

# **AT&T Inc.**

## **Proposed Acquisition by T-Mobile US, Inc. of Sprint Corporation**

### **NARRATIVE RESPONSE OF AT&T INC. TO FCC DATA REQUESTS**

**ISSUED ON SEPTEMBER 10, 2018**

**(Attachment A: Offered Capacity, Traffic Demand; Attachment B: Cost Data)**

**December 7, 2018**

***REDACTED—FOR PUBLIC INSPECTION***

**NARRATIVE RESPONSE TO FCC DATA REQUESTS**

**OFFERED CAPACITY DATA**

The file entitled “Offered Capacity Table” contains information responsive to the portions of this request that call for deployed frequencies and bouncing busy hour (“BBH”) metrics for each quarter from 1Q2015 through 3Q2018.<sup>1</sup>

Columns A through F identify the year, month, operator (*i.e.*, AT&T), county FIPS code, CMA, and relevant technology.<sup>2</sup>

Columns G through N contain, for each quarter and each county, the frequency bands deployed by AT&T, and the combined uplink and downlink bandwidth measured in MHz deployed for each band,<sup>3</sup> and column O contains the sum of the bandwidth used by AT&T in each quarter and county.

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<sup>1</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]** AT&T is separately providing responsive information related to network latency in the file entitled “Network Performance Metrics,” described below.

<sup>2</sup> For AT&T, the relevant technologies are LTE, UMTS, and GSM. AT&T shut down its GSM network in the first quarter of 2017, and thus AT&T does not have information responsive to this request for its GSM network after that time.

<sup>3</sup> In some counties, AT&T uses the same frequency bands with different technologies. For example, AT&T may use the same 850 bands for LTE and UMTS in different parts of the same county. To avoid double counting spectrum in the Exhibit, AT&T applied the following rule. If at least 2% of cell sites in a county use the band for LTE, then AT&T’s deployed bandwidth for that band is assigned to LTE for that county. If fewer than 2% of cell sites in a county use the band for LTE, and at least 2% of cell sites in the county use the band for UMTS, then AT&T’s deployed bandwidth for that band is assigned to UMTS for that county. Finally, if fewer than 2% of cell sites in a county use the band for LTE or UMTS, and at least 2% of cell sites in a county use the band for GSM, then AT&T deployed bandwidth for that band is assigned to GSM.

Columns P through R contain estimates of mobile offered traffic (data and voice) in Gigabytes during the BBH, as measured by AT&T in the ordinary course of business.<sup>4</sup> For LTE and UMTS, the BBH metrics are measured in Gigabytes per hour for combined data and voice, and are computed separately for uplink and downlink. For GSM, the BBH metrics are in Erlangs per hour for combined data and voice. **[BEGIN HIGHLY CONFIDENTIAL**

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**TRAFFIC DEMAND DATA**

The file entitled “Traffic Demand Table” contains information responsive to the portions of this request that call for BBH and monthly traffic metrics for each quarter from 1Q2015 through 3Q2018, and projections for each quarter through 2024 to the extent AT&T maintains such information in the ordinary course of business.<sup>5</sup>

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<sup>4</sup> These county-level BBH metrics reflect the instantaneous capacity available for each county, which is the capacity that would be available if all deployed spectrum in each county for the relevant technology (*i.e.*, LTE, UMTS, or GSM) were used simultaneously. It is important to note that demand is often concentrated in particular areas within a county at particular times of day (*e.g.*, in business districts during working hours). As a result, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]**

<sup>5</sup> AT&T is separately providing responsive information related to network latency in the file entitled “Network Performance Metrics,” described below. In addition, AT&T is separately providing monthly subscriber counts in response to the “Customer Data” table.

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Columns A through F contain, respectively, the year, month, network operator (*i.e.*, AT&T), county FIPS code, CMA number, and relevant technology.<sup>6</sup>

Columns G through J contain BBH metrics as maintained by AT&T in the ordinary course of business. The BBH metrics differ for LTE, UMTS, and GSM. The LTE BBH metrics are measured in Gigabytes per hour, separately for uplink and downlink. The UMTS BBH metrics are measured in Gigabytes per hour for data, separately for uplink and downlink, and in Erlangs per hour for voice. The GSM BBH metrics are measured in Erlangs per hour for both data and voice.<sup>7</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]**

Columns K through M contain average monthly traffic metrics as maintained by AT&T in the ordinary course of business. The average metrics differ for LTE, UMTS, and GSM. The LTE metrics contain the average monthly downlink and uplink traffic measured in Gigabytes per hour. The UMTS and GSM metrics contain average monthly downlink and uplink data traffic measured in Gigabytes per hour, and monthly voice traffic measured in Erlangs per hour.<sup>8</sup>

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<sup>6</sup> For AT&T, the relevant technologies are LTE, UMTS, and GSM. AT&T shut down its GSM network in the first quarter of 2017, and thus AT&T does not have information responsive to this request for its GSM network after that time.

<sup>7</sup> For GSM, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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**[END**

<sup>8</sup> These metrics are computed by dividing the total Gigabytes for the month by the total number of hours in the month.

The exhibit also contains forecasts for the figures described above for AT&T's LTE and UMTS technologies, as maintained by AT&T in the ordinary course of business. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]** There are no GSM forecasts because AT&T shut down its GSM network in the first quarter of 2017.

**NETWORK PERFORMANCE DATA**

In response to the requests for network performance metrics specified in the Offered Capacity and Traffic Demand tables, AT&T is providing the file entitled "Network Performance Tables," which contains metrics for speed, latency, data blocking, voice blocking, and voice drops. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]**

The file (an Excel Worksheet) contains three tabs, each containing network performance metrics, respectively, for LTE data, Voice over LTE ("VoLTE"), and 3G (UMTS) data and voice.<sup>9</sup>

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<sup>9</sup> AT&T does not in the ordinary course of business maintain responsive performance metrics for its legacy GSM network, which was shut down in the first quarter of 2017.

*LTE Data Performance Metrics.* The tab entitled “LTE Data Performance Metrics” contains speed, latency, and data blocking metrics for AT&T’s LTE data network.

The speed metrics are in the columns entitled “DL DRB Throughput” (Downlink Data Radio Barrier Throughput). This metric measures the speed, in kilobits per second (kbps), from the eNodeB to the end user device. These data are provided from January 2015 through June 2018.<sup>10</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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The latency metrics are contained in the columns entitled “Round Trip Time.” **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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<sup>10</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]**

<sup>11</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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**[END HIGHLY CONFIDENTIAL INFORMATION]**

The data blocking rates are contained in the columns entitled “RAN Data Accessibility Failure Rate.” This metric is the percentage of unsuccessful LTE data session setup attempts.<sup>12</sup> These data are provided for each month from January 2015 through June 2018.

*VoLTE Performance Metrics.* The table entitled “VoLTE Performance Metrics” contains metrics related to blocked and dropped call attempts using AT&T’s Voice over LTE network.

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<sup>12</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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<sup>13</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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For dropped calls, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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*3G Performance Metrics.* The tab entitled “3G Performance Metrics” contains metrics relating to speed, data blocking, voice blocking, and voice dropped calls for AT&T’s 3G (UMTS) network.<sup>15</sup>

The speed metrics are in the columns entitled “RAN Throughput (kbps).” This metric measures the average downlink High Speed Packet Access (“HSPA”) throughput between the radio access network (“RAN”) and the end user device. These data are provided from January

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<sup>14</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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<sup>15</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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2015 through June 2018.<sup>16</sup> AT&T does not in the ordinary course of business maintain uplink speed throughput data.

The data blocking metrics are contained in the columns entitled “3G Data Accessibility Failure Rate.” This metric is the percentage of 3G data sessions that failed to successfully set up on AT&T’s 3G Radio Access Network.<sup>17</sup> These data are provided for each month from January 2015 through June 2018.

The voice blocking metrics are contained in the columns entitled “3G Voice Accessibility Failure Rate.” This metric is the percentage of voice call attempts that failed to successfully set up on the 3G network.<sup>18</sup> These data are provided for each month from January 2015 through June 2018.

The voice dropped call metrics are contained in the columns entitled “3G Voice Drop Call Rate.” This metric is the percentage of successfully connected 3G voice calls that are dropped by the mobile network.<sup>19</sup> The data are provided for each month from January 2015 through June 2018.

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<sup>16</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**  
**[END HIGHLY CONFIDENTIAL INFORMATION]**

<sup>17</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**  
**[END HIGHLY CONFIDENTIAL INFORMATION]**

<sup>18</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**  
**[END HIGHLY CONFIDENTIAL INFORMATION]**

<sup>19</sup> These metrics are computed as follows. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**COST DATA**

The file entitled “Cost Data” contains information responsive to this request for each month from January 2015 through June 2018.<sup>20</sup> As agreed to by Commission Staff, the Cost Data Exhibit does not contain data related to AT&T’s connected devices (*e.g.*, IoT, M2M).

Column A contains the month and year for the data.

Column B contains the line of business for the data: (1) consumer postpaid, (2) business postpaid, (3) prepaid voice, or (4) reseller.<sup>21</sup>

Column C contains the geographic areas for the data. **[BEGIN HIGHLY**

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<sup>20</sup> Information responsive to Column U (towers) will be provided separately in response to the Offered Capacity Table.

<sup>21</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

**[END HIGHLY CONFIDENTIAL INFORMATION]** In addition, AT&T has two types of business customers, IRUs and CRUs. An IRU customer purchases service directly from AT&T, but obtains discounts negotiated by the organization with which the customer is associated. A CRU customer obtains service from AT&T through the organization with which the customer is associated, and the organization purchases the service from AT&T. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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<sup>22</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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Column D contains subscriber counts, and Column E contains activations. These data are reported by **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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Column F contains capex at the **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[END HIGHLY CONFIDENTIAL INFORMATION]**  
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Columns G-L contain, respectively, opex, service cost, equipment cost, admin cost, depreciation cost, and amortization cost. These costs are reported by **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[END HIGHLY CONFIDENTIAL INFORMATION]**  
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Columns M-S contain retention costs, cpga, advertising cpga, handset cpga, selling cpga, average ccpu, and cost of capital. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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<sup>23</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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Columns T, V, W, and X, respectively, contain site lease costs, roaming costs, call center cost, and call center calls.<sup>25</sup> These data are reported by **[BEGIN HIGHLY CONFIDENTIAL**

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<sup>24</sup> **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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<sup>25</sup> As reflected in the table, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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Also as reflected in the table, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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