EE helikite solution to bring coverage to rural communities hurt by disasters

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(Tech Xplore)—On Tuesday, the EE network operator posted a video showing its latest air mast technology using drones and balloons.

But exactly what are air masts? For that you can rely on James Laird in *TrustedReviews* for some answers.

Air masts are essentially unmanned aerial vehicles designed to carry 4G coverage to the UK's hardest to reach rural areas. Laird said that EE and a handful of its partners developed them.

Laird also reported on Tuesday that an air mast drone was shown at a press event at London's Oval cricket ground. "As far as we're aware, it was the first live demonstration of the technology."

The BBC said, "Mobile phone provider EE has demonstrated helium balloons and drones that could provide 4G mobile coverage following damage to existing infrastructure."

Mark Sweney on Tuesday referred to the new design in *The Guardian* as "A fleet of blimps" bringing the areas their mobile phone and wireless broadband coverage

The technology is primarily to make sure that people in rural areas do not lose coverage in emergency times of natural disasters such as flooding. EE wants to be there to deliver 4G data services and voice capabilities.

EE CEO Marc Allera: "Rural parts of the UK provide more challenges to mobile coverage than anywhere else, so we have to work harder there."

Across the UK, said the presenter in the video, we see how flooding can devastate people's lives, removing their ability to communicate.

To address that, EE has showcased their solution. Namely, they have patent-pending balloon and drone 'air masts' designed to connect the most remote parts of the UK and keep communities online in the wake of disasters.

The technology involves mini mobile sites attached to a helium balloon, referred to as a "Helikite."

In a video the presenter said that this is not just a balloon but a specially designed kite with custom built trailer for transport and launch.

In further detail, their tech solution involves the use of small cells connected back into the EE network over satellite or using the EE 4G spectrum to make calls and access the Internet. The company release said that "EE's tethered and powered mobile 'air mast' solutions are currently in patent-pending status."

The BBC said the EE said it planned to deploy such a network in a UK rural area this year. The company release said that "EE expects to deliver a deployed balloon solution in a rural environment in 2017." *TrustedReviews* noted, however, that wider deployment may not happen until a later date.

The balloon is able to stay airborne for weeks at a time, said the video.

Drones, meanwhile, are another part of the equation.

TrustedReviews said the plan was that "Air Masts will first take flights as balloons, with drones bearing 4G speeds set to be introduced in the next year or two, according to EE's representatives."

The company release spoke of drones equipped with mini sites, each including a basestation and antenna, that could be used "to provide targeted coverage, including in search and rescue operations."

The drone solution is regarded as being the fastest deployment option when replacement coverage is needed in the most severe of terrains.

It's considered suitable for short, rapid deployments.

EE, part of BT Group, is a UK mobile communications company in the UK. It delivers mobile and fixed communications services to consumers. The company release said that EE "plans to extend 4G to 95% geographic coverage by 2020."

More information: ee.co.uk/