

## How Cell on Wheels, Drones and Other Smart Tech will Help in the Next Hurricane

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(TNS) — In 1992, we were glued to our transistor radios or battery-powered TVs as weatherman Bryan Norcross guided us during and in the aftermath of the devastating Hurricane Andrew. Old school? You bet. Now, when another hurricane strikes, a whole army of technology will attempt to take his place.

In the early 1990s, the World Wide Web was in its infancy and the *Miami Herald* and other media companies weren't online yet. Cellphones weren't prevalent, and they sure weren't smart. And social media? Facebook and Twitter weren't even around for a test drive in the 2004-05 hurricanes.

Today, the experts get the lights back on, the cellphones ringing and the Internet connections restored with the help of COWs (Cell on Wheels), drones and other smart technology to pinpoint problems and speed recovery.

Here's a peek into some of those tech advances intended to get critical utilities and information to people more quickly. Many of these have never been tested in a major hurricane.

## **ELECTRICITY**

Keeping the lights on or getting power back may be easier now, thanks to smart devices and “eyes in the sky.”

“The difference is night and day,” Florida Power and Light (FPL) spokesman Bill Orlove said. “By the end of this year, we will have installed 66,000 smart devices on the grid. These are devices that help isolate an issue so our line workers and restorations specialists can see where the issue is. That didn’t exist 25 years ago; it didn’t exist during Hurricane Wilma.

These smart devices got a test drive during Hurricane Matthew, which socked northeastern Florida in 2016. Thanks to them, some 118,000 customers avoided outages, Orlove said.

Also during Matthew, FPL flew 130 drone flights in northern Florida, where areas were unsafe or inaccessible to ground crews. During Wilma in 2005, FPL had to contract a helicopter, which took hours to survey an area. Now a drone can be deployed in 10 minutes and transmit a live feed to command centers, Orlove said. “Our drones were our eyes in the sky.”

In Wilma as well as Andrew, survey crews had to return to a staging area to enter the information. Now they do this on a tablet in real time.

As crews restore power, technology communicates with every meter in that area, so crews can verify instantly that the lights are back on.

For those who did lose power during Matthew, 99 percent were back online within two days.

## **CELL COVERAGE**

Mobility is key to crews charged with getting cell service restored, too. All cell carriers can quickly ready mobile cell sites and mobile command centers.

Take AT&T, for instance. It plans to have more than 700 pieces of equipment, including its Cell on Wheels (COW), Cell on Light Trucks (COLTs), trailers and generators available to maintain its network — about double what was available last year.

“Our deployables and equipment can help [first responders] stay connected during emergencies and operate faster, safer and more effectively when lives are on the line,” said Kelly Starling, AT&T’s South Florida spokeswoman.

Joining could soon be Flying COWs (Cell on Wings, or drones). “We could one day send a Flying COW into areas where flooded roadways might prevent a traditional COW (Cell on Wheels) from being deployed,” she said.

## **INTERNET**

Once power company crews have completed repairs, Comcast crews deploy and work to get services back up as quickly as possible. In the meantime, customers can still access the Internet through its network of Xfinity Wi-Fi hot spots; often these are

“opened up” to everyone, not just Comcast customers, after a natural disaster, Comcast spokeswoman Cynthia Arco said.

The telecommunications company began offering digital voice services to residential customers in 2005. Consumers can purchase a back-up battery for their modems so they are still able to make phone calls for several hours during the power outages that are common after hurricanes. A call-forwarding feature also is available.

Also worth noting: in 1992, there was no “cloud” for safe storage of documents. Now numerous companies offer the service, including Comcast, so that residents and business owners can access documents in the cloud even if their facilities or computers are damaged during a storm.

## **INFORMATION/COMMUNICATION**

In '92, TV, radio and the newspaper (print editions) were critically important for getting local storm news, but today the internet will be our lifeline. For hurricane preparation and surviving the aftermath, there's a whole new, real-time world of information, with 24/7 media websites including MiamiHerald.com; weather and [Federal Emergency Management Agency](#) apps; email from municipalities; and social media to spread the word.

Facebook and Twitter launched to broad membership in 2006, after the 2004-05 storms, including Katrina's assault on New Orleans. But they did get a workout in Hurricane Sandy, which slammed the Northeast in 2013. The federal and state governments and relief organizations published studies on social media's role in preparation and recovery as well as what went right — [and wrong](#).

Facebook and other networks will likely act as massive information exchanges for everything from where to get water and supplies to rallying help in the hurricane aftermath, bringing real-time information faster than ever. Of course the onus will be on the community to lighten up on the frivolous — not the time for the cat videos — so the networks can do their jobs.

“We're living in a crazy time,” said Nancy Richmond, who teaches social media at Florida International University. “Now social media is where people are getting their news from. That can be good and bad because people can be posting fake information on there, as had happened during Sandy.” A fake report about the Wall Street trading floor being flooded went viral and caused the stock market to fall, she said. A website was quickly created to track what was true and what was false.

But Hurricane Sandy also brought out the good from technology and social media, she said. People were posting their locations so authorities could use social media to find the problems. After the storm, people marshaled social media to organize or fund relief efforts. Airbnb set up a free site where people could offer rooms to victims.

“That's really powerful. Before, you had to rely on the news to tell you what was going on. Now people are part of the story, they're part of the conversation, they are showing where they need help — and what are the needs that are out there. It's helped GoFundMe pages and organizations collecting donations.”

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The meteorologist said the U.S. is the only developed country without a public communications system for emergencies, such as the BBC in Britain or the NHK in Japan. The lack of a credible source with the mission of assimilating emergency messages and disseminating them leaves a critical gap in our ability to communicate with the public during an emergency, he said. "The good news is that the technology now exists to allow local and state emergency management offices to fill most of this gap, especially with Facebook and Google's help."

## TIPS FOR TECH

Families, companies and organizations need a crisis plan to know how they are going to get the message out there. For big organizations, governments and large entities like universities, Richmond suggests making sure that official channels are connecting with one other so the real news gets out there and shared. These channels can also help discredit fake or untrue news quickly, Richmond said.

Don't assume something is true on social media or the internet. Check the source of the information and the URL, Richmond said.

Facebook instituted safety check-ins in 2014 so people can let their family and friends know that they are safe. Use the tool, she advised.

Other advice that has survived the tests of time: Power up all your devices before a storm and have several battery-operated chargers at the ready.

During an emergency situation, text messages may go through more quickly than voice calls because they require fewer network resources. Avoid unnecessary calls. Program all of your emergency contact information, including family members, police, fire station and hospital, into your mobile phone.

If you are one of the 38 percent of homes that still have a landline, congratulations. It may be working when cell towers are down.

Take, store and send photos and video clips of damage to your insurance company.

"Old-school technology should be a critical part of everybody's hurricane kit, too,"

Norcross said. "One or more transistor radios with lots of batteries, and, if possible, a POTS system [plain old telephone service, or analog landline] are the most important.

Beyond that, one or more large portable battery systems that can be charged by the car, solar or by taking it to a location where it can be plugged into AC will go a long way toward keeping cellphones charged, even if it's just for texting."

After Hurricane Andrew, the community came together to help one another. Will that still be the case with all the social media of today? Social media is just a tool, but it can help connect people, Richmond said. In the aftermath of disaster, nothing compares to the human connection, neighbor helping neighbor.

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