April 18, 2016

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

Re: In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268; Amendment of Parts 15, 73 and 74 of the Commission's Rules to Provide for the Preservation of One Vacant Channel in the UHF Television Band For Use By White Space Devices and Wireless Microphones, MB Docket No. 15-146; Notice of *Ex Parte* Communication

Dear Ms. Dortch:

On April 14, 2016, Bruce Franca, Bob Weller, Alison Neplokh, Patrick McFadden and the undersigned, all of the National Association of Broadcasters (NAB), met with Gary Epstein, Howard Symons and Sasha Javid of the Incentive Auction Task Force, Michelle Carey, Hillary DeNigro, and Joyce Bernstein of the Media Bureau, Ira Keltz and Mark Colombo of the Office of Engineering and Technology, Jean Kiddoo and Erin Griffith of the Wireless Telecommunications Bureau, William Scher of the Office of General Counsel, and Charles Meisch of the Office of Media Relations. During this meeting, NAB discussed the attached presentation regarding the Commission's Google Channel proposal. In particular, NAB reviewed its analysis demonstrating that the auction and repacking will result in up to one quarter of LPTV and translator stations being unable to find new channels after the auction. NAB also outlined the basic infirmities in Google's analysis purporting to demonstrate that reserving free channels for Google and other tech companies will have little or no impact on LPTV and translator stations.[1]

NAB explained that its analysis is based on two representative FCC repacking profiles, one reflecting a 120 MHz clearing target and one reflecting an 84 MHz clearing target. NAB used a graphical repacking algorithm that attempted to "fit" the replicated coverage contour of each LPTV and TV Translator station displaced by repacking between the coverage contours of the repacked Class A and full-service television stations in each FCC profile. We then examined the tentatively selected channels using the Commission's *TVStudy* software for prohibited interference to Class A and full-power stations – ignoring potential interference *to* LPTV and translator stations.

[1] Letter from Austin C. Schlick, Google, Inc. to Marlene H. Dortch, FCC, MB Docket No. 15-146, GN Docket No. 12-268 (March 25, 2016).

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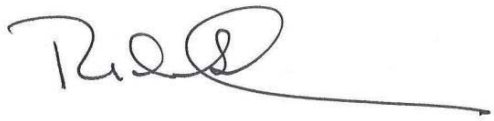
While it is difficult to estimate the breakdown between LPTV and translator stations that are likely to be unable to find new channels after the auction, NAB's best estimate is that, at a 120 MHz recovery, approximately 20 percent of low power stations unable to find a new channel would be LPTV stations and 80 percent would be translators. At an 84 MHz recovery, our best estimate is that approximately 30 percent of stations unable to find a new channel would be LPTV stations and 70 percent would be translators.

NAB also discussed the fundamental flaw in Google's analysis; namely that Google assumed the Commission would recover stations in *every* market – even those where the Commission can repurpose a significant amount of spectrum without accepting a single reverse auction bid from a broadcaster. Thus, Google assumed that the FCC would accept bids from between 40 and 70 percent of broadcasters nationwide. This assumption is way off base, as it ignores the Commission's delineated auction procedures, publicly available Commission repacking simulations and economic reality.

Conducting the auction Google envisions would require the Commission to accept broadcast station bids totaling perhaps tens of billions of dollars, without any corresponding forward auction return. Indeed, taking only the markets Google used as examples in its analysis, the opening bid prices for the extra stations the Commission would need to recover to make Google's dreams a reality total nearly 10 billion dollars. Fortunately, the Spectrum Act forbids such action and the FCC has made clear that it is not clearing spectrum specifically to enable dedicated unlicensed spectrum.

While the dispute about how many translators and LPTV stations will be forced off the air necessarily requires stakeholders to make assumptions and projections that may prove optimistic or conservative, there is no question that the Google Channel proposal will deprive viewers of free, over-the-air existing services upon which they currently rely. After six years and a significant amount of hyperbole, there are just a few hundred white spaces devices providing service across the country. Rather than doubling down on this sputtering experiment at the direct expense of existing viewers, the Commission should focus on helping displaced LPTV and translator stations find new channels after the auction, where possible. At a minimum, the Commission should not act on this proposal until after the auction and LPTV and translators stations are relocated, which will give the Commission its only accurate look at the true impact of its current proposal.

Respectfully Submitted,



Rick Kaplan
General Counsel and Executive Vice President,
Legal and Regulatory Affairs
National Association of Broadcasters

cc: Gary Epstein
Howard Symons
Sasha Javid
Michelle Carey
Hillary DeNigro
Joyce Bernstein
Ira Keltz
Mark Colombo
Jean Kiddoo
Erin Griffith
William Scher
Charles Meisch

NAB
NATIONAL ASSOCIATION OF BROADCASTERS

# Google Channels
# 15,000 Wrongs Don’t Make a White (Space)

# Background

- NAB submitted detailed analysis suggesting hundreds of LPTV and translator stations could be displaced
- Google responded with analysis purporting to show “minimal impact” on LPTV and translator stations
- Why the difference?
  - Google fundamentally misunderstands the auction

# The Auction

- FCC has two ways of recovering spectrum: reverse auction and repacking
- If the FCC can clear spectrum just through repacking, there is no need to buy stations

# Google's Major Error

- Google assumed the FCC bought stations in every market, including markets where spectrum cleared by repacking alone
  - Google correctly assumed 40-70% participation, consistent with FCC assumptions
  - HOWEVER, Google then took a wrong turn:
    - "A corresponding number of full-power and Class A broadcasters were then randomly designated as having sold their licenses in the reverse auction and, accordingly, to be removed from the post-auction band."
  - RESULT: Google assumed 40-70% of broadcast stations were recovered <u>even in rural markets where few if any stations needed</u>

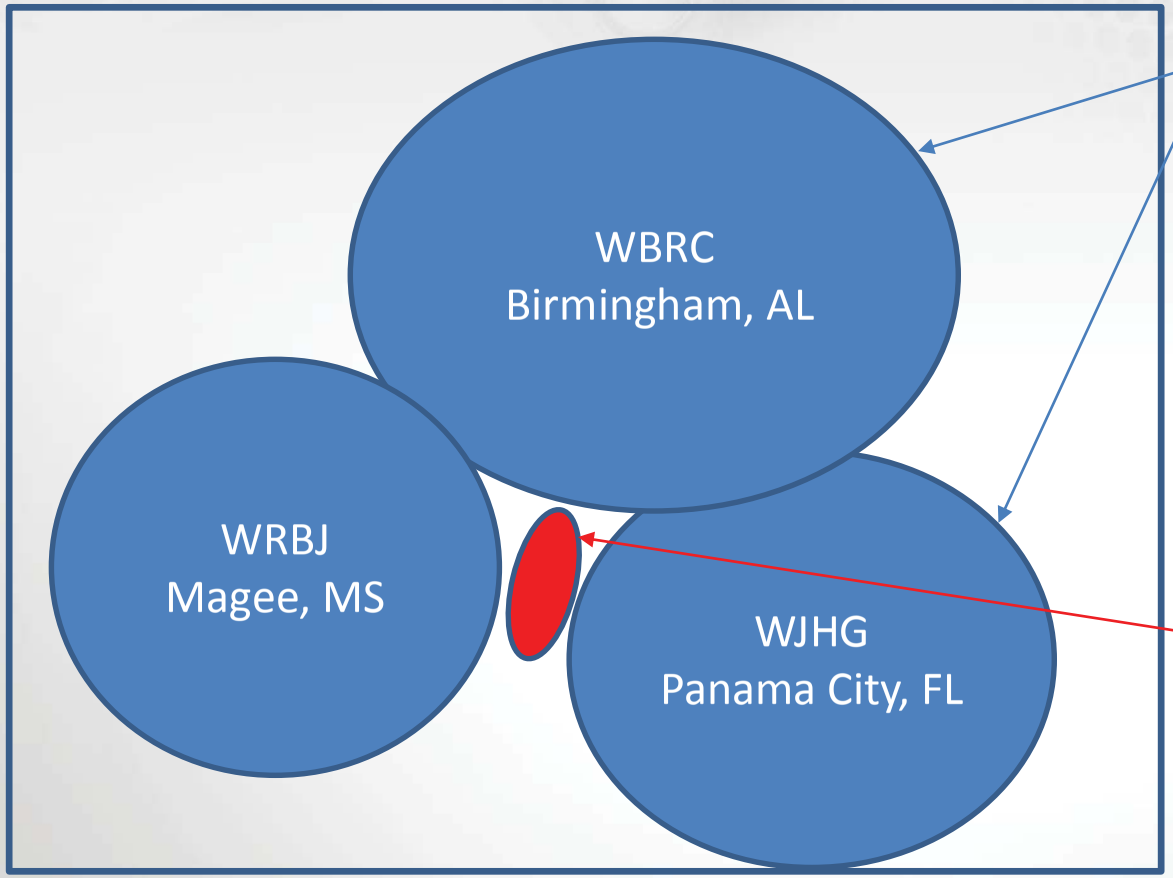
# The Cost of a Google Auction

- In some of Google's sample markets, the opening bid prices of the extra stations Google assumes the FCC will buy would cost billions of dollars
  - Cleveland/Akron: up to $2.2 billion
  - NC and SC markets: up to $4.8 billion
  - Salt Lake City: up to $1.3 billion
  - Albuquerque/Santa Fe: up to $1.2 billion
- Is the FCC really going to spend up to **$9.5 billion** more just to provide Google with free spectrum in these markets?

# NAB's Analysis

- First, selected two representative FCC UHF repacking profiles for study
- Second, attempted to shoehorn in LPTV and translator stations using contours, then ran *TVStudy* to identify stations that violated interference limit

# LPTV Repacking: Step 1
# Contour-fitting




Full-power/Class A stations repacked to Channel 20

LPTV Station W50BO repacked to Channel 20

# LPTV Repacking - Step 2
# 0.5% IX Test Using *TVStudy*

| Desired Station | TL Area | TL Pop. | IL Area | IL Area |
|---|---|---|---|---|
| WBRC D20 LIC BIRMINGHAM, AL | 33134.6 | 1,821,322 | 30481.3 | 1,702,201 |

| Interfering stations: | Tot Area | Tot Pop | Unq Area | Unq Pop |
|---|---|---|---|---|
| WMCF-TV D19 LIC MONTGOMERY, AL | 188.8 | 3,904 | 24.1 | 114 |
| WJHG-TV D20 CP PANAMA CITY, FL | 144.4 | 2,411 | 68.1 | 818 |
| WRBJ-TV D20 LIC MAGEE, MS | 300.3 | 5,827 | 176.3 | 3,338 |
| WLMT D20 LIC MEMPHIS, TN | 143.8 | 3,161 | 16.0 | 283 |
| WZTV D20 LIC NASHVILLE, TN | 195.7 | 11,127 | 59.9 | 4,232 |
| WCOV-TV D21 LIC MONTGOMERY, AL | 297.2 | 5,024 | 116.5 | 968 |
| WANN-CD D20A LIC ATLANTA, GA | 51.9 | 1,735 | 31.9 | 400 |
| W38BQ D21A CP MOD HUNTSVILLE, AL | 4.0 | 72 | 0.0 | 0 |
| **WMJN-LP D19L LIC SOMERVILLE, AL** | **71.8** | **4,823** | **16.0** | **2,342** |
| **WBMA-LD D19L LIC BIRMINGHAM, AL** | **32.0** | **229** | **16.0** | **22** |
| **W32EQ-D D19L CP TUSCALOOSA, AL** | **123.7** | **2,123** | **24.0** | **188** |
| **W30BD D20L CP EUFAULA, AL** | **36.0** | **524** | **16.0** | **193** |
| **W26EC-D D20L CP MOD MONTGOMERY, AL** | **180.7** | **4,265** | **12.0** | **89** |
| **WLFW-LP D20L CP LAFAYETTE, GA** | **16.0** | **594** | **0.0** | **0** |
| **W50BO D21L CP ASHVILLE, AL** | **1147.5** | **87,933** | **1111.5** | **83,818** |
| **W16CM-D D21L LIC JASPER, AL** | **424.7** | **6,561** | **392.6** | **6,323** |
| **WEEL-LD D21L CP TUSCALOOSA, AL** | **115.7** | **2,108** | **39.9** | **654** |

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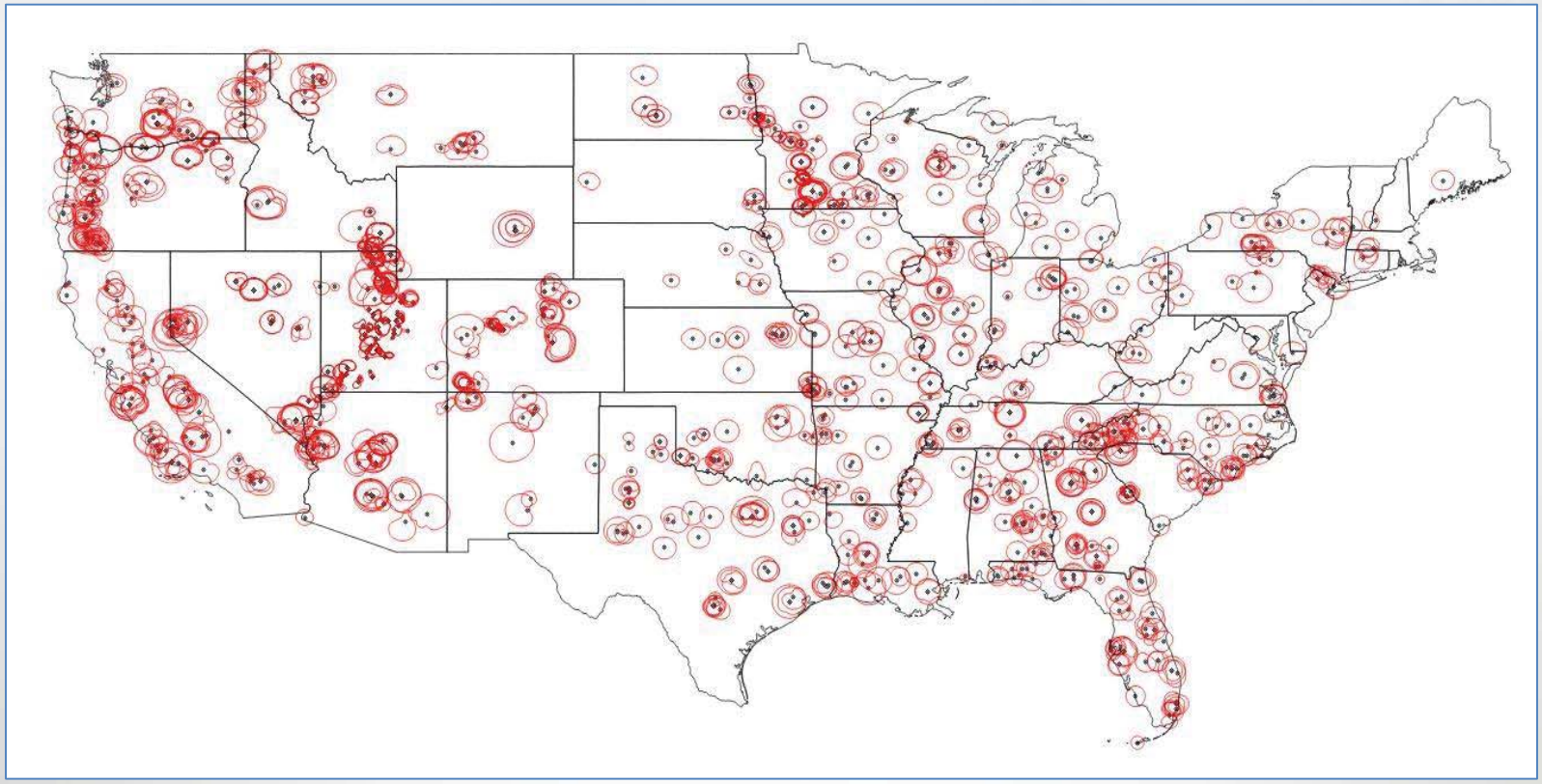
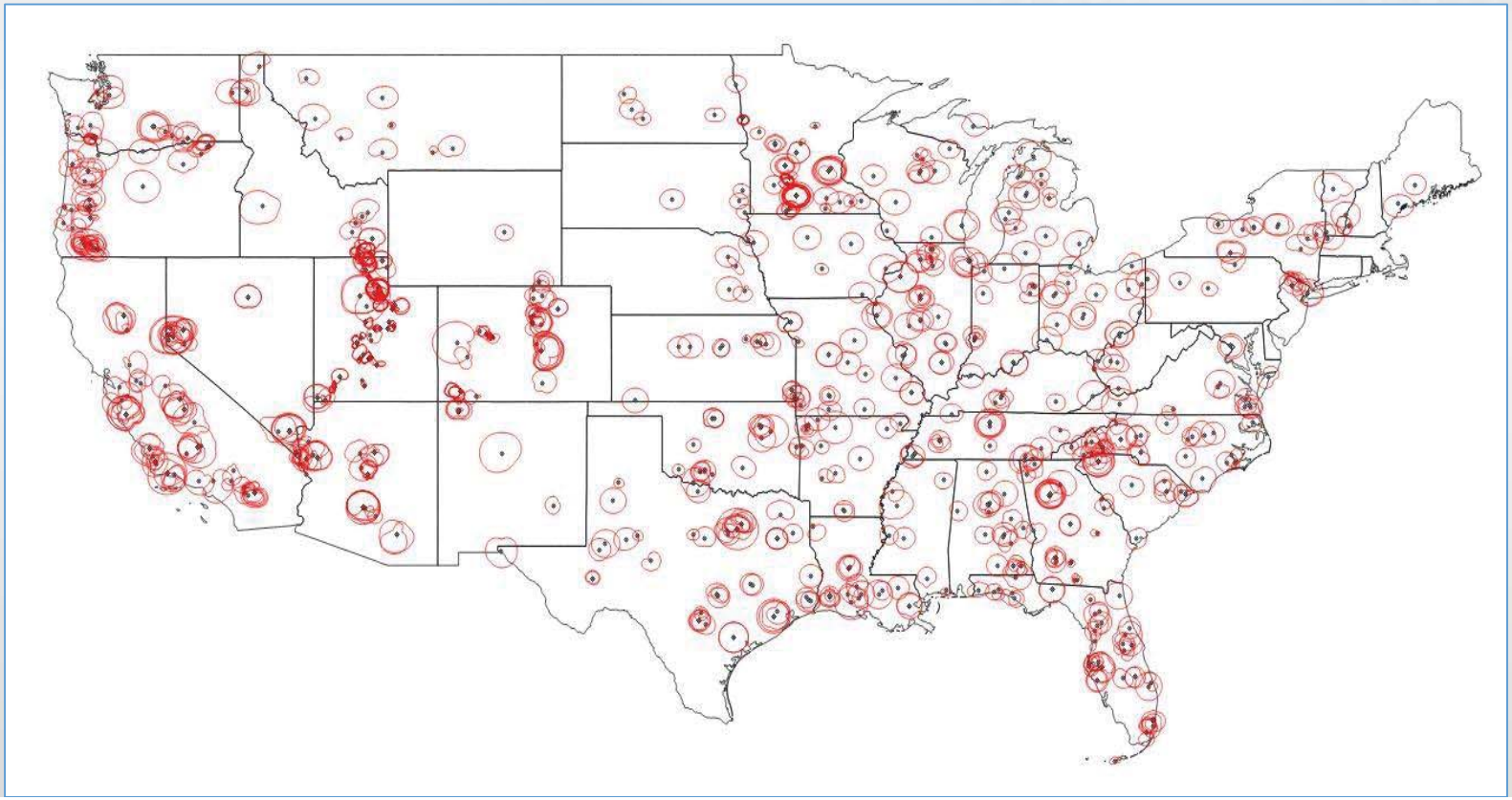
# Results: Displaced LPTV/TVT Stations
# 120 MHz recovery. 1469 stations displaced



# Results: Displaced LPTV/TVT Stations
# 84 MHz recovery. 935 stations displaced



# Results

- At 120 MHz, 1,469 of 5,935 LPTV and translator stations (24.8%) could not find new UHF channels
- At 84 MHz, 935 of 5,935 LPTV and translator stations (15.8%) could not find new UHF channels
- Results undercount likely impacts
  - Input channels
  - Daisy chains
  - Translator relays
  - Mexican and Canadian Stations

# An Unexplained Rush

- 15,000 wrongs don't make a right; Google's analysis is careless and uninformed
- After six years under the current TVWS rules, only 600 devices nationwide – why is there such urgency now?
- Spectrum Act authorizes the FCC to repack only to make spectrum available for auction – not to give away to Google and others
- At a minimum, rather than guess at spectrum recovery amounts and impacts, the FCC should wait until after the auction when it knows the relevant facts