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

In the Matter of	)	
	)	
Revision of the Commission's Rules	)	CC Docket No. 94-102
To Ensure Compatibility with	)	RM-8143
Enhanced 911 Emergency	)	
Calling Systems	)	
Non-Initialized Phones	)	
	)	
	)	

MEMORANDUM OPINION AND ORDER

Adopted: October 21, 2003 **Released: November 3, 2003**

By the Commission:

I. INTRODUCTION

1. In this Memorandum Opinion and Order (Order), we grant the *Petition for Reconsideration* (*Reconsideration Petition*) filed by the Alliance for Telecommunications Industry Solutions (ATIS) on behalf of the Emergency Services Interconnection Forum (ESIF).[1] The Commission's *Report and Order*[2] under reconsideration here required the programming of carrier-donated non-service-initialized phones and newly manufactured non-initialized "911-only" wireless handsets with the number 123-456-7890 as the "telephone number" transmitted to the Public Safety Answering Point (PSAP) receiving the call in order to address the problems created by the lack of call-back capability when 911 calls are dialed from these devices. We now conclude, in light of the new information presented by the ESIF, that the voluntary technical standard developed by the ESIF, which was recently adopted as part of the "Enhanced Wireless 9-1-1 Phase 2" industry consensus standard, provides a more far-reaching and technically superior solution to that contained in the Commission's April 29, 2002, *Report and Order* and therefore better serves the public interest.

2. Accordingly, we lift the Stay[3] currently in effect and modify the Commission's rules by striking the requirement to program the 123-456-7890 sequential number into carrier-donated non-

[1] *See* In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Non-Initialized Phones, CC Docket No. 94-102, RM-8143, ESIF *Petition for Reconsideration* (filed June 12, 2002) (*Reconsideration Petition*). This Memorandum Opinion and Order (Order) will refer to the Petitioner as the ESIF, rather than ATIS, to maintain consistency with earlier documents pertaining to this matter.

[2] *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Non-initialized Phones, CC Docket No. 94-102, RM-8143, FCC 02-120, *Report and Order*, 17 FCC Rcd 8481, 8481, 8489-93, 8499 (*Report and Order*); 67 Fed. Reg. 36112 (2002) (to be codified at 47 C.F.R. §§ 20.18(l)(1)(i), (l)(2)(i)).

[3] *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Non-initialized Phones, CC Docket No. 94-102, RM-8143, DA 02-2423, *Order* (rel. Sept. 30, 2002) (staying §§ 20.18(l)(1)(i) and (l)(2)(i) of the Commission's rules until Commission resolves the *Reconsideration Petition*) (*Stay Order*).

initialized and "911-only" phones. We also relieve carriers of any attendant obligations to complete any network programming necessary to deliver the 123-456-7890 "telephone number" from these devices to PSAPs.[4] We replace those rules with the requirement to program carrier-donated non-service initialized phones and new "911-only" handsets covered in our original *Report and Order* with a sequential number beginning with "911," plus seven digits selected in a manner analogous to the way a "telephone number" is generated by Annex C compliant network software, as explained in more detail below. We further require that carriers complete any network programming necessary to deliver this "telephone number" from carrier-donated non-service initialized phones and "911-only" handsets to PSAPs.

II. BACKGROUND

3. The *Report and Order* amended section 20.18 of the Commission's rules to address the problems associated with two classes of non-initialized wireless devices[5] that lack call-back capability: (1) carrier-donated phones that have the capability of being service-initialized, but are either no longer, or never have been, service-initialized by a wireless carrier; and (2) recently manufactured 911-only handsets that can only make 911 calls and are technically incapable of receiving any incoming calls. Specifically, the portions of the rule subject to reconsideration here are subsections 20.18(l)(1)(i) and (l)(2)(i), which provided a handset-based solution to enable PSAPs to recognize calls from these types of phones. Subsection (l)(1)(i) required that licensees that donate non-initialized handsets for the purpose of providing access to 911 services must program 123-456-7890 as the "telephone number"[6] or Mobile Directory Number (MDN)[7] of each handset to alert a PSAP that the 911 call is being made from a wireless phone that lacks call-back capability. Subsection (l)(2)(i) required manufacturers of 911-only handsets that lack call-back capacity to program those handsets with the same number. The *Report and Order* also required carriers to complete any network programming necessary to deliver the 123-456-7890 "telephone number" to PSAPs from a non-initialized carrier-donated handset or "911-only" phone. The effective date of these rules was to be October 1, 2002.[8]

---

[4] However, as discussed in more detail below, we urge all carriers to implement an Annex C compliant solution as soon as possible and encourage PSAPs to make any equipment changes necessary to enable them to recognize, in the first few critical seconds of a 911 call, that a phone lacks call-back capacity.

[5] Non-service-initialized wireless mobile telephones (non-initialized phones) are phones that are not registered for service with any CMRS carrier. Because carriers generally assign a dialable number to a handset only when a customer enters into a service contract, a non-initialized phone lacks a dialable number. We continue to use the term "non-initialized" interchangeably with "unsubscribed" to refer to phones that cannot be called back by a PSAP because they have no dialable number, whether or not the phone may have previously been initialized by a service provider by programming the handset to transmit a mobile identification number (MIN). *See Report and Order*, 17 FCC Rcd 8481, 8482 n.6.

[6] "Telephone number" refers to the language in 47 C.F.R. § 20.18(d)(1), regarding Phase I of enhanced 911 (E911) services, which requires that licensees "must provide the *telephone number* of the originator of a 911 call and the location of the cell site or base station receiving a 911 call from any mobile handset accessing their system to the designated Public Safety Answering Point through the use of ANI and Pseudo-ANI" (emphasis added).

[7] We have changed the nomenclature from the previously used "telephone number/MIN" to "telephone number/MDN" to reflect the fact that, with the advent of wireless thousands-block number pooling and wireless local number portability, the Mobile Identification Number (MIN) and the Mobile Directory Number (MDN), which previously were the same number, now may be different numbers. *See* Telephone Number Portability, CC Docket No. 95-116, 13 FCC Rcd 16315, 16319 (1998); *see also* Cellular Telecommunications Industry Association's *Petition for Forbearance from Commercial Mobile Radio Services Number Portability Obligations and Telephone Number Portability*, WT Docket No. 98-229, CC Docket No. 95-116, 14 FCC Rcd 3092, 3105 (1999).

[8] *See Report and Order*, 17 FCC Rcd 8481, 8493-94. The requirements now in effect include (1) the labeling of carrier-donated non-initialized phones and 911-only handsets to alert the user to the lack of call-back capability

(continued....)

4. On May 17, 2002, after the *Report and Order* was released, the Chair of the newly formed ESIF[9] filed an *Ex Parte* letter describing problems with the sequential numbering requirements that Forum participants in the inaugural meeting of the ESIF had identified.[10] The letter also described a potential alternative network solution that was, at that time, an informative annex (Annex C)[11] of J-STD-036-A, the industry-adopted consensus standard for implementation of Phase II E911, published jointly by the Telecommunications Industry Association (TIA) and ATIS, on behalf of its sponsored Committee T1.

5. On June 12, 2002, the ESIF filed its *Reconsideration Petition*, seeking reconsideration of that portion of the Commission's *Report and Order* adopting sections 20.18(l)(1)(i) and (l)(2)(i) of the Commission's rules.[12] Also, on June 12, 2002, the ESIF filed a separate *Stay Request*[13] of the effective date of October 1, 2002 for implementation of sections 20.18(l)(1)(i) and (l)(2)(i) of these rules, until the Commission disposed of the ESIF's *Reconsideration Petition*. On September 30, 2002, the Commission's Wireless Telecommunications Bureau granted the ESIF's Request for Stay, and ordered the effective date of sections 20.18(l)(1)(i) and (l)(2)(i) to be suspended until the Commission had disposed of the ESIF's *Reconsideration Petition.*[14] On July 3, 2002, the Commission's Wireless Telecommunications Bureau released a Public Notice seeking comment on the *Reconsideration Petition* and the *Stay Request*.[15] Five comments and five Reply Comments were received.[16] A number of *Ex Parte* filings were also made in this proceeding.

6. In its filings, the ESIF provided detailed information about the Annex C solution for mobile phones that do not have a valid call-back number. The Annex C solution specifies using 911 followed by

(...continued from previous page)
and (2) the creation of public education outreach programs to inform users of the limitations of these non-initialized phones, in particular their lack of call-back capacity and the consequent need for the caller to provide the PSAP with his or her location information immediately upon connection and to redial if the call is disconnected.

[9] The ESIF is a sponsored committee of ATIS and is jointly convened by ATIS and the National Emergency Number Association (NENA) to facilitate the identification and resolution of technical issues related to the interconnection of telephony and emergency service networks. The ESIF is an open, technical forum that includes Commercial Mobile Radio Service (CMRS) carriers, wireless handset vendors, and public safety representatives among its voluntary participants.

[10] *See* Letter from Megan L. Campbell, General Counsel, ATIS, to Marlene H. Dortch, Secretary, Office of the Secretary, Federal Communications Commission (May 20, 2002) (incl. Letter from James Nixon, ESIF Chair, to Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (May 17, 2002)).

[11] The ESIF refers to the solution as the "Annex C" solution because it was originally published as Annex C to J-STD-036-A, "Enhanced Wireless 9-1-1 Phase 2" (June 2002). *See Stay Request* at 4-5.

[12] *See* 67 Fed. Reg. 36112 (2002) (to be codified at 47 C.F.R. §§ 20.18 (1)(1)(i), (1)(2)(i)).

[13] *See* Letter from Megan L. Campbell, General Counsel, ATIS, to Marlene H. Dortch, Secretary, Office of Secretary, Federal Communications Commission (June 12, 2002) (incl. In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, RM-8143, Request for Stay of Effective Date (rel. June 12, 2002) (*Stay Request*)).

[14] *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Non-initialized Phones, CC Docket No. 94-102, RM-8143, DA 02-2423 (rel. Sept. 30, 2002) (*Stay Order*).

[15] *See* Wireless Telecommunications Bureau Seeks Comment on Petition for Reconsideration on Non-Initialized Phones and Filing of Request for Stay, *Public Notice*, CC Docket No. 94-102, DA 02-1575 (rel. July 3, 2002), 67 Fed. Reg. 46909 (2002).

[16] *See* Appendix A for list of Commenters and abbreviations used to designate them herein.

the seven least significant digits of the decimal representation of a wireless handset's Electronic Serial Number (ESN) or International Mobile station Equipment Identity (IMEI)[17] to enable network software to create a pseudo ten-digit telephone number/MDN when a non-initialized wireless phone or other similarly programmed wireless device makes a 911 call. When a switch that has been programmed with software that complies with Annex C receives a handset's ESN or IMEI and there is no valid call-back number, it will transmit "911" followed by the decimal representation of the seven least significant digits of the ESN or IMEI as the caller identification number (Caller ID) to equipment used by the PSAP.[18] According to the ESIF, using this pseudo number will thereby provide the PSAP with a distinctive number, likely to be associated only with the specific device used to place the 911 call.

7. The ESIF explained in its filings with the Commission that this solution has a number of advantages over the transmission of the identical 123-456-7890 numerical sequence for donated non-initialized phones and 911-only handsets. First, because the Annex C solution can more accurately identify the particular device making the call, the pseudo number could allow a PSAP to (1) work more effectively with law enforcement agencies to prevent misuse of the 911 system due to repeated harassing calls made on non-initialized phones, and (2) identify legitimate emergency callers making multiple calls because of exigent circumstances.[19]

8. Second, the ESIF forum had identified a potential problem with the use of the sequential number solution that was not addressed in the record on which the *Report and Order* was based. According to the ESIF, the number 123-456-7890 also serves as a valid International Roaming Mobile Identification Number (IRM).[20] Because IRMs are a finite numbering resource where the first number must be a zero (0) or a one (1), the numerical sequence beginning with 1234 might have to be removed from the IRM pool in order to avoid confusion between the number transmitted by non-initialized and 911 only phones pursuant to the Commission's *Report and Order* and an IRM assigned by the International Forum on ANSI-41 Standards Technology (IFAST).[21] As a result, the required use of the 123-456-7890 number sequence has the potential to cause the removal of one million numbers from the IRM assignment pool.

9. The ESIF also asserted that further study of the technical issues was warranted to determine the best way to solve the problems raised by the lack of call-back number availability in donated non-initialized phones and 911-only handsets. The ESIF proposed to form a working group to undertake such a study and to report the ESIF's findings to the Commission by March 2003. The working group would consider the merits of Annex C, along with other possible solutions, for adoption as part of the voluntary technical standard for Phase II E911 implementation. The ESIF proposed that, after its membership reached consensus and made its report to the Commission, the Commission could then seek public

[17] The IMEI is generally associated with GSM phones. *See Reconsideration Petition* at 5.

[18] *See Reconsideration Petition* at 4-5 and n.9. *E.g.*, if a mobile phone with the ESN 029880405 (comprised of a Manufacturer's Code of 029 and a Serial Number of 880405), but without a valid call-back number, is used to call 911, the Annex C solution would program 911, plus the least significant seven digits of the ESN (in decimal form). This would result in 911 988-0405 being sent to the PSAP as the identifier for that phone.

[19] *See id*. at 5.

[20] *See id*. at 5-6. IRMs are MINs with the following format: 0-XXX+6D or 1-XXX+6D, where X can be any digit 0-9, and the last six digits (6D) of the IRM are assigned by the carrier. The 4 digit prefix of an IRM is allocated by the IFAST (International Forum on ANSI-41 Standards Technology). The IFAST is a voluntary organization that attempts to facilitate international roaming by minimizing conflicts with North American MINs (which are generally based on their ten-digit directory number). *See* Letter from Toni Haddix, Staff Attorney, ATIS, to Marlene H. Dortch, Office of the Secretary, Federal Communications Commission (November 15, 2002). *See also International Forum on ANSI-41 Standards Technology* (visited June 27, 2003) <http://www.ifast.org>.

[21] *See Reconsideration Petition* at 5-6.

comments on the ESIF's report, and decide, based on that record, what solution should be implemented. In the interim, the ESIF requested that the Commission maintain the *Stay* in force.

10. Commenters who responded to the ESIF's *Reconsideration Petition* and *Stay Request* supported the ESIF's position and favored withdrawal of the solution that the Commission had adopted in the *Report and Order*.[22] All commenters agreed with the ESIF on the need for additional technical review to determine the precise details of the methodology to ensure that the best overall solution would be deployed. However, while agreeing that further study was warranted, the overwhelming majority of commenters showed a strong preference for the Annex C solution, pointing out a number of its advantages over programming the sequential number 123-456-7890 into non-initialized and 911-only phones to serve as the "telephone number." Commenters also saw a need to have as distinctive an identifier as possible for each handset to facilitate its identification in order to prevent repeated harassing calls and to identify legitimate repeat calls from a person experiencing a real emergency.[23] A number of commenters also agreed with the ESIF that there are real disadvantages in using the 123-456-7890 code for programming donated non-initialized phones and 911-only handsets.

11. NENA, speaking on behalf of several public safety trade associations, was in general agreement with the rest of the commenters. As co-convenor of the ESIF, NENA had actively participated on behalf of public safety in developing the Annex C solution, in its adoption as the industry consensus Phase II standard, and in the formulation of the ESIF's recommendations to the Commission with regard to Annex C implementation and other issues. On April 28, 2003, NENA's Operations Issues Director, Rick Jones, met with Commission staff to reiterate NENA's general support for the ESIF's position, as set forth in the letter filed on behalf of the ESIF by ATIS on February 24, 2003, recommending voluntary adoption of the solution found in Annex C of the J-STD-036-A Phase II standard.[24] NENA also made clear the importance to the public safety community of a point made in that February 24th letter, namely, that "[n]etwork providers should be able to provide, on a timely basis [within minutes], the necessary subscriber information" to PSAPs.[25] NENA took the further position that the FCC should only mandate the use of Annex C if there is sufficient database support to provide the PSAP quickly with "the ESN/IMEI associated with the surrogate 10-digit number," so that, in cases of threats, harassment, and false reports using 9-1-1, the PSAP has the critical ability to associate the name and address of a present or former user of the phone.[26]

[22] In its Comments, the Texas 9-1-1 Agencies, who had originally petitioned the Commission to institute the proceeding that culminated in the *Report and Order*, reserved the right to oppose the *Reconsideration Petition* in Reply Comments. *See* Texas 9-1-1 Agencies Comments at 1. However, no such opposition was received by the Commission. Even Remote MDx, a manufacturer of E-911-only wireless phones, offered "conditional support" for the ESIF's filings, *see* MDx Comments at 1, and promised full support for the Annex C solution if the ESIF technical review underway at the time of MDx's comments resulted in recommending the use of Annex C, *see id*. at 2.

[23] *See, e.g.*, Lucent Comments at 2-3; Intrado Comments at 3.

[24] *See Ex Parte* Letter from James Nixon, ESIF Chair, to John Muleta, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (Feb. 24, 2003) at 2 (ESIF *Ex Parte* of Feb. 24, 2003).

[25] *See Ex Parte* Letter from James R. Hobson, Counsel for NENA, to Marlene H. Dortch, Secretary, Office of the Secretary, Federal Communications Commission (May 5, 2003) (describing substance discussed at Rick Jones' meeting with Wireless Bureau Staff on April 28, 2003, and quoting the ESIF's *Ex Parte* of Feb. 24, 2003).

[26] *See Ex Parte* Letter from James R. Hobson, Counsel for NENA, to Marlene H. Dortch, Secretary, Office of the Secretary, Federal Communications Commission (May 5, 2003) at 1-2.

III. DISCUSSION

12. The primary goal of the rule that the Commission adopted is to provide a methodology that will alert the PSAP that a caller is using a phone without call-back capability so that the PSAP can obtain location information in the first crucial seconds of the call. In addition, because some commenters report an increasing number of harassing calls from non-initialized devices, which can divert a PSAP's scarce resources from responding to real emergencies, it is also important to select a methodology that will enable the PSAP to identify a phone without a call-back number that is making repeated harassing calls. In order to achieve this latter goal, the number transmitted to alert the PSAP must be as nearly unique as possible. This will also enable a PSAP to identify repeated emergency calls from a person who is having difficulty maintaining a connection on a non-initialized wireless device.

13. Based on the record now before us, we agree with the ESIF and with the commenters that the newly adopted Annex C solution provides greater potential benefits[27] and fewer potential downsides[28] than the solution adopted in the *Report and Order*. A call from a non-initialized phone over an Annex C compliant network is recognizable immediately, because the "telephone number" that is sent to a PSAP's caller ID has 911 as its prefix, which is not used as either an area code (Numbering Plan Area Code or NPA) or an exchange prefix (NXX) in the North American Numbering Plan (NANP), and consequently can only be a pseudo-telephone number. The Annex C network solution, because it appends the seven least significant digits of the unique ESN or IMEI to the 911 prefix, generates a phone number that is likely to be duplicative in only one in ten million cases. It therefore is highly probable that a PSAP receiving harassing calls will be able to recognize that these calls are coming from a phone that cannot be called back, to identify that phone, and to work with the appropriate carrier and law enforcement personnel to trace it and block further harassing calls from the device. Moreover, the PSAP can identify calls that are being repeatedly made by a legitimate caller who is experiencing problems staying connected in an emergency. Finally, because these digits are not used as the initial part of any IRM range, there is no potential for confusion with any IRM that could be assigned.[29]

---

[27] *See, e.g.*, Intrado Comments at 2-4 (pointing out the potential benefits of the Annex C solution include 1) capacity to identify the broadest range of phones that lack call back capacity including non-initialized telephone sets, phones whose subscriptions have expired or that lack a subscriber identity module; as well as certain international mobiles or mobile phones from a service provider that does not have a roaming agreement with the current service provider; 2) leveraging the current PSAP knowledge base because PSAPs are already trained to recognize that any call delivered with 911 as either the Numbering Plan Area Code (NPA or area code) or the exchange prefix (NXX) cannot be called back and therefore will require special handling; and 3) fewer problems in maintaining 911 system integrity because the system will not receive a host of identical sequential numbers that it cannot easily query. *Id*. In addition, the Annex C solution accommodates important functionalities such as MIN/MDN separation, which is required for wireless local number portability.)

[28] For example, the Commission's methodology allegedly conflicts with the Annex C solution, which some vendors began to incorporate into products developed for compliance with various regulatory requirements, while Annex C was still only an informative annex to the Phase II implementation standard. *See* VSW Reply Comments at 4. VSW sees other ways in which the proposed sequential 123-456-7890 handset solution would produce serious impediments for some carriers. *See* VSW Reply Comments at 1, 2-4 (claiming that by treating all non-initialized mobiles alike, the 123-456-7890 requirement would prevent GSM carriers from using x, y coordinates in routing calls originated from non-initialized mobile terminals to the correct PSAP and could render GSM carriers unable to support the "refresh" capability, *i.e*., the ability to resend location information).

[29] Many commenters believe that the use of the 123-456-7890 code as a MIN could remove resources from the international roaming MIN ("IRM") assignment pool, as the ESIF suggested. *See, e.g.*, VSW Reply Comments at 4. Intrado points out that 123 is a particularly useful "area code" for an IRM because it allows the wireless network to process international roaming calls by utilizing numbers that are not used in the North American Numbering Plan (NANP), in that 123 is not a valid NANP area code. Intrado Comments at 4.

14. Although the Commission remains technology-neutral with respect to a carrier's Phase II E911 solution (either handset-based or network-based), we recognize that both network and handset components may be necessary to achieve a successful solution to the problem of identifying emergency calls from different wireless devices that lack call-back capability.[30] A network-based solution is needed to deal with any handsets without call-back capacity that predate the date on which any handset-based solution is implemented. We will term this the retrospective problem. As one commenter points out, any handset solution, alone, has limited application because a handset solution does not reach phones already in the public domain and beyond a carrier's reach, *e.g.*, older, unused non-initialized phones.[31] Those prior generations of non-initialized phones could still be used to make emergency calls and such calls will not be able to be detected without a network solution. Only a network solution can reach any such devices already in circulation. A network solution is also needed to identify distinctly phones already programmed with 123-456-7890 as the telephone number, and to alert PSAPs that such phones cannot be called back. Annex C software is intended to recognize when a phone does not have a valid call-back number (such as 123-456-7890) and to substitute 911 plus the seven least significant digits of the handset's ESN or IMEI as the caller ID for the phone, thereby allowing a PSAP to quickly recognize that the call is coming from a phone that cannot be called back, and to identify distinctly the phone being used to call 911. Moreover, for various reasons, service-initialized phones can fail to deliver their MDN.[32] The Annex C solution provides a ready network solution for existing handsets that lack call-back capability because these handsets have an ESN, as was required under the Commission's rules until the most recent Biennial Review relaxed that requirement.[33]

15. However, because subscribers will continue to replace their wireless handsets as technology develops, there could be what we will term a prospective problem with the Annex C network solution if it is dependent upon continuing use of an ESN. We suggest that an ESN continue to be programmed into the handset, as long as it is necessary to fulfill our public safety objectives. If the ESN is not voluntarily programmed into the handset or if an alternative handset identifier does not evolve to replace it, the Annex C network solution would have to be supported by requiring the use of an ESN or other identifier unique to a particular handset.[34] Thus, the Annex C network solution, to be truly effective, requires some handset identifier that can be used compatibly with this network solution to generate the nearly unique pseudo number transmitted to the PSAP. The handset identifier may change as the technology changes; however, as long as the handset identifier is uniquely associated with a specific handset, in a manner

[30] The problem is the same with regard to identifying the caller making harassing calls to a PSAP from one of these devices. Further, as one commenter notes, the wireless devices without call-back capacity that are covered in our *Report and Order* are only a subset of the non-initialized phones that are currently in use. *See* CTIA Comments at 2 and n.6. We note that this problem will continue into the future as subscribers replace their current handsets with new models and pass on their old phones that no longer have a valid service contract, and as new types of wireless devices that could lack call back capacity come into use.

[31] VSW Reply Comments at 4.

[32] *See* Feb. 24, 2003, ESIF *Ex Parte* at 2 (noting that a valid call-back number may not be available for delivery to a PSAP in various situations, such as when the phone's subscription has lapsed, the service identity module is missing, or when international or domestic roamers place calls from areas where their carrier has no local service agreement).

[33] *See* In the Matter of Year 2000 Biennial Regulatory Review - Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and Other Commercial Radio Services, *Report and Order*, WT Docket No. 01-108, FCC 02-229, *Report and Order* (Released September 24, 2002) at para. 36. However, we specifically noted there that "we do not intend our treatment here to be dispositive of pending consideration of possible application of ESNs for public safety purposes." *Id*. at n.120.

[34] While we cannot predict whether and how such an identifier would be developed, we understand that there continues to be a perceived need to have some such identifier and that the industry is continuing to program an ESN into handsets while the issue is being explored.

similar to the way that an ESN or IMEI functions today, it should be possible for Annex C compliant software to generate a distinctive pseudo number. That pseudo number will instantly alert the PSAP that the caller is using a device that lacks call-back capacity; provide an effective way of differentiating between repeated hoax calls and true emergencies; and create a means of determining which particular device made the call. However, because it appears that the best number to use as an identifier is evolving as the technology evolves, and that we are in a period of transition in which ESNs may be being replaced in certain handset systems with other solutions, we do not wish to impose a requirement that may constrain the development of these new technologies, unless it becomes necessary to preserve public safety.

16. We therefore decline to codify any strict technical requirements with regard to what identifier should be used in handsets at this juncture. We believe that it is in the public interest, now that the Annex C solution has been adopted by consensus as part of the J-STD-036-A industry standard for Phase II E911 and is being implemented voluntarily, to allow that voluntary implementation process to develop as vendors bring the Annex C solution to market in their next generation software. Carriers who are not already Annex C compliant, will, it appears, adopt that solution as they update their software to prepare for Phase II E911 implementation. Moreover, we note that a number of vendors have already implemented Annex C compliant solutions in Phase I E911 software to deal with other technical issues.[35] Thus, certain carriers are already offering Annex C nationally, while others are providing it in switches from certain vendors, but will not phase it into general service until they implement Phase II E911.[36] We believe that it will be most effective to allow carriers to follow the Phase II E911 implementation process, while the Annex C solution evolves to reflect the identifiers used by handset manufacturers offering different technologies and while the diverse types of equipment employed by PSAPS are adjusted to be compatible with the Annex C standard.

17. We therefore urge all parties to ensure that the voluntary standard is compatible with the broadest range of equipment possible and that all carriers perform the network programming and any other work necessary to implement the industry consensus standard as quickly as possible. This standard, we are persuaded, will provide a powerful solution that can, once Phase II E911 is fully implemented, handle the majority of the problems addressed in the *Report and Order*, as well as help to solve broader, related issues, not addressed in that proceeding. We believe that these steps will also further the goal of implementing our E911 rules within the time frame set forth in the Commission's orders.

18. However, permitting voluntary implementation of the Annex C solution as part of the natural process of upgrading equipment and as Phase II E911 is deployed, does not warrant inaction with regard to resolving potentially urgent problems related to emergency calls from non-initialized phones in the interim. Congress has directed the Commission to take all appropriate steps to further the creation of a seamless emergency network of which wireless E911 will play an increasingly significant part.[37] We

---

[35] *See*, *e.g.*, ESIF *Ex Parte* of Feb. 24, 2003 (recommending voluntary implementation as part of the Phase II E911 upgrade process); Letter from James Nixon, ESIF Chair, to John Muleta, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (March 5, 2003) (noting that Annex C is part of the Phase II implementation standard and therefore may not be available in all Phase I systems).

[36] *Compare, e.g.,* Verizon Reply Comments at 1-2 (stating that Verizon chose to have its vendors incorporate the Annex C functionality as part of the switch software package it received for implementation of Thousands-Block Number Pooling and Local Number Portability) *with* Letter from Louisa L. Lancetti, Vice President, PCS Regulatory Affairs, Sprint, to John Muleta, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (May 30, 2003) at 4 (noting that Sprint has Annex C functionality in its E911 Phase II switches, which is available to PSAPs which upgrade to Phase II, but that Sprint only provides Annex C functionality in Phase I in markets where Sprint uses Lucent equipment and the PSAP uses non-call associated signaling (NCAS)).

[37] "It is estimated that of the 150 million calls that were made to 911 in 2000, 45 million of them were made by wireless telephone users—that's 30 percent. This is a ten-fold increase from nearly 4.3 million wireless 911 calls

(continued....)

must continue to move forward to implement E911 service as rapidly as possible. In this context, we note that many of the callers who depend upon the non-initialized devices covered in the Commission's *Report and Order* are of limited economic means and are at high risk, such as victims of domestic violence, residents of high-crime neighborhoods, the elderly, or the infirm. In such a situation, when an individual may be relying on a wireless phone in an emergency, the lack of call-back capacity could pose a very serious risk. We therefore believe that this problem must be addressed immediately by the best means technically available at this time.

19. For these reasons, we remove the Commission's previous handset programming requirements and replace that solution with the requirement that carriers who provide non-initialized phones to donation programs and all manufacturers of 911-only phones program those devices with "911" plus the decimal representation of the seven least significant digits of a unique identifier, such as the ESN or IMEI. This will create a transmissible pseudo "telephone number" analogous to the number that Annex C compliant software will generate in the network. We also require carriers to complete any network programming necessary to transmit this pseudo "telephone number" to PSAPs when 911 calls are made from covered devices. We thus continue to follow the "targeted approach" we adopted in the *Report and Order*[38] by addressing regulatory requirements first to those classes of non-initialized phones where it is most likely that emergency calls will be made and by adopting the solution most likely to lead to rapid identification by PSAP personnel that the call is being placed from a phone that lacks call back capacity. As noted above, using the initial code "911" will provide the PSAP with immediate recognition, while the use of the distinctive identifier will aid in preventing the growing number of harassing calls and identifying repeat calls from a handset that is having difficulty maintaining the connection. In addition, as pointed out by one commenter, PSAPs are trained to recognize 911 as a signal that the phone lacks call-back capacity.[39] Moreover, use of this handset solution, which is analogous to the Annex C network solution, will create a consistent system for both handset and network solutions to alert PSAPs that the emergency call comes from a non-initialized handset. The use of this handset solution will also remove whatever potential there may be for confusion with an IRM that uses the 1234 range and thus allow assignment of IRMs using this range, which will help to preserve that limited resource.

20. We recognize that no current approach can solve all problems associated with emergency calls from phones that lack call back capacity and that there may also be situations in which a call-back number is not transmitted due to network error. However, it is in the public interest to minimize this problem, as far as possible, so that all emergency callers can be identified and called back, if necessary. We therefore continue to urge carriers participating in donation programs to provide service activation that will furnish call-back capability for emergency calls. We commend the growing number of carriers who are already providing donated phones with such call-back capacity, rather than non-initialized devices.[40] By doing so, they are further reducing the problem of non-initialized phones through voluntary

---

(...continued from previous page)
just 10 years ago, and the number will more than double to 100 million calls in the next five years. It is anticipated that by 2005, the majority of 911 calls will be from wireless callers." *See Wireless 9-1-1 Overview* (visited June 26, 2003) <http://www.nena.org/Wireless911/Overview.htm>.

[38] *See* Letter from Sprint to John Muleta, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (May 30, 2003) at 2 (agreeing with Commission's regulatory focus on these two types of non-initialized phones: "[b]ased on the record, the Commission properly determined in its *Non-Initialized Phone Order* that a targeted response to the public safety concern was warranted").

[39] Intrado comments at 4.

[40] We note that our *Report and Order* pointed out that CTIA has issued guidelines for the carrier donation programs that it sponsors. which specifically call for each phone to be activated on a wireless network and be given a unique dialable telephone number. *See Report and Order* at 8490. We urge all carriers and all sponsors of donation programs to follow these guidelines.

efforts which may, in fact, be less costly than an imposed regulatory solution. We also suggest that manufacturers of "911-only" devices should continue to explore whether there are any technical options that would incorporate limited call-back capacity into these devices without sacrificing battery life.

21. We also commend the work of the ESIF in creating a successful voluntary standards setting process that quickly adopted the informative Annex C solution by consensus as part of the J-STD-036-A standard. We also commend those vendors who are already providing equipment utilizing Annex C and those carriers who are employing it, and recommend that all consider it as a potential means to solve the non-initialized phone and E911 problem to be deployed as early as possible. We also suggest that the ESIF examine how to adapt the standard to the requirements of Phase I E911. We believe that it is important, as we achieve full compliance with the identification requirements in Phase I, that PSAPs have a ready means of identifying those callers who may be most in need of their assistance, among whom there may be those who are using non-initialized phones or 911-only devices. Equally, it is important to weed out those callers who are using non-initialized phones or 911-only devices to make harassing calls to PSAPs, which cannot afford to waste their precious time and resources.

22. In addition to requiring that carriers who are donating non-initialized phones and manufacturers of "911-only" wireless devices shift from programming the 123-456-7890 sequential number to programming these devices with 911 plus the seven least significant digits of the decimal representation of the ESN, IMEI, or other unique identifier programmed into the handset, we further recommend that all stakeholders move swiftly to develop the capability of utilizing an Annex C compliant solution. If a carrier's switch already has the Annex C functionality, then that the carrier should employ the Annex C solution with PSAPs that can receive and accommodate caller ID delivered in such a manner. We encourage vendors and carriers to work together to implement the Annex C solution in carriers' networks as early as feasible. Certainly, this process should be completed as part of the upgrade for Phase II E911 service. Equally, we urge PSAPs to make any adjustments needed in order to receive the pseudo caller ID number and, if necessary, to train their personnel to recognize and respond appropriately to such a call delivered by Annex C compliant software in the network or programmed into non-initialized handsets.

23. As this process develops, the Commission's labeling rules[41] which cover all non-initialized carrier-donated devices and all 911-only phones without call-back capacity, will remain in effect. Our educational outreach programs will continue to make clear to consumers that non-initialized phones have limitations in an emergency. Any person using these devices in an emergency should be prepared to provide the PSAP with his or her location information immediately upon connection and to redial if the call is disconnected. We also commend the voluntary efforts of consumer groups to educate the public about E911 service in their particular service area and to help the consumer make an informed choice of wireless provider, given the consumer's particular priorities for wireless service, his or her economic means, and the available choices.

24. We intend to continue to monitor this issue closely. If the voluntary implementation process is not functioning effectively, we stand ready to consider whether further specific requirements are in the public interest. We commend the ESIF participants for their initiative in resolving this issue in a timely manner and reporting to us on the adoption of the Annex C solution as a voluntary industry standard. We are ready to respond to further hard data on the nature and extent of the problems and the burdens on the public safety community and the industry in resolving them. We will then determine if further action is required.

[41] *See* 47 C.F.R. §§ 20.18 (l)(ii)-(iii), (l)(2)(ii)-(iii).

II. CONCLUSION

25. In view of the potential importance to public safety to provide PSAPs with a means of identifying emergency calls made by recipients of non-initialized wireless phones donated to provide them with emergency assistance and by purchasers of non-initialized "911-only" phones, we require that, within six months of the issuance of this Order, carriers donating such phones and handset manufacturers of "911-only" phones that were covered under the requirements in our *Report and Order* begin to program 911 plus a seven digit number that is derived by a methodology analogous to that described in Annex C. By striking our earlier programming requirement and replacing it with a requirement that is consistent with the emerging industry standard for network deployment of Phase II E911, we are targeting our regulations to accomplish the greatest benefit with the least burden. If the network solution becomes ubiquitous in the future and is able to provide a means of identifying emergency calls from these handsets, as well, we will revisit the imposition of this limited requirement. However, it provides a necessary bridge at this time to the full implementation of the Annex C solution.

26. In light of the record, the limited scope of our original *Report and Order*, and the need for flexibility in the face of rapidly changing technology, we will give the ESIF consensus standards process time to achieve full implementation voluntarily. However, we expect to see the Annex C solution substantially implemented voluntarily within 18 months of the issuance of this Order. As we have previously stated in the context of the *First Report and Order*, if a need for further action is demonstrated, "especially once E911 Phase I is fully operational and ubiquitous, we will revisit this issue, weigh the evidence presented, and look at the possibility of requiring a technical or other solution at that time."[42] If, within one year from the date this Order issues, considerable progress towards the goal of voluntary implementation of the Annex C solution has not been made, we will consider whether it is in the public interest to impose further specific implementation requirements.

III. PROCEDURAL MATTERS AND ORDERING CLAUSES

A. Final Regulatory Flexibility Certification

27. The Regulatory Flexibility Act (RFA) of 1980, as amended,[43] requires that a regulatory flexibility analysis be prepared for notice-and-comment rule making proceedings, unless the agency certifies that "the rule will not, if promulgated, have significant economic impact on a substantial number of small entities."[44] The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[45] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[46] A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small

[42] *Report and Order*, 17 FCC Rcd 8481, 8495.

[43] *See* 5 U.S.C. § 603. *See* 5 U.S.C. §§ 601 *et. seq.*, amended by the Contract with America Advancement Act (CWAA) of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996). Title II of the CWAA is the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996.

[44] 5 U.S.C. § 605(b).

[45] 5 U.S.C. § 601(6).

[46] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in Small Business Act, 15 U.S.C. S § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

Business Administration (SBA).[47] We continue to use these definitions and to consider the impact of this Order on the entities discussed in the initial *Report and Order*.[48]

28. The RFA analysis adopted in the initial *Report and Order* remains correct because there is no greater burden on carriers who are donating non-initialized phones and manufacturers of "911-only" wireless devices to program these devices with 911 plus the seven least significant digits of the decimal representation of the ESN, IMEI, or other unique identifier programmed into the handset, than to program these devices with the 123-456-7890 sequential number. Also, there is no greater burden on carriers to program their networks to deliver these "telephone numbers" from carrier-donated non-service initialized phones and "911-only" handsets to PSAPs than programming their networks to deliver the 123-456-7890 sequential number from these devices.

B. Paperwork Reduction Analysis

29. The actions ordered in this Memorandum Opinion and Order do not affect the labeling requirement imposed by our previous *Report and Order* and do not create any new information collection requirements within the meaning of the Paperwork Reduction Act of 1995, Public Law No. 104-13.

C. Authority

30. This action is taken pursuant to Sections 1, 4(i), 201, 303, 309, and 332 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. §§ 151, 154(i), 201, 303, 309, 332.

D. Further Information

31. For further information, contact Eugenie Barton in the Policy Division of the Wireless Telecommunications Bureau, at (202) 418-1310.

E. Ordering Clauses

32. Accordingly, IT IS ORDERED that the Stay currently in effect with respect to sections 20.18(l)(1)(i) and (l)(2)(i) of the Commission's rules IS LIFTED and the Petition for Reconsideration filed by the Alliance for Telecommunications Industry Solutions on behalf of the Emergency Services Interconnection Forum, filed June 12, 2002, is GRANTED AS PROVIDED HEREIN.

33. IT IS FURTHER ORDERED that Part 20 of the Commission's Rules is AMENDED by striking the requirements to program non-initialized and 911-only phones with the sequential number 123-456-7890, contained in sections 20.18(l)(1)(i) and (l)(2)(i), respectively. Sections 20.18(l)(1)(i) and (l)(2)(i), respectively, are amended to require carriers that donate non-initialized wireless phones and manufacturers that produce 911-only wireless phones program these phones with 911 plus the decimal representation of the seven least significant digits of the ESN, IMEI, or any other identifier unique to that handset, as required by the action taken by this Memorandum Opinion and Order. This action SHALL BECOME EFFECTIVE six months after the date on which this Order issues.

[47] Small Business Act, 15 U.S.C. § 632.

[48] *See Report and Order*, Appendix C (providing analysis of entities qualifying as "small" under applicable standards).

34. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch,
Secretary

Appendix A

Public Notice issued July 3, 2002	**Abbreviation**
Comments:	
Cellular Telecommunications and Internet Association	CTIA
Intrado, Inc.	Intrado
Remote MDx	Remote MDx
Sprint Corporation	Sprint
Texas Commission on State Emergency Communications and Texas Emergency Communication Districts	Texas 9-1-1 Agencies
Reply Comments:	
Alliance for Telecommunications Industry Solutions (ATIS) on behalf of ESIF	ESIF
Lucent Technologies	Lucent
Sprint Corporation	Sprint
Verizon Wireless	Verizon
VoiceStream Wireless Corporation	VSW[49]

[49] We retain VoiceStream Wireless Corporation (VSW) as the Commenter was then named, and note that it is now known as T-Mobile USA.

Appendix B

FINAL RULES

Part 20 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 20 continues to read as follows:
Authority: 47 U.S.C. 154, 160, 251-254, 303, and 332 unless otherwise noted.

2. Sections 20.18(l)(1)(i) and 20.18(l)(2)(i) are amended to read as follows:

§ 20.18 911 Service.

*****

(l) Non-Service-Initialized Handsets.
(1) Licensees subject to this section that donate a non-service-initialized handset for purposes of providing access to 911 services are required to:
(i) program each handset with 911 plus the decimal representation of the seven least significant digits of the Electronic Serial Number, International Mobile Equipment Identifier, or any other identifier unique to that handset;
(2) Manufacturers of 911-only handsets that are manufactured on or after [six months after the order is released], are required to:
(i) program each handset with 911 plus the decimal representation of the seven least significant digits of the Electronic Serial Number, International Mobile Equipment Identifier, or any other identifier unique to that handset;