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**REDACTED – FOR PUBLIC INSPECTION**

May 31, 2012

**VIA ECFS AND HAND DELIVERY**

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

**FILED/ACCEPTED**

**MAY 31 2012**

**Federal Communications Commission  
Office of the Secretary**

**Re: *Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC for Consent to Assign Licenses; Application of Cellco Partnership d/b/a Verizon Wireless and Cox TMI Wireless, LLC for Consent to Assign Licenses, WT Docket No. 12-4, Ex Parte***

Dear Ms. Dortch:

Cellco Partnership d/b/a Verizon Wireless herewith submits the attached *ex parte* notice. The notice contains Highly Confidential Information subject to the Second Protective Order (DA 12-51) in the above-referenced proceeding.

Pursuant to the terms of the Second Protective Order, two copies of the Redacted version of the attached notice are being filed with the Office of the Secretary. The Redacted version of the notice is also being filed electronically through the Commission's Electronic Comment Filing System. In addition, one copy of the Highly Confidential version of the notice is being delivered to the Office of the Secretary and two copies are being delivered to Sandra K. Danner of the Wireless Telecommunications Bureau's Broadband Division.

Should any questions arise concerning this filing, please do not hesitate to contact the undersigned.

Sincerely,

No. of Copies rec'd 0 + 1  
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**Attachments**

**cc:** Rick Kaplan  
Jim Schlichting  
Tom Peters  
Susan Singer  
Joel Taubenblatt  
Austin Schlick  
Sean Lev  
Joel Rabinovitz  
Charles Mathias  
Louis Peraertz  
Paul Murray  
Jim Bird  
Sandra Danner  
Best Copy and Printing

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**Ex Parte**

**VIA HAND DELIVERY**

Ms. Marlene H. Dortch  
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Federal Communications Commission  
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**Re: *Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo, LLC for Consent to Assign Licenses; Application of Cellco Partnership d/b/a Verizon Wireless and Cox TMI Wireless, LLC for Consent to Assign Licenses, WT Docket No. 12-4***

Dear Ms. Dortch:

On May 30, 2012, Bill Stone, Executive Director - Technology, Verizon, as well as Michael Glover, Kathleen Grillo, Tamara Preiss, and John Scott of Verizon, and Mia Hayes of Willkie Farr & Gallagher, outside counsel to SpectrumCo, met with the following Commission staff: Rick Kaplan, Jim Schlichting, Tom Peters, Susan Singer, Joel Taubenblatt, Austin Schlick, Sean Lev, and Joel Rabinovitz. The Verizon representatives (except for Mr. Glover) and Ms. Hayes also met separately with Charles Mathias, Legal Advisor to Chairman Genachowski; Louis Peraertz, Legal Advisor to Commissioner Clyburn; and Paul Murray, Legal Advisor to Commissioner Rosenworcel.

During the meetings, Mr. Stone reviewed and discussed the points set forth in the attached written presentation entitled "Verizon Wireless: Meeting Customers' Broadband Needs." Mr. Stone discussed Verizon's LTE deployment to date and its plans to augment LTE network capacity through the deployment of AWS spectrum. He also discussed Verizon's data usage projections, resulting capacity constraints, and plans to address those capacity needs,

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consistent with the attached presentation. He also stated that Verizon devotes more than half of its network capital budget to investing in multiple techniques to increase spectrum capacity, and that it accounts for these techniques in its spectrum need projections. However, he explained that these techniques are not sufficient to address growing capacity constraints given the extraordinary increase in customers' demand for LTE. For example, he noted consistent with the attached presentation that Verizon plans to redeploy PCS spectrum for LTE as soon as it is possible to do, but the PCS spectrum cannot accommodate the dramatic growth in customer LTE demand and is instead needed to further supplement the AWS spectrum being acquired.

Mr. Stone also discussed the company's most recent update of its projections for traffic on its network, which was prepared in the regular course of business and uses the most current available actual usage data. He stated that those projections indicate that the number of LTE devices used by customers, the usage per device by each customer, and traffic on the LTE network are all projected to grow faster than had previously been forecast. Mr. Stone stated that, based on these updated projections, the company forecasts greater capacity constraints across its LTE network, making the need for additional AWS spectrum even more urgent. Attached is a copy of those projections, entitled "Data/Voice/SMS Traffic Projection, Wireless Access Planning, May 23, 2012."

This letter is being filed pursuant to Section 1.1206 of the Commission's Rules. Should you have any questions, please contact the undersigned.

Sincerely,



Attachments

cc: Rick Kaplan (redacted)  
Jim Schlichting (redacted)  
Tom Peters (redacted)  
Susan Singer (redacted)  
Joel Taubenblatt (redacted)  
Austin Schlick (redacted)  
Sean Lev (redacted)  
Joel Rabinovitz (redacted)  
Charles Mathias (redacted)

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Louis Peraertz (redacted)  
Paul Murray (redacted)



# **Verizon Wireless: Meeting Customers' Broadband Needs**

**Bill Stone, Executive Director - Technology, Verizon  
Presentation in WT Docket No. 12-4**

**May 30, 2012**





# Data Usage Growth

- **EVDO Traffic**

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- **Verizon's Customers Require Substantially More Spectrum for LTE**

- Without sufficient spectrum, customers will experience slower speeds, longer latency, and degraded service quality

- **High and Growing Customer Demand for LTE**

- Increasing variety of LTE devices
- Higher use of bandwidth-intensive applications such as video streaming

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- **LTE Traffic Forecasting**

- Regular business practice based on projected number of devices and usage per device
- YE2015 LTE traffic projected to be 5X higher than peak EVDO traffic
- Semiannual update of traffic forecast now complete
- LTE over-running prior number of devices and usage per device forecasts



# Data Forecast Graph

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# Spectrum Capacity Constraints

- **Spectrum Forecast Based on September 2011 Traffic Forecast**
    - Projects spectrum capacity vs. projected demand on cell site sector basis
    - Many larger markets in West and East constrained in 2013
    - Many more markets nationwide, large and small, constrained in 2015
    - 20 x 20 AWS spectrum needed to absorb rapid growth in customer demand
  
  - **Spectrum Forecast Based on May 2012 Traffic Forecast**
    - Additional LTE actual traffic through April 2012
    - Includes LTE sites that launched through April 2012
- {{
- **Alternatives Cannot Meet Growing Need for More Capacity**
    - Over half of Network capex invested in network capacity enhancements
    - Enhancements already accounted for in capacity forecasts
      - Cell splitting
      - Small cells
      - LTE Advanced
      - WiFi
- }}



# PCS Spectrum Will Not Address Need

- **Plan to redeploy PCS spectrum for LTE beginning in 2015**
  - { {
  - At least 5x5 MHz required to meet service quality objectives
  - { {
  - Redeployed PCS spectrum will not supply enough capacity to meet LTE traffic demand
  - } }





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# Data/Voice/SMS Traffic Projection

Wireless Access Planning

May 23<sup>rd</sup>, 2012

- Preliminary Draft -

# EOY Device Mix



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# Smartphone migration/growth



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# MB/Mo Usage per Device/Technology



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# 1xRTT/EVDO Assumptions



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# LTE Assumptions



# Data Usage



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**Data**



**{{**

**}}**

# Voice Usage



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**Voice**



**{{**

**}}**

# SMS Usage



{

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**SMS**



**{{**

**}}**

# Home Fusion Usage



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