

## APPENDIX A – CALCULATION OF RUNNING AVERAGES

### Background

Nextel calculated its spectrum holdings for these Comments using the center point coordinates of the top 100 markets in the U.S. based on the site-specific and auctioned geographic-area licenses owned and controlled by Nextel. Analysis of whether a specific frequency is available at a proposed site in a given market was calculated for a proposed transmitter site with a height above ground of 200 feet and an effective radiated power of 90 watts. Nextel's analysis considered a license controlled by Nextel if Nextel owns the license, has a contract or option to purchase the license or manages the operations of the license. In addition, frequencies controlled by Nextel through cross-border sharing agreements were included.

### Nextel's 800 MHz Spectrum

An 800 MHz frequency was considered available if 1) the FCC's required distance separations<sup>1</sup> were provided to all co-channel<sup>2</sup> licenses not controlled by Nextel and 2) Nextel controls the auctioned Economic Area ("EA") license for that frequency, or the 22 dBu contour from the proposed transmitter site would not expand the composite 22 dBu contour from Nextel-controlled licenses on that frequency.<sup>3</sup> For example, in Boston Nextel has 409 800 MHz frequencies available for its use today (which converts to 20.5 MHz). Similarly, in Kansas City Nextel has 426 800 MHz frequencies available for its use today (which converts to 21.3 MHz). In a smaller market, such as Enid, Oklahoma, Nextel has 18.7 MHz available for its use. In a "Border Area" market, such as San Diego, where the 800 MHz spectrum is divided between the United States and Mexico, Nextel has 176 800 MHz frequencies available for its use today (which converts to 8.8 MHz). Nextel took these findings for each of 100 cities nationwide and calculated a running average. Based on an average of the top 100 cities, Nextel's running average is 18.0 MHz per city.

### Nextel's 900 MHz Spectrum

Similarly, a 900 MHz frequency was considered available if 1) the FCC's required distance separations were provided to all co-channel licenses not controlled by Nextel and 2) Nextel controls the auctioned Metropolitan Trading Area ("MTA") license for that channel, or the 40 dBu contour from the proposed transmitter site would not

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<sup>1</sup> 47 CFR § 90.621(b).

<sup>2</sup> For co-channel distance separation purposes only, 800 MHz frequencies offset by 12.5 kHz were considered to be co-channel.

<sup>3</sup> The composite 22 and 40 dBu contours were calculated using the licensed antenna height and the maximum allowed effective radiated power.

expand the composite 40 dBu contour from Nextel controlled licenses on that frequency.<sup>3</sup> Thus, Nextel's spectrum holdings differ from the initial findings of the FCC in its NPRM, which only examined MTAs and not incumbent Designated Filing Area ("DFA") licensees who may operate systems in or near some major U.S. cities. In addition, Nextel's calculation of its 900 MHz spectrum holdings includes recently approved transactions, such as Neoworld License Holdings, which had not been approved by the FCC at the time of Nextel's White Paper filing or at the time of the issuance of the NPRM, but should be included now.<sup>4</sup>

#### Nextel's 700 MHz Spectrum

A 700 MHz frequency was considered available if Nextel controls the Major Economic Area ("MEA") in which the proposed transmitter site is located. Incumbent co-channel and adjacent channel television broadcast stations were not considered in determining availability. Each 700 MHz license is a 4 MHz block license.

#### Nextel's Calculation of Existing High-Site SMR and B/ILT Use

Nextel calculated the running average of current 800 MHz use by high-site SMR and B/ILT entities by using the center point of the nation's 100 largest cities. Nextel identified existing non-Nextel licensees within 22.5 miles of this central point ("the core") of each city. Based on this analysis, Nextel calculates that the running average of incumbent SMR and B/ILT use in the top 25 cities is approximately 5 MHz per city. In the top 100 cities the incumbent SMR and B/ILT spectrum use is 4 MHz per city.

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<sup>4</sup> The Wireless Telecommunications Bureau granted its consent to the proposed transaction via Public Notice on April 19, 2002.