

# Hughes Network Systems in Russia and the Newly Independent States

**HUGHES**  
NETWORK SYSTEMS



Providing Advanced  
Telecommunications  
**Solutions** for the Region

# Providing advanced telecommunications solutions in Russia and the Newly Independent States.

## 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 more than 500,000 terminals ordered or shipped to customers worldwide. HNS provides more than 500 organizations in 85 countries with broadcast video communications; two-way data, voice and multimedia; and telephony systems. HNS has operations in 30 countries and employs approximately 4,400 people.

HNS' advanced communications systems are based on VSAT satellite technology. These networks transmit high-speed IP multimedia, data, video and voice to support a wide array of industries and entities throughout the region:

- Government Networks
- Oil and Gas
- Banking
- Telecommunications Services
- Internet Access
- Automotive
- Private Networks



## DIRECWAY® Solutions: Flexible, High-Speed Communications for the Enterprise and Government.

As Internet Protocol (IP) is rapidly becoming the standard protocol for data, video, and audio delivery, companies and organizations around the world are challenged to integrate the resulting complex interactive and multimedia applications into their existing communications systems. HNS, through its advanced satellite solutions, offers solutions 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
- Micro advertising/point-of-sale TV
- Audio broadcasting
- IP multicast, unicast and broadcast
- Data distribution
- Telemedicine
- Voice Over IP
- Legacy protocol support
- E-school
- E-commerce

#### The TES *QUANTUM*™ A Family of Satellite Telephony Solutions.

Satellite transmission is insensitive to distance, terrain, and numbers of geographically dispersed locations, making it a logical solution for telecommunications in the region. HNS designed its TES *Quantum* family of meshed telephony products to provide a range of very cost-effective telephony solutions:

- High-speed digital telephony services for both public and private networks
- Single-user access to satellite-based telephone service
- Payphone, pre-paid "smart-card", and other revenue-generating services
- INTELSAT/EUTELSAT-compatible gateway connections for international circuits
- Rural telephony solution
- PSTN interface
- All range of signaling support
- Transportable solution for voice and data

#### 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
- Integration of locally manufactured components with HNS technology

#### Looking to the Future.

SPACEWAY™, a next-generation, satellite broadband communications system, presents exciting new opportunities for customers worldwide. 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 Customers throughout Russia and the Newly Independent States.

HNS is committed to supporting the technological and commercial development of Russia and the Newly Independent States. With more than 1800 VSATs and 19 hubs in operation in the region today, HNS is fulfilling the communications needs of customers both directly and through local partners.

#### Oil and Gas Industry of Kazakstan and Russia

■ **TNS Plus, SATTEL** – HNS networks are providing complete network solutions for TNS Plus in Kazakstan and SATTEL in Russia, linking headquarters, regional offices, and service stations as well as oil wells, pipelines, and refineries. These networks support corporate applications such as enterprise data, file transfer/email, video broadcast, teleconferencing, and telephony, as well as remote monitoring and supervisory control and data acquisition (SCADA) applications.

#### Government Networks

■ **Ukrainian Customs Committee** – Through UKRSAT, an HNS VSAT network supports corporate data and voice com-

munications between Ukrainian Customs data center in Kiev, and more than 250 remote centers throughout Ukraine. Applications include LAN interconnection, telephony, and Internet/intranet access.

■ **State Tax Committee of Uzbekistan** – The State Tax Committee of Uzbekistan utilizes an HNS VSAT network to transmit tax collection and audit information between Uzbekistan's Tax Center and 246 remote sites including regional and district centers. In addition, the network provides connectivity to the national LAN network.

#### Banking Networks

■ **Halyk Bank** – An HNS VSAT network is providing Halyk Bank in Kazakstan with the first

unified network solution for banking applications in the region. Through services provided by KATELCO, the network links the bank's main data center in Almaty with 150 remote branches, reducing the number of paper transactions, and supporting the migration from legacy protocols towards TCP/IP. In 2001, the cumulative number of remotes more than doubled and well exceeds the 400 stations in the KATELCO network.

■ **National Bank of Azerbaijan** – became the first customer of the new HNS VSAT service provider in the country – DELTA TELECOM. Delta Telecom is the first VSAT services company in Azerbaijan and started operating services in early 2002.



**For more information on our products and services,  
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