



Digital Ground  
**Use Case**

**DEFENSE**

# Protecting Military Comms as Regulations Change

**Defense agencies must maintain mission-critical satellite connectivity as regulatory change ripples through nations around the world. By creating true interoperability for digital IF among ground segment technology, the DIFI Standard delivers the flexibility needed to adapt with minimum cost and disruption.**

## C-Band Clearance Poses New Interference Hazard

When Intelsat and SES agreed to surrender 280 megahertz of C-band spectrum for use by mobile carriers, service providers and their customers launched a massive effort to clear the frequencies. A defense agency, operating gateways near cities as well as rural areas, discovered a serious flaw in its plan for compliance. It could move the entire ground network to higher frequencies, but around the cities, interference from 5G mobile service would seriously impact the service. Making matters worse, encryption systems for the antennas were housed in secure facilities in those impacted sites and relocating them presented both financial and security risks.

## Digital Flexibility

The challenge was met thanks to the flexibility of interoperable digital IF. The agency installed digitizers at the rural gateways in the network and used secure IP transport to exchange data with urban-area facilities, which shut down their local gateways but continued to host modems and crypto devices. This eliminated the immediate challenge of 5G interference with critical military communications. It also provided the flexibility to deploy future services using the best combination of modem and antenna locations to meet changing regulatory requirements.



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