

WILMERHALE

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January 28, 2008

William T. Lake

+1 202 663 6725 (t)

+1 202 663 6363 (f)

william.lake@wilmerhale.com

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Federal Communications Commission
Office of the Secretary

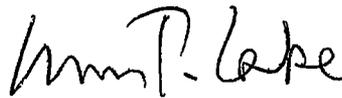
Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *In the Matter of Wireless E911 Location Accuracy Requirements, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Association of Public-Safety Communications Officials - International, Inc. Request for Declaratory Ruling, 911 Requirements for IP-Enabled Service Providers, PS Docket No. 07-114, CC Docket No. 94-102, WC Docket No. 05-196.*

Dear Ms. Dortch:

On behalf of T-Mobile USA, Inc. ("T-Mobile") we hereby submit an original and four copies of the REDACTED version of T-Mobile's Application for Expedited Stay and supporting declaration to be filed in the above-referenced proceeding. T-Mobile is simultaneously submitting an original and four copies of the confidential version of this material under a separate cover letter, which includes the information required by section 0.459(b) of the Commission's rules to support the request for confidential treatment of commercially sensitive information.

Respectfully submitted,



William T. Lake

Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Wireless E911 Location Accuracy Requirements)	PS Docket No. 07-114
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)	

APPLICATION FOR EXPEDITED STAY PENDING JUDICIAL REVIEW

John T. Nakahata
HARRIS, WILTSHIRE & GRANNIS LLP
1200 Eighteenth Street, N.W.
Washington, D.C. 20036
(202) 730-1300

Thomas J. Sugrue
Kathleen O'Brien Ham
Sara F. Leibman
T-MOBILE USA, INC.
401 Ninth Street, N.W., Suite 550
Washington, D.C. 20004
(202) 654-5900

William T. Lake
Lynn R. Charytan
Alison H. Southall
WILMER CUTLER PICKERING
HALE AND DORR LLP
1875 Pennsylvania Avenue, N.W.
Washington, D.C. 20006
(202) 663-6000
William.Lake@wilmerhale.com

Attorneys for T-Mobile USA, Inc.

January 28, 2008

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APPLICATION FOR EXPEDITED STAY PENDING JUDICIAL REVIEW

T-Mobile U.S.A., Inc. ("T-Mobile") respectfully requests the Commission to stay, pending judicial review, the effectiveness of the rule changes adopted in its *Wireless E911 Location Accuracy Requirements* Report and Order, which was adopted on September 11, 2007 and released on November 20, 2007 ("*Part A Order*" or "*Order*").^{1/} Because the first compliance deadline of September 11, 2008 is less than 8 months away, T-Mobile requests expedited Commission action on this stay application. If the Commission does not grant the stay requested here by February 11, 2008, T-Mobile intends to seek a stay in a United States Court of Appeals.

^{1/} Report and Order, *Wireless E911 Location Accuracy Requirements, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling, 911 Requirements for IP-Enabled Service Providers*, PS Docket No. 07-114, CC Docket No. 94-102, WC Docket No. 05-195, FCC 07-166 (rel. Nov. 20, 2007) ("*Part A Order*").

INTRODUCTION AND SUMMARY

The Commission has had a long-standing objective of ensuring that mobile phone users receive reliable 911 emergency calling service. Not only does T-Mobile not quarrel with this objective, but it fully supports it. For instance, T-Mobile has spent hundreds of millions of dollars and has devoted substantial other resources to rolling out wireless enhanced 911 (“E911”) services in communities across the country. However, in pursuing this worthy objective in this proceeding, the Commission has disregarded rulemaking requirements of the Administrative Procedure Act (“APA”)^{2/} and imposed infeasible mandates that are unsupported by the administrative record. In light of these serious legal deficiencies, T-Mobile will seek judicial review of the new mandates in a U.S. Court of Appeals. Unless stayed pending judicial review, these mandates will not only fail to achieve their stated objective, but also will cause substantial and irreparable harm to wireless carriers and – ironically – will likely harm wireless consumers by reducing their access to emergency calling services. The Commission should stay the effectiveness of the new mandates while the court considers the very serious questions about their lawfulness.

Since 1996, the Commission’s rules have required wireless carriers to provide information on the locations of wireless 911 callers automatically to local public safety answering points (“PSAPs”) that request that information.^{3/} Wireless carriers responded, developing and deploying methods of providing E911 service nationwide, in accordance with the rules and guidelines promulgated by the Commission. On June 1, 2007, the Commission issued

^{2/} 5 U.S.C. § 553.

^{3/} Report and Order, *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 11 FCC Rcd 18676 (rel. 1996).

a notice of proposed rulemaking seeking comment on a number of issues relating to the accuracy and reliability of such E911 services.^{4/} In particular, the Commission sought comment on the appropriate geographic area for measuring carrier compliance with location accuracy rules.^{5/} This was an issue on which the Commission had never previously issued rules, though, as a practical matter, the Commission generally permitted wireless carriers to measure compliance on a network-wide or state-wide basis.^{6/} The Commission expressly bifurcated the rulemaking proceeding, seeking comments first on what geographic unit should be used to measure the location accuracy of a carrier's E911 services and whether to defer enforcement of this new requirement to allow carriers to come into compliance (Part A of the NPRM), and then on a collection of issues looking to future improvements in E911 service – including *how long* carriers should have to come into compliance and whether to establish interim “benchmark” compliance deadlines (Part B of the NPRM).^{7/}

On September 11, 2007 – the sixth anniversary of the terrorist attacks and before the Part B comment period had closed – the FCC adopted the *Part A Order*. Although the Commission did not release the text of the *Part A Order* at that time, it announced certain key points of its decision. According to the Commission, the *Part A Order* mandated that wireless carriers

^{4/} Notice of Proposed Rulemaking, *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, CC Docket No. 94-102, WC Docket No. 05-196, FCC 07-108 (rel. Jun. 1, 2007) (“*E911 NPRM*”).

^{5/} *Id.* ¶ 5.

^{6/} For example, the Commission authorized T-Mobile to measure compliance *nationwide*, see Order, *T-Mobile USA, Inc.*, 18 FCC Rcd 15123, 15128 ¶ 2 n.11 (2003) (“*T-Mobile Consent Decree 2003*”) (requiring carrier to “derive its *network-wide location accuracy measurements* by selecting the 67 percent and 95 percent accuracy numbers from test data weighted in accordance with OET Bulletin No. 71”) (emphasis added); see also Order, *Cingular Wireless LLC*, 18 FCC Rcd 11746, 11750 ¶ 2 n.9 (2003) (same), and the Network Reliability and Interoperability Council (“NRIC”) recommended in its NRIC VII Final Report chartered by the FCC that “compliance be measured at the State level.” NRIC VII, Focus Group 1A, Near Term Issues for Emergency/E9-1-1 Services, Final Report, at 50 (Dec. 2005) (“NRIC VII Report”) available at http://www.nric.org/meetings/docs/meeting_20051216/FG%201A_Dec%2005_Final%20Report.pdf.

^{7/} *E911 NPRM* ¶ 1. The *E911 NPRM* was published in the Federal Register on June 20, 2007, and the Commission received comments and reply comments on Part A by July 5 and July 11, 2007, respectively. The Commission received comments and reply comments on Part B by August 20 and September 18, 2007, respectively.

measure the location accuracy of their E911 services at the level of each PSAP to which they provide information.^{8/} In addition, the *Part A Order* decided a number of issues that had been expressly reserved for Part B of the proceeding, even though the Part B comment period had not yet ended. Specifically, the Commission resolved the important Part B issues of the timeframe for compliance with the new PSAP-level mandate, whether carriers should be required to meet interim benchmarks and, if so, what those benchmarks should be. The Commission set a five-year deadline for compliance with the PSAP-level mandate, and it imposed one-year and three-year benchmarks requiring compliance at the Economic Area (“EA”) level and at the Metropolitan Statistical Area (“MSA”) or Rural Service Area (“RSA”) level, respectively^{9/} – geographic compliance areas that are wholly unrelated to the areas served by PSAPs on which the Commission’s ultimate compliance goal is based. The Commission also set a three-year benchmark requiring compliance at the PSAP level in at least 75% of the areas served by PSAPs in which the carrier provides service.^{10/}

Notwithstanding the Commission’s haste to convene a meeting and adopt new rules on September 11, 2007 – and its decision that the clock for wireless carrier compliance would begin running immediately from its September 11, 2007 press announcement – the Commission failed to release the text of the *Part A Order* or its new rules until more than two months later, on November 20, 2007. By that time, the deadline for wireless carrier compliance with the one-year benchmark was already less than ten months away. Moreover, the *Part A Order* as released contains an additional PSAP-level requirement not even mentioned in the Commission’s discussion at its September 11th open meeting or in the announcement of its decision: a mandate

^{8/} *FCC Clarifies Geographic Area Over Which Wireless Carriers Must Meet Enhanced 911 Location Accuracy Requirements*, News Release (rel. Sept. 11, 2007) (“9/11 News Release”).

^{9/} *Id.* at 1.

^{10/} *Id.*

that wireless carriers at the three-year mark meet 150% of the applicable accuracy standard in every area served by a PSAP.^{11/} And this requirement comes on top of the three-year requirements that carriers comply at the MSA/RSA level in all areas served by the carriers and at the PSAP level in 75% of areas served by PSAPs in which the carrier provides service.

T-Mobile seeks a stay of these new geographic-level compliance mandates from the Commission. As T-Mobile demonstrates below, this application satisfies all of the prerequisites for a stay because: (1) T-Mobile is likely to prevail on the merits; (2) T-Mobile will suffer irreparable harm if a stay is not granted; (3) other interested parties will not be harmed if the stay is granted; and (4) the public interest favors granting a stay.^{12/}

Specifically, the *Part A Order* is legally deficient in four major respects. First, the one-year, three-year, and five-year compliance mandates are technically infeasible. Carriers cannot comply with these mandates using any existing or reasonably foreseeable technology. The Commission failed to acknowledge, much less consider, proposals to modify the mandates, such as excluding from the mandates those areas where compliance would be technically infeasible or economically unreasonable. Second, the Commission's wholesale disregard of APA procedural requirements denied interested parties the opportunity to comment on the one-year and three-year benchmarks, which the Commission imposed in the *Part A Order* without prior notice. The Commission's subsequent 70-day delay in releasing the text of the *Order* strongly suggests that there was time to allow comment on the benchmark proposal. Third, the Commission put the cart before the horse, arbitrarily imposing new geographic compliance mandates and deadlines

^{11/} *Part A Order* ¶ 18 (although the text states that compliance is required in all PSAPs "within at least 50% of the applicable location accuracy standard," the example given by the Commission makes clear that the network-based location accuracy standard would be 150m/450m, or 150% of the current 100m/300m standard).

^{12/} See, e.g., Memorandum Opinion and Order, *Petition by Forest Conservation Council, American Bird Conservancy and Friends of the Earth for National Environmental Policy Act Compliance*, 21 FCC Rcd 4462, ¶ 16 (2006) (citing *Virginia Petroleum Jobbers Ass'n v. FPC*, 259 F.2d 921, 925 (D.C. Cir. 1958)); *Washington Metropolitan Transit Comm'n v. Holiday Tours, Inc.*, 559 F.2d 841 (D.C. Cir. 1977).

before resolving Part B issues relating to the content of the rules and how compliance will be tested – thus making progress towards compliance virtually impossible. Yet the compliance clock began ticking on September 11, 2007, long before these key Part B issues had been (or could be) resolved. The Commission also rendered decisions on other Part B issues before the comment period for them had ended. Fourth, the technically infeasible geographic-level mandates are likely to harm public safety by diverting PSAP resources and by discouraging wireless coverage in already underserved areas – a cost-benefit analysis the Commission failed to perform.

T-Mobile will suffer imminent and irreparable harm if a stay is not granted, especially in light of the fast-approaching one-year benchmark. This harm includes exposure to enforcement action for failure to meet infeasible requirements, permanent loss of goodwill and customers, unrecoverable economic losses, and impairment of credit. Other interested parties, on the other hand, will not be harmed if a stay is granted: consumers will retain existing wireless E911 service^{13/} and, in any event, cannot suffer from a stay of new requirements with which carriers cannot comply in the first place. And other wireless carriers and PSAPs will *benefit* from not being forced to comply with costly new rules that are under significant threat of judicial reversal. In fact, the public interest strongly favors granting a stay, which will protect wireless consumers from the new rules' unintended but harmful consequences – which include forcing carriers to raise prices, curtail service in already underserved areas, and divert resources from enhancing coverage in currently served areas – all of which would reduce consumer access to wireless E911 services.

^{13/} Existing 911 service allows wireless consumers to complete 911 calls, provides a callback number to PSAPs, and provides a location estimate under existing rules.

For all of these reasons, the Commission should stay the effectiveness of the *Part A Order* pending judicial review.

I. GIVEN THE SERIOUS LEGAL INFIRMITIES OF THE *PART A ORDER*, T-MOBILE IS LIKELY TO PREVAIL ON THE MERITS.

The Commission's *Part A Order* is likely to be overturned on judicial review on a number of grounds. Each of the four separate and uniformly serious legal infirmities, discussed below, provides a compelling basis on which a U.S. Court of Appeals will likely overturn the procedurally defective and arbitrary and capricious *Part A Order*. The Commission's half-hearted attempt to insulate the *Order* from judicial review by suggesting that it merely clarifies existing rules is plainly wrong.^{14/} The *Order* expressly amends Part 20 of the Commission's rules, imposing geographic-level mandates and compliance deadlines that did not previously exist at all.^{15/} The Commission had never before specified geographic levels at which compliance must be measured, and it countenanced practices that used various, larger geographic areas in this respect.^{16/} The new geographic-level mandates are thus plainly new rules,^{17/} and those rules – and the process by which they were adopted – are unlawful in several respects.

A. The *Part A Order* Is Arbitrary and Capricious Because the Evidence Unvaryingly Demonstrates That the Geographic-Level Compliance Mandates Imposed by the *Part A Order* Are Technically Infeasible.

^{14/} See *Part A Order* ¶ 8 (“Although Section 20.18(h) does not explicitly state that accuracy must be measured and tested at the PSAP level, it is unreasonable to think that the Commission ever envisioned averaging of location accuracy on a large geographic basis, such as a carrier’s entire national footprint.”); *id.* ¶ 9 n.16 (“We have never suggested that it is appropriate to average accuracy results over an entire state, much less over a multistate carrier’s entire service area. It would, therefore, have been appropriate for us to clarify that Section 20.18(h) requires compliance at the PSAP level; however, . . . out of an abundance of caution, we have initiated a rulemaking in order to ensure full public input and development of a record on this issue. . . . We therefore find no merit in commenters’ procedural arguments regarding our action today.”) (internal citations omitted).

^{15/} See *id.*, App. B (setting forth text of new rules).

^{16/} See, e.g., *supra* n.6.

^{17/} See also AT&T Comments at 10-13 (filed Jul. 5, 2007) (explaining that adoption of PSAP-level requirement is a “substantive rule change, not a mere clarification”); Sprint Nextel Comments at 3 (filed Jul. 5, 2007) (“The addition of this new geographic limitation to the accuracy rule is a substantial change . . .”).

The record in this rulemaking unvaryingly demonstrates that the *Part A Order's* geographic-level mandates are technically infeasible using any existing or reasonably foreseeable technology. The Commission's contrary conclusion is wholly unsupported by any record evidence. The mere desirability of PSAP-level accuracy in no way rebuts the clear record of its technical infeasibility.^{18/} As discussed below, the key passages in the *Part A Order* cite either nothing or plainly unresponsive evidence in failed attempts to justify the *Order's* infeasible mandates. The *Part A Order* therefore fails to meet APA standards because, as the D.C. Circuit has held, “[i]mpossible requirements imposed by an agency are perforce unreasonable.”^{19/}

1. The five-year deadline for PSAP-level compliance is technically infeasible, and the record provides no support for the Commission's assertions to the contrary.

The record contains no evidence to support the feasibility of PSAP-level compliance within five years. To the contrary, the comments reflect a remarkable consensus among a wide range of stakeholders that the existing accuracy standards contained in Rule 20.18(h) cannot be achieved in every area served by a PSAP by September 11, 2012 using any currently available or reasonably foreseeable technology. As Commissioner Adelstein observed, “the record reflects [] overwhelming concern regarding the technical feasibility and compliance deadlines”^{20/}

^{18/} See *Part A Order* ¶ 10 (“The record in this proceeding supports our conclusion that requiring PSAP-level accuracy is necessary to ensure that the goal of providing meaningful location information to emergency responders is met.”).

^{19/} *Alliance for Cannabis Therapeutics v. DEA*, 930 F.2d 936, 940 (D.C. Cir. 1991) (remanding order classifying marijuana as a narcotic drug).

^{20/} Commissioner Adelstein's Statement at 2 (Sept. 11, 2007); see, e.g., T-Mobile Ex Parte at ¶ 3 (“PSAP-level compliance with the FCC's accuracy standards is not technically feasible in all PSAPs now or in the foreseeable future.”); Sprint Comments at 11 (filed Jul. 5, 2007) (“[V]endors associated with providing location accuracy technologies agree that current technology will not meet the Commission's proposed new standard.”); Polaris Wireless Comments at 10 (filed Jul. 5, 2007) (“Due to the fact that currently deployed E911 Phase II location technologies cannot practically and economically meet the Commission's goal of compliance at the . . . PSAP-level, . . . the Commission should consider staying the effective date of any new rule because currently deployed E911 location technologies will require time to be upgraded to hybrid systems”); AT&T Comments at 7 (filed July 5, 2007) (“the evidence to date makes clear that it is not possible to satisfy the existing wireless E911 requirements on a PSAP-level basis.”); Verizon Wireless Comments at 21-22 (filed July 5, 2007); Qualcomm Comments at 6-7 (filed July 5, 2007).

Instead, as the comments overwhelmingly showed, new technologies would have to be developed and implemented to yield PSAP-level compliance with existing accuracy standards.^{21/}

Indeed, the Commission wholly ignored the recommendations of its own federal advisory committee, which underscored the technical infeasibility of PSAP-level compliance.^{22/} The Network Reliability and Interoperability Council (“NRIC”) was chartered by the Commission, inter alia, to examine and “recommend accuracy requirements for location information . . . and recommend ways to verify that accuracy requirements are met.”^{23/} After nearly two years of investigation and deliberation, including participation from a wide range of stakeholders,^{24/} NRIC concluded that “[a]ll parties agree that it is not technically possible today for every carrier to meet the FCC location accuracy requirement at every PSAP.”^{25/} Yet the *Part A Order* fails even to cite the conclusions of the Commission’s federal advisory committee, and likewise ignores the robust record making the precise same point.^{26/}

^{21/} *Id.*

^{22/} Similarly, by rushing to adopt the *Part A Order* on September 11, 2007, the Commission was unable to consider the two reports it commissioned from its Office of Engineering and Technology to address, inter alia, the potential technological capabilities of hybrid technologies. See, e.g., Commissioner Copps’ Statement at 2 (rel. Nov. 20, 2007) (noting that the reports would have “put this process on a sound technical footing,” and lamenting that “[u]nfortunately, those studies are not before us today, even as we have an item that adopts the specific compliance benchmarks suggested to us in recent days by the two leading public safety organizations.”).

^{23/} NRIC VII Charter at § B.1.a, adoption announced 69 Fed. Reg. 2596 (Jan. 16, 2004), available at http://www.nric.org/charter_vii/NRICVII_Charter_FINAL_Amended_2004_3_12_04.pdf.

^{24/} Stakeholders that participated in the recommendation included public safety organizations, wireless carriers, and E911 solutions and infrastructure providers. The full membership of NRIC VII is available at http://www.nric.org/charter_vii/nric_vii_org.html.

^{25/} *NRIC VII Report* at 51. NRIC recommended state-level compliance, with further optimization of existing location technologies at the PSAP-level, to the extent technically feasible and commercially reasonable. Only APCO cast a dissenting vote against the recommendation. *Id.*

^{26/} See *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (noting that agency decisions would be vacated under arbitrary and capricious standard where agency “offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise”).

Moreover, the Commission ignored proposals to impose the PSAP-level compliance requirement only where technically feasible and economically reasonable,^{27/} and it rejected without explanation “overwhelming support for a joint FCC, industry and public safety forum on new requirements.”^{28/} As T-Mobile and others have emphasized, imposing uniform accuracy requirements based on geopolitical boundaries is neither logical nor generally feasible, since location accuracy performance varies greatly over areas of the same number of square miles depending on the unique characteristics of each area.^{29/} However, if uniform accuracy requirements were to be imposed based on geopolitical boundaries, state-level boundaries are generally recognized as the smallest possible geopolitical boundaries that ensure a sufficient mix of terrain, site density, and geometry to allow a reasonable likelihood of meeting the location accuracy requirements with available location technologies.^{30/}

The *Part A Order* wrongly brushes this point aside with the glib observation that if carriers could comply at the level of small states, then PSAP-level compliance is feasible.^{31/} But, as the record shows, the performance of location technology varies greatly depending on factors such as terrain, site density, site geometry, number and type of buildings, ground clutter, and

^{27/} See, e.g., T-Mobile Ex Parte, Attach. at 5 (Sept. 6, 2007); *NRIC VII Report* at 50 (recommending that carriers be required to “optimize the performance of their deployed location technology at the [PSAP] level, to the extent technologically feasible and commercially reasonable,” while retaining overall compliance measurement at the state level).

^{28/} Commissioner Adelstein’s Statement at 2; see *Part A Order* ¶ 12 (noting that commenters argue that “we should first convene an industry forum or advisory council to assess the possibilities for improving 911 location accuracy,” but failing to explain its rejection of this approach).

^{29/} T-Mobile Ex Parte, Pottle/Jensen Decl. ¶ 6 (Sept. 7, 2007); T-Mobile Decl. ¶¶ 6-7 (Jan. 7, 2008).

^{30/} T-Mobile Decl. ¶ 6 (Jan. 7, 2008); *NRIC VII Report* at 51.

^{31/} *Part A Order* ¶ 11 (stating “if it is possible for carriers to comply with location accuracy requirements on a statewide basis in small states, then it suggests that it would be feasible for carriers to comply with location accuracy requirements at the PSAP level across the nation were they willing to invest appropriate resources”); see also *id.* ¶ 11 n.23 (“We recognize that geographical variations in service areas can present challenges to the provision of E911 service, but in the interest of public safety, we cannot permit those challenges to justify diminished location accuracy.”).

foliage (collectively, “density/geometry variables”).^{32/} In fact, the smaller states like Rhode Island and Connecticut happen to present generally fewer challenging density/geometry variables due to their high population densities.^{33/} Where these factors exist, the high number of cell sites used to provide service coverage also generally provide sufficient measurement points for carriers using network-based solutions to achieve compliance with Rule 20.18(h).^{34/} The same does not hold true for EAs, MSAs, RSAs, and areas served by PSAPs located in rural areas and/or containing challenging density/geometry variables.

a. T-Mobile and others demonstrated that carriers cannot comply with the PSAP-level mandate using existing location technology.

PSAP-level compliance with existing technology is impossible, notwithstanding the Commission’s blithe statement that “[w]e only require service providers to comply with [the new PSAP-level mandate] . . . with whatever location technology they are now using to locate 911 callers.”^{35/} T-Mobile, for example, uses the network-based Uplink-Time Difference Of Arrival (“U-TDOA”) location technology, a triangulation solution that calculates the caller’s location using a minimum of three Location Measurement Units (“LMUs”) located at different cell sites. The only theoretical solution to PSAP-level compliance using existing technology would be one so enormously expensive and pointless as to defy reason, as well as any rational business justification. T-Mobile would have to install approximately [REDACTED

] new sites that have no purpose

^{32/} See, e.g., T-Mobile Ex Parte, Pottle/Jensen Decl. ¶ 6 (Sept. 7, 2007)

^{33/} T-Mobile Decl. ¶ 7 (Jan. 7, 2008).

^{34/} *Id.*

^{35/} *Part A Order* ¶ 13. Moreover, the record demonstrates that, because there is “no meaningful or clear definition of a PSAP,” any standard based on PSAP boundaries “would create such ambiguity that it would be unenforceable, thus calling into question the legality of such a standard.” Sprint Nextel Comments at 4 (filed Jul. 5, 2007); see also *id.* at 1-6 (noting that there is no “entity that can even definitively state how many PSAPs exist in the United States” and “[a]t best, they are estimated to number from 5,000 to over 8,000”); T-Mobile Reply Comments at 12-14 (filed Jul. 11, 2007).

other than hosting LMUs to meet the *Order*'s requirements. Doing so would do nothing to support or enhance the provision of underlying service in the existing network, while imposing a huge financial cost on the business: the capital expenditure required to install these

[REDACTED] LMU-only sites would be a breathtaking [REDACTED]

[REDACTED], with yearly operating expenditures in excess of

[REDACTED] ^{36/} In

light of this [REDACTED]

[REDACTED] expense, achieving compliance by constructing and operating

[REDACTED] new

LMU-only sites would be impossible as a business matter. Indeed, T-Mobile and other carriers would be forced to consider shutting down existing service and curtailing future service deployments, predominately in rural areas.^{37/} Thus, as the Commission was previously advised, "currently deployed E911 Phase II location technologies cannot practically and economically meet the Commission's goal of [PSAP-level] compliance."^{38/}

The Commission was reduced in many cases to basing its determination of the technical feasibility of PSAP-level compliance on no evidence whatsoever – many of its conclusions cite to *nothing in the record at all*.^{39/} In other cases, commenters cited by the Commission for

^{36/} See T-Mobile Decl. ¶ 11-15 (Jan. 7, 2008).

^{37/} See *id.* ¶ 17.

^{38/} Polaris Wireless Comments at 10 (filed Jul. 5, 2007).

^{39/} See *Part A Order* ¶ 14 ("[I]t is our judgment based on the record as well as our experience regarding the implementation of similar public safety mandates that carriers will be able to meet the compliance deadline and interim benchmarks set forth in this Order.") (citing nothing); *id.* ¶ 17 ("We find that allowing sufficient time for carriers to achieve compliance alleviates parties' concerns about the challenges of PSAP-level compliance with Section 20.18(h) . . .") (citing nothing).

support in fact do not support the Commission's conclusions.^{40/} For example, the only record evidence that supports even the potential feasibility of PSAP-level compliance relates to the possible *future* development of hybrid technology.^{41/} Since such technology does not now exist,^{42/} even its advocates advised the Commission to, at a minimum, "defer enforcement of the PSAP-level accuracy requirements until carriers have an opportunity to deploy hybrid networks."^{43/}

b. Development and implementation of a new hybrid technological solution will take at least 10 years, far longer than the five years the Commission has allowed for carrier compliance with the PSAP-level mandate.

As discussed below, a hybrid technology that could meet the Commission's accuracy requirements is pure conjecture at this time. But, even if such theoretical technology were a viable solution, the Commission's five-year PSAP-level compliance deadline does not allow time for its development, let alone deployment of that new solution into carriers' networks and customers' handsets. As T-Mobile previously established, just *developing* a new technology will take five years or more.^{44/} That figure represents the minimum time necessary to develop new

^{40/} See, e.g., *id.* ¶ 16 ("The record in this proceeding contains encouraging evidence that location technology providers have developed and are developing technologies that can achieve PSAP-level compliance.") (citing Polaris Comments at 3-8); *but see* Polaris Wireless Comments at 10 (filed Jul. 5, 2007) ("Due to the fact that currently deployed E911 Phase II location technologies cannot practically and economically meet the Commission's goal of compliance at the . . . PSAP[-level] in some cases, . . . the Commission . . . should defer enforcement of the PSAP-level accuracy requirements until carriers have an opportunity to deploy hybrid networks."). In Part B reply comments and ex partes filed after the *Part A Order* was adopted but before it was released, TruePosition similarly set forth evidence that undermines the Commission's conclusions. Compare, e.g., *Part A Order* ¶ 14 ("[T]he record indicates that in many cases, PSAP-level compliance is technically feasible today and would require only the investment of additional financial resources.") (citing True Position Comments at 2-3), with TruePosition Reply Comments at 2 (filed Sept. 18, 2007) (acknowledging that "it undoubtedly is true that existing and anticipated technologies will not work in every case"); TruePosition Ex Parte at 6 (Nov. 8, 2007) (acknowledging that carrier compliance with 1-year EA-level benchmark is "not feasible").

^{41/} See, e.g., *id.*

^{42/} See, e.g., TruePosition Comments at 6 (filed Jul. 5, 2007) (discussing timeframe to develop network side of hybrid U-TDOA and A-GPS solution).

^{43/} Polaris Wireless Comments at 10 (filed Jul. 5, 2007).

^{44/} See T-Mobile Ex Parte at 3 (Sept. 6, 2007); T-Mobile Ex Parte, Pottle/Jensen Decl. ¶ 12 (Sept. 7, 2007).

software, standardize the approach, manufacture equipment and chipsets, put them into cell sites and handsets for testing purposes, complete the testing, make adjustments, manufacture the equipment and chips for commercial distribution, deploy required equipment throughout the network, add the chips to handsets, and introduce the new handsets into the carriers' lineups.^{45/} At that point, carriers could *begin* to provide subscribers with handsets with the new location capability. The process of achieving 95% penetration into the subscriber base would take at least five additional years, and likely much longer.^{46/}

The comments of even the most aggressive vendor do not support a finding that a technically feasible hybrid technology can be developed and implemented in a shorter time-frame. TruePosition's over-optimistic suggestion that the *software development* necessary to achieve "network functionality" for a hybrid solution could be developed within 3 years^{47/} expressly does not cover the development or implementation of a *complete* working solution – much less its deployment into the network or handsets – meaning that carriers will be unable to achieve PSAP-level compliance in 75% of the areas served by PSAPs in the carrier's service area by that time, as the rules require. Indeed, even TruePosition acknowledged the

^{45/} *Id.*

^{46/} T-Mobile Part A Reply Comments at 7 (filed Jul. 11, 2007) (stating that TruePosition's suggestion that handset change out could be accomplished in three years was "fanciful" and unsupported by the Commission's experience under the current handset-based E911 rules); T-Mobile Ex Parte, Pottle/Jensen Decl. ¶ 12 (Sept. 7, 2007) (noting that at least five years would be necessary to change out handsets in support of hybrid solution); AT&T Ex Parte (Sept. 6, 2007) (suggesting at least five years are necessary to accomplish handset change out); *see also* Polaris Wireless Comments at 8 (filed Jul. 5, 2007) ("For carriers that are currently network-based, it will take a significant amount of time for commercial A-GPS handset devices to become available in sufficient quantities and varieties to support a hybrid system. As demonstrated by the numerous E911 Phase II handset deployment waiver requests filed by handset-based carriers, it also takes a significant amount of time to migrate new handsets into a carrier's customer base through the supply chain."); TruePosition Comments at 6 (filed Jul. 5, 2007) ("As to estimates of the amount of time to achieve required handset penetration, TruePosition defers to the wireless carriers and handset vendors.").

^{47/} *See* TruePosition Comments at 5 (filed Jul. 5, 2007).

inappropriateness of a mandate that would require the development and implementation of a hybrid technology by a date certain.^{48/}

c. Even a new hybrid solution may not solve the PSAP-level compliance problem.

A hybrid location technology, though much ballyhooed, does not exist today that can achieve compliance with current accuracy standards at the PSAP level. As T-Mobile made clear on the record, “no vendor has yet created or tested, let alone deployed, a hybrid of U-TDOA and A-GPS,”^{49/} the hybrid solution touted in comments by the most aggressive vendor as likely to come closest to meeting current location accuracy requirements in every area served by a PSAP. We cannot know whether it might ever enable carriers to achieve universal PSAP-level compliance until the solution is actually developed. In short, as commenters already made clear, “[h]ybrid solutions are not a panacea” and there is no hybrid location technology that will ensure compliance with a PSAP-by-PSAP requirement.^{50/}

d. The Commission failed even to consider two feasible alternatives proposed by T-Mobile.

In light of these obstacles to universal PSAP-level compliance, T-Mobile proposed that the Commission require PSAP-level accuracy only to the extent technically feasible and economically reasonable.^{51/} Alternatively, T-Mobile proposed a three-step process that would (1) begin by requiring all carriers to optimize the performance of their systems at the PSAP level using current technology, in accordance with the recommendations of NRIC VII, (2) move

^{48/} See *id.* at 3 (filed Jul. 5, 2007) (acknowledging that “[t]he amount of time and investment necessary to achieve PSAP-level accuracy will vary substantially from PSAP-to-PSAP”); *id.* at 6 (estimating that it would take “at least three years to deploy the network side of the [hybrid] solution,” and “defer[ring] to the wireless carriers and handset vendors” regarding “the amount of time to achieve required handset penetration”).

^{49/} T-Mobile Ex Parte, Pottle/Jensen Decl. ¶ 7.

^{50/} Qualcomm Comments at 6-7 (filed Jul. 5, 2007).

^{51/} See T-Mobile Ex Parte (Aug. 13, 2007).

promptly to a process in which the Commission and all interested stakeholders could further analyze the technological challenges and other issues involved in enhancing E911 accuracy, and (3) culminate in the adoption by the Commission and implementation by industry and public safety of new E911 standards.^{52/} The Commission completely ignored both proposals, and never justified its decision instead to impose uniform geographic mandates regardless of technical infeasibility or economic unreasonableness. And as noted, the Commission – also without explanation or justification – similarly ignored the recommendations of NRIC VII, its own advisory committee.^{53/}

2. The fast-approaching one-year and three-year benchmarks are also technically infeasible.

Although EAs and MSAs/RSAs are larger than areas served by PSAPs, EA-level and MSA/RSA-level compliance remains unattainable. As T-Mobile explained on the record, EAs and MSAs/RSAs do not correspond with how T-Mobile's current network – or most other carriers' networks – are designed and engineered, how 911 systems are deployed, or the geographic areas served by public safety units.^{54/} Like other Part 24 PCS licensees, T-Mobile was issued its PCS1900 spectrum licenses according to Metropolitan Trading Area ("MTA") and Basic Trading Area ("BTA") boundaries,^{55/} which are not congruent with the boundaries of EAs, MSAs, RSAs, or areas served by PSAPs.

T-Mobile, like other carriers, often provides service to only a portion of an EA, MSA, RSA, or an area served by a PSAP – a situation that is often true in remote areas where the local topography – such as mountainous terrain or dense foliage – would also make compliance with

^{52/} See T-Mobile Ex Parte. Attach. at 6 (Sept. 6, 2007).

^{53/} See *supra* n.6.

^{54/} See T-Mobile Ex Parte Letter (Sept. 10, 2007) (date on first page of ex parte was corrected from September 7, 2007 to September 10, 2007 by erratum, see T-Mobile Erratum (Oct. 10, 2007)).

^{55/} Some older cellular licenses were issued according to MSA or RSA boundaries.

location accuracy requirements particularly difficult. And in some cases, T-Mobile may serve only a narrow highway corridor in an EA or MSA/RSA, with cell sites located along the highway in a line. U-TDOA technology is well understood to have relatively poor accuracy performance in such environments. Furthermore, because network-based technologies inherently deliver weaker performance at the edge of a coverage area, it would be difficult for a carrier to meet the Commission's location accuracy requirements where the carrier has limited coverage of an EA, MSA/RSA, or an area served by a PSAP at the edge of the carrier's service area – at least without extraordinary and cost-prohibitive steps such as building, operating, and maintaining sites solely to provide additional location measurement points. In such challenging areas, EA-level and MSA/RSA-level accuracy compliance presents many of the same feasibility problems as PSAP-level accuracy compliance.

a. Compliance by September 11, 2008 in every EA in which T-Mobile operates is not technically feasible.

Compliance with the location accuracy and reliability requirements in every EA in which T-Mobile operates is not feasible with existing location technologies, and the record contains no evidence to the contrary. Because one year (now less than eight months) is not sufficient time to develop or deploy a new technological solution,^{56/} feasibility must be evaluated with reference to existing technology. And the constraints of current technology make it impossible for T-Mobile to comply with the one-year benchmark, even if unlimited resources were available to T-Mobile (which they are not).^{57/}

^{56/} T-Mobile Ex Parte, Pottle/Jensen Decl. ¶ 12 (Sept. 7, 2007).

^{57/} See Part A Order ¶ 14 ([W]hile it is obviously in carriers' financial interests to argue that any meaningful requirement will not be possible to meet, carriers too often blur the distinction between that which is infeasible and that which simply requires the expenditure of additional resources."). Indeed, even the sole commenter the Commission cites in support of its conclusion that these requirements are technically feasible stated (after the record was closed but before the Order was released) that compliance with the one-year benchmark is "not feasible by GSM operators, such as T-Mobile, TruePosition Ex Parte at 8 (Nov. 8, 2007) ("Realistically in about 1 year, operators can roll out described software features, and assess performance at PSAP and other levels, and create a plan to address remaining issues over several future years.").

When T-Mobile selected U-TDOA as its location technology solution, it was with the understanding that it would be permitted to aggregate its compliance statistics over its national footprint in accordance with its consent decree with the Commission.^{58/} Achieving universal compliance at geographic levels smaller than states is beyond the capability of U-TDOA technology.^{59/} And the steps T-Mobile would have to take to chase this impossible goal would be a logistical and economic nightmare.^{60/} As previously discussed, the only theoretical solution to EA-level compliance using existing technology would be for T-Mobile to install new sites that have no purpose other than hosting LMUs – in this case, approximately [REDACTED

] of them. But, as noted, such a measure would be beyond the pale of reason: doing so would impose crippling costs without any compensating service enhancement. The capital expenditure required to install these [REDACTED] LMU-only sites would be a staggering [REDACTED

] , with yearly operating expenditures in excess of [REDACTED

] .^{61/} And there is no way that T-Mobile could install [REDACTED] LMU-only sites by the September 11, 2008 EA-level compliance deadline: constructing wholly new sites to house LMUs would entail zoning, permitting, and real estate leasing complexities that can be difficult and time

^{58/} See T-Mobile Decl. ¶ 8 (Jan. 7, 2008); see also Order, *T-Mobile USA, Inc.*, 18 FCC Rcd 15123, 15128 ¶ 2 n.11 (2003) (“*T-Mobile Consent Decree 2003*”) (requiring derivation of “network-wide location accuracy measurements”); see also Order, *Cingular Wireless LLC*, 18 FCC Rcd 11746, 11750 ¶ 2 n.9 (2003) (“*Cingular Consent Decree 2003*”) (same).

^{59/} See T-Mobile Decl. ¶¶ 8-11 (Jan. 7, 2008).

^{60/} See *id.* ¶¶ 11-16.

^{61/} See *id.* ¶ 12.

consuming – not to mention the other logistical and materials challenges that would be triggered by an effort to simultaneously build out [REDACTED]

] new sites.^{62/} In short, this approach is an entirely unworkable and unreasonable solution. T-Mobile and other carriers would instead be forced to consider shutting down existing service and curtailing future service deployments, especially in predominately rural areas.^{63/}

b. Compliance by September 11, 2010 in every MSA or RSA in which a carrier operates is not technically feasible.

Compliance with the three-year MSA/RSA-level benchmark presents equally daunting technical issues. Three years is insufficient time to make anything other than incremental changes to existing technology. Thus, even assuming that a viable new technical solution (such as a hybrid solution) could be developed in the future, it would not be ready for deployment, let alone actually deployed, within three years.

As with EA-level compliance, attempting to increase compliance at the MSA/RSA level by building new LMU-only sites would be enormously impractical and – for all that – ultimately unsuccessful. T-Mobile would need approximately [REDACTED]

] new LMU-only sites to achieve MSA/RSA-level compliance using existing technology, in addition to the [REDACTED]

] new LMU-only sites discussed above that would be necessary to achieve EA-level compliance. Such a deployment could not feasibly (or reasonably) be achieved by September 11, 2010. And the capital expenditure for the additional [REDACTED]

] LMU-only sites would be an extraordinary [REDACTED]

^{62/} See *id.*

^{63/} See *id.* ¶ 17.

], with yearly operating

expenditures of [REDACTED

]^{64/} – resulting in a total capital expenditure of [REDACTED

] and yearly

operating expenditures of [REDACTED

] to achieve MSA/RSA-level compliance.

c. The *Part A Order* as released contains warring three-year requirements.

The new mandate that appeared in the *Part A Order* as released requires a carrier, in addition to achieving PSAP-level compliance in 75% of the areas served by PSAPs in which the carrier provides service in three years, to meet at least 150% of the applicable location accuracy standard at the PSAP-level in the remainder of the carrier's service area.^{65/} Requiring such PSAP-level compliance is directly at odds with the notion of targeting compliance in the somewhat larger MSAs/RSAs in the same time period. As a result, the warring three-year benchmark requirements will compete for limited carrier resources and exacerbate the technical infeasibility of each of the requirements. The practical effect of this three-year PSAP-level mandate is to shorten to three years the time frame that carriers have to put in place technologies that can achieve PSAP-level compliance, while tolerating a somewhat lesser level of accuracy in only 25% of areas served by PSAPs. Because PSAP-level compliance is infeasible within five years, it is all the more clearly infeasible within three years.^{66/} Notably, the Commission does not even *purport* to have evidence supporting the availability of a PSAP-level solution in *three years*, as opposed to its unrealistically aggressive *five-year* deadline. Indeed, to the extent the

^{64/} See T-Mobile Decl. ¶¶ 13, 15 (Jan. 7, 2008).

^{65/} See *supra* n.11.

^{66/} See discussion *supra* pp. 11-15.