

OUS SPREAD: PHOTO ILLUSTRATION BY 731, GETTY IMAGES (2), THIS SP

he writers and editors at the Weather Channel's weather.com don't often talk about the weather. They're not meteorologists. They don't mention the forecast or debate

whether New York's overcast sky means it's going to rain. When they wheel their desk chairs together in the open-office newsroom for their morning editorial meeting, many of their ideas have nothing to do with storms or sunshine at all.

"A gallery of city skylines then and now?" suggests Stephanie Valera, weather.com's travel editor.

"I'm finishing that thing on large castles," says her assistant editor, Simone Scully. After that, she says, maybe something on vineyards. There are pitches for stories about sharks, whales, food allergies, and drones. The health editor wants to do something on how an apple a day can help with weight loss.

Neil Katz, weather.com's editor-inchief, listens to their ideas and selects

the ones he thinks readers will like. Bald and bookish, he speaks quietly but clearly, just like everyone else he works with. He approves the skylines and castles,

says "maybe" to the weight loss, and gives enthusiastic approval to a story about a scientist who works in an active volcano, because volcanoes are cool.

Katz calls these types of stories "weather adjacent," and during the last two years he's peppered weather.com with thousands of them. He's changed the way the Weather Channel's website presents the weather, doubling the site's traffic even as viewers drift away from the TV network. People come to

his website or mobile app looking for the local forecast; it's Katz's job to keep them there with headlines such as "12 Spooky

"It used to be that people checked our website once in the morning. Now on the phones, it's three or four—some people check 40 times a day"



Abandoned Hospitals and Asylums" and "What Does Mars Smell Like?" (Answer: We don't know yet, but NASA is trying to find out.) Something similar has happened to the Weather Channel itself, where reality programs and morning talk shows have superseded weathermen giving old-fashioned forecasts. Amid all this, the company has ventured into new territory: using its massive collection of weather data to help companies sell products based on the weather. "People's relationship with weather is changing," says David Clark, president of the Weather Channel Network. "We have to build products that people really want to consume."

For years, the Weather Channel accepted that viewers ignored it on sunny days and essentially bided its time until a hurricane came along and the whole country tuned in for hours, even days. Now that viewers are moving away from TV toward streaming and prerecorded shows, that model doesn't work

so well. During the past four years, the Weather Channel's fair-weather audience size has dropped about 20 percent, according to Nielsen, averaging just 214,000 viewers a day, or less than half the size of other specialized cable channels such as the Food Network or HGTV. And the past two hurricane and tornado seasons in the U.S. have been unusually calm, making the network's shove-Jim-Cantore-out-into-the-storm business model practically moot. "It's as if we were ESPN, and football and baseball season were canceled this year," Clark says.

The mild storm seasons have been "fantastic for Americans but terrible for the weather news business," Katz says. "The team we've assembled is trying to figure out what to do

on the sunny days of the year. It's not a new problem; it's just one we've finally invested in tackling."

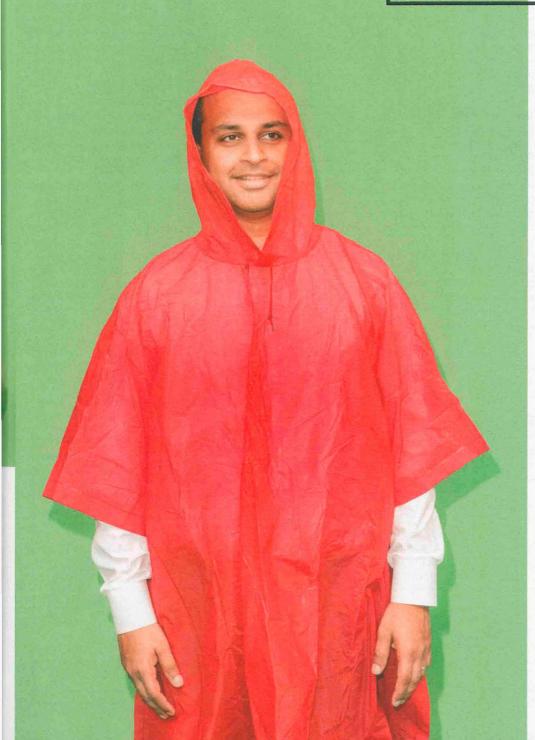
When the Weather Channel first went on the air in 1982, it looked like a flop. *Newsweek* called it "a 24-hour-a-day exercise in meteorological overkill" and a prime example of the stupidity of cable TV. In its first year, the channel lost \$7 million, causing its original owner, Landmark Communications, now Landmark Media Enterprises, to oust a co-founder, former *Good Morning America* weather forecaster John Coleman. But there was some-

"We don't track you as a person," Somaya says. "We just want to know where you are and what your weather is like" thing about the soothing music and brightly colored maps that people started to like, and within a few years the

Weather Channel was drawing a daily audience of millions. "People sit and watch for hours on end," a baffled *New York Times* reported in 1985. "Even the Weather Channel doesn't know why."

With more than 97 million subscribers, the Weather Channel is now one of the most widely distributed cable networks in the country. During big storms its audience spikes into the tens of millions, often surpassing those of regular news outlets such as Fox News and CNN. Its parent company, Weather Co., has been jointly owned by NBCUniversal, Bain Capital, and the Blackstone Group since 2008, although Bloomberg News reported in September that the companies are considering a sale. ("We don't comment on rumors," says David Kenny, Weather Co.'s chairman and chief executive officer.) It has 1,300 employees among offices in eight U.S. cities, with headquarters, main forecasting center, and television studios in Atlanta. Weather Co. doesn't disclose its revenue, but media research company SNL Kagan says last year it made about \$340 million.

Despite the decline in TV viewers, Weather Co. is growing—booming, actually—in the two areas that really matter: Web and mobile. Sure, only a couple hundred thousand people watch the Weather Channel on any one day, but about 7 million visit weather.com and an additional 13 million look at its app. "This week we did 25,000 forecasts per second—that's 2 billion in a day," Kenny



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says. "It used to be that people checked our website once in the morning. Now on the phones, it's three or four—some people check 40 times a day."

To create a forecast, Weather Co. pulls nine separate weather models from places such as the U.S. National Weather Service, the Canadian weather service, and forecasters in Europe and Asia. It collects data from 1,000 commercial air flights and the 64,000 weather stations that make up the Weather Underground network. Its 220 meteorologists then tweak the data based on their knowledge that, say, one of the models tends to overestimate the likelihood of snow.

Thanks to more-precise math and faster computers, today's five-day forecasts are as reliable as a three-day outlook was 30 years ago. Yet most models are still correct only about 70 percent of the time, and they can't tell you what's going to happen beyond two weeks. AccuWeather, the Weather Channel's main rival, tries to. Although if you ask independent meteorologists about the 45-day forecasts AccuWeather began issuing last year, you won't get an answer, because they'll be too busy laughing. Trying to predict the weather that far out is like trying to calculate the last decimal in pi.

When Kenny joined Weather Co. in 2012, he looked at its huge store of data and realized it wasn't being used to its potential. The company was still focused on TV, even though people mostly checked the forecast on their phone. The questions they were asking had changed as well. "People want to know if it's going to rain in the next 15 minutes, and they want to know it where they're standing at Columbus Circle, not Battery Park," Kenny says. "We had to figure out a way to give them that." If the company didn't, there were plenty of nascent apps that would.

First, Kenny bought Weather Underground, which used thousands of mini-weather stations attached to its members' houses, immediately improving Weather Co.'s accuracy in places such as San Francisco, where one area of the city could be 20F cooler than another. He also closed 7 of 13 computer data centers and put everything on the cloud instead. Forecasts came out faster and were more precise; the number of unique locations the Weather Channel offers forecasts for has since jumped from 2 million to 3.2 billion.

All the data in the world aren't helpful unless you have a good way to communicate their meaning. So Kenny brought Katz over from the *Huffington Post* to revamp the website and app and hired Clark, a longtime media executive at Madison Square Garden and Fuse, to run the TV side. Katz and Clark prepared to overhaul everything. "I don't think we'd been honest with ourselves about the need to adapt to consumer behavior until that point," Clark says.

On the website and app, Katz developed what he calls "a deliberate strategy of high/low that was somewhat gratefully borrowed from Arianna [Huffington] at the *Huffington Post*." In addition to serious pieces about the weather, he ran galleries of women in bikinis and an article about how Kate Upton said she got frostbite during a *Sports Illustrated* photo shoot, expecting traffic to soar the way it did elsewhere on the Internet. It didn't. "The audience

both got upset and didn't care—the worst of both worlds," he says. Instead, they went for what weather.com editors call "creepy abandoned": pictures of deserted theme parks, crumbling buildings, basically anything weird and old.

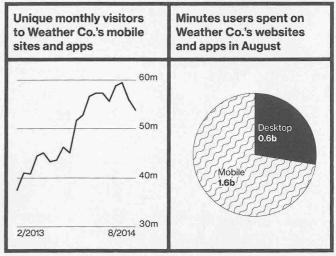
Weather.com didn't give up on long investigative pieces on topics such as fracking and climate change. They don't get as much traffic, Katz says, but they make the site feel more substantive. Weather.com's latest project is *The Real Death Valley*, jointly produced with Telemundo, about migrants who die in the South Texas heat while trying to cross the border from Mexico. Already available online, the documentary will air as a one-hour TV special on the Weather Channel in November.

Under Katz, the nonforecast part of the website has more than doubled its page views, from 1 billion in 2012—already an anomalous number because of Hurricane Sandy traffic spikes—to 2.4 billion this year, despite the frustratingly calm weather. More than 150 million people have downloaded its app. On Apple's iOS 8 system, which comes preloaded on the iPhone 6, the Weather Channel has replaced Yahoo! Weather as the default forecast provider. Since the system rolled out, the channel has added half a million customers, 40 percent of them overseas. "It took us global overnight," Kenny says, though he acknowledges most of the company's traffic still comes from the U.S.

Following its expansion, the Weather Channel can collect data about people, not just weather. Last year it launched Weather-FX, an in-house advertising agency that combs through mounds of weather data, matching it to consumers, and sells its discoveries to its advertisers.

The company persuaded advertisers such as Wal-Mart Stores and Procter & Gamble to hand over their sales data for every product they sold, in every store, in every aisle, all over the country. "I mean that literally," says Vikram Somaya, general manager of WeatherFX. "We said, 'Give us your data.' Traditionally, that's not been met with a whole lot of resounding cheer, right?" But the stores did it. WeatherFX's team then matched the information with the past 30 years of local weather data and uncovered sales trends so specific they surprised even the data scientists. "People always thought we reacted to the weather, like, 'Oh, it's raining!' and then we'd run and buy umbrellas," says Somaya. "That's actually not how it works at all."

"We can tell you that on a January morning in Miami, if a set of weather conditions occurs, people will buy a certain brand of raspberry," he says. Not just any fruit. Raspberries. When advertisers ask for an explanation—why raspberries?—Somaya can't always provide a clear answer. "A lot of times we have to tell them to just trust us." Other times, he finds correlations that make perfect sense. "There's a particular dew





point percentage that makes everyone in Dallas rush out and buy bug spray," he says. "We couldn't figure out why, then we realized that insects' eggs hatch at that dew point." Basically, everyone in Dallas was getting bitten at once.

One of the first brands to use WeatherFX was Pantene, which learned that people didn't buy products to control their humidity-frizzed hair on the day it was humid. They needed time to go shopping. Pantene started running location-specific ads on the Weather Channel's mobile app, offering free "haircasts" that would tell people how flat, fried, or frizzy they could expect to look during the next three days. Sales of Pantene's advertised products jumped 28 percent.

Since then, WeatherFX has formed partnerships with more than 200 brands. It figured out how to sell cold and flu medicine in the middle of the summer. It helped Michaels Stores promote rainy-day craft supplies by offering coupons and reminding parents a few days in advance. It even figured out that when Seattle has several days of rain followed by four hours of sunshine, "everybody goes crazy," as Somaya puts it, and rushes to eat a fruit cup—again, it's that specific—outside. WeatherFX places mobile, Web, and TV ads on the Weather Channel and has started brokering deals for commercial spots on competing cable networks if it thinks the right audience will see them, even buying space as a regular ad agency would do.

The only reason any of this works is because the Weather Channel app constantly tracks users' locations—it has to, otherwise it can't provide a forecast. And WeatherFX plans to tailor ads not only to a forecast but to an exact location. In Chicago on a warm (OK, less frigid), sunny winter day? You probably want to eat yogurt. And oh, look at that—you're driving right by a Trader Joe's, which happens to be having a sale. "There's a little bit of a minefield around privacy with this," Somaya concedes, though he says as long as the company is honest about what it's doing, users don't seem to have a problem revealing their location. "We don't track you as a person," he says. "We just want to know where you are and what your weather is like."

In the beginning, WeatherFX assumed it would have to break down its data along the traditional marketing demographics of age, gender, and race, but it quickly realized it didn't. No matter who they are or what they look like, people in the same place mostly react to weather the same way. "Assuming you've lived there a while," says Somaya, which is why people in the Florida Keys feel very differently about 40F weather than people in Duluth, Minn. As long as they're from the same region, 55-year-old Hispanic mothers hate getting caught in the rain as much as black college students. They get colds together in Minneapolis, they soak up the infrequent sun together in Seattle, and when a hurricane comes ashore in North Carolina, they all rush to the TV and turn on the Weather Channel.

Weather Co. is still trying to figure out how to get viewers in front of its television channel when the weather is nice. On *Wake Up With Al*, hosted at 5:30 a.m. by Al Roker before his stint on the *Today* show, sports and celebrity news have increasingly crept into the broadcast. Nascar racer Kurt Busch recently pretended to intern on the show, which Roker says makes sense, because "weather is integral to racing." The channel's most widely promoted program this fall will be *Fat Guys in the Woods*, a reality show about wilderness survival.

The network's core weather obsessives remain unimpressed. "A lot of people consider the Weather Channel to be irrelevant at this point," says Eric Holthaus, *Slate*'s meteorologist and a former employee of forecasting app Weathermob. The company's Facebook page is full of people writing to ask why there are so many nonweather prime-time shows and why their Weather Channel forecasters have suddenly started talking about other stuff.

"I get that they want to compete with other channels, but I don't want to watch that stuff. And even if I did, I already have those other channels," says Missi Grantham, 42, who lives in Mobile, Ala. She says she's watched so much Weather Channel over the past 20 years that for a while she needed it to fall asleep. Grantham cut back a few years ago when the network aired reality shows, and she realized she couldn't use the Weather Channel to constantly follow the weather. In January, DirecTV, trying to negotiate a better rate, complained about the shift away from forecasting and briefly dropped the network. The fight lasted three months, ending only when tornado season rolled round.

"General entertainment is the wrong analogue for us," Clark says. Since the DirecTV dispute, the network has doubled down on round-the-clock forecasting. In July it launched a Sunday morning talk show called *WX Geeks*, hosted by the former president of the American Meteorological Society. The show can get so far into the weeds—forecasting equations are used as a backdrop—that it can feel like a college seminar. The program isn't getting huge ratings, but Weather Channel die-hards love it. "You never want to abandon your core weather geeks," Kenny says.

WX Geeks, like many of the Weather Channel's TV programs, is shot in Atlanta, where producers have access to plenty of the company's meteorologists. WeatherFX and the weather.com team work out of New York. Last year they moved from a drab, all-beige space near Grand Central Terminal to the sixth floor of a Midtown Manhattan skyscraper renovated to look like a set decorator's idea of a tech startup's industrial loft. There's a shuffleboard table and air hockey. Flatscreen TVs tuned to the Weather Channel let visitors know that Daytona Beach, Fla., got 7.95 inches of rain last night-"a record for today's date!"and that Bartlett, Kan., is experiencing baseball-size hail. In the reception area, weather definitions for everything from cirrus clouds to zonal flow run across the gray walls like wind swirls on a weather map. The office is so close to the neighboring buildings that a glance out the tinted windows shows only another office building or brick wall, depending on which way you look. No one seems to mind that if you look out the windows, you can't actually see the sky. B