

Hughes Network Systems in Mexico

HUGHES
NETWORK SYSTEMS



Providing Advanced
Telecommunications
Solutions for Mexico

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An Introduction to Hughes Network Systems.

Hughes Network Systems, Inc. (HNS), a wholly owned subsidiary of Hughes Electronics Corporation, is a world leader in broadband satellite and wireless networking solutions. HNS holds more than 50 percent of the global market for very small aperture terminal (VSAT) systems, with approximately 500,000 terminals installed worldwide. HNS provides more than 500 companies in 85 countries with broadcast video communications; two-way data, voice and multimedia; and telephony systems. Employing approximately 4,400 people, HNS has operations in 30 countries.

As part of its vision to be a premier broadband products and services company, with particular emphasis on broadband access, HNS is expanding its role as an end-to-end service provider. Long established as the premier supplier of satellite-based hardware and data transport services, HNS is now offering integrated value-added business services. By integrating Web-based services into their HNS-provided networks, customers can eliminate duplicative equipment, streamline network management, increase network flexibility and reduce costs.

Telecommunications is a key strategic resource for Mexico as it aggressively seeks to improve the business climate for rapidly-privatizing organizations, streamline operations at government agencies, and speed the distribution of services such as education and healthcare throughout its population.



DIRECWAY® Solutions Designed with One Goal in Mind: Flexible, High-Speed Communications for the Enterprise.

As Internet protocol (IP) is rapidly becoming the standard protocol for data, video, and audio delivery, companies and government agencies are challenged to integrate the complex interactive and multimedia applications into their existing communications systems. HNS, through its advanced satellite solutions, offers global enterprise services that support fully integrated wide area networking and the high-speed delivery of content-rich information to support applications such as:

- High-speed Internet access/broadband Intranet
- Training and distance learning
- Corporate video broadcasting and communications
- Video advertising/point-of-sale TV
- Audio broadcasting
- IP multicast
- Data distribution

The TES QUANTUM™ Product Family.

Satellite transmission is insensitive to distance, terrain, and numbers of geographically dispersed locations, making it a valuable communications technology for use in Mexico. HNS designed its TES *Quantum* family of meshed telephony products to offer cost-effective, satellite communications for voice and enhanced data services, including:

- High-speed digital telephony services for both public and private networks
- Single-user access to satellite-based telephone service
- Intelsat/Eutelsat-compatible gateway connections for international circuits

The product's architecture was Intelsat's choice for the thin-route DAMA (demand assigned multiple access) standard for its signatory countries and non-signatory users.

HNS Broadband Wireless Solutions.

HNS' AIReach® broadband networks give telecommunications carriers a powerful platform for offering their customers fiber-quality, "last kilometer" wireless solutions. These highly efficient networks extend voice, video, data, multimedia, and Internet services via

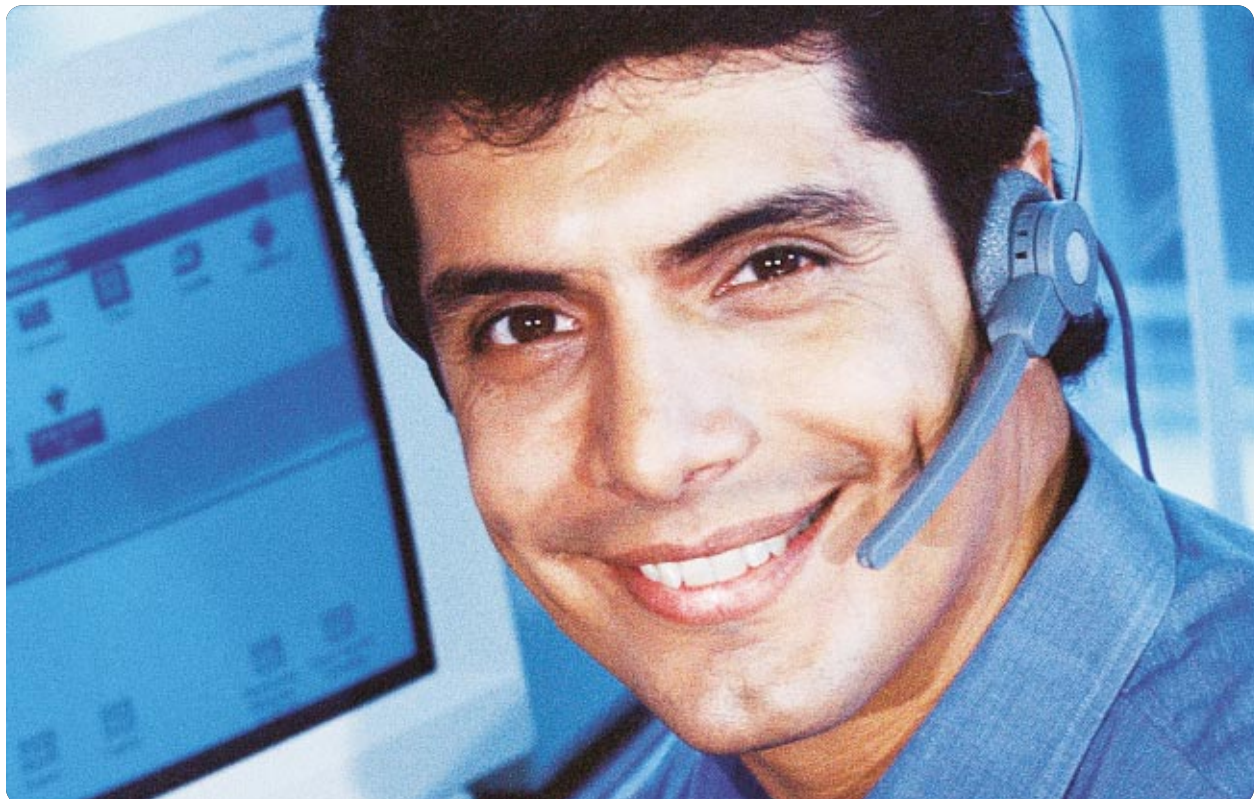
point-to-multipoint radio airlinks from the fiber drop point of switching center to small and medium-sized businesses needing cost-effective, high-bandwidth applications. For the carrier, benefits include increased speed of system implementation, reduced capital and operating expenditures, increased revenue opportunities, and protection of spectrum investment.

Hughes Professional Services: Helping HNS Clients Leverage their Technology Investment.

Hughes Professional Services (HPS) helps HNS clients – enterprises and service providers – leverage their technology investment to deliver next-generation applications over their satellite networks.

HPS provides clients with a comprehensive understanding of the satellite network with the objective of enabling quick-service creation and instant time-to-revenue. This includes defining the service, architecture, engineering, operations, and cost models.

HPS also helps clients create new revenue opportunities and develop sustainable growth strategies. HPS identifies and implements new value-added services for the client and defines a viable business model – including pricing strategy and structure – as well as the technology and investment required.





Turnkey Networks with Comprehensive Service and Support.

HNS backs its networks with a range of customer service and support.

- Network design and planning
- Installation and commissioning
- System testing and optimization
- Network operations
- Applications support
- User training and documentation

Looking to the Future.

SPACEWAY™, a next-generation, satellite broadband communications system, presents exciting new opportunities for customers in the Americas region. The SPACEWAY Ka-band platform will support both consumer and business users with a variety of applications from high-speed Internet access to corporate Intranets and virtual private networks to multimedia broadcasting and high-speed data delivery via “mesh” or point-to-point connectivity. The first regional system will launch in 2003.

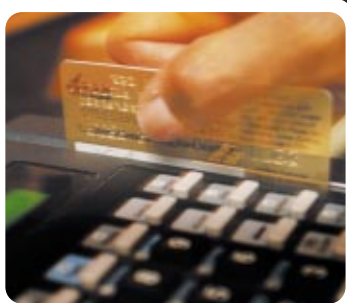
HNS' Commitment to “Hecho en Mexico.”

HNS has been committed to the success of Mexico and the surrounding region since 1987. HNS is Mexico's VSAT market leader with a total of 3500 VSATs and 16 satellite hubs installed to date. Our commitment also includes a manufacturing plant in Tijuana, employing more than 1,000 Mexican nationals. Employees there build DIRECTV® set-top units as well as DIRECWAY units for Internet access currently being introduced throughout Mexico.

Advanced Applications for Government and Industry.

HNS networks are used today to support advanced communications in a variety of industries and applications:

- *Banking* – money transfer, ATM transactions
- *Energy* – oil and gas pipeline monitoring, retail gasoline sales
- *Automotive* – dealer communications, parts inventory and repair records, retail sales, large file transfer, distance training
- *Corporate and government services* – emergency communications, data transfer
- *Education and training* – distance learning for educational institutions, industrial training
- *Medical Services* – medical image transfer, virtual consultations



HNS Customers in Mexico.

HNS networks support customers in a range of industries throughout Mexico, including local telephone companies and service providers, banks, energy producers, retailers, and manufacturers. Selected customers include:

■ Telecomm/Service Providers

Satelitron
Comsat
Telecomm Intelsat
Grupo Galaxy Mexicana
Enlaces Integra
Interdirec

■ Medical Services

ISSSTE (Instituto de Seguridad y Servicios Sociales para Trabajadores del Estado)

■ Education

Interdirec
CDS (Comunicación Digital Satelital)

■ Automotive

Chrysler de México
Ford de México

■ Banking, Money Transfer

Banrural
Telecomm/Telégrafos
Control Electrónico, S.A.
Guatemala

■ Energy

Sainco Pemex
Comisión Federal de Electricidad
— Gerencia de Informática y Telecomunicaciones
Comisión Federal de Generación de Electricidad



**For more information about Hughes Network Systems' solutions,
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