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November 6, 2009

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, Southwest
Washington, D.C. 20554

Dear Ms. Dortch:

On November 5, 2009, David Zufall, Mariam Sorond, Bob Day, Peter Corea and the undersigned of DBSD Satellite Services G.P. (DBSD) met with Robert J. Nelson, Chief, International Bureau Satellite Division; Ronald Repasi, Deputy Chief, Office of Engineering and Technology; and Arnab Das and Tom Peters of the Broadband Task Force. DBSD discussed the materials presented in the attached technical presentation on DBSD's mobile-satellite service ("MSS") and ancillary terrestrial component ("ATC") systems.

Please direct any questions about this submission to the undersigned.

Respectfully submitted,

A handwritten signature in black ink that reads "Suzanne Hutchings Malloy". The signature is written in a cursive style.

Suzanne Hutchings Malloy
DBSD

cc: Robert Nelson
Ronald Repasi
Arnab Das
Tom Peters



DBSD Presentation to Broadband Task Force

November 5, 2009



Company Overview

Next-generation mobile satellite service ("MSS") operator

- Licensed to offer MSS throughout the United States using a geosynchronous earth orbit ("GEO") satellite

Mobile Satellite Services / Ancillary Terrestrial Component ("MSS/ATC") System is being developed to enable innovative integrated services

- Bent-pipe satellite with flexible beam forming large S-band reflector is waveform agnostic and can dynamically assign capacity
- MSS communication technology integrated in cellular chipsets to enable low cost integrated services
- ATC authorization enables improved coverage and further differentiation

DBSD's MSS/ATC System is capable of supporting a suite of mass-market, industrial and government/public safety service offerings to urban and rural customers in North America

- Services can include voice, video, data, and machine-to-machine communication



Status

Satellite

- G1 spacecraft testing completed, operating normally
- Satellite Gateway and Ground Based Beam Forming operating in North Las Vegas

mim Alpha Trials

- Nationwide test validates hybrid satellite/terrestrial technologies
- Integrated video, messaging and assistance service product demonstrating the differentiated service capabilities of MSS/ATC systems

Qualcomm "Satellite-DO" Platform

- Developed satellite communication protocol for cellular device and showed communication between G1 and cellular class device
- Commercializing platform in partnership with Skyterra and Terrestar

ATC

- Received ATC authorization January 2009
- Requested and received Part 25 waivers to enable competitive services



Space Segment

G1 spacecraft launched 14 April 2008

- Spacecraft on station at 92.85 WL with 6° inclined orbit
- Satellite operations with Intelsat in Long Beach, CA

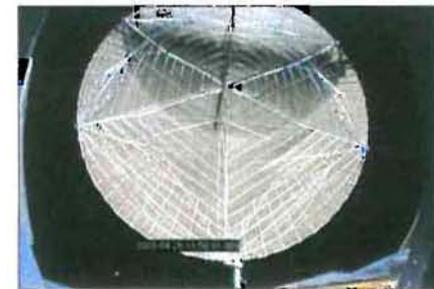
Large, fully deployed, 12 m S-band antenna

17 kW solar array and 13 kW battery supplies 11 kW Payload

Operates over all 20 MHz of S-band spectrum in both forward and reverse paths

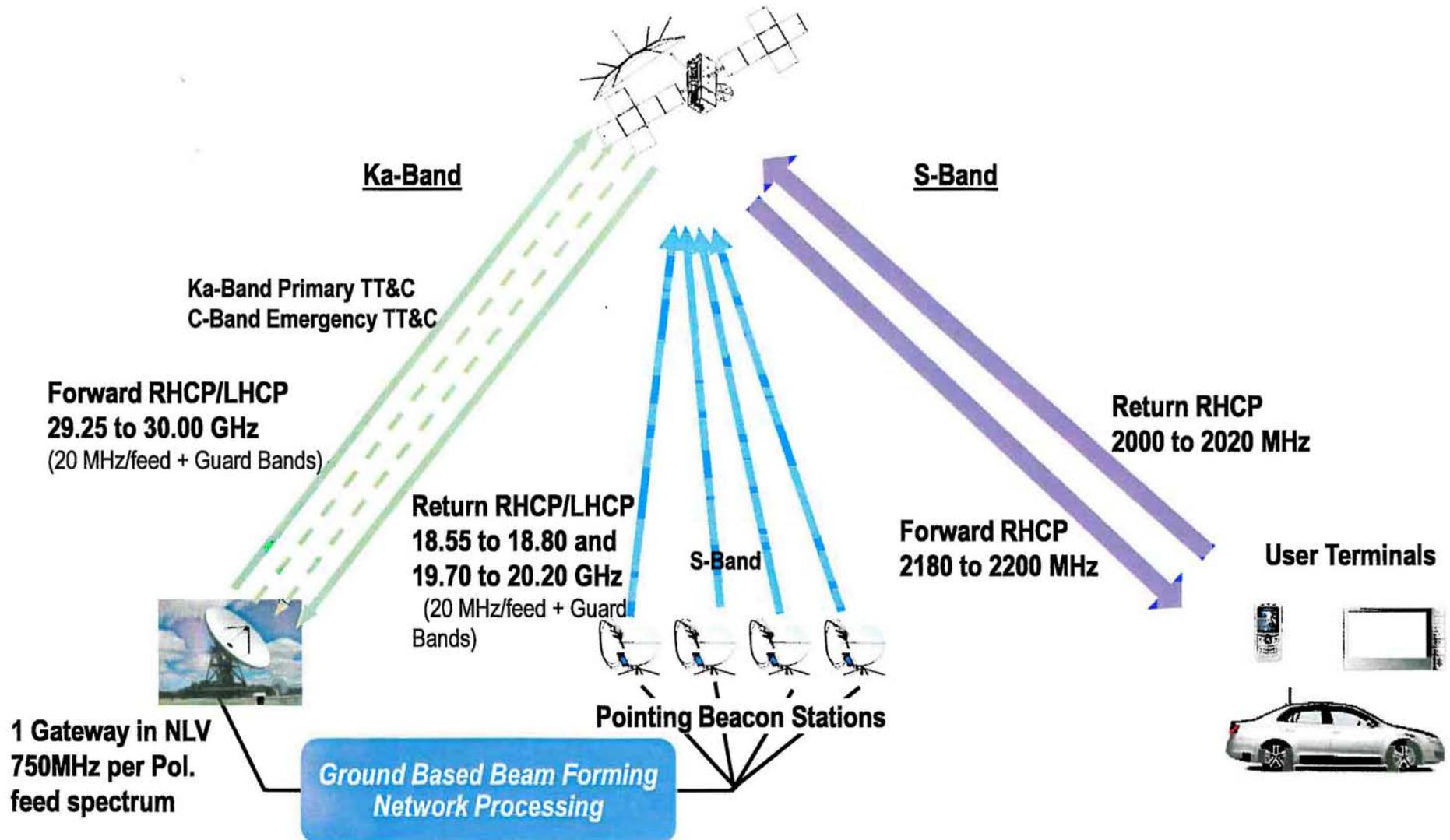
Bent-pipe architecture supports any modulation and channel width in forward and reverse link

Communications and Beam Forming handled on the ground at North Las Vegas Gateway



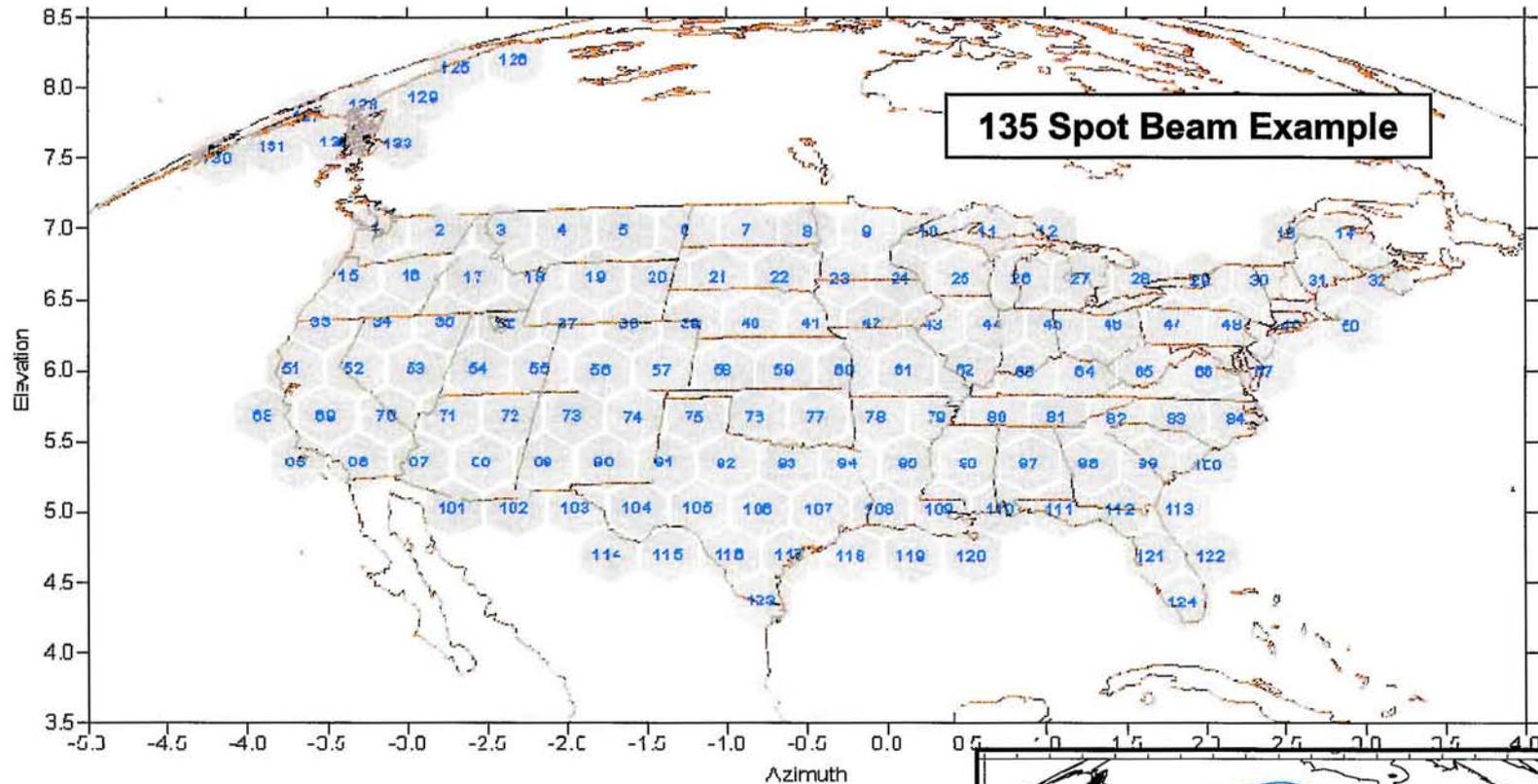


Space Segment Architecture

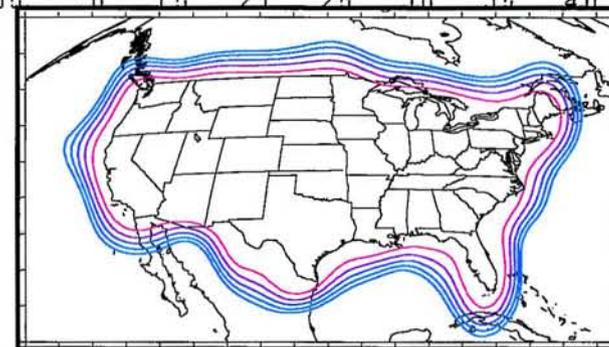




Ground Based Beam Forming



- Forms up to 250 beams in each direction
- Beams can be of any shape and sizes
- All 20 MHz is available in each beam
- Satellite power is flexibly assigned to each beam



CONUS Beam Example



MSS / ATC Benefits

Ubiquitous coverage

- Ubiquitous services on reliable robust low-cost devices
- Nationwide MSS at launch, ATC where satellite signals are blocked

Seamless integration of satellite capability into mass-market devices

- Multicast (one-to-many) and two-way data and voice user applications
- Operational parameters consistent with adjacent-band services
- MSS is globally harmonized in 2 GHz

Scalability, spectrum efficiency of integrated satellite/terrestrial platform

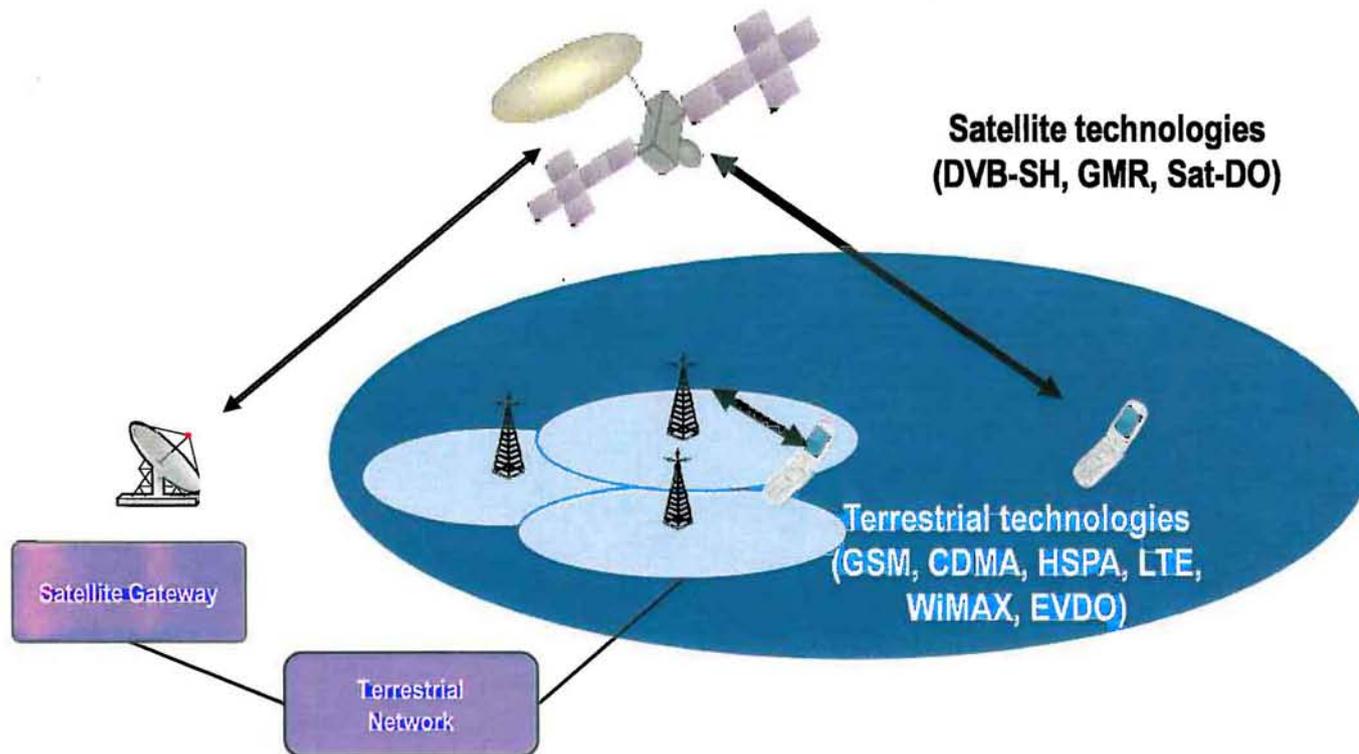
- Integrated network management permits optimum use of spectrum for satellite and terrestrial services
- Hybrid technologies such as DVB-SH and Satellite-EVDO enable truly integrated systems which make optimal use of spectrum

Platform for innovative and differentiated offerings

- MSS/ATC technology and scale enables creation of new, cost effective products for markets ranging from consumer to enterprise to Public Safety
- High value, mass-market applications can be realized with MSS capabilities



MSS / ATC System



Satellite and Terrestrial services are integrated provide advanced video, voice, and data services in the same spectrum



MSS / ATC Technologies

Satellite-EVDO

- Software modification of QUALCOMM CDMA EVDO for satellite communication to cell-phones
- Platform for creation of low-cost integrated devices
- Validated by working prototype

GMR1

- Family of ETSI standard protocols developed by Hughes Network Systems and in commercial use in Thuraya system
- Operational in DBSD mim Alpha Trial

DVB-SH

- Evolution of global broadcast standard to mobile satellite operation
- Enables efficient use of spectrum through satellite/terrestrial Single Frequency Network
- Operational in DBSD mim Alpha Trial



Satellite-EVDO

Satellite mobile devices continually decrease in size

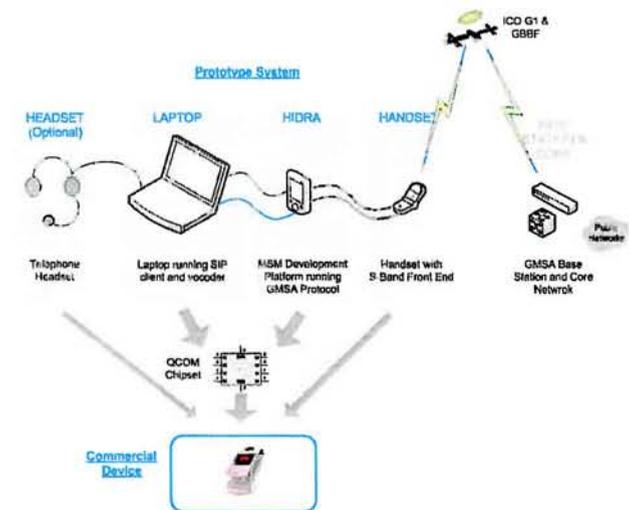
MSS satellites are getting larger and more powerful, enabling new services to millions of smaller devices

Next-generation applications require adequate MSS spectrum capacity

- Interference management
- Innovative applications

Satellite capability at approaching zero incremental cost is needed to enable mass adoption

Satellite-EVDO provides a solution to these constraints





mim Alpha Trial

Demonstration network showing capabilities of MSS/ATC System

Operational nationwide with ATC sites in Las Vegas, Reston and Raleigh

“Best in Show” at CES 2009





2 GHz MSS Spectrum

