



1776 K STREET NW  
WASHINGTON, DC 20006  
PHONE 202.719.7000  
FAX 202.719.7049

7925 JONES BRANCH DRIVE  
McLEAN, VA 22102  
PHONE 703.905.2800  
FAX 703.905.2820

www.wileyrein.com

November 18, 2009

Colleen King  
202.719.7307  
cking@wileyrein.com

**VIA IBFS**

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

Re: Amtech Systems LLC, Notice of *Ex Parte* Presentation,  
File Nos. SAT-MOD-20090429-00047, SAT-MOD-20090429-  
00046, SES-MOD-20090429-00536

Dear Ms. Dortch:

In accordance with Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, this letter notifies the Commission that on November 17, 2009, George McGraw, Executive Vice President of Operations for Transcore, and Tom Houtman, an engineering consultant to Amtech Systems LLC ("Amtech"), and David Hilliard and the undersigned of Wiley Rein LLP, counsel for Amtech, met with Stephen Duall, Kathryn Medley, William Bell, and Sylvia Lam of the FCC's International Bureau to discuss SkyTerra Subsidiary LLC's pending ATC waiver applications. Amtech reiterated positions consistent with its filings in this proceeding and presented the attached handout.

Sincerely,

*/s/ Colleen King*

Colleen King

cc: Stephen Duall  
Kathryn Medley  
William Bell  
Sylvia Lam

# **Amtech Systems LLC**

**Presentation to  
Satellite Division  
International Bureau**

November 17, 2009

# Introduction

- **Amtech** holds the FCC licenses authorizing the operation of tens of thousands of mobile earth terminals (METs) that would receive harmful interference from SkyTerra's proposed ATC operations, if certain requested waivers are granted.
- **Transcore** currently provides 22,000 Amtech-licensed METs (with 7,000-10,000 added annually) to end-user customers. These terminals, used on trucks and trains, are the heartbeat of the transportation industry.
  - Customers include the Department of Defense (DOD), the Tennessee Valley Authority, the Washington State Department of Transportation, the American Red Cross, Southern California Edison, Union Pacific and over 500 private trucking firms.
- **Roper Industries** is the parent company of both Amtech and Transcore. Roper is a diversified growth company, with a broad customer base in end-markets that include water, energy, transportation, education, and healthcare.

# Procedural History of SkyTerra's Pending ATC Application

- On April 29, 2009, SkyTerra filed an application for waiver of certain technical rules in the deployment of its ATC operations.
- On July 10, 2009, Amtech filed a Petition to Deny, explaining that SkyTerra's proposed operations would harm Amtech's customers.
  - SkyWave Mobile Communications, Corp. filed comments presenting similar concerns.
  - Inmarsat and Mississippi Department of Public Safety filed comments in support.
- On July 23, 2009 SkyTerra filed a Consolidated Opposition.
- On August 4, 2009, Amtech filed a Reply to SkyTerra's Consolidated Opposition.

# Overview of Amtech's Concern

- **Principal Technical Concern:**
  - SkyTerra's proposed waiver of Section 25.253(d) would allow ATC base stations to operate at higher power than the current rule requires.
  - This higher power level will expand dramatically the exclusion zones around ATC base stations in which Amtech's METS will experience harmful interference.
  - Expanded area from 200 meter radius to greater than 3 kilometer radius.
- **Impact on Amtech Customers:**
  - SkyTerra suggests Amtech has no customers and will be unharmed by its proposed higher power ATC base station operations. In fact, Amtech provides service to over 22,000 customers.
  - Grant of SkyTerra's application will degrade service for these and future Amtech customers in large geographic areas.

# Overview of Amtech's Concern

- **SkyTerra's Agreement with Inmarsat Does Not Support Waiver:**
  - SkyTerra requests the FCC waive its technical rules in deference to the SkyTerra-Inmarsat inter-operator coordination agreement.
  - The agreement is not public and there is no reason to believe it benefits anyone other than the two parties.
  - Private agreements do not condone non-compliance with FCC rules.
  - The harm to Amtech customers undermines any good cause to support SkyTerra's requested waiver.
  - This is particularly true given that the Commission decided to permit ATC networks to operate only if they caused no harmful interference to primary MSS operations.

# Principal Technical Issues

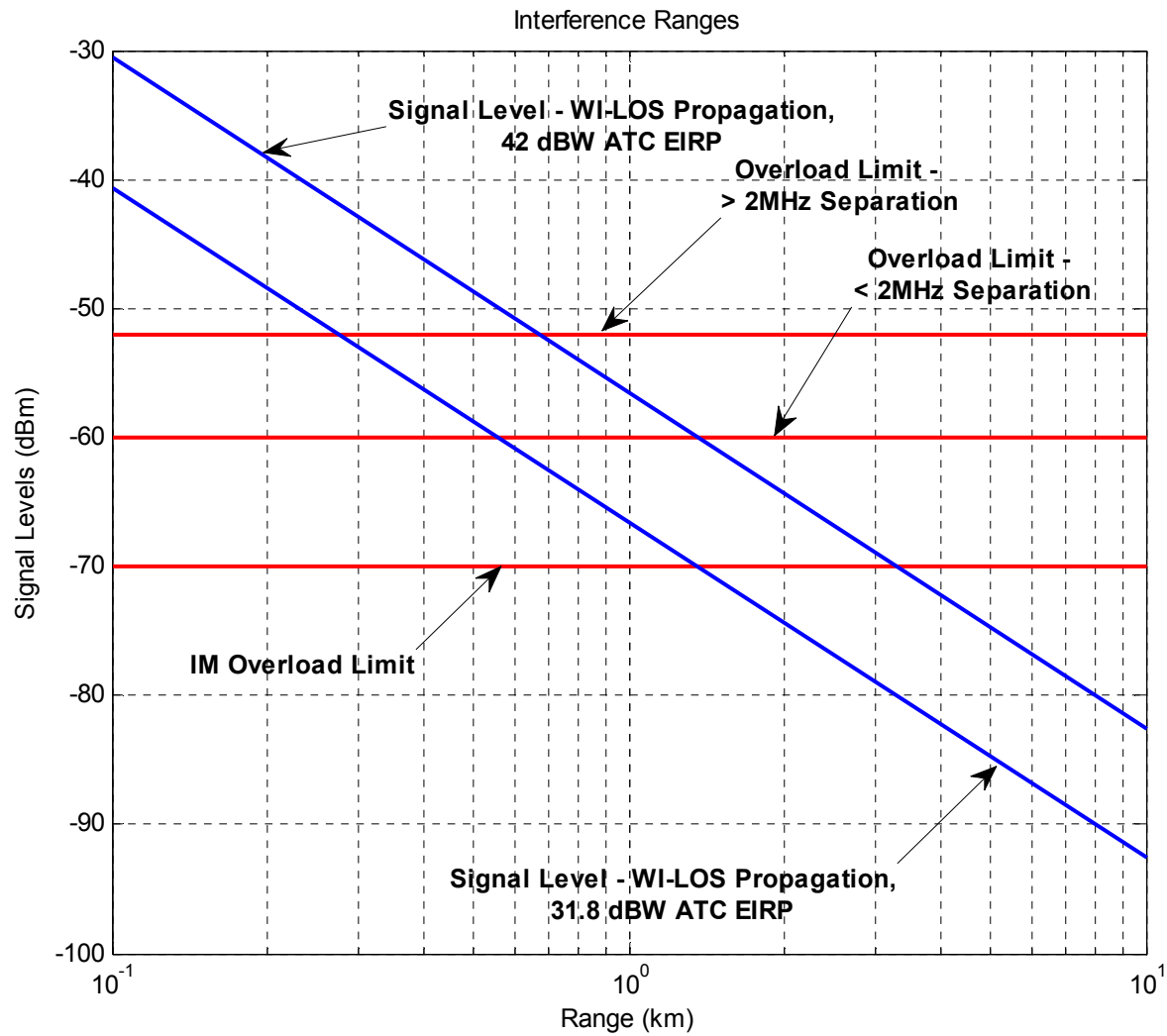
- Increased interference
- Elimination of Out of Channel Emissions (OOCE) restrictions protecting land mobile terminals
- Coordination of frequency allocation cannot prevent intermodulation interference.
- Terminals are at risk in both urban and suburban environments.

# Interference Mechanisms

- LNA-Mixer Saturation
  - -52 dBm with  $> 2$  MHz separation
  - -60 dBm with  $< 2$  MHz separation
- Intermodulation
  - -70 dBm from FCC analysis
- Out of Channel Emissions



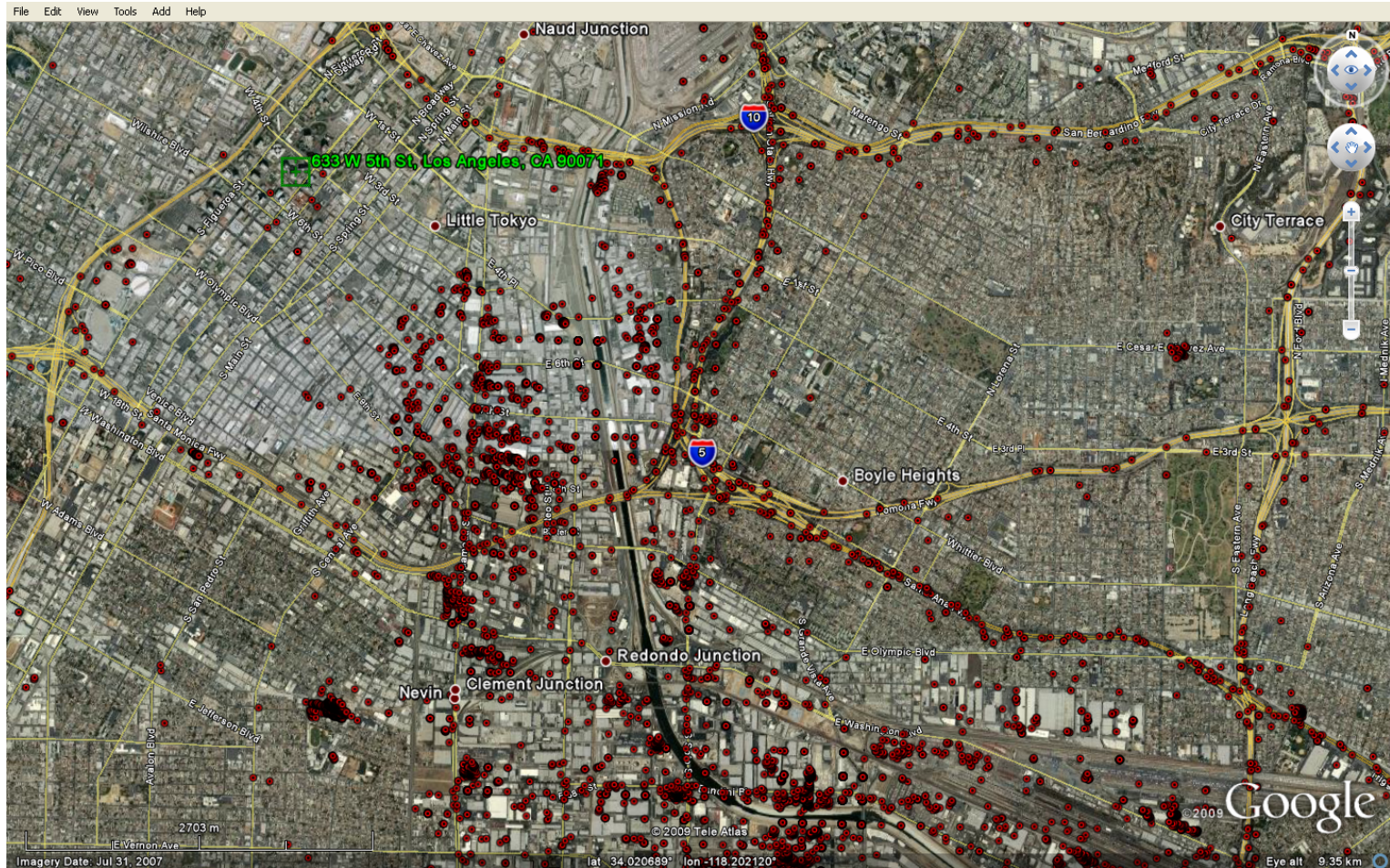
# Interference Ranges



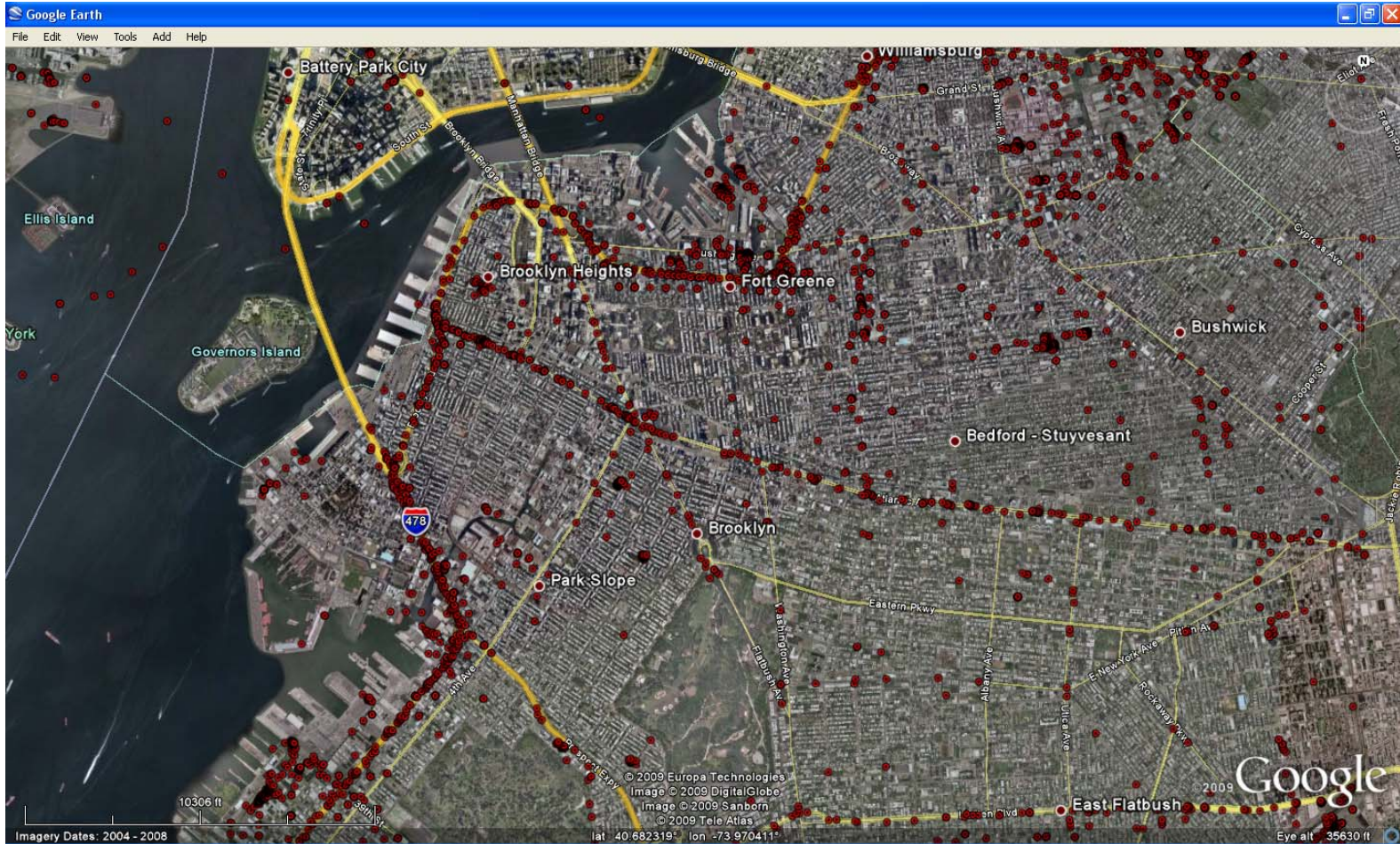
# Out of Channel Emissions

- General requirement replaced with aeronautical and marine specific requirements
- No protection for land mobile terminals
- SkyTerra *ex parte* submission of Oct 27: “all base stations within the same OOCE limit”
- Specious argument: impossible to predict OOCE interference generally without radiated PSD level or equivalent information
- The Commission has already established power levels in Section 25.253 of the rules that permit operation of terminals without interference. SkyTerra has not shown good cause to waive these rules.

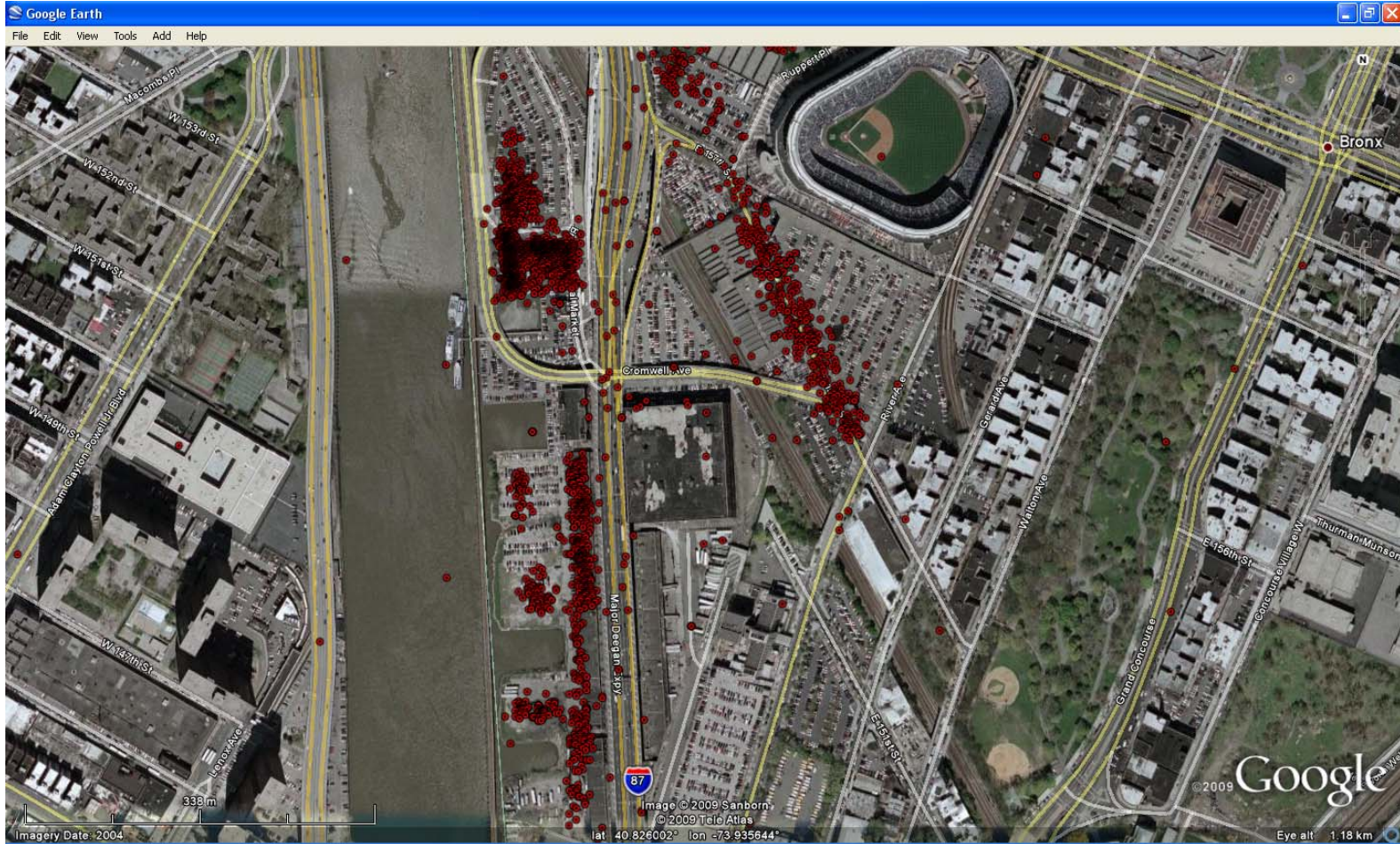
# Terminal Locations – Los Angeles



# Terminal Locations - Brooklyn



# Terminal Locations – The Bronx



# Financial Impact to Our Company and Customers

- **Our Customers**

- 550 customers with over 22,000 Mobile Satellite Terminals
- Adding 7,000 to 10,000 new terminals a year
- Specific impact to a customer
  - Purchase replacement terminal
  - Pull the asset to which the terminal is attached into repair depot
    - Remove old unit
    - Install new unit
    - Dispose of old unit properly [they have Lithium batteries]
- These will not be happy customers as they all purchased expecting 5 to 10 years of use

- **The Company**

- We'll have to engage every customer explaining why what they bought will no longer work
  - Recompete for their business starting from adverse position
  - We would expect significant lose of current customers
  - This effort will give competitors significant advantage
- In summary our customers will wake up one day and the system they rely on to run their business will not work when in urban areas with ATC service.

# Conclusion

- Amtech respectfully requests that the FCC deny SkyTerra's request for waiver of Section 25.253 of the rules.
- If the waiver is granted, it should be conditioned on SkyTerra complying with its obligation to operate on a non-harmful interference basis including, if necessary, funding the replacement of Amtech's METs.