May 11, 2013

Below is the text of an email (the attachment referred to is not included since it is irrelevant to this Comment) sent to Professor Mayo at Georgetown University pointing out a fundamental error in the methodology and analyses presented in the McDonough School of Business' report, "The Economic Implications of Restricting Spectrum Purchases in the Incentive Auctions," to which he wrote the Introduction. This report was filed by him on May 3rd, 2013 as a Comment in FCC Docket 12-269 concerning Mobile Spectrum Holdings - http://apps.fcc.gov/ecfs/document/view?id=7022309583.

The findings of this report are also directly relevant to FCC Docket 12-268 on Incentive Auctions. However as explained in the email the use of a fundamentally flawed metric for a mobile operator's spectrum efficiency calls into question the validity and credibility of this report's findings with respect to the impact of restrictions on the bidding eligibility of Verizon and AT&T in the Incentive Auctions in terms both of the revenues generated by the Auctions and their broader downstream economic consequences.

We therefore urge the FCC to take no account of this report in its deliberations in both Dockets or to request that the report be revised and the findings modified accordingly, and the report then re-filed presenting the results of analyses and calculations based on defensible claims and premises.

Text of email to Professor Mayo, May 7, 2013:

Dear Professor Mayo,

We have read the report published by the McDonough School of Business on April 30, "The Economic Implications of Restricting Spectrum Purchases in the Incentive Auctions." In the introduction to this report you write, "I believe this study provides important inputs for informed public discussion and can make a major contribution to the FCC and its stated desired for decisions driven by facts and data. "

Unfortunately the methodology, analyses and the "facts" presented in the report fall far short of the standard expected from Georgetown University and the McDonough School. On the contrary, to a large extent the report is a dressed up version of the propaganda presented by Verizon and AT&T.

One damning indicator (among several others) of the sloppy, fact-averse content and reasoning of this report lies in its use of a spurious metric for calculating a wireless operator's spectrum "efficiency". According to this metric, an operator's spectrum efficiency is calculated by dividing the operator's total (i.e., nationwide) number of subscribers by its average spectrum depth (the total number of MHz on average in its spectrum licenses in the areas in which it operates). This metric has been used by Verizon and by the mobile sector's trade association, the CTIA, to claim that Verizon and AT&T are the two most spectrum-efficient operators in the U.S. It has also been used to claim that the U.S. mobile industry is the most spectrum-efficient in the world!

For the purposes of its analysis, this metric portrays that all the customers of an operator (and the total population within its license areas) are located in one area (or cell). Consequently, they all have to share one and the same set of frequency channels. This portrayal is absurd and obviously so. The whole point and genius of cellular technology is that the same frequencies or channels are reused many times across different license areas. In other words, the same frequencies are only shared by the customers located within a cell and not, for example, in the case of Verizon, by all its approximately 100 million or so customers, who are located throughout the U.S.

The metric is fatally flawed logically and mathematically. It is devoid of any probative value, since it is not based on the actual cellular network structure within which operators strive to maximize the efficiency of use of the spectrum in which they deploy mobile networks. Use of this spurious metric betrays a fundamental lack of understanding of the underlying technical and economic characteristics of the deployment and operation of cellular networks. The inclusion of this metric in the McDonough report's analytical framework destroys its credibility as a source of fact-based insights into the likely impact of bidding eligibility conditions on the outcomes of the Incentive Auctions.

For your information, over the past 12 months we have brought the fundamental fallacy in the Verizon/CTIA/McDonough metric for spectrum efficiency to the attention of both Verizon and the CTIA through several channels, including but not limited to FCC filings. There has been no response to, nor any acknowledgement, from either Verizon or the CTIA. No attempt has been made to rebut the reasons we have presented to show that the metric is baseless, and therefore that claims of superior performance based on its application are deceitful.

It may reasonably be deduced from this silence that the exposure of the spurious nature of this measure of spectrum efficiency cannot be rebutted. To give just one example of what we have pointed out, application of the metric results in findings that China Mobile and the Chinese mobile sector are over three times more efficient than Verizon and the U.S. mobile sector respectively. The CTIA's use of this metric finds incredibly that U.S. mobile operators are over eight times more efficient than their Canadian counterparts, a result that comes as somewhat of a surprise to our northern neighbors (even more so since Mexico is also "revealed" as being substantially more efficient than Canada in this regard).

Nevertheless there are organizations and individuals, and regrettably the McDonough School has now joined this group, who persist in presenting this metric or its calculations as "evidence" of the superiority of the performance of the largest U.S. mobile operators. In some cases the proponents of the metric are regular recipients of funds from these operators to produce their "independent" analyses. Disturbingly this falsehood, like others before it, may become "accepted wisdom" through frequent and loud repetition, unless its inherent invalidity is exposed openly, widely, and definitively in, as you say, an "informed public discussion."

It is obvious who will benefit from the unsupported and incorrect conclusions that use of the metric can produce if it becomes "accepted wisdom". It ignores the basic structure of cellular communications that lies at the core of engineering the optimum use of spectrum so as to maximize the economic potential and capacity for wealth creation by mobile operators, and more importantly in the long run by others who use and exploit mobile broadband communications services.

We would be happy to discuss the report further in whatever format or channel you feel are suitable. We attach a recent article about the Sprint/SoftBank/Dish/Clearwire transactions that we hope will assure you of the extent of our knowledge and experience as well as our bona fides in addressing critical

issues in the telecommunications and related areas of the economy and society.

Sincerely,

Martyn Roetter, D.Phil. & Alan Pearce, Ph.D.