

The United States Government has a mandate to serve its citizens and remain in control under whatever disruptive incidents may occur, either within or from outside its borders. In a crisis, government leaders must have access to highly reliable and resilient communications to coordinate effectively among national, regional, and local agencies. Such a communications network is essential to ensure maximum preparedness and rapid response and relief activities.

Path-Diversity: A Necessity in a Crisis

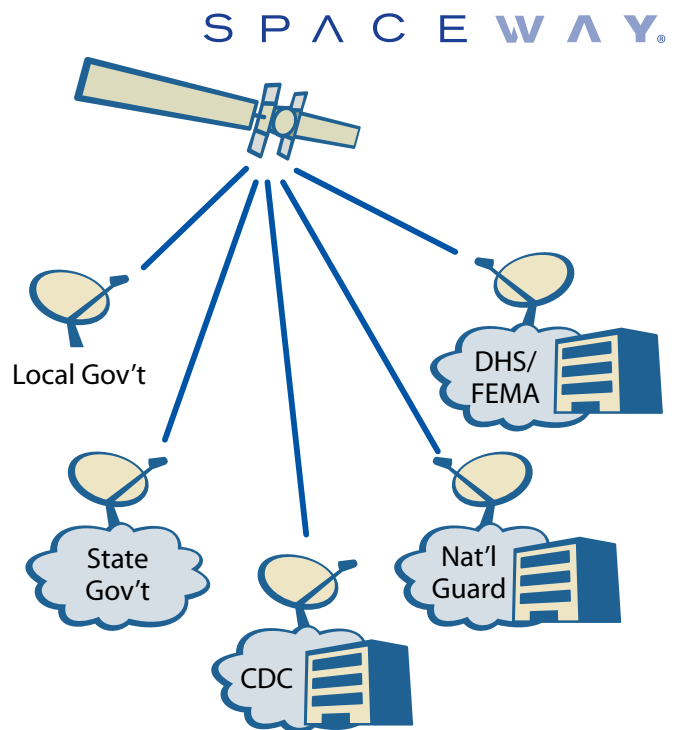
Utilizing redundant or alternate paths to back up a terrestrial network, whether fixed or wireless, is the correct strategy to achieve high availability. However, this is not the case if the paths share common technologies or physical routing, making them vulnerable to sabotage or natural disasters that can simultaneously take out primary and backup systems alike. True path-diversity, and hence highest network availability, can only be achieved by employing alternate technologies and physical routing.

IGCN: The Solution for Path-Diversity and High Availability

Hughes has the solution: Inter-Government Crisis Network (IGCN). IGCN is secure, cost-effective, and is unaffected by events on the ground. It is instantly deployable and interoperable among any number of agencies and levels of government.

IGCN utilizes the unique onboard switching and routing capabilities of the Hughes SPACEWAY® 3 satellite system to create any number of user groups among crisis-related agencies, which can be immediately activated in any emergency.

It is not the Internet—and hence not subject to the Internet's predictable congestion during a crisis. It is not a cellular or wireless network that is prone to crisis-inflicted logjams. IGCN is physically diverse from the vulnerabilities of even the most robust terrestrial networks.



IGCN and COOP

IGCN satisfies certain segments of Homeland Security Presidential Directive 20 (HSPD 20) requiring communications path diversity/redundancy at key sites. IGCN, using the Hughes SPACEWAY 3 satellite's unique capabilities, enables:

- Complete terrestrial network bypass to the primary and backup data centers offering the highest possible network availability achieved with a totally path-diverse design
- Policy-Based Routing (PBR)—Automatic failure detection and switchover between primary and back-up links
- Flexible architecture and service plans on a site-by-site basis with network capacity and functionality readily scalable as site and network requirements evolve

Unique Capabilities of SPACEWAY 3 and IGCN

IGCN operates over SPACEWAY 3, the world's first commercial satellite system with onboard switching and routing, and with the highest throughput. This unique switch-in-the-sky enables unprecedented high-performance and high-availability broadband satellite networking solutions. With instant network prioritization and defined user groups, any number of site-to-site connections or network topology can be readily configured securely—outside the Internet—when and where Government needs it.

Why IGCN?

Fullfills the Need for Government Leadership Communications

In a crisis, communications channels can become jammed or disabled. IGCN is a dedicated network for decision makers to communicate in times of urgent need.

Robust and Path-Diverse

IGCN operates over Spaceway 3's high-performance broadband IP channels, distinctly separate from terrestrial services. It complements and is unaffected by the operational status of terrestrial fixed or wireless networks.

Features Advanced Private Networking Capabilities

IGCN utilizes the unique private networking capabilities of Spaceway 3. Site-to-site mesh connectivity can be instantly deployed among any number of locations with the flexibility to readily configure defined user groups.

Integrated IP Solution

End-to-end IP with multiple class-of-service levels enables efficient and simultaneous VoIP, video, and broadband data services.

Allows Prioritization and High Throughput

IGCN enables Government decision-makers to prioritize applications and end-to-end user access throughout the network. These priority services include high-definition video- and audioconferencing, FTPs, and other data exchanges.

Features Compact Connectivity

Each location is configured with a compact, Ka-band external antenna and powerful Hughes IP router for superior performance.

Low Cost of Implementation

This architecture eliminates the need for an expensive central hub, extensive network operations infrastructure, and terrestrial backhauls. In addition, network service plans can be designed for occasional use or full-time operations.

SPACEWAY 3 is the world's first satellite system that functions as an IP router in space. Developed, owned, and operated by Hughes, SPACEWAY 3 supports all Hughes technology solutions.

- **Latest in Satellite Technology**—First with onboard switching/routing
- **10 Gbps Gross Traffic Capacity**—Highest available satellite throughput
- **Mesh IP Networking**—Site-to-site uninterrupted communications
- **Continent-wide Coverage**—Complete coverage in North America
- **Secure Connections**—Private networks with integral AES encryption

Key NS/EP-Related Features in SPACEWAY 3

- Multiple classes of service for different applications
- Support of DiffServ Code Points to enable priority within the access network
- Secure transport of voice, video, and data traffic across native AES and Type I IPSTE private networks
- Physical path redundancy when primary connectivity fails
- Custom user groups



Contract Holder

Contact Hughes to learn how IGCN can help support your mission.
Call 1-800-416-8679 or visit gov.hughes.com.

www.hughes.com

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