

NORWEGIAN OPERATOR FORMS WEATHER CAMERA NETWORK

News / Business aviation



Helicopter EMS operator Norsk Luftambulans is installing a network of cameras in Norway to gather remote weather information, mainly about visibility, with the aim of dispatching easier and safer missions along a fog-free route and landings using GPS approaches.

Each sensing unit comprises three cameras—looking in three different directions—a thermometer and an optional barometer, all contained in an aluminum housing. The cameras are semi-professional DSLRs. “They can take high-quality images at night, which is the main difference between our system and a conventional webcam,” Jens Fjelnset, the pilot in charge of the HEMS Weather Camera project, told AIN. The information is sent to a server via the cellular network.

To determine visibility, the system uses geographic references, such as the height of a mountain and the distance to a ridge. Each camera takes a picture every 15 minutes, allowing the sensing unit to send a picture every five minutes. Pressure and temperature data are sent every two minutes.

BAD-WEATHER OPERATIONAL IMPROVEMENTS

“Norway’s CAA has just approved the way we estimate visibility,” Fjelnset said. The way the operator now receives pressure information has been certified, which is required to use GPS approaches. Previously, Norsk Luftambulans personnel were allowed to call local ambulance

companies at the destination and along the desired flight path to ask about visibility, a method that yielded incomplete, relatively inaccurate information.

Weather cameras have improved operations. “They save us time in bad weather, as they avoid us trying more than one valley to arrive at the destination,” Fjelnset said.

Crews use the information for flight planning. Currently, the iPad mini they use as an EFB remains connected until takeoff. Then the dispatcher on the ground can communicate, on the radio, updated information. Fjelnset hopes that eventually crews will be approved to receive updated information on their EFB in flight.

The oldest sensing unit is 2.5 years old and has suffered no major issue, according to Fjelnset. Norsk Luftambulans has installed 27, including six for GPS approaches. The company expects to complete the 63-unit network this year. GPS approaches are the priority, and the company hopes to have them in place by the summer. “What takes time is to find the owner of the land and reach an agreement,” Fjelnset explained.

Norsk Luftambulans is funding the network of HEMS weather cameras on its own. Each unit costs \$10,000 to \$15,000, depending on the number of cameras and the inclusion of a barometer. The information it provides is made available, currently at no charge, to every professional user. In the future, the system’s creators would like to have other users contributing to maintenance costs. However, Fjelnset considers the project is still in the development phase so such details will be studied later.

Selling sensing units to other countries—as has already been done to Denmark, for testing purposes—is in the cards, too.

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