



FEB 03, 2017

#275

# Apple Magazine

**Q1 2017**  
NEXT BIG  
MOVE  
**APPLE REVERSED  
ITS IPHONE SLUMP**

**TAKING OFF**  
ABOVE CROWDED  
ROADWAYS  
**INDUSTRY RACE TO  
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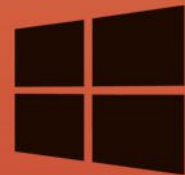
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The background of the advertisement is a photograph of a modern, bright office or home workspace. A large window in the background looks out onto green foliage. In the foreground, a white desk holds a silver laptop, a pair of tortoiseshell glasses, a black coffee cup, and a glass of water. The overall atmosphere is clean, organized, and professional.

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# INTENTIONALLY OR NOT, BIG BRANDS HELP FUND FAKE NEWS



Wittingly or not, major global corporations are helping fund sites that traffic in fake news by advertising on them.

Take, for instance, a story that falsely claimed former President Barack Obama had banned Christmas cards to overseas military personnel. Despite debunking by The Associated Press and other fact-checking outlets, that article lives on at "Fox News The FB Page," which has no connection to the news channel although it bears a replica of its logo.

And until recently, the story was often flanked by ads from big brands such as the insurer Geico, the business-news outlet Financial Times, and the beauty-products maker Revlon.



This situation isn't remotely an isolated case, although major companies generally say they have no intention of bankrolling purveyors of fake news with their ad dollars. Because many of their ads are placed on websites by computer algorithms, it's not always easy for these companies to steer them away from sites they find objectionable.

Google, the biggest player in the digital ad market, places many of these ads. The company says it bars ads on its network from appearing against "misrepresentative content" - its term for fake news - yet Google spokeswoman Andrea Faville acknowledged that the company had sold ads on the site with the Christmas-card story. Those ads vanished after The Associated Press inquired about them. Faville declined to comment on their disappearance.

## **ADS THAT GO WHERE THEY WILL**

Media advertising was much simpler when companies had only to buy ad space in newspapers or magazines to reach readers in a particular demographic category. Digital ads, by contrast, can wind up in unexpected places because they're placed by automated systems, not sales teams, and targeted at individuals rather than entire demographics.

In effect, these ads follow potential customers around the web, where a tangle of networks and exchanges place them into ad slots at online publications. These middlemen have varying standards and levels of interest in helping advertisers ensure that their ads avoid controversy.





25,423 Pageviews

3.32 Pages/Visit

### Traffic Sources Overview



Traffic Source	Visitors	Percentage
Direct Traffic	3,097.00	(40.49%)
Search Engines	2,910.00	(38.04%)
Referring Sites	1,642.00	(21.47%)

### Visitors Overview





“A brand wouldn’t have a real foolproof way of not getting on sites that have issues like this,” said Joseph Galarneau, CEO of the New York City startup Mezzobit, which helps publishers and marketers manage advertising technology.

## **AUTOMATIC FAKE-NEWS FUNDING**

Such automated ads are a major income source for fake news stories, which may have influenced voters in the U.S. presidential election. False stories can undermine trust in real news - and they can be dangerous. A widely shared but untrue story that pegged a Washington, D.C., pizzeria as part of a Hillary Clinton-run child sex trafficking ring led a man to fire a gun in the restaurant.

This largely invisible web of automated exchanges and ad networks funds millions of online sites, from niche, small-traffic blogs to professional news and entertainment sites with audiences in the tens of millions. By tracking web users to smaller sites, advertisers can reach them more cheaply than by limiting themselves to “premium” websites like the Washington Post, CBS or ESPN.

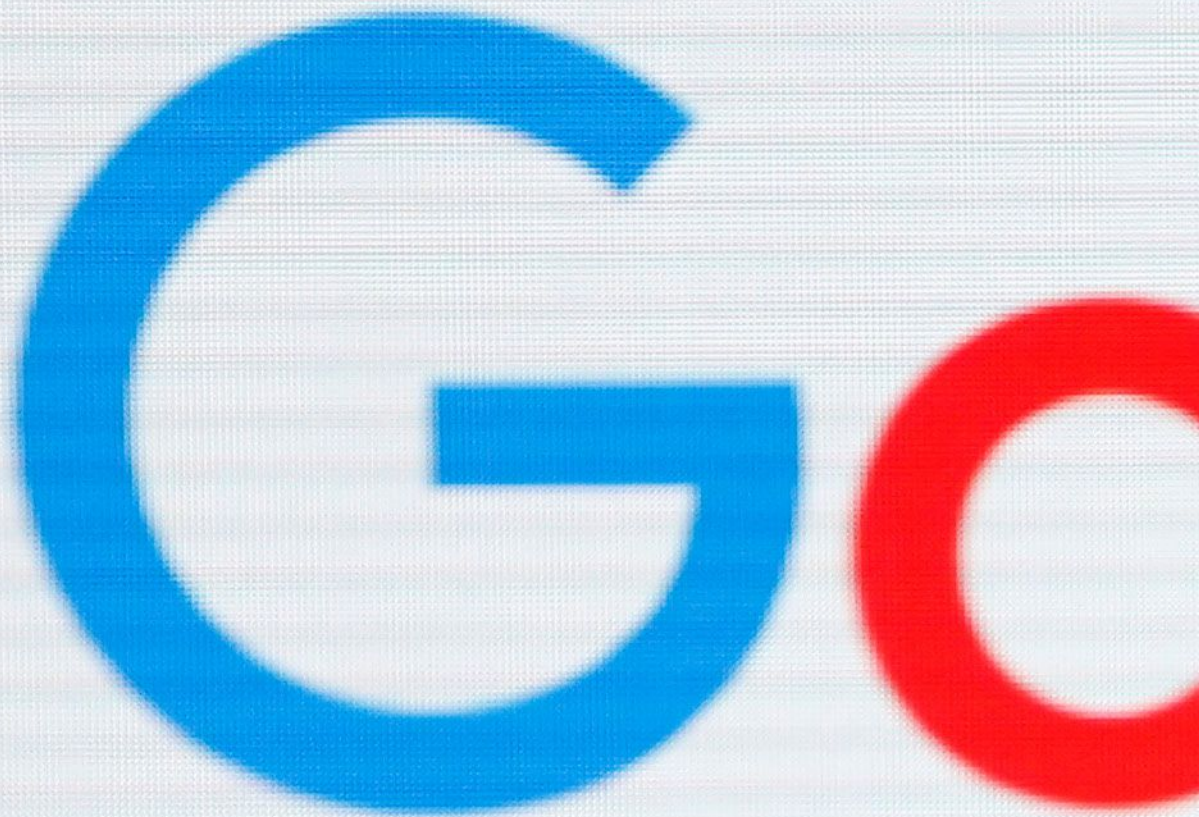
The megaphone of social media can give marginal sites a big lift. When a fake-news story spreads on Facebook, lots of people end up on the article’s original site - and ads follow. The result: Big companies help fund some low-rent websites trafficking in conspiracy theories and other unverified claims, at the measly rate of a fraction of a cent per person per ad.











## **WHERE “FAKE” FALLS THROUGH THE CRACKS**

While advertising technology vendors have safeguards in place to help mainstream advertisers avoid porn or hate speech, those don't always work for spoof news sites, said Marc Goldberg, CEO of Trust Metrics. Advertisers pay him to keep them off unwanted sites.

That's partly because “fake news” can be hard to define. And while advertisers can come up with “blacklists” of sites to avoid, there's no guarantee that ad-tech vendors farther down in the food chain will honor it, said Susan Bidel, an advertising analyst for research firm Forrester.

Many publishers and advertisers use Google's ad technology without having Google sell their ads. In those cases, Google's misrepresentative-content policy doesn't apply.



oogle











## BRANDS IN A BIND

When the AP pointed out that a Chrysler Ram truck ad popped up on a story saying that the United Nations was making the U.S. pay reparations to African-Americans - it's not - Fiat Chrysler said it works with ad companies to scour individual sites and block them from loading its ads if it finds them "harmful."

An ad for would-be Amazon rival Jet.com, owned by Walmart, showed up on a misleading story claiming California had legalized child prostitution. The company said in an emailed statement that it has filters that stop its ads from loading "on these kinds of sites," but wouldn't provide more detail or explain its criteria.

Walgreens ads also popped up next to the child prostitution story on the site The Red Elephants, but the drugstore chain has since prevented its ads from appearing there, a company spokesman said.

A person who responded to an email sent to The Red Elephants declined to discuss the site's advertising, but insisted that the child-prostitution story was true. The person declined to provide their name.

A Financial Times spokeswoman said in an emailed statement that the media company was "frustrated" to learn that its ads appeared next to fake news like the Christmas-card story, saying the situation underscored the "very real risk" of using automated ads. "We think the ad technology ecosystem could, and should, do more to improve brand safety," she said.

Revlon declined to comment. A Geico spokeswoman said the company didn't know about its ad that ran on the spoof Fox News site.



# APPLE REVERSED ITS iPhone SLUMP. BUT WHAT'S NEXT?

Apple has snapped out of the first sales slump in the iPhone's decade-long history, although the modest upturn doesn't mean that it has broken out of its innovation funk.

If anything, the numbers Apple released Tuesday highlight the company's growing dependence on the iPhone, whose sales tower above Apple's other current offerings. The company hasn't managed to come up with another breakthrough product since its chief visionary, Steve Jobs, died in 2011.

Meanwhile, Apple's rivals have been rolling out new products in other promising fields such as augmented reality, virtual reality and artificial intelligence. Apple currently trails in those areas, although many analysts believe the company may try to catch up with products featuring those trendy technologies later this year.

No matter what's coming down the pike, the iPhone remains a huge moneymaker. Its success is the main reason Apple boasts a market value of \$640 billion - more than any other company.









The iPhone is also driving the rapid growth of Apple's services division, which makes money from fixing devices, selling music streaming subscriptions and commissions on sales of mobile apps. Apple's services revenue surged 18 percent to \$7.2 billion in the past quarter, putting it on pace generate enough annual revenue by itself to rank among the world's largest companies.

## **IPHONES ON THE RISE AGAIN ... BARELY**

But selling more iPhones has been getting tougher as more people hold on to older models for longer periods and competitors such as Samsung and Google entice customers with sleek devices running on Android software. The trend led to three consecutive quarters in which iPhone sales fell compared to the prior year, causing Apple's total revenue to sag as well.

Apple bounced back in the quarter ending in December, buoyed by a positive response to the late September release of the iPhone 7 and 7 Plus. That device featured a better camera, which drew rave reviews, and no jack for headphones, which irked some consumers and befuddled others.

Apple shipped 78.3 million iPhones in the latest quarter, a 5 percent increase compared to the previous year. It benefited from a year-end quarter consisting of 14 weeks, one more than the previous year period. If not for the calendar quirk, the iPhone sales slump might not have ended. Apple sold an average of 5.6







million iPhones per week in the latest quarter compare to 5.7 million iPhones per week in the previous year.

The Cupertino, California, company also was helped by a recall of Samsung's Note 7 phones, which were plagued by battery fires. That problem drove some people switch to other models such as the iPhone.

## THIS YEAR'S IPHONE

About 17 percent of all iPhones are now 7 models, according to Localytics, which tracks activity on mobile devices. Most of the rest are older iPhone 6 or iPhone 5 models. Apple could have sold more of the iPhone 7 Plus, which boasts a bigger screen and an extra camera, but the company misgauged demand and didn't make enough to meet customer demand, CEO Tim Cook said during a conference call.

iPhone sales could slip yet again. Anticipation is building for the expected release of a 10th anniversary iPhone of some sort this summer or fall. Many smartphone owners could hold off until they get a good look at this year's iPhone, says Daniel Ives, a senior vice president for the mobile research firm Synchronoss Technologies.

"It's like a drum roll while everyone waits for the curtains to roll back to unveil the next iPhone," Ives says. "There is a lot of pent-up demand out there, so this has the potential to be a game changer."



Cook promises there are still many iPhone advances yet to come that will win even more fans.

"The smartphone is still in the early innings of the game," he said. "I think there's lots more to do."

## APPLE PHONE INC.

The iPad, a tablet that became a smash hit after its 2010 debut, remains mired in a three-year sales slump, further magnifying the iPhone's importance to Apple. The company shipped 13.1 million iPads in the past quarter, a 19 percent drop from the previous year.

"Remember when Apple called itself Apple Computer Inc.?" says BGC Financial analyst Colin Gillis, harking back to the company's identity until 2007. "They may as well call themselves Apple Phone Inc. now."

Propelled by the iPhone, Apple Inc.'s revenue edged up 3 percent to \$78.4 billion in the quarter. But its profit dipped 3 percent to \$17.9 billion.

## STILL WAITING

It was Apple's biggest quarterly revenue in its 40-year history, but it doesn't erase the question that has nagged Tim Cook since he succeeded Jobs as CEO nearly 5 1/2 years ago: What's next?

Cook touts a smartwatch that Apple introduced as a huge success, but most analysts still view it as more of a novelty.

In interviews, Cook has hinted Apple is exploring opportunities in augmented reality, which casts holograms and other digital images onto the real world around you. Apple also has been buying companies and hiring engineer specializing in artificial intelligence, a niche focused on teaching computers to think and talk more like humans.

Gillis believes Apple already has wasted too much time trying to figure out its next big move.

"When your iPhone juice runs down, you should already be ready to ramp up your next product," he says. "What have we gotten after all the billions that Apple has spent on" research and development?







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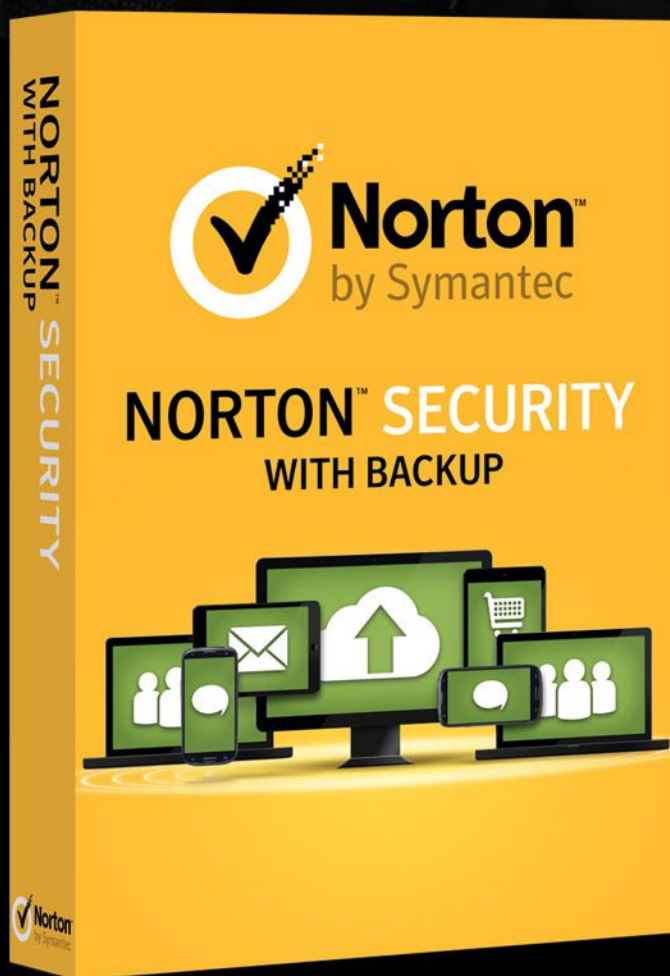


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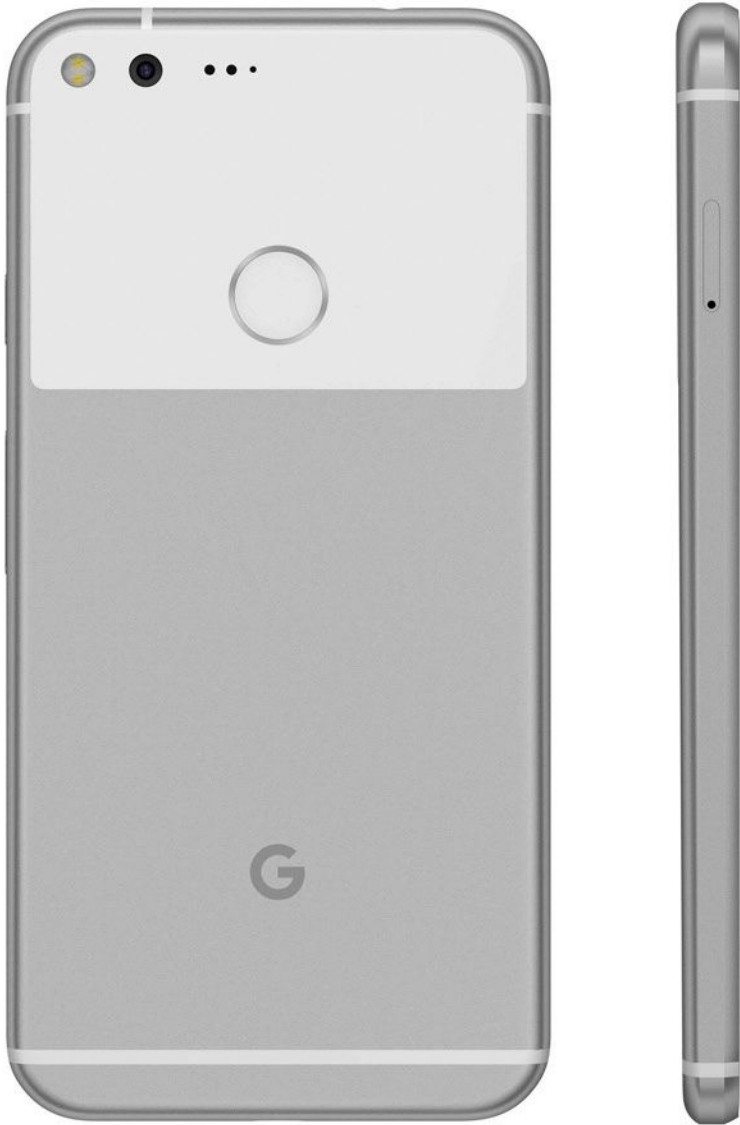
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# GOOGLE'S PIXEL PHONE SHINES DESPITE MISGAUGING DEMAND

The Pixel phone, Google's answer to Apple's iPhone and Samsung's Galaxy, is off to a promising start - but might have done even better had Google managed consumer demand as smartly as the device's sleek design.

Although Google hasn't released sales figures, industry researchers say the Pixel has been a hot item since its October debut was greeted with mostly glowing reviews and the biggest marketing blitz in Google's 18-year history.

But there were missed opportunities.

Google didn't have enough Pixels available to meet demand. Rather than wait several weeks, many consumers interested in the Pixel probably bought an iPhone, Galaxy or another phone instead. And these people aren't likely to need a phone replacement for another year or two.

Google also struck a deal to sell it through just one wireless carrier, Verizon. Although Google's online store sold Pixels compatible with other wireless networks, most people don't shop for





phones that way. Of course, it's a moot point if there weren't enough Pixels to sell, but Google likely would have produced more if it had distribution deals with other carriers.

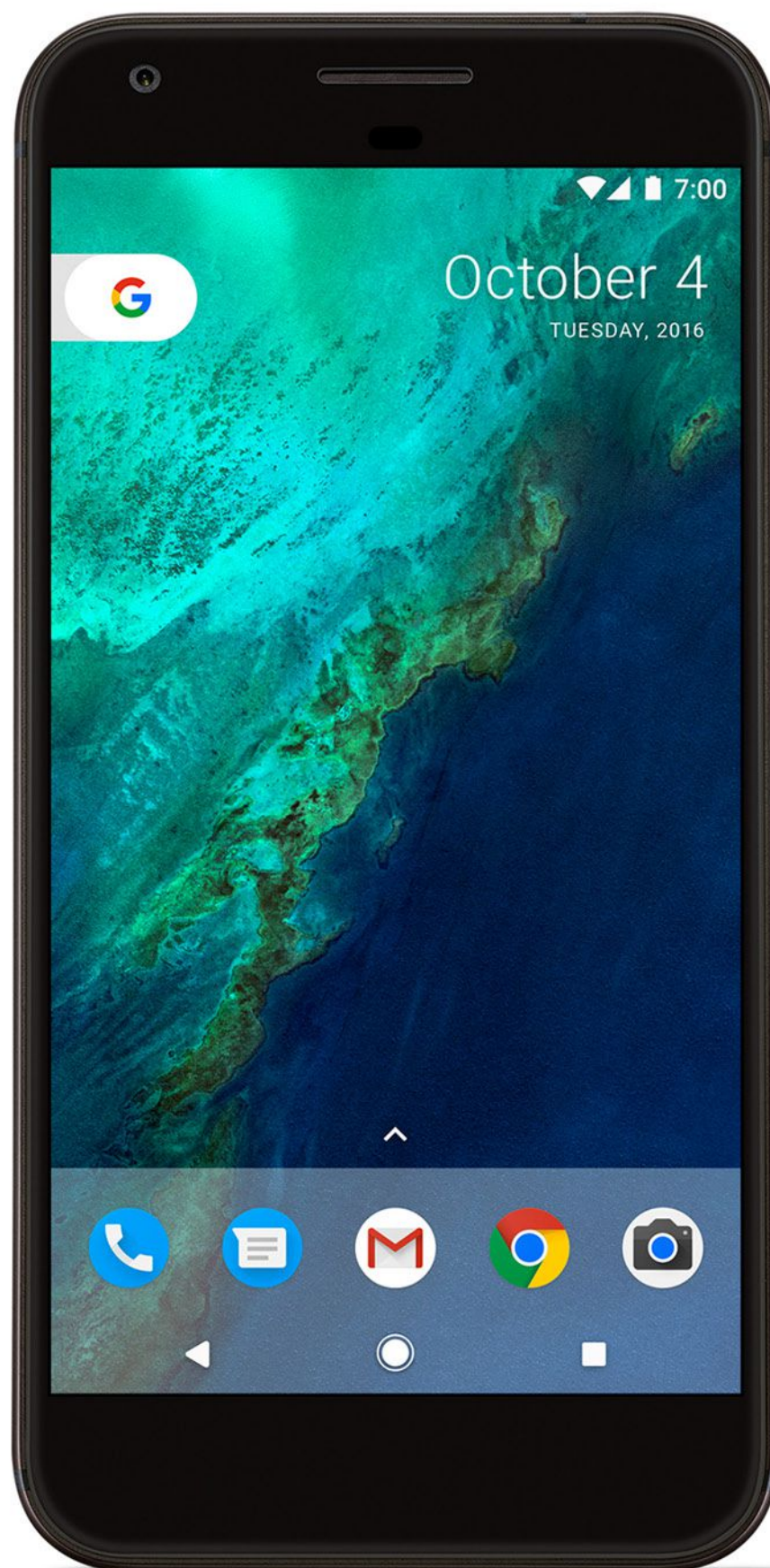
It's not surprising that Google misjudged the market, given that this is the search company's first stab at making its own phone. Previously, it partnered with various manufacturers on a Nexus line of phones to showcase its Android operating system, but that effort barely made a dent.

"This was probably a really good learning experience for them," says Neil Doshi, an analyst with Mizhuo Securities USA.

The Pixel's success is important to Google because it wants to ensure there's a stylish Android phone to compete with the iPhone and drive more affluent consumers to its search engine, maps, YouTube videos and other services. Samsung's Galaxy and other phones also run on Android, but those devices have been de-emphasizing Google's services.

Google, which is based in Mountain View, California, can afford to make some mistakes as it tries to establish the Pixel because its internet search and advertising network brings in so much revenue.

Alphabet, Google's corporate parent, provided another reminder of its financial might with Thursday's release of its fourth-quarter earnings. The company earned \$5.3 billion on revenue of \$26 billion during the final three months of last year. Even after subtracting commissions paid to Google's ad partners, Alphabet's revenue totaled \$21 billion - a 23 percent increase from a year earlier. The company's profit rose 8 percent from the prior year.















Although Pixel sales weren't disclosed, the numbers provided a clue on how the phone did. Google's "other revenue" segment, which covers all sales outside of advertising, generated \$3.4 billion in the fourth quarter, a 62 percent increase from the same time last year.

Some of those gains came from sales of Google's new internet-connected speaker, Home, and its business software services, but Doshi believes most of the increase was generated by the Pixel.

He estimates Google sold 1 million to 1.5 million Pixels during the fourth quarter. That's still just a sliver of the estimated 77 million that Apple sold during the same period (Apple is scheduled to release its numbers Tuesday). Pixel sales are also well below the roughly 15 million Galaxy S7 that Samsung sold during that device's first quarter on the market.

Still, analysts say the Pixel did exceptionally well for a new phone with little brand recognition.

"Without question, Google has a hit on its hands and is building a platform for success," says Jeff Moore, principal of Wave7 Research. Wave7 estimates that Pixel accounted for 12 percent of activations in December compared with 51 percent for iPhones and 26 percent for Samsung devices.

Localytics, which tracks app activity on nearly 2 billion smartphones, also reported Pixel activations have steadily increased since sales began, especially around the Thanksgiving weekend and the holidays.

"It looks like it has the potential to be a strong competitor to the likes of Apple and Samsung," says Josh Todd, Localytics' chief marketing officer.









# MARK ZUCKERBERG DROPPING LAWSUITS SEEKING TO BUY HAWAII LAND

Facebook CEO Mark Zuckerberg said last Friday that he was dropping lawsuits seeking to buy out Native Hawaiians who own small pieces of land within his sprawling estate on the island of Kauai, promising to work with the community on “a new approach.”

Zuckerberg and his wife, Priscilla Chan, said in a letter to the community published in The Garden Island newspaper that they were ending the cases “to find a better path forward.”

“Upon reflection, I regret that I did not take the time to fully understand the quiet title process and its history before we moved ahead,” the letter said of the legal move to clear up disputed or undetermined land ownership in Hawaii.



“Now that I understand the issues better, it’s clear we made a mistake.”

A spokesman for Zuckerberg confirmed the couple sent the letter.

The 14 parcels mostly belong to Native Hawaiian families awarded the land during the mid-19th century, when private property was established in Hawaii. Many original owners died without wills. Ownership today is split among hundreds of descendants, many of whom are unaware of their shares.

The couple filed court cases last month to identify the owners and ask the court to auction the land. Critics say the process often results in Native Hawaiians losing their land.

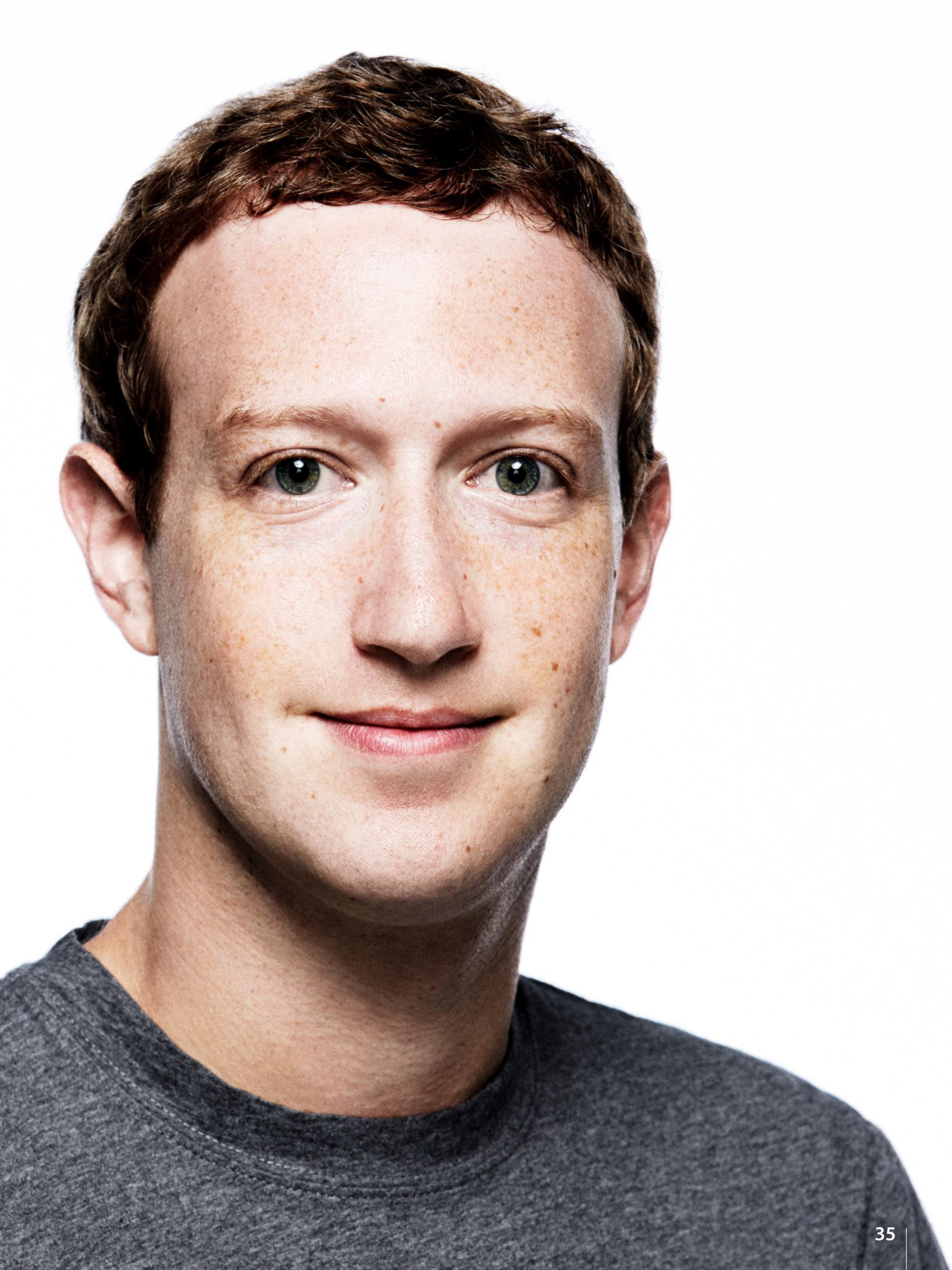
The parcels in question emerged during land reforms that the Kingdom of Hawaii pursued in the 1800s called “the Great Mahele.” Until then, no individual owned land - it was collectively cared for and used.

The reforms allowed commoners to claim title to land they lived on and farmed, usually about a half-acre.

But only a small share of Hawaii’s land - some 28,000 acres - ended up in the hands of commoners. Millions of acres went to the king, other royals and the government.

In the decades afterward, large sections of land passed into the hands of sugar plantation owners. The plantations, and other landowners who purchased the properties after sugar growing became unprofitable, frequently used the quiet title process to buy out descendants of the commoner families, whose land was interspersed among the larger holdings.












A close-up photograph of a person's hand, palm facing up, reaching out from the left side of the frame. The hand is illuminated against a solid black background, with the fingers slightly spread. The skin tone is light, and the lighting creates soft shadows on the palm and fingers.

Kilauea Sugar Co. previously owned Zuckerberg's land. He bought his 700-acre oceanfront property in 2014 for \$100 million, Forbes reported.

Moses Haia, executive director of the Native Hawaiian Legal Corp., an agency that frequently represents people on the receiving end of quiet title lawsuits, welcomed the tech billionaire's move.

"We appreciate Mr. Zuckerberg's sense of justice and his desire to truly understand the impact that the introduction of private property has had on the indigenous people of Hawaii," Haia said. "We are encouraged by his desire to engage in a process intended to achieve the true intent of the Mahele."

Democratic state Rep. Kaniela Ing, who introduced legislation this month requiring people to enter mediation before filing quiet title lawsuits, thanked the Facebook executive.

"You now have an opportunity to set the bar for what being a good neighbor and an ally to indigenous peoples looks like," Ing said in a statement.





Image: Rick Wilking





# US NO LONGER HAS GEOGRAPHY AS DEFENSE, ALLY IN CYBERCOMBAT

The United States has long relied on its borders and superior military might to protect against and deter foreign aggressors. But a lack of boundaries and any rulebook in cyberspace has increased the threat and leveled the playing field today.

It's unclear how President Donald Trump, who has emphasized an "America First" approach to domestic issues, will respond to cyberspace threats, which transcend traditional borders and make it easier and cheaper than ever for foreigners to attack the U.S. Whatever the approach, it will set the tone and precedent for global policies during a critical time when the ground rules are still being written.



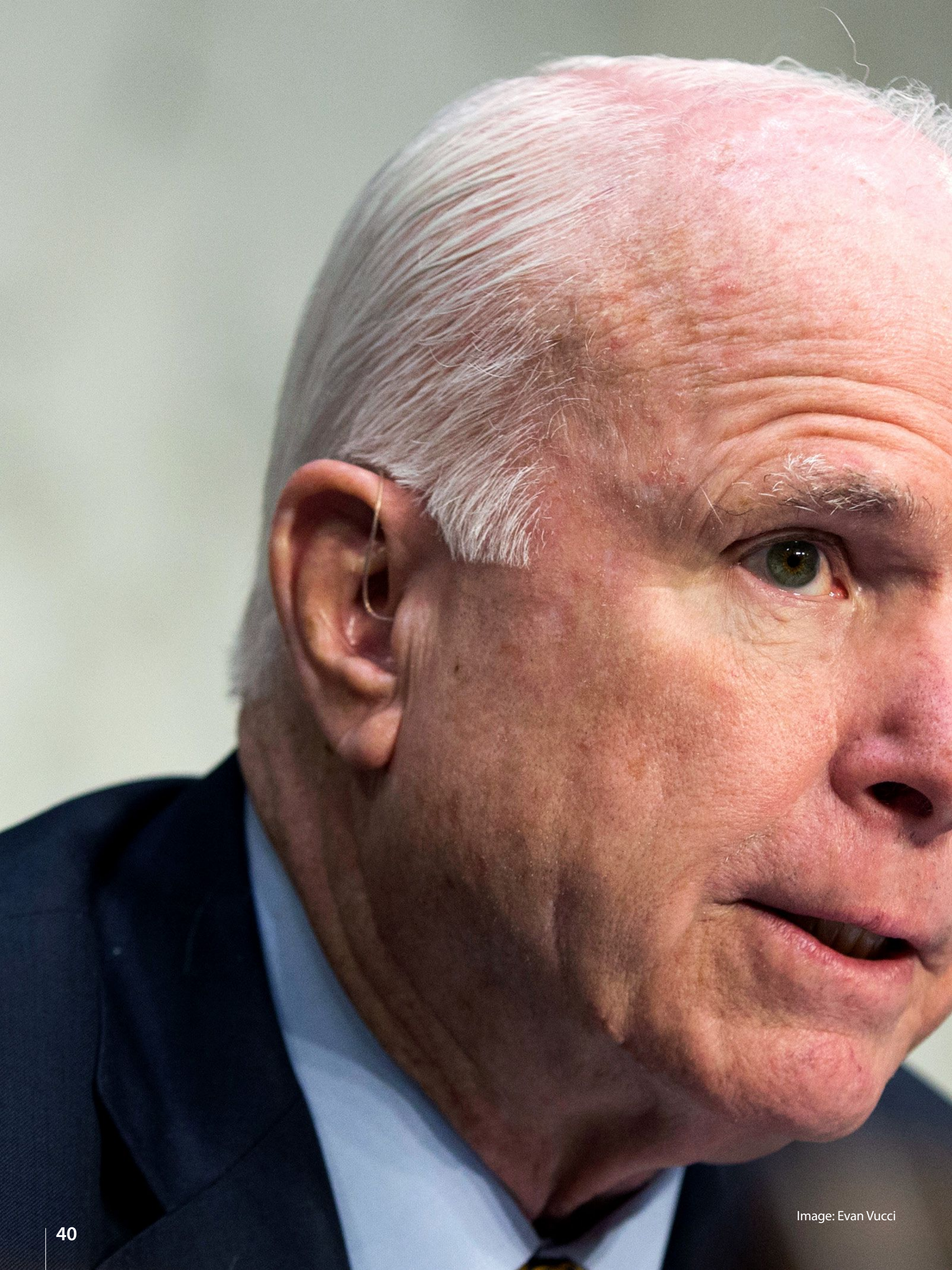


Image: Evan Vucci





At a hearing this month on foreign cyberthreats, the chairman of the Senate Armed Services Committee, Sen. John McCain, R-Ariz., ran through a list of recent operations the U.S. believes was carried out by foreign countries - Russia, China, Iran and North Korea. The targets: the White House, State Department, Office of Personnel Management, Joint Chiefs of Staff, Navy, major U.S. financial institutions, a small New York dam and Sony Pictures Entertainment Inc.

"Our adversaries have reached a common conclusion, that the reward for attacking America in cyberspace outweighs the risk," McCain said.

With most of the U.S. critical infrastructure in private hands and Americans among the most connected citizens in the world, the potential attack surface for any hacker is vast and increasing. U.S. officials and lawmakers have argued that because there is no official policy on cyberwarfare, the response to any attack can be slow, politicized and ultimately ineffectual.

The U.S. took two months, after publicly accusing Russian government hackers of trying to influence the presidential election, to respond with economic sanctions and other more symbolic measures.

The reality is that the "nature of conflict has moved to the information space instead of just the physical kinetic space, and it now operates at greater scale and quicker speed," said Sean Kanuck, who served as the first U.S. national intelligence officer for cyber issues in the Office of the Director for National Intelligence.

Under the Obama administration, the U.S. proposed international cyber rules for



peacetime, including that countries should not target another's critical infrastructure. But otherwise, it has maintained existing international laws and reserved the right to respond to any cyberattack.

The Trump administration is reviewing cyber policies, but it has said it will prioritize developing defensive and offensive cyber capabilities. It has also said it will work with international partners to engage in "cyberwarfare to disrupt and disable (terrorist) propaganda and recruiting."

Unlike conventional warfare, the costs in cyberspace can have rippling impacts for both the victim and attacker. Malicious software may end up spreading in an unforeseen and unplanned manner, and a hacker who gets into a single computer can cause unpredicted effects to a network.

"Look at what North Korea did to Sony or what China did to us via the OPM hack," said David Gioe, a history fellow at the Army Cyber Institute at West Point and a former intelligence officer. "You've got all of these aircraft carriers and all of this ocean, and it really doesn't matter because we're still feeling effects. They're not kinetic effects, but they're surely effects."

More than 20 million people had their personal information compromised when the Office of Personnel Management was hacked in what the U.S. believes was a Chinese espionage operation.

"Really it's our geeks versus their geeks," Gioe said. "In the same way as single combat. It doesn't matter how good my army is or your army is, it's me versus you."















# A COMMUTER'S DREAM: ENTREPRENEURS RACE TO DEVELOP FLYING CAR

Even before George Jetson entranced kids with his cartoon flying car, people dreamed of soaring above traffic congestion. Inventors and entrepreneurs have long tried and failed to make the dream a reality, but that may be changing.

Nearly a dozen companies around the globe, including some with deep pockets such as European aircraft maker Airbus, are competing to be the first to develop a new kind of aircraft that will enable commuters to glide above crowded roadways. A few of the aircraft under development are cars with wings that unfold for flight, but most aren't cars at all. Typically they take off and land vertically like helicopters. Rather than a single, large main rotor, they have multiple small rotors. Each rotor is operated by a battery-powered electric motor instead of a conventional aircraft piston engine.



It's no sure bet that flying-car dreams will turn into reality. There are many obstacles, including convincing regulators that the aircraft are safe, figuring out how to handle thousands of new low-flying aircraft over cities without collisions and developing batteries that will keep them aloft long enough to be useful.

But entrepreneurs are moving forward. They see a vast potential market for "air taxis" and personally owned small aircraft to transport people from the fringes of metropolitan areas to city centers as urban areas grow more congested and people spend more time stuck in traffic. They envision tens of thousands of one or two-person flying taxis delivering passengers to the rooftops of office buildings in city centers and other landing pads during rush hours.

"In as little as 10 years, products could be on the market that revolutionize urban travel for millions of people," said Zach Lovering, the leader of Airbus' project to develop an autonomous flying taxi called the Vahana. The name means the mount or vehicle of a Hindu deity.

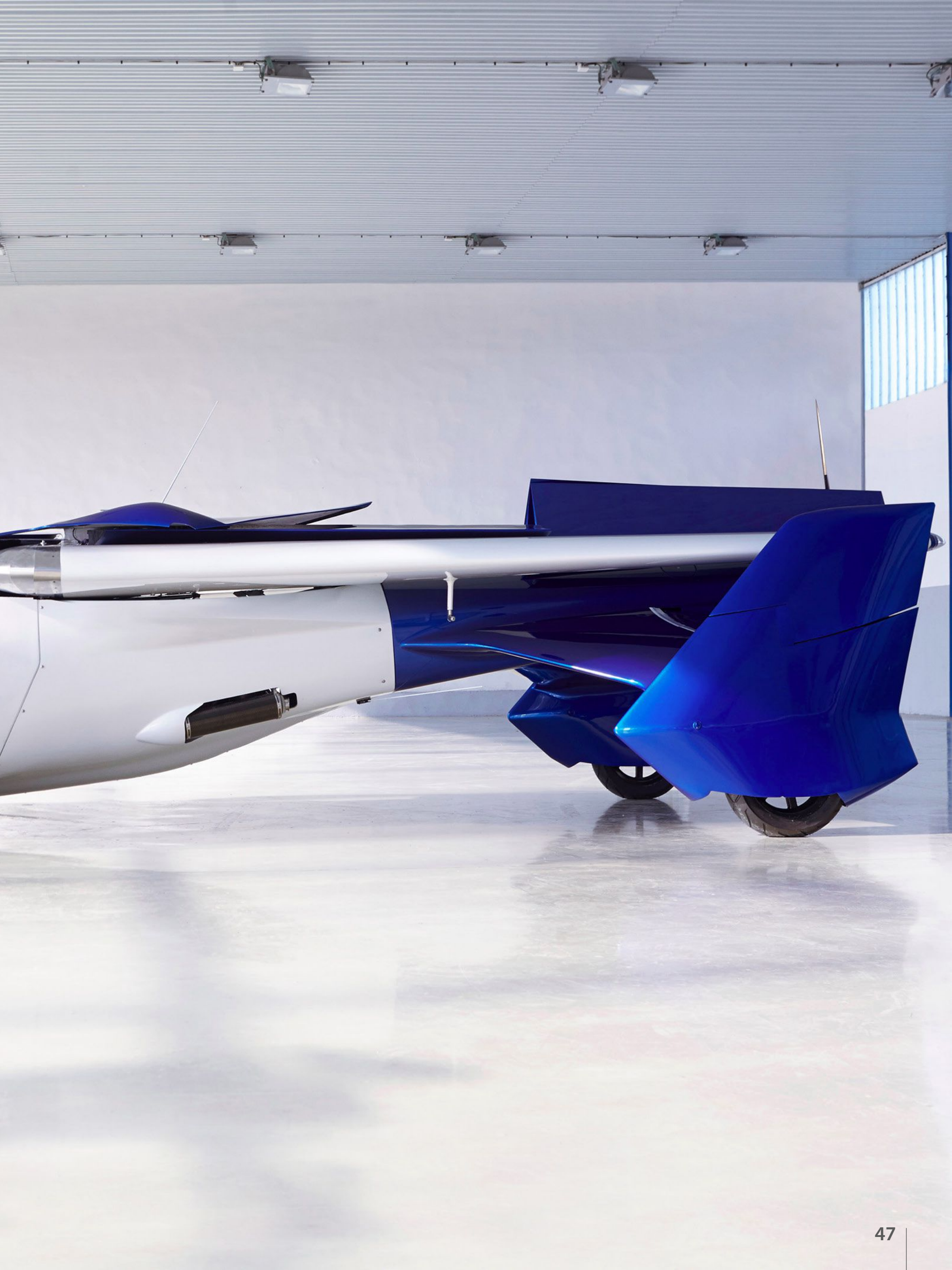
Uber released a 98-page report in October making the business case for air taxis, which the company sees as the future of on-demand transportation. Uber doesn't have any plans to develop a flying car itself, but the online transportation network is advising several companies that have aircraft in the works.

"The role we want to play is as a catalyst for the entire industry," said Nikhil Goel, an Uber project manager for advanced programs.

Some of the aircraft are drones that passengers will be able to program for flight using a smartphone. Others will be operated from the















ground or a command center, and some are designed for human pilots.

It's unclear yet how much the aircraft will cost, although prices are likely to vary significantly. Some of the aircraft are designed to be individually owned, while others are envisioned more for commercial use. Designers hope that if demand is high, prices can be kept affordable through economies of mass production.

Several recent developments could make these aircraft possible. Advances in computing power mean the rotors on multi-copter drones can be adjusted many times per second, making the aircraft easy to control. Drones have also benefited from advances in battery and electric motor technology. Some companies, like Chinese dronemaker EHang, are scaling-up drones so that they can carry people.

Another aircraft under development, Santa Cruz, California-based Joby Aviation's S2, looks more like a conventional plane except that there are 12 tiltrotors spread along the wings and tail. And some, like the Vahana, a cockpit mounted on a sled and flanked by propellers in front and back, don't really look like any aircraft in the skies today.

"In terms of what you can make fly in a reliable manner, the solution speed gateway that (computer) chips have gone through recently have literally opened the door to a whole new world of flying machine possibilities," said Charles Eastlake, an Embry-Riddle Aeronautical University professor emeritus of aerospace engineering.

But he also cautioned: "My best engineering guess is that people actually using autonomous air taxis in the next 10 or 15 years is possible, but definitely not certain. The challenges are big."



Key for many of the designs will be the development of longer-lasting lightweight batteries. Currently available batteries could probably keep an air taxi aloft about 15 to 30 minutes before it would have to land, experts said. Depending on how fast the aircraft flies, that probably isn't quite enough to transport passengers between nearby cities or across metropolitan areas, experts said.

Another hurdle will be winning Federal Aviation Administration certification for any radical new kind of aircraft when approval of even small changes in aviation technology can take years.

The FAA said in a statement that it is taking a "flexible, open-minded, and risk-based approach" to flying cars. FAA officials have discussed with several manufacturers the certification of aircraft that will be flown with a pilot in the beginning, and later converted to an autonomous passenger aircraft.

While further research is needed to ensure that autonomous aircraft are safe, "we believe automation technology already being prototyped in low-risk unmanned aircraft missions, when fully mature, could have a positive effect" on aviation safety, the agency said.









Reducing noise is another challenge since air taxis will be taking off and landing in densely populated areas. So is creating enough landing pads to handle lots of aircraft at the same time. A new air traffic control system would also likely be needed.

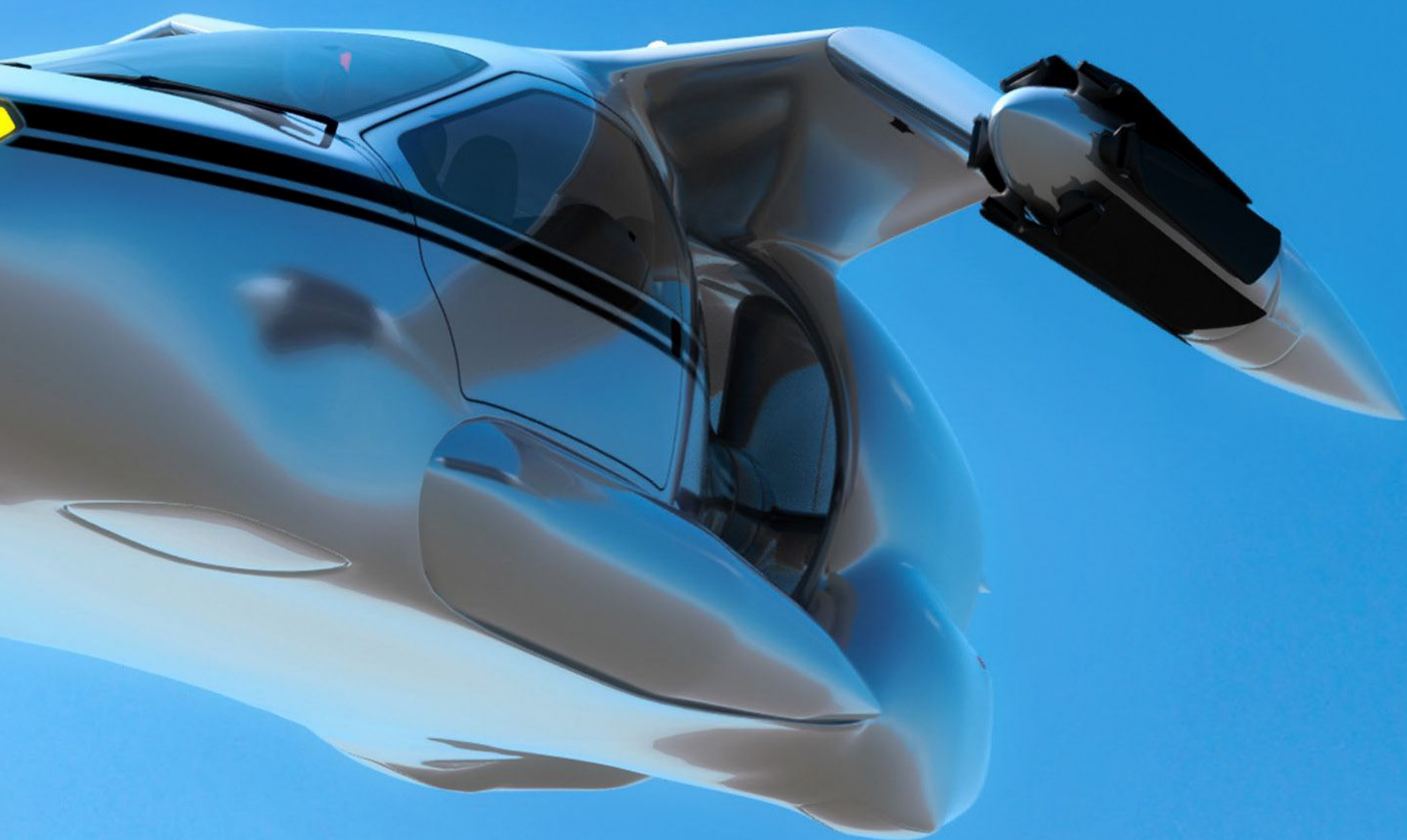
“It’s pretty clear that the existing air traffic control system won’t scale to the kind of density at low altitudes that people are talking about,” said John Hansman, a Massachusetts Institute of Technology professor who chairs the FAA’s research and engineering advisory committee.

NASA is developing an air traffic control system for small drones that perhaps could be expanded to include flying cars.

“There’s no question we can build the vehicle,” Hansman said. “The big challenge is whether we can build a vehicle that would be allowed to operate in the places where people want to use it.”









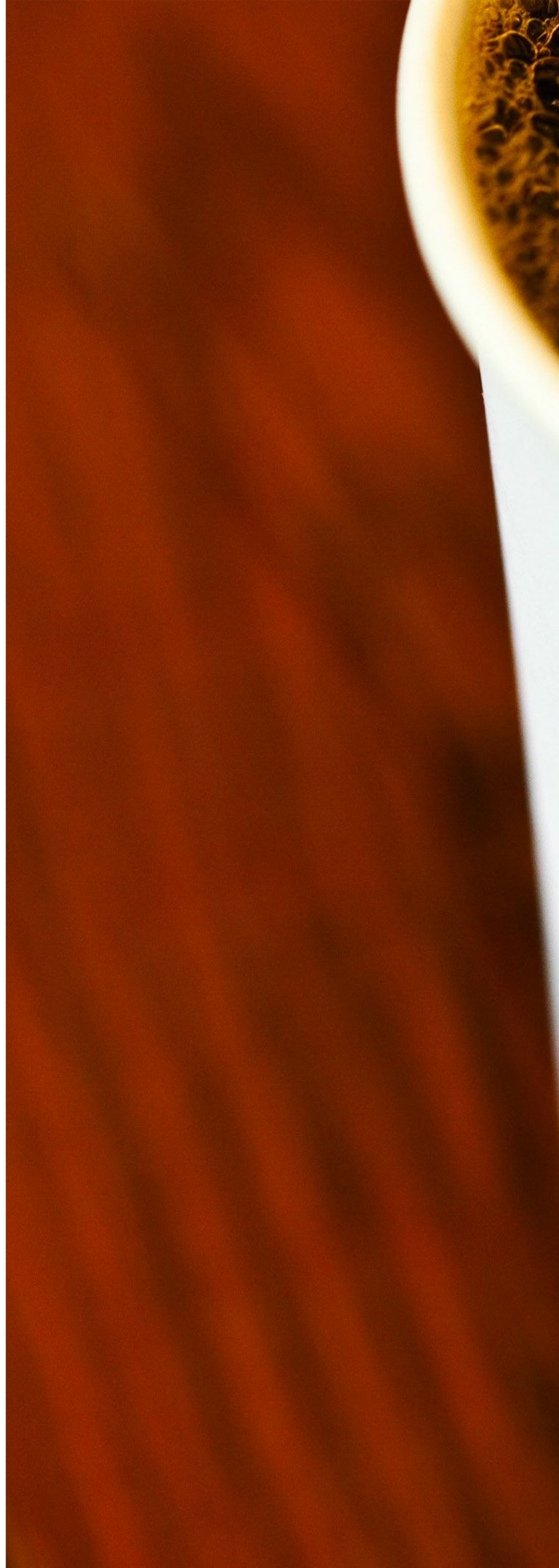
# STARBUCKS LAUNCHES VOICE ORDERING VIA APP, AMAZON'S ALEXA

Amazon's Alexa is now able to order up a latte.

Starbucks says it's partnering with Amazon's voice platform to offer what it calls "on command" ordering. Starting Monday, anyone who has an Amazon device with Alexa, like the Echo smart speaker, is able to place a Starbucks order by just using their voice.

Starbucks is also launching a beta test of voice ordering through its iPhone app. The Seattle-based coffee giant says the feature is being rolled out to a limited group of 1,000 people nationwide Monday. It plans to expand the feature later this year.

Starbucks chief technology officer Gerri Martin-Flickinger says in a statement that the company expects to "learn a lot from both of these experiences and to evolve them over time."











# TV APP AN "ENTIRE POP CULTURAL EXPERIENCE" IS IN THE WORKS

ADVANTAGES OF AN 'APPLE VIDEO'  
STREAMING SERVICE













## APPLE-MADE TV SHOWS AND FILMS MAY ON THE WAY

Apple has often declared the fourth-generation Apple TV set-top box “the future of television”, but there have been recent flickers of evidence that Apple’s ambitions in television could extend far beyond this little home hub. These ambitions could encompass the production of original TV shows for the promotion of a video streaming service and indeed, Apple hardware. Could TV, rather than smartwatches or augmented reality, be the place for Apple’s next big revolution?

## AN “ENTIRE POP CULTURAL EXPERIENCE” IS IN THE WORKS

The current version of Apple TV was released in October 2015 and has since received software updates enhancing its onboard operating system tvOS. In December, **Apple released a new app, simply called ‘TV’**, allowing users to browse content from various providers through the same portal on iPhones, iPads and Apple TVs. Apple has also dipped its toes into original content, having helped to develop **a new version of Carpool Karaoke** and reportedly, **dark Dr. Dre drama Vital Signs**.

That iteration of Carpool Karaoke will be released for users of the streaming service Apple Music, while Vital Signs evidently could have similar availability. However, in January, The Wall Street Journal reported that **Apple was seeking to make further original content** that would also become available through Apple Music. Apple is thought to be preparing to launch that content later in 2017 - and the proposed projects “don’t have any particular relationship to music”.









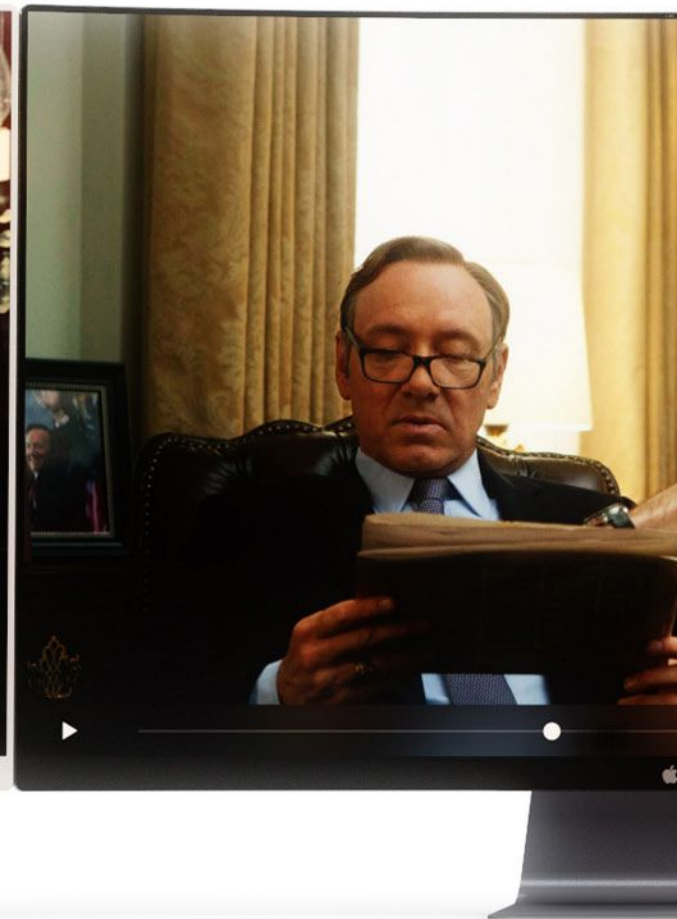
In fact, the Cupertino company is believed to be aiming to make shows along the lines of HBO's *Westworld* and Netflix's *Stranger Things* - while there are also "more preliminary" plans for original films. A few days after these revelations, Apple executive Jimmy Iovine admitted: "At Apple Music, what we're trying to create is **an entire cultural, pop cultural experience**", adding: "If *South Park* walks into my office, I'm not going to say you're not musicians, you know?"

### WHY APPLE COULD BENEFIT FROM LAUNCHING 'APPLE VIDEO'

Still, it looks like Apple's move into original content is intended to augment the appeal of Apple Music in its fight against Spotify rather than directly take on Netflix or Amazon, now both established producers of acclaimed audio-visual content. This seems a wise strategy, given that Apple would reportedly require an annual expenditure of hundreds of millions or even billions of dollars to compete with those companies. However, for Apple, one big benefit of making original content could be getting its previously rumored video streaming service off the ground.

In 2015, it was claimed that **Apple had entered discussions with networks including CBS** about bringing exciting content to a television subscription service for Apple customers. Those talks ultimately stalled as Apple failed to reach agreements with content providers. Apple executive Eddy Cue later downplayed the prospect of Apple offering such a service that would provide strictly the best for a low monthly fee, insisting: "As a matter of fact, I'm not a big fan of the skinny bundle."







# WHAT WE CAN ALREADY ENJOY ON APPLE TV





However, in **an opinion piece for 9to5Mac**, Zac Hall has suggested that an “Apple Video” - as he calls it - streaming service could help to plug a few holes in Apple’s TV app. Last year, Apple introduced a feature called Single sign-on (SSO), allowing tvOS 10 and iOS 10 users to unlock numerous channels with just one authentication process. However, Hall has observed that Apple Video could provide SSO to users who would otherwise have to wait for their cable provider to co-operate with Apple.

Furthermore, the selection of third-party content that can be browsed in the TV app is patchy right now. Content from a number of big-name companies, including HBO, ESPN and Disney, can be perused in this way. However, cable providers like Time Warner Cable and Comcast remain unsupported - while **Netflix, which has not embraced Single sign-on, is only partly integrated with the app.** By making more of its own content, Apple could provide more content for ready access in the TV app without the need for tricky and awkward negotiations with other providers.









## HOW APPLE'S ORIGINAL CONTENT PLANS COULD UNFOLD

While rumors don't suggest that Apple is intent on seriously rivaling Netflix and Amazon with its own output of original and exclusive content, such a strategy would seem a natural evolution following the shows already launched solely on Apple Music. These have included **Taylor Swift: The 1989 World Tour Live** and **808: The Movie, a documentary about the influential 1980s drum machine**. So, what further material could Apple be lining up?

Brian Blau, an Apple-following analyst with Gartner, told NPR: **"Having original content is a strategy that is simply just going to bring people back to Apple."** He cited the company's "unique opportunity" to become "more competitive with these other original content providers that potentially have been drawing Apple users away from the Apple ecosystem". So for a hint of what is to come from Apple, should we look at what Netflix and Amazon have been making?

Statistics from the measurement service Symphony cite the 2016 viewer figures for







Netflix original shows like Fuller House and Orange is the New Black as almost 16 million for each. Making these shows apparently paid off handsomely for the company - which, last quarter, recruited about seven million new subscribers globally. That progress had been beyond Wall Street's expectations and Blau believes that, in the case of Apple, "this sort of TV and video and music content I think is just going to be one more pillar that they're going to be able to stand on over time."

This could be especially the case should Apple strike gold with a really big hit - one that could help pick up subscribers for an 'Apple Video' service and maybe even sell iPhones, iPads and Apple TVs. Hollywood producer Art Linson reckons that Netflix and Amazon have excelled with their own original content due to taking a more experimental approach forgone by cautious Hollywood studios. Apple might need to be similarly bold, using writers and directors with "the emotional ability to move us as viewers," in the words of producer Sid Ganis.











## TREATS ALREADY BEING SERVED UP ON APPLE TV

But all of that is looking far into the future. While we're still waiting for Apple to provide its own content, what can we already enjoy on what the company enthusiastically calls "the future of television" - yes, the fourth-generation Apple TV? The answer: **lots of great stuff**. Major apps currently available natively on the device include Fox Now, HBO Now, HBO Go and CNN Go. Some other notable apps, including Fox News and Amazon Video, are available to enjoy on the set-top box through the AirPlay feature,

through which content can be streamed from an iOS device.

Other Apple TV apps from well-known media companies include YouTube, Hulu Plus, Showtime, iTunes, Vimeo, Watch ESPN, Watch Disney Channel, NBC, Nic, Nat Geo TV, CNBC and Bloomberg TV. None of those apps require AirPlay, making the Apple TV appealing even for people without iOS devices. Could that appeal grow yet further later this year, when Apple is rumored to be set to officially announce content of its own? We'll have to wait and see, but we're already excited.









# CRAIGSLIST FOUNDER DONATES \$500K TO CURB WIKIPEDIA TROLLS

Craigslist founder Craig Newmark is donating \$500,000 to help curb harassment on Wikipedia.

The Wikimedia Foundation announced last week that money from the Craig Newmark Foundation and Craigslist's Charitable Fund will go toward tools for Wikipedians' staff and volunteer editors to reduce harassment on the user-generated encyclopedia site.

The Wikimedia Foundation says online harassment faced by Wikipedia contributors impedes their ability to write and edit the site's entries.

Newmark says in a statement that preventing "trolling, harassment and cyber-bullying" is essential to ensuring Wikipedia's vitality.

Wikimedia says the money will be used to launch a program to help editors "more quickly identify potentially harassing behavior." One of the tools being considered under the program is to make it more difficult for blocked users to return to the site.













# SMALLER STATES REJOICE AS AMAZON FINALLY COLLECTS SALES TAX

Many online shoppers in the United States have for years had to pay state sales taxes whenever they buy goods from Amazon. But the Seattle e-commerce giant has dragged its feet on collecting sales taxes in small and sparsely populated states where it doesn't have any distribution centers or corporate offices.

That's quickly changing this year. And governors and state legislators looking to balance their beleaguered budgets are rejoicing as they brace for a boost of revenue from Amazon sales.



Amazon customers in at least 10 states will begin paying sales taxes on their website purchases for the first time this winter. Tax collection begins Wednesday in Mississippi, Missouri, Rhode Island, South Dakota and Vermont. It already started this month in Louisiana, Iowa, Nebraska and Utah, and begins in Wyoming on March 1.

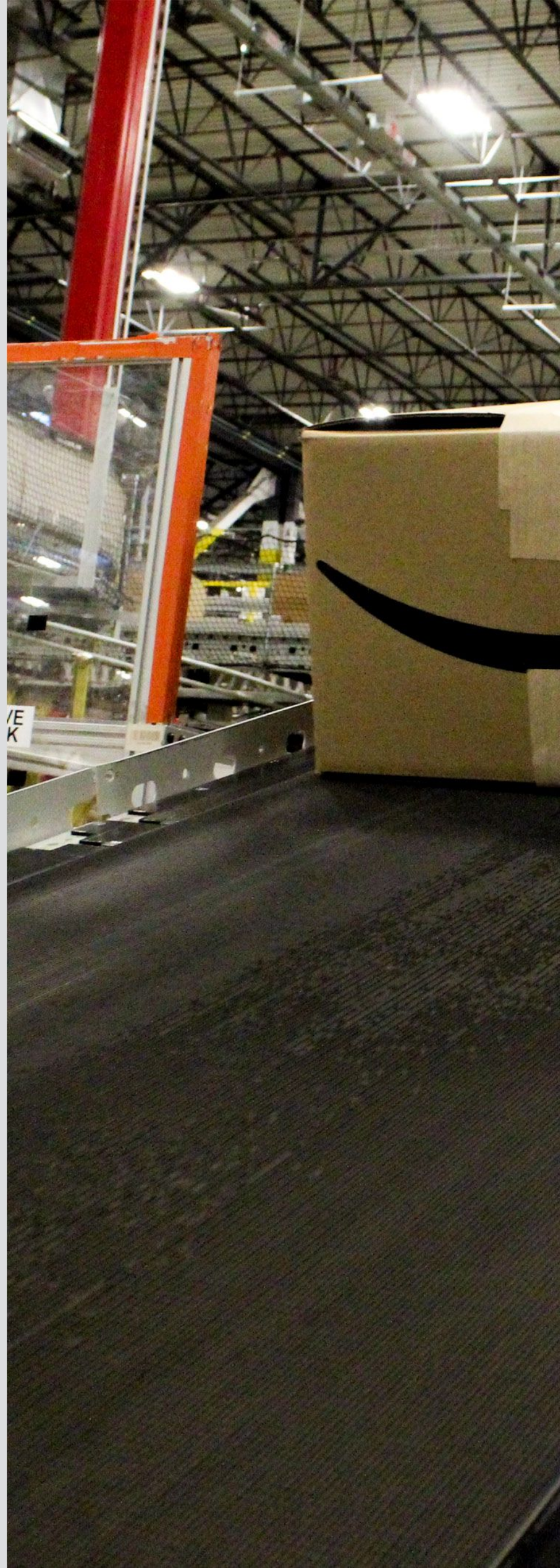
The company didn't return request for comment and hasn't explained its rapid shift, but the move follows last month's U.S. Supreme Court ruling that rejected a challenge to a Colorado law requiring online sellers to notify customers about how much they owe in taxes. Colorado officials had estimated they were missing out on as much as \$172.7 million a year.

To avoid collecting taxes, Amazon has historically relied on another high court ruling that predates the era of online shopping. That 1992 decision bans states from forcing out-of-state retailers to collect taxes if they don't have a physical presence in the state.

Rhode Island, which has long fought for Amazon to remit sales taxes, is now counting on nearly \$35 million in tax revenue next year from the company and other online retailers that follow its lead.

"Amazon's doing the right thing," said Robert Hull, the director of the state's revenue department. "They're an \$85 billion revenue animal that's making sales, historically, into Rhode Island and not paying the 7-percent sales tax."

Customers might not be as pleased as state budget-writers. Those in Rhode Island and other states were technically supposed to declare the taxes owed on items bought online at the end















of the year, but almost no one did. A proposed Rhode Island law would mimic Colorado's in ordering companies that don't collect sales taxes to post a "conspicuous" online pop-up notice informing customers about what they owe and following that up with an email and an annual tax obligation mailing. The measure is a way to effectively coerce companies to collect the tax if they don't want to burden their customers with unpleasant notices.

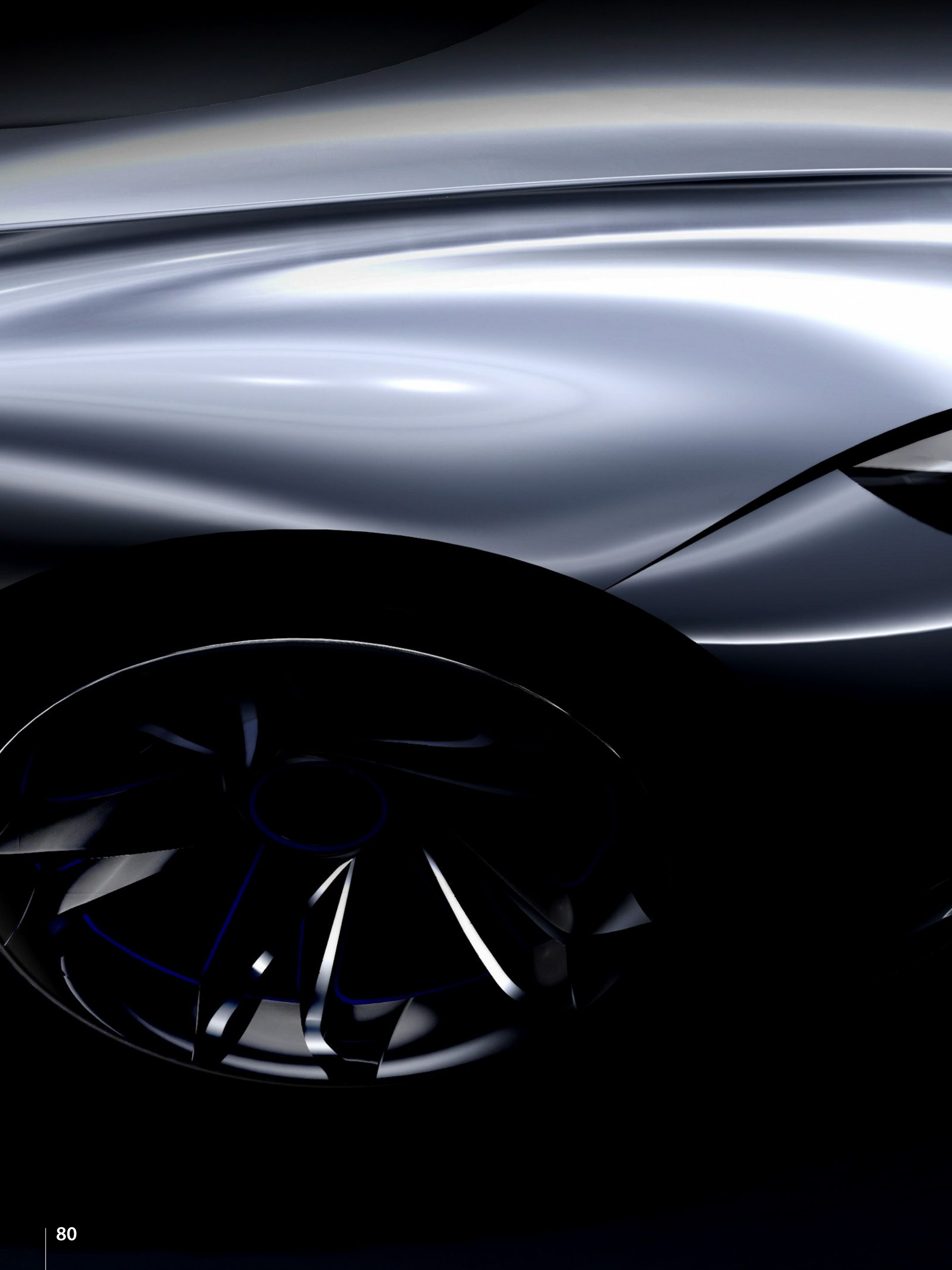
Excluding states that don't have a sales tax, only six states remain where Amazon doesn't collect sales taxes or hasn't announced plans to do so. Amazon already collects sales taxes in the most populous states and has been for years, so expanding to the entire country is unlikely to hurt its appeal to customers, said R.J. Hottovy, an e-commerce analyst for Chicago-based Morningstar, Inc.

"It really hasn't been that big of a deterrent in preventing people from shopping on Amazon's platform," Hottovy said. "Expedited shipping is almost as important as price in making a purchase decision."


Not celebrating the boost to state coffers is Rhode Island state House Republican Minority Leader Patricia Morgan, who said the tax comes out of the pocket of average customers, not companies. She said it makes sense that online retailers no longer have an unfair advantage over brick-and-mortar shops but it's wrong to look at the increased revenue as an excuse for increased spending.

"Let's not give a 'high-five' over this," Morgan said. "Who is it coming from? Families that are already strained by a high cost of living."









# GM, HONDA TEAM UP TO DEVELOP ADVANCED HYDROGEN FUEL CELLS

General Motors Co. and Honda Motor Co. took a big step toward putting out vehicles powered by hydrogen fuel cells by forming a joint venture to produce the systems for both companies' vehicles.

The automakers expect to begin production in 2020 at a GM battery-pack facility south of Detroit, creating about 100 new jobs. They'll also work together on setting up fueling stations to make the cars marketable.

And executives say the use of fuel cell systems may not be limited to cars. They said at a joint news conference Monday in Detroit that they're exploring military, aerospace and even residential uses for the systems, which generate electricity to power vehicles.

The companies are equally sharing the \$85 million cost of the venture, which came from a



cooperative agreement on fuel cells that began in July of 2013. Executives said costs have come down dramatically since then and the new fuel cell system has become smaller, lighter, less complex and more durable.

The fuel cell producing part of the system has been reduced to the size of a box that would come close to fitting onto an airplane as carry-on luggage. A first-generation system from GM took up the entire floor space in a van, executives said.

GM isn't ready to say when it might have a fuel cell car ready to go on sale widely to the public. But product development chief Mark Reuss said that's not the only use. Fuel cells could have military applications as well as aerospace and even as home power generators, he said.

"The Army is very interested in that," Reuss said. "We've also done a lot of aerospace exploration on some of the backup systems that may be in some of those planes."

Honda started delivering the third generation of its Clarity fuel cell vehicle to U.S. customers in December.

Although GM and Honda have trimmed costs on the system by reducing the amount of precious metals in it and making it more efficient, the cost still will be higher than an internal combustion engine when production starts in 2020, said Charlie Freese, GM's executive director of global fuel cell business.

"We do think the building blocks are in place to close that gap," he said. "We are taking a lot of cost out to make the system much more affordable."







Image: Susana Gonzalez



# SLACK'S MESSAGING SERVICE SETS SIGHTS ON BIG BUSINESSES

Slack Technologies, a fast-growing startup trying to wean businesses off email by hooking employees on its more informal messaging service, is now hoping to snare the world's biggest companies as customers.

On Tuesday, the company unveiled a new feature intended to let workers in different departments communicate more easily with each other. The new option, called "Enterprise Grid," is Slack's latest step toward its ambitious goal of making life at work "simpler, more pleasant and more productive."

In contrast to traditional email, Slack works more like a social network, allowing employees to share their thoughts, updates, web links and documents in channels that can be viewed on a personal computer or smartphone.

Since its 2013 debut, Slack has emerged as a popular new way for teams of employees to communicate with each other, but those workers haven't been able to quickly connect with other departments within the same company to discuss projects or other issues.



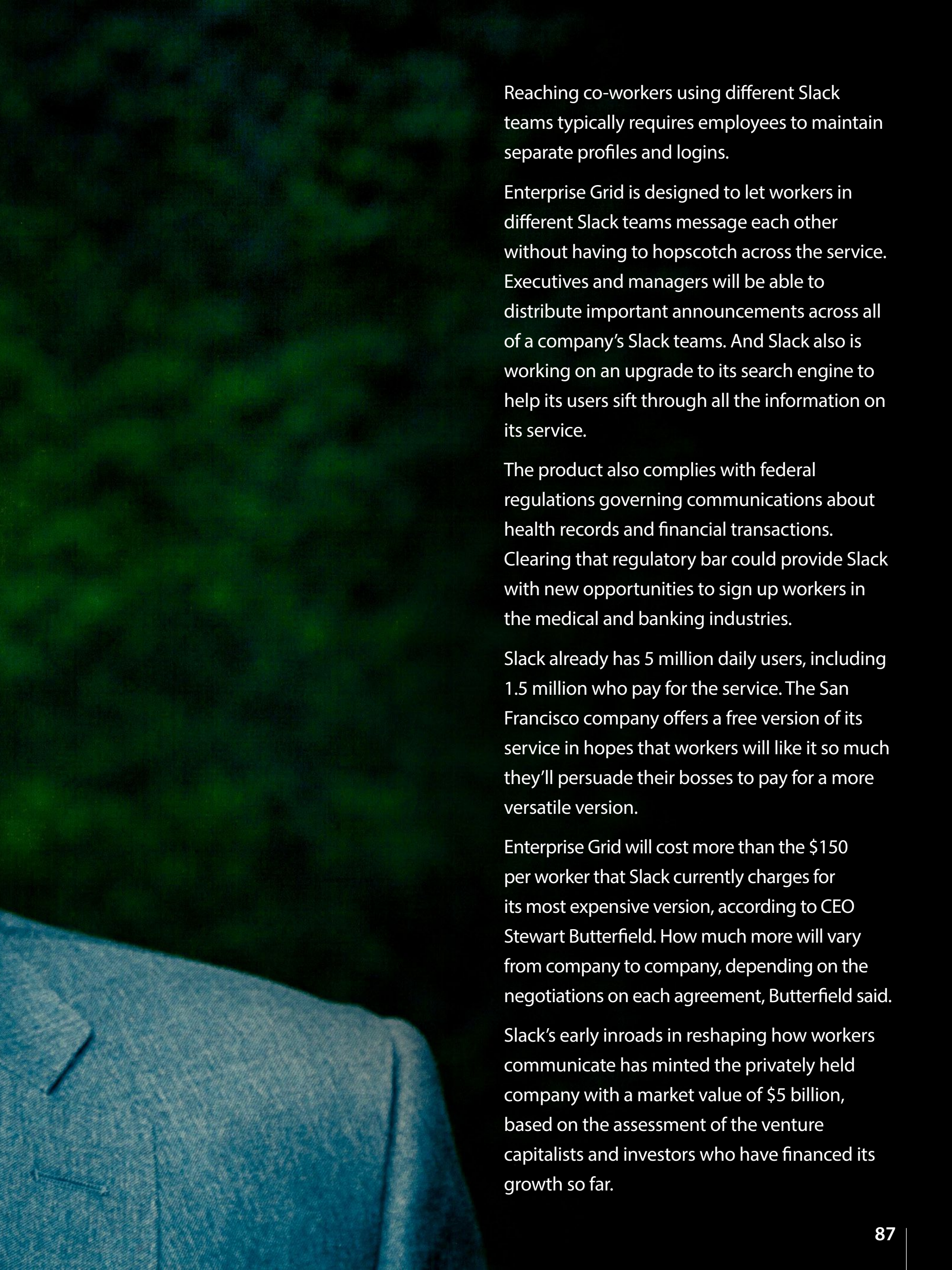










A person wearing a blue suit jacket is visible in the bottom left corner of the page. The background is a dark, textured green.

Reaching co-workers using different Slack teams typically requires employees to maintain separate profiles and logins.

Enterprise Grid is designed to let workers in different Slack teams message each other without having to hopscotch across the service. Executives and managers will be able to distribute important announcements across all of a company's Slack teams. And Slack also is working on an upgrade to its search engine to help its users sift through all the information on its service.

The product also complies with federal regulations governing communications about health records and financial transactions. Clearing that regulatory bar could provide Slack with new opportunities to sign up workers in the medical and banking industries.

Slack already has 5 million daily users, including 1.5 million who pay for the service. The San Francisco company offers a free version of its service in hopes that workers will like it so much they'll persuade their bosses to pay for a more versatile version.

Enterprise Grid will cost more than the \$150 per worker that Slack currently charges for its most expensive version, according to CEO Stewart Butterfield. How much more will vary from company to company, depending on the negotiations on each agreement, Butterfield said.

Slack's early inroads in reshaping how workers communicate has minted the privately held company with a market value of \$5 billion, based on the assessment of the venture capitalists and investors who have financed its growth so far.



# TOP 10 APPS

**iOS**  
FREE APPS



## #01 – Bitmoji - Your Personal Emoji

By Bitstrips

Category: Utilities / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #02 – Paper.io

By Voodoo

Category: Games / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #03 – Instagram

By Instagram, Inc.

Category: Photo & Video / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #04 – Pokémon Duel

By The Pokemon Company

Category: Games / Free

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #05 – Snapchat

By Snap, Inc.

Category: Photo & Video / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #06 – Messenger

By Facebook, Inc.

Category: Social Networking / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #07 – YouTube

By Google, Inc.

Category: Photo & Video / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #08 – Lyft - Taxi App Alternative

By Lyft, Inc.

Category: Travel / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #09 – Facebook

By Facebook, Inc.

Category: Social Networking / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #10 – WWE: Champions - Free Puzzle RPG

By Scopely

Category: Games / Free

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.





### #01 – WhatsApp Desktop

By WhatsApp Inc.

Category: Social Networking / Free

Compatibility: OS X 10.9.0 or later, 64-bit processor



### #02 – Xcode

By Apple

Category: Developer Tools / Free

Compatibility: OS X 10.11.5 or later



### #03 – 1Doc: Word Processor for Writer

By Chengyu Huang

Category: Business / Free

Compatibility: OS X 10.10.0 or later, 64-bit processor



### #04 – Microsoft Remote Desktop

By Microsoft Corporation

Category: Business / Free

Compatibility: OS X 10.9 or later, 64-bit processor



### #05 – Microsoft OneNote

By Microsoft Corporation

Category: Productivity / Free

Compatibility: OS X 10.10 or later, 64-bit processor



### #06 – The Unarchiver

By Dag Agren

Category: Utilities / Free

Compatibility: OS X 10.6.0 or later, 64-bit processor



### #07 – Dr. Cleaner: Disk, Memory, System Optimizer

By Trend Micro

Category: Utilities / Free

Compatibility: OS X 10.10 or later, 64-bit processor



### #08 – Kindle

By AMZN Mobile LLC

Category: Reference / Free

Compatibility: OS X 10.8 or later



### #09 – Slack

By Slack Technologies, Inc.

Category: Business / Free

Compatibility: OS X 10.9 or later, 64-bit processor



### #10 – OneDrive

By Microsoft Corporation

Category: Productivity / Free

Compatibility: OS X 10.9.0 or later, 64-bit processor

# TOP 10 APPS

## mac OSX FREE APPS



# TOP 10 APPS

iOS  
PAID APPS



## #01 – Minecraft: Pocket Edition

By Mojang

Category: Games / Price: \$6.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #02 – Heads Up!

By Warner Bros.

Category: Games / Price: \$0.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #03 – Bloons TD 5

By Ninja Kiwi

Category: Games / Price: \$2.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #04 – Geometry Dash

By RobTop Games AB

Category: Games / Price: \$1.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

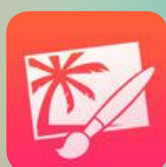


## #05 – Plague Inc.

By Ndemic Creations

Category: Games / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #06 – Pixelmator

By Pixelmator Team

Category: Photo & Video / Price: \$0.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #07 – Five Nights at Freddy's: Sister Location

By Scott Cawthon

Category: Games / Price: \$2.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #08 – True Skate

By True Axis

Category: Games / Price: \$1.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #09 – Tabs & Chords by Ultimate Guitar

By Ultimate Guitar

Category: Music / Price: \$2.99

Requires iOS 9.0 or later. Compatible with iPhone, iPad, and iPod touch.



## #10 – HotSchedules

By HotSchedules

Category: Business / Price: \$2.99

Requires iOS 9.0 or later. Compatible with iPhone, iPad, and iPod touch.





### #01 – GarageBand

By Apple

Category: Music / Price: \$6.99

Compatibility: OS X 10.10 or later



### #02 – Magnet

By CrowdCafé

Category: Productivity / Price: \$1.39

Compatibility: OS X 10.9 or later, 64-bit processor



### #03 – macOS Server

By Apple

Category: Utilities / Price: \$27.99

Compatibility: OS X 10.11.6 or later



### #04 – Logic Pro X

By Apple

Category: Music / Price: \$279.99

Compatibility: OS X 10.10 or later, 64-bit processor



### #05 – Borderlands: The Pre-Sequel!

By Aspyr Media, Inc.

Category: Games / Price: \$54.99

Compatibility: OS X 10.9.2 or later



### #06 – Affinity Designer

By Serif Labs

Category: Graphics & Design / Price: \$54.99

Compatibility: OS X 10.7 or later, 64-bit processor



### #07 – Duplicate Photos Fixer Pro

By Systweak Software

Category: Photography / Price: \$1.39

Compatibility: OS X 10.7 or later



### #08 – MindNode 2

By IdeasOnCanvas GmbH

Category: Productivity / Price: \$39.99

Compatibility: OS X 10.11 or later, 64-bit processor



### #09 – Call of Duty® 4: Modern Warfare™

By Aspyr Media, Inc.

Category: Games / Price: \$13.99

Compatibility: OS X 10.6.6 or later



### #10 – Scrivener

By Literature & Latte

Category: Productivity / Price: \$62.99

Compatibility: OS X 10.6.6 or later

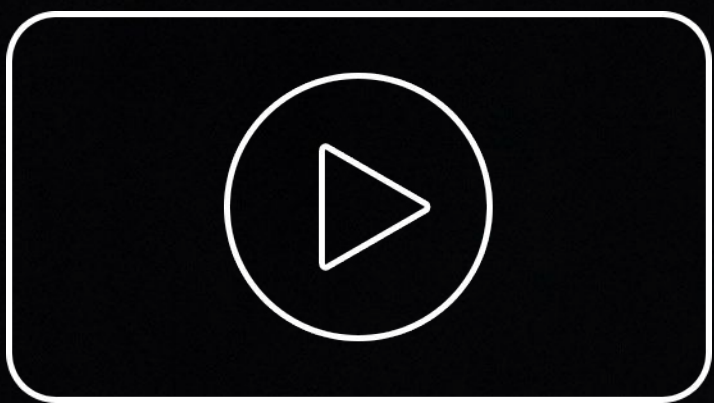
# TOP 10 APPS

# mac OSX PAID APPS



# iTunes

## Review



Trailer



iTunes Preview



by Denis Villeneuve  
Genre: Drama  
Released: 2016  
Price: \$14.99

★★★★★  
199 Ratings

# Movies & TV Shows

Rotten Tomatoes



94%





# Arrival

A fleet of mysterious crafts touches down in several locations across the globe, and it's up to expert translator Louise Banks to find out what they want.

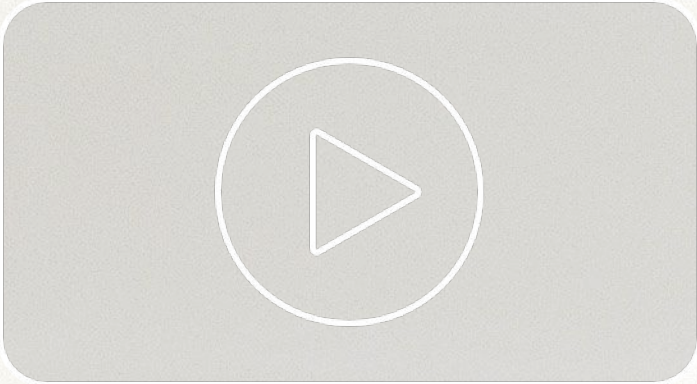
## FIVE FACTS:

- 1.** The movie is based on the Ted Chiang book, *Story of Your Life*. This was also going to be the name of the movie, but test audiences said they didn't like the title, so it was changed to *Arrival*.
- 2.** Director Denis Villeneuve and screenwriter Eric Heisserer worked together to create a complete alien language.
- 3.** *Arrival* has been nominated for eight Oscars, including Best Picture and Best Director (Villeneuve).
- 4.** Originally, the spacecrafts were glass shaped and 112 of them landed on Earth, but for the movie, the number was reduced and the crafts redesigned to resemble an asteroid known as 15 Eunomia.
- 5.** The two main aliens in this movie are called Abbot and Costello in homage to the legendary comedy duo









*Arrival Movie CLIP*  
*They Need To See Me (2016) - Amy Adams Movie*

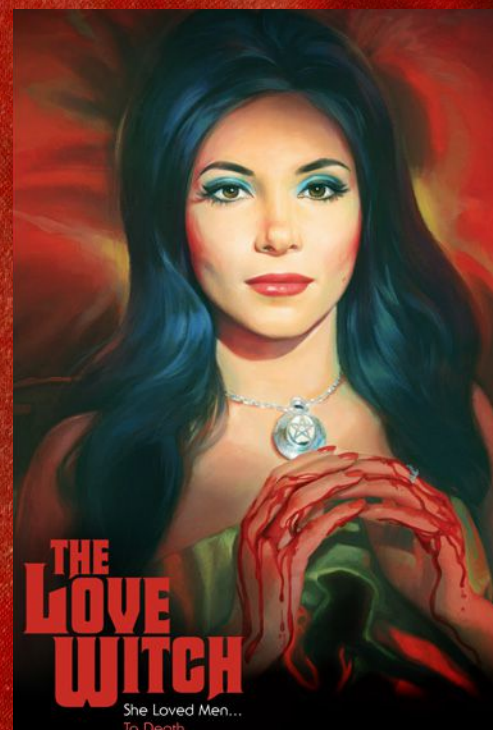


# The Love Witch

A witch in modern times uses her powers to make men fall in love with her, in this homage to the 1960s era of Technicolor thrillers.

## FIVE FACTS:

1. Despite the striking '60s aesthetic of the movie, writer and director Anna Biller has said she never intended the movie to be an homage or parody of that decade's films.
2. Biller created most of the movie's props and costumes.
3. The movie was inspired by Biller's experience following a break-up, of reading self-help books that gave pathetic advice on winning men back.
4. For research purposes, Biller interviewed some of her friends who are witches and visited some of their potion-making classes.
5. The movie was partly inspired by the work of Laura Mulvey, specifically tackling both the male and female 'gaze' in movies.



iTunes Preview



by Anna Biller  
Genre: Drama  
Released: 2017

Rotten Tomatoes  
 95%





Trailer





*The Love Witch Movie CLIP - What Do Men Want?*  
*(2016) - Samantha Robinson Movie*







# iTunes

Review



"Gentle Storm"

*Music*





iTunes **Preview**



Genre: Alternative, art rock,  
neo-progressive rock  
Released: Feb 03, 2017  
10 Songs  
Price: \$11.99



22 Ratings

# Little Fictions

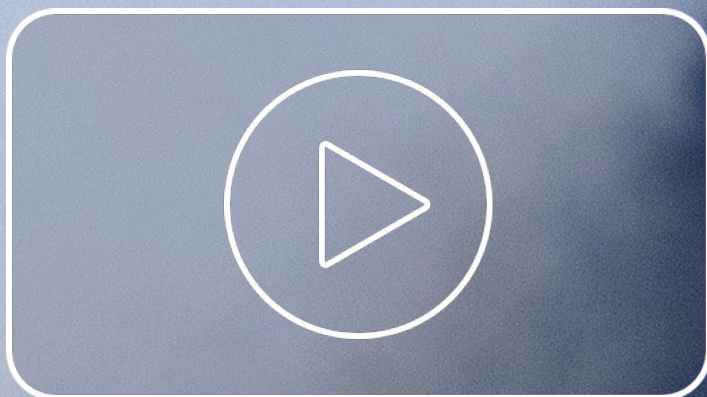
## Elbow

Returning with another helping of “prog without the solos”, Elbow’s newest album brings their distinctive orchestral sound to the forefront once again.

### FIVE FACTS:

1. Elbow not only make music but also lend their name to a variety of different beers. Build a Rocket Boys and Charge are both beers launched by Elbow.
2. Before deciding on the name ‘Elbow’, the band was called ‘Mr Soft’.
3. The name ‘Elbow’ was inspired by a line taken from a BBC TV drama called The Singing Detective, in which one of the characters proclaims ‘elbow’ to be the loveliest word in the English language.
4. The band have cited Genesis and Radiohead as influences.
5. Elbow got the chance to work with Genesis frontman Peter Gabriel later in their career, covering “Mercy Street” from his 1986 album So.





*"Magnificent (She Says)"*









# I Decided

## Big Sean

The long-awaited return of one of the most original rappers to emerge in the last 10 years, Big Sean, showcasing his amazing freestyling and lyric writing skills.

### FIVE FACTS:

1. Big Sean got his big break in the music industry after impressing Kanye West with his freestyling. Two years after hearing him, Kanye signed Big Sean to his newly established record label, GOOD music.
2. Big Sean has been influenced as an artist by such rappers as Eminem, Notorious B.I.G and J Dilla.
3. The Sean Anderson Foundation is a charity founded by Big Sean to help children in Detroit.
4. Before recording a song, Big Sean meditates. The rapper has been very open in the past about his spirituality.
5. Big Sean had every intention of going to college and even had a college fund that was saved up by his grandmother, but ended up spending that money on studio time instead.



iTunes Preview



Genre: Hip-Hop/Rap, Music  
Released: Feb 03, 2017  
14 Songs  
Price: \$9.99



12 Ratings



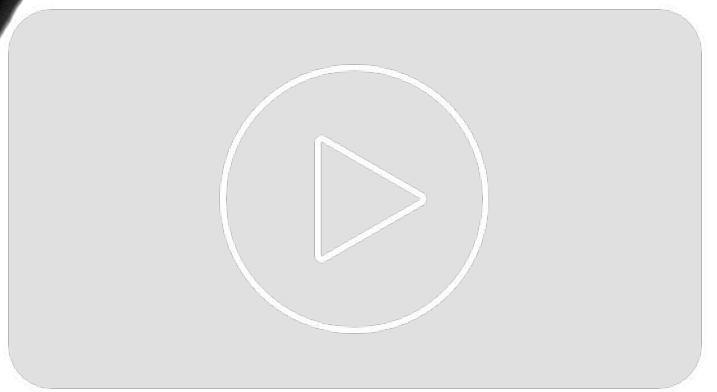


"Moves"









*"Bounce Back"*









## BOX OFFICE TOP 20: 'A DOG'S PURPOSE' IS SECOND TO 'SPLIT'

The M. Night Shyamalan thriller "Split" topped the box office for a second week, outperforming new openers including "A Dog's Purpose" and "Resident Evil: The Final Chapter."

"A Dog's Purpose" still managed to land in second place with \$18.2 million despite the controversy around animal treatment on set, while "Resident Evil: The Final Chapter" debuted in fourth with \$13.6 million.

"Split" added \$25.7 million, bringing its total earnings to \$77.4 million in two weeks, while the NASA drama "Hidden Figures," took third place after 6 weeks in theaters with \$14 million - bumping its grosses to \$104 million.

In fifth place, "La La Land" also crossed the \$100 million mark. Its \$12.2 million weekend brought the film's total to \$106.7 million.



3



4







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.** *"Split," Universal, \$25,655,440, 3,199 locations, \$8,020 average, \$77,385,530, 2 weeks.*

**2.** *"A Dog's Purpose," Universal, \$18,222,810, 3,058 locations, \$5,959 average, \$18,222,810, 1 week.*

**3.** *"Hidden Figures," 20th Century Fox, \$14,003,275, 3,351 locations, \$4,179 average, \$104,024,969, 6 weeks.*

**4.** *"Resident Evil: The Final Chapter," Sony, \$13,601,682, 3,104 locations, \$4,382 average, \$13,601,682, 1 week.*

**5.** *"La La Land," Lionsgate, \$12,233,928, 3,136 locations, \$3,901 average, \$106,693,300, 8 weeks.*





6. *"xXx: The Return Of Xander Cage,"* Paramount, \$8,601,858, 3,651 locations, \$2,356 average, \$33,839,608, 2 weeks.

7. *"Sing,"* Universal, \$6,408,210, 2,702 locations, \$2,372 average, \$257,599,585, 6 weeks.

8. *"Rogue One: A Star Wars Story,"* Disney, \$5,274,513, 2,049 locations, \$2,574 average, \$520,200,086, 7 weeks.

9. *"Monster Trucks,"* Paramount, \$4,177,101, 2,496 locations, \$1,674 average, \$28,212,248, 3 weeks.

10. *"Gold,"* The Weinstein Company, \$3,471,316, 2,166 locations, \$1,603 average, \$3,471,316, 1 week.









12



14







**11.** *"Patriots Day," Lionsgate,*  
\$2,774,772, 1,847 locations,  
\$1,502 average, \$28,306,013, 6 weeks.

**12.** *"The Founder," The Weinstein*  
Company, \$2,606,832,  
1,115 locations, \$2,338 average,  
\$7,433,899, 2 weeks.

**13.** *"Moana," Disney, \$2,479,845,*  
1,894 locations, \$1,309 average,  
\$240,170,441, 10 weeks.

**14.** *"Lion," The Weinstein Company,*  
\$2,348,719, 575 locations,  
\$4,085 average, \$19,718,591, 10 weeks.

**15.** *"Manchester By The Sea," Roadside*  
Attractions, \$2,054,739,  
1,168 locations, \$1,759 average,  
\$41,568,878, 11 weeks.





**16.** *"Raees," Independent Indian,*  
\$1,798,379, 256 locations,  
\$7,025 average, \$2,369,469, 1 week.

**17.** *"Sleepless," Open Road, \$1,750,083,*  
1,055 locations, \$1,659 average,  
\$17,813,578, 3 weeks.

**18.** *"Moonlight," A24, \$1,489,470,*  
1,104 locations, \$1,349 average,  
\$17,714,849, 15 weeks.

**19.** *"Arrival," Paramount, \$1,473,440,*  
1,221 locations, \$1,207 average,  
\$97,328,639, 12 weeks.

**20.** *"Fences," Paramount, \$1,443,074,*  
880 locations, \$1,640 average,  
\$50,822,683, 7 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.







17



19





Nintendo®

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# NINTENDO'S THIRD QUARTER PROFIT JUMPS ON POKEMON GAME SALES

Japanese video game maker Nintendo Co.'s third-quarter profit more than doubled from a year earlier on healthy sales of Pokemon game software, the company said Tuesday.

Nintendo, which makes Super Mario games and will start selling the Switch console March 3, reported a better-than-expected October-December profit of 64.7 billion yen (\$569 million), up from 29.1 billion yen in the same period of 2015.

Kyoto-based Nintendo raised its full year profit forecast to 90 billion yen (\$792 million) from an earlier 50 billion yen (\$440 million). That would mark a more than five-fold increase from what it earned the previous fiscal year.

It kept its sales forecast unchanged at 470 billion yen (\$4.1 billion). Nintendo's quarterly sales slipped 21 percent to 174.3 billion yen (\$1.5 billion).



Nintendo's bottom line also was helped by a relatively weak yen, which lifts the overseas revenue for Japanese companies like Nintendo that do much of their business abroad.

Nintendo has a lot riding on the Switch, the new game system that combines a portable handheld device with a dock to use at home, and comes with detachable controllers. Although new machines tend to sell briskly at first, it's difficult to maintain sales momentum.

Nintendo's previous devices struggled against competition from smartphones and other mobile devices, which also offer entertainment.

The company said in a statement the success of the "Pokemon Go" augmented-reality game for smartphones last year led to bigger Pokemon game sales for Nintendo's own portable 3DS machine in recent months.

After resisting switching to games on cellphones for years, fearing that could erode sales of its own consoles, Nintendo made its big push into mobile with "Super Mario Run" for the iPhone, which launched late last year.

At first, it was a big hit but the interest has quickly fizzled out. Nintendo said an Android version of the game will become available in March.














An aerial photograph of a tropical coastline. A river flows through a dense mangrove forest, which is lush green. The river's water is a milky, light brown color. Below the mangroves, the water transitions to a clear, turquoise blue. A sandy beach is visible in the lower left, with several palm trees and a small boat. The overall scene is a mix of green, brown, and blue.

# NEW INDONESIA TSUNAMI NETWORK COULD ADD CRUCIAL MINUTES

Indonesia's tsunami detection system, made up of seafloor sensors that communicate with transmitting buoys on the surface, has been rendered useless by vandals and lack of funding. Now Indonesian and U.S. scientists say they've developed a way to dispense with the expensive buoys and possibly add crucial extra minutes of warning for vulnerable coastal cities.

The prototype, nearly four years in the making, is designed to detect so-called near-field tsunamis and has been tested off Padang on the western coast of Sumatra. It awaits a decision on government funding to connect it to disaster agencies on land.



A tsunami triggered by a Dec. 26, 2004 earthquake in the Indian Ocean that killed or left missing nearly 230,000 people, a large share in Indonesia, raised the urgency of ensuring communities have the fastest possible warnings.

But when a sizeable earthquake struck near the Mentawai islands 170 kilometers (106 miles) from Padang in March last year, none of the buoys in the area meant to transmit tsunami warnings were working. A disaster official said all of Indonesia's 22 buoys, which cost several hundred thousand dollars each and are expensive to operate, were inoperable because of vandalism by boat crews or a lack of funds for maintenance.

That quake didn't cause a tsunami but there was a chaotic evacuation in Padang, population 1 million, and other cities, which have at most 30 minutes before tsunami waves hit. Because of lack of information, officials didn't cancel the tsunami warning for two hours.

"Now we have no buoys in Indonesia. They are all damaged," said Iyan Turyana, an ocean engineer at BPPT, Indonesia's Agency for the Assessment and Application of Technology. "Where do you live in Indonesia? Jakarta! It's ok. But if you live in Padang, if you live in Bengkulu, your life is very dangerous."

Germany and the U.S. provided 12 of the buoys, but did not maintain them, he said.

For Indonesians, Aceh province in the north of Sumatra where more than 100,000 people died after 2004 earthquake, is synonymous with tsunami risk. Now, however, Padang and nearby cities face the greatest danger of being wiped out by giant waves.







Image: Achmad Ibrahim









The magnitude 9.1 quake in 2004, centered in the north of a subduction zone where one major section of the earth's crust is being forced under another, released enough energy to make a similarly powerful quake in that area unlikely in the foreseeable future. In the section of that "megathrust" off Padang, pressure has built relentlessly and an undersea earthquake greater than magnitude 8.5 is possible in the next few decades.

To boost its detection ability, tsunami-prone Japan has linked dozens of seafloor sensors off its eastern coast with thousands of kilometers of fiber-optic cable. That cost several hundred million dollars and a similar endeavor would be impossibly expensive for Indonesia, a vast but poor archipelago in one of most seismically active regions in the world.

But with \$3 million of funding from the U.S. National Science Foundation, a prototype network of undersea sensors has been deployed between Padang and the Mentawai islands.

Buoys are not needed because the undersea seismometers and pressure sensors send data-laden sound waves to the warm surface waters. From there they refract back into the depths, traveling 20-30 kilometers to the next node in the network and so on.

At its final undersea point, the network needs a few kilometers of fiber optic cable to connect it to a shore station in the Mentawai islands where the cascades of data would be transmitted by satellite to the meteorology and geophysics agency, which issues tsunami warnings, and to disaster officials in Padang.









"This entire process likely takes 1-3 minutes instead of the 5-45 minutes typical of the buoy system," said Louise Comfort, a University of Pittsburgh expert in disaster management who has led the project, which also involves engineers from the Woods Hole Oceanographic Institute.

"We get a more immediate record of the seismic movement and with that more immediate record we gain a few minutes of very valuable time," she said. "And we get a clearer signal of whether or not there is going to be a tsunami."

Laying the cable will cost the Indonesian government about 1.5 billion rupiah (\$112,000), said Turyana, the ocean engineer. The Ministry of Research, Technology and Higher Education is considering a funding proposal.

The system has not been deployed elsewhere, but could be an option for other poor countries or regions that are vulnerable to tsunamis.

Since 2004, the mantra among disaster officials in Indonesia has been that the earthquake is the tsunami warning and signal for immediate evacuation. Not everyone is convinced a tsunami detection system is essential.

"Why? Because the tsunami is too quick to arrive to the land. After the earthquake, we evacuate. No need to detect the tsunami. Just evacuate. That is the second opinion. That is why it is hard to have the budget," said Turyana.

Memories of the 2004 tsunami are fresh enough that Indonesians living near the coast typically run for high ground whenever the land shakes, as it frequently does.



Yet without a reliable system that reduces false alarms, a “crying wolf” effect will eventually change people’s behavior, say proponents of the detection network.

Not least, it can give disaster officials give crucial information about a tsunami, such as the heights of its waves and where and when they will hit.

“This system is to make sure the tsunami is really coming,” said Febrin Ismail, a structural engineer involved in earthquake mitigation and tsunami planning for Padang.

“Sometimes after the earthquake, people are running and then they see the tsunami doesn’t come. In the future maybe they don’t run again. We are afraid the quake itself is not effective.”



Image: Achmad Ibrahim













# GAMES, CRAFTS, OTHER ACTIVITIES MAY SAFEGUARD AGING BRAIN

Even in your 70s and beyond, simple activities including web-surfing, playing bridge and socializing can stave off mental decline, new research says.

Benefits were greatest in computer users and in those without a gene variation linked with Alzheimer's disease. But even among seniors with that trait, mental decline that sometimes precedes dementia was less common among those who engaged in mind-stimulating activities.

The results don't apply to costly, computer-based games that purport to keep the brain sharp - those were not studied. The benefits were found from activities that many seniors have access to.

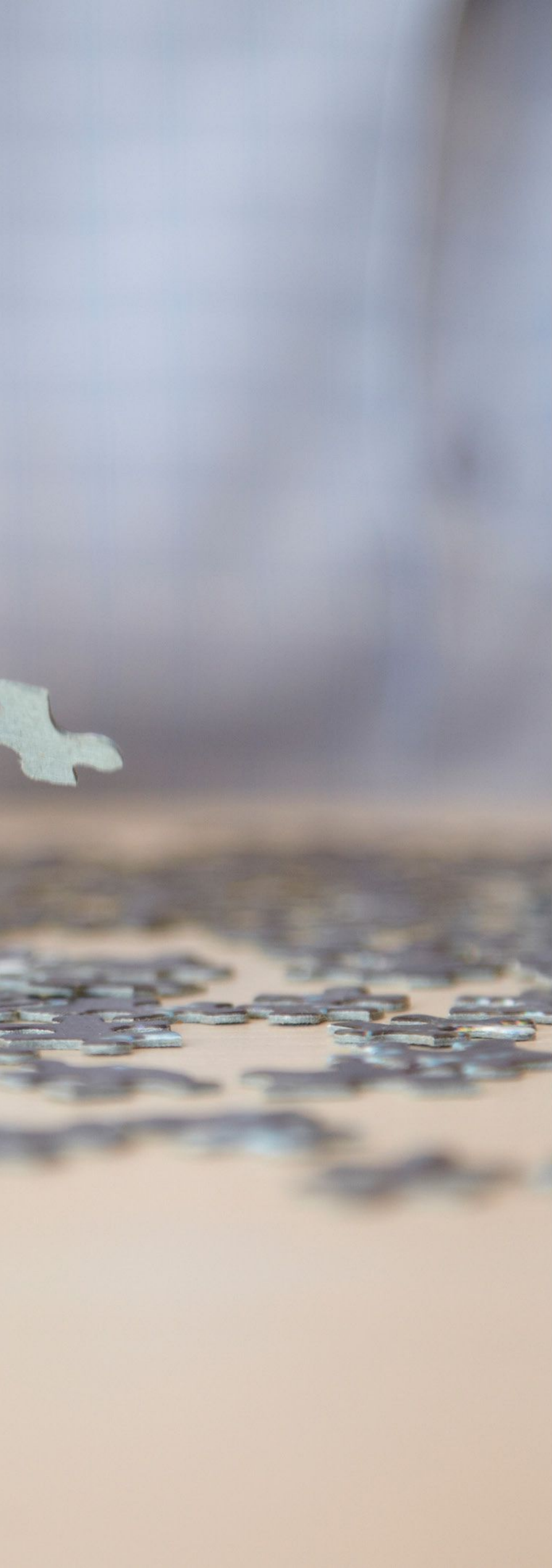
"They don't have to spend their life savings" on fancy gadgets, said Dr. Yonas Geda, the study's senior author and a neurologist at the Mayo Clinic's Scottsdale, Arizona, campus.

The study was published this week in the journal JAMA Neurology. The researchers noted that the









statistical link they found with reduced risk does not prove the activities were responsible.

Still, said Heather Snyder of the Alzheimer's Association, the results support the idea that "being engaged mentally is good for brain health."

The study looked at five types of activities that are thought to help keep the mind sharp: computer use; making crafts; playing games including chess or bridge; going to movies or other types of socializing; and reading books. The idea was to see if these activities could help prevent mild cognitive impairment. That condition involves problems with memory, thinking and attention that don't interfere much with daily life but which increase risks for developing Alzheimer's disease and other types of dementia.

Almost 2,000 adults aged 70 to 93 without any memory problems participated. They lived in Minnesota's Olmsted County, where the Mayo Clinic in Rochester is located. They were asked whether they had engaged in any of the five activities during the previous year and if so, how often. They were tested for the condition in mental exams at the beginning and every 15 months for about four years. During that time, 456 study participants developed the mild impairment.

Analysis found a protective effect from each activity except for reading books. Study participants who engaged in any of the other activities at least once weekly were 20 percent to 30 percent less likely to develop the condition over the four years than those who never did those activities.

**Online: Journal**









# TOP 10 SONGS

***I DON'T WANNA LIVE FOREVER  
(FIFTY SHADES DARKER)***  
*ZAYN & TAYLOR SWIFT*

***SHAPE OF YOU***  
*ED SHEERAN*

***BAD THINGS***  
*MACHINE GUN KELLY & CAMILA CABELLO*

***PARIS***  
*THE CHAINSMOKERS*

***DOWN***  
*MARIAN HILL*

***PLAY THAT SONG***  
*TRAIN*

***24K MAGIC***  
*BRUNO MARS*

***I FEEL IT COMING (FEAT. DAFT PUNK)***  
*THE WEEKND*

***MAKE ME (CRY) [FEAT. LABRINTH]***  
*NOAH CYRUS*

***THIS TOWN***  
*NIALL HORAN*









# TOP 10 ALBUMS

***THE DEVIL DON'T SLEEP (DELUXE)***  
*BRANTLEY GILBERT*

***LA LA LAND (ORIGINAL MOTION  
PICTURE SOUNDTRACK)***  
*VARIOUS ARTISTS*

***AFTER ALL THESE YEARS***  
*BRIAN JOHNSON & JENN JOHNSON*

***THE SEARCH FOR EVERYTHING  
WAVE ONE - EP***  
*JOHN MAYER*

***NOW THAT'S WHAT I CALL MUSIC, VOL. 61***  
*VARIOUS ARTISTS*

***TROLLS (ORIGINAL MOTION  
PICTURE SOUNDTRACK)***  
*VARIOUS ARTISTS*

***A GIRL A BOTTLE A BOAT***  
*TRAIN*

***24K MAGIC***  
*BRUNO MARS*

***NOW THAT'S WHAT I CALL A WORKOUT 2017***  
*VARIOUS ARTISTS*

***THREE STRIPES***  
*BELL BIV DeVOE*









# **TOP 10 MUSIC VIDEOS**

***I DON'T WANNA LIVE FOREVER***

*ZAYN & TAYLOR SWIFT*

***BACK TO GOD***

*REBA McENTIRE*

***24K MAGIC***

*BRUNO MARS*

***FOREVER COUNTRY***

*ARTISTS OF THEN, NOW & FOREVER*

***THIS ONE'S FOR ME AND YOU  
(FEAT. NEW EDITION)***

*JOHNNY GILL*

***IF IT ISN'T LOVE***

*NEW EDITION*

***CAN'T STOP THE FEELING!  
(ORIGINAL SONG FROM DREAMWORKS  
ANIMATION'S "TROLLS")***

*JUSTIN TIMBERLAKE*

***DESPACITO (FEAT. DADDY YANKEE)***

*LUIS FONSI*

***BAD THINGS***

*MACHINE GUN KELLY & CAMILA CABELLO*

***CAN YOU STAND THE RAIN***

*NEW EDITION*









# TOP 10 TV SHOWS

**2105**

*THE BACHELOR, SEASON 21*

**AMBUSH**

*VANDERPUMP RULES, SEASON 5*

**THE BEAUTIFUL GAME**

*MADAM SECRETARY, SEASON 3*

**JMPALM**

*QUANTICO, SEASON 2*

**WE CAN BE HEROES**

*SUPERGIRL, SEASON 2*

**A GOOD DAY TO DIE**

*LUCIFER, SEASON 2*

**THE WRATH OF WIRKUS**

*SUMMER HOUSE, SEASON 1*

**SURVIVAL OF THE FITTEST**

*SCANDAL, SEASON 6*

**DOLL 123 (FULL UK-LENGTH EDITION)**

*VICTORIA, SEASON 1*

**HARRY'S MEAT AND GATSBY'S FETE**

*THE REAL HOUSEWIVES OF BEVERLY HILLS, SEASON 7*



The image shows a book cover with a dark, textured background. A large, light green diagonal shape cuts across the left side. The title 'GARDEN' is written in large, white, serif capital letters at the top. Below it, in smaller red capital letters, is 'NEW YORK TIMES BESTSELLING'. Further down, the word 'RIGHT' is visible in large white capital letters, and 'WHI' is visible at the bottom. A hand is visible at the top left, holding a thin, light-colored object.

GARDEN

NEW YORK TIMES BESTSELLING

RIGHT

WHI



# NEVER TOP 10 BOOKS

AUTHOR OF FIN

IT

N

***RIGHT BEHIND YOU***

LISA GARDNER

***PICTURE PERFECT***

JODI PICOULT

***THE PRISONER***

ALEX BERENSON

***1984***

GEORGE ORWELL

***NEVER NEVER***

JAMES PATTERSON & CANDICE FOX

***JUST FRIENDS***

BILLY TAYLOR

***SEVEN MINUTES IN HEAVEN***

ELOISA JAMES

***FROM DOON WITH DEATH***

RUTH RENDELL

***GOOD BOY***

ELLE KENNEDY & SARINA BOWEN

***THE GIRL BEFORE***

J.P. DELANEY









# WHERE ARE THE TREES? NOT PARIS, NEW 'GREEN VIEW INDEX' FINDS

Where are the trees? More important, where aren't the trees? A lab at the Massachusetts Institute of Technology is helping some of the world's cities answer both questions in an attempt to make them more pleasant places to live and work.

In an effort to enhance the critical role trees play in urban environments - providing cooling shade, alleviating air and noise pollution, and easing the effects of climate change - the school's Senseable City Lab has developed an online platform that maps out the canopy in some major cities to make it easier for urban planners and ordinary citizens to see where more are needed.

The project, called Treepedia, uses Google Street View to create what the MIT team calls the Green View Index.









Trees block shortwave radiation and increase water evaporation, creating more comfortable microclimates and mitigating air pollution, lab director Carlo Ratti said. But they also just make people feel better, Ratti said, channeling Harvard biologist E.O. Wilson's biophilia theory that humans innately seek out connections with nature.

"We as humans have a natural willingness and desire to be in green spaces," he said.

The interactive website gives bird's-eye views of 15 cities, with trees represented by green dots. Users can zoom into a particular neighborhood or individual street to see ground-level images.

The City of Lights apparently isn't the city of trees. Of the cities mapped so far, Paris scores lowest with a Green View Index score of 8.8 percent.

North American cities tend to score higher than European cities. Singapore, however, ranks the highest with a 29.3 percent score, slightly ahead of Vancouver, British Columbia.

The other cities mapped so far are Amsterdam; Boston; Frankfurt, Germany; Geneva, Switzerland; London; Los Angeles; New York; Sacramento, California; Seattle; Tel Aviv, Israel; Toronto; and Turin, Italy.

More cities are being added.

"In the future, the goal of this project is to start a conversation so that cities can see how they compare with one another and how they can learn from each other," Ratti said.

He also hopes ordinary citizens will use the website to check out their own homes, and advocate with municipal officials for more trees in their neighborhoods.







The project was inspired by the World Economic Forum's Global Agenda Council on the Future of Cities, which included increasing tree canopy cover on a list of top 10 urban innovations.

"We hope that this endeavor will give citizens a greater appreciation of their city's green canopy and appreciate that the green canopy can assist in responding to climate change," council manager Alice Charles said in a statement.

The project's maps aren't perfect. It appears as if there are no trees in some of the world's most famous parks. New York's Central Park, Boston Common and London's Hyde Park appear as large black swaths of nothing - probably because Google Street View vehicles can't get into those areas.

Ratti hopes to eventually fill those gaps using satellite data, but adds that cataloging street trees is the project's primary goal.

"Streets are important, because that's where we spend most of our time," he said.











# CARDINALS MUST GIVE ASTROS TOP 2 PICKS, \$2M FOR HACKING

The St. Louis Cardinals were stripped of their top two picks in this year's amateur draft Monday and ordered to give them to Houston along with \$2 million as compensation for hacking the Astros' email system and scouting database, the final and unprecedented step in an unusual case of cybercrime involving two Major League Baseball teams.

Baseball Commissioner Rob Manfred also banned former St. Louis executive Christopher Correa for life as he ruled the Cardinals must give the 56th and 75th draft choices in June to Houston. They must pay the Astros the money within 30 days.



Correa, the Cardinals' director of baseball development until July 2015, pleaded guilty in federal court last year to five counts of unauthorized access of a protected computer. He was sentenced to 46 months in prison and ordered to pay the Astros \$279,039 in restitution.

"Although Mr. Correa's conduct was not authorized by the Cardinals, as a matter of MLB policy I am holding the Cardinals responsible for his conduct," Manfred wrote. "A club suffers material harm when an employee of another club illegally accesses its confidential and propriety information, particularly intrusions of the nature and scope present here. In addition, as a result of Mr. Correa's conduct, the Astros suffered substantial negative publicity and had to endure the time, expense and distraction of both a lengthy government investigation and an MLB investigation."

Cardinals chairman Bill DeWitt Jr. said in a statement the "findings are fully consistent with our own investigation's conclusion that this activity was isolated to a single individual."

"This has been a long and challenging process for all of us, especially those within our baseball operations department," St. Louis general manager John Mozeliak said. "We have learned a great deal along the way and we have taken additional steps to ensure that something like this doesn't ever happen again."

Houston said "this unprecedented award by the commissioner's office sends a clear message of the severity of these actions."

Correa was employed by the Cardinals from 2009-15. When he was sentenced last July by U.S. District Judge Lynn N. Hughes, Correa















said he was “overwhelmed with remorse and regret for my actions” that cost him his career and his home.

“I violated my values and it was wrong. I behaved shamefully,” he said then. “The whole episode represents the worst thing I’ve done in my life by far.”

Astros general manager Jeff Luhnow told reporters in June 2014 the team had been the victim of hackers who accessed servers and published online months of internal trade talks. Astros general counsel Giles Kibbe said Correa accessed the Astros’ system about 60 times over two years.

Federal prosecutors said in a sentencing memorandum that Correa used the password of Sig Mejdal, Houston’s director of division sciences who had been the Cardinals’ director of amateur draft analysis. When he left St. Louis in December 2011, Mejdal was directed to give his computer to Correa along with its password, and Mejdal later used an almost identical password with his Astros account.

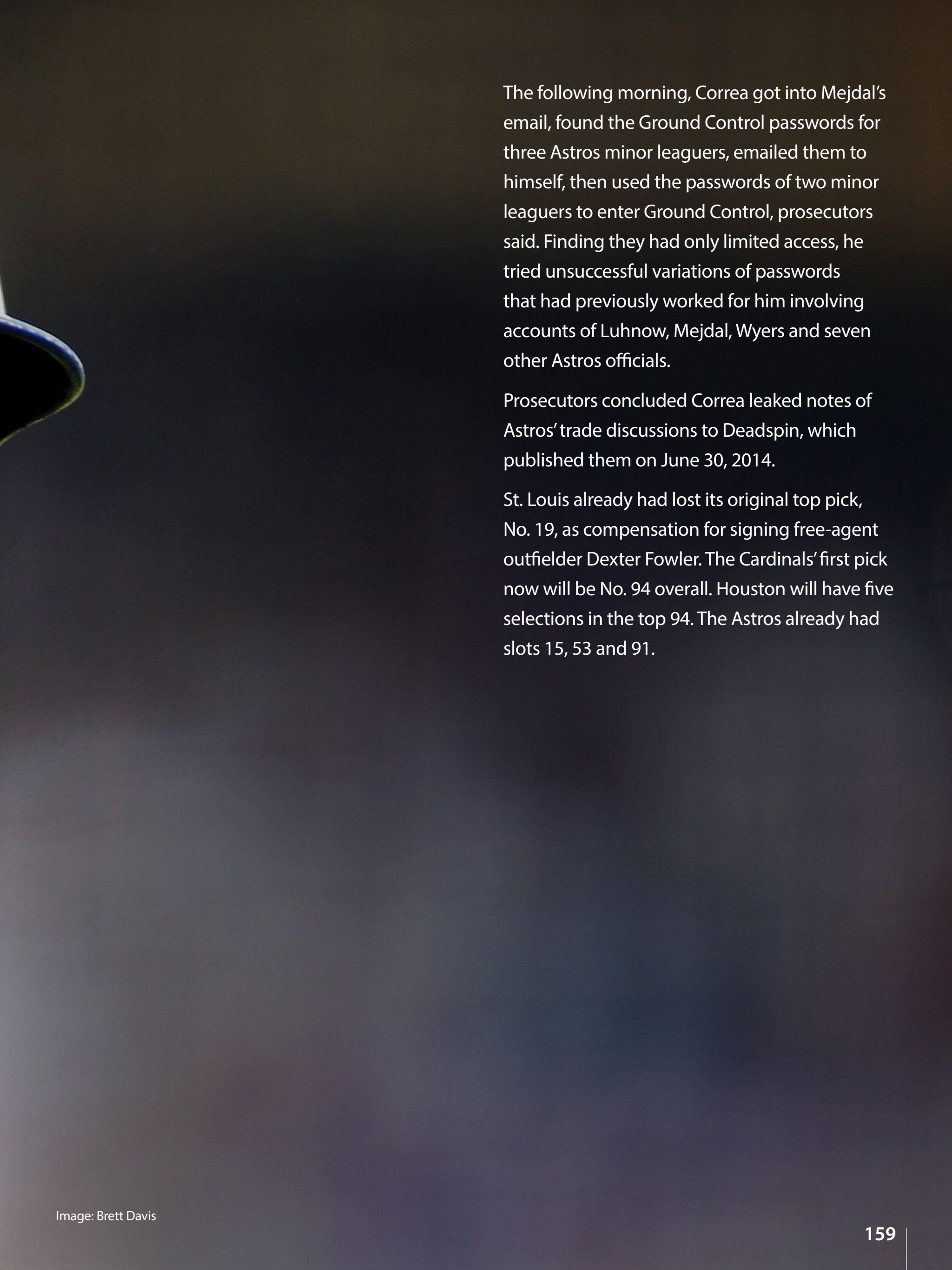
Prosecutors said Correa had access to the Astros’ system from January 2012 until June 2014 and entered the team’s Ground Control database of confidential scouting reports, statistics and contract information 48 times. He also accessed the email of five Houston employees, including that of Mejdal.

After a Sports Illustrated article that detailed the Ground Control system was published on June 26, 2014, Correa the next night unsuccessfully tried to access Ground Control using the accounts of Mejdal, Luhnow, analyst Colin Wyers, manager Bo Porter and pitching coach Brent Strom.









The following morning, Correa got into Mejdal's email, found the Ground Control passwords for three Astros minor leaguers, emailed them to himself, then used the passwords of two minor leaguers to enter Ground Control, prosecutors said. Finding they had only limited access, he tried unsuccessful variations of passwords that had previously worked for him involving accounts of Luhnow, Mejdal, Wyers and seven other Astros officials.

Prosecutors concluded Correa leaked notes of Astros' trade discussions to Deadspin, which published them on June 30, 2014.

St. Louis already had lost its original top pick, No. 19, as compensation for signing free-agent outfielder Dexter Fowler. The Cardinals' first pick now will be No. 94 overall. Houston will have five selections in the top 94. The Astros already had slots 15, 53 and 91.









# PBS' 'NOVA' SEEKING PERIODIC- TABLE FANS TO FUND TV SPECIAL

Geeks of America, PBS' "Nova" wants you to open up your minds and wallets for a sequel to its sleeper 2012 hit film on the periodic table.

A Kickstarter campaign for \$1 million to finance "Beyond the Elements" from public TV station WGBH Boston launched Tuesday. The follow-up to "Hunting the Elements" will bring puckish tech reporter David Pogue back as host.

Money alone isn't the goal for the drive at [novakickstarter.com](http://novakickstarter.com), said John Bredar, WGBH's vice president of national programming.

"What really excites us is the opportunity to team up directly with 'Nova' fans and science lovers," Bredar said in a statement about the campaign tagged "Make Science for All."

"Hunting the Elements" gave viewers a closer look at the elements of the periodic table. The sequel shows how those elements combine to form the millions of substances in the world.

Why was a subject that's the dread of many a high school student the right project for crowdfunding? Because it has a vocal fan base, Bredar said in an interview.

After the original program aired, WGBH began hearing from teachers and others asking,



“Hey, when are you going to do another show on the periodic table?” he said.

“Once we got over the fact that there was this seemingly loyal group of people we were hearing a lot from” and then added in Pogue’s own following, Bredar said, WGBH decided the show fit the model for a successful campaign.

If more than \$1 million is raised, additional goals can be met including interactive classroom materials, a 360-degree virtual reality experience and free distribution of copies of the two shows to all U.S. public high schools, WGBH said.

Making the show will take up to 20 months, Bredar said. The program will be made even if the campaign falls short but will take longer while funding is sought, Bredar said.

The online fundraiser isn’t a first for a PBS program or its filmmakers. WGBH, for instance, relied on it to help fund an oral history project tied to the program “Last Days of Vietnam” for its “American Experience” series.

“When you think of it more broadly, PBS has been in the crowdfunding game from the get-go,” Bredar said, with its reliance on viewer contributions as an adjunct to federal funding.

Federal money represents 15 percent of public TV stations’ funding overall, with the rest provided by private and corporate donors. Most of that approximately \$400 million is divided annually among 1,500-plus locally owned-and-operated TV and radio stations nationwide.

“Nova,” in its 44th season, is a top-rated prime-time science series with an average audience of 5 million weekly viewers.









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