BEFORE THE FEDERAL COMMUNICATIONS COMMISSION
Washington D.C. 20554

In the Matter of

Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunication Act of 1996, as Amended by the Broadband Data Improvement Act

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COMMENTS OF THOMAS W. WEST
ON
TENTH BROADBAND PROGRESS REPORT NOTICE OF INQUIRY

Submitted: September 4, 2014

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I. INTRODUCTION

While both Commissioner Pai and Commissioner O'Reilly approved in part this Inquiry, they both called for a focused and straightforward approach to determining “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”

In response to their plea my comments and recommendations are focused on two issues: 1) What should be the broadband speed standard to reach into households now and in the future? and, 2) How should mobile wireless be treated in advancing the deployment of broadband to all Americans?

II. COMMENTS AND RECOMMENDATIONS

A. One Broadband Speed Standard to Reach Into All Households

As stated in Paragraph 23, “the July 2010 National Broadband Plan set a goal that 100 million U.S. homes should have affordable access to actual speeds of at least 100 Mbps/50 Mbps by 2020, and as an interim milestone, by 2015, 100 million U.S. homes should have affordable access to actual speeds of 50 Mbps/25 Mbps.” Yet, four years later the Federal Communications Commission (FCC) is still questioning whether or not to raise the current standard of 4 Mbps/1 Mbps. And, now in this Inquiry the FCC wants to complicate matters by asking whether there should be multiple benchmark standards (Paragraphs 4; 22-23; 40).

In his Statement for this Inquiry Chairman Wheeler asks the question “as more people adopt faster broadband speeds, we are asking if all consumers, even those in the most rural regions, should have greater access to better broadband.” The answer to Chairman Wheeler and the full Commission is YES. The goal should be to provide all American households the same minimum broadband capacity access, regardless of the geographic location of the household.

There is no substantive rationale provided to warrant having multiple standards. One standard sends a clear and easily understood message to all parties.
I recommend the FCC reset the target dates for achieving the goals set forth in the 2010 *National Broadband Plan*. The following are the recommended standards and dates to provide all households in America access to minimum broadband capacity:

- **By the end of 2016** 30 Mbps/15 Mbps
- **By the end of 2020** 50 Mbps/25 Mbps
- **By the end of 2025** 100 Mbps/50 Mbps

Achieving these standards and dates is certainly a challenge. It calls for fresh perspective on the strategies we employ going forward. Clearly, private sector providers have not been able to meet the total need after having 30 years of free-market opportunity. Nor have federal or state programs been able fill all the remaining “potholes”. Yet, the FCC continues to cling to these strategies.

These old models do not seem appropriate going into the future. Given the importance of broadband in our society for the remainder of this century I believe we now need to involve all the stakeholders in tackling this challenge. It is going to take the cooperation and collaboration of all the stakeholders- the telecommunications providers; groups of individual end users/providers; corporations and businesses as consumers and producers of products and services; providers of services including education, health services, and public safety; government agencies at the federal, state, county and community levels. To my knowledge this has only happened in very limited circumstances.

The FCC can provide the leadership and serve as the facilitator to bring together such collaborative efforts across this country. (*Further elaboration is for another day*).

### B. Mobile Wireless Should be Treated as a Complementary/Conditional Technology

In its own statements (Footnote 72 and Paragraph 34) the FCC states that data sources for mobile wireless appear to be not reliable and overstate deployment to a significant degree; consequentially data on mobile wireless services were excluded in the last report.

I have not found research documentation that has been conducted that would support the thesis that mobile wireless can replace terrestrial fiber-based technology to meet the broadband needs at the household level. Nor does this Inquiry document cite such research.

In the field the issues of terrain, technology and costs are raised as barriers to having mobile wireless as the sole technology solution for broadband
access. In the parts of the country that have hills, hollows, trees and/or fog terrain becomes an issue to deployment and quality of services. As for technology, mobile wireless is a shared resource so one cell tower at LTE CAT4 speeds of 150 Mbps can only support 15 simultaneous user streams at 10 Mbps at one time. While more of a digital divide issue cost of mobile services, especially in rural areas of this country, is a barrier to access.

The fact that this Inquiry raises questions about measuring latency, usage and other characteristics (Paragraphs 25-30) suggests that mobile wireless is not equivalent to terrestrial fiber-based technology. Verizon Wireless CEO Dan Mead was recently quoted as saying "LTE certainly can compete with broadband," said Mead, “but if you look at the physics and the engineering of it, we don't see LTE being as efficient as fiber coming into the home.” Chris Ziegler in The Verge put it more pointedly. Anyone who uses both knows that it's a ridiculous argument — LTE service is usually slower, less consistent, and comes with deeply restrictive data caps,” he wrote.

While we would all agree that mobile wireless is a valuable resource in our mobile society, the question the FCC needs to address as part of this Inquiry—“Is mobile wireless an equivalent to terrestrial fiber-based infrastructure in meeting the need to provide broadband access into all households across America?”

It is my opinion the answer is NO. The evidence, to date, suggests that mobile wireless is primarily a complementary technology to fiber-based technology designed to best serve individuals while they are on the move. While on the move people will put up with issues such as latency and intermittent drops. However, when at home they expect solid and consistent performance.

At best, if mobile wireless is the only technology solution available to reach a home the FCC should identify it as CONDITIONAL. In essence, the goal and long-term strategy should be to reach into all the households across America with terrestrial fiber-based technology.

Tom West
44 Coral Reef
Newport Coast CA 92657
tom@westfamily.org