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Business Day

N B1

MONDAY, SEPTEMBER 8, 2014

The New York Times

Medieval Message, Modern Delivery

The ostensible purpose of the recent videos that show the beheadings of two American journalists by Islamic militants is to deter attacks — your missiles on our positions will beget our knives on Western hostages — but the true aim is to spread dread and terror.

DAVID CARR

THE MEDIA EQUATION

The videos deliver in miniature the same chilling message as the footage of the towers falling 13 years ago: Everything has changed, no one is safe and the United States is impotent against true believers. It is a memo from a foe that has everything to gain by goading America into a fight in a faraway land where its enemies are legion. The tactic worked back then.

And while the videos convey barbarism on an elemental level, dismissing them as crude or one-dimensional would be wrong. The Islamic State in Iraq and Syria, known as ISIS, clearly has a sophisticated production unit, with good cameras, technically proficient operators and editors who have access to all the best tools. What they made are modern

A video of a murder shows evidence of careful crafting.

media artifacts being used to medieval ends. The videos serve as both propaganda and time machine, attempting to wipe away centuries of civilization and suggest that the dreamed-of caliphate flourishes and blood is cheap currency.

The real warriors in those videos are the journalists who were killed, James Foley and Steven Sotloff, who were trying to do a terrible, dangerous job when they were grabbed opportunistically in Syria. Innocent people end up tragically caught in the crossfire of war, but the targeting of journalists who provide witness for the rest of us is particularly appalling to people in the news business.

I initially had no interest in seeing the videos — the beheading of Daniel Pearl, a reporter for The Wall Street Journal, in 2002 is still fresh — but watched the footage of Mr. Sotloff's death after I decided to write about it.

The mastery of medium and message is evident in the careful crafting of the video. (Anybody who doubts the technical ability of ISIS might want to watch a documentary of Falluja that includes some remarkable drone camera work.)

In the Sotloff clip, the enemy, in *Continued on Page 4*

Success of Apple Smartwatch May Rely on Health Care Partnerships

By BRIAN X. CHEN

SAN FRANCISCO — Apple is trying to have another iPod experience.

The company was not the first to create a digital music player when it introduced the iPod 13 years ago. But the device, with its click wheel and slick integration with the iTunes software that ran on a computer, took digital music into the mainstream.

Nor will Apple be the first to introduce a so-called smartwatch when it unveils

its much-anticipated wristband device on Tuesday, along with two iPhones. But if the company gets it right, it could be the first to make average people want to buy one of these devices.

Wearable computers — attached to a wrist, a belt, a lapel or even a head — have so far been the property of serious gadget enthusiasts and calorie-counting fitness buffs. While a lot of attention has been paid to Google Glass, for example, the computer-in-eyewear is as well-

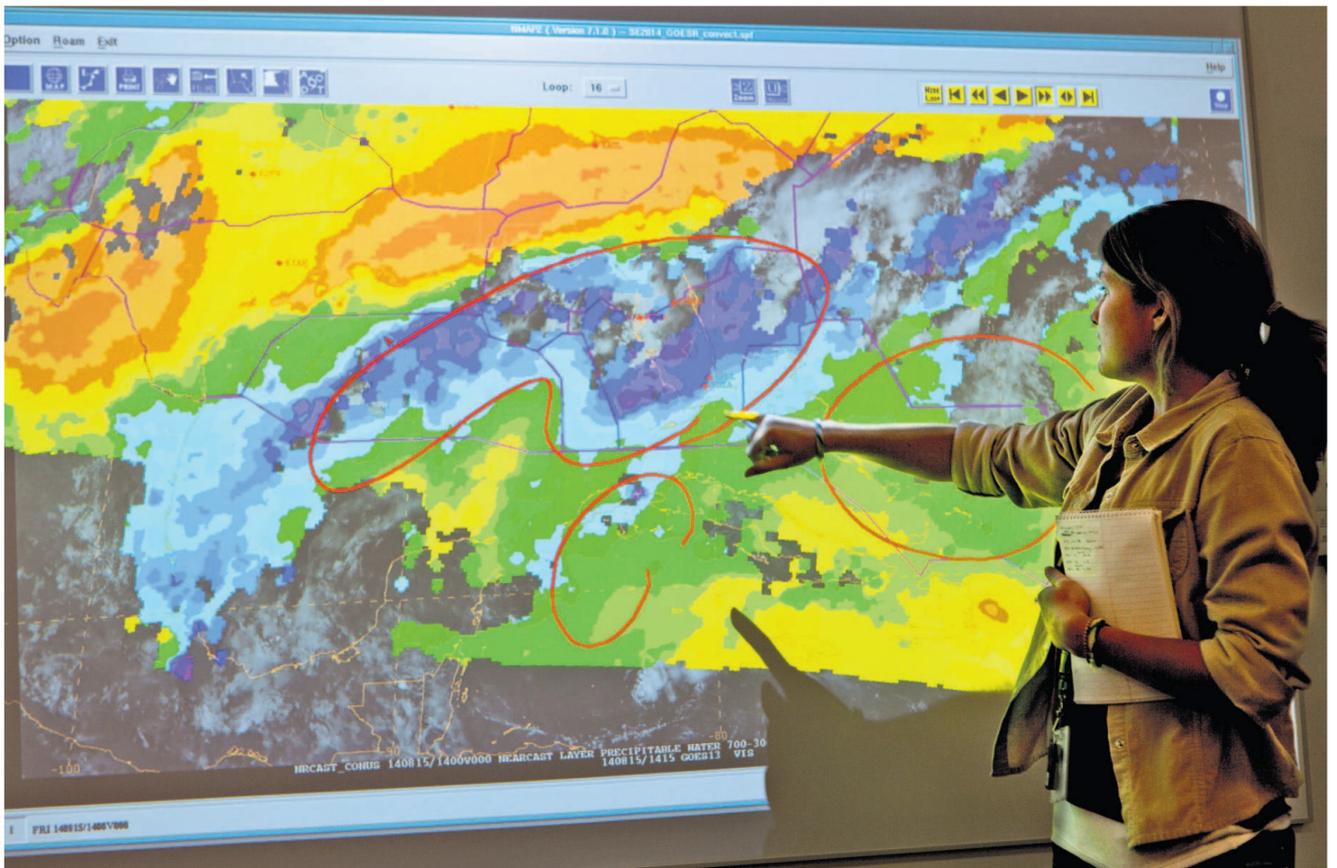
known for the privacy controversy it has caused as for its technical trailblazing.

Smartwatches have not fared much better. Samsung, Apple's biggest rival, introduced the first of its six smartwatches last year with a commercial that recounted watches that have appeared in science fiction entertainment, from "The Jetsons" to "Star Trek." A long list of other tech companies like Motorola and LG have also introduced smartwatches, but none of them have been anywhere near

as popular as the movies and television shows featured in the Samsung ad.

Has that left an opening for Apple with the product that the media has labeled the iWatch? Perhaps, analysts say, if the company can court partners in other industries like health care — health monitoring is believed to be a major feature — as cleverly as it courted the music industry.

Apple, based in Cupertino, Calif., spent *Continued on Page 7*



PHOTOGRAPHS BY DAN GILL FOR THE NEW YORK TIMES

Taking the Bump Out of Turbulence

In Search of Calmer Skies, Airlines Embrace Ever-Improving Weather Technology

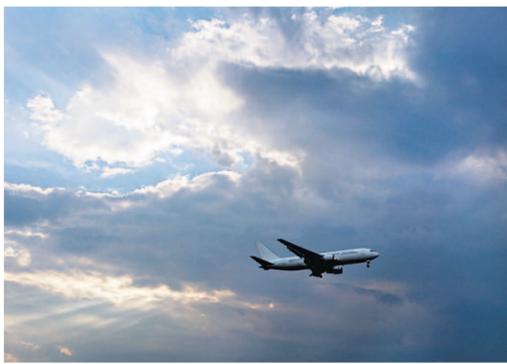
By JAD MOUAWAD

Just a few years ago, airlines got their weather reports by telex. Pilots pored over reams of paper and compared the forecasts with their flight plans. Once airborne, they depended on radio communications and rudimentary radar to avoid bad weather.

Now, pilots download detailed flight plans and weather reports full of intricate graphics onto tablet devices. Flight dispatchers track aircraft in real time and provide up-to-the minute weather data. New generations of airplane radar systems allow for easy in-flight adjustments.

The result? Fewer of the bumps, jolts and spilled drinks that have been a part of flying ever since the Wright Brothers.

"The secret sauce is how you use the information," said Tim Campbell, senior vice president for air operations at Ameri-



Amanda Terborg, top, an Aviation Weather Center meteorologist in Kansas City, Mo. Above, a jet flies out of a storm.

can Airlines. "Fundamentally, it's only a forecast and it's still weather."

Stronger computing power, improved satellite and radar technology and more sophisticated scientific models have all given airlines a more detailed understanding of flying conditions. This means they can better plan their operations before flights — for instance by canceling flights early and avoiding stranding passengers at airports. During flights, they can better navigate around storms and avoid turbulence.

Weather accounted for 36 percent of all airline delays in 2013, down from 50 percent in 2003, according to the Bureau of Transportation Statistics.

"Our seven-day forecast today is about as accurate as a three-day forecast was 10 years ago," said Michael Pat Mur- *Continued on Page 2*

Filmmaker Pins Hopes on a Beach Boy

By MICHAEL CIEPLY

TORONTO — The film producer William M. Pohlad has made his name in Hollywood backing award-winning films like "12 Years a Slave" and "Brokeback Mountain." But he first tried his hand at directing, and his 1990 debut feature, "Old Explorers," went virtually unseen, losing money for friends and family.

"I didn't want to ever be the guy who did that," Mr. Pohlad said in an interview just before unveiling his second directing effort — nearly a quarter-century later.

The new movie, a musical biography of the Beach Boys' Brian Wilson, titled "Love & Mercy," will have its world premiere on Sunday night at the Toronto International Film Festival. Written by Oren Moverman, it stars both Paul Dano and John Cusack as the complicated Mr. Wilson at different points in his musically rich but psychologically troubled life.

Other than that, details re-



FRANÇOIS DUHAMEL

Paul Dano, left, and William Pohlad on the "Love & Mercy" set.

mained scarce through the weekend, even in the gossipy film market. "No one has screened the film yet, including Harvey — total mystery," one film executive said in an email. He was referring to the well-wired indie film executive Harvey Weinstein, and spoke on condition of anonymity

because of confidentiality strictures.

The quiet approach is Mr. Pohlad's way. A son and heir of the Minnesota billionaire Carl Pohlad, who died in 2009, Mr. Pohlad has for over two decades financed and produced movies

Continued on Page 4

Facebook's Feeds Give Videos a Boost

By VINDU GOEL

MENLO PARK, Calif. — On Friday morning, Beyoncé posted a video on Facebook and YouTube that took her fans behind the scenes to see the preparations for her live performance last month at the MTV Video Music Awards.

In the first four hours, Facebook users watched the video 2.4 million times. On YouTube, the four-minute clip garnered just a few thousand views during that time.

The difference: Many of the singer's 64 million Facebook fans spotted the video in their news feeds and shared it with their friends. People who saw it on Google's YouTube did not have such an easy way to spread their enthusiasm.

"For us, Facebook has become the primary platform that we use to communicate content to fans," said Lauren Wirtzer Seawood, head of digital at Parkwood Entertainment, Beyoncé's management company.

YouTube is still the big gorilla of online video, especially as an archive for work with lasting appeal and as a place where creators can make money from ads sold around their material. But Facebook's ability to use social connections to make content popular quickly, along with changes the social network has made to its news feed to showcase video better, have helped fuel rapid growth in the amount of video viewed on the

service over the last year.

Since June, Facebook, which has about 1.3 billion monthly users worldwide, has served up an average of a billion video views a day, two-thirds of them on mobile devices. About 100 million new videos are uploaded every month. While that is a small fraction of YouTube's traffic, it is up significantly from just a few months ago.

Chris Cox, Facebook's chief product officer, said that video was still in its infancy on Facebook. Ordinary users are just starting to learn how to shoot great video on their smartphones, and most professional video creators do not yet know how to use the social network to amplify their audiences.

The company itself is just beginning to grapple with how to give its users a satisfying video experience on the site.

Last December, Facebook began to play videos automatically, with the sound off, when users scrolled past them in their news feeds. But the feature, which can be turned off, upset some people who had to pay for extra data use on their mobile phones. Facebook has since changed the auto-play function to minimize data consumption and added an option for mobile users to enable auto-play only when they are on a Wi-Fi connection.

Facebook also needed to upgrade its infra- *Continued on Page 7*

Improved Technology Taking the Bump Out of Turbulence

From First Business Page

phy, a meteorologist at the Aviation Weather Center in Kansas City, Mo., a unit of the National Oceanic and Atmospheric Administration.

Meteorologists at the center provide detailed weather reports to the airline industry. Every two hours, they hold a conference call to give airlines and the Federal Aviation Administration's central command center their latest storm and rain predictions. They also come up with a global forecast every six hours that is used by airlines around the world, and they are responsible for issuing alerts for dangerous conditions like lightning storms or icing in the United States.

There are about 50,000 flights in America every day, and around 8,000 jets in the air at any given time. It does not take much to disrupt operations. A storm over the northeast corner of Pennsylvania — where much of the air traffic from New York's three big airports flows — can cause widespread delays all the way to the West Coast.

Turbulence poses a particular challenge because it cannot be seen by satellite or radar. But meteorologists use complex weather models as well as reports from pilots to predict areas of heavy turbulence. Sensors on some planes operated by Alaska Airlines, American Airlines and Delta Air Lines can automatically relay turbulence information to dispatchers to look for alternative routing for later flights.

An average of 36 people have been injured as a result of turbulence each year since 2002, according to the F.A.A., which records only the most severe cases. This month, an Allegiant Air jet hit a patch of rough air over Florida, injuring three people; the experience felt "like a bad roller coaster ride," one passenger recounted, with people jumping up and down as if it were a scene from a movie.

"We can reliably identify potential areas for turbulence," said Tom Fahey, who heads a team of 27 meteorologists at Delta. "Where it gets difficult is identifying exact locations at a given instant, since by definition turbulence is in motion."

Some experts also believe that the frequency and intensity of turbulence could increase because of climate change. A study from professors at two British



PHOTOGRAPHS BY DAN GILL FOR THE NEW YORK TIMES

The Aviation Weather Center, above, where meteorologists like Matt Strahan, far left, and Steven R. Silberberg use stronger computers and improved technology to make their forecasts.



universities, Paul Williams of the University of Reading and Manoj Joshi of the University of East Anglia, found that by the middle of the century the strength of turbulence over the North Atlantic could increase 10 to 40 percent.

"Our results suggest that climate change will lead to bumpier trans-Atlantic flights," the authors wrote in a paper published last year.

Getting the weather right is just half the story. Planes are also delayed by congested airspace, limited runway capacity or me-

chanical problems, even on clear days. Just 76 percent of all flights landed within 15 minutes of schedule in the 12 months through June, down from 79.4 percent a decade ago, according to the Transportation Department.

And airlines can still get the weather wrong. On Aug. 9, forecasters thought a storm over Denver's airport would be short-lived. The storm lasted three hours; planes that were holding in the air were getting low on fuel and were diverted to nearby air-

ports in Colorado Springs, Cheyenne, Wyo., or Provo, Utah.

Cleaning up the mess after such storms and getting planes and crew back on schedule and passengers to their intended destinations takes time, something Gene Kim, the dispatch director at Southwest Airlines, calls the "two-day hangover."

"Forecasting weather is a very unforgiving practice," Mr. Kim said. "When you miss the mark, a lot of people come barking at you."

Southwest Airlines recently outfitted 87 of its 600 Boeing 737s with sensors that measure water vapor in the air to determine the location of fog, cloud formation and cloud ceilings. Hawaiian Airlines is developing real-time weather maps in the cockpit to give pilots access to the same detail of information available to dispatchers on the ground.

Airlines are also putting more emphasis on anticipating events, not just reacting to them.

When Hurricane Sandy came up the East Coast in 2012, airlines started to cancel flights several days in advance, giving passengers ample warning, rebooking them on later flights or offering refunds.

"Our goal is when you have to hit the customers and cancel a flight, hit them early, hit them

when they are at home and give them rebooking options early," said Dave Holtz, who heads Delta's operation control center.

The forecasting process is constantly evolving. The National Weather Service uses a supercomputer in Reston, Va., known as Tide, that has a capacity of 213 teraflops — meaning it can make 213 trillion calculations a second. The computer was recently upgraded from 90 teraflops, and the agency is seeking funding from Congress to increase it to 1,950 teraflops.

Meteorologists also expect that new satellites, to be launched starting in early 2016, will give them a better reading of low-ceiling clouds and low-visibility environments, one of the biggest causes of fatal accidents for private pilots and general aviation.

Places like San Francisco might benefit. Morning fog often restricts traffic to a single runway, instead of two. Getting a more precise sense of when the fog will break would help airlines know when to direct flights to San Francisco without risking delays.

"The more observation, the better the model," Steve A. Lack, a meteorologist with the National Weather Service, said of the new generation of satellites. "And this one is a game-changer."

THE WEEK AHEAD

Alibaba Takes to the Road To Pitch Its Initial Offering

The Alibaba Group, the Chinese equivalent of eBay, Amazon.com and Google wrapped into one company, will begin pitching investors this week on its initial public offering in hopes of raising over \$21 billion. The highly anticipated roadshow will begin Monday with a flurry of meetings, including a lunch presentation at the Waldorf-Astoria hotel that is expected to draw more than 100 participants. Its representatives will crisscross the country, then head to Europe, the Middle East and Asia before returning to New York to price the stock sale, tentatively scheduled for Sept. 18.

MICHAEL J. DE LA MERCED



Sentencing Set for Martoma In Insider Trading Trial

Mathew Martoma, the former SAC Capital Advisors trader convicted of insider trading, will find out on Monday whether he will be sentenced to one of the stiffest sentences in the federal government's crackdown on improper trading in the hedge fund industry. Prosecutors have asked a federal judge in Manhattan to sentence Mr. Martoma, a former employee of the billionaire investor Steven A. Cohen, to at least eight years in prison. Mr. Martoma, 40, is one of eight people who once worked for Mr. Cohen's former hedge fund to either be convicted or plead guilty to insider trading charges. In February, a jury convicted him of helping the hedge fund generate profits and avoid losses totaling \$275 million in 2008.

MATTHEW GOLDSTEIN

August Retail Sales Data To Give Clues on Economy

On Friday, the Commerce Department will report on retail sales in August. The data will be closely watched to see how stores performed during the important back-to-school season. Economists are looking for a 0.6 percentage point increase in retail sales including automobiles, and a 0.2 percentage point increase excluding that volatile sector. Later on Friday will come the Thomson Reuters/University of Michigan survey of consumer sentiment in September, and economists are looking for a slight uptick.

NELSON D. SCHWARTZ

Yale Fund Takes Aim at Climate Change

By GERALDINE FABRIKANT

As pressure grows from students who want to see their schools use financial clout to address environmental issues, Yale University's investment office wrote to its money managers asking them to assess how investments could affect climate change and suggesting they avoid companies that do not take sensible "steps to reduce greenhouse gas emissions."

The letter, from David F. Swensen, Yale's chief investment officer, stopped short of asking managers to sell shares in companies with a "large greenhouse footprint." Instead, Yale asked them to "discuss with company managements the financial risks of climate change and the financial implications of current and prospective government policies to reduce greenhouse gas emissions."

Mr. Swensen, who has run the \$20.8 billion endowment since 1985, said in an interview that "while divestment is a blunt tool, considering the economic costs of greenhouse gas footprints is more subtle, influencing in a positive or negative fashion the risk and return profile of every investment position, existing and potential."

"I think it is a valuable experiment," he added. "We will see how it plays out."

The strategy is part of a program just announced at Yale that includes a \$21 million capital investment for energy conservation.

Yale's endowment, the second largest in the country after Harvard's, is closely watched. Mr. Swensen was a pioneer in the use of alternative investments, including hedge funds, and established a stellar record. In recent years, alternatives have fared poorly relative to other asset classes. Nevertheless, for the decade ending June 30, 2013, Yale and Columbia led university en-



MICHAEL MARSLAND/YALE UNIVERSITY

David F. Swensen, who runs Yale's endowment, asked money managers to discuss the financial risks of climate change with companies.

A conversation with companies on efforts to reduce greenhouse gas emissions.

dowment returns with an average annual return of 11 percent, according to Cambridge Associates. Returns for the most recent year will be released this month.

Treasury Auctions Set for This Week

The Treasury's schedule of financing this week includes Monday's regular weekly auction of new three- and six-month bills and an auction of four-week bills on Tuesday.

At the close of the New York cash market on Friday, the rate on the outstanding three-month bill was 0.03 percent. The rate on the six-month issue was 0.05 percent, and the rate on the four-week issue was 0.02 percent.

The following tax-exempt fixed-income issues are scheduled for pricing this week:

MONDAY

Florida Department of Environmental Protection, \$230 million of debt securities. Competitive.

ONE DAY DURING THE WEEK

Metropolitan Atlanta Rapid Transit Authority, \$95.7 million of variable rate sales tax revenue bonds. RBC Capital Markets.
Chicago, \$372.7 million of water revenue bonds. PNC Capital Markets.

Colorado Springs, \$110 million of utilities system improvement revenue bonds. Barclays Capital.

Douglas County, Neb., \$80.9 million of hospital revenue bonds. Wells Fargo Securities.
Fresno, Calif., Unified School District, \$60 million of general obligation bonds. Siftel, Nicolaus & Company.

Greenville, S.C., Health System, \$83.5 million of hospital revenue bonds. Barclays Capital.
Municipal Improvement Corporation of Los Angeles, \$51.1 million of lease revenue bonds. Loop Capital Markets.

Maryland Community Development Administration, \$121.5 million of residential revenue bonds. Bank of America.

Mason County, W. Va., \$100 million of pollution control revenue bonds. J. P. Morgan Securities.
Massachusetts Development Finance Agency, \$73.4 million of Boston University revenue bonds. J. P. Morgan Securities.

Michigan, \$56 million of debt securities. Citigroup Global Markets.
Minneapolis, \$274 million of debt securities. Citigroup Global Markets.

Novato, Calif., Unified School District, \$54 million of general obligation refinancing bonds. Siftel, Nicolaus & Company.

Palm Beach County, Fla., Health Facilities Authority, \$90 million of debt securities. Citigroup Global Markets.

Pennsylvania, \$286.4 million of taxable turnpike special obligation bonds. Wells Fargo Securities.
Suffolk County, N.Y., Economic Development Corp., \$82.5 million of revenue bonds. Goldman Sachs.

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