

## Case Study: Extending Nationwide LTE Network to Metro Edge

Fast, cost-effective deployment of 4G services in underserved and unserved markets



### Executive Summary

#### The Challenge

Extend LTE network to metro edge and rural areas with an outstanding user experience and low total cost of ownership.

#### The Solution

- Cellular backhaul over satellite solution
  - SkyEdge II-c hub platform
  - SkyEdge II-c Capricorn VSAT

#### Benefits of Gilat

- True LTE speeds ensure best possible user experience
- Fastest time-to-market for LTE deployments at metro edge
- Lower TCO and easier to deploy than terrestrial backhaul solutions



Using Gilat's satellite-based cellular backhaul solution, Sprint is bringing high-speed broadband services to metro edge and other unserved areas throughout the United States.



It's an honor to have been selected by Sprint for their satellite-based LTE network, given the demanding US market reliability and resilience requirements. This achievement further validates Gilat's proven technological leadership, enabling tier-1 MNOs to provide unprecedented speeds with a lower TCO.



Michal Aharonov,  
VP Global Accounts & Telecom Services at Gilat Satellite Networks

## The Challenge: Fast Deployment of High-Speed LTE Services at Metro Edge

Sprint is a Tier 1 mobile network operator (MNO) in the United States. To enhance its competitive position and grow its customer base, Sprint decided to extend its network to underserved markets in metro edge and rural areas. The project encompasses the delivery of high-speed LTE voice and data services to areas that previously had limited 2G/3G service. The network is also to be extended to areas that are not served by any other mobile operator.

Given the extensive scope of Sprint's deployment plan, time-to-market and total cost of ownership were critical success factors. Accordingly, Sprint sought innovative satellite-based backhaul technologies that would allow it to take advantage of the decreasing cost of satellite bandwidth as well as enabling fast rollouts. High-speed LTE performance for the end-user was a must, as was compliance with Sprint's stringent reliability and resilience requirements.

## THE SOLUTION: CELLULAR BACKHAUL OVER SATELLITE

To meet its key project requirements in terms of performance/user experience, time-to-market and total cost of ownership, Sprint selected Gilat's industry proven cellular backhaul over satellite solution.



SkyEdge II-c Capricorn-4



SkyEdge II-c Capricorn Outdoor

Requiring only hours to deploy per site, Gilat's solution allowed Sprint to rapidly and cost-effectively expand its network to new areas. Metro edge customers with 2G/3G service and limited data capabilities are now able to enjoy the benefits of true LTE over satellite performance. Using Gilat's satellite backhaul, Sprint can provide reliable, high-speed voice, data and video services on par with terrestrial performance. Equally important, Gilat's LTE satellite backhaul is comparable in cost to terrestrial solutions, with a lower TCO than microwave-based technologies.

Gilat's field-proven and highly efficient satellite-based solution consists of high-speed Capricorn VSATs at each base station, centrally managed by the SkyEdge II-c hub platform at Sprint's satellite network hub. Using patented data acceleration technology, Gilat's solution provides an enhanced user experience with high throughput, indistinguishable from terrestrial solutions.

Gilat VSATs have been deployed at the metro edge, as well as in rural areas that previously did not have mobile coverage. During the year, Sprint plans to deploy additional VSATs at hundreds of locations across the US. In addition, leveraging Gilat's fast deployment capabilities, Sprint has upgraded its nationwide Emergency Response Team (ERT) fleet of vehicles from 2G/3G to LTE. Sprint's SAT-COLT (Satellite Cellular on Light Truck) now deployed across the United States are providing true LTE data speeds.

"It's an honor to have been selected by Sprint for their satellite-based LTE network, given the demanding US market reliability and resilience requirements," said Michal Aharonov, VP Global Accounts & Telecom Services at Gilat. "This achievement further validates Gilat's proven technological leadership, enabling tier-1 MNOs to provide unprecedented speeds with a lower TCO."

## The Gilat Advantage

Gilat's VSAT technology ensures a superior user experience for Sprint customers through the use of patented embedded acceleration techniques over GTP/TCP to overcome inherent satellite delay. This unique technology enables full LTE speeds of up to 150 Mbps to the handset to support a wide range of data services.

Moreover, Gilat's satellite-based solution implements carrier grade Layer 2 operations in large-scale networks, with the ability to accelerate inside the LTE GTP Tunnel as well as being IP transparent. This enables application of standard terrestrial operational practices to satellite networks.