

# Sky no longer the limit for in-flight Internet service

January 10 2014, by Sophie Estienne

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A plane prepares to take off in order to test the latest internet connectivity available in the skies, in Las Vegas, Nevada, on January 9, 2014

Even over the moonscape Nevada desert travelling in a 1950s seaplane, the Internet is there.

Flying from Las Vegas to Lake Mead on the amphibious Albatross One, in-flight services firm Global Eagle Entertainment is demonstrating its ability to deliver connectivity under unusual conditions.

The company showed off its satellite Internet system to a handful of journalists attending the Consumer Electronics Show, just weeks after US regulators allowed "gate to gate" online service, ending a ban on in-flight connectivity below 10,000 feet (3,050 meters).

By using a satellite connection, Global Eagle says it has a more reliable system than air-to-ground providers, especially at low altitudes.

"The satellite is already there and it's possible to have more bandwidth when needed," said Simon McLellan, chief engineer for Row44, the technology division of California-based Global Eagle.

Using a satellite "allows you to expand the capacity when the demand grows," while air-to-ground Internet "is focused on land masses and very populated areas... the infrastructure is not always there."

One of Global Eagle's rivals, Gogo, which serves many US carriers, announced last year it would modify its ground-based connections to a hybrid system that uses both satellites and land transmission.

A transceiver, a modem, a server and a [wireless access point](#) were fitted onto the Albatross, a search-and-rescue aircraft designed for the US Navy and later used for NASA astronaut training that took journalists over spectacular mountain and desert landscapes.

So it is possible to use a smartphone or tablet instead of checking out the view.

Showing the Internet capability in a vintage-era seaplane is "unusual but it serves its goal," said McLellan.

"There's plenty of room for equipment, a fuselage profile similar to the 737 and a very good environment for vibration testing."

Global Eagle in December signed a deal to provide its services to Southwest Airlines, which can deliver connectivity in all stages of flight to mobile devices.

Services including messaging and live television from the Dish satellite network are among those that can be offered through the in-flight connections.

On Southwest, Global Eagle is delivering the service to some 442 aircraft, but its customers also include Norwegian Air Shuttle, Russian carriers UTAir and Transaero, and Mango in South Africa.

Global Eagle uses three satellites over the United States and eight to 10 worldwide, mainly in the northern hemisphere.

The planes are fitted with the necessary equipment, including an antenna that "is moving all the time" as it orients itself and connects to the satellites, according to McLellan.

It costs between \$300,000 and \$500,000 to equip each plane, according to McLellan. The carriers can recoup the costs through fees, like Southwest, or offer it for free to highlight premium service, like Norwegian Air.

McLellan said on-demand video over the Internet for tablets and phones is possible as well but that some limits need to be imposed.

"We have processes in place to prevent one or two people from using all the bandwidth," he said.

"Every passenger has an IP address, so if a device starts consuming more data than we'd like to, we can limit their access."

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