

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of )  
 )  
Revision of the Commission's Rules ) CC Docket No. 94-102  
To Ensure Compatibility with )  
Enhanced 911 Emergency Calling Systems )  
 )

**South No. 5 RSA LP Petition for Waiver  
of Section 20.18(g) of the Commission's Rules**

South No. 5 RSA LP d/b/a Brazos Cellular Communications, LLC ("Brazos"), by its attorneys and pursuant to Sections 1.3 and 1.925 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission"),<sup>1</sup> hereby requests a temporary waiver of Sections 20.18(g)(i)-(iv) of the Commission's rules.<sup>2</sup>

Brazos is a small cellular carrier providing service in rural Texas (Hardeman, Texas RSA 5, CMA656). Because of the unique circumstances Brazos faces regarding the provision of Phase II Enhanced 911 ("Phase II") service in rural Texas, Brazos requests a temporary waiver and extension of certain of the Commission's Phase II "handset" deadlines for Tier III carriers<sup>3</sup> as outlined below. As Brazos reported in its September 20, 2001 request for waiver, Brazos selected a handset-based solution to achieve Phase II compliance. Brazos presently operates a

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<sup>1</sup> 47 C.F.R. §§ 1.3 and 1.925.

<sup>2</sup> 47 C.F.R. §§ 20.18(g)(i)-(iv).

<sup>3</sup> On September 20, 2001, Brazos filed a Petition for Waiver seeking temporary relief from the Commission's Phase II compliance deadlines. In its July 26, 2002 *Stay Order*, the Commission extended certain Phase II deadlines for Brazos and other small carriers, which it classified as "Tier III" carriers. *In re Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers*, Order to Stay, FCC 02-210 (July 26, 2002) ("*Stay Order*"). In extending the deadlines for Tier III carriers as a general matter, the FCC dismissed Brazos' Petition as moot without addressing its merits.

time division multiple access (“TDMA”) network for which no handset-based E911 location solutions are available. Brazos is, however, in the process of migrating its TDMA network to a code division multiple access (“CDMA”) alternate digital technology. Brazos plans to overlay its current network with a CDMA network by the second quarter of 2004, at which time Brazos can begin to offer ALI capable handsets to its customers. Brazos specifically requests a temporary limited waiver of the “selling and activating” benchmarks set forth in Section 20.18(g)(i)-(iv) of the Commission’s rules, as modified by the *Stay Order*, to permit Brazos to implement its CDMA-based Phase II solution based on the schedule discussed below.

#### **I. Brazos’ Rural Network Realities Limit Its Phase II E911 Options**

Brazos provides analog and TDMA-based cellular service in north Texas, south of Wichita Falls. The majority of the land is used for farming and ranching. The vast majority of Brazos’ service area is comprised of sparsely-populated rural areas lacking concentrated centers of commercial and industrial activity. Because of the demographic characteristics of Brazos’ service area, Brazos strives to maximize the geographic “footprint” served by each of its cellular base stations (or cells). To maximize the efficiency and minimize the costs of providing service, overlap of the reliable service contours of adjacent cells is typically limited to areas where “hand-off” from one cell coverage area to another is essential for continuous, uninterrupted communications.

Based on the characteristics of its service area, Brazos, like many carriers that serve rural areas, has ruled out a purely network-based Phase II solution. Brazos provides service throughout most of its coverage area with cells having the minimal measure of overlap needed to permit reliable cellular communications, but far from sufficient to permit the triangulation of a mobile subscriber’s geographic position that a network-based E911 solution needs to achieve

Section 20.18(h) accuracy. In the Brazos network, an E911 caller is unlikely to be within the range of multiple cells. In addition, many of Brazos' cell sites are spaced in straight lines or a "string-of-pearls" (by roadways, for example), making triangulation a geometric impossibility.<sup>4</sup> Given the constraints posed by this network configuration, Brazos has been unable to find a network solution vendor that can achieve Section 20.18(h) Phase II accuracy in Brazos' service area. Accordingly, Brazos determined that the only E911 Phase II technology currently available to realize Section 20.18(h) accuracy requirements appears to be a handset-based solution.<sup>5</sup>

## **II. Factors Outside of Brazos' Control Have Delayed Its Implementation Plans**

Since Brazos filed its original request for waiver in September 2001, Cingular and AT&T, the two largest carriers then employing the TDMA air interface, announced that they were phasing out their use of that protocol in favor of a GSM protocol. As a result of this market development, developers of handset-based solutions announced that they were discontinuing development of Phase II solutions for the TDMA protocol, including development of a TDMA-based ALI-capable handset. The industry jettisoning of the TDMA protocol forced Brazos to abandon a TDMA-based handset solution for Phase II compliance and necessitated Brazos' examination of *new* Phase II solutions. Absent a TDMA-capable handset, Brazos was compelled to replace its entire network with a new, ALI-capable protocol. Due to market and technological factors outside of its control, Brazos' Phase II compliance plan went from simply upgrading its

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<sup>4</sup> See, generally, *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Third Report and Order, 14 FCC Rcd. 17388, ¶ 23 (1999) ("*Third R&O*").

<sup>5</sup> Brazos November 9, 2000 E911 Report at 1.

switch and selling handsets to the need for Brazos to overhaul its entire network, raising the cost<sup>6</sup> and complexity of Phase II compliance to unforeseen levels.

Brazos' decision to ultimately reject a TDMA-based solution was delayed by the lack of response and commitment that Brazos, like most rural carriers, receives from vendors.<sup>7</sup> Most handset and GPS-based technology manufacturers continued to investigate TDMA-based solutions even after Cingular and AT&T decided to move away from TDMA technology. For example, Airbiquity was trumpeting memorandums of understanding with large carriers well into 2002. After one after another handset vendor admitted that it would not be supporting the TDMA protocol, Brazos finally determined that it had no choice but to pursue another Phase II solution.

The unanticipated abandonment of the TDMA protocol left Brazos scrambling for a new, technically sound and economically rational Phase II solution. As a small, rural carrier with a customer base of approximately 5,800, Brazos must conservatively plan its network upgrades. Brazos had to weigh the advantages and disadvantages of the two prevailing ALI-capable technologies, CDMA and GSM. Brazos had to contact vendors, examine engineering specifications, and determine which technology would be the best technical fit for its rural network. In addition, technical considerations were also affected by business considerations. Since Brazos depends upon roaming revenue for a substantial portion of its revenue, Brazos had to consider which technology, CDMA or GSM, its roaming partners were going to use.<sup>8</sup> This

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<sup>6</sup> Brazos estimates that the cost to convert its network to CDMA and to make it Phase II compatible will be \$1.8 million.

<sup>7</sup> The record in this proceeding demonstrates the lack of vendor-related clout of non-nationwide CMRS carriers. *See, e.g., Stay Order* at ¶ 10.

<sup>8</sup> Rural carriers such as Brazos are dependent upon their roaming partners in order to offer their customers the flexibility they need when traveling outside of their carrier's service area. While roaming revenue fluctuates, Brazos can depend upon roaming revenue for approximately twenty-

consideration involved negotiations with Brazos' roaming partners and forecasting of future traffic patterns. After taking into account the best method to preserve its roaming revenue and the best technical solution to provide Phase II capability, Brazos decided in first quarter 2003 to transition its system from TDMA to CDMA technology. Brazos then contacted a number of vendors in order to begin planning and allocating its resources for the network overlay. Brazos has begun its network overbuild and its current plans are to finish the transition to CDMA throughout its network by the end of the second quarter of 2004.

### **III. Brazos Satisfies the Relevant Standards for Waiver of the Commission's Rules**

Under Section 1.3 of its rules, the Commission may waive any provision of its rules if good cause is shown.<sup>9</sup> The Commission must take a "hard look"<sup>10</sup> and then decide if such a waiver is in the public interest.<sup>11</sup> The Commission has already recognized that wireless carriers may face difficulties in meeting the FCC's E911 deadlines. In the FCC's *Fourth Memorandum Opinion and Order* ("*Fourth MO&O*"), the Commission recognized that there would be instances when "technology-related issues" or "exceptional circumstances" would cause a delay in a wireless carrier's ability to become Phase II compliant.<sup>12</sup> In its most recent *Stay Order*, the Commission recognized that there was good cause to extend its previous "selling and activating" benchmark deadlines.<sup>13</sup>

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five percent of its total revenue. Therefore, Brazos had to take into consideration the protocol choices of all of its roaming partners to determine which digital protocol would best serve the long-term needs of Brazos and its customers.

<sup>9</sup> 47 C.F.R. § 1.3.

<sup>10</sup> *Wait Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

<sup>11</sup> *Northeast Cellular Telephone Company, L.P., et al v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

<sup>12</sup> *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Fourth Memorandum Opinion and Order*, 15 FCC Red. 17442 at ¶ 43 (2000) ("*Fourth MO&O*").

<sup>13</sup> See *Stay Order* at ¶¶ 11-13.

The Commission indicated that it would not “entertain requests for additional relief that seek changes in the requirements, schedules, and benchmarks imposed herein absent extraordinary circumstances.”<sup>14</sup> Brazos’ instant waiver petition, as illustrated by the discussion *supra*, demonstrates the extraordinary circumstances that Brazos encounters as it provides service to its customer base in rural Texas. Moreover, as set forth below, the instant petition satisfies the applicable waiver standards.

Section 1.925(b)(3) of the Commission’s rules sets out the general standards for determining when a waiver should be granted in Wireless Telecommunications Bureau proceedings:

The Commission may grant a request for waiver if it is shown that:

- (i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or
- (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.<sup>15</sup>

Under both of these standards, grant of the requested waiver is warranted.

Grant of the requested waiver is consistent with both the public interest and the underlying purpose of the Commission’s Phase II deployment rules. The Commission has recognized that temporary extensions of its “selling and activating” benchmarks will not delay actual deployment of E911 Phase II since “PSAPs in smaller or rural areas... may well require additional time to become capable of receiving and utilizing Phase II information.”<sup>16</sup> Since Brazos has not received a Phase II request, the underlying purpose of the Phase II requirements,

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<sup>14</sup> *Id.* at ¶ 36.

<sup>15</sup> 47 C.F.R. § 1.925(b)(3).

<sup>16</sup> *Stay Order* at ¶ 15.

“to extend automatic location identification (ALI) to wireless callers,”<sup>17</sup> will not be frustrated by grant of this request. In setting the September 1, 2003 deadline, the FCC relied on the assumption that “a choice of effective ALI solutions would be available to all wireless carriers.”<sup>18</sup> With the evaporation of this choice due to the manufacturers’ gradual abandonment of TDMA solutions, the underlying purpose of the September 1 deadline no longer exists.

The Commission enacted Section 20.18(g) for the underlying purpose of ensuring that wireless E911 will meet fundamental public safety needs “as quickly as reasonably possible.”<sup>19</sup> Brazos is in the midst of converting its TDMA network to an ALI-capable CDMA network as quickly and as reasonably as it can under the circumstances. Brazos’ progress on its CDMA conversion is reasonable in light of the business implications of its ultimate technology choice and the steep capital expenditure involved with overhauling its network. Brazos’ need to pursue another solution is consistent with the Commission’s determination that “the Phase II rules are intended to be applied in a manner that takes into account practical and technical realities.”<sup>20</sup> The practical and technical reality is that, given the recent recognition that there is no manufacturer continuing to commit to an ALI solution compatible with a TDMA network, a forced conversion to an entirely new network technology cannot be accomplished prior to September 1, 2003. Further, Brazos’ waiver request is for a limited period of time and is intended to last only until such time as it is able to complete its planned CDMA overlay, thus carefully heeding the Commission’s instruction that waiver requests are “specific, focused and limited in scope, and [show] a clear path to full compliance.”<sup>21</sup>

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<sup>17</sup> *Id.* at ¶ 14.

<sup>18</sup> *Fourth MO&O* at ¶ 23.

<sup>19</sup> *Id.* at ¶ 17.

<sup>20</sup> *Id.* at ¶ 22.

<sup>21</sup> *Id.* at ¶ 44.

Application of the Section 20.18(g) handset deadlines to Brazos would be inequitable in light of the lack of availability of TDMA-based ALI-capable handsets, a factor outside of Brazos' control. Further, as discussed above, the unexpected industry abandoning of the TDMA protocol drastically changed Brazos' Phase II plans. The unavailability of TDMA handsets and the need for Brazos to overhaul its entire network with a CDMA overbuild, combined with the technical incompatibility of a network-based solution in its rural service area, leaves Brazos with no reasonable alternative but to seek a waiver.

The Commission has recognized the "distinct challenges" that rural carriers such as Brazos face in implementing Phase II requirements.<sup>22</sup> Enforcement of the Commission's current "selling and activating" benchmarks does not serve the public interest since Brazos has made reasonable plans to overlay its current network with a CDMA network by the second quarter of 2004. As a small, rural carrier, Brazos does not have the resources to proceed any faster. Enforcement of the current benchmarks would subject Brazos to unnecessary enforcement action, diverting its scarce resources from imminent E911 implementation, would do nothing to speed Brazos' compliance, and would not be in the public interest. Considering the daunting cost of its network upgrade, Brazos' conversion schedule will provide Phase II E911 service to its rural Texas customers as soon as can be expected, while still meeting the Commission's overarching "full compliance" deadline of December 31, 2005.<sup>23</sup>

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<sup>22</sup> See, e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Fifth Memorandum Opinion and Order, 15 FCC Rcd. 22810, ¶ 21 (2000) ("*Fifth MO&O*").

<sup>23</sup> In its *Stay Order*, the Commission indicated that further extensions of Phase II interim benchmarks would be problematic if they undermined the entire E911 rollout. *Stay Order* at ¶ 16. ("The benefits of the delay described herein would be outweighed if further delay resulted in our 2005 date being missed.").

#### **IV. Schedule for Compliance**

As discussed fully above, due to its unique circumstances as a small, rural carrier, Brazos requests additional time in which to upgrade its network from TDMA to a Phase II capable digital network in order to begin selling working ALI-capable handsets to its customers.<sup>24</sup> Once Brazos has finished converting to a CDMA-based network, it can immediately begin selling and activating ALI-capable handsets.

Accordingly, Brazos requests that the deadlines for Brazos to begin selling and activating handsets, and to ensure that 25 percent of the handsets sold and activated are ALI-capable, be extended to July 1, 2004; that the deadline for ensuring that 50 percent of the handsets sold and activated are ALI-capable be extended to September 1, 2004; and that the deadline for ensuring that 100 percent of the handsets sold and activated are ALI-capable be extended to December 31, 2004.<sup>25</sup>

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<sup>24</sup> Although Brazos could conceivably sell and activate CDMA-based ALI-capable handsets by September 1, the handsets would have severely limited use since they would be unable to fully function on Brazos' non-CDMA network. Such handsets would not function at all in digital mode and would be relegated to operating on the analog portion of Brazos' TDMA network. Selling CDMA handsets to customers before Brazos converts its entire network to digital CDMA would unnecessarily subject customers to spotty coverage and dropped calls. It makes no sense for Brazos to begin selling and activating ALI-capable handsets until it is certain which handsets will be compatible with its chosen technology. Brazos' ultimate goal is to comply with the Commission's Phase II rules in a meaningful manner.

<sup>25</sup> As noted above, Brazos is not seeking a waiver of the ultimate December 31, 2005 deadline for achieving 95 percent penetration of ALI-capable handsets.

**V. Conclusion**

Based on the foregoing, Brazos respectfully requests that the Commission grant Brazos a temporary limited waiver of Section 20.18(g)(i)-(iv) of its rules as requested herein and permit Brazos to implement its Phase II solution based on the schedule set forth herein.

Respectfully submitted,

**SOUTH NO. 5 RSA LP D/B/A BRAZOS  
CELLULAR COMMUNICATIONS,  
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Dated: August 8, 2003

**DECLARATION OF LONNIE RUE**

I, Lonnie Rue, do hereby declare under penalty of perjury the following:

1. I am the Assistant Manager and Chief Financial Officer of South No. 5 RSA Limited Partnership d/b/a/ Brazos Cellular Communications, Ltd.
2. I have read the foregoing ‘Petition for Waiver of Section 20.18(g) of the Commission’s Rules.’ I have personal knowledge of the facts set forth therein, and believe them to be true and correct.

\_\_\_\_\_/s/\_\_\_\_\_  
Lonnie Rue

\_\_\_\_\_August 8, 2003\_\_\_\_\_  
Date