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November 10, 2008

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Call Sign E080100: Applications of Row 44, Inc. for

Authority to Operate up to 1,000 Technically-Identical Aeronautical-Mobile Satellite Service Transmit/Receive Earth Stations Aboard Commercial and Private Aircraft, FCC File Nos. SES-LIC-20080508-00570; SES-AMD-20080619-00826; SES-AMD-20080819-01074; SES-AMD-20080829-01117; and

Special Temporary Authority, FCC File No. SES-STA-20080711-00928.

Notice of Ex Parte Presentation

Dear Ms. Dortch:

On Friday, November 7, 2008, representatives of ViaSat, Inc. ("ViaSat") met with Commission staff regarding the above-captioned applications of Row 44, Inc. Specifically, Daryl T. Hunter, ViaSat's Director of Regulatory Affairs, and John P. Janka and Jarrett S. Taubman of Latham & Watkins LLP, counsel to ViaSat, met with members of the International Bureau listed below. The presentation attached hereto and ViaSat's positions of record formed the basis for the discussion.

Please contact the undersigned should you have any questions.

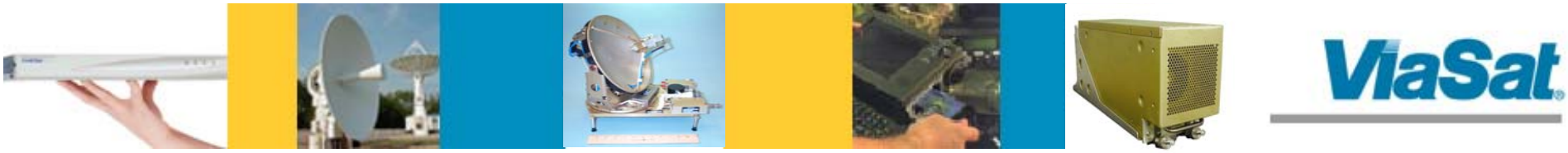
Sincerely yours,

John P. Janka
Jarrett S. Taubman

Counsel for ViaSat, Inc.

cc: Karl Kensinger
Scott Kotler
Steve Duall
Frank Peace
David Keir, Counsel for Row 44, Inc.

Row 44 Continuing Issues



Interference a Significant Problem

- Even determining interference exists can be difficult – more so when it is transient
- NTIA reports that often times radar interference has been present for over a year before they become involved
- 10th Internation Space Radio Monitoring Meeting reports that the cause of a significant percentage (~30%) of interference events are unknown
- Demonstration of non-interference critical in applications for secondary services

ViaSat

Key Technical Issues

- Pointing error is greater than Row 44's claimed 0.2° peak value
- Return Link Budget issues
  - **Several changes were made to link parameters such as spreading, modulated bandwidth, and power reduction, but no new link budgets have been supplied for 512 kbit/s**
  - **Use of 2.1 dB Eb/No value is unrealistic. 3.3 dB Eb/No value more realistic but requires Row 44 to transmit additional EIRP**
- Careful control of EIRP needed because off-axis EIRP density exceeds FCC mask if pointing accuracy falls below 0.2° or skew reaches 25°

ViaSat

Antenna Pointing Error

- Typical stated accuracy 2σ (95.4%) of IRU used in commercial airliners is 0.4° in heading axis, and 0.1° each in the pitch and roll axis
- Equivalent peak accuracy 3σ (99.7%) values are 0.6° in heading, and 0.15° in pitch and roll
- Row 44 claims better performance than above based on 24 hour evaluation of a representative IRU sample
- Honeywell engineers have confirmed that stated accuracy values in the manual should be used when considering required performance
- In other words, design for the worst case specified values

Antenna Pointing Error (cont)

- Honeywell engineers also said that IRU itself may not be the limiting factor - an IRU on the bench performs well
  - **A number of problems were cited where IRU accuracy in the airplane operating environment is degraded**
  - **IRU mounting location an important factor**
    - **Location of IRU with respect to aircraft CG (center of gravity) and with respect to antenna may cause issues**
  - **Airframe flex reported as non-trivial**
    - **Examples were given of Airbus A340-600 aircraft where airframe flex was reported as "dramatic". Similar example of a Boeing 757 was given.**
- IRU can't self align/calibrate out installation offset errors

Row 44 Azimuth Antenna Pattern

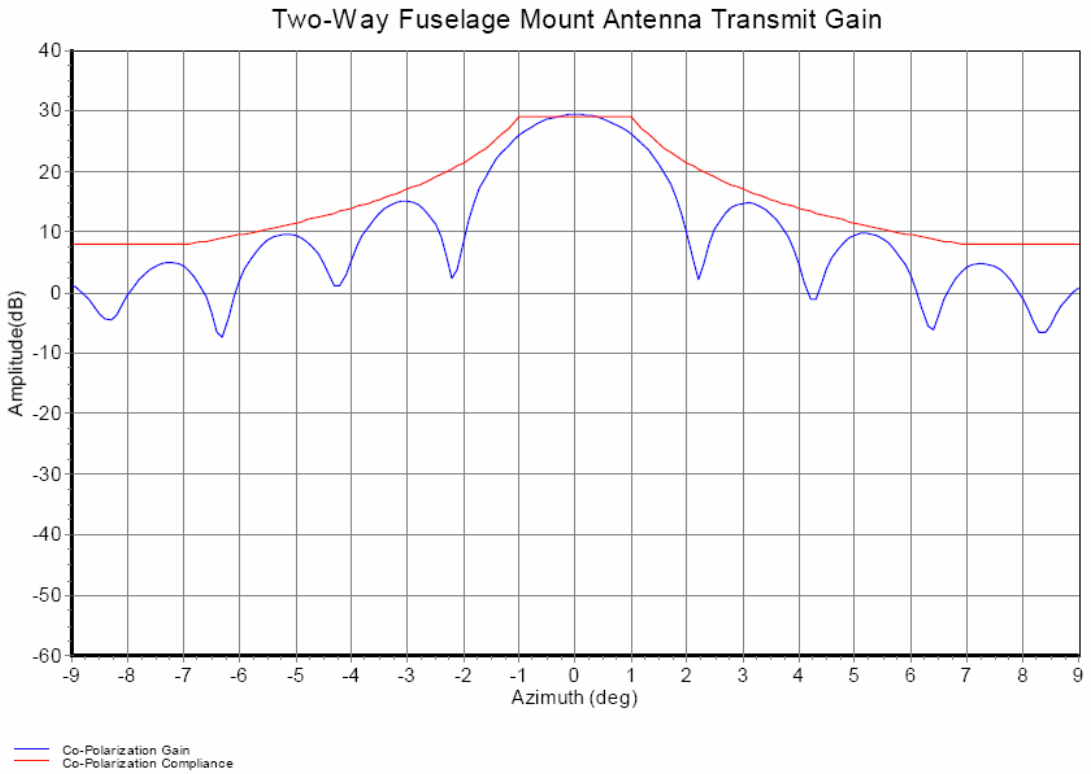


FIGURE 4.1.2-4 Antenna Gain in dBi for 14.05 GHz (Horizontal Polarization) (25.209 Expanded Azimuth)

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Row 44 Elevation Antenna Pattern

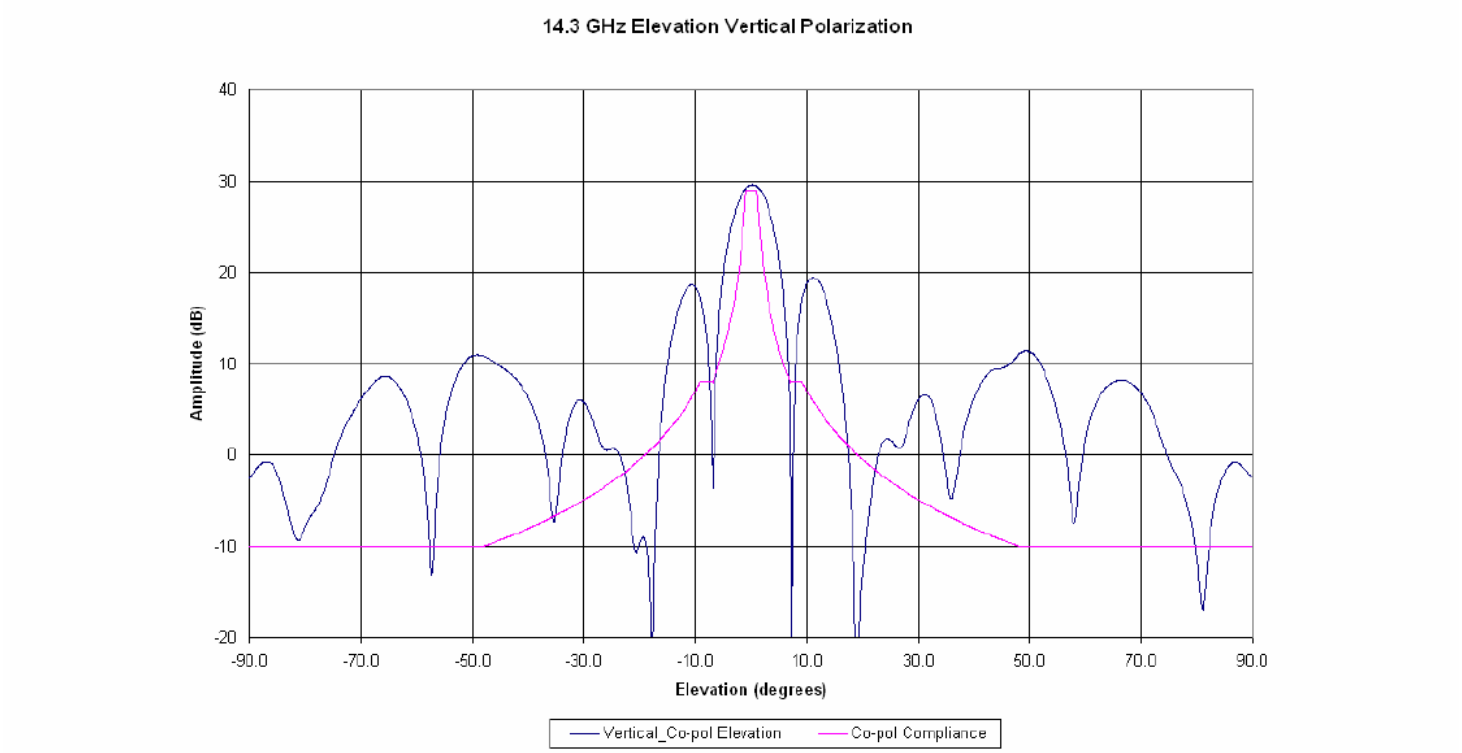

FIGURE 4.1.2-109 Antenna Transmit Elevation Gain in dB for 14.3 GHz (Vertical Polarization) (25.209 Sidelobe Compliance)

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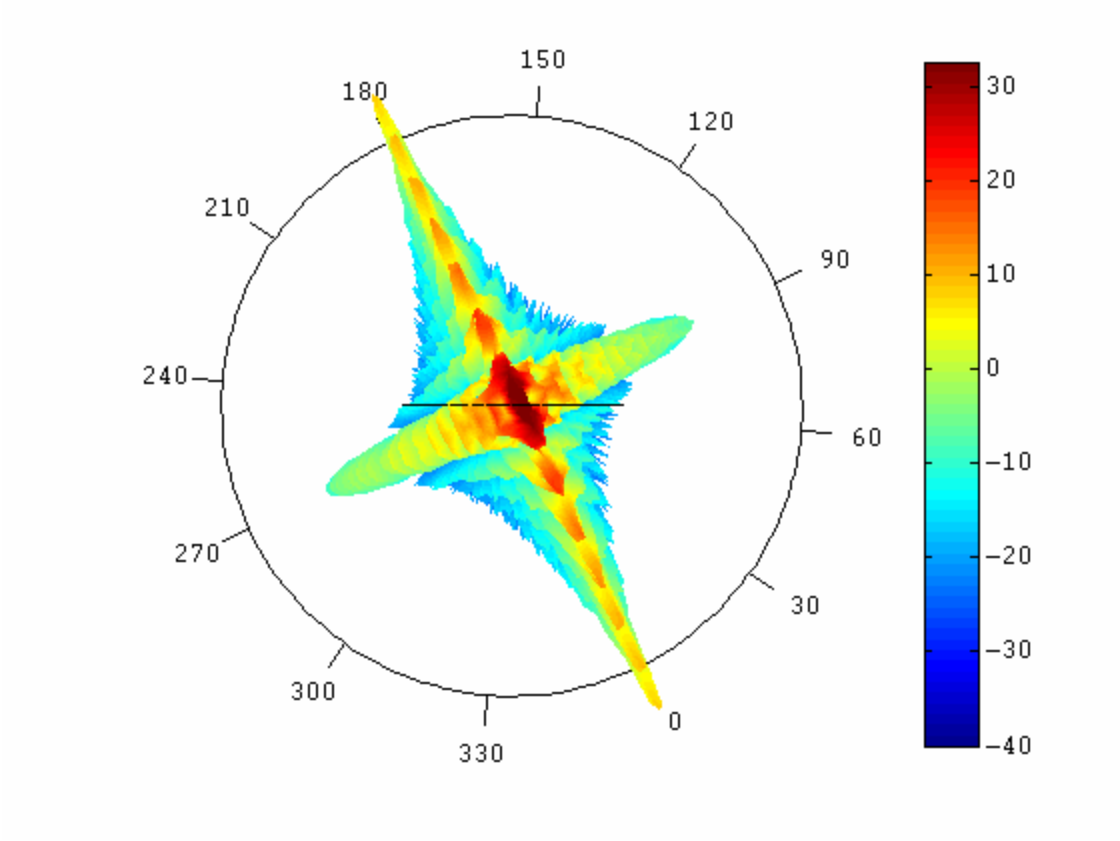
Simulated 3D Antenna Pattern



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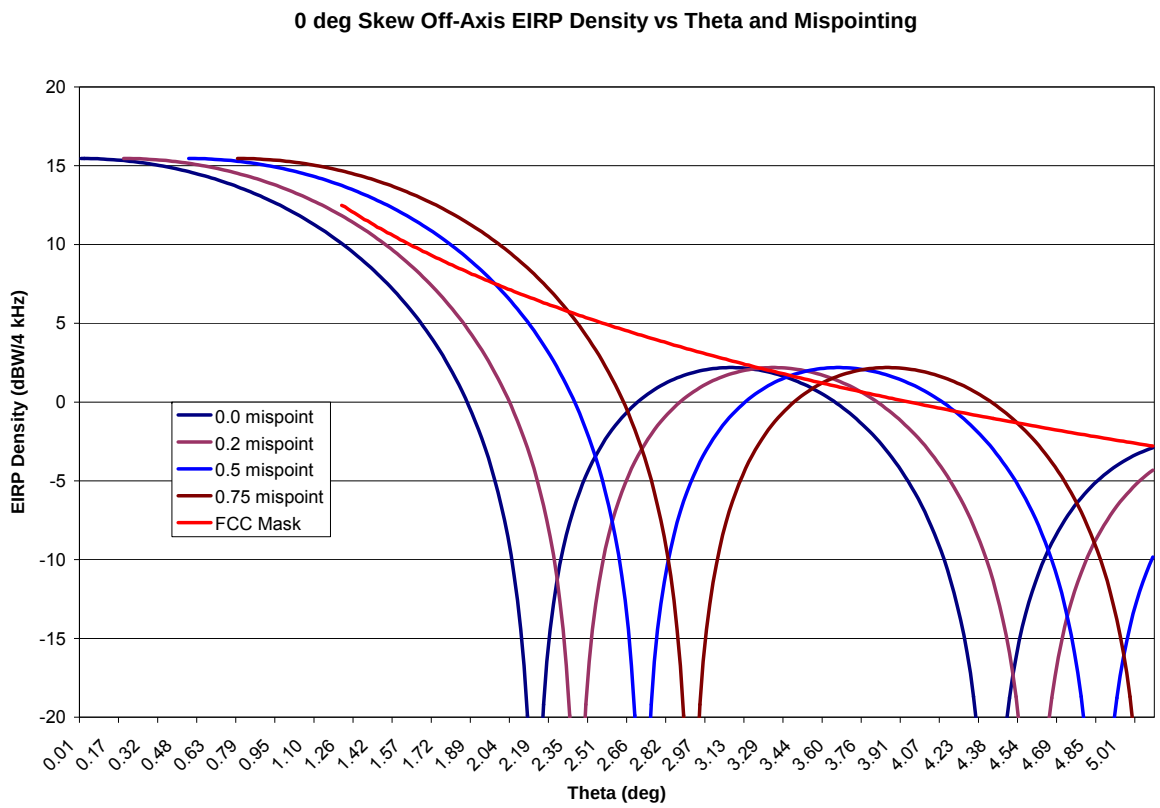
Off-Axis EIRP Density – No Skew



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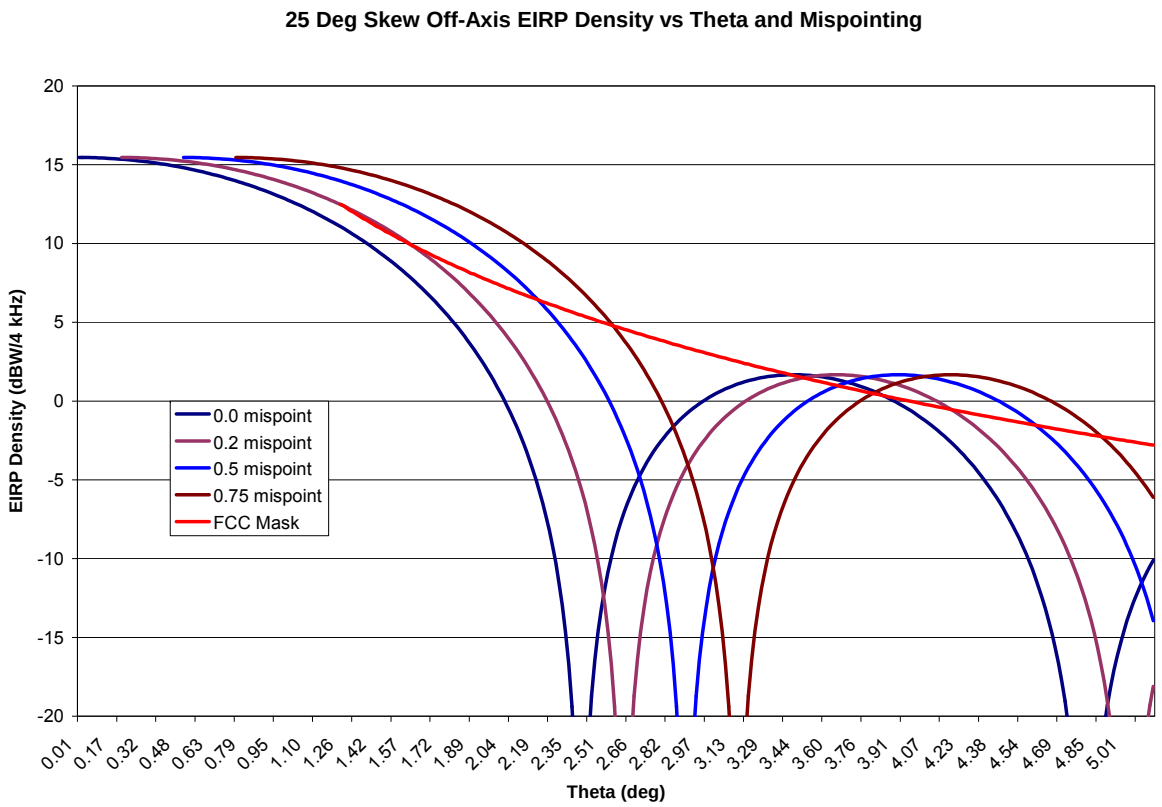
Off-Axis EIRP Density 25 deg Skew



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Return Link Budgets

- **Carrier noise bandwidth calculation still not correct**
  - **Uses 1.6 MHz as the necessary bandwidth in their antenna input power density calculation versus 1.024 MHz – the bandwidth shown in their modulation plot**
- **2.1 dB Eb/No value not realistic – more likely in the 3.3 dB range**
  - **Requires Row 44 to transmit higher than claimed EIRP**
- **No 512 kbit/s link budgets**
- **No satellite G/T footprint contours**

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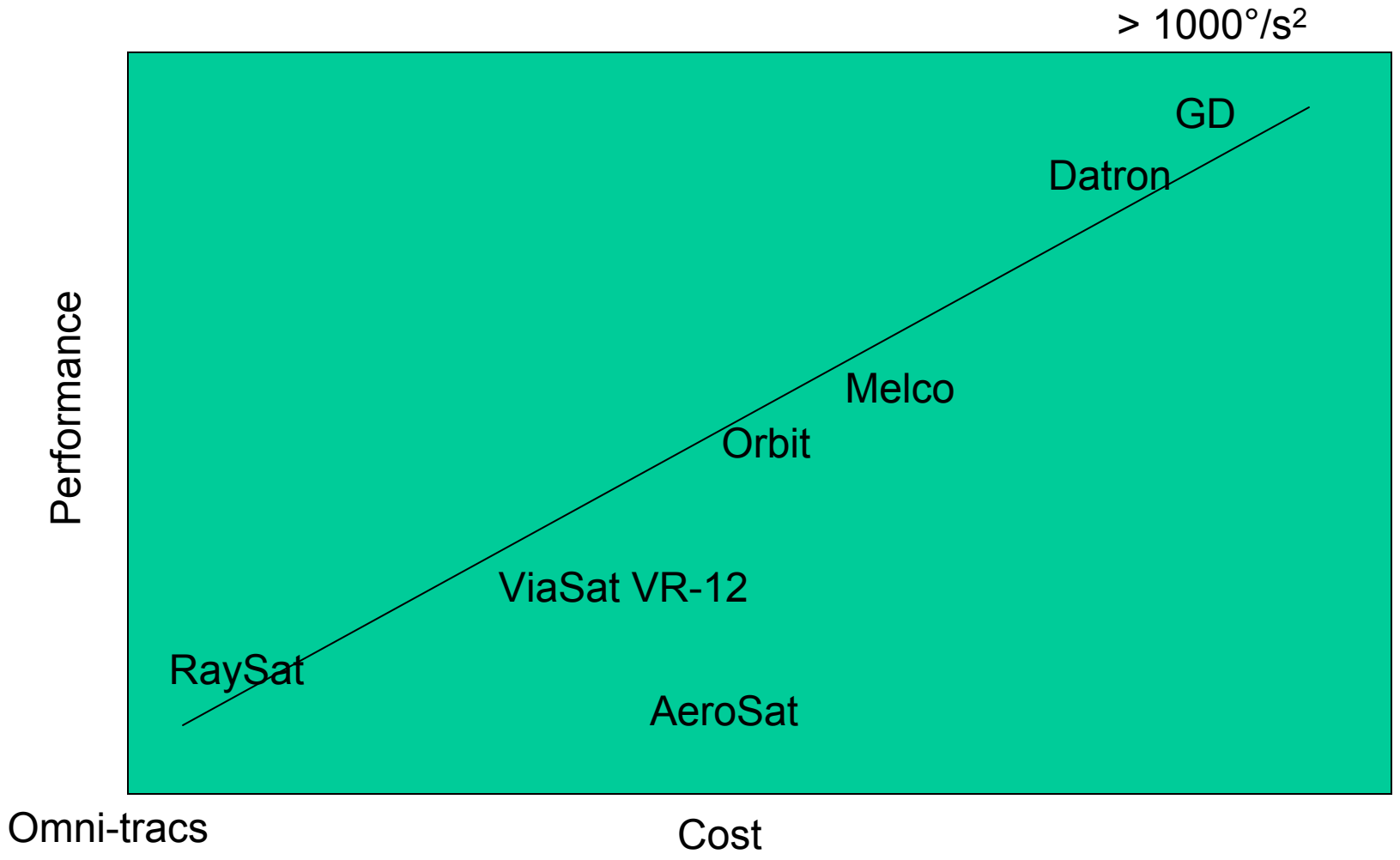
Antenna Tracking Performance vs Cost



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Power / Pointing Trade-off When Using Small Antennas

- High PSD waveforms require very accurate pointing to avoid exceeding OAED mask – results in high cost antennas
  - **Failures or operator mistakes have already resulted in adjacent satellite interference, even when using a $300 k high performance antenna**
- Low PSD waveforms allow user to trade pointing performance for antenna cost
  - **Qualcomm Omni-tracs is good example**
    - **no active pointing at all in elevation – preset to fixed value**
    - **simple azimuth pointing mechanism**

ViaSat

Conclusion

- Row 44 fails to show it can adequately protect adjacent Primary FSS services
- Application is still incomplete
- Have not demonstrated that pointing accuracy can be achieved and maintained to within 0.2° peak – or that Tx inhibit will occur at 0.5° within 100 ms
- Demonstration of EIRP control paramount to avoid exceeding mask – particularly when mispointed

ViaSat