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October 6, 2011

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

**Re: WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135,
WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45,
WC Docket No. 03-109
Notice of *Ex Parte* Presentation**

Dear Ms. Dortch:

On October 5, 2011, Derrick Bulawa of BEK Communications Cooperative (“BEK”) and John Kuykendall of John Staurulakis, Inc. (“JSI”) met separately with Margaret McCarthy, Wireline Policy Advisor to Commissioner Michael Copps, Angela Kronenberg, Wireline Legal Advisor to Commissioner Mignon Clyburn, Christine Kurth, Policy Director and Wireline Counsel to Commissioner Robert McDowell, and with Patrick Halley and Brad Gillen of the Wireline Competition Bureau. The subject of discussion was proposed universal service and intercarrier compensation reforms and the deficiencies of satellite service in delivering essential telecommunications and broadband services to rural North Dakota. Attached is a copy of the presentation which was provided.

Mr. Bulawa described the challenges in providing services in North Dakota, a sparsely populated rural state with unique geographical and environmental challenges, and explained the importance of reliable broadband to BEK customers. Vast distances and severe weather make high speed Internet more than just a convenience to customers. It provides access to essential emergency services and information, and meets educational, work-from-home and business operations needs. Mr. Bulawa shared the results of a survey undertaken by BEK that demonstrates the critical necessity of reliable broadband to its customers.

Mr. Bulawa detailed the disadvantages of satellite technology in provisioning these essential broadband services to North Dakota, including limitations resulting from the satellite platform, terrestrial blockage, rain and look angle factors, and signal coverage design that results in unreliable and unpredictable service. Satellite broadband is inappropriate for interactive media, has limited capacity, is subject to interference and has a long procurement cycle. Mr. Bulawa stated that these limitations demonstrate that satellite broadband is not comparable to terrestrial broadband and is not capable of providing

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contiguous carrier-of-last-resort service. Therefore, satellite operators should not be eligible for support granted to eligible telecommunications carriers.

Mr. Bulawa concluded with a brief video of customer testimonials describing their experiences with the deficiencies of satellite service in rural North Dakota.

Respectfully submitted,

/s/ John Kuykendall

John Kuykendall
Vice President

on behalf of

BEK Communications Cooperative

cc: Christine Kurth
Angela Kronenberg
Margaret McCarthy
Patrick Halley
Brad Gillen

Attachment



Breaking the DISH

Can Satellite Internet **SERVE** Essential Rural Needs?

Wednesday, October 5, 2011

Presented By: Derrick Bulawa, CEO

BEK Communications – Steele, ND

BEK Communications

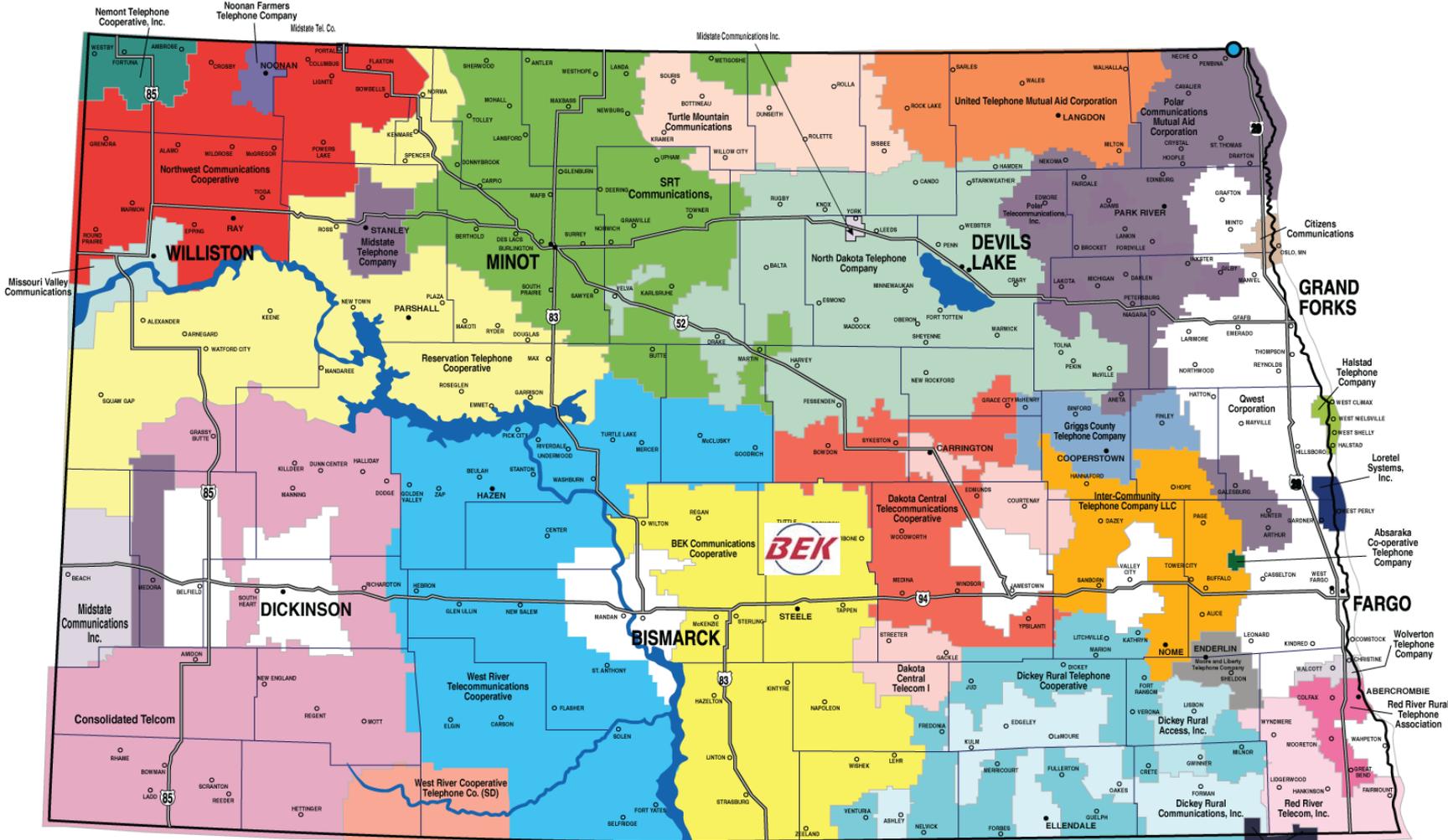


North Dakota State Facts

- Nearly 70,000 square miles
- 670,000 people
- 98% of state is rural
- Service by rural telephone coops
- Incomplete cellular coverage
- Hostile weather patterns
- High latitude resulting in poor satellite service performance



ND Statewide Map of ILECS



To Aberdeen

Roberts County Telephone Cooperative and RC Communications, Inc. (SD) To Watertown

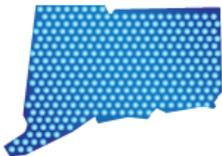


Population Density and NJ Comparison



● = 10,000 people

Connecticut



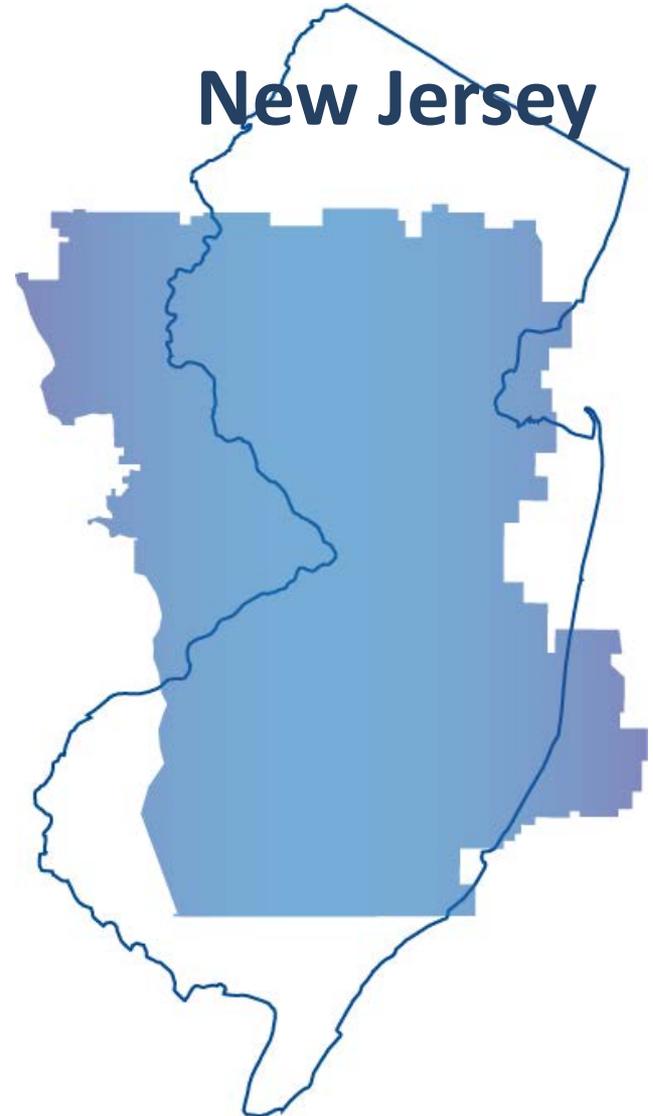
Rhode Island



**Connecticut +
Rhode Island
COMBINED**
have a similar size
land area as BEK,
but 4.25 million
more people to
share the cost.

| | <i>Square Miles</i> | <i>Population</i> |
|-------------------------|---------------------|-------------------|
| BEK Service Area | 5,585 | 20,000 |
| Rhode Island | 1,045 | 990,800 |
| Connecticut | 4,845 | 3,282,031 |

New Jersey

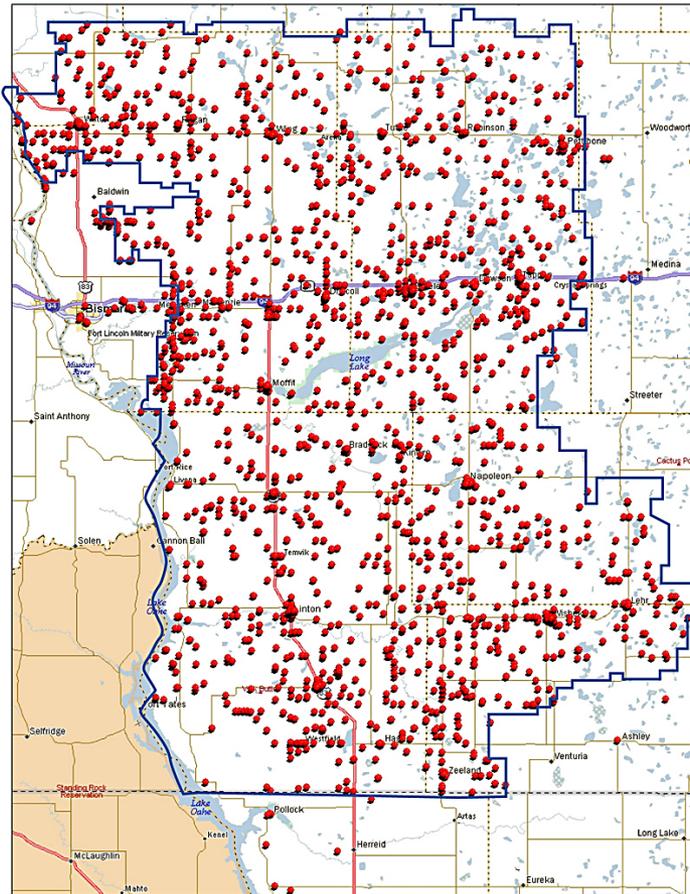




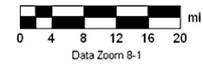
Membership Map

BEK Membership Distribution

● BEK Member



MN (6.0° E)





BEK Communications Cooperative

- Formed in 1952 (Nearly 60 years old)
 - Established by farmers because no one else would provide service
- Headquarters in Steele, North Dakota
- Serving 6+ rural counties, over 5,585 square miles
- 18,500 population
- 6,248 lines served
- 1.1 lines per square mile
- 5,394 members
- .95 average member density per square mile
- 2126 rural members
- .38 rural member density per rural square mile
- COLR obligation fulfilled
- 4074 out of 5394 members have **NECA Tariff IP Services = 75%**
- 3430 out of 5394 members have **Internet Service = 63%**

Why is the penetration so high?
High speed Internet is essential in the rural.

Internet (IP) Use is Essential NOT a Convenience in Rural America

- Emergency Services
 - Trauma Center, can be 100+ miles away
- Education
 - Higher education can be 100+ miles away
- Work from Home
 - Necessary due to distance, roads and weather
- Business Operations
 - Sales, parts order, service delivery & finance
- Access to Media
 - Broadcast signals too distant
 - Satellite dishes unreliable



Not a quick trip to the ER



Night school is impossible



Can't commute



Distances are too far



Can't get EAS Warnings



Actual BEK Survey Responses

BEK Internet survey received
nearly a 40% response rate.

1361 out of 3430

BEK Communications



Personal Use Stats

2a. I use the Internet for the following "personal use" type of activities (click all that apply, If you do not use BEK Internet at your home, please skip to question #3a):

| Answer | 0% | 100% | Response Ratio |
|--------------------------------------------------------------------------------------------|----|------|----------------|
| Personal, recreational, informational, social use, banking/recordkeeping, weather updates | | | 98.7% |
| Remote medical care, medical alerts, security, emergency alarming | | | 22.0% |
| Online classes, college courses, home schooling, certifications or other educational needs | | | 32.5% |
| Other (View all) | | | 8.6% |
| Totals | | | 100% |

54.5% identify mission critical applications

2c. What are the consequences of not being able to use BEK Internet for the "personal use" applications indicated in question #2a (click all that apply)?

| Answer | 0% | 100% | Response Ratio |
|------------------------------------|----|------|----------------|
| Little or no consequences | | | 7.9% |
| We would be inconvenienced | | | 81.4% |
| It would cost us more | | | 42.3% |
| We would have to relocate | | | 6.0% |
| Other (View all) | | | 5.5% |
| Totals | | | 100% |

Cost more

Move to the city
(Coal Cattle Corn & Oil)



Professional Use Stats

3a. Regarding use of my BEK Internet for "professional use," myself or someone in my household (if you do not use BEK Internet for professional use, skip to question #4a):

| Answer | 0% | 100% | Response Ratio |
|--------------------------------------------------------------------------------------------|----|------|----------------|
| Works for a company which allows occasional work from home | | | 48.0% |
| Primarily works at home for a company (please list company name in comments section below) | | | 20.3% |
| Other (View all) | | | 32.9% |
| Totals | | | 100% |

68.3% Work from home primarily or occasionally

24.8% would have severe consequences lose job, lose home or relocate (Coal Cattle Corn & Oil)

3c. What are the consequences of not being able to use BEK Internet for the "professional use" applications indicated in question #3a (click all that apply)?

| Answer | 0% | 100% | Response Ratio |
|----------------------------------|----|------|----------------|
| Little or no consequences | | | 11.5% |
| We would be inconvenienced | | | 69.1% |
| It would cost us more | | | 45.3% |
| We would have to relocate | | | 9.4% |
| Someone would lose their job | | | 13.2% |
| We would lose our home | | | 2.2% |
| Other (View all) | | | 7.6% |
| Totals | | | 100% |



Self Employed

4a. I primarily operate my business from (if you do not own/operate a business, skip to question #5):

| Answer | 0% | 100% | Response Ratio |
|----------------------------------|----|------|----------------|
| My home | | | 74.7% |
| Other business location | | | 24.0% |
| Other (View all) | | | 6.3% |
| Totals | | | 100% |

**15.1% would have severe consequences
lose business, layoff staff or relocate** (Coal Cattle Corn & Oil)

4f. What are the consequences of not being able to use BEK internet for the applications indicated in questions 4c and 4d?

| Answer | 0% | 100% | Response Ratio |
|-------------------------------------|----|------|----------------|
| Little or no consequences | | | 14.0% |
| My business would be inconvenienced | | | 72.1% |
| It would cost my business more | | | 44.9% |
| My business would have to relocate | | | 6.9% |
| I would have to lay off staff | | | 1.2% |
| I would lose my business | | | 7.0% |
| Other (View all) | | | 4.6% |
| Totals | | | 100% |



Critical Use of the Internet

4d. If you chose "critical operational activities" on question 4c, please select activities (click all that apply):

| Answer | 0% | 100% | Response Ratio |
|------------------------------------------------------------------|----|------|----------------|
| Industry specific online software applications | | | 36.5% |
| Online sales, service, order fulfillment, financial transactions | | | 72.1% |
| Detailed industry-specific knowledge database | | | 41.4% |
| Security & surveillance | | | 12.5% |
| Multi-site office connections | | | 16.7% |
| Other (View all) | | | 8.3% |
| Totals | | | 100% |

High Quality IP connectivity is **not a luxury or convenience** it is a **necessity!**



Rural America Needs High Quality Internet Connectivity

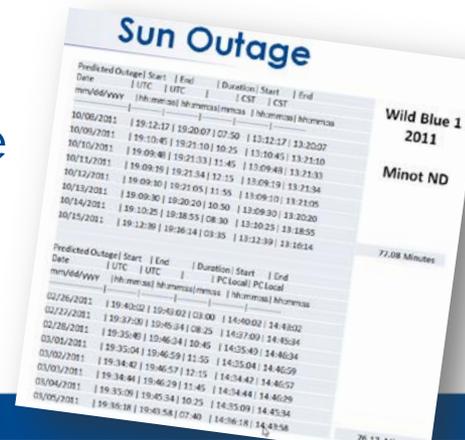
- High quality characteristics:
 - Highly reliable and availability
 - Low latency
 - Symmetrical and asymmetrical
 - Resistant to environmental conditions
- When you live 100+ miles from the nearest Wal-Mart:

The Internet is your Life Line.

- Due to the following:
 1. Satellite platform - laws of physics
 2. Terrestrial blockage
 3. Rain & look angle
 4. Current & future satellite coverage

1. Satellite Platform - Laws of Physics

- Satellite characteristics:
 - Position
 - 36,000 km above the equator (72,000 km round trip)
 - 41,700 km edge of coverage (84,000 km round trip)
 - Latency
 - Radio wave speed of 300,000 km per second
 - Resulting in latency of (240 ms to 280 ms single hop)
 - Data speed does **NOT Reduce Latency**
 - Sun Interference
 - 2011 forecast outage duration **153 minutes**



Sun Outage

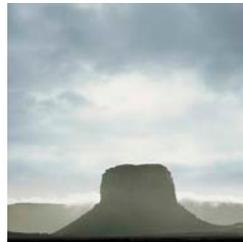
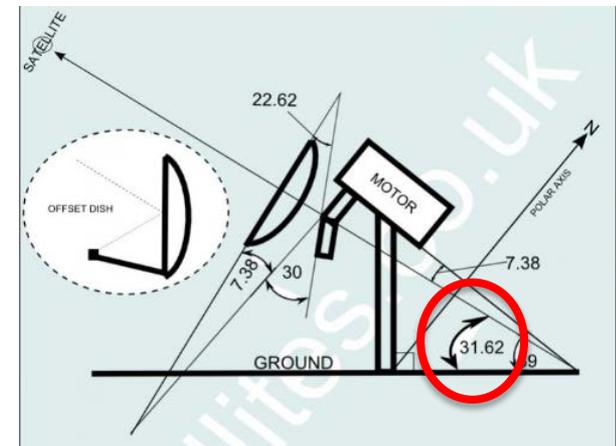
| Predicted Outage | Start | End | Duration | Start | End |
|------------------|----------|----------|----------|----------|----------|
| Date | UTC | UTC | | Local | Local |
| mm/dd/yyyy | hh:mm:ss | hh:mm:ss | hh:mm:ss | hh:mm:ss | hh:mm:ss |
| 10/09/2011 | 19:12:17 | 19:20:07 | 07:50 | 13:12:17 | 13:20:07 |
| 10/09/2011 | 19:10:46 | 19:21:10 | 10:25 | 13:10:45 | 13:21:10 |
| 10/10/2011 | 19:09:40 | 19:21:33 | 11:45 | 13:09:40 | 13:21:33 |
| 10/11/2011 | 19:09:25 | 19:21:34 | 12:15 | 13:09:25 | 13:21:34 |
| 10/12/2011 | 19:09:30 | 19:21:05 | 11:55 | 13:09:30 | 13:21:05 |
| 10/13/2011 | 19:09:30 | 19:20:20 | 10:50 | 13:09:30 | 13:20:20 |
| 10/14/2011 | 19:10:25 | 19:18:53 | 08:30 | 13:10:25 | 13:20:20 |
| 10/15/2011 | 19:12:30 | 19:16:14 | 03:35 | 13:12:30 | 13:16:14 |

Wild Blue 1 2011

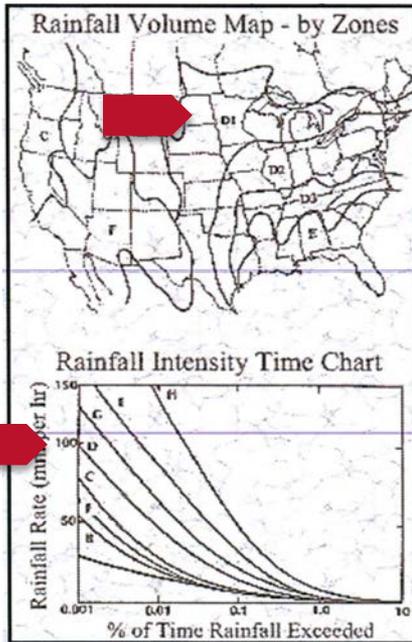
Minot ND

77.08 Minutes

- Satellite broadband blockage:
 - Northern Plains with elevations of 20-30 degrees
 - Subject to significant terrestrial blockage
 - Mountains
 - Hills
 - River beds
 - Buttes
 - Valleys
 - Forestation
 - Not ubiquitous and
 - **Can not fulfill COLR obligation**



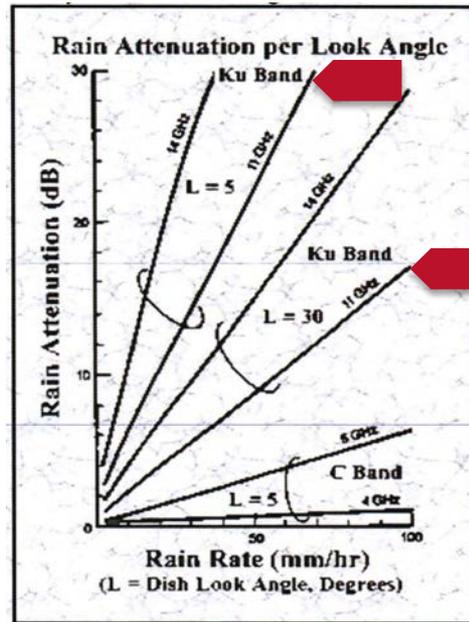
3. Satellite Internet - Rain & Look Angle



Impact of Rain Intensity

- Central Plains
- "D" region for intense rain rate
- Increased signal loss
- Lower service availability

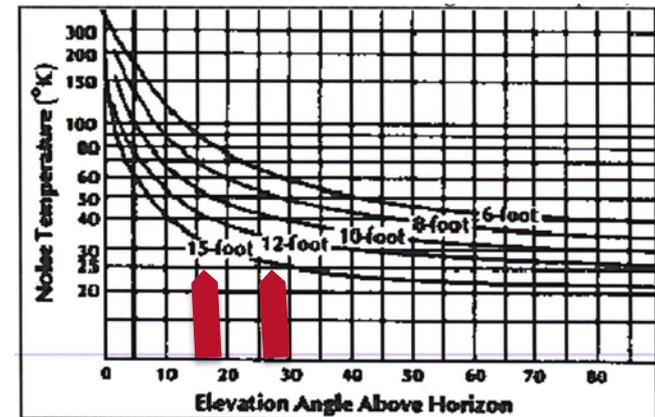
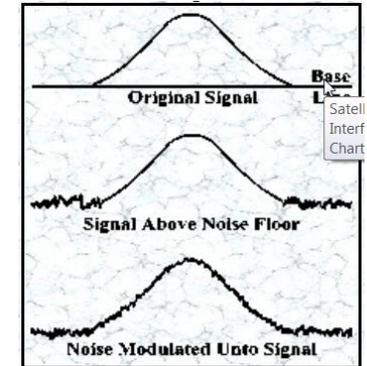
Upper 1/3 in Intensity



Rain Attenuation per Look Angle

- Lower look angle higher signal loss
- Northern Plains 20 to 30 degrees
- 13 dB signal loss between 30 and 5 degrees

Northern Plains suffers from both



Thermal Noise vs. Look Angle

- Lower look angle yields higher noise floor
- Northern Plains 20 to 30 degrees
- Noise floor is non-linear below 30 degrees

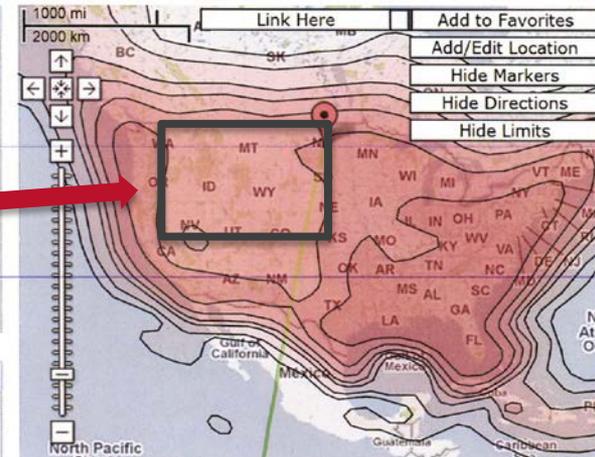
Lower look angle higher noise temperature

4. Current & Future Satellite Coverage

- Stronger signal coverage is designed for dense population
- Weaker signal coverage is designed for rural areas
- Notice boxed areas (low signal)
- Joint comments of satellite broadband providers:
 - No additional rural coverage planned

| Reception details | |
|-------------------------------------------------------|--------------------|
| 110°W — Echostar 11 (Echostar XI) | |
| Ku-band CONUS Beam | |
| Distance to satellite: | 38413.7km |
| Location: | 46.87°N 100.12°W |
| Elevation angle: | 35.2° |
| LNB Tilt (skew): | -9.1° |
| True azimuth: | |
| <input checked="" type="checkbox"/> Magnetic azimuth: | 187.2° |
| Next Sun azimuth match at: | 19:21:07 (GMT) |
| | 14:21:07 (PC time) |

| Advertising | |
|-------------------------------|--|
| Features include: | |
| Free Field Guide and software | |



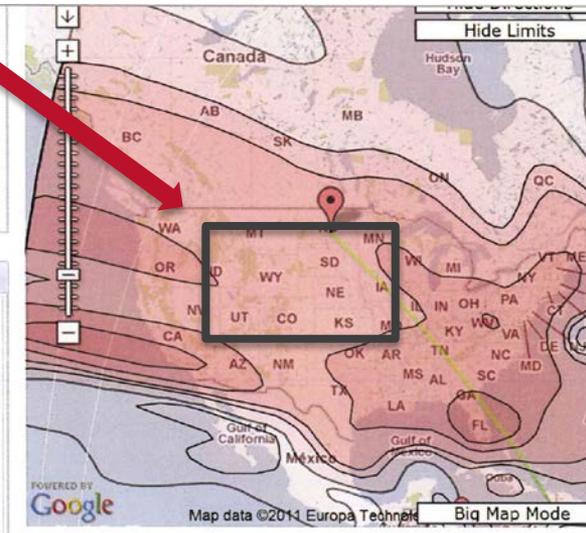
| | |
|-------------------------------------------------------|--------------------|
| Location: | 46.87°N 100.12°W |
| Elevation angle: | 24.1° |
| LNB Tilt (skew): | 30.6° |
| True azimuth: | 131.9° |
| <input checked="" type="checkbox"/> Magnetic azimuth: | 125.7° |
| Next Sun azimuth match at: | 15:05:11 (GMT) |
| | 10:05:11 (PC time) |

Advertising

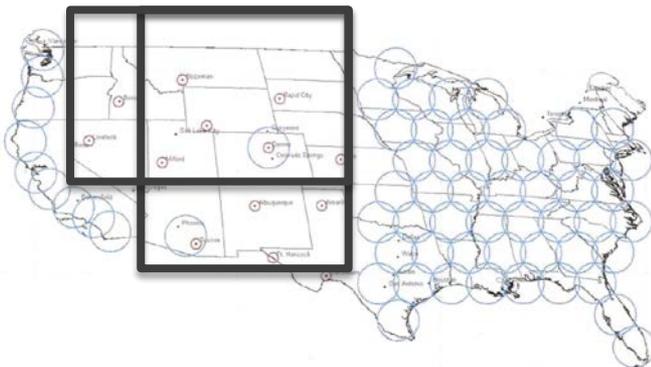
Applied Instruments, Inc.

Super Buddy Satellite Meter

"The new



Viasat 1 Q3 2011





Satellite Broadband is Not Comparable to Terrestrial Broadband

- Inappropriate for interactive media
- Limited capacity
- No spacecraft failure recovery plan
- Limited by slot coordination
- Subject to adjacent satellite interference
- Long procurement cycle (36 to 48 months)
- Limited use for customers (non-work quality)

- Not COLR capable (non contiguous coverage)
- Satellite Operators should NOT BE ETC eligible