BEFORE INDUSTRY CANADA

Response to Call
Proposal of
Hughes Communications Galaxy, Inc.
to
Launch and Operate the SPACEWAY™ GSO FSS
Satellite System at 107.3° West Longitude orbital position

Hughes Communications Galaxy, Inc.

November 5, 2001
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INDEX

Overview

Part I.- Background
  • 1.- History and Corporate structure……………………………………….p. 5
  • 2. - The Spaceway™ system………………………………………………p. 7

Part II.- Competency of Hughes:
  • 1.- Financial resources ………………………………………………..p. 9
  • 2.- Technical resources & expertise…………………………………..p. 9
  • 3.- Operational resources to develop and operate a fixed-satellite
    space station ……………………………………………………………p.10
  • 4.- Operational resources and competencies to operate earth
    stations…………………………………………………………………p.11

Part III.- Proposed satellite plan for 107.3° W.L.:
Part IV.- Proposed Alliances and Partnerships ................................. p. 18

Conclusion ........................................................................................................ p. 21

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APPENDICES


Appendix B:

Appendix C:
HUGHES press release issued on March 17, 1999 announcing the commitment to invest $1.4 billion in the Spaceway broadband satellite system.

Appendix D:
BOEING and Hughes Network System press statement, released on September 18, 2001 on Final Designs delivered by BOEING and built by IBM of Powerful Next-Generation Integrated Circuits for Spaceway Satellite Payloads

Appendix E:
Characteristics of the Boeing 702 bus being built by Boeing.

Appendix F:

Appendix G:
Figure describing the System Control and Operations Management Context on the Ground Segment.
Overview

This Submission by Hughes is in response to the Industry Canada "Call for Proposals to License Expeditiously a Ka-Band Space Station at the 107.3º West Longitude Orbital Position" ("Call for Proposals"), as released under Notice Nº DGRB-00701 of September 29, 2001. Hughes is the entity currently licensed by the United States Federal Communications Commission ("FCC") for the Spaceway™ system Ka-band system, and, as such, proposes to launch and operate at 107.3º W.L. before April 2004. This Proposal demonstrates that the Company has developed the satellite design and the ground segment in order to begin services in 2003. Hughes has committed $1.4 billion U.S. dollars to its Spaceway™ system ($734 million spent as of June 30, 2001) and has dedicated more than 1,500 employees and consultants to the implementation of the satellite network. Hughes has signed contractual agreements with Boeing for the construction of the satellite (Boeing 702 bus), and the Satellite Control Facility (SCF). The development of the Network Operations Control Center (NOCC) is at advanced stage and on schedule. The process of design, production and verification of the Ka-band earth stations and consumer terminals is well underway. Additionally, Hughes is testing the performance of the user ground segment through recently granted experimental licenses for Ka-band.

This Proposal offers an overview of the Spaceway™ system, demonstrates its technical feasibility and underscores the commitment Hughes has to bring Spaceway into operation in Canada and the Americas expeditiously.

Introduction

In response to Industry Canada’s "Call for Proposals", Hughes hereby respectfully submits this Proposal to launch and operate a Spaceway Satellite at the 107.3º W.L. Ka-band orbital position. The Spaceway™ satellite system will provide advanced broadband satellite services to business and residential users, in Canada and other countries in North and South America, using the Ka-band frequencies as allocated in the Canadian Allocation Plan.
Part I. BACKGROUND

1.) History and Corporate Structure

Hughes Electronics Corporation ("Hughes") and its affiliates have pioneered many aspects of the satellite and wireless broadband communications industry. As a manufacturer, its technologies have driven the development of new services and markets with outstanding achievements and have created a unique set of businesses, technologies, marketing, and management expertise. During the last several years, Hughes Electronics, headquartered in El Segundo, California, has evolved from an aerospace and defense company into a diversified entertainment and broadband communications company, and from a traditional manufacturer of satellites and satellite equipment to an international satellite service provider, with nearly 11 million consumer and enterprise customers worldwide.

Hughes Electronics includes the following entities:

1) Hughes Network Systems: In 1987, Hughes Electronics acquired what is now Hughes Network Systems ("HNS"), a provider of satellite-based private business networks and broadband Internet access, and a major manufacturer of satellite communications equipment (set-top boxes and antennas). HNS has affiliate companies in many countries including India, the United Kingdom, Germany, Italy, Brazil, Ukraine, China and Indonesia. HNS pioneered the development of high-speed satellite Internet access services, which it markets globally under the DirecPC® and DIRECWAY™ brands. HNS is also the manufacturer of mobile satellite and fixed-satellite earth stations with over 400,000 systems installed in more than 85 countries. According to the Comsys VSAT report for 2001, HNS is in the forefront of the "satellite enterprise networking business with an annual share of bookings which has virtually never fallen below half of the total [VSAT] market and sometimes exceeded 80%".1 HNS is the entity responsible for

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delivering the *Spaceway™ system* into operation and to commercialize the space segment capacity. HNS is headquartered near Washington, DC, in Germantown, Maryland.

2) **DIRECTV Enterprises Inc.** A provider of digital multichannel, direct-to-home broadcast satellite entertainment service to 10 million customers in the United States and several South American countries. DirecTV Enterprises has its headquarters in El Segundo, California.

3) **Hughes Communications Galaxy, Inc. (HCGI):** A wholly owned subsidiary of Hughes Communications, Inc. (HCI), which is in turn a subsidiary of Hughes Electronics. HCGI and HCI are responsible for developing new businesses and services for Hughes Electronics. New business emanating from HCGI and HCI include DIRECTV, the Galaxy satellite system (managed now by PanAmSat) and the Spaceway Satellite System. HCGI currently holds the FCC license for the “first round” Spaceway Satellite System in Ka-band, and HCI for the “second round” Spaceway application. HCGI and HCI are headquartered in El Segundo, California.

4) **PanAmSat Corporation:** A major international satellite operator with 20 owned and operated spacecraft in orbit worldwide at year-end 2000, and with plans to expand to 22 satellites by year-end 2001. PanAmSat has its headquarters in Greenwich, Connecticut.

On October 28, 2001, General Motors announced the signing of an agreement that provides for the merger of Hughes with EchoStar Communications Corp. This merger is subject to obtaining necessary governmental approvals. Hughes will keep Industry Canada apprised of the status of this merger, and amend this application as appropriate to reflect the new Hughes corporate structure. Concerning the *Spaceway™ System*, both Hughes and EchoStar have publicly stated that its implementation is "strategic" and shall continue as originally approved by the board of General Motors in 1999. Hughes will pursue its mandate to launch and operate the Spaceway North American system in the dates stipulated.
2.- ) The Spaceway™ System

In 1993, Hughes submitted to the FCC an application to construct launch and operate the SPACENET™ satellite network, a global reach system able to provide all users with the ability to directly communicate through the spacecraft on a full mesh basis, rather than through relay hubs on the ground.

From its genesis in 1993, SPACEWAY™ has been designed as a high-speed, information highway for advanced two-way satellite broadband communications, a platform designed to offer “bandwidth on demand” responding to the increasing demand for high-speed Internet access and to meet the needs of individual and commercial users through small and affordable transmit/receive antennas. SPACEWAY™ represents a significant departure from previous satellite systems, as it offers a serious competitive alternative to terrestrial broadband communications services. The first of three North American Spaceway Satellites will begin service in the first half of 2003. The SPACEWAY™ satellite system will provide global service and interconnectivity. Following the launch of the North American satellites, Hughes will launch further satellites to serve Europe, Asia and Latin America.

In May 8 1997, the FCC authorized HCGI to launch and operate the Spaceway™ System in geostationary satellite orbit ("GSO") to provide fixed-satellite services ("FSS") in the Ka-band and assigned the 101° W.L. and 99° W.L. orbital slots for its North American plan. In 1999, Hughes contracted with Hughes Space and Communications (“HSC”) for the construction of its North American satellites. HSC was purchased by Boeing in late 2000. The satellites to be launched at the 99° W.L. (USASAT-31N) and 101° W.L. (USASAT-31M) orbit locations, are currently being manufactured at the newly-named Boeing Satellite Systems (BSS) facilities. Boeing Space System is also the corporation contracted with to build and operate the Spaceway™ Satellite Control Facility. Regarding other elements of the ground segment, the design of the Network Operations Control Center is practically concluded and the facility will be ready for operation by the launch date.

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Through this Proposal before Industry Canada, Hughes respectfully requests authorization to launch and operate at the 107.3° W.L. orbital position to serve Canada and the North American Region. Since the Spaceway satellites are already under construction, Hughes will be able to meet the ITU in-service date for CANSAT KA-1 of April 25, 2004.
Part II. - COMPETENCY OF HUGHES

1.-) Financial resources:

On May 17, 1999, Hughes announced its commitment to invest of $1.4 Billion dollars in the Spaceway broadband satellite system, North America first phase. Appendix A of this Proposal includes a copy of Hughes’ press release issued on March 17, 1999 to invest $1.4 billion in Spaceway broadband satellite system.

The implementation of the North American Spaceway™ system is fully supported by Hughes Electronic Corporation. In its latest report to the United States Securities Exchange Commission, Hughes Electronics demonstrates that its third quarter revenues for 2001 increased 24.6% to $2,103 million, compared with $1,688 million in the third quarter of 2000. Appendix B of this Proposal includes two reports to the Securities and Exchange Commission, one for the fiscal year ended December 31, 2000, filed on March 3, 2001, and the other for the third quarter report, filed on October 17, 2001.

In its Annual report to the FCC issued in June 2001, Hughes Communications Galaxy, Inc. documented that HNS (whose revenues reached $1.4 billion in 2000) had accomplished major efforts on the space and ground segment implementation and that over $734 million had been spent to date on the Spaceway™ System. A copy of Hughes Communications Galaxy, Inc.’s 2001 Annual Status Report to the Federal Communications Commission is included in Appendix C of this Proposal.

2.-) Technical resources and expertise:

Hughes’ outstanding performance in the satellite industry is attributable in large part to the capabilities and experience of its vast engineering resources. As of October 1, 2001, approximately 1,500 specialists were dedicated full-time to the design and construction of the space and ground segments for Spaceway™. Almost half of the Spaceway program is composed of engineers and technologists recruited from over 20 countries, with an average of
between 6 to 10 years working in satellite communications systems and satellite research. The development and operation of the Spaceway™ system benefits from the complete support the technical resources and engineering expertise of Hughes Electronics, Hughes Network Systems and Boeing technologies and engineers and infrastructures.

3.-) Operational resources to develop and operate a fixed-satellite space station:

Hughes, through the business development group of HCGI and HCI developed and launched the Galaxy satellite network serving the North American region with satellite communications and telecommunications. Galaxy 1, 2 and 3 were launched during the early 1980’s and formed the initial elements of Hughes’ commercial satellite system. These vehicles provided C-band television services, as well as audio and business telecommunications services. The system was complemented in 1988, and upgraded during the 1990s with new Galaxy satellites operating in the Ku-band.

Similarly, Hughes Communications, Inc., the parent of HCGI, developed, launched and operated the DirecTV satellite system in its initial phase.

HCGI’s competence to develop, launch and operate satellite networks is clearly demonstrated by the years of experience and the numerous services the company has provided over the existing fleet of Galaxy satellites and the significant investments it has made in the last decades on C- and Ku-band and recently in the Ka-band system.

With regard to the Ka-band Spaceway System, HCGI designed the system and secured the FCC license. HNS has subsequently taken the responsibility for the detailed system design and contract management of the Spaceway space station, the satellite control facilities, satellite payload interface and implementation of the Spaceway business. Hughes Network Systems is deploying substantial resources to simultaneously develop the ground segment of the Spaceway™ system, its Satellite Terminals and its centers of operation and control.
4.-) Operational resources and competencies to operate earth stations

In the 1990’s, HNS developed, operated and offered the first consumer satellite broadband service with telephone return in the United States.

In 2000, HNS added DirecWay with two-way satellite return capability to its U.S. high-speed satellite Internet service. This allows consumers, to access the Internet completely independent of the dial-up telephone network.

Furthermore, HNS holds earth stations licenses granted by the FCC for more than 2,800,000 earth stations in C and Ku-band in continental and non continental United States, including Puerto Rico and the US Virgin Islands. FCC has also granted "blanket licenses” to operate consumer satellite terminals in Ku-band, numerous enterprise VSAT networks, many central hubs and experimental licenses for Ka-band terminal testing.

Since 2000, with its authorization to test and monitor Ka-band earth station performance, HNS has developed test equipment to continually measure transmission and reception frequencies on its test range. The Ka-band antennas are being tested 24 hours per day, measuring gain variations based on weather conditions. HNS will continue the testing through 2002 until the first satellite launch, and will repeat this testing with additional vendor antennas.
Part IV.- PROPOSED ALLIANCES AND PARTNERSHIPS

The Hughes Broadband Alliance Program has been designed for partners - including service providers, content providers, retailers, hardware and software developers, systems integrators and technology/platform providers and will be fully applicable in Canada. Some of the Hughes partners, such as America Online (AOL) are already operating and licensed in Canada and could facilitate development of our program in Canadian provinces.

If granted this authority, Hughes will seek to broaden and implement new Canadian alliances. Hughes considers such an approach to be a continuation of the strong business relationships it has already developed with Canadian Service Providers and Telecommunications operators.
Conclusion

In conclusion, the Spaceway™ System, if granted authorization by Industry Canada to launch and operate a GSO FSS Satellite at 107.3° W.L., will provide high-speed, advanced satellite broadband services in the Ka-band to many parts of Canada and North America. Spaceway will significantly reduce the cost of telecommunications broadband services and increase competition in the provision of those services.

The Spaceway™ system for North America is funded, viable and well along the path towards launch of commercial service starting in 2003. The program status is such that launch of a Spaceway™ satellite at 107.3° before the April 25, 2004 ITU in-service date for CANSAT KA-1 can be achieved.

Consequently, Hughes respectfully submits this Proposal to Industry Canada for authorization to launch and operate a Spaceway GSO FSS Satellite System as CANSAT KA-1 in the 107.3° W.L. orbital position. Hughes stands ready to meet with Industry Canada at any time to answer questions and discuss any issues of concern to the Government.

Respectfully submitted,

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