

Commission thought there was evidence supporting five years as the deadline by which carriers could deploy a PSAP-level accuracy solution, that evidence would stand to *undermine* a requirement that the carriers nevertheless deploy this solution a whole two years earlier in most of the areas served by PSAPs in which they provide service.

d. Because the Commission precluded any notice and comment on the interim benchmarks, the record contains nothing to support their feasibility.

There is no record support for the technical feasibility of *any* of the interim benchmarks in the *Part A Order* because the Commission explicitly announced that it was deferring comment on interim benchmarks until Part B of the proceeding. As discussed further below, the *Part A Order* presented interested parties with the fait accompli that benchmarks had already been adopted a week *before* the period for filing Part B reply comments closed. The only written comment on the interim benchmarks in the Part A record is T-Mobile's letter of September 10, 2007, which strongly opposes the benchmarks on the grounds that they are technically infeasible and would interfere with carriers' efforts to implement a long-term solution.^{67/}

3. The interim benchmarks exacerbate the infeasibility of the PSAP-level compliance requirement by requiring carriers to divert resources into orphan technologies different from any technology that could achieve PSAP-level compliance.

The Commission justified its last-minute adoption of interim benchmarks on the ground that doing so "ensure[s] that carriers are making progress toward compliance with the Commission's location accuracy requirements at the PSAP level."^{68/} Had the Commission permitted comment on that point, it would have learned the contrary: Attempts by carriers to comply with the infeasible interim benchmarks will divert resources from the new-technology

^{67/} 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).

^{68/} *Part A Order* ¶ 18; see also *id.* ¶ 1.

solutions that offer the only hope of achieving PSAP-level compliance. The Commission itself *recognized this likely consequence earlier in the proceeding, but then evidently forgot it in adopting the Part A Order.*^{69/}

The infeasibility of meeting the five-year deadline is, in fact, exacerbated by imposing interim benchmarks at one and three years. To meet these extremely compressed timeframes – on which several months already have run – carriers obviously cannot rely on new technologies that will take years to develop and deploy.^{70/} Instead, they must race to deploy existing technologies. But since these “orphan” technologies do not provide a PSAP-level solution, they inevitably will differ from whatever long-term solutions may be developed.^{71/} Far from providing a glide path to compliance with the five-year deadline, the benchmarks will divert carrier resources into useless deployments, and will make compliance more difficult and expensive across the industry.^{72/} In short, the arbitrary interim benchmarks selected by the Commission serve only as an obstacle to carriers’ ultimate compliance efforts.

The requirement to achieve PSAP-level compliance within three years complicates compliance even more. To the extent the Commission hoped to provide a glide path (which it did not), accelerating the PSAP-level requirement will obviously eliminate that, requiring carriers to leap from EA- to PSAP-level compliance directly in some instances. In other areas, carriers will have to devise a means of meeting both the MSA/RSA requirements *and* a slightly

^{69/} The Commission previously concluded that an interim “stage of E911 deployment would not be a bridge but instead could be a costly detour that could delay full implementation of ALI capability.” Report and Order and Further Notice of Proposed Rulemaking, *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 11 FCC Rcd 18676, 18710-11 ¶ 67 (1996).

^{70/} See discussion *supra* pp. 13-15.

^{71/} See T-Mobile Decl. ¶ 18 (Jan. 7, 2008).

^{72/} See Polaris Wireless Comments at 8 (filed Jul. 5, 2007) (“The Commission should encourage the wireless industry to adopt hybrid solutions rather than spend money on short-term network technology investments (that would later be stranded), and should therefore defer enforcement of the PSAP-level accuracy requirement for E911 Phase II so that carriers have sufficient time to implement hybrid technologies.”).

watered-down PSAP-level requirement – which may or may not involve use of the same technology as the full PSAP-level location accuracy requirement. The rule thus could create yet another source of orphan technologies, even at the PSAP level. In short, the scattershot deadlines in the *Part A Order* reflect no coherent compliance scheme, as commenters would have made plain if the Commission had subjected them to APA notice and comment requirements, a failure discussed further below.

B. The Commission Flouted the APA Requirement To Provide the Industry With an Opportunity for Notice and Comment.

The Commission flagrantly disregarded the APA’s notice and comment requirements. The APA requires the Commission to “give interested persons an opportunity to participate in the rulemaking through submission of written data, views, or arguments.”^{73/} Yet the Commission allowed no notice and comment before adopting APCO/NENA’s last-minute interim benchmark proposal. As discussed above, this lack of notice and comment resulted in a record barren of evidence to support the *Part A Order*’s infeasible interim benchmarks.

1. The Commission allowed no notice and comment before adopting APCO/NENA’s last-minute interim-benchmark proposal.

Interim benchmarks for compliance in one year at the EA level and in three years at the MSA/RSA and PSAP levels were proposed for the first time in a joint meeting that APCO and NENA held with Chairman Kevin Martin on September 6, 2007, more than three months after the NPRM was released and the day before the Sunshine Period began. The APCO/NENA proposal did not become part of the public record until September 7, 2007, the day the Sunshine period began, when APCO/NENA filed their ex parte notice of their meeting with Chairman Martin.^{74/} Nevertheless, the Commission adopted that proposal on September 11, 2007, merely

^{73/} 5 U.S.C. § 553(c); see also *Federal Express Corp. v. Mineta*, 373 F.3d 112, 120 (D.C. Cir. 2004).

^{74/} APCO/NENA Ex Parte (Sept. 7, 2007).

two business days later. No party received more than *one* business day's notice of the APCO/NENA proposal, and most parties got *no notice at all* – thus precluding interested parties from meaningful participation in the rulemaking.^{75/} The subsequent 70-day delay before the Commission released the *Part A Order* strongly suggests that this proposal did not need to have been adopted without industry participation on September 11. Certainly, the Commission could have allowed ample time for public comment on the interim benchmarks, and still could have released its final order as it did on November 20, 2007.

- a. **Coupling the five-year PSAP-level mandate with one-year EA-level and three-year MSA/RSA-level mandates raises issues significantly different from those that parties had addressed in their Part A comments.**^{76/}

Interested parties had no opportunity to comment on using EAs as compliance units generally or using EAs or MSAs/RSAs for interim benchmark purposes, because – until APCO/NENA's last-minute proposal – there was no such proposal on the record in the Part A proceeding. Indeed, the Commission had expressly deferred consideration of interim benchmarks until Part B of the rulemaking, for which the comment period ended one week after the *Part A Order* was adopted. Neither the Commission nor any commenter had previously proposed an EA-level compliance mandate, one- and three-year deadlines for EA-level and MSA/RSA-level compliance, or requiring both MSA/RSA-level and PSAP-level compliance simultaneously. For this reason, the record contains no discussion whatsoever of the host of

^{75/} See Statement of Commissioner Adelstein, at 2 (Sept. 11, 2007) (“Adopting in whole cloth an eleventh hour proposal at the stroke of Sunshine’s end is not the way to promote an atmosphere of progress. Instead of working with all stakeholders, the Commission today simply adopts on a Tuesday a proposal filed on Friday. Offering no opportunity for deliberation or participation by so many stakeholders does not befit an expert agency.”); Statement of Commission Adelstein, at 2 (Nov. 20, 2007) (same).

^{76/} Compare, e.g., *Florida Power & Light Co. v. United States*, 846 F.2d 765, 772 (D.C. Cir. 1988) (no evidence of harm where “[n]o substantive challenges which differ in kind from the original comments have been raised”).

additional issues raised by coupling a five-year PSAP-level compliance deadline with EA-level and MSA/RSA-level interim benchmarks.

b. The Commission proceeded in a manner that precluded comment by all but a select handful of interested parties.

When the issue *was* finally introduced into the record via APCO/NENA's late-filed proposal – no earlier than September 7, 2007 – the Commission provided only a select few parties any opportunity to respond. The APCO/NENA *ex parte* notice was filed on the day the Commission's Sunshine rules took effect. Under these rules, parties are not allowed to make presentations during the Sunshine period except in response to a request by the Commission or its staff.^{77/} Thus, on the one business day between APCO/NENA's filing of its *ex parte* notice and the Commission's wholesale adoption of its proposal, parties could respond only if the Commission asked them to do so. In fact, the Commission solicited comments by telephone from only a small handful of interested parties.^{78/} As a result, interested parties who did not receive the Commission's last-minute solicitation of views on the APCO/NENA proposal were entirely precluded from commenting on it.^{79/} More than forty parties had submitted Part A comments or reply comments prior to the Sunshine period and thus very likely would have commented on this new proposal had they been allowed to. The Commission easily could have

^{77/} See 47 C.F.R. § 1.1203 (prohibiting presentations to decisionmakers regarding matters listed on the Sunshine Agenda); *FCC to Hold Open Commission Meeting Tuesday, September 11, 2007*, Commission Meeting Agenda, Item No. 1 (Sept. 4, 2007).

^{78/} Compare, e.g., *Florida Power & Light Co.*, 846 F.2d at 772, (no evidence of harm from short comment period where agency received sixty-one comments, some of them lengthy).

^{79/} Notably, the lack of transparency of Commission decisionmaking, and the agency's failure to provide all parties with equivalent notice, has been criticized very recently and vehemently by Congress. See Letter from Rep. John D. Dingell to Chairman Kevin J. Martin (Dec. 3, 2007) (criticizing recent "trend" at FCC of "short-circuiting procedural norms"). In Chairman Martin's response, he announced that in the future the Commission will publicly disclose when proposed actions are circulated among the Commissioners for decision. See Letter from Chairman Kevin J. Martin to Rep. John D. Dingell (Dec. 12, 2007).

enabled interested parties to comment by simply deferring its meeting and reopening the comment period.^{80/}

All three parties that were able to comment on the APCO/NENA proposal strongly opposed it. Only T-Mobile submitted written comments, doing so by filing a three-page letter opposing the proposal on the same day it received notice of the proposal.^{81/} Two other parties, CTIA and Verizon Wireless, opposed the proposal in telephone conversations with advisors to Commissioners.^{82/} The Commission failed even to acknowledge this opposition in its *Part A Order*.^{83/}

c. The Commission also deprived interested parties of the opportunity to comment on multiple Part B issues.

As discussed further below, the Commission also deprived interested parties of the opportunity to comment on multiple Part B issues that it unexpectedly resolved in its *Part A Order*, before the Part B comment period closed. The *Part A Order* resolved issues (including the use of interim benchmarks) that the Commission put out for comment in Part B of the NPRM. The reply comments on these issues were due a week *after* the Commission adopted the *Part A Order*.

2. The APA requires a further round of comments where, as here, the final rule adopted is not a “logical outgrowth” of the proposed rule.

^{80/} See, e.g., *Omnipoint Corp. v. FCC*, 78 F.3d 620, 631 (D.C. Cir. 1996) (second round of comments required under APA where final rule is not a “logical outgrowth” of the proposed rule); *Connecticut Light & Power Co. v. NRC*, 673 F.2d 525, 533 (D.C. Cir. 1982) (a final rule is not a logical outgrowth of a proposed rule “when the changes are so major that the original notice did not adequately frame the subjects for discussion”); *Fertilizer Institute v. EPA*, 935 F.2d 1303, (D.C. Cir. 1991) (a final rule is a logical outgrowth of a proposed rule “if a new round of notice and comment would not provide commenters with their first occasion to offer new and different criticisms which the agency might find convincing) (internal quotation marks and citation omitted).

^{81/} 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).

^{82/} See Verizon Wireless Ex Parte Letter (Sept. 11, 2007), CTIA Ex Parte Letter (Sept. 7, 2007).

^{83/} This marks another instance in which the Commission failed to establish a “rational connection between the facts found and the choice made.” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)). See also discussion *infra* at pp. 28-32.

The APA requires a further round of comments where, as here, the final rule adopted by the Commission is not a “‘logical outgrowth’ of the proposed rule.”^{84/} The rule proposed in Part A of the NPRM was simply to require PSAP-level compliance with Rule 20.18(h), on a schedule to be decided in Part B. Instead, the Commission adopted a series of detailed requirements and time frames, including (a) a five-year PSAP-level compliance mandate, (b) a one-year EA-level compliance mandate, (c) a three-year MSA/RSA-level compliance mandate, (d) a three-year mandate requiring compliance in 75% of PSAPs in a carrier’s service area, and (e) a three-year PSAP-level mandate requiring compliance with 150% of the Rule 20.18(h) location accuracy standard in the remainder of the carrier’s service area (25%) not covered by the mandate described in above in (d). The multitude of additional requirements unanticipated in Part A of the NPRM constitute “changes . . . so major that the original notice did not adequately frame the subjects for discussion.”^{85/} The Commission accordingly was required to solicit a second round of comments prior to adopting the final rule.

C. The Bifurcated Rulemaking Failed To Meet the APA Requirement of Reasoned Decisionmaking By Resolving Key Part B Issues Prior to the Close of the Part B Comment Period, Leaving Other Issues Key to Compliance Unresolved.

The APA requires an agency adopting rules to “examine the relevant data and articulate a satisfactory explanation for its action, including a ‘rational connection between the facts found and the choice made.’”^{86/} To meet this requirement, the agency must address substantial and

^{84/} See, e.g., *Omnipoint Corp. v. FCC*, 78 F.3d 620, 631-32 (D.C. Circuit 1996) (“In deciding whether a second round of comment is required, this Court looks to see ‘whether the final rule promulgated by the agency is a logical outgrowth of the proposed rule.’”) (citing *American Water Works Ass’n. v. EPA*, 40 F.3d 1266, 1274 (D.C. Cir. 1994); *Connecticut Light and Power Co. v. NRC*, 673 F.2d 525, 533 (D.C. Cir. 1982).

^{85/} *Connecticut Light & Power Co.*, 673 F.2d at 533 (holding that a final rule is not a “logical outgrowth” of the proposed rule “when the changes are so major that the original notice did not adequately frame the subjects for discussion”).

^{86/} *Motor Vehicle Mfrs.*, 463 U.S. at 43 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)); *U.S. Telecom Ass’n v. FCC*, 227 F.3d 450, 461 (D.C. Cir. 2000).

material factual issues based on a review of the whole record, and explain its resolution of those issues.^{87/} This necessarily includes taking into account the comment record and addressing significant issues raised by commenters.^{88/} The bifurcated procedure followed here failed to meet those requirements. First, the adoption in the *Part A Order* of interim benchmarks and compliance deadlines was not based on a consideration of the whole record, because those issues were put out for comment in Part B of the proceeding, for which the comment period had not yet closed. As Commissioner Adelstein observed:

[The *Part A Order*] is fraught with highly dubious legal and policy maneuvering that bypasses a still developing record on what should be the reasonable and appropriate implementation of details. Instead of giving the public safety community, industry and this Commission the benefit of a decision based on a full record, the majority plows forward with details on benchmarks and compliance determinations – findings that are the very subject of the III.B. portion of this bifurcated proceeding.^{89/}

Second, other part B issues that have yet to be resolved are necessary underpinnings to compliance with the *Part A Order's* geographic-level compliance mandates. Carriers cannot implement a solution to the *Part A Order* without knowing how the Commission will resolve other important Part B issues.

1. The *Part A Order* engages in the “willful blindness” of viewing inextricably related Part A and Part B issues “in isolation from one another.”^{90/}

^{87/} See, e.g., *MCI WorldCom, Inc. v. FCC*, 209 F.3d 760, 765 (D.C. Cir. 2000); *T&T Corp. v. FCC*, 86 F.3d 242, 247 (D.C. Cir. 1996); *City of Brookings Mun. Tel. Co. v. FCC*, 822 F.2d 1153, 1167-69 (D.C. Cir. 1987); see also *GTE Serv. Corp. v. FCC*, 205 F.3d 416, 422 (D.C. Cir. 2000) (Commission’s failure “to consider an important aspect of the problem” is error); *Achernar Broad. v. FCC*, 62 F.3d 1441, 1445 (D.C. Cir. 1995) (no deference is due when Commission does not exercise its expert judgment); see also *Verizon Tel. Cos. v. FCC*, 374 F.3d 1229, 1233 (D.C. Cir. 2004) (The FCC’s authority under 47 U.S.C. § 154(j) to “order its own proceeding as it reasonably sees fit . . . does not extend to dispensing with a reasoned explanation for its decisions.”).

^{88/} See 5 U.S.C. § 553(c); *Telocator Network of Am. Broad. v. FCC*, 691 F.2d 525, 537 (D.C. Cir. 1982); *Kollett v. Harris*, 619 F.2d 134, 141, n.7 (1st Cir. 1980) (“comment[s] which, if true, would seriously call into question the rationality of agency action . . . are the type of relevant factors whose disregard may render agency action invalid”).

^{89/} Statement of Commissioner Adelstein, at 1 (Nov. 20, 2007).

^{90/} See *MCI v. FCC*, 842 F.2d 1296, 1303-04 (D.C. Cir. 1988).

The Part A issue of geographic compliance level is inextricably related to the Part B issues of the substantive content of the rules and the timeline for compliance. The Commission singled out in Part A of the NPRM the issue whether to require PSAP-level compliance, while leaving for Part B the underlying and closely related issues of:

- how long carriers should have to comply;
- whether the compliance timeline should vary based on certain factors, and if so what factors;
- what specific tasks will be necessary for carriers to comply;
- whether interim benchmarks should be established;
- whether the two different current technologies should remain subject to different accuracy standards or be governed by a uniform standard, and what that standard should be;
- if a single standard is imposed, how long carriers should have to comply with it;
- whether the standard should include additional information, such as elevation;
- whether a carrier should be required to comply with respect to calls by roamers who use a different technology than the carrier does;
- what technologies are available, what can they do, and whether the Commission should mandate a particular technology;
- what methodology carriers should use to test for compliance, including whether OET Bulletin No. 71 should be used to verify compliance and, if so, what revisions to the Bulletin would be appropriate (such as specifying a certain level of indoor versus outdoor testing, what mix of equipment – carrier-provided handsets, base stations, or other facilities – should be employed, how many test points within a PSAP service area should be required and how should they be distributed, and whether special considerations should be established for tests in rural areas);
- whether a mandatory schedule should be adopted for compliance testing and, if so, what schedule; and
- whether carriers should automatically provide accuracy data to PSAPs and, if so, how, how often, at what level of granularity, and in what format.^{21/}

^{21/} E911 NPRM ¶¶ 8-17.

Merely reading this list of Part B issues reveals how *inextricably related* they are to the geographic-level compliance issue raised in Part A. Carriers cannot meaningfully develop new technologies to achieve improved levels of geographic accuracy without guidance on the fundamental elements of the rules with which they are trying to comply – for example, the specific tasks carriers must do to comply, whether there will be a single or multiple standards, and whether the Commission mandates a single technology solution. Because carriers need to know how the Commission resolves all of these Part B issues before they can attempt to implement a solution to the geographic-level compliance mandates, the Commission has not merely “‘set the stage’ for the examination that lies ahead [in Part B],” but has effectively brought the curtain down on it.^{92/}

The agency has ordered carriers to do “it” within five years, without saying what “it” is, without considering whether technologies exist that make “it” possible, and without saying whether only one particular technology can be used.^{93/} Like the Queen of Hearts, the Commission has declared, “Sentence first – verdict afterwards.”^{94/} The Commission has “entirely failed to consider [several] important aspect[s] of the problem,” rendering its *Part A Order* arbitrary and capricious.^{95/}

^{92/} See *Part A Order* ¶¶ 12 (“Commenters also argue that we should not require location accuracy compliance at the PSAP level before completing the second phase of this rulemaking, or that we should first convene an industry forum or advisory council to assess the possibilities for improving 911 location accuracy. We reject this argument as without merit. The step we take today is necessary to ensure first responders receive meaningful location accuracy information as soon as possible, and should not be delayed while we explore additional issues regarding improving location accuracy. By making clear that compliance with Section 20.18(h) must be measured at the PSAP level, we also effectively ‘set the stage’ for the examination that lies ahead, ensuring that all stakeholders are properly discussing location accuracy at the correct geographic level.”) (emphasis added).

^{93/} See *id.* ¶ 13.

^{94/} Lewis Carroll, *Alice’s Adventures in Wonderland*, ch. 12.

^{95/} *Motor Vehicle Mfrs.*, 463 U.S. at 43 (noting that agency decisions would be vacated under arbitrary and capricious standard where agency “entirely failed to consider an important aspect of the problem, 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”); see, e.g., *Radio-Television News Directors Ass’n v. FCC*, 229 F.3d 269 (D.C. Cir. 2000) (“Incredibly, the Order reinstates the rules before the Commission will have received any of the updated information that the Commission states it requires in order to evaluate the rules.”);

2. The Commission resolved key Part B issues before receiving comments on them.

As previously noted, some key Part B issues were resolved by the *Part A Order* before the Part B comment period had closed, and thus without a complete record or consideration. Reply comments on the Part B issues were not due until a week after the Commission adopted the *Part A Order*.^{96/} Yet the *Part A Order* resolves the following important Part B issues: how long carriers should have to comply (5 years); whether the amount of time should vary based on certain factors (no); and whether benchmarks should be established (yes, at 1 and 3 years). As Commissioner Adelstein pointed out, “benchmarks and compliance determinations . . . are the very subject of the III.B. portion of this bifurcated proceeding.”^{97/} The *Part A Order* also effectively mandates adoption of hybrid location technologies – an issue expressly reserved for consideration in Part B – by mandating PSAP-level compliance, since the only evidence in the record that even suggests the possibility of substantial, though imperfect, future PSAP-level compliance indicates that new hybrid technologies (once developed) would be necessary to do so.^{98/} Thus, the Commission’s claim that it has “not mandate[ed] any specific location

Southern Co. Servs. Inc. v. FCC, 313 F.3d 574 (D.C. Cir. 2002); *MCI v. FCC*, 842 F.2d at 1303-04; *Prometheus Radio Project v. FCC*, 373 F.3d 372, 420-21 (3d Cir. 2004) (in “repealing [a rule] without any discussion of the effect of its decision on [the objective of that rule],” the Commission “has not provided ‘a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored,’” and “‘entirely failed to consider an important aspect of the problem,’ and this amounts to arbitrary and capricious rulemaking,” citing *Greater Boston TV Corp. v. FCC*, 444 F.2d 841, 852 (D.C. Cir. 1970).

^{96/} *E911 NPRM*.

^{97/} See Statement of Commissioner Adelstein, at 1 (Nov. 20, 2007).

^{98/} TruePosition Comments at 5 (filed Jul. 5, 2007) (stating that “[w]ere [a hybrid network-GPS technology consisting of U.S. DOA and A-GPS] implemented, TruePosition believes it would meet the 100/300 meter accuracy standard in virtually all cases and the 50/150 meter accuracy standard in the vast majority of cases.”).

technology or approach in this *Order*, nor are we requiring carriers to implement new location technologies” is patently wrong.^{99/}

By unexpectedly and prematurely resolving these Part B issues, the Commission failed to collect, let alone examine, the relevant data, as required by the APA. In addition, by effectively truncating without prior public notice the Part B reply comment period by a week, the Commission violated its own rules, which state that a “reasonable time will be provided for filing [reply] comments.”^{100/}

D. The Commission Arbitrarily Failed To Consider the Costs, Along With Possible Benefits, of Imposing a Technically Infeasible Compliance Timeframe.

Courts have held that analysis of the costs and benefits of a proposed action is a core element of reasoned decisionmaking.^{101/} Reasoned decisionmaking necessarily involves evaluation of the positive and negative effects of new requirements. The *Part A Order* fails to reflect such an analysis and ignores important trade-offs implicated by the new geographic-level mandates. Commenters pointed out that the Commission made no attempt to quantify any possible incremental public safety benefits of imposing a technically infeasible PSAP-level

^{99/} *Part A Order* ¶ 13 (“Our action today, however, does not depend on that examination [i.e., the second phase of the rulemaking], . . . or otherwise ‘plac[e] the cart before the horse.’ Although the *Notice* sought comment on whether hybrid location technologies can provide even *better* location accuracy results, we do not resolve those questions in this *Order*. . . . More specifically, we are not mandating any specific location technology or approach in this *Order*, nor are we requiring carriers to implement new location technologies. For example, carriers that currently employ a network-based location solution need not incorporate handset-based location technologies into their networks to comply with our ruling in this *Order*, or vice versa.”) (internal footnote omitted).

^{100/} 47 C.F.R. § 1.415(c). Although this rule may be waived by the Commission for good cause shown, *see id.* § 1.3, the Commission made no attempt to waive the rule in this instance.

^{101/} *See, e.g., American Petroleum Institute v. EPA*, 216 F.3d 50, 57-58 (D.C. Cir. 2000) (“EPA makes no attempt to balance the costs and benefits of primary treatment, or otherwise to explain why the Clean Water Act requirements are the real motivation behind primary treatment. . . . If the non-Clean Water Act benefits of the initial treatment are enough to justify firms’ incurring the costs . . . , the EPA would have to reconcile that fact with any conclusion that the Clean Water Act purpose was primary.” (emphasis added); *USTA v. FCC*, 359 F.3d 554, 570 (2004).

accuracy requirement,^{102/} and that any such benefits would be outweighed by the possibility that the requirement would lead to reduced service availability and thus less public access to any form of wireless 911 services.^{103/} Yet the *Part A Order* reflects no recognition of the possible harm to the public interest if the proposed requirement impairs the availability of wireless services.

The expansion of wireless coverage has made an enormous contribution to public safety by making 911 calls possible from places where such calls could not have been made before. This public safety contribution will continue to grow as wireless service extends to more communities and rural areas.^{104/} Any regulatory action that slows the expansion of wireless service, or causes service to be dropped in economically challenging areas, will significantly harm wireless consumers and public safety. Such an effect can occur in a number of ways, as discussed below – none of which is considered in the *Part A Order*. Like the dog who “los[t] his bone going after its deceptively larger reflection in the water,” the Commission here risks losing the public safety benefits of ever-increasing wireless 911 coverage in its quest for even better – but technically infeasible – E911 autolocation.^{105/}

1. Available capital is subject to competing uses.

^{102/} See, e.g., T-Mobile Comments at 14 (filed Jul. 5, 2007) (“Risk analysis necessarily involves considerations of all the trade-offs of new requirements, including the *incremental public safety benefits* to be gained from the additional accuracy specification and the possibility that such new requirements may lead to reduced service availability and thus less public access to any form of 911.”) (emphasis added).

^{103/} See, e.g., *id.*; T-Mobile Ex Parte, Pottle/Jensen Decl., ¶ 10 (Sept. 7, 2007) (“[T]he Commission’s new rules could have an unintended consequence of less coverage, less competition, and less ability to use mobile 911 and E911 in rural areas.”); Sprint Nextel Comments at 12 (filed Jul. 5, 2007) (“Testing wireless location accuracy at the PSAP level would be an expensive and time-consuming process that would severely strain PSAP resources and divert funds to unproductive ends, raising consumer costs and draining resources from public safety.”).

^{104/} See T-Mobile Ex Parte Letter, Attach. at 2 (Aug. 8, 2007) (“Consumers use wireless service to place 260,000 911 calls per day (2005), many from places never possible using landlines – such as moving cars, parks, accident sites, city streets, canyon or woodland hikes, in malls and other indoor spaces. Bringing wireless to more communities will allow more customers to use wireless 911 in emergencies in even more locations.”).

^{105/} See *Buckley v. Valeo*, 519 F.2d 821, 898 (D.C. Cir. 1975) (referring to an Aesop’s fable when commenting on the trade-offs involved in striking down a statute that promotes the First Amendment in the pursuit of other, tenuous First Amendment benefits).

The costs of attempting to comply with these new requirements would be monumental. T-Mobile estimates that, logistical and business infeasibilities momentarily aside, its compliance with the geographic-level mandates using existing technologies would require an impossible [REDACTED] capital expenditure and [REDACTED]

] yearly operating expenditure. As the National Association of State 911 Administrators has explained,

the cost to improved accuracy and compliance testing cannot be viewed in a vacuum. If not used for improvement of accuracy or testing, the funding, be it public funds in a cost recovery state or the private funds of the carrier, could be used to benefit other public safety needs such as expanding wireless coverage into an area without service so a 9-1-1 call can be completed at all.^{106/}

The Commission failed even to consider these trade-offs.^{107/}

2. Service may have to be withdrawn where compliance is infeasible.

Carriers may be forced to withdraw existing service and curtail planned service expansion in areas where compliance is technically infeasible or impossibly expensive – thereby reducing consumers' ability to place wireless 911 calls at all. This problem will loom largest in rural and other underserved areas, where providing service already may be economically challenging for the carrier.

3. Higher prices to consumers will curtail service.

Demand for wireless service is elastic, and thus increased prices may cause subscribership to fall. Such increased prices would be unavoidable given the extraordinary compliance costs carriers would face as a result of the new geographic-level compliance

^{106/} Letter from Steve Marzolf, President, National Association of State 9-1-1 Administrators to Chairman Martin, CC Docket No. 94-102, at 2 (filed Sept. 21, 2005).

^{107/} *Part A Order* ¶ 17 (stating that “allowing sufficient time for carriers to achieve compliance alleviates parties’ concerns about the challenges of PSAP-level compliance,” and citing NANSAs’ May 23, 2007 Ex Parte Letter at 1-2 (expressing concern about the effect of requiring PSAP-level compliance on state budgets and E911 cost recovery mechanisms)).

mandates, pushing some consumers to drop service. Again, the net result would be a decrease in wireless calls – including wireless 911 calls.^{108/}

E. The Possibility of Waiver or Prosecutorial Discretion Does Not Save These Arbitrary Requirements.

The Commission cannot skirt the prohibition on arbitrary and capricious agency action by holding out the possibility of waiver or forbearance from enforcement in particular cases.^{109/} As the courts have made clear, “the Commission cannot escape judicial review of a wholly arbitrary action by instituting a waiver procedure that would allow it to correct in the future at its discretion the arbitrary results of that action.”^{110/} That is especially true here, where waivers would have to be widespread. Instances of substantial burden or barriers to compliance will not be isolated or unique. Rather, compliance is generally impossible across *most* carrier networks, throughout the industry. The probable need for waivers by a majority of the industry further illustrates the fundamental unsoundness of the rule.

II. T-MOBILE WILL SUFFER IRREPARABLE HARM IF A STAY IS NOT GRANTED.

T-Mobile will suffer irreparable harm if a stay is not granted, including exposure to enforcement action for failure to meet impossible requirements, permanent loss of goodwill and customers, unrecoverable economic losses, and impairment of credit.^{111/} All of these harms are likely and imminent, as T-Mobile currently has less than 8 months to achieve compliance in every EA in which it provides service.

^{108/} Although it is theoretically possible for individuals who cancel their wireless subscriptions to access 911 services through an unsubscribed handset, it is unlikely that any significant number would do so.

^{109/} *E911 NPRM* ¶ 6 (seeking comment on whether or to what extent to defer enforcement).

^{110/} *Alltel Corp. v. FCC*, 838 F.2d 551, 563 (D.C. Cir. 1988).

^{111/} See, e.g., *Multi-Channel TV Cable Co. v. Charlottesville Quality Cable Operating Co.*, 22 F.3d 546, 552 (4th Cir. 1994) (finding irreparable injury prong satisfied where failure to grant a stay “creates the possibility of permanent loss of customers to a competitor or the loss of goodwill”); see *Baker Elec. Coop., Inc. v. Chaske*, 28 F.3d 1466, 1473 (8th Cir. 1994) (finding threat of unrecoverable economic losses qualifies as irreparable harm); *Airlines Reporting Co. v. Barry*, 825 F.2d 1220, 1227 (8th Cir. 1987) (same).

A. Exposure to Enforcement Actions.

The geographic-level mandate unfairly exposes T-Mobile and other carriers to enforcement action for failure to comply with impossible regulations. The Communications Act subjects carriers to possible damages, injunctive relief, civil forfeitures, and even criminal liability for failure to comply with Commission rules.^{112/} The Commission may impose sanctions on its own motion or on complaint by an aggrieved party.^{113/} A carrier subject to rules with which it cannot comply thus faces severe legal risks that it cannot avoid through any action on its part.

B. Loss of Goodwill and Customers.

Beyond the threat of financial harm from enforcement penalties, a carrier would suffer irreparable reputational harm by being branded a violator of public safety laws. T-Mobile's goodwill and customer base would suffer as a result of this reputational damage, in addition to the loss of customers from any increase in service prices and curtailment of service necessitated by the infeasible geographic-level mandates. Such losses have been recognized as irreparable harm.^{114/}

C. Unrecoverable Economic Harm.

Compliance with the one-year EA-level requirement may be possible in some areas only through massive expenditures to implement orphan technology that will be useless in meeting

^{112/} See 47 U.S.C. §§ 206-209, 401, 404, 407, 408, 501-504.

^{113/} *Id.* §§ 208, 403.

^{114/} See, e.g., *Multi-Channel TV Cable Co.*, 22 F.3d at 552; *Michigan Bell Tel. Co. v. Engler*, 257 F.3d 587 (6th Cir. 2001) (finding loss of customer good will caused by being forced to recoup losses by raising rates and fees may irreparably harm a company); *Basicomputer Corp. v. Scott*, 973 F.2d 507, 512 (6th Cir. 1992) (finding that because "damages flowing from . . . losses [of customer goodwill] are difficult to compute," such loss "amounts to irreparable injury"); *Gateway E. Ry. Co. v. Terminal R.R. Ass'n*, 35 F.3d 1134, 1140 (7th Cir. 1994) ("[S]howing injury to goodwill can constitute irreparable harm that is not compensable by an award of money damages.").

the *Part A Order*'s longer-term requirements.^{115/} There is no mechanism to allow T-Mobile to *recover the costs of this stranded investment if it later prevails on the merits of its challenge to the Order*. Such unrecoverable economic harm has been recognized as irreparable harm.^{116/} The same will be true with respect to the investment necessary to satisfy the MSA/RSA and PSAP-level requirements – investment that must be undertaken fairly soon in order to meet the three year deadline.

D. Impairment of Credit.

Many carriers' financing is dependent on their remaining in compliance with all Commission rules. [REDACTED]

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III. OTHER INTERESTED PARTIES WILL NOT BE HARMED IF THE STAY IS GRANTED.

A. Consumers Will Retain Wireless E911 Service and Will Not Suffer by Virtue of a Stay of Requirements With Which Carriers Cannot Comply.

Consumers will continue to make wireless 911 calls and to benefit from the autolocation requirements of the Commission's preexisting rules. Irrespective of these new rules, carriers will continue to deliver 911 calls, along with callback numbers and locations with uncertainty estimates, to PSAPs. Moreover, consumers cannot be harmed by the staying of new rules with which carriers cannot comply in the first place. To the contrary, as discussed below, staying the

^{115/} See *Part A Order* ¶ 14 (acknowledging that "meeting the deadline and benchmarks may require the investment of significant resources by certain carriers"); Report and Order and Further Notice of Proposed Rulemaking, *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 11 FCC Rcd 18676, 18710-11 ¶ 67 (1996) (concluding that an interim "stage of E911 deployment would not be a bridge but instead could be a costly detour that could delay full implementation of ALI capability").

^{116/} See, e.g., *Baker Elec. Coop., Inc. v. Chaske*, 28 F.3d at 1473.

^{117/} T-Mobile Decl. ¶¶ 11-17 (Jan. 7, 2008).

new rules is likely to benefit consumers by sparing them the curtailment of wireless 911 service that would be the unintended consequence of these technically infeasible requirements.

B. Wireless Carriers and PSAPs Will Benefit from Not Being Forced To Comply With Costly New Rules Under Significant Threat of Judicial Reversal.

Both wireless carriers and PSAPs will benefit from being relieved of obligations to make significant expenditures to try to achieve compliance, with dubious benefits. Neither carriers nor PSAPs would have a means of recovering those compliance costs in the event that the geographic-level mandates ultimately are overturned on judicial review.

IV. THE PUBLIC INTEREST FAVORS GRANTING A STAY.

A. A Stay Will Promote the Public Interest by Avoiding the Harmful Consequences of a Quest to Implement Technically Infeasible Requirements.

A stay will relieve carriers of the choice between ceasing operations or facing enforcement threats in areas where compliance is difficult or impossible. This will serve the public interest by ensuring that service is not withdrawn, but continues to be available for regular and emergency calls. For T-Mobile, using U-TDOA technology, this factor comes into play most acutely in underserved rural areas, where the economic case for provision of service already is the most challenging – and where the economics of burdensome regulatory requirements are least defensible.

A stay also will spare consumers from price increases driven by the massive costs of attempting to comply with the *Part A Order*'s requirements.

B. The Public Interest Will Benefit from a Regulatory Environment in Which Important Rule Changes Are Tested, Considered Fully, and Found Technically Feasible.

The important public interest objectives of the APA will be served by avoiding forced compliance with arbitrary and infeasible requirements effectuated without meaningful public participation while their lawfulness is being tested.

C. A Stay Will Prevent Undue Strain on PSAP Resources.

As a number of public safety entities pointed out, testing wireless location accuracy at the PSAP level would be an expensive and time-consuming process that would strain PSAP resources and divert funds to unproductive ends, again raising consumer costs and decreasing resources for public safety.^{118/} The result would be a diversion of PSAP resources and possible impairment of PSAPs' ability to provide E911 services. A stay will prevent that harm.

^{118/} See, e.g., NANSA Ex Parte Letter at 1-2 (May 23, 2007) (expressing concern about the effect of requiring PSAP-level compliance on state budgets and E911 cost recovery mechanisms).

Conclusion

The Commission should stay the effectiveness of the rule changes adopted in the Part A Order, pending judicial resolution of their lawfulness.

Respectfully submitted,



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January 28, 2008

Attorneys for T-Mobile USA, Inc.

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

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

DECLARATION OF JOHN F. POTTLE AND RYAN N. JENSEN

1. My name is John F. Pottle. I am the Director of National Systems Engineering, Engineering Services for T-Mobile USA, Inc. ("T-Mobile"). I have been employed at T-Mobile, or its predecessor companies, for 13 years. I have 27 years experience as an electrical engineer and manager in the wireless industry, the last 9 of which have been involved in the development and deployment of location technologies and E911 systems. I manage several functional areas within T-Mobile, including the teams responsible for deployment and maintenance of E911 services, compliance with mandated Public Safety Answering Point ("PSAP") request timelines, assurance of Phase II location accuracy performance, and PSAP technical support. I am also responsible for formulating T-Mobile's technology roadmap for E911 services and ongoing assurance that T-Mobile systems and networks continue to meet requirements for E911 as the network grows and new technologies are introduced. In this capacity, I have direct and personal

knowledge regarding T-Mobile's E911 location technology and deployments, and the accuracy issues presented in this proceeding.

2. My name is Ryan N. Jensen. I am a Member of the Technical Staff, National Systems Engineering for T-Mobile. I have been employed at T-Mobile, or its predecessor companies, for 17 years, with 9 of those years spent in the research, development, deployment, and analysis of the performance of various location technologies for mobile phones. I have 24 years experience as an electrical engineer, hold a Masters of Science in Electrical Engineering, and have been issued 22 U.S. Patents. I am responsible for investigating potential new location technologies for T-Mobile, and for E911 performance and accuracy compliance methodology and testing within T-Mobile. I have participated extensively in the Emergency Services Interconnection Forum ("ESIF") since its inception, including working on the development of ESIF's Technical Reports on Accuracy Testing, Maintenance Testing, and Functional/End-to-End Testing for wireless E911. I also represented T-Mobile at the Network Reliability and Interoperability Council ("NRIC"), and helped to develop the recommendations produced by the NRIC VII Focus Group 1A, which was chartered by the Commission to report on E911 Accuracy Requirements and other related Best Practices. In this capacity, I have direct and personal knowledge regarding T-Mobile's E911 location technology and deployments and the accuracy issues presented in this proceeding.

3. This declaration is intended to support T-Mobile's application for stay of the *Wireless E911 Location Accuracy Requirements Report and Order ("Part A Order")* submitted to the Federal Communications Commission.

4. T-Mobile has deployed a network-based Uplink-Time Difference Of Arrival (U-TDOA) location solution. U-TDOA requires a certain density and geometry of measurement points (i.e.,

Location Measurement Units or “LMUs” at cell sites) in order to meet the accuracy requirements of Rule 20.18(h). Like any triangulation solution, U-TDOA requires a minimum of at least three measurement points to provide a specific location estimate. The necessary threshold of measurement point density and geometry required to establish an accurate location estimate varies, and typically requires many more than three measurement points, depending on a number of factors, including terrain, number and type of buildings, site geometry, and ground clutter (e.g., foliage) (collectively, “density/geometry variables”). In areas where these density/geometry variables limit access to or the quality of a particular measurement point, the availability of additional measurement points increases the likelihood that the location of a handset can be accurately determined.

5. 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, which are not congruent with the boundaries of Economic Areas (“EAs”), Metropolitan Statistical Areas (“MSAs”), Rural Service Areas (“RSAs”), or areas served by PSAPs. There is no geographic correlation or other logical relationship between the geographic boundaries of EAs, MSAs, RSAs, or areas served by PSAPs and the geographic boundaries of T-Mobile’s PCS licenses, the design and engineering of T-Mobile’s current network, or the T-Mobile network’s wireless location technology challenges and capabilities. In many cases, T-Mobile provides service to only a portion of an EA, MSA/RSA, or area served by a PSAP, and this is often true in remote areas where density/geometry variables also would make compliance with location accuracy requirements particularly difficult. For example, T-Mobile may have only one or two cell sites within an area served by a PSAP, or may serve only a single narrow highway corridor

in an MSA/RSA, with cell sites located along the highway in a line, which would make triangulation difficult or impossible.

6. EAs, MSAs/RSAs, and areas served by PSAPs are generally too small for U-TDOA to be able to deliver location estimates within the accuracy requirements of Rule 20.18(h). As compliance areas get smaller, the likelihood increases that a single challenging density/geometry variable (for example, mountainous terrain) will require more measurement points to meet the Rule 20.18(h) location accuracy requirements than the number of available cell sites in the compliance area. Thus, it would be more logical and more feasible to base accuracy requirements on local density/geometry variables, rather than applying a uniform accuracy rule based on geopolitical boundaries unrelated to the performance of the location technology. However, if uniform accuracy requirements are imposed based on geopolitical boundaries, state-level boundaries are the smallest geopolitical boundaries that ensure a sufficient mix of density/geometry variables to make it reasonably likely that U-TDOA will meet the Rule 20.18(h) location accuracy requirements in T-Mobile's network.

7. The Commission misunderstands this relationship between geopolitical boundaries and location technology capabilities when it states that, "if it is possible for carriers to comply with location accuracy requirements on a statewide basis in small states, this 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." *Part A Order* ¶ 11. As described above in paragraphs 4 – 6, the location accuracy performance of U-TDOA varies greatly over areas of the same number of square miles depending on the density/geometry variables present in each area and the number of available measurement points. Due to their high population densities, smaller states like Rhode Island and Connecticut present generally fewer challenging

density/geometry variables because it is economically feasible for carriers to deploy a large number of cell sites throughout the coverage area. This relatively high number of cell sites located throughout the area to provide service coverage and capacity also provide sufficient measurement points to achieve compliance with Rule 20.18(h). The same cannot be said of a rural area of similar size, for example, where adequate service coverage and capacity may be provided by relatively few cell sites that provide inadequate measurement point density and geometry to meet the location accuracy requirement.

8. When T-Mobile selected U-TDOA technology as its location solution in 2003 (after, like other major GSM carriers, having selected a hybrid handset-network location technology that did not work out), it did so 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. *See 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). At the time, U-TDOA was a promising new technology that could meet location accuracy requirements when averaged over large market areas with sufficient population and cell site density to permit sufficient measurement points. U-TDOA offered the additional benefit of providing location estimates for any handset operating in our network – i.e., it would not require modifications to handsets. Given the length of time necessary to change out handsets, meeting the 95 percent penetration requirement for handset-based location technologies by the December 31, 2005 compliance deadline would have been impossible.

9. T-Mobile would not have selected U-TDOA as its location technology if there had been a PSAP-level compliance requirement. For instance, T-Mobile knew that U-TDOA could not meet location accuracy requirements in many smaller markets and isolated rural areas without aggregating our location accuracy statistics over our larger national footprint. Due to these technology limitations, T-Mobile's U-TDOA vendor, TruePosition, would not contractually agree to meet the accuracy requirements at the PSAP level.

10. In 2005, T-Mobile agreed to state-level accuracy compliance as part of the NRIC VII, Focus Group 1A recommendations. *See* NRIC VII, Focus Group 1A, Near Term Issues for Emergency/E9-1-1 Services, Final Report at 50 (Dec. 2005) (recommending "that compliance be measured at the State level"). This agreement was based on T-Mobile's actual experience with U-TDOA technology in its network, which indicated that state-level compliance could be achieved with reasonable levels of incremental investment and improvements. Although the Commission has not adopted the NRIC VII, Focus Group 1A recommendations, T-Mobile remains confident that it could meet state-level accuracy requirements using U-TDOA technology.

11. There is no technologically feasible and economically reasonable approach to achieving universal location accuracy compliance with U-TDOA technology at any geographic level smaller than state-level boundaries in T-Mobile's network. U-TDOA location technology is, as a practical matter, incapable of meeting the network-based 100m/300m accuracy requirement at the geographic levels of EAs, MSAs/RSAs, or areas served by PSAPs. Although it may be theoretically possible to achieve compliance with these new geographic-level mandates by constructing and operating [REDACTED

] new sites solely for the purpose of hosting LMUs ("LMU-

only sites”), based on our familiarity with T-Mobile’s network and our review of its existing location technology deployments, we conclude that this approach does not provide a realistic path to complying with the Commission’s new geographic-level mandates. The [REDACTED

] price tag of essentially building a new LMU-only wireless network makes it impossible as a business matter.

12. More specifically, we estimate that achieving EA-level compliance by adding new LMU-only sites would require the construction and operation of approximately [REDACTED

] LMU-only sites. Constructing [REDACTED

] LMU-only sites would be logistically infeasible by the one-year benchmark, which is less than nine months away. Constructing new LMU-only sites is logistically challenging and, even where possible, time-consuming due to factors such as site lease negotiation, engineering, zoning approval, and permitting – not to mention the actual construction process and inevitable delays in some locations due to local citizen opposition. Moreover, constructing and operating the necessary LMU-only sites would require a capital expenditure of approximately [REDACTED

] and yearly operating expenditures in excess of [REDACTED]]. Given

this enormous cost and the complete absence of any business justification for it, such a step would be economically unjustifiable as a business matter.

13. The economic infeasibility of adding LMU-only sites becomes even more clear by examining the cost of MSA-/RSA-level compliance. We estimate that achieving MSA-/RSA-

level compliance by adding new LMU-only sites would require the construction and operation of approximately [REDACTED]

] additional LMU-only sites, requiring an additional capital expenditure of approximately [REDACTED]

] and additional yearly operating expenditures of approximately [REDACTED].

14. Achieving PSAP-level compliance by adding new LMU-only sites would require the construction and operation of approximately [REDACTED]

] additional LMU-only sites, requiring an additional capital expenditure of approximately [REDACTED]

] dollars and a yearly operating expenditure of approximately [REDACTED]

].

15. The figures in paragraphs 12-14 are incremental. Thus, achieving compliance with the EA-level, MSA/RSA-level and PSAP-level requirements by adding new LMU-only sites would necessitate construction and operation of roughly [REDACTED]

] LMU-only sites, requiring a capital expenditure of more than [REDACTED]

] and a yearly operating expenditure of more than [REDACTED]

].

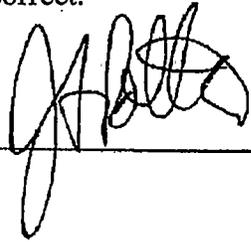
16. These expenditures would not be incremental investments to improve the capabilities of the existing location solution; rather, these expenditures would result in a massive increase to the

cost structure of T-Mobile's network and, given the elasticity of wireless service demand, they would be unrecoverable through service price increases.

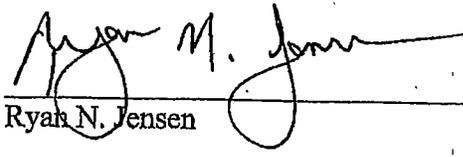
17. In light of the technical infeasibility and economic unreasonableness of complying with Rule 20.18(h) at the EA, MSA/RSA, and PSAP levels, discussed above, T-Mobile would be forced to consider turning off existing service in many areas and curtailing deployment of new service in other areas where compliance would be technically and/or economically infeasible. Given the fundamental limitations of U-TDOA technology, this would most likely occur in underserved rural areas, where the economic case for entry by new carriers is already most challenging. Thus, the net result of the new geographic level mandate would be to reduce access to wireless service generally, including wireless E911 service.

18. The new LMU-only sites that T-Mobile would be forced to install in attempting to comply with the geographic-level mandates would soon become "orphan technology" because they likely would not support or be necessary for whatever long-term technology solution T-Mobile would ultimately employ to comply with Rule 20.18(h) at the PSAP level. Thus, the Commission's short compliance time-frames would serve to divert carrier resources from the ultimate technological solution toward stop-gap orphan investments, making compliance ultimately more difficult and more expensive.

I declare under penalty of perjury that the foregoing is true and correct.



John F. Pottle



Ryan N. Jensen

Executed on January 28, 2008