

July 5, 2016

Ex Parte

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

Re: *Protecting and Promoting the Open Internet*, GN Docket No. 14-28

Dear Ms. Dortch:

On June 30, 2016, Joby Fortson and Tom Jenkins of Nielsen Holdings plc (“Nielsen”), and I met with Scott Jordan and Antonio Sweet of the Office of Strategic Planning and Policy Analysis, Betsy McIntyre, Judith Dempsey, and Karen Sprung of the Wireless Telecommunications Bureau, Jerusha Burnett of the Consumer and Governmental Affairs Bureau, and Bee Moradi of the Office of General Counsel. In that meeting, Nielsen reviewed the attached presentation with the staff. We explained the geographic scope of Nielsen’s drive test program, which currently covers 220,000 road miles. In addition, we explained the Nielsen Mobile Performance program, which uses a panel of real smartphone consumers to measure mobile usage and experience. Insights from these programs range from overall market results to specific streets in major urban downtown areas and interstate highways, to specific venues where consumers frequently go (e.g., airports, hospitals, universities, shopping centers, and others).

If you have any questions, please communicate with me at (202) 730-1311 or jveach@hwglaw.com.

Sincerely,



Julie A. Veach
Counsel to Nielsen Holdings plc

cc: Scott Jordan
Antonio Sweet
Betsy McIntyre
Judith Dempsey
Karen Sprung
Jerusha Burnett
Bee Moradi



NIELSEN MOBILE MEASUREMENT

COMPLIANCE OPTION FOR THE OPEN INTERNET
TRANSPARENCY RULES

TODAY'S DISCUSSION

- Overview of Nielsen's Mobile Network Measurement Solutions
- Open Internet Transparency
- Next Steps

4 WAYS TO MEASURE MOBILE

Active/Scripted Testing

User or Testing company actively tests the network. Performs predefined tasks.

Upload/Download/Voice Calls – Attempt to simulate consumer behavior and mobile experience. Fixed file sizes, types of files and test scripts.



Drive Test

Advantages:

- Voice and data
- Identical tests
- Ultra-detailed metrics
- Controlled/repeated area

Disadvantages:

- 2x to 3x per year
- Limited scripts/tests
- Limited devices (1 per operator)
- Limited time of day
- Limited locations
- Limited operators



User Activated

CLICK: Begin
Test Now

Advantages:

- Anywhere user desires
- Anytime desired
- Multiple devices

Disadvantages

- Large file sizes (data use)
- No/limited app results
- No voice results
- Low quantity of results
- Operators can identify



Background Activated

Automatically Test
Periodically

Advantages:

- Collects everywhere
- Collects anytime
- Controlled tests (same)
- Multiple devices

Disadvantages

- Med/large files (data use)
- No/limited app results
- No voice results
- Operators can identify

Passive/Unscripted Testing

Results are based on what consumers do on their own for all calls, data uploads/downloads, wifi connections, and apps.

No scripts used. Only real results from actual consumers.



Consumer Uses Device Normally

Advantages:

- Actual consumer experience
- Collection 24x7 (billions of points)
- All applications collected
- Speed/throughput
- Voice collection (inc. VoLTE)
- Coverage
- Collects everywhere/location
- Multiple devices
- Minimal extra data use
- All operators
- Operators can't identify

Disadvantages

- No controlled tests
- Tests not standardized
- Less detailed metrics



OVERVIEW-NIELSEN DRIVE TEST

How does Nielsen measure mobile broadband performance and experience? Drive Test

Drive Test – Active/Scripted Testing

- More than 15 years of Drive Test Expertise
- Viewed as the market leader and largest provider of Drive Test results to Mobile Operators
- 199 Markets (MSAs) – The largest program in the US
 - Top 125 Markets 3x per year
 - Covering 225M pops
 - 220,000 miles collected/reported per drive (over 1.5M miles driven)
- Collection/Results
 - Voice (Circuit and VoLTE)
 - Data (Uploads and Downloads, Speed, Reliability, 2G/3G/4G technology, Coverage)
 - Detailed metrics including Network Engineering level of detail



OVERVIEW-NIELSEN DRIVE TEST

Fleet of custom-outfitted drive test vehicles.



The latest devices used to test mobile voice and data networks across the US.

Large operations team supporting the program monitoring results and performing rigorous Quality Control throughout testing.





OVERVIEW-NIELSEN DRIVE TEST

Washington, DC Drive Route
(3000+ Reported Miles)

Same Route Every Year = Consistency
and Comparisons to prior years

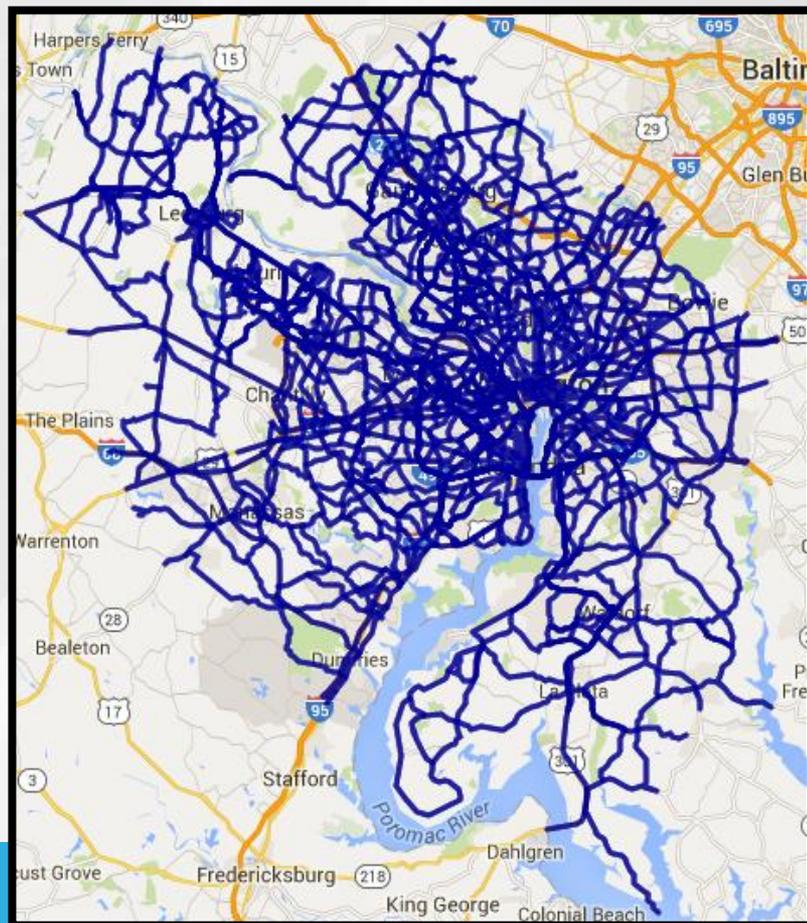
Data (2G/3G/4G LTE)

Voice

VoLTE

3x per year

Engineering level of detail





OVERVIEW-NMP

How does Nielsen measure mobile broadband performance and experience? Nielsen Mobile Performance (NMP)

NMP – Passive/Unscripted

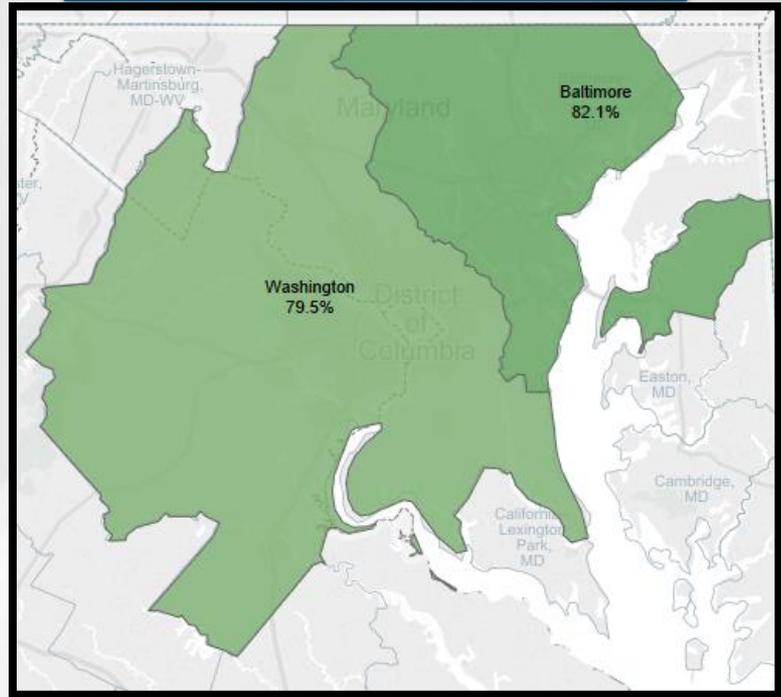
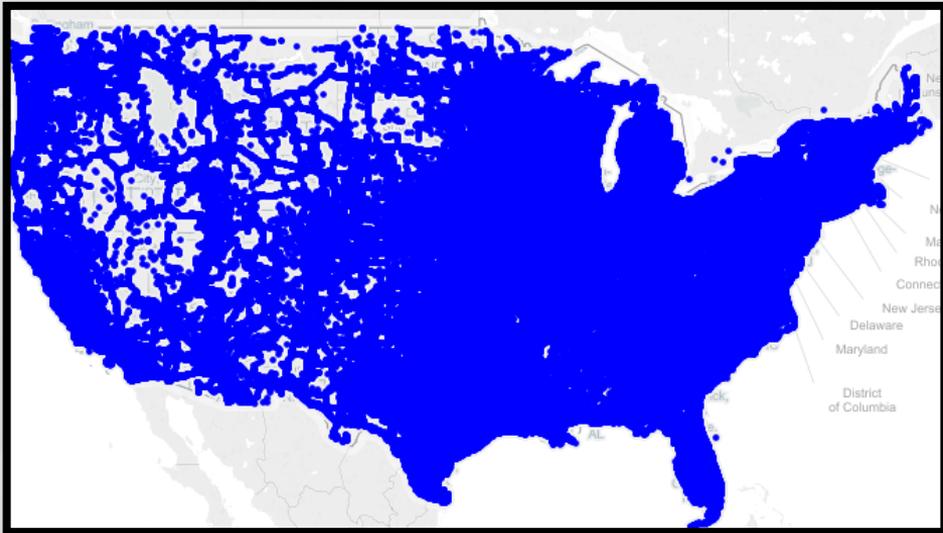
- Passive measurement of the mobile consumer's actual experience, 24/7
 - Panel of >50k panelists (growing to 200K soon) with 500,000,000 real consumer experience events reported every quarter across the US. When, where and how consumers use their devices.
 - Measuring All:
 - Apps (Over 100K apps collected)
 - File Sizes (above 150Kb)
 - Network Information/Technologies (Mobile and WiFi)
 - Locations (Indoors, On-road, Venues, etc.)
 - Voice and Data
 - Thorough Quality Control process to ensure the most accurate results



OVERVIEW-NMP

Nationwide Results

Market/MSA Details
Example: % LTE Coverage



Same details available by Operator

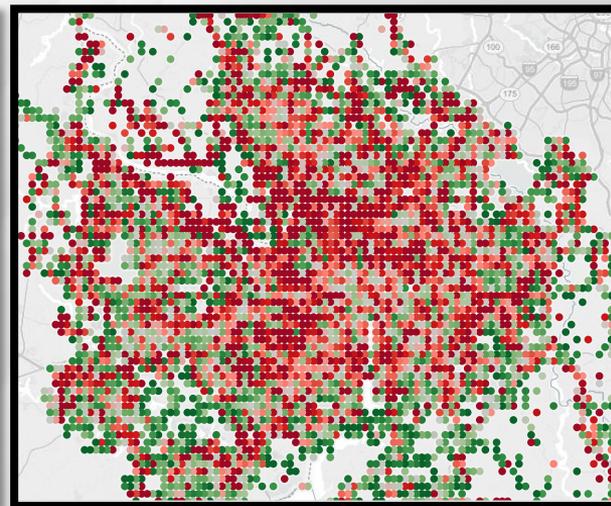
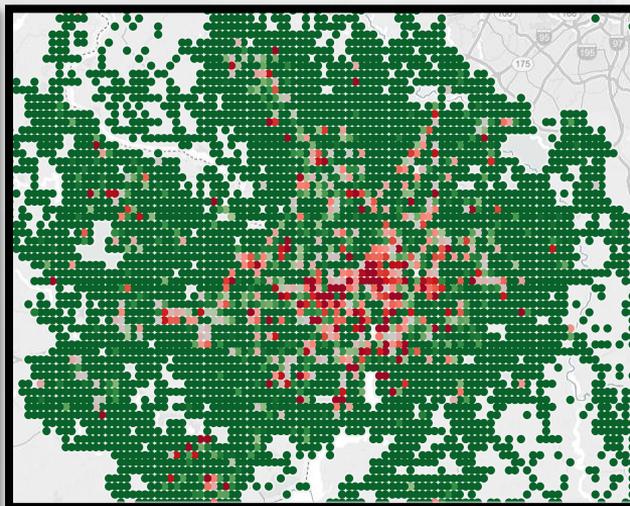
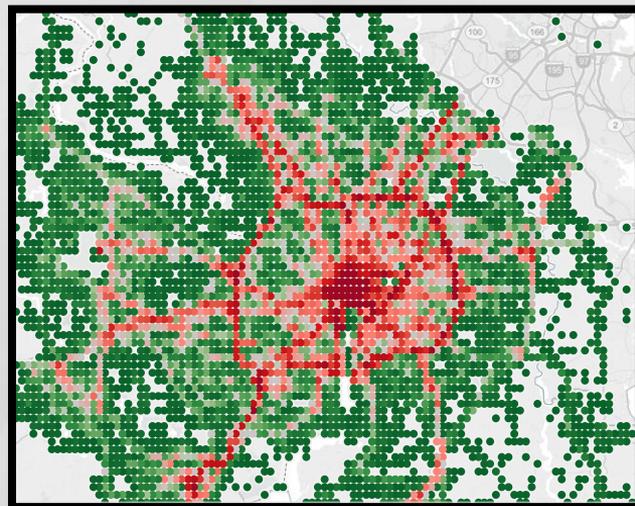


OVERVIEW-NMP

Detailed Location Results
Most People On Mobile (RED)

Detailed Location Results
Most Amount of Data Used (RED)

Detailed Location Results
Fastest Data (RED)



Same details available by Operator for Voice/VoLTE, WiFi, and other metrics

OPEN INTERNET MOBILE DISCLOSURES

Service Tiers	Speed	Peak Usage
<ul style="list-style-type: none"> NMP and Drive Tests report collected data by network technology. Drive Test can even report Frequency Band. 	<ul style="list-style-type: none"> NMP and Drive Test capture upload and download speeds plus any attempt to connect to an IP address over cellular and whether it is successful or fails. Drive Test has 3 different file sizes. NMP measures all file sizes above 150Kb. 	<ul style="list-style-type: none"> NMP measures real consumer usage 24x7 and can report down to the millisecond level of detail for all markets. NMP can also report how much data is used on Mobile vs WiFi by time of day.

Geographic Granularity	Latency	Packet Loss
<ul style="list-style-type: none"> Nielsen Drive Test and NMP results are captured at the exact point where the test occurred. Results can be summarized by various geographies. 	<ul style="list-style-type: none"> Nielsen Drive Test and NMP are able to report latency for each mobile data connection/session in any range or format. 	<ul style="list-style-type: none"> Nielsen Drive Test is able to determine packet loss for each test as well as average packet loss across all tests. NMP is being enhanced to include additional metrics and it is anticipated Packet Loss will be included in the new metrics.

NEXT STEPS

- Your questions
- Further technical discussions
- Future opportunities for designation as a safe harbor



AN UNCOMMON SENSE
OF THE CONSUMER™

Tom Jenkins
Vice President-Network Solutions
Nielsen

Ph +1 (214) 536 7906
thomas.jenkins@nielsen.com

Joby Fortson
Vice President-Federal Government Affairs
Nielsen

Ph +1 (202) 777 7213
joseph.fortson@nielsen.com

