Me too!"





# DISNEY BUYING LARGE PART OF 21ST CENTURY FOX IN \$52.4B DEAL

Disney is buying a large part of the Murdoch family's 21st Century Fox for about \$52.4 billion in stock, including film and television studios and cable and international TV businesses, as it tries to meet competition from technology companies in the entertainment business.

The deal gives Disney film businesses including Twentieth Century Fox, Fox Searchlight Pictures and Fox 2000, which together are the homes of Avatar, X-Men, Fantastic Four and Deadpool. On the television side, Disney will get Twentieth Century Fox Television, FX Productions and Fox21, with shows including "The Simpsons" and "Modern Family."



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Disney  
Company

21st Century Fox shareholders will receive 0.2745 Disney shares for each share they own. The transaction also includes approximately \$13.7 billion in debt.

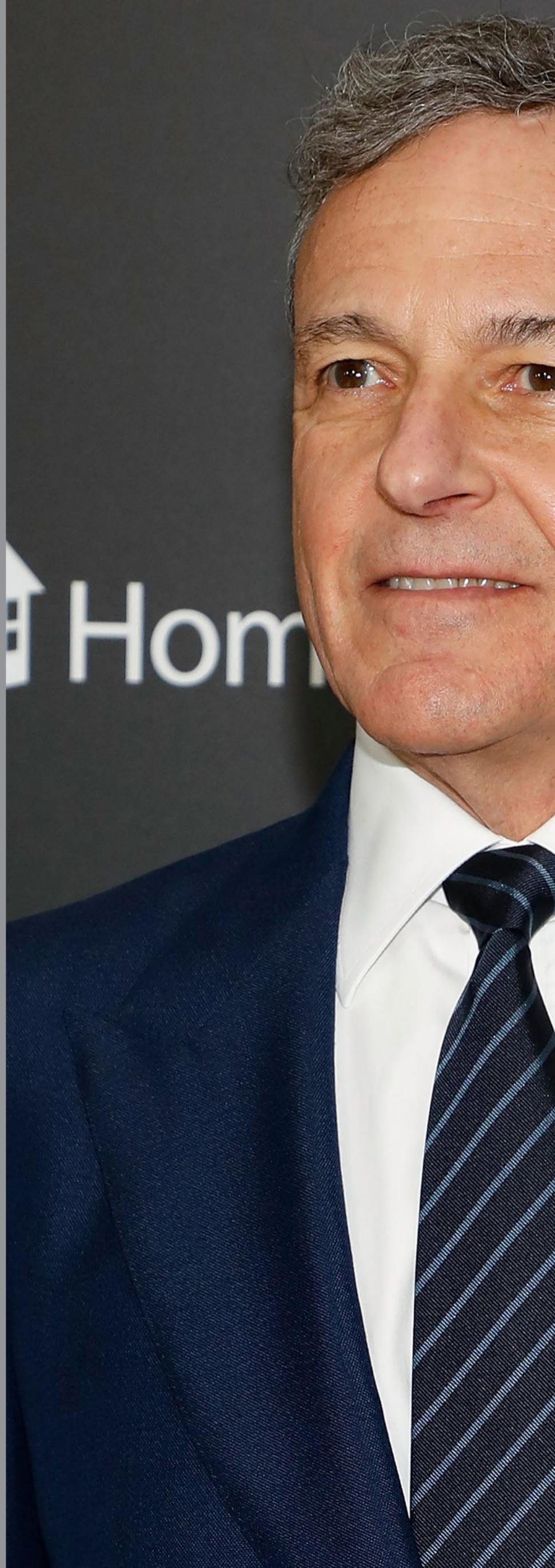
Robert Iger will continue as chairman and CEO of The Walt Disney Co. through the end of 2021. Disney said Thursday that it anticipates the acquisition providing at least \$2 billion in cost savings. Both companies' boards have approved the deal. It still needs approval from Disney and 21st Century Fox shareholders.

Before the buyout, 21st Century Fox will separate the Fox Broadcasting network and stations, Fox News Channel, Fox Business Network, FS1, FS2 and Big Ten Network into a newly listed company that will be spun off to its shareholders. It will also include the company's studio lot in Los Angeles and equity investment in Roku.

That Rupert Murdoch and his sons were willing to sell off much of the business that has been built up over decades came as a shock to the entertainment industry.

The entertainment business is going through big changes. TV doesn't have a monopoly on home entertainment anymore. There's Netflix, which is spending up to \$8 billion on programming next year. Amazon is building its own library, having splashed out on global TV rights to "Lord of the Rings." Facebook, Google and Apple are also investing in video.

As consumers spend more time online, TV's share of U.S. ad spending is shrinking. Advertisers are following consumer attention to the internet, where Google and Facebook win the vast majority of advertisers' dollars.





Disney  
BEAUTY  
AND THE  
BEAST



**21ST  
CENT  
FOX**



URY

“We’ve been talking about cord cutting for the better part of a decade. But now it’s real,” USC Annenberg communications professor Chris Smith said. The media companies have to compete with the internet giants for consumers’ attention — and the younger generations pay more attention to YouTube, Facebook and other “platforms” than traditional TV, Smith said.

To combat this trend, Disney is launching new ESPN- and Disney-branded streaming services over the next couple of years. It could beef them up with some of the assets it’s acquiring from Fox, making them exclusive to its services and sharpening its ability to compete with Netflix for consumer dollars. During a conference call with investors, Disney CEO Bob Iger said many Fox properties will fit with the new service, including possibly National Geographic and additional Marvel productions.

“The core underlying driver for this deal in our opinion is the impending battle royale for content and streaming services vs. the Netflix machine,” GBH analyst Daniel Ives wrote.

Not everyone thinks this is a good bet by Disney, though. Rich Greenfield, a longtime Disney critic, thinks the deal is a bad idea that ties Disney to older TV-distribution systems — cable and satellite TV — rather than helping it look toward the future.

He also notes that regulators may not like the idea of combining two major movie studios. The Justice Department surprised many in the industry and on Wall Street when it sued to block another media megamerger, AT&T’s acquisition of Time Warner, in November.

## MURDOCH FAMILY TAKES A BOW

Rupert Murdoch built 21st Century Fox and News Corp. out of an inheritance from his father in Australia. He bought a string of papers there, in the U.K. and the U.S., building an influential platform for his views. He expanded into TV and movies, launching the Fox network and Fox News and changing the face of American news and entertainment.

“Rupert has spent many, many years assembling the components of his empire,” said NYU business professor Samuel Craig, who specializes in the entertainment industry.

Rupert Murdoch has ostensibly already handed the reins over to a new generation at Fox. His son James is CEO, while his other son, Lachlan, like Rupert, has the title of executive chairman.

The Murdoch empire has already been divided. After a phone-hacking newspaper scandal in the U.K., News Corp. was split off into a separate company for the publishing and newspaper businesses, which include the New York Post, The Wall Street Journal, The Sun and The Times in the U.K., and book publisher HarperCollins. Now Fox is also being split up as the company sets itself up to deal with the growing power of the tech industry.

“The Murdochs realize they don’t have the same kind of leverage Disney has, the same kind of brand power,” Smith said.

It would be harder to launch a Fox-branded streaming service that attracts lots of the new generation of consumers, for example. Smith said that makes it a great time to sell off the entertainment business.



# X STUDIOS

MOTOR GATE 1  
VISITORS CLEARANCE 14'0" EMPLOYEE





Fox is also selling to Disney its substantial overseas operations. It is offloading its 39 percent stake in European satellite-TV and broadcaster Sky after running into regulatory roadblocks in the U.K. trying to take over the rest of the company, in part because of how Fox handled the sexual harassment scandal at Fox News. Disney is also acquiring Star India, a major media company with dozens of sports and entertainment channels.

Fox will be left with the live events, news and sports, that are key parts of the traditional TV bundle. There is speculation that the Murdochs would want to recombine what's the slimmed-down Fox with News Corp.

## MIGHTIER MOUSE

The Disney-branded service, expected in 2019, will have classic and upcoming movies from the studio, shows from Disney Channel, and the “Star Wars” and Marvel movies.

Disney will also win majority control of Hulu, both its live-TV service and the older service with a big library of TV shows.

Disney could continue to add movies and TV shows from Fox’s library to its services, making them more attractive compared with Netflix’s offerings. The combined libraries of the Disney and Fox movie and TV studios could have more titles than Netflix, Barclays analyst Kannan Venkateshwar said. Buying Fox’s FX networks will add edgy TV shows that complement Disney’s long list of kid-friendly series and films, he said.

Greenfield, however, notes that a lot of programming wouldn’t be immediately available to Disney. Fox movies are exclusive to HBO through 2022, for example.

Disney also plans an ESPN Plus service for next year. It isn’t a duplicate of the ESPN TV network, but it will stream tennis matches along with major-league baseball, hockey and soccer games, as well as college sports. It might be able to add more sports through Fox’s 22 local sports networks — cable channels that show popular sports in the viewer’s region.

Disney also owns Marvel, but not all the Marvel characters. It’s made movies starring Thor, Doctor Strange and Captain America and the Avengers crew. But the X-Men are at Fox. Bringing them home under one roof could mean movies with more of the characters together.



NEW YORK STOCK EXCHANGE

Disney Company





Image: Eric Risberg



# SAN FRANCISCO MAYOR EDWIN LEE LEAVES BEHIND CITY IN TURMOIL

Under Mayor Ed Lee's seven-year watch, San Francisco went from a city mired in recession to a technology-fueled economic powerhouse where housing costs skyrocketed and the chasm between the wealthy and everyone else grew. Lee died Tuesday at 65 after collapsing while grocery shopping.

He leaves behind a rapidly transforming city where the median home value is more than \$1.2 million and grumpy residents are unhappy with homelessness, clogged traffic and frequent auto break-ins.

Supporters touted his dedication to building new housing and sending out workers to clean up dirty streets in a city known for its entrenched homelessness. Critics said Lee, a Democrat, catered too much to tech companies, citing a 2011 tax break he brokered for Twitter as part of a remake of the city's dilapidated downtown.

Still, many on Tuesday mourned the city's first Asian-American mayor as a reluctant politician dedicated to civil service who was more comfortable working on details than on delivering the perfect political sound bite. No cause was given for his death but an autopsy was planned.

"He believed in a city where a poor kid from public housing could become mayor," acting San Francisco Mayor London Breed told reporters at a briefing attended by hundreds of city workers and civic leaders.

"What mattered most to him always was helping his fellow San Franciscans, and occasionally delivering the almost perfectly timed corny joke."

Local celebrities, sports figures, and national politicians sent condolences. California Gov. Jerry Brown, attending a climate change conference in Paris, called Lee a gentleman.

"Very honest, very human, he was well liked by people who knew him," Brown said. "People are shocked and surprised. My sympathies go out to his family and all the people of San Francisco."

Former San Francisco Mayor Willie Brown and the late Chinatown political power broker Rose Pak talked Lee into filling out the rest of former Mayor Gavin Newsom's term when he was elected California's lieutenant governor in 2010.

Lee, city administrator at the time, said he had no interest in taking on the role permanently. But he changed his mind and won a four-year term in 2011, beating 15 other contenders. He was re-elected in 2015, beating out five others.

Willie Brown said Lee showed that non-typical politicians could win elective office.









“At all times it was for the love of the city,” he said, “it was not self.”

The former mayor also praised Lee as the man who “stepped up and made it possible for Silicon Valley to almost relocate to our city,” a change not cheered by San Francisco’s more politically progressive faction.

Members of that faction railed against his perceived lenience with vacation-stay rental platform Airbnb, which they say has exacerbated San Francisco’s already tight housing market. Lee vetoed a measure approved by city officials to crack down on short-term rental stays.

When Lee took office in January 2011, Zillow reported the median home value in San Francisco was just over \$656,000. The figure has nearly doubled since then. The percentage of households earning at least \$100,000 increased from 38 percent in 2011 to 45 percent in 2016, according to the American Community Survey of the U.S. Census Bureau.

San Francisco Supervisor Hillary Ronen said she did not agree with Lee on corporate issues but was surprised to develop a great working relationship with him. They worked to open a new homeless center in her district last summer.

“He got the urgency of the issue and was tough in making solutions happen quickly,” she said.

Lee battled with fellow Democrats on development issues, but was a staunch supporter of many of the liberal policies most associated with San Francisco — including higher minimum wages, marriage equality and sanctuary status for those living in the country illegally.

He reiterated his support for sanctuary policies last month after a Mexican man who had been repeatedly deported was acquitted of murder in the 2015 killing of Kate Steinle in a case that sparked a national debate over illegal immigration. President Donald Trump repeatedly cited the case during his presidential campaign.

Edwin Mah Lee was born May 5, 1952, in Seattle to Chinese immigrants who from Toisan, a rural village in China's southern province of Guangdong. His father was a cook and his mother a seamstress. They raised Lee and his five siblings in public housing.

"We learn modesty. We learn sacrifice. We learn to be humble from people who may have even less. But we learn how to fight and survive at the same time," Lee said in an interview with KTVU-TV in February.

Lee graduated from Bowdoin College in 1974 and from the University of California, Berkeley law school in 1978. He worked as a housing activist and civil rights attorney before joining city government in 1989 as a whistleblower investigator.

Dr. Susan Ehrlich of Zuckerberg San Francisco General Hospital said Lee arrived at the hospital in critical condition shortly after 10 p.m. Monday and died at 1:11 a.m. Tuesday after several hours of live-saving measures were tried.

Lee Houskeeper, a publicist and friend of the mayor, said Lee collapsed at a Safeway store while grocery shopping Monday night.

A spokeswoman for Safeway stores, Wendy Gutshall, declined to confirm the report but said the store's employees "will miss seeing him in the neighborhood."







*Friends and colleagues remember San Francisco Mayor Ed Lee, the city's first Asian-American Mayor, after his sudden death early Tuesday at the age of 65.*



The last San Francisco mayor to die in office was George Moscone, who was fatally shot by a disgruntled former Board of Supervisors member in 1978, leading to the ascension of then-Board of Supervisors President Dianne Feinstein to mayor. Feinstein, a Democrat, is now California's senior U.S. senator.

Lee's death now will likely upend the race to replace him, which had been scheduled for 2019. Former state Sen. Mark Leno, a onetime member of the Board of Supervisors and longtime political figure and Democrat, has already announced his candidacy.

Breed, also a Democrat, was also expected to seek the office.



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# MICROSOFT UPDATES BING SEARCH TO HIGHLIGHT REPUTABLE RESULTS

Microsoft on Wednesday rolled out new features on its Bing search engine powered by artificial intelligence, including one that summarizes the two opposing sides of contentious questions, and another that measures how many reputable sources are behind a given answer.

Tired of delivering misleading information when their algorithms are gamed by trolls and purveyors of fake news, Microsoft and its tech-company rivals have been going out of their way to show they can be purveyors of good information — either by using better algorithms or hiring more human moderators.

Microsoft is also trying to distinguish its 2nd-place search engine from long-dominant Google and position itself as an innovator in finding real-world applications for the latest advances in artificial intelligence.

“As a search engine we have a responsibility to provide answers that are comprehensive and objective,” said Jordi Ribas, Microsoft’s corporate vice president for AI products.

Bing's new capabilities are designed to give users more confidence that an answer is correct and save them time so they don't have to click through multiple links to validate it themselves.

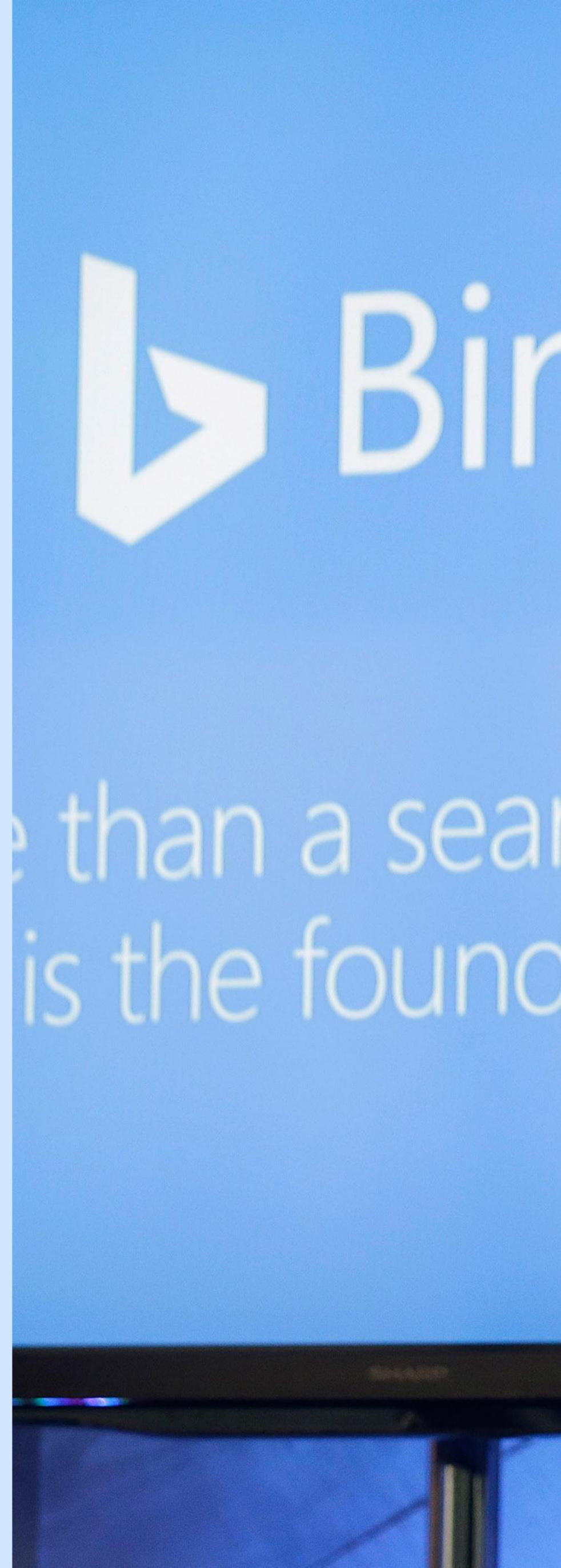
"You could be asking, 'Is coffee good for you?' We know that there are no good answers for that," Ribas said. But the new search features side-by-side opposing perspectives. One source emphasizes coffee's ability to increase metabolism and another shows it can raise blood pressure. Similar questions can also be asked on more sensitive topics, such as whether the death penalty is a good idea.

On more complicated questions — is there a god? — Bing doesn't have enough confidence to provide a pro-con perspective. But on questions that involve numbers, it boils information down into digestible doses. Iraq, for instance, is described as "about equal to the size of California."

Search engines have evolved since Google took the lead at the turn of the 21st century, when rankings were based on "link analysis" that assigned credibility to sites based on how many other sites linked to them. As machines get better at reading and summarizing paragraphs, users expect not just a list of links but a quick and authoritative answer, said Harry Shum, who leads Microsoft's 8,000-person research and AI division. To test its technology, the company has compared its machine-reading skills to the verbal score on the SAT.

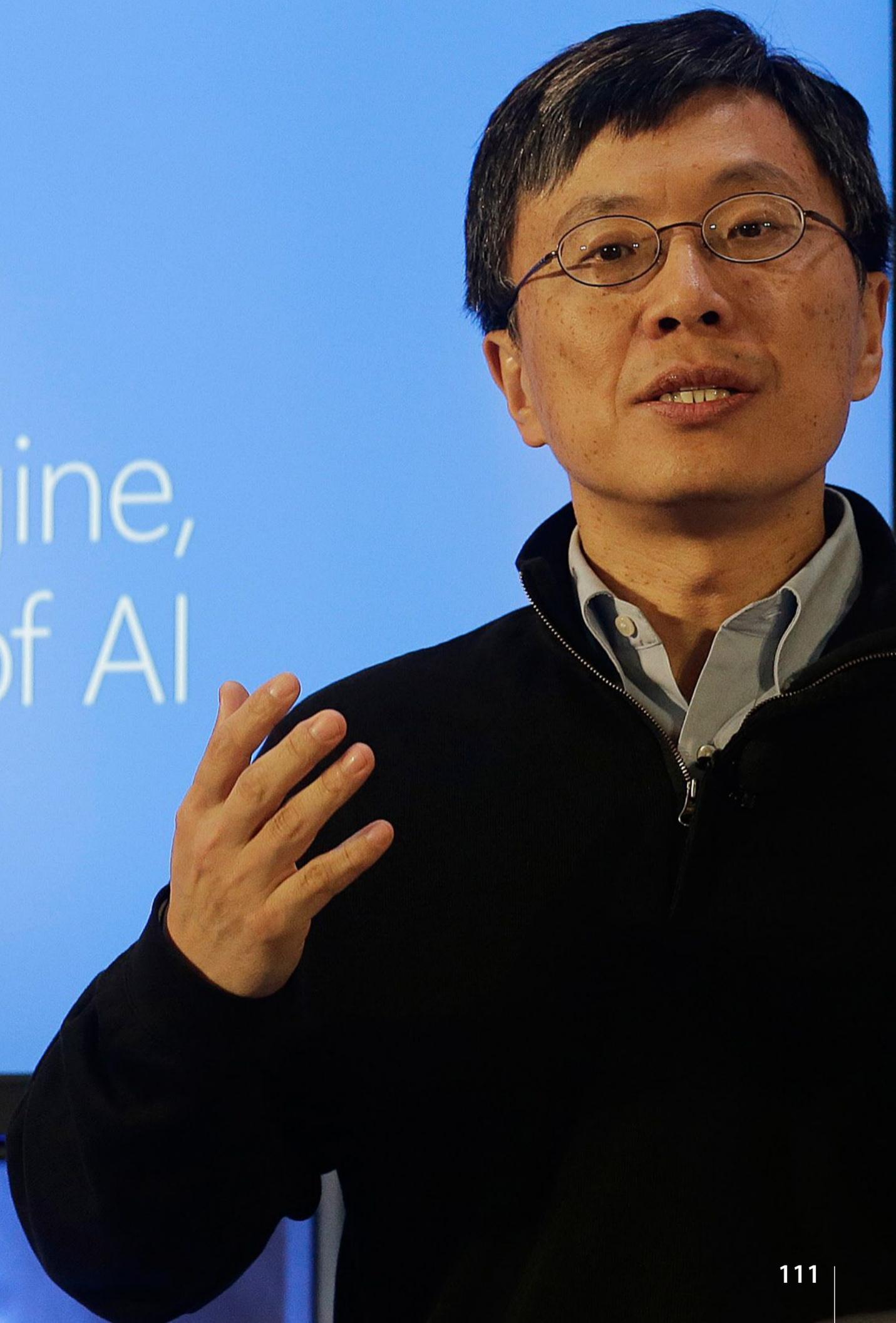
"We are not at 800 yet, but we bypassed President Bush a long time ago," Shum jokes.

The demand for more sophisticated searches has also grown as people have moved from

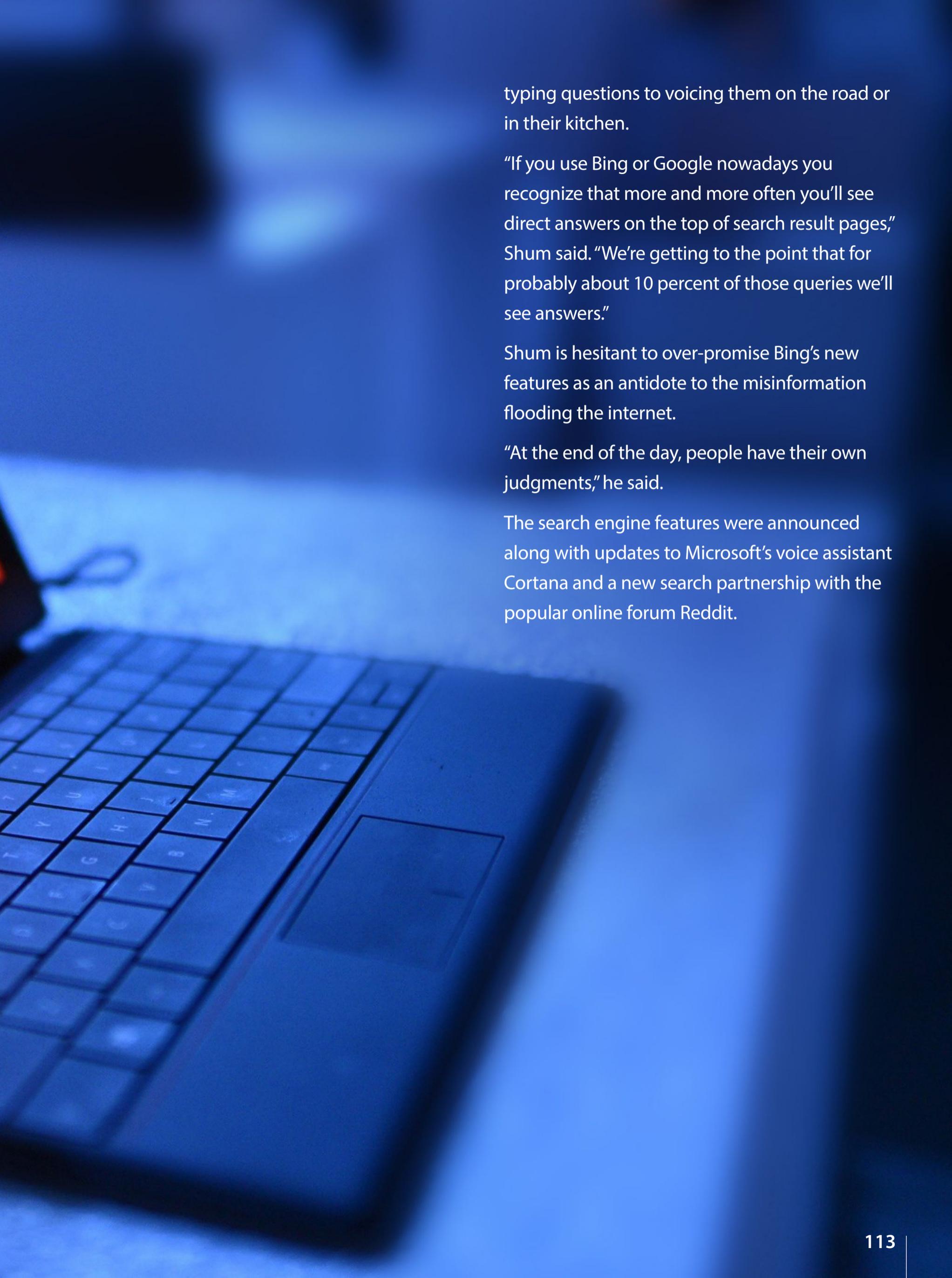


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dation of AI







typing questions to voicing them on the road or in their kitchen.

“If you use Bing or Google nowadays you recognize that more and more often you’ll see direct answers on the top of search result pages,” Shum said. “We’re getting to the point that for probably about 10 percent of those queries we’ll see answers.”

Shum is hesitant to over-promise Bing’s new features as an antidote to the misinformation flooding the internet.

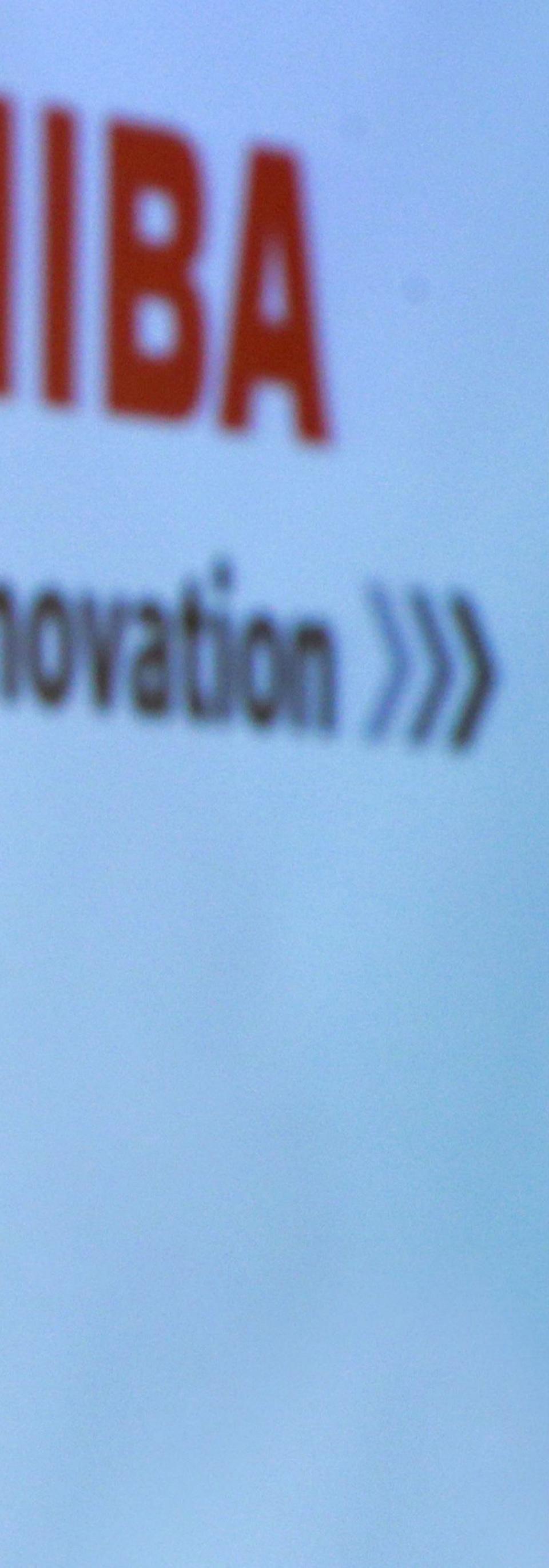
“At the end of the day, people have their own judgments,” he said.

The search engine features were announced along with updates to Microsoft’s voice assistant Cortana and a new search partnership with the popular online forum Reddit.

TOSH

Leading Inn





# TOSHIBA, WESTERN DIGITAL MAKE PEACE ON SALE OF CHIP UNIT

Toshiba Corp. and its joint venture partner Western Digital have made peace over the embattled Japanese electronics giant's plan to sell its flash memory unit to raise cash to stay afloat.

The agreement allows Western Digital to participate in future investments in their joint venture, clearing the way for a consortium led by Bain Capital to buy Toshiba Memory Corp., the companies said this week.

The deal also addresses concerns over protection of valuable patents and other intellectual property in the highly competitive field of flash memory products used in many high-tech products.

The two companies said it settles all disputes in litigation and arbitration over Western Digital's objections to the planned sale of the companies' NAND flash-memory SanDisk joint venture.

“The settlement represents the best possible outcome for all parties, clearing the way for the Bain Capital-led consortium to complete its acquisition of TMC as planned,” Yuji Sugimoto, managing director in Japan of Bain Capital, said in a statement.

The two companies said they will jointly invest in a new computer chip fabrication unit at their joint venture in central Japan and in another facility in northeastern Japan’s Iwate prefecture.

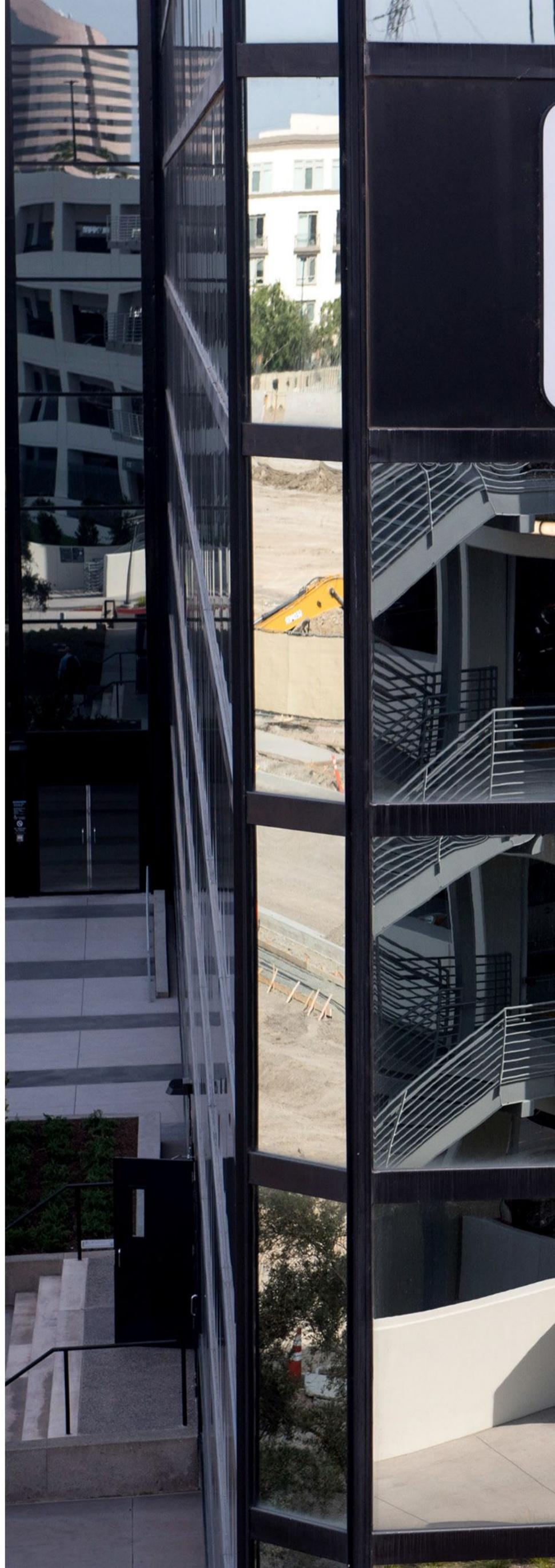
The plan calls for Toshiba Memory Corp. to eventually sell shares through an initial public offering.

“With the concerns about litigation and arbitration removed, we look forward to renewing our collaboration with Western Digital, and accelerating TMC’s growth to meet growing global demand for flash memory,” said Yasuo Naruke, a Toshiba senior executive vice president and president and CEO of Toshiba Memory.

He said the plan will ensure Toshiba Memory has the resources it needs to compete in the flash memory market, which is growing quickly with advances in artificial intelligence and networks for products that have internet connections, known broadly as the “internet of things.”

Western Digital’s CEO Steve Milligan said the arrangement with Toshiba adequately protects its own interests.

Toshiba has said it hopes the sale, estimated at 2 trillion yen (\$18 billion), will close by the end of March. It may have to clear further hurdles, such as possible anti-trust concerns.



The Western Digital logo, consisting of the letters 'WD' in a bold, stylized, black font on a white background.

# Western Digital







Toshiba is inundated with losses related to its U.S. nuclear operations at Westinghouse Electric Co., which filed for bankruptcy earlier this year. Its decline, worsened earlier scandals over bookkeeping and corporate governance, is one of the most dramatic downfalls of a modern Japanese company. But the company has said it expects to return to the black by the end of this fiscal year, in March.

In the meantime, it has struggled to avoid being delisted. Last week it raised 600 billion yen (\$5.3 billion) by issuing new shares with 60 overseas investment funds.

Bain Capital Private Equity, based in Boston, is one of the world's leading investment firms. The consortium it is leading includes the government-backed Development Bank of Japan and the Innovation Network Corp. of Japan, which is made up of 26 big-name Japanese corporate investors, including Sony Corp., Canon Inc., Toyota Motor Corp. and Sumitomo Mitsui Banking Corp. The consortium also includes South Korea's SK Hynix.

# iTunes

Review



iTunes Preview



by Michael Winterbottom  
Genre: Comedy  
Released: 2017  
Price: \$14.99

★★★★★  
15 Ratings

# Movies & TV Shows

# The Trip to Spain

After their trips through England and Italy, Rob Brydon and Steve Coogan embark on a deadpan journey through Spain. While sampling the country's finest gastronomic offerings, the pair exchange off-the-cuff banter, celebrity impressions and serious reflections about what it's like to settle into middle age.

## FIVE FACTS:

1. In his autobiography, Steve Coogan states that both he and Rob Brydon disliked the pitch for the series but went along with it due to their friendship with Michael Winterbottom.
2. The dialogue has been largely improvised in all seasons.
3. Michael Winterbottom came up with the idea after working with Steve Coogan and Rob Brydon on *Tristram Shandy: A Cock and Bull Story* (2005) stating that he was specifically inspired by the opening scene where the two actors were playing fictionalized versions of themselves.
4. The tagline for this season is 'The Two Amigos Are Back'.
5. The pair talk about the song "The Windmills of Your Mind" by Noel Harrison, and it is played at the film's ending. A different version of this song was played at the end of *I'm Alan Partridge* (1997) which stars Coogan.



Trailer

Rotten Tomatoes



84%

See more in  
iTunes





*Mick Jagger Clip*

# Columbus

When a renowned architecture scholar falls suddenly ill during a speaking tour, his son Jin (John Cho) finds himself stranded in Columbus, Indiana. Jin strikes up a friendship with Casey (Haley Lu Richardson), a young architecture enthusiast and as their relationship develops the two begin to explore the town and their conflicted emotions.

## FIVE FACTS:

1. The movie was shot in only 18 days.
2. Koganda stated that one of his major influences for the film was filmmaker Yasujiro Ozu's film Tokyo Story.
3. Columbus was also used as a film location for the film Madison (2001).
4. John Cho is the lead singer for Viva La Union, a Los Angeles garage rock band.
5. Koganda is also a famous video essayist, and his work celebrates the works of Ingmar Bergman, Wes Anderson, Robert Bresson, Richard Linklater and Yasujiro Ozu.



iTunes Preview



by Kogonada  
Genre: Drama  
Released: 2017  
Price: \$12.99

★★★★★  
51 Ratings

Rotten Tomatoes  
 97%



*Trailer*



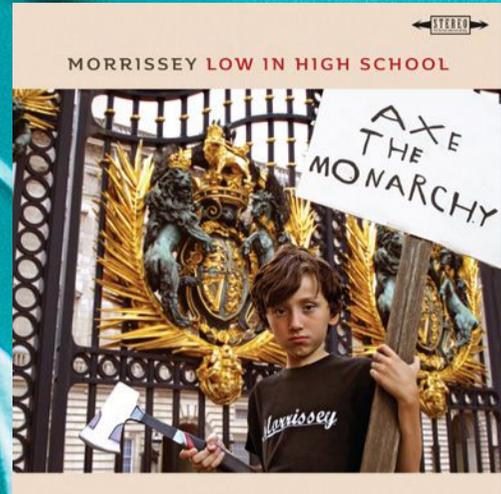


*Teaser 1*



# iTunes

## Review



iTunes Preview



Genre: Alternative  
Released: Nov 17, 2017  
12 Songs  
Price: \$9.99

★★★★★  
111 Ratings



*"Jacky's Only Happy When She's Up on the Stage"*

# Music



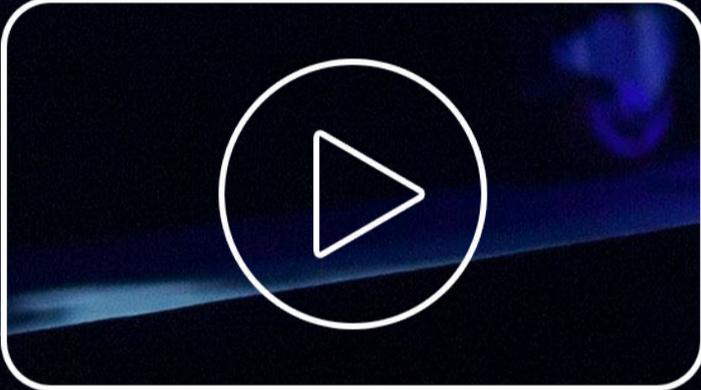
# Low In High School Morrissey

Morrissey's eleventh studio album has tracks that skitter across melancholia ("Spent the Day in Bed") to sounds that could have been lifted from a '70's novelty song ("Jacky's Only Happy When She's Up On Stage"). While there are songs that offer anger and compassion mixed with narcissism and misanthropy, it's unclear to see just where he stands regarding the state of the world but this doesn't mean that his lyrics aren't elegant and as quotable as ever.

## FIVE FACTS:

- 1.** Morrissey asked if he could pen a script for the UK soap Coronation Street, made an appearance in Brookside and turned down roles in Emmerdale and Eastenders.
- 2.** He draws much of his inspiration from his musical and literary heroes, which include David Bowie, Patti Smith and the New York Dolls as well as Oscar Wilde and WH Auden.
- 3.** His solo debut 'Viva Hate' debuted at number one and entered the US Billboard Charts at 48: a higher chart number than any of The Smiths' albums.
- 4.** His 1988 track 'Margaret on the Guillotine' about UK Prime Minister Margaret Thatcher landed him in hot water with Scotland Yard.
- 5.** In 2006, he was voted the second greatest living British icon by BBC's The Culture Show. He was beaten to the top spot by David Attenborough.





*"Spent the Day in Bed"*

# You Make Me Feel Like Christmas

## Gwen Stefani

Rather than applying a more contemporary sound to the genre, Gwen Stefani has remained loyal to the traditional Yuletide jingles with an album that includes favourites including “White Christmas”, “Let It Snow” and a cover of Wham!’s “Last Christmas”. There are also some original compositions including “Never Kissed Anyone with Blue Eyes Before You”, a track obviously inspired by Stefani’s boyfriend Blake Shelton who appears on the title track.

### FIVE FACTS:

1. Gwen’s elder brother Eric set up the band No Doubt in 1986, asking her to sing backing vocals. She became the band’s lead singer when the original singer John Spence committed suicide.
2. She made her acting debut in Martin Scorsese’s *The Aviator* (2004).
3. She is named after a stewardess from the 1988 novel ‘*Airplane!*’
4. She released a clothing line named L.A.M.B in 2004, inspired by Guatemalan, Japanese and Jamaican styles.
5. Her single ‘Hollaback Girl’ was the first digital download to exceed sales of 1 million.



iTunes Preview



Genre: Holiday  
Released: Oct 6, 2017  
12 Songs  
Price: \$7.99

★★★★★  
606 Ratings



*"Santa Baby"*  
(Live On The Today Show/2017)





*"Santa Baby"*





## BOX OFFICE TOP 20: 'COCO' TOPS CHARTS FOR THIRD WEEKEND

With "Star Wars: The Last Jedi" set to open this weekend, Disney and Pixar's "Coco" topped the quiet box office charts for the third time in a row.

The animated flick earned \$18.5 million this weekend, and the only new wide release, "Just Getting Started" starring Morgan Freeman, opened in 10th place with a lackluster \$3.2 million.

Holdovers mostly populated the top five, with "Justice League" in second place with \$9.7 million, "Wonder" in third with \$8.4 million, and "Thor: Ragnarok" in fifth place with \$6.3 million. No. 4 was "The Disaster Artist," which performed well in its expansion to 840 theaters, bringing in just under \$6.4 million.





The top 20 movies at U.S. and Canadian theaters Friday through Sunday, followed by distribution studio, gross, number of theater locations, average receipts per location, total gross and number of weeks in release, as compiled Monday by comScore:

1. *"Coco,"* Disney, \$18,452,315, 3,748 locations, \$4,923 average, \$135,658,005, 3 weeks.

2. *"Justice League,"* Warner Bros., \$9,664,297, 3,508 locations, \$2,755 average, \$212,129,668, 4 weeks.

3. *"Wonder,"* Lionsgate, \$8,447,762, 3,519 locations, \$2,401 average, \$100,300,868, 4 weeks.

4. *"The Disaster Artist,"* A24, \$6,366,243, 840 locations, \$7,579 average, \$7,963,017, 2 weeks.

5. *"Thor: Ragnarok,"* Disney, \$6,271,374, 3,047 locations, \$2,058 average, \$301,136,438, 6 weeks.





6. "Daddy's Home 2," Paramount, \$5,919,337, 3,263 locations, \$1,814 average, \$91,078,796, 5 weeks.

7. "Murder On The Orient Express," 20th Century Fox, \$5,162,331, 3,089 locations, \$1,671 average, \$92,769,846, 5 weeks.

8. "The Star," Sony, \$3,707,087, 2,976 locations, \$1,246 average, \$32,311,133, 4 weeks.

9. "Lady Bird," A24, \$3,451,822, 1,557 locations, \$2,217 average, \$22,235,491, 6 weeks.

10. "Just Getting Started," Broad Green Pictures, \$3,201,459, 2,161 locations, \$1,481 average, \$3,201,459, 1 week.

11



12





**11.** *“Three Billboards Outside Ebbing  
Missouri,”* Fox Searchlight,  
\$2,862,109, 1,620 locations, \$1,767 average,  
\$18,312,393, 5 Weeks.

**12.** *“A Bad Moms Christmas,”* STX  
Entertainment, \$2,581,446,  
2,124 locations, \$1,215 average,  
\$68,702,052, 6 weeks.

**13.** *“The Shape Of Water,”* Fox  
Searchlight, \$1,141,546,  
41 locations, \$27,843 average,  
\$1,372,554, 2 weeks.

**14.** *“Roman J. Israel, Esq.,”* Sony,  
\$871,624, 1,453 locations,  
\$600 average, \$11,209,149, 4 weeks.

**15.** *“Darkest Hour,”* Focus Features,  
\$741,417, 53 locations,  
\$13,989 average, \$1,196,325, 3 weeks.

# 16



# 17





**16.** *"The Man Who Invented Christmas,"*  
Bleecker Street, \$715,800,  
720 locations, \$994 average,  
\$4,346,405, 3 weeks.

**17.** *"Call Me By Your Name,"* Sony  
Pictures Classics, \$285,850,  
9 locations, \$31,761 average,  
\$1,367,155, 3 weeks.

**18.** *"Blade Runner 2049,"* Warner Bros.,  
\$264,527, 388 locations,  
\$682 average, \$91,252,390, 10 weeks.

**19.** *"I, Tonya,"* Neon Rated, \$264,  
155, 4 locations, \$66,039 average,  
\$264,155, 1 week.

**20.** *"The Mountain Between Us,"*  
20th Century Fox, \$244,829,  
535 locations, \$458 average,  
\$30,191,120, 10 weeks.

Universal and Focus are owned by NBC Universal, a unit of Comcast Corp.; Sony, Columbia, Sony Screen Gems and Sony Pictures Classics are units of Sony Corp.; Paramount is owned by Viacom Inc.; Disney, Pixar and Marvel are owned by The Walt Disney Co.; Miramax is owned by Filmyard Holdings LLC; 20th Century Fox and Fox Searchlight are owned by 21st Century Fox; Warner Bros. and New Line are units of Time Warner Inc.; MGM is owned by a group of former creditors including Highland Capital, Anchorage Advisors and Carl Icahn; Lionsgate is owned by Lions Gate Entertainment Corp.; IFC is owned by AMC Networks Inc.; Rogue is owned by Relativity Media LLC.

# NEW LINKIN PARK LIVE ALBUM PACKS A PUNCH OF SORROW

Linkin Park, "One More Light Live" (Warner Bros.)

It's unescapably heartbreaking to listen to Linkin Park's new album. The reason is right there in the title: Live.

Five months after singer Chester Bennington hanged himself, the band has released "One More Light Live," an album to cherish even if some fans disliked the pop direction the group had recently taken.

Here, we get to hear again that unmistakable voice, both delicate and ferocious. Here, we get to celebrate a unique talent, even as we say goodbye.





“Who cares if one more light goes out?/In the sky of a million stars,” Bennington sings in the fragile song “One More Light.” He answers: “Well, I do.” It’s hard not to get emotional hearing him reaching out to someone in trouble and knowing his light would go out soon.

Recorded earlier this summer during the band’s tour through South America and Europe, the album is naturally top-heavy with songs from the latest album, with seven of the 16 tracks pulled from “One More Light.”

So it’s not a greatest hits, but it still has essential Linkin Park tunes like “Crawling,” “Numb,” “In the End,” “What I’ve Done” and “Burn It Down.” (The only guest is Stormzy, who reprises his rap on “Good Goodbye.”)

Yes, the editing is ragged, with some songs cutting off abruptly, weird extraneous stuff lingering in the mix and intros sometimes attached to previous songs. But the instruments are clear and the crowd noise is well balanced. As the band says in the liner notes, the album is a “glimpse into how magical these shows were for the six of us.”

The L.A.-based metal-rap genre-benders often dealt with depression, anguish and alienation in their lyrics and those words haunt the album as the band pushes through its set.





"I don't like my mind right now," Bennington sings on "Heavy." On the song "Battle Symphony," he begs: "Please just don't give up on me." One song from the new album — "Nobody Can Save Me" — talks of storm clouds and "darkness inside." Bennington's voice sounds torn in the ominous "Leave Out All the Rest," a song about someone looking back from their own death.

Whether by design or happenstance, the album ends with "Bleed It Out" from the CD "Minutes to Midnight" — and a sonic punch of horror. That's the song with the lyrics: "Find a new place to hang this noose/String me up from atop these roofs/Knot it tight so I won't get loose."

The last things we hear on the album are cheering crowds and feedback. The sorrow we add ourselves.









# TRUMP WANTS TO SEND MAN BACK TO MOON, ON TO MARS

President Donald Trump wants to send man back to the moon — and on to Mars.

Trump signed a policy directive Monday instructing the National Aeronautics and Space Administration to “refocus America’s space program on human exploration and discovery.”

The move, Trump said, “marks an important step in returning American astronauts to the moon for the first time since 1972 for long-time exploration.”

“This time we will not only plant our flag and leave our footprint,” he said, “we will establish a foundation for an eventual mission to Mars, and perhaps someday, to many worlds beyond.”



Past presidents, including George H.W. Bush and George W. Bush, have also proposed returning to the moon and missions to Mars, Budget constraints derailed their plans.

Trump was joined at the White House by several current and former astronauts, including Buzz Aldrin, the second man to walk on the moon, and former U.S. Sen. and Apollo 17 astronaut Harrison "Jack" Schmitt, the next-to-last person on the moon.

"Today we pledge that he will not be the last, and I suspect we'll be finding other places to land in addition to the moon," Trump said.

No human has been on the moon since Apollo 17 in December 1972. Only 12 men have set foot on the moon, all have been Americans.

Under the directive, the government is also expected to work closely with other nations and private industry.







# SPACE X DELIVERY DELAYED FEW DAYS; 1ST REUSED ROCKET FOR NASA

SpaceX has delayed its latest grocery run for the International Space Station by at least another few days.

The company now aims to launch its first recycled rocket for NASA on Friday.

The unmanned Falcon rocket originally flew in June. The Dragon capsule made a space station shipment in 2015.

This will be the first launch in more than a year from this Florida pad, the scene of a rocket explosion in 2016. Late Tuesday, SpaceX pushed back the launch for the second day in a row, saying it needs to rid the second-stage fuel system of unwanted particles. Liftoff had been scheduled for Tuesday, then Wednesday.

If the Falcon isn't flying by Friday, SpaceX will have to wait until late December at NASA's request, based on sunlight restrictions on the orbiting lab.

As before, SpaceX will attempt to land the first-stage booster back at Cape Canaveral after liftoff. SpaceX chief Elon Musk is pushing to lower launch costs by reusing the most expensive rocket parts.

The Dragon holds nearly 5,000 pounds of supplies, including a barley experiment for Budweiser.









# AMAZON WILL STREAM AVP BEACH VOLLEYBALL TOUR

Amazon is going shopping for TV content, and it's putting some beach volleyball in its cart.

The internet retail giant has an agreement with the AVP tour to livestream almost every match from every tournament for the next three summers. The domestic beach circuit joins NFL Thursday night games and some men's tennis on Amazon Prime Video, which sends shows to TVs, phones, tablets, game consoles and other connected screens around the world.

"When Amazon has interest in anything you do, you pick up the phone," AVP managing partner Donald Sun told The Associated Press. "The fact that they've made the decision, it's definitely a positive for the AVP in terms of being on that train."

The deal announced Thursday could provide a boost for a sport that emerges as an Olympic favorite for American TV audiences every four years but has struggled to sustain viewership. Next year's AVP tour is scheduled to make eight stops, from the sport's longtime venues in California to Seattle, Chicago, New York and Austin, Texas.

Sun said numbers from the tour's broadcasts on NBC and its own livestream were "pretty robust." But the opportunity offered by an Amazon partnership "was quite the no-brainer," he said.

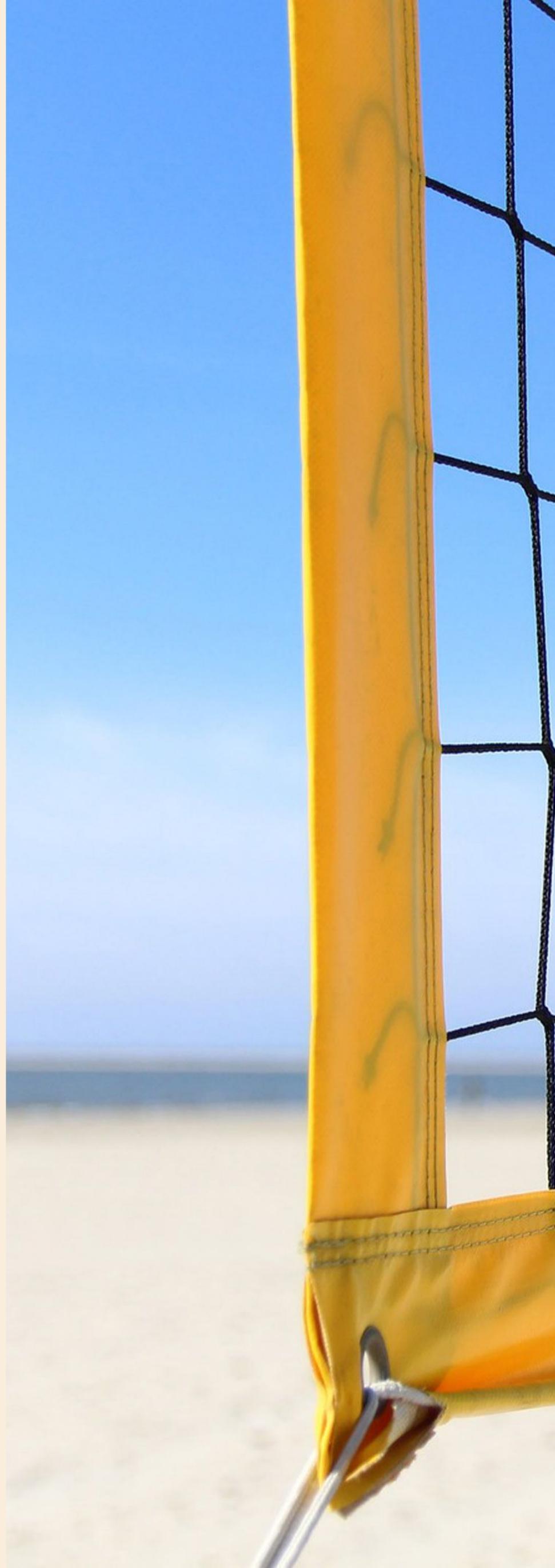
"They clearly have shown their technological know-how," Sun said. "Everything that they've sought out to be, whether it is buying grocery chains to producing movies now, they clearly have the bandwidth and knowledge."

Jim DeLorenzo, the head of sports for Amazon Video, said the NFL streaming has been a success so far. It also will offer 37 ATP tennis events live and on demand in Britain and Ireland.

The AVP tournaments will be available in nearly every country in the world and on more than 600 devices, Amazon said, from TVs to mobile devices and game consoles. In the U.S., one match per event — the men's or women's final — will be broadcast exclusively by NBC or its sports network.

DeLorenzo declined to comment on Amazon's future plans for live sports streaming.

"It's too soon to say," he said. "We're in the early, early stages of this."









# SOON YOU CAN WATCH THE NFL FREE ON YOUR PHONE ON YAHOO

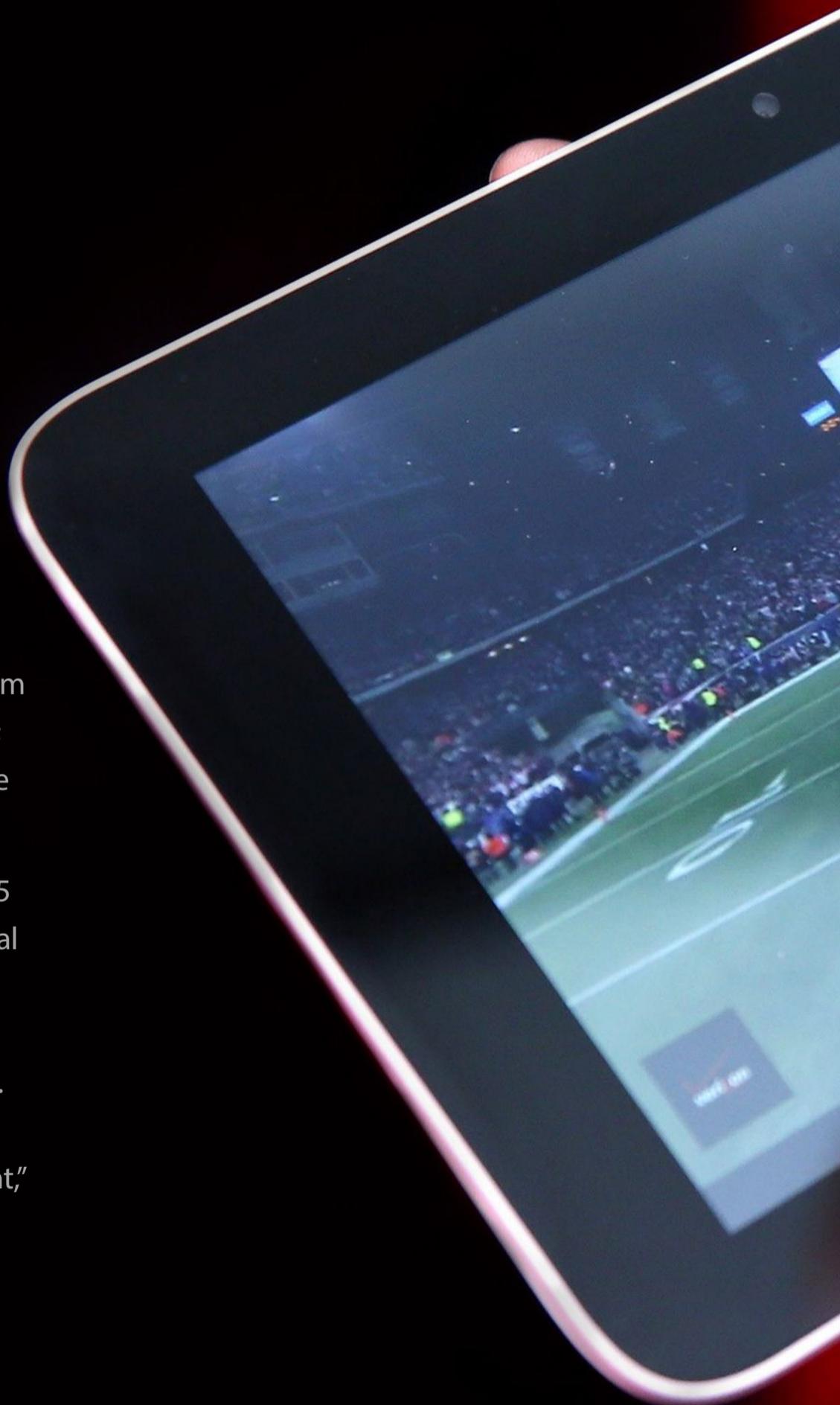
Watching NFL football games on your phone used to be mainly limited to Verizon customers. Soon anyone will be able to watch football games on the go for free on Yahoo's app, now that Verizon owns Yahoo.

But people who want to watch football through online-TV services like Sling or YouTube TV will have more problems. An NFL game on ESPN will still be blocked on the app on a phone — and starting next season, on tablets as well, for some games, said Brian Angiolet, Verizon's global chief media and content officer.

Verizon's five-year deal with the NFL takes effect in January, in time for playoffs. Games will stream on the Yahoo Sports app; Yahoo.com on mobile (but not Yahoo.com on computers); Verizon's little-known video app, go90; and the NFL mobile app.

Verizon bought Yahoo in June and AOL in 2015 and wants to combine the two to build a digital ad business to rival Facebook and Google. It hopes adding more sports streaming will help grow the audience for its media business. "Sports is the first major pillar in Verizon's strategy. The NFL is a marquee piece of content," Angiolet said. Verizon will be able to sell some digital ads during games.

The NFL has had a partnership with Verizon since 2010 and has been experimenting with other ways to televise its games besides broadcast and cable TV. Amazon this year has 10 Thursday night games and a Christmas game.



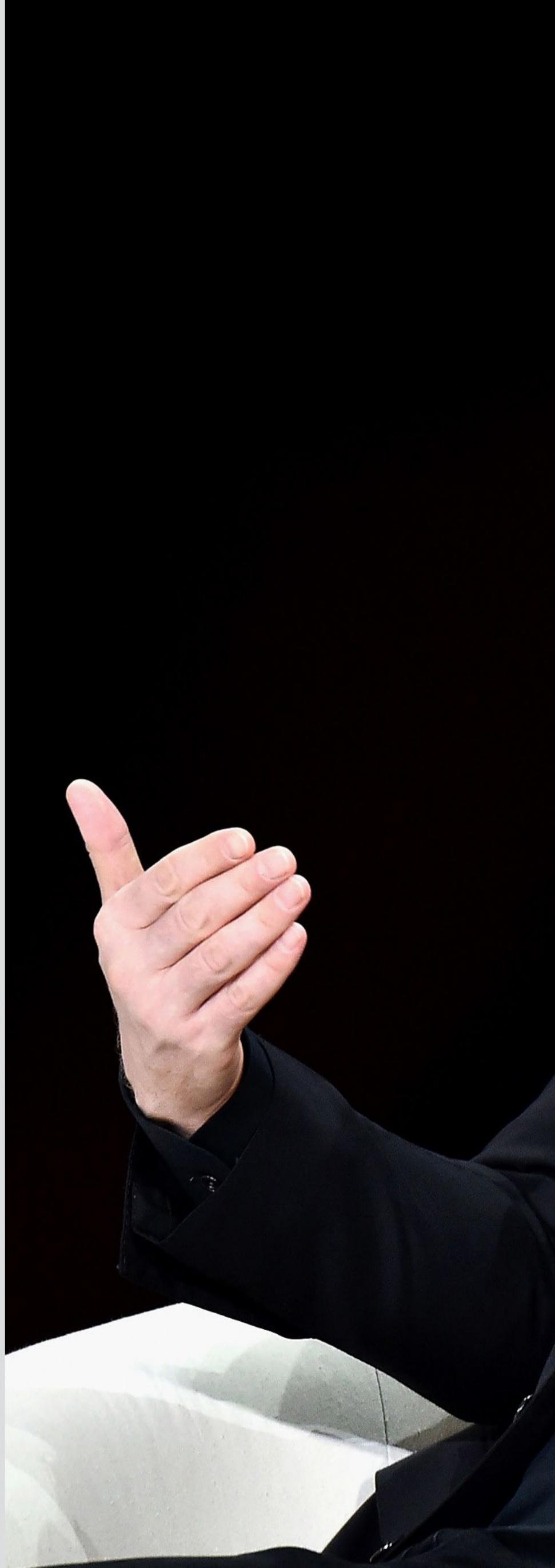


# SOME OF FACEBOOK'S EARLY FRIENDS NOW ITS SHARPEST CRITICS

Some of Facebook's former friends are starting to express some serious doubts about the social network they helped create.

Facebook exploits a "vulnerability in human psychology" to addict its users, Sean Parker, the company's first president, said in a public forum last month. Chamath Palihapitiya, a former Facebook vice president who joined the company in 2007, recently told an audience at Stanford that the company is "ripping apart the social fabric of how society works."

And Roger McNamee, a venture capitalist and early investor in both Facebook and Google, wrote that both companies "threaten public health and democracy" in an August USA Today op-ed.





It has been a rough year for the tech industry, especially social media companies. It opened with concerns about fake news and “filter bubbles” that can shield people from contrary beliefs, segued into pressure on Facebook and Twitter to clamp down on trolling and online harassment, and culminated with congressional hearings into Russian agents’ alleged use of their platforms to meddle with the 2016 presidential election .

All of that, of course, came against a steady drumbeat of tweets from President Donald Trump, who used the service to praise his allies and castigate his foes, often in inflammatory fashion.

But the unkindest cut of all may have come from three people who helped build Facebook in its early days. In early November, Parker told the news site Axios that Facebook was built to answer the question, “How do we consume as much of your time and conscious attention as possible?” He called its stream of comments, “likes” and reactions a “social validation feedback loop that exploits how human brains work.”



A few days later, McNamee wrote another essay for the Guardian in which he argued that Facebook and Google have used “persuasive techniques developed by propagandists and the gambling industry,” combining them with modern technology to maximize their profits while pushing “appeals to fear and anger” and other material that reinforces filter bubbles and addictive behavior.

Palihapitiya piled on too, saying at a Stanford Graduate School of Business talk last month that he feels “tremendous guilt” about helping create tools that have widened social divisions. He recommended that people take a break from social media.

Facebook, in an emailed comment, said it is “working hard to improve,” and noted that it’s not the same company it was when Palihapitiya, who left six years ago, worked there.

“We’ve done a lot of work and research with outside experts and academics to understand the effects of our service on well-being, and we’re using it to inform our product development,” the company’s statement read. “We are willing to reduce our profitability to make sure the right investments are made.”

Not all early investors are critical. LinkedIn co-founder Reid Hoffman acknowledged in an interview concerns around how social media systems are causing what he called “lightly addictive behavior.” But, he added, “that’s also been true of television, that’s also been true of sugar.”







# SCHOLARSHIP FOR MUSLIM WOMEN HONORS PIONEERING SCIENTIST

When it came to pursuing a scientific career, Tasneem Essader encountered forces pulling her in and pushing her away: She drew inspiration from her mother's work in chemistry, but initial discouragement from her engineer father, who thought she should do something else. She was inspired by women engineers she met, but found few girls around her in advanced high school science classes.

Essader, who feels strongly connected to her Muslim faith, also struggled to find the right fit among an array of identity-based scholarships as she looked to help ease the financial burden of college.

Then, an uncle informed her about the Adawia Alousi Scholars program, and the obstacles started to fall away. She found

that fit, and a kinship with the scholarship program's namesake.

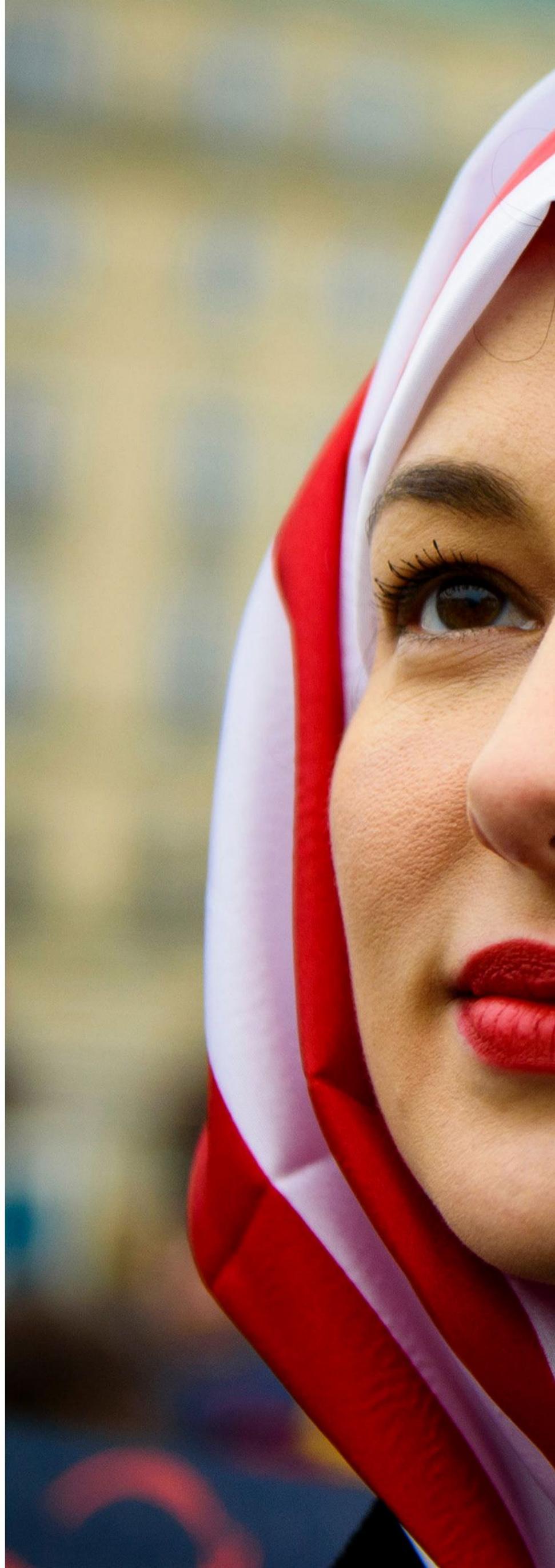
"After reading about Dr. Alousi's life, I felt like the struggles I faced because of who I am in the field I want to pursue have been validated," Essader wrote in her essay application, "that someone who has gone through the same struggles as I have and has something about it to make it easier for future generations."

The scholarship, established at the Dearborn, Michigan-based Center for Arab American Philanthropy with money from Alousi's family trust, is believed to be the first of its kind for Muslim-American women studying science, technology, engineering and mathematics. Essader is in the inaugural class of 11 recipients of the scholarship, named after a scientist who helped develop a pioneering drug treatment for congestive heart failure in the 1980s.

Alousi, who died in 2010, was an Iraq-born Muslim who had to fight to earn recognition in a male-dominated field. She wanted money from her trust to go toward charity.

"We reflected upon who my aunt was, what she would want. She was most passionate about her science and Islam — the scholarship reflects those passions," said nephew Amin Alousi, an associate professor of medicine at the University of Texas' MD Anderson Cancer Center.

Alousi said his aunt's pharmacological research was the backbone for a new class of drugs for congestive heart failure — and she and her colleagues were the first to bring such drugs to market. Still, he added, she faced discrimination being "a foreign-born woman."









“She really did have to be vocal,” Alousi said. “On all the scientific papers, she insisted on being recognized as a lead author.”

Alousi said the scholarship includes grade requirements but he added, “We want people with a compelling story,” including “overcoming hardships.”

Essader, a freshman at the University of North Carolina, wants to “carry forward Dr. Alousi’s spirit by breaking the stereotypes surrounding people who look like me.” Essader says her father has grown more encouraging as he sees her passion for her intended career in biomedical engineering.

Another recipient, Teeba Jihad, said her “family was under attack” in her native Iraq as members of the Shiite sect of Islam during wartime. After coming to the U.S. at age 11, she faced name-calling and criticism for her modest clothing. Jihad, who had a cancer scare in 2013, is studying biomolecular science at New York University and has worked in a lab to develop breast cancer treatments using magnetic, nanoscale particles. The scholarship, she wrote, allows her to “continue to create a positive image of young Muslim females.”

Alousi hopes the recipients’ achievements help dispel misconceptions.

“The bigger narrative of how often people in the West or in the United States wrongly assume Muslim women are uneducated, not successful, or not outspoken — I think that’s the bigger story that we hope to overcome with this scholarship and the young women it supports,” he said.



Image: Dominick Reuter



# MEN PLEAD GUILTY TO CREATING 'BOTNET' USED TO CRASH THE WEB

Three men pleaded guilty to creating a “botnet” known as Mirai that was used to paralyze chunks of the internet in 2016.

Paras Jha, Josiah White and Dalton Norman admitted to one count of conspiracy in plea agreements filed earlier this month. Federal prosecutors in Alaska and New Jersey said Wednesday that the men created a collection of hundreds of thousands of computers and internet-connected devices — including routers, webcams and other devices — infected with malware that they controlled.

A broad “denial of service” attack waged using the Mirai botnet knocked services such as Twitter and Netflix offline in October 2016. Prosecutors said they don’t believe the three men were responsible for that attack, as Jha had already posted the code for Mirai to online criminal forums.

Jha, 21, of Fanwood, New Jersey, and Norman, 21, of Metairie, Louisiana, also pleaded guilty to a separate conspiracy charge for using another powerful botnet for a ‘clickfraud’ scheme, used

to artificially generate advertising revenue by making it appear that a real user clicked on an online ad.

Jha, a former Rutgers University computer science student, also pleaded guilty Wednesday in a New Jersey federal court to a computer fraud charge for allegedly executing a series of attacks from 2014 through 2016 that paralyzed the university's networks, often during high-stress times such as mid-term or final exams.

Jha's attorney, Robert Stahl, said Jha "is a brilliant young man whose intellect far exceeded his emotional maturity" and that he is "extremely remorseful and accepts responsibility for his actions." He said the guilty pleas "are the first step in his evolution into adulthood and responsibility."

A prominent cybersecurity journalist, Brian Krebs, had outed Jha and White back in January as likely suspects involved in creating the Mirai botnet.

White, 20, of Washington, Pennsylvania, and Norman could not immediately be reached for comment Wednesday.

The investigation originated in Anchorage after some internet-connected devices in Alaska were discovered to have been affected by the Mirai malware.

Bill Walton, a special agent who oversees the Anchorage FBI's Cyber Crime unit, said the botnet's name is a reference to a Japanese anime called Mirai Nikki, which loosely translated into English means "future diary."

"The co-conspirators were all just a fan of that particular anime," Walton said.







Spotify





# MUSIC STREAMING GIANTS SPOTIFY, TENCENT INVEST IN EACH OTHER

Swedish music streaming service Spotify and Chinese internet company Tencent have struck a deal to take minority stakes in each other.

The companies said in a joint statement they will acquire new shares representing minority equity stakes in each other for cash — Tencent Music Entertainment will invest in Spotify, while the Swedish music startup will take a stake in Tencent’s music wing. Terms of the deal were not disclosed.

The companies said it would be “strengthening relationships between the two most popular music streaming platforms in the world.”

Spotify CEO Daniel Ek said it “will allow both companies to benefit from the global growth of music streaming.”

The CEO of Tencent Music Entertainment Group, Cussion Pang, said the companies will look to collaborate and “foster a vibrant music ecosystem that benefits users, artists and content owners.”



Shenzhen-based Tencent is one of China's most powerful internet companies, running the WeChat messaging app as well as online payment platforms and games. Because Chinese authorities have largely shut out western companies like Google, Twitter and Facebook, homegrown internet companies like Tencent have been able to grow rapidly in size.

Spotify, meanwhile, has no users in China. According to the company, Spotify as of July had over 60 million subscribers and 140 million active users who can access to over 30 million songs.



# GERMAN INTELLIGENCE WARNS OF INCREASED CHINESE CYBERSPYING

The head of Germany's domestic intelligence agency warned this week that China allegedly is using social networks to try to cultivate lawmakers and other officials as sources.

Hans-Georg Maassen said his agency, known by its German acronym BfV, believes more than 10,000 Germans have been targeted by Chinese intelligence agents posing as consultants, headhunters or researchers, primarily on the social networking site LinkedIn.





“This is a broad-based attempt to infiltrate in particular parliaments, ministries and government agencies,” Maassen said.

In addition, Chinese hackers increasingly are launching attacks on European companies through trusted suppliers, he alleged.

The BfV established a task force early this year which examined the use of fake profiles on social networks over nine months. The agency provided journalists with what it said were eight of the most prolific fake profiles on LinkedIn used by alleged Chinese spies.

Using names such as Lily Wu, Laeticia Chen or Alex Li, the profiles sport impressive resumes, hundreds of contacts and attractive pictures of young professionals.

The agency also named six organizations it alleged Chinese spies use to cloak their approaches, including one called the Association France Euro-Chine and another named Global View Strategic Consulting.

Messages seeking comment from the organizations weren’t immediately returned.

Maassen warned that Chinese cybergroups also were using so-called “supply-chain attacks” to get around companies’ online defenses.

Such attacks target IT workers and others who work for trusted service providers to send malicious software into the networks of organizations the attackers are interested in.

“The infections are difficult to detect, since network connections between service providers and their customers aren’t suspicious,” the BfV said. “This gives the attacker an even better disguise than before.”





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## CONTACTS

**Executive Director** - ceo@techlifeneews.com  
**Relationship Management** - crm@techlifeneews.com  
**Editor** - editor@techlifeneews.com  
**Advertise** - ads@techlifeneews.com  
**Social Network** - network@techlifeneews.com  
**Promotions** - promo@techlifeneews.com

## EXECUTIVE DIRECTOR

**Ivan Castilho**  
Chief Executive Officer / Design Conception

## MINDFIELD DIGITAL ART & GRAPHIC DESIGN

**Glauco Ribeiro**  
Chief Design Officer / Art & Graphic Design Director

**Michael Danglen**  
Art & Graphic Design Producer

**Anderson Oliveira**  
Art & Graphic Design Producer

## OFFICIAL WEBSITE

**Yogh Inc.**  
WordPress Production & Website Support

**Lucas Carvalho**  
Production Director

**Fellipe Giesel**  
Web Designer / Producer

**Filipe Siems**  
Web Designer / Programmer

## WRIWRITERS

**Precise English Inc.**  
**Benjamin Kerry (UK)**  
**Gavin Lenaghan (UK)**  
**Craig Lenaghan (UK)**  
**Elena Lusk (US)**

## COLUMNS

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## REVISION

**Gavin Lenaghan**  
**Elena Lusk**

## PRODUCTION SUPPORT / COLLABORATORS

**Rui da Costa**  
**Segolene Vincent**  
**Lise Berda**  
**James Jarvis**  
**Richard Sawyer**  
**Lauren Brown**  
**Matthew Coburn**  
**Jeffrey Milks**  
**Gustavo Leite**  
**Susan Kiesling**  
**Raquel Serrano**  
**Robert Fluellen**  
**Lisa Swiniarski**  
**Roger Gayalkar**  
**Gustavo Labanca**  
**Held Souza**

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