

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

In the Matter of)	
)	
Revision of the Commission's Rules)	
To Ensure Compatibility with)	CC Docket No. 94-102
Enhanced 911 Emergency)	
Calling Systems)	
)	
Wireless E911 Phase II Implementation Plan of Nextel)	
Communications, Inc.)	

ORDER

Adopted: October 2, 2001

Released: October 12, 2001

By the Commission: Chairman Powell issuing a separate statement; Commissioners Abernathy and Martin issuing separate statements; Commissioner Copps dissenting and issuing a statement.

I. INTRODUCTION

1. In this Order, we approve a plan proposed by Nextel Communications, Inc. and Nextel Partners, Inc. (Nextel) for its provision of wireless Enhanced 911 (E911) Phase II location capability. Under this plan, and because it appears that location-capable handsets will not be available to Nextel in time to meet the schedule in the Phase II rules, Nextel would be allowed additional time for its initial rollout of a handset-based Phase II solution. Nextel commits, however, to completing deployment of location-capable handsets by the end of 2005, the same deadline for all other carriers using a handset-based technology under our rules, and will remain subject to all other wireless E911 rules. Further, we require Nextel to file Quarterly Reports concerning its E911 implementation program, including both Phase I and Phase II deployments, to permit effective monitoring and enforcement of its progress and performance in complying with the rules and the terms and conditions of its plan. We also require that Nextel propose to deploy a compliant location technology in the event its proposed technology fails to satisfy Phase II accuracy requirements. We find this alternative compliance plan to be justified by the special circumstances Nextel faces in deploying location capability for its iDEN air interface, the lack of viable alternatives as determined by its trial of location technologies, and the overall benefits to public safety of its proposed solution, and therefore, grant a temporary conditional waiver of the wireless E911 rules to allow implementation of this plan.

2. With this Order, along with the companion wireless E911 Orders adopted today, the Commission clears the way for the start of actual deployment of E911 Phase II. The deployment plans approved in these Orders apply to carriers who serve more than 75 percent of all subscribers for wireless phone service in the United States. Under these plans the major national carriers will begin deploying technologies to locate wireless 911 callers within the next several months. They also should achieve complete deployment of Phase II, in full compliance with the Commission's accuracy standards, in all areas across the nation where 911 call centers are ready and able to use this information by the end dates in the existing Commission rules – *i.e.*, no later than December 31, 2005. These carriers must implement Phase II in accordance with the terms of these approved schedules or they will be subject to enforcement action by the Commission. The quarterly reports to be filed by these carriers will allow the Commission to monitor the pace and overall progress of Phase I and Phase II deployment, and to facilitate the prompt enforcement of the milestones and other requirements of the plans approved today.

3. Despite the substantial progress to date, especially given the groundbreaking nature of these technologies, much remains to be done to achieve the FCC's fundamental goal of having wireless E911 Phase II capabilities deployed throughout the country. All necessary participants – carriers, the public safety community, technology vendors, network equipment and handset vendors, local exchange carriers, and this Commission – must continue to work aggressively in the coming months and years to ensure the promise of these new life saving technologies becomes a reality.

II. BACKGROUND

A. Phase II Framework

4. Under Phase II of the Commission's wireless E911 rules, wireless carriers are required to provide the location of wireless 911 callers, a capability known as Automatic Location Identification (ALI).¹ In establishing those rules, the Commission sought to be technologically and competitively neutral, allowing any location technology to be used that can comply with specified accuracy, reliability, and deployment schedule requirements. For example, the rules provide that handset-based location solutions must provide the location of wireless 911 calls with an accuracy of 50 meters for 67 percent of calls and 150 meters for 95 percent of calls.² Carriers using a handset-based solution also must begin to offer one entry-level model with location capability no later than October 1, 2001 and must ensure that 95 percent of their customers have location capable handsets no later than December 31, 2005.³

5. For carriers choosing a network-based solution, the rules provide that the technology must report the location of wireless 911 calls with an accuracy of 100 meters for 67 percent of calls and 300 meters for 95 percent of calls.⁴ A carrier using a network-based solution must provide ALI to 50 percent of its coverage area, or 50 percent of its population, beginning on October 1, 2001 or within 6 months of a Public Safety Answering Point (PSAP) request, whichever is later, and to 100 percent of callers within 18 months of that request or by October 1, 2002, whichever is later. Wireless carriers subject to the rules were directed to report their Phase II plans, including the technologies they plan to use, by November 9, 2000.⁵

6. During the course of the E911 proceeding, the Commission recognized that the E911 deployment schedule was aggressive in light of the need for further technological advancement. Nonetheless, the Commission predicted that ALI technologies would generally be available in sufficient time for carriers to comply.⁶

7. The Commission also recognized, however, that requests for waiver may be justified based

¹ See *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18676 (1996). For additional information regarding the Commission's wireless E911 program, see www.fcc.gov/e911.

² 47 C.F.R. § 20.18(h)(2).

³ 47 C.F.R. § 20.18(g).

⁴ 47 C.F.R. § 20.18(h)(1).

⁵ 47 C.F.R. § 20.18(i). See www.fcc.gov/e911, Wireless E-911 Phase II Automatic Location Identification Implementation, Reports From Wireless Carriers.

⁶ *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Fourth Memorandum Opinion and Order, 15 FCC Rcd 17442, 17457-58 (2000) (*E911 Fourth Memorandum Opinion and Order*).

on specific showings and discussed standards for such requests in the *E911 Fourth Memorandum Opinion and Order*.⁷ In the *E911 Fourth Memorandum Opinion and Order*, we explained that we would expect requests for waiver to be specific, focused, and limited in scope, with a clear path to full compliance.⁸ We also stated that carriers should undertake concrete steps necessary to come as close as possible to full compliance and should document their efforts, including the solutions they considered and why none could be employed in a way that complies with our Phase II rules. Finally, we stated that carriers should not expect to defer implementing a location solution if one is available and feasible.⁹

B. Summary of Nextel's Implementation Plan and Request

8. In its November 9 Phase II implementation report, Nextel stated that it intends to deploy a handset-based location technology, assisted Global Positioning System (A-GPS). As part of this report, Nextel also requests relief that would allow it additional time to deploy this solution in its national network.¹⁰ Nextel claims that the deployment of A-GPS will benefit public safety because it will provide the most accurate location information possible, assisting in the provision of more effective emergency response than less accurate technologies.¹¹ In addition, Nextel proposes, upon grant of relief, to commit a contribution of \$25 million over the next two years to help fund the upgrading of PSAP facilities to accept location information.¹²

9. Nextel argues further that relief is justified by the unusual circumstances it faces.¹³ Nextel's network employs the iDEN air interface, which is used by only a handful of carriers in the U.S; Nextel is the only iDEN carrier operating on a national basis. Moreover, iDEN technology is provided by only one manufacturer, Motorola.¹⁴ According to Nextel, many location technology vendors showed little or no interest in developing iDEN-based location solutions and it had very few options for possible solutions.¹⁵ As a result, Nextel claims, A-GPS is the only accurate Phase II location solution available to it, as demonstrated by field trials it conducted in April 2000.¹⁶ Moreover, according to Nextel, Motorola must develop a prototype iDEN handset with A-GPS capability and modify the iDEN network infrastructure to support a handset-based solution. For these reasons, Nextel claims, handsets including A-GPS capability will not be available before October 1, 2002.¹⁷

10. Accordingly, Nextel requests relief to permit a delay in the deployment of A-GPS capable

⁷ *Id.*

⁸ *Id.* at 17457, para. 44.

⁹ *Id.* at 17457-58, paras. 44-45.

¹⁰ Nextel Communications, Inc. and Nextel Partners, Inc. Joint Report on Phase II Location Technology Implementation and Request For Waiver, filed November 9, 2000 (Nextel Petition).

¹¹ *Id.* at 5-7.

¹² *Id.* at 4-5.

¹³ *Id.* at 7-11.

¹⁴ *Id.* at 8.

¹⁵ *Id.*

¹⁶ *Id.* at 8-9.

¹⁷ *Id.* at 8.

handsets of one year to 23 months beyond the benchmarks for handset-based technologies in the Phase II rules, but to retain the December 31, 2005 end-date deadline in the Commission's rules for having almost all its subscribers on location-capable handsets.¹⁸ Specifically, Nextel proposed the following schedule for deployment of A-GPS-capable handsets:

October 1, 2002:	Begin selling A-GPS-capable handsets;
December 31, 2002:	10% of all new handsets sold are A-GPS-capable;
December 1, 2003:	50% of all new handsets sold are A-GPS-capable;
December 1, 2004:	100% of all new handsets sold are A-GPS-capable;
December 31, 2005:	95% of Nextel's entire iDEN customer base is A-GPS-capable.

11. These deployment dates are based on the schedule set by Motorola for delivery of A-GPS capable handsets. Motorola states that, with Commission approval of Nextel's plan, it is committed to supporting these A-GPS deployment and penetration rates.¹⁹ Nextel does not seek any relief from other provisions of the Phase II rules. Thus, under its petition, it would remain subject to the same accuracy and reliability requirements applied to other carriers employing handset-based solutions, as well as to the provisions of the rules for any network upgrades to deliver Phase II information to PSAPs.²⁰

C. Positions of Interested Parties

12. The Nextel proposal was placed on public notice on December 4, 2000.²¹ Comments supporting the Nextel petition were filed by AT&T Wireless,²² Motorola,²³ and Pacific Wireless.²⁴ Two public safety organizations, the National Emergency Number Association (NENA)²⁵ and the Association of Public-Safety Communications Officials-International, Inc. (APCO),²⁶ offer qualified support for relief. NENA requests that relief be subject to conditions similar to those imposed by the Commission in its *E911 Fourth Memorandum Opinion and Order* in granting Phase II relief requested by VoiceStream Corporation, such as meeting the proposed handset delivery dates, a fallback location solution in the event the proposed solution does not perform as expected, and progress reports.²⁷ APCO asserts that grant of Nextel's request would be in the public interest, particularly because Nextel's A-GPS solution has been demonstrated as capable of meeting or exceeding the handset accuracy requirements, provided Nextel supplied further information about its efforts to test other location technologies, as well as about how it

¹⁸ *Id.* at 3-4.

¹⁹ Motorola Comments. Comments, Oppositions, and Reply Comments filed in response to Nextel's request are listed in Appendix A.

²⁰ See 47 C.F.R. § 20.18(g)(2).

²¹ WTB Seeks Comment on Phase II E911 Implementation Waiver Requests Filed by Nextel Communications, Inc. and Hawaiian Wireless, Inc., Public Notice, DA 00-2704 (rel. Dec. 4, 2000).

²² AT&T Comments.

²³ Motorola Comments.

²⁴ Pacific Wireless Comments.

²⁵ NENA Comments.

²⁶ APCO Comments.

²⁷ NENA Comments at 4.

intends to ensure that it will meet the 95 percent penetration level.²⁸ Grayson Wireless opposes the Nextel request, claiming that its network overlay system can be used to provide ALI in compliance with the rules and that the petition fails to meet the standards for the grant of Phase II relief specified in the *E911 Fourth Memorandum Opinion and Order*.²⁹ On May 10, 2001, the Wireless Telecommunications Bureau directed Nextel to submit additional information concerning its request, including information regarding its tests and studies of Phase II location technologies.³⁰ Nextel submitted information in response to this Order on May 21, 2001.³¹ On June 5, 2001, a wireless industry trade association, the Cellular Telecommunications and Internet Association (CTIA), filed *ex parte* comments in support of the Nextel request.³²

III. DISCUSSION

13. As we discuss more fully below, we conclude, based on the record developed here, that allowing Nextel to implement its Phase II deployment plan, through limited, temporary relief, is justified. We analyze Nextel's request under the standards set for Phase II relief in the *Fourth Memorandum Opinion and Order*.

A. Nextel Has Satisfied the Commission's Standard for E911 Phase II Relief

14. *Plan That Is Specific, Focused, and Limited in Scope.* As the Commission directed, Nextel's proposal is specific, focused, and limited in scope. The request specifies the technology Nextel plans to employ, that is, A-GPS, explains why relief is needed to deploy that technology, and proposes specific milestones for Phase II implementation. Nextel's deployment schedule is supported by its handset manufacturer, Motorola, which both asserts that the schedule in the current rules is not feasible and commits itself to meeting the schedule in Nextel's plan.³³ The Nextel plan also presents a clear path to full compliance, including meeting the date set in the current rules for achieving full deployment.³⁴

15. Further, Nextel provides a substantial presentation of the other solutions it considered and why it decided not to employ them.³⁵ Nextel reports that it began working toward compliance with the Commission's wireless E911 rules in late 1998, by issuing requests for information to ten potential location technology vendors.³⁶ During this pre-trial process, according to Nextel, numerous vendors were eliminated because they did not appear to be capable of meeting the FCC standards for iDEN; others

²⁸ APCO Comments at 3.

²⁹ Grayson Opposition.

³⁰ Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, DA 01-1187 (rel. May 10, 2001).

³¹ Response of Nextel Communications, Inc. and Nextel Partners, Inc. to Order of the Wireless Telecommunications Bureau, CC Docket No. 94-102 (filed May 21, 2001) (Nextel Response).

³² Letter from Michael Altschul, Senior Vice President, General Counsel, Cellular Telecommunications & Internet Association, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 94-102 (filed Jun. 5, 2001) (*CTIA June 5 Ex Parte*).

³³ Motorola Comments, *passim*.

³⁴ *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17458.

³⁵ See Nextel Petition, Nextel Response, Exhibits A through F.

³⁶ Nextel Petition at 11; Nextel Response at 2-10 and Exhibit A.

dropped out of Nextel's testing of their own accord.³⁷ Accordingly, beginning in April 2000, Nextel sponsored an independent trial, conducted by TechnoCom Corporation, of three possible location technologies, including A-GPS, a network overlay solution, and a hybrid solution, with both handset and network components, Enhanced Observed Time Difference of Arrival (E-OTD).³⁸

16. Based on this trial, Nextel decided to employ A-GPS.³⁹ According to Nextel, A-GPS was the only technology tested that satisfied the accuracy and reliability requirements of the Phase II rules.⁴⁰ In fact, A-GPS substantially exceeded these requirements in the test. Nextel reports that A-GPS located callers on average within 18 meters/67 percent of the time and within 52 meters/95 percent of the time, a result substantially better than the 50 meter/67 percent, 150 meter/95 percent requirements in our rules for handset-based solutions.⁴¹ The A-GPS solution did encounter difficulties in reporting positions within buildings and in some urban canyon environments, but overall the technology was judged to have "worked well and provided remarkable accuracy in a mix of urban and suburban environments."⁴² By contrast, the test results of the network overlay solution indicated that the best accuracy it could provide was 120 meters for 67 percent of calls and 442 meters for 95 percent of calls.⁴³ Similarly, a simulation of E-OTD for iDEN produced an accuracy of 462 meters for 67 percent of calls and error that was too high to measure for 95 percent of calls.⁴⁴ Moreover, achieving even this level of accuracy required eliminating some data judged to be unreliable.⁴⁵ Overall, the Motorola E-OTD solution, as applied to iDEN, was judged to be in a fairly early stage of research and development and considerably more work would have to be done before an operational system could be demonstrated that could possibly meet the FCC requirements.⁴⁶

17. Nextel's trial process appears from this record to have been a fair and reasonable method of evaluating and selecting a Phase II technology. None of the commenters or participants in this trial objects to Nextel's selection of A-GPS as unjustified or biased, based on the conduct or results of the trial. The only objection comes from Grayson, which was invited to participate in the Nextel trial and initially

³⁷ Nextel Petition at 12; Nextel Response at 2-3.

³⁸ Nextel Response at 4 and Exhibit B.7 at 8. Both A-GPS and E-OTD are considered handset-based solutions under our rules, because they require new or updated handsets, but both are in some ways hybrid solutions, because additional network-based components are also used in computing location.

³⁹ Nextel Petition at 13-14.

⁴⁰ *Id.* at 14-17.

⁴¹ Letter from Lawrence R. Krevor, Vice President – Government Affairs, Nextel, to Blaise Scinto and Dan Grosh, Wireless Telecommunications Bureau, Federal Communications Commission, CC Docket No. 94-102 at 1, 4 (filed Apr. 2, 2001) (*Nextel April 2 Ex Parte*); Nextel Reply, Exhibit B.7 at 8.

⁴² Nextel Response, Exhibit B.7 at 8.

⁴³ Nextel Petition at 17. For this network overlay solution, the Commission's rules require accuracy of 100 meters/67 percent of calls, 300 meters/95 percent. 47 C.F.R. § 20.18(h)(1). Nextel says that the vendor of this solution claimed that with changes the technology would permit location within 100 meters/67 percent of calls but this has not been verified either in field trials or simulations. Nextel Petition at 17, n. 25.

⁴⁴ Motorola Comments at 6; Nextel Petition at 15-16; Nextel Response, Exhibit B.7, Appendix C at 8.

⁴⁵ Nextel Response, Exhibit B.7, Appendix B at 1. Without this data selection, accuracy was 545 meters/67 percent and error to high to calculate for 95 percent of calls.

⁴⁶ Nextel Response, Exhibit B.7, Appendix B at 8.

planned to do so, but concedes that it dropped out.⁴⁷ Grayson contends that it subsequently performed a demonstration for Nextel and repeatedly reaffirmed its willingness to participate in a trial at a later date.⁴⁸ Grayson also claims that its system would comply with Phase II accuracy and reliability requirements but does not support these claims with any evidence from actual iDEN trials.⁴⁹ However, at the time Nextel was implementing its trial process, the Phase II rules required Nextel to report its location technology plans by October 1, 2000.⁵⁰ The April 2000 trial date was reasonably timed to comply with this date.

18. In certain circumstances it might be unreasonable for a carrier to fail to consider an alternative available location technology, even after it has made an initial implementation decision. The reporting requirement, after all, does not bind carriers, who remain free to switch to another compliant technology. For example, the carrier might later learn of another Phase II location solution that possesses characteristics that make it a superior choice for that carrier's network than the originally selected technology. In this case, however, it appears that Nextel acted reasonably both in its test methodology and its selection.

19. Nextel also faces special circumstances that affect its deployment of Phase II. As Nextel discusses and as most commenters agree, the low market share of the iDEN technology limits Nextel's options for location technologies. According to the Commission's latest annual report on competition in the CMRS market, Nextel was the fifth largest wireless carrier in 2000 with 6.7 million customers and was by far the largest iDEN carrier, accounting for 94 percent of iDEN subscribers.⁵¹ In total, however, iDEN represented only 10 percent of the digital U.S. mobile telephony market.⁵² By contrast, TDMA and CDMA carriers represented 38 and 40 percent of the market, respectively.⁵³ Even GSM, which for years had a minimal presence in the U.S., is used by more U.S. wireless customers, with a 12 percent market share.⁵⁴ Moreover, GSM is the dominant standard in Europe and many countries in Asia, and is the largest digital standard available worldwide.⁵⁵ iDEN, by contrast, has a relatively small presence outside the United States.⁵⁶ Under these circumstances, it is reasonable to expect that Nextel might find it more

⁴⁷ Grayson Opposition at 6.

⁴⁸ *Id.*

⁴⁹ *Id.* at 5-6. Grayson did not apparently perform its own comparable field trial for iDEN. There is, in fact, no clear evidence to show how Grayson's system would perform in locating actual iDEN 911 calls. Demonstrations, while a useful first step, offer little evidence of how a location technology, particularly a network overlay system that must be integrated with a carrier's network facilities, will perform in actual, real world operations.

⁵⁰ October 1, 2000 was the reporting date at the time Nextel planned and carried out its trial. The Commission later delayed this reporting date by a month, to November 9, 2000. *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17467.

⁵¹ *Sixth Annual Report and Analysis of Competitive Market Conditions With Respect To Commercial Mobile Radio Services*, Appendix C, Table 3 at C-4 (2001).

⁵² *Id.*, Appendix C, Table 6. Nextel is apparently one of only four U.S. carriers currently using the iDEN air interface.

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ According to the GSM Association, GSM is deployed in 171 countries and accounts for 70.5 percent of the world's digital mobile phone market. See http://www.gsmworld.com/membership/mem_stats.html.

⁵⁶ According to Motorola, the iDEN technology is used by one carrier each in eleven countries outside the U.S. and two carriers in Argentina. See http://www.motorola.com/LMPS/iDEN/addl_info/faq/providers.html.

difficult to meet the same schedule as carriers employing the more common air interfaces, because location technology vendors and equipment manufacturers will have substantial incentives to introduce ALI products first for those segments of the market with larger market share. In addition, iDEN is a proprietary Motorola technology and, to the extent that a location technology requires new or modified handsets and network equipment, Nextel must rely on Motorola as a sole source provider. The Commission made clear that it expected carriers to make concrete and timely efforts to comply with the Phase II rules.⁵⁷ Nextel appears to have done so and to have reached a reasonable decision on Phase II deployment based on those efforts.

20. **A Clear Path to Full Compliance.** Nextel's plan, as noted above, proposes a clear path to full compliance with the Commission's rules. Nextel's proposed handset solution appears to meet the Commission's accuracy standards, based on its trial, and we accept Nextel's proposed schedule for deployment of A-GPS-capable handsets, which, when implemented, will bring it fully into compliance with the Commission's rules by December 31, 2005. Motorola supports the proposed schedule, and the relief itself, as reasonable and achievable and commits itself to supporting the A-GPS deployment and penetration rates proposed by Nextel.⁵⁸ None of the commenters question or oppose this schedule, and no one suggests that an earlier deployment schedule is feasible. In late-filed comments, three public safety organizations suggest that some further type of manufacturer commitment to the timetable be required, such as a letter from the manufacturer.⁵⁹ In our view, the representations made by Motorola in its formal comments filed in this proceeding constitute a commitment to the timetable, and no further manufacturer representation is necessary.

21. We note, as APCO points out, that because of the initial delay in deployment, Nextel must accelerate the percent of location-capable handsets activated in 2003 and 2004, vis-à-vis other carriers, to meet its proposed deployment schedule. That is, Nextel will need to achieve a more accelerated replacement of its older, non-A-GPS handsets with A-GPS handsets in those years than other carriers employing a handset approach. For example, under its deployment schedule, Nextel is not required to move to 100 percent activation of A-GPS-capable handsets until December 1, 2004, 23 months after other carriers employing handset-based solutions. Nevertheless, thirteen months later, Nextel must meet the final, full deployment threshold requirement that 95 percent of its total handset base be A-GPS-capable.

22. Meeting this latter requirement, in particular, will require rapid replacement of old, non-A-GPS handsets with A-GPS handsets. Nextel anticipates that the commercial features to be introduced as a result of A-GPS integration will give existing subscribers an incentive to upgrade their handsets. In addition, its plans to introduce 3G services will, in Nextel's view, further enhance the value of location-capable handsets. Nextel projects that customer churn and growth will mean that as many as 70 percent of its subscribers will be using new handset models at the end of each year between now and 2005, and that this turnover rate should assure satisfaction of the 95 percent A-GPS capable handset penetration by December 31, 2005.⁶⁰ Nextel observes, for example, that within two years of introducing a single Internet-ready handset, it had achieved a customer base that is 80 percent Internet-ready, even though its handset line is not fully Internet-ready.⁶¹

⁵⁷ *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17458.

⁵⁸ Motorola Comments at 1-2.

⁵⁹ Further Comments of NENA, APCO, and NASNA at 3 (filed Jul. 19, 2001) (NENA, APCO, and NASNA Further Comments).

⁶⁰ *Nextel April 2 Ex Parte* at 5.

⁶¹ Nextel Further Reply Comments at 15 (filed August 2, 2001) (Nextel Further Reply).

23. Nextel's projected roll-out of location-capable handsets may well develop as it forecasts.⁶² But such projections are necessarily uncertain and may prove optimistic – changes in the economy or technology, among other factors, could affect actual roll-out. Under the rules and the conditions of the implementation plan, we require Nextel to do more than simply rely on normal handset churn and market trends. Rather, we require Nextel to take steps to ensure that these conditions are met. For example, Nextel may need to undertake special measures, such as incentive programs (rebate offers or discounts) or handset recalls. The burden is on Nextel to achieve the penetration levels it has committed to in its alternative implementation plan, even if handset churn or other market forces are not sufficient to meet these commitments.

24. We also conclude that approval of the implementation plan, subject to specific enforceable conditions as described below, is likely to benefit the public interest and public safety. First, the effects of the delay in A-GPS handset deployment are mitigated to a substantial degree by the fact that the final deadline, the requirement that 95 percent of all customer phones have location capability no later than December 31, 2005, continues in effect. Thus, the delay in initial deployment, while not desirable, should have only short-term and limited effects, and does not affect the long-term responsibilities of Nextel, which will be subject to the same full deployment requirement as all other carriers.

25. Second, by using the handset-based Phase II solution, Nextel is subject to the more strict accuracy requirements for handset-based solutions, *i.e.*, at least 50 meter accuracy for 67 percent of calls rather than the 100 meter/67 percent standard for network overlay solutions. Thus, Nextel is permanently obligated to provide more accurate and useful location information to PSAPs than if it were planning to use the network overlay solution tested in its trial. Based on the results of its trial, in which A-GPS achieved an accuracy of 18 meters for 67 percent of calls, actual location accuracy may prove to be better still. The Commission has previously indicated that, in considering requests for E911 relief, it would take into account the extent to which a proposal helps achieve further, long-term improvements in location accuracy.⁶³ Nextel's compliance proposal appears to represent such a step.⁶⁴

26. NENA and APCO's qualified support for the Nextel plan also is of significance in our assessment that approval of the implementation plan will benefit public safety. Both of these major public safety organizations have participated extensively in all stages of the wireless 911 proceeding and are familiar with both the state of location technology and the needs of public safety organizations. Their concurrence that Nextel faces special circumstances and their view that the ability of the A-GPS solution to meet or exceed the accuracy standards offsets the effects of the delayed deployment,⁶⁵ provides persuasive support for the plan, particularly with respect to our assessment of its overall benefit to public safety.

27. We also concur with NENA and APCO that we should not, as part of our assessment of the plan, give consideration to Nextel's proposed contribution to PSAP upgrades. Any additional resources that might speed the deployment of Phase II capability by PSAPs would no doubt benefit public safety. But we have not sought to estimate the benefit of any contribution to public safety or take any such

⁶² Nextel Petition at 10.

⁶³ Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Memorandum Opinion and Order, 12 FCC Rcd 22665, 22725 (1997).

⁶⁴ We note, however, that, as suggested by NENA and as we required in the VoiceStream case, in the event that Nextel's solution unexpectedly fails to comply with the Phase II accuracy requirements in the rules, Nextel is expected, as a condition for its implementation plan, to propose a solution that does comply. *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17464.

⁶⁵ APCO Comments at 4.

benefits into account in evaluating Nextel's plan. As we have discussed above, we believe that approval of the plan is justified by the public interest and public safety, without regard to Nextel's proffered contribution.

28. *As Close as Possible to Full Compliance.* Under the Commission's standard for Phase II relief, if no solution is available that fully complies, the carrier is expected to employ a solution that comes as close as possible.⁶⁶ For example, in the case of VoiceStream, we took into account VoiceStream's proposal to deploy an additional location solution that, while less accurate than required by the rules, would operate as an interim and backstop solution that would be more accurate than Phase I.⁶⁷ Nextel claims that it pursued a similar technology with Motorola, but that deploying this additional location solution in its iDEN network would provide minimal location accuracy improvement over Phase I, delay A-GPS deployment for one year, and represent a "throw-away" investment once A-GPS was ready for deployment. In addition, it claims that at this juncture an interim solution on Nextel's iDEN network could not be deployed before October 1, 2002, the date on which A-GPS will be commercially available.⁶⁸ After reviewing the record, we find credible Nextel's representation that no interim solution that will substantially improve accuracy over Phase I could be effectively deployed at this point and we concur with its assessment that deployment of an interim solution would be contrary to the public interest if that deployment resulted in a further push-back to the deployment of the A-GPS solution.

29. We also direct that Nextel aggressively pursue deployment of Phase I implementation, including both full completion of any work remaining on currently pending PSAP requests and timely completion of all future PSAP requests. Phase I implementation provides useful information to PSAPs in the form of callback numbers and a rough indication of the caller's location. In addition, the interconnection of CMRS carriers and PSAPs under Phase I is a necessary component of Phase II implementation. Delays in complying with PSAP requests for Phase I thus both impair public safety in the short term and Phase II implementation in the future.

30. To date, although Nextel reports that it has deployed Phase I to approximately 100 PSAPs serving nearly 24 million people, its Phase I deployment in some areas has not been without significant delay. For example, in response to a request for information from Wireless Bureau staff, Nextel reports that it has received approximately 400 PSAP requests for Phase I and many of those have been pending for more than six months.⁶⁹ The implementation of Phase I is especially important for Nextel, since Nextel will not even begin to deploy its Phase II solution until the fall of 2002 and will not be required to begin selling a significant proportion of handsets with A-GPS capability until December 1, 2003. Nextel itself asserts that it anticipates speedier deployment of Phase I in the future and has taken steps to help accomplish this.⁷⁰ Nextel must make Phase I a corporate priority as it continues to develop and implement its Phase II solution.⁷¹ The filing of detailed Phase I information is thus important to allow this Commission to aggressively monitor future performance, so that we may swiftly pursue enforcement action if necessary.

⁶⁶ *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17462.

⁶⁷ *Id.*, 15 FCC Rcd at 17466.

⁶⁸ Nextel Further Reply at 8-12.

⁶⁹ Letter from Laura Holloway, Director – Government Affairs, Nextel, to Kris Monteith, Chief, Policy Division, Wireless Telecommunications Bureau, CC Docket No. 94-102, Attachment "Nextel-Deployed" at 1-3 (filed Jun. 29, 2001) (*Nextel June 29 Ex Parte*).

⁷⁰ *Id.* at 5; Nextel Further Reply at 12-14.

⁷¹ See *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17458.

B. Additional Conditions of Relief Granted

31. To assist in monitoring and enforcing applicable Phase I and Phase II rules and each of the conditions imposed on Nextel, as set forth in summary form below, we also require that Nextel file Quarterly Reports with the Chief of the Enforcement Bureau and the Chief of the Wireless Telecommunications Bureau. Because mere assertions of compliance with the conditions of this Order and with our rules are not sufficient to show compliance, these reports are intended to provide specific, verifiable information to allow us to monitor Nextel's progress closely and determine whether Nextel is in compliance with each of the benchmarks and conditions of this Order and with other applicable provisions of the E911 rules, permitting prompt enforcement action if necessary.⁷²

32. Specifically, the Quarterly Reports must include the following information:⁷³

- The Report must include information on all pending Phase I and Phase II requests, including the name of the PSAP, the date the request was received by the carrier, whether or not Nextel claims it is valid, and its status. To the extent any request has been pending for more than six months, Nextel must identify the specific reasons underlying the failure to provide the requested service, the steps Nextel has taken to resolve the problems, and the anticipated date of full completion of the work necessary to deliver the requested information to the PSAP in question. If Nextel believes there are questions concerning a PSAP's compliance with the conditions necessary for a valid Phase I or II request, such as its readiness to receive and utilize Phase I or Phase II information, it should identify specifically the question and the efforts it has undertaken, including the communications it has had with the PSAP, to resolve the question. Further, to help keep PSAPs informed, we direct Nextel to serve this report on APCO, NENA and NASNA.⁷⁴ In addition, the Commission will post this information on its website.⁷⁵ Because it is important for each individual PSAP with a pending Phase I or Phase II request to have access to this information, we authorize the Wireless Telecommunications Bureau to require additional steps necessary to ensure PSAP access to this information.
- The Report must also include information on: current handset models being activated or sold that are A-GPS-capable; and important events affecting location-capable handset penetration levels, such as introduction of new handset models.
- The Report also must contain statements regarding whether Nextel has met each deployment benchmark and, if not, the reasons for its failure to comply. Specifically, Nextel must report, in the Quarterly Report immediately following the benchmark date⁷⁶: (1) for the October 1, 2002

⁷² To the extent Nextel believes any of the required information is proprietary, it may file a request for confidential treatment pursuant to 47 C.F.R. § 0.459.

⁷³ We delegate authority to the Chiefs of the Wireless Telecommunications Bureau and the Enforcement Bureau to require Nextel to provide additional information in its Quarterly Reports, if necessary to evaluate Nextel's compliance with the terms and conditions of the relief granted, and its progress in deploying Phase I and Phase II E911 services.

⁷⁴ Nextel should serve the Executive Director of each organization as well as its counsel, to the extent such counsel has been identified in the record in response to Nextel's request for relief.

⁷⁵ See www.fcc.gov/e911.

⁷⁶ To the extent Nextel cannot provide the information required under this paragraph in its next Quarterly Report following the respective benchmark, it must file with the Chief, Enforcement Bureau, a request for extension of time to file the required information. Such request must be filed as early as possible before the Quarterly Report filing date, but generally no later than 10 business days prior to the Quarterly Report filing date. The request must specify the specific reasons for the request.

benchmark, a statement of whether Nextel has begun selling and activating a single A-GPS handset model and, if so, on what date; (2) for the periods of December 31, 2002 to November 30, 2003, and December 1, 2003 to November 30, 2004, the percentage of new handsets activated nationwide during the respective periods that were A-GPS-capable, as well as the total number of new handsets activated nationwide during the respective periods and the total number of new handsets activated during those periods that were A-GPS-capable; (3) for the December 1, 2004 benchmark, a statement of whether 100 percent of new digital handsets being activated nationwide were A-GPS-capable; and (4) for the December 31, 2005 benchmark, a statement of the percentage of the total number of Nextel subscriber handsets in service nationwide as of that date that are A-GPS-capable, as well as the total number of Nextel subscriber handsets in service nationwide as of that date and the total number of those handsets that are A-GPS capable as of that date.⁷⁷

- Nextel must support each Quarterly Report with an affidavit, from an officer or director of Nextel, attesting to the truth and accuracy of the report.
- To the extent Nextel anticipates that it will fail to satisfy any one of the conditions, it must advise the Commission of the problem. Seeking relief from that condition will not, in and of itself, insulate Nextel from possible enforcement in cases where Nextel has violated a condition of this Order.

33. Nextel's Quarterly Reports to the Commission should be the principal vehicle for providing the Commission with notice of anticipated problems but, to the extent unexpected problems arise affecting Nextel's ability to perform in the period between reports, Nextel should notify the Commission through a supplementary filing. This supplemental filing must include specific details regarding the problems Nextel has encountered affecting its ability to comply.

34. These Quarterly Reports by Nextel will assist the Commission and the PSAPs in monitoring its compliance not only with its Phase II implementation plan, but also with the Phase I deployment requirements of the rules. Information on Phase I deployment will allow us to assess whether this aspect of E911 deployment - itself a critical public safety benefit - is being achieved. The reports on Phase II deployment will assist in monitoring Nextel's compliance with both its implementation plan and the Phase II rules. The reports on handset deployment will assist us in assessing whether Nextel is in compliance with the requirements of its implementation plan.

35. Nextel is required to comply with each individual condition of this Order, including the reporting requirements set forth above. Consistent with the *Fourth Memorandum Opinion and Order*, we note that the conditions imposed herein as part of the grant of Phase II relief have the same force and effect as a Commission rule itself. Each specific benchmark and Quarterly Report is a separate condition of the plan as approved. In addition, Nextel remains subject to all other requirements of the Commission's wireless E911 rules apart from those specifically modified in this Order. To the extent that Nextel fails to satisfy any condition or Commission rule, it will be subject to possible enforcement action, including but not limited to revocation of the relief, a requirement to deploy an alternative ALI technology, letters of admonishment or forfeitures. We will not entertain requests for additional relief that seek changes in the requirements, schedules, and benchmarks imposed herein absent extraordinary circumstances.

36. Moreover, the approval of Nextel's compliance plan does not alter Nextel's ultimate

⁷⁷ Nextel's Quarterly Reports are due February 1, May 1, August 1 and November 1 of each year, beginning February 1, 2002 and continuing through February 1, 2006. To the extent Nextel cannot provide any of the information required in its final report, it must file with the Chief, Enforcement Bureau, a request for extension of time to file the required information in accordance with the procedures set forth in n.77, *supra*.

obligation to comply with the Phase II rules and the conditions of this relief. Nextel remains ultimately responsible for providing timely compliant Phase II service. If Nextel does not have compliant Phase II service on the dates set forth herein, it will be deemed noncompliant and referred to the Commission's Enforcement Bureau for possible action. At that time, an assertion that a vendor, manufacturer or other entity was unable to supply compliant products will not excuse noncompliance. However, a carrier's "concrete and timely" actions taken with a vendor, manufacturer, or other entity may be considered as possible mitigation factors in such an enforcement context.⁷⁸ As set forth above, Nextel is required to include in its Quarterly Reports a statement regarding whether it has met each deployment benchmark, activation rate, accuracy milestone, and any other condition as set forth below, and, if not, the reasons for its failure to comply. As noted above, the report must be supported with an affidavit. To the extent that the Commission receives a complaint or otherwise has questions regarding the information in the report, or more generally Nextel's compliance, Nextel may be required to provide additional documentation to refute the complaint or respond to the Commission's questions. In the event that Nextel's Phase II solution unexpectedly fails to comply with the Phase II accuracy requirements, Nextel shall, as a condition, propose to deploy a solution that does comply with those requirements, as well as the other conditions of the Order and applicable Phase II rules.⁷⁹

C. Summary of Conditional Relief Granted

37. Accordingly, we approve Nextel's proposed schedule for deployment of A-GPS-capable handsets, as follows:

October 1, 2002:	Begin selling and activating A-GPS-capable handsets; Nextel must ensure that at least one entry-level A-GPS-capable handset model is available;
December 31, 2002:	Ensure that at least 10% of all new handsets activated are A-GPS-capable;
December 1, 2003:	Ensure that at least 50% of all new handsets activated are A-GPS-capable;
December 1, 2004:	Ensure that 100% of all new digital handsets activated are A-GPS-capable;
December 31, 2005:	95% of all subscriber handsets in service are A-GPS-capable.

These revised benchmarks apply generally in the same manner as the benchmarks for location-based handset deployment in our rules.⁸⁰ In the *Fourth MO&O* we recognized that measuring compliance with interim percentage benchmarks, such as the 25 and 50 percent benchmarks in our rules, might be difficult.⁸¹ We emphasized that, in evaluating compliance, we would look at the reasonableness of a

⁷⁸ *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17458.

⁷⁹ As stated above, seeking relief will not, in and of itself, insulate Nextel from possible enforcement in cases where Nextel has violated a condition of this Order.

⁸⁰ For example, the benchmarks apply only to new handsets, not to new activations of older model or refurbished handsets. The benchmarks also apply to all the carrier's areas of operation and services subject to the E911 rules, *i.e.*, nationally in the case of Nextel. See, *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17455, fn. 62 and 17453-4.

⁸¹ *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17455 at n.65.

carrier's measurement methodology and the circumstances surrounding the measurement.⁸² To further clarify the benchmarks and their enforcement, we believe that one reasonable methodology to show compliance with the approved plan would be for Nextel to demonstrate that it has complied with the required fractional percentage figures during the period beginning at the date on which that percentage takes effect and ending at the date of the next benchmark.⁸³ Thus, for the 10 percent benchmark, Nextel would demonstrate that at least 10 percent of the new handsets it activated during the period between December 31, 2002 and November 30, 2003 were A-GPS-capable. Similarly, it would demonstrate that at least 50 percent of new handsets it activated during the period between December 1, 2003 and November 30, 2004 were A-GPS-capable. The difficulty in measuring compliance should not arise in the case of the other two handset sales benchmarks, *i.e.*, the benchmark for beginning to sell and activate A-GPS handsets and that for ensuring that 100 percent of all new digital handsets are A-GPS-capable. Under the approved plan, Nextel is required to begin selling and activating at least one model A-GPS handset no later than October 1, 2002; as of December 1, 2004, 100 percent of new digital handsets Nextel activates must be A-GPS-capable.

38. Second, in the event that Nextel's solution fails to comply with the Phase II accuracy requirements, Nextel is required, as a condition, to propose a solution that does comply with those requirements, as well as the other conditions of this Order and applicable Phase II rules.⁸⁴

39. Third, Nextel must file Quarterly Reports, on its progress and compliance with the terms and conditions of the implementation plan and the wireless E911 rules, as set forth in paragraphs 32-33, *supra*.

D. Southern LINC Proposal for Automatic Roaming Condition

40. Background. In its reply comments, Southern Communications Services, Inc. (Southern) supports the Nextel proposal, but requests that we impose the further condition that Nextel negotiate automatic roaming agreements with other iDEN carriers. Southern argues that requiring automatic roaming of Nextel, as the dominant nationwide iDEN carrier, will give customers of other iDEN carriers the full benefit of 911 and E911 capabilities when they roam outside their home carrier's footprint.⁸⁵ Southern's comments appear to indicate that a problem may occur when a 911 caller inadvertently roams on another carrier's network, in areas where two iDEN carriers have coverage.⁸⁶ Southern says this issue can be resolved but requires a carrier-to-carrier agreement to do so.⁸⁷

41. Discussion. We decline to impose this requirement as a condition of the Nextel implementation plan, because it presents issues that are beyond the scope of this proceeding, are best addressed elsewhere, and bear little relationship to the merits of the plan itself. Moreover, Southern first raised the issue in this proceeding in a reply comment. Thus, the nature and extent of any problem for 911 calls has not been subject to a full round of public comment. Southern's request also appears to

⁸² *Id.*

⁸³ If Nextel is found to be in violation of a benchmark using the measurement period described above, the carrier will be deemed to be out of compliance for the entire period over which the benchmark is measured.

⁸⁴ Proposing such a revised implementation plan would not relieve Nextel from its obligations under the rules and its revised implementation plan or insulate Nextel from possible enforcement action. *See* para. 36, *supra*.

⁸⁵ Southern Reply Comments at 1.

⁸⁶ *Id.* at 5, n.12.

⁸⁷ *Id.*

encompass our requiring automatic roaming for all calls, not just 911 calls, and to raise issues relevant to other wireless carriers, not just Nextel. The Commission has an open Docket, No. 00-193, in which roaming requirements for CMRS are currently being considered, including a very similar request by Southern concerning automatic roaming on Nextel's network.⁸⁸ Any 911 issues associated with automatic roaming can be presented and addressed there, where they can be considered generally and not separately for a single carrier. Further, the requested condition bears no apparent relationship either to the merits of Nextel's petition for relief or to the standards for the grant of Phase II relief set out by the Commission.⁸⁹

IV. PROCEDURAL MATTERS AND ORDERING CLAUSES

A. Paperwork Reduction Analysis

42. This Order does not contain an information collection applicable to ten or more entities.

B. Further Information

43. For further information, contact Dan Grosh of the Policy Division, Wireless Telecommunications Bureau, at (202) 418-1310 (voice) or (202) 418-1169 (TTY).

C. Ordering Clauses

44. Accordingly, IT IS ORDERED that the Nextel implementation plan and request for relief from wireless E911 Phase II rules IS GRANTED to the extent indicated and subject to the conditions indicated herein effective October 1, 2001.

45. IT IS FURTHER ORDERED that authority is delegated to the Chief of the Enforcement Bureau and the Chief of the Wireless Telecommunications Bureau to administer, clarify, and, as appropriate, modify the Quarterly Reports specified in this Order, including requiring the filing of additional information.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas

Secretary

⁸⁸ See Automatic and Manual Roaming Requirements Pertaining to Commercial Mobile Radio Services, WT Docket No. 00-193, *Notice of Proposed Rulemaking*, 15 FCC Rcd 21628 (2000).

⁸⁹ *E911 Fourth Memorandum Opinion and Order*, 15 FCC Rcd at 17458.