develop design standards, field-test prototype equipment, and deploy technology throughout a broad range of CMRS systems. The wireless industry and emergency service community have already begun to address these matters, however, and PCIA is optimistic of the chances for timely progress toward a reasonable ALI solution. Against this background, PCIA suggests that the following timeline presents an aggressive, but realistic, schedule for developing workable ALI technology:

Stage 3 Time Line

Joint Position Paper 911 JEMS	Stage 1 Deployed. SRD Published. 911 Joint Technical Committee	Write Standards and Evaluate w/ Field Tests	PSAP Upgrade. Funding. Field Trials	PSAP Upgrade. LEC Upgrade. Manuf. Build	Wide Scale Deployment
3Q/94	1Q/96	2Q/97	2Q/98	4Q/00	4Q/02

Nonetheless, PCIA cautions that these dates should be considered goals that appear achievable as of early 1995, rather than firm deadlines.

F. Re-ring/Call Back

The Commission proposes that within three years of the effective date of an Order, wireless providers must provide PSAP attendants with the capability to call back the 911

caller if the call is disconnected.[32] Several technical hurdles must be overcome before a call-back capability can be implemented. First, PSAPs need to be capable of accepting at least ten digits,[33] in order to process 911 calls from roamers or callers with overlay phone numbers. Second, manufacturers will need to develop a 911 service override feature, whereby a user who has either blocked incoming calls or forwarded them to voice mail could still be called back by a PSAP attendant. Third, means will have to be developed so that the PSAP operator can re-dial a roamer directly, rather than calling through the roamer's home system.

As with the timing for the implementation of user location technology, PCIA urges that the Commission not tie implementation to the effective date of an Order in this proceeding. Instead, the Commission should direct wireless carriers, equipment manufacturers, PSAPs, and LECs jointly to develop, test, and implement the necessary standards and technology.

G. Common Channel Signaling

The Commission proposes that, within three years, wireless 911 carriers should use common channel signaling to

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[32] Notice at ¶ 52.

[33] At present, most PSAPs can process only seven digits.

provide the same or similar information and features that are currently provided by wireline carriers to enhanced 911 systems.[34] Specifically, wireless carriers would be required to furnish the following information to PSAPs: call-back number and subscriber name, location of call origination, class of service, base station provider's name and telephone number, priority of caller (e.g. hospital or school), call routing information to direct the call to the proper PSAP, and transfer numbers for police, fire, and rescue services. PCIA has concerns with both the three-year implementation deadline and some of the information sought.

Common channel signaling, like user location information, is a feature whose implementation will require cooperation by wireless carriers, LECs, and PSAPs.[35] At present, a significant number of wireline networks (and even more wireless networks) have yet to deploy this feature. Moreover, common channel signaling embraces a wide variety of signaling protocols, of which SS7 is only one. While SS7 is prevalent on wireline networks, wireless networks often use different protocols, such as IS-41. Therefore, in order for the wireline network to receive the aforementioned information from the wireless network, either the same

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[34] Notice at ¶ 53.

[35] PSAPs in particular will need to upgrade their equipment to process out-of-band signalling.

signaling protocol must be used or a means of interworking must be developed and deployed. Because of the obvious need for coordination among industry members in the implementation of this feature, PCIA urges that the Commission not tie implementation to the effective date of these rules, but rather to the joint development of a universal common channel signaling or interworking platform.

Second, some of the information that the Commission would require to be provided will either be impossible to transmit in three years (such as ALI) or is imprecise (such as priority of caller and transfer numbers). Rather than specifying the required information in its rules at this stage, the Commission should allow the wireless industry and the 911 community to agree on the scope of information that ultimately will be provided.

H. Access For Text Telephone Devices

The Notice proposes that within one year, radio services must be capable of permitting access by individuals with speech or hearing disabilities through means other than mobile radio handsets, such as text telephone (TTY) devices.[36] As with common channel signaling, this requirement will require coordination among the telecommunications and equipment manufacturing industries.

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[36] Notice at ¶ 54.

Foremost among these coordination issues is the establishment of a common data standard under which the wireless and wireline providers can deliver TTY data to the PSAP. At present, TTY devices work as 300 baud acoustical couplers in the wireline environment, and PSAPs are equipped to receive such data from wireline TTY users. However, because this technology may not function in some wireless environments, a digital data interface and transfer capability might be developed so that wireless handsets and TTY devices can function together. Similarly, PSAPs might need to upgrade their equipment in order to receive and interpret any new interface and transfer mechanism. Such a mechanism might include the capability to accommodate next generation TTY devices. Once again, the Commission should not impose an arbitrary deadline for compatibility, but rather should allow the industry to develop the necessary standards and technology.

I. Equipment Manufacture, Importation and Labeling

The Commission seeks comment on whether it should establish specific requirements for base stations and mobile transmitters to ensure compliance with the objectives of this proceeding, and whether manufacturers should be required to demonstrate compliance as part of the equipment authorization

process.[37] PCIA suggests that, for two reasons, the FCC's type acceptance process is not a good means by which to ensure compliance. First, most of the enhanced 911 compatibility functions are contained within the mobile switching system and interconnected telephony systems, which are not a part of the type acceptance process. Second, because different systems may utilize different location technologies, mobile equipment might provide location data only in conjunction with specific radio systems, thereby making type acceptance a poor means of assuring compliance.

The Commission also seeks comment on whether it should establish cut-off dates for the manufacture, importation, and marketing of non-complying equipment.[38] PCIA suggests that cut offs are inappropriate for handset and base station manufacture, importation and marketing because there is currently no basis for determining when compliant technology can be developed.

Finally, the Commission asks whether equipment that does not meet the proposed requirements within 30 days of the effective date of an Order should be labeled as non-compliant.[39] Mandatory package and/or handset labeling is

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[37] Notice at ¶ 55.

[38] Id.

[39] The Notice proposes the following warning: "You may use this transmitter to dial for help through 911. The

(continued...)

inappropriate for a number of reasons.[40] Such a warning might cause a user to believe that the device is incapable of calling 911. In addition, the location technology might not be built into the handset, thereby making the warning label obsolete as soon as network-based location technology becomes operational. Moreover, any limitations on a phone's compatibility with access to E911 could more effectively be communicated to the user through the owner's manual, the service contract, or billing inserts.

III. THE COMMISSION MUST ADDRESS SEVERAL IMPORTANT POLICY ISSUES.

A. Privacy

The Commission seeks comment on the necessity for, and the implications of, imposing privacy requirements on information transmitted to local exchange carriers and PSAPs in the delivery of 911 emergency services.[41] PCIA agrees with the FCC's general assessment that privacy protection requirements are not necessary in the delivery of 911 emergency service calls. However, in states where PSAP

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[39](...continued)
person answering may not know where you are or how to call you back, unless you accurately provide your location and your full telephone number . . . ." Id. at ¶ 55.

[40] PCIA takes no position with respect to voluntary labelling.

[41] Notice at ¶ 56.

information is public, there might be a concern with the release of the unlisted numbers of parties dialing 911. In any event, PCIA urges the Commission to immunize wireless service providers from liability for transmitting information that is required to be provided under the FCC's rules or standard industry practices.

B. Federal Preemption

PCIA agrees with the FCC's proposal that state laws regarding wireless E911 service should be preempted by federal regulation.[42] Uniformity of technical requirements is essential in order to assure nationwide compatibility of E911 access technologies and guarantee that roamers dialing 911 in a foreign system receive the same response they would in their home system (assuming 911 capabilities are available in both systems).

C. Liability

The FCC should grant wireless carriers the same liability protection as wireline carriers enjoy in the provision of access to E911 services. To this end, PCIA suggests that the Commission incorporate the following text (discussed at the JEM but not included in the final Report) into its wireless E911 rules:

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[42] Id. at ¶ 59.

> No provider or subsidiary of a provider or any person that supplies E 9-1-1 emergency reporting system wireless location information or equipment or employees or agents thereof, or the 9-1-1 jurisdiction or the employees or agents thereof, shall be held civilly liable for the installation, performance, provision or maintenance of an E 9-1-1 wireless location system if the provider, subsidiary or other supplier, or the employees or agents thereof, or the E 9-1-1 jurisdiction or the employees or agents thereof act without willful or wanton conduct. Nothing in this section shall affect any liability an E 9-1-1 jurisdiction may have for operator or operator-supervisor negligence in receiving calls from the public and rendering dispatch services to the public.
>
> "Provider" means a utility, vendor or supplier or licensee of telecommunications services and equipment who provides network system equipment; enhanced 9-1-1 data base development, installation or maintenance; or wireless location information and equipment; or local exchange access services within an E 9-1-1 service area.

D. Cost Recovery

Although not directly addressed in this Notice, it is essential that the Commission address the issue of cost recovery. Providing ALI capability and other elements of E911 compatibility will engender substantial costs for wireless carriers. Wireless carriers traditionally have recovered similar costs through surcharges, and wireless carriers should be given an equivalent opportunity to treat 911 expenses as extraordinary. Because compatibility will be a federal mandate, PCIA respectfully suggests that the FCC institute a proceeding to develop an equitable method by which wireless providers can recover the costs they incur in providing access to E911 service.

IV. CONCLUSION

The collaborative effort of the wireless industry and emergency service community to promote wireless/E911 compatibility is reflected in the JEM Report. That Report illustrates the need for an evolutionary approach toward compatibility, under which all affected industry segments develop performance requirements and design standards, field-test equipment and software under the multitude of network architectures, protocols, and air interfaces utilized by wireless services, and ultimately deploy viable technology. In contrast, the approach in the Notice -- mandating design requirements and imposing arbitrary compliance deadlines -- is unrealistic, unwise, and likely to result in the implementation of seriously inferior technology. Rather than pursuing its proposals, the Commission should encourage continuation of the diligent industry efforts that already are underway.

Respectfully submitted,

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