

- The FCC should encourage states to make similarly featured E911 available on both wireless and wireline systems. (6)

Availability of 911 to service-initialized handsets.

- Supports requiring access to 911 in home service area and subscribed to roamed service area. (4)

911 call priority.

- Supports 911 call priority. (5)

Provision of location information.

- Supports Commission's ALI requirements. (5)

Re-ring/call-back.

- Supports re-ring/call back requirements. (5)

Common channel signalling.

- Supports requiring an SS7 common channel standard. (5)

Access to TTY devices.

- Supports TTY access requirements and timeframe. (5)

Labelling.

- Supports labelling requirement. (5)

Other Issues:

Preemption.

- Oregon does not support preemption. (6)

Privacy.

- Privacy should be a state and local issue. (5-6)

**ORGANIZATION FOR THE PROTECTION AND ADVANCEMENT
OF SMALL TELEPHONE COMPANIES (OPASTCO)**

Interest: National trade association of more than 440 independently owned and operated telephone companies serving rural areas of the United States and Canada.

PBX-Related Issues:

Other. If after one year from the effective date of the order adopting the rules in this proceeding, only equipment which complies with the FCC's requirements is manufactured and imported, this equipment may not be compatible with the "grandfathered" equipment and system configurations of older PBXs, forcing the customer to replace its whole system if one piece needs replacing. This could be particularly devastating in rural areas for small businesses. (4-5)

Wireless-Related Issues:

Provision of location information. Provision of ALI information could substantially raise the cost of providing wireless services and increase the rates charged to subscribers. This could retard the growth of these services. In addition, these costs may have to be borne by wireless service providers since demand for CMRS is highly inelastic. This will in turn make it more difficult for firms to do research and development and to compete in the global telecommunications market. (6)

Other Issues:

Liability. PBX owners should bear full responsibility for compliance with any E911 compatibility requirements the FCC may impose since they are usually owned and operated exclusively by their customers or vendors and LECs rarely have any control over the systems. (7)

Preemption. E911 service provision should remain in the hands of state and local governments. Local governments best understand the needs of their communities and local communities can make informed decisions on how tax dollars should be spent. In communities where PSAP does not exist, PBX and CMRS compliance with E911 requirements would be of no use. (3-4)

Other.

- A federal mandate on PBXs and CMRS to meet E911 service performance requirements could significantly increase the cost of providing these services, have debilitating effects on small and rural areas, and suppress the development of new telecommunications services. (2)
- The FCC should work to promote the establishment of voluntary technical guidelines for the entire E911 network. Manufacturers will have an economic incentive to build to these guidelines in order to remain competitive in the world market, and a variety of products and services could be offered, from basic 911 to fully enhanced 911. (7)

PACIFIC BELL, NEVADA BELL AND PACIFIC BELL MOBILE SERVICES

Interest: Bell Operating Companies.

PBX-Related Issues:

Ability of PBX to pass calling number and location.

- Support the FCC's proposed rule which will assist in ensuring that emergency response personnel get to the correct private station location as soon as possible. Has already taken steps to provide the necessary changes in their network to support this rule. Project that by the end of 1995, they will be able to offer California customers using private switches the ability to add their telephone numbers and associated location information to the Pacific Bell database for display at the PSAP. (2)

Wireless-Related Issues:

Availability of 911 to service-initialized handsets.

- Agree that mobile customers should have the ability to reach emergency services from any service-initialized handset in a home service area or a subscribed-to-roamed service area by dialing 911 and that this feature should be made available one year after the effective date of the order in this proceeding but the FCC must consider cost issues. (3)

911 call priority.

- The most appropriate place to assign priority is at the first point of switching in the network. The role of the handset is to obtain an air interface. To require additional functionality would unnecessarily increase its cost with low return in consumer benefit. The FCC should consider a network-based solution prior to setting any effective date. (4)

Provision of location information.

- While technology is available to meet the FCC's proposed phase one requirements, recommend that wireless carriers be allowed 18 months to put in place a system to provide this information rather than 12 months. Eighteen months is a typical time frame in the telecommunications industry for the development and deployment of a new feature of function. (5)

- Recommend that the FCC omit phase two entirely as the absence of an accuracy requirement may make the information given to the PSAP of little value and may make finding a user location even more difficult. (5)
- Because technology does not yet exist to send three dimensional information of the proposed level of accuracy in certain environments, the five year implementation date is inappropriate. Recommend that the agency defer any setting of a deadline for compliance with stage three until technology has progressed. The increasingly competitive nature of wireless services will drive technology development. (5-6)

Re-ring/call-back.

- Support the call-back requirement and urge the FCC to retain its requirement as to the capability of the PSAP to ring back the caller and not specify the method. (6)

Common channel signalling.

- Do not believe that an architecture should be mandated at this time. The FCC should specify the desired functionality but permit the industry the flexibility to design the architecture to achieve the required functions. (7-8)

Access to TTY devices.

- Support the proposal to require radio services to be capable of permitting access by individuals with speech and hearing disabilities through TTY devices within a year of the effective date of the order adopted in this proceeding. (7-8)

Funding.

- If wireless carriers must provide even non-paying customers with access to 911, they will be unable to cover their costs. One alternative would be to create a national fund subsidized by wireless equipment sales to defray the cost to carriers. (3)

Other Issues:

- Agree with the FCC's initial conclusion that federal standards are not warranted at this time for grade of service. (3-4)

- Question how valuable some of the information that is currently available on wireline calls would be in the wireless environment. For example, the subscriber's name is not transmitted in California because of privacy concerns. The priority of a caller is also not utilized in California. Agree that the other features proposed by the FCC are appropriate to E911 services associated with wireless services. (7)
- The issue of whether "9" must be dialed prior to dialing "911" should be addressed in an industry forum. Unaware of any way to technically bypass the need to dial 9 to exit a private system. (8-9)

PEOPLE OF THE STATE OF CALIFORNIA & THE PUBLIC UTILITIES
COMMISSION OF THE STATE OF CALIFORNIA (CPUC)

Interest: State utility regulators.

PBX-Related Issues:

Ability of PBX to pass calling number and location information.

- Local authorities should be allowed to define which entities are "single location" PBXs, which should not be required to send station location information to the PSAP. (2-3)

Reach 911 without initial "9".

- Supports this requirement. (2)

Timing of compliance.

- Supports the proposed compliance schedule. (2)

PBX owner's obligation to update LEC.

- Although the FCC should require that ALI data be stored in a NENA-approved format, the remainder of the regulation of ALI database administration is best left to local authorities. (2, 3)

Need for standard data link interface.

- Supports the use of the NENA format as a national standard. (3)

Wireless-Related Issues:

General.

- Supports wireless E911 access because an increasing number of 911 calls have wireless origins, wireless services may soon become a substitute for wireline services, and California has already made a great monetary investment in providing state-wide 911 service. (3-4)

Scope of requirement (covered and non-covered services).

- Supports including all real-time voice CMRS, including PCS and satellite services within the scope of these rules. (4-5)

- Believes that non-voice CMRS (e.g. 2 way paging, portable voice mail) are sufficiently distinct to merit exclusion from the scope of these rules. (5)

Provision of location information.

- Supports the three stage implementation schedule, but questions whether the proposed Stage 3 125 meter resolution will be sufficiently accurate in an urban environment. Therefore suggests that this accuracy requirement be periodically revisited by the Commission. (6)
- The FCC should assure that location technologies are uniform so that roamers will not be shut out. (6)

THE PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

Interest: Trade association for personal communications services industry.

Wireless-Related Issues:

Scope of requirement (covered and excluded services).

- Agrees with the FCC that "real time voice service" appropriately defines the class of radio services to which E911 rules should apply, but states that SMR providers should be required to assure compatibility only for options entailing interconnected service. (5-6)
- Air-to-ground services should be exempt from the compatibility requirement because of the impossibility of response by terrestrial 911 providers. (6)

Availability of 911 to service-initialized handsets.

- Generally agrees with the proposal that a user would be able to access emergency services from any service-initialized handset in a home service area or a subscribed-to roamed service area by dialing 911 without requiring user validation. (5)
- Mobile providers should be required to provide service only to handsets that are initialized and whose users maintain a currently valid subscription. Also, because a roamed-to system needs to know about roaming subscribers, wireless providers should be required to provide E911 service only to subscribed roamers. (6-7)
- States that the above limitations are essential to the provision of E911 service because use by a non-subscriber could result in the passing of incomplete or inaccurate information. (7)
- Urges the Commission to clarify: (1) that access should be required only for handsets that are in proper operating condition and in range of a base station; (2) retrofitting existing equipment to allow for the dialing of 9-1-1 to override user lock would not be cost effective; (3) access to E911 by wireless subscribers is contingent on the presence of a wireline and public safety 911 infrastructure that can process and respond to a wireless call; and (4) the proposed one-year deadline for availability of 911 access to wireless subscribers is a goal rather than a firm cut-off date. (7-8)

911 call priority.

- Agrees that 911 call priority is an important aspect of wireless access to E911, but argues that the proposed one-year implementation date is unrealistic and counter-productive in view of the following difficulties:
(1) the fact that mobile networks currently are incapable of prioritizing or queuing calls; (2) if queuing were possible, an emergency call dialed by something other than 911 would be "downgraded"; (3) an algorithm for prioritizing calls made by members of the emergency service community will need to be developed; and (4) foreseeable problems with flow control ("throttling") that could cause the LEC and PSAP to be overwhelmed if multiple calls are placed, and squeeze out an equally urgent call. (9-11)

Provision of location information.

- States that the JEM Report -- which represents a consensus between the public safety and wireless communities -- calls into question the achievability and public interest benefits of the use of Commission-established, arbitrary deadlines for compatibility. (2-3)
- In view of the hurdles to compatibility, urges the FCC to reconsider its mandatory milestone approach, endorse the efforts of the JEM, and instruct industry bodies to work toward compatibility under flexible time goals, with the Commission as monitor. (3-4)
- Agrees with the Commission that no federal grade of service standards need be promulgated at this time, and that any such standards promulgated in the future must be the product of a cooperative effort between the initiating, interconnecting, and terminating systems. (8-9)
- Agrees with the ultimate objective of providing Automatic Location Identification (ALI) to PSAPs, but suggests that the approach set forth in the NPRM is unworkable and imprudent. (11-12)
- Has serious doubts about proposed "Stage One" because the information provided with respect to the location of the base station or cell site receiving the 911 call often will not facilitate routing to the nearest PSAP and may impede a timely response. Cell sites can cover areas of several square miles, making it impossible to localize the origination of a call. Also, radio cell boundaries and PSAP service area boundaries do not

necessarily coincide, which could cause calls to be routed to a geographically inappropriate PSAP if routing is based on the originating cell location. Finally, in many cases the originating cell site will not be closest to the caller. (12-13)

- Also states that, under current technology, the transmission of base station information requires the use of "pseudo ANI," which precludes the passage of the originating telephone number -- something essential to permit call-back by the PSAP operator. (13)
- The originating telephone number will be far more useful to emergency service personnel than originating base station information. The proposed one-year deadline, however, freezes current technology and precludes call-back. Thus, the industry should work for a solution that supports transfer of ANI for call back and pseudo ANI for routing and database query. (13-14)
- Recommends that the Stage Two proposal be eliminated. Suggests that Stage Two is neither readily achievable nor a significant step toward the ultimate goal of compatibility. Based on the JEMs, it is unlikely that technology and standards could be developed within 3 years to produce remotely accurate information and might result in a costly dead end. (14-15)
- Submits that the Stage Three proposal is inconsistent with the current state of technology, and recommends FCC encouragement and oversight of the following four-step process, already underway, which will lead to the development of viable ALI technology by industry bodies. (15)
 - First, a Standards Requirement Document should be developed to define performance standards for the wireless system, network, and the PSAP. The JEM Report and Joint Position Paper are good starting points. (15)
 - Second, standards for equipment design, data transfer, and interworking and interoperability must be developed for PSAPs, wireline and wireless networks, signalling systems, and PCS technologies. Recommends assembly of a joint emergency services body to oversee detailed system requirement documents, and suggests the D.J. Driscoll Survey as a helpful step toward promulgation of design standards. Notes, however, that the technologies in the Driscoll Survey are not in use in a CMRS system, and that no manufacturers of radio

equipment have reported that they intend to integrate these technologies into 1800 MHz PCS handsets. (16)

- In this connection, notes that 2 GHz PCS, 800-900 MHz mobile services, and other emerging technologies consist of broad families of technologies, requiring the ability of a specific air interface to produce location information to be determined with respect to numerous implementations. Similarly, any proposed location technology must be evaluated for operation with current and future 800 and 900 MHz technologies as well as the seven emerging JTC Common Air Interface standards, each of which contains multiple methods of implementation. Finally, the location technologies must support all roaming handsets using a compatible air interface, and the systemic impact of high speed handoffs through multiple cell sites, base stations, and neighboring systems must be considered. (17-18)
- Third, once design standards are developed, prototype devices must be manufactured and field-tested for an assessment of accuracy and repeatability of signal reception in various environments, accuracy of reception using only a single cell, the effect of repeaters/enhancers, and the effect of reflections in an urban environment. Design standards will require revision after field testing and only after conclusion of the testing process will it be possible to determine whether the ability to locate a user within a 125 meter sphere is achievable. (18-19)
- Fourth, the technology must be implemented, with distinctions between integrated and overlay technologies. Also, complications include systems that employ power control, potentially limiting reception to a single cell site, and systems that employ ultra high gain antennas plus diversity to achieve link budgets, requiring that the location technology work within the single cell site or link budget limitations. (19)
- Maintains that it will take more than five years to define performance standards, develop design standards, field-test prototype equipment, and deploy technology throughout a broad range of CMRS systems, and suggests the following goals: (1) Stage 1 deployed, SRD published by the first quarter of 1996; (2) standards written and evaluated with field tests by the second

quarter of 1997; (3) PSAP upgrade, funding, field trials by the second quarter of 1998; (4) PSAP upgrade, LEC upgrade, and manufacturing by the fourth quarter of 2000; and (5) wide-scale deployment by the fourth quarter of 2002. (20)

- With regard to specific requirements for base station and transmitter compliance, and to requiring equipment manufacturers to demonstrate compliance as part of the equipment authorization process, suggests that the Commission's type acceptance process is inappropriate to ensure compliance because: (1) most E911 compatibility functions are in the mobile switching system and interconnected telephony systems, which are not part of the type acceptance process; and (2) mobile equipment might provide location data only in conjunction with specific radio systems. (24-25)
- Suggests that cut-off dates are inappropriate for handset and base station manufacture, importation, and marketing because there is no basis for determining when compliant technology can be developed. (25)

Re-ring/call-back. Suggests that the timing for implementation not be tied to the effective date of the Order, urges the Commission to direct wireless carriers, equipment manufacturers, PSAPs, and LECs jointly to develop, test, and implement the necessary standards and technologies. Identifies the following technical hurdles that must be overcome before call-back capability can be implemented: (1) PSAPs must be able to accept at least ten digits to process 911 calls from roamers or callers with overlay phone numbers; (2) manufacturers must develop a 911 service override feature, whereby a user who has blocked incoming calls or forwarded them to voice mail can be called back; and (3) means must be developed to permit PSAP operators to re-dial a roamer directly. (20-21)

Common channel signalling. Expresses concern with respect to both the proposed three-year implementation deadline and certain information sought, noting: (1) implementation of common channel signalling will require cooperation by wireless carriers, LECs, and PSAPs since a significant number of wireline and most wireless networks have yet to deploy this feature; (2) many wireless networks use a protocol different from SS7, meaning that, in order for the wireline network to receive information from the wireless network, either the same protocol must be used or a means of interworking must be developed, which will require coordination among industry members; (3) it will be impossible to transmit ALI information in three years and priority or caller and transfer number information is

imprecise. Urges the Commission not to tie implementation to the effective date of the rules, but to permit joint development of a universal common channel signalling or interworking platform, and to allow the industry to agree on the scope of information to be provided. (22-23)

Access to TTY devices. Urges the Commission not to impose an arbitrary deadline for compatibility, but to allow the industry to develop the necessary standards and technology. Access by individuals with speech or hearing disabilities through means other than mobile radio handsets, such as TTY devices, will require coordination among the industry with respect to, at the foremost: (1) establishment of a common data standard under which wireless and wireline providers can deliver TTY to the PSAP; (2) PSAPs' need to upgrade their equipment to receive and interpret a new interface and transfer mechanism. (23-24)

Labelling. Opposes mandatory package and/or handset labelling. Such warnings may cause a user to believe the device is incapable of calling 911, the label would be obsolete if network-based location technology becomes operational, and any limitations on a phone's compatibility could be more effectively communicated in the owner's manual, the service contract, or billing inserts. (25-26)

Funding.

- Suggests that, because compatibility will be a federal mandate, the FCC should institute a proceeding to develop an equitable method to allow wireless providers to recover the substantial costs they will incur in providing access to E911. (28)
- Notes that wirelines have traditionally recovered similar costs through surcharges, and states that wireless carriers should be given an equal opportunity. (28)

Other Issues:

Privacy.

- Agrees with the FCC that privacy protection requirements are not necessary in the delivery of 911 calls, but notes that, in states where PSAP information is public, there could be a concern with the release of unlisted numbers. (26)

- Also, urges the FCC to immunize wireless service providers from liability for transmitting information required under the FCC's rules or standard industry practices. (27)

Liability. Supports granting wireless carriers the same protection that wirelines enjoy in the provision of access to E911, and suggests incorporation into the rules of text discussed at JEM and listed on page 28 of PCIA's comments. (27-28)

Preemption. States that uniformity of technical requirements is essential, and agrees with FCC's proposal to preempt state laws regarding wireless E911. (27)

PRO-WEST & ASSOCIATES

Interest: Rural addressing/911 coordinator for part of Minnesota.

Other Issues:

- Supports widespread implementation of E911 and strongly concurs with the position taken by APCO, NENA and NASNA in their joint comments and the positions taken at the October 1994 Joint Experts Meeting sponsored by TIA, PCIA, APCO, NENA and NASNA. (1)

REDCOM LABORATORIES, INC.

Interest: Equipment manufacturer.

PBX-Related Issues:

Ability of PBX to pass calling number and location identifier.

- Agrees with the FCC that PBX and other dispersed private telephone systems may present location identification problems for emergency services personnel. Concurs with the decision to amend Part 68 to ensure compatibility of PBX equipment with E911 services, and agrees with the assessment that market forces to date have not been effective in implementing a solution. (2-4)
- Claims that the Adcomm proposal regarding compatibility of telephone stations served by PBX equipment with public emergency access networks does not address the complexity of change required, and urges the FCC to permit necessary flexibility to allow equipment manufacturers to respond to new rules. (4)
- States that the comments responding to the Adcomm petition reflect only the "tip of the iceberg" concerning inherent costs. (5)
- With respect to LEC ability to offer interconnection necessary to permit PBXs to transmit station identification in an acceptable format, urges Commission to focus on what the telephone network must transport in the future, not what it can transport today. (5)
- In response to GTE's statement that compatibility will require a standard LEC/private switching system interface with identifying information for private switching system calling stations, private switching system compliance with NENA standards for the transmission of ALI data to the telephone company or caller location database, and creation of either alternative number identification or DID numbers for private switching system stations, states that thousands of non-DID stations connected behind PBXs and KTU systems would place a burden on the numbering scheme, but that it is unnecessary and infeasible. New technologies moving toward one national, transportable telephone number, coupled with the new dial tone service providers, make it unlikely that telcos will assign the numbers for these stations -- the public "owns" the numbers. (5 and Appendix at 1)

Timing of compliance.

- Opposes mandatory manufacturer compliance requirements because currently deployed technology may not have call processing software associated with the system as manufactured. Computers can control call processing functions of many existing switches and some PBXs, and manufacturers have no control over call processing programs designed by users. Registration restrictions must be separated from hardware and firmware manufacturing and call processing development, and rules based on service standards rather than hardware and software registration standards. (10)
- Absolutely opposes the adoption of rules requiring that the manufacture and importation of noncompliant PBX equipment must cease as of one year from the effective date of the order. The requirement is anticompetitive and discriminatory, particularly as applied to exporters of PBX equipment, who may be prohibited from manufacturing for export PBX equipment not compatible with U.S. 911 requirements. (10, Appendix at 6)

Attendant notification. Agrees that the attendant should be notified and automatically included in the conversation, muted by an automatic conference bridge. The attendant may activate "cut-in" as needed to supplement information or provide detail. States, however, that the rule, as written, is overly restrictive, that adjunct equipment should be allowed, and that the requirement of getting information to the attendant and response personnel should not be solely the responsibility of the PBX, but can be accommodated through after-market devices. (7-8, Appendix at 5)

Ability to use private emergency response personnel.

- Notes that industrial and military complexes often have their own safety departments, which generally provide a far greater level of understanding of a problem reported than any civilian 911 agency and often bar civilian agencies from entering because of special security or hazard requirements, and states that these exceptions to normal response behaviors must be accommodated. (5)
- States that there are many installations where ALI information will be suppressed. Some such locations may have local security, fire, or medical dispatch centers that answer campus 911 calls and direct 911 calls in the campus to private communications centers. These locations must be able to forward selective ALI information to the PSAP if outside response is required. (7)

General.

- Existing telephone companies will not necessarily be keepers of the 911 ALI database. It is within the technical capabilities of other service providers to have their own databases and trunks to a 911 center, and any FCC restriction of access to 911 centers by new service providers would likely be unconstitutional. (5 and Appendix at 2)
- In this vein, suggests as a possible solution a "third party cooperative" to provide for equal database access for all companies. Automatic electronic data transfers on completion of install/change orders would keep the database current. A simple PC-based transaction system could handle smaller companies. A scheme to allow the telephone network to be a "path" between an intelligent PBX/KTU and the PSAP would be a possible solution, with the public network sending the ANI of the line-side "trunk" and 911 service class mark identifying the signalling type and the PBX/KTU sending its own station digits. (5-6, Appendix at 3)
- Notes that individual PBXs may be "homed" to various local providers, which may not include the existing local exchange providers, and that the territories served by new local dial tone providers may have no relationship to political or LATA boundaries. The situation is further compounded by local number transportability, which will erase the relationship between NNX and geographic locations. (7)
- Suggests that the most practical method of database maintenance is direct user access via modem to the database, with passwords and filter screens to protect information. (8, Appendix at 3-4)
- Maintains that the proposal for transmission of database information by PBX owners to LECs is bureaucratic and costly, and indicates a lack of understanding of the technological capabilities of network switches and PBXs. Further, the LECs will be in a competitive environment and must be paid for each change made to remain competitive in their own markets unless each is independently responsible for their own E911 database and trunking information. (8, Appendix at 3-4)
- Opposes suggestion by TSB-103 and GTE that an artificial SNI be created for each calling station on PBX equipment, and states that the local NNX doesn't have any geographical relationship in a competitive environment. Suggests that it is better to address the

Listed Directory Number or billing number and PBX extension directly, and to give the PBX owner the responsibility to keep the database updated. (8)

Need for standard data link interface.

- Agrees that a nationwide standard is needed for information protocol, and states that much work is needed to identify the impact of competitive local loop operations (both companies and electronic switch media) before a typical interface requirement is established, and that it may not be possible to identify all information aspects with current technology. (9)
- With regard to TSB-103's notation that some PBX equipment may directly access the Automatic Location Identification Database Management System to input and update changes in station location records, and the recommendation that these data link interfaces be standards, states that Bellcore does not speak for the national network companies, and that any standards they create are "standards" only to the extent that users (local dial tone providers) purchase their equipment. Any proposed rule should not adopt the Bellcore standard without close scrutiny for anti-competitive issues. (9)

Training of PBX owner personnel. Urges elimination of proposed Section 68.228(c) regarding supervision of work done by installation personnel. The proposed rules imply that a licensed civil engineer could make the changes and not need to know anything about telephony. In fact, competent telephone engineers are not licensed PE's. (Appendix at 3)

P.01 Grade of Service. Claims that the proposed rule regarding P.01 grade of service will allow for a non-redundant path that may never be used and will not be tested frequently. Suggests that it is better to allow end-office line-side DTMF connection where the connections will be tested daily. Also maintains that the requirement that trunks be added to maintain an availability of P=.01 based on the number of users served creates an undue burden on PBX owners and the public network providers, and that it would be better to establish a table of "trunk" quantities based on the number of stations served. (Appendix at 5)

Labelling. Should be the responsibility of the owner, not the manufacturer, since the owner has the capability to change routing within PBXs without the knowledge of the manufacturer. (7)

Other.

- States that the TIA Bulletin should be made part of the official appendix in the proceeding, and that a draft should be available to all commenters. There are numerous technical aspects of leading-edge switching equipment designs that are not shared with TIA membership and that must be allowed for. (4)
- States that the definition of "trunked" is not adequate to describe the necessary Class 5 LINE or Trunk side connection, which must be accommodated for practical access solutions. Also argues that it is imperative that PBX 911 access not be restricted to only trunk-side switch connections in Class 5 or 4 offices, and that it is possible that, if regional tandem connections are required, PBX owners would be required to have one or two trunks, costing possibly \$ 500/month, to the tandems to allow 911 center access -- an unfair burden on the owner to accommodate occasional 911 calls. (Appendix at 1, 4)
- With regard to proposed 10-digit station number proposal, states that instead of ten digits, the LDN or billing number and extension number could be used for PBXs. The costly dual number requirement could be eliminated by conversion to digital switches. (Appendix at 3)
- States that the proposed rule requiring that the station number identification code assigned to the emergency response location of a 911 caller be sent from the registered equipment to the telephone company 911 system using MF pulses prompted by a solid off-hook indication from the telephone network is an attempt to require PBX owners, at great expense, to meet a trunk-side public network with today's signalling requirements. The network is, however, changing and with DTMF signalling capability standards, can receive digits on the line or trunk side. Urges the FCC to recognize these changes, and to accommodate interconnection to competing local access providers. (Appendix at 5)
- Suggests that the proceeding be expanded by creating a general mailing announcement of issue topics to manufacturers, service providers (existing and potential) cellular and PCS operators, and other interested parties. After notification, forums should be held, particularly in Rochester, NY and Ameritech territories, where competition in the local loop is in progress or imminent.

- Next, the proposal should be redrafted to specify 911 service interfaces (voice, voice/data, data only) and depart from themes involving the existing network environment. Through competition, subscribers should have the choice of how networks will be interfaced and interconnection accomplished. (Appendix at 7)
- Urges the Commission to take advantage of new network features such as "crankback" and "911 priority" to help ensure call completion over various switching and transmission media, and to temper the 911 priority issue with the realities of shared spectrum usage during large emergencies. (Appendix at 7-8)

Wireless-Related Issues:

Scope of requirement (covered and excluded services).

Generally agrees that services that can be used to report to 911 centers should provide ALI. Many existing LB, VHF, and UHF radio services allow connection to the public network, but would not be able to afford wholesale change-out of equipment designed to last 20-30 years (includes amateur radio and business band radio), and the cost to benefit in these services would be prohibitive and an unnecessary burden. Also, temporary radio and PBX installations, such as a disaster PBX installed temporarily at a damaged commercial building, should be exempted from providing ALI information. (12)

911 call priority.

- Agrees that "grade of service" refers to the percentage of calls between the mobile transmitter and the PSAP that are blocked either within the radio or the wireline network, and that interconnection of a mobile transmitter call with a PSAP attendant may involve several interconnecting networks. Supports an overall grade of service objective, which is critical for disaster situations where local networks are damaged or inundated. A means of identifying at the origination point that a call is a 911 priority call is required, and this priority must be applied to RF spectrum access and successive switching efforts through any interconnecting networks until a PSAP is reached. (14)
- Concurs with the proposal to require that, within one year after the effective date of the order, originating 911 calls must be assigned priority over non-emergency calls. (14)

Provision of location information.

- PCS and mobile services development should not be unduly stifled by compatibility requirements. Some stepped transition rules may be necessary to give notice to these new services that migration to a final standard is required prior to deployment in quantity. (10)
- ALI information should be updated as a call is in progress to the 911 center so an in-progress event can be tracked. (11)
- Believes that all segments of the industry must be kept advised of developments between the industry and public safety community, and that sufficient review and comment intervals be allowed. In this vein, notes that the proceeding has not addressed the competitive local loop environment, which is a reality, and suggests that companies, (service and manufacturers) must be included in the process. (15)
- In response to the Phase 3 proposal, states that satellite and radio spectrum signals will not be able to penetrate many locales sufficiently to effect a "lock" to calculate position, especially in buildings or tunnels where fill-in repeaters are used for a particular technology, such as cellular, but not for the associated GPS signals. Notes that this is particularly problematic for handheld PCS users and mobile units moving in multi-path fade environments. (16)
- Private network radio equipment, such as that used for emergency restoral or in private campus systems must be exempt from the proposal to establish specific requirements for base and mobile transmitters and to adopt cut-off dates for manufacture, importation and marketing of noncompliant equipment. Similarly, the requirement must not be applied to in-band voice signalling systems. (18)

Common channel signalling. With regard to the information to be furnished to the PSAP, states that a language identifier should be included, and that SS7 standards must be addressed. Competitive forces dictate that SS7 is an option, not a mandatory inter-switch message protocol. (17-18)

Other Issues:

Privacy.

- Urges the Commission to address the requirement for privacy of number records, especially from the service

provider, as the quantity of stations behind PBX/KTU systems and their number plan is competitive information, and may invoke national security issues regarding disclosure. (6, 19)

- Any discussions or rules regarding database administration must account for the transition to competition in the local loop. ALI information of a local service provider is critical competitive information and must be protected from competition, including BOC, Independent Telcos. (6)

Preemption. Comprehensive and fair federal regulation is required to avoid multiplicity of standards at the state level, which will result in undue hardship on manufacturers. States that the federal government may even be required to fund the initial development by manufacturers to meet a new standard. (19)

RURAL CELLULAR ASSOCIATION

Interest: Association of cellular companies serving rural America.

Wireless-Related Issues:

Availability of 911 to service-initialized handsets.

- Mobile access to 911 service, through initialized cellular handsets with a valid subscription to service, is already virtually universal. Therefore, the FCC need not mandate availability of 911 service on mobile phones. (3-4)
- The FCC's use of "initialized mobile radio handset" could be interpreted too broadly. Even landline 911 service is unavailable to previously "initialized" customers who are no longer subscribers in good standing. Thus, cellular carriers should only have to provide 911 service to customers with a valid subscription. (4)

911 call priority, Provision of location information, Re-ring/call-back.

- Flexible goals v. firm deadlines.
- Disagrees with mandating availability of E-911 as premature and possibly counterproductive. Submits that technical and economic impediments, such as discrepancies between cell site service areas and PSAP response areas, and variations among PSAP facilities, make many of the FCC's proposals not feasible within the time frames proposed and extremely costly. Supports instead encouraging existing market forces which allocate resources more efficiently. (1, 4, 7-8)
- Cellular and wireline uses are different. Disagrees with FCC's assumptions that the need for mobile E-911 is identical to that of landline customers, and that wireless customers, or even landline subscribers, expect access to E-911. (5-7)
- Landline subscribers call from private, secluded locations that may conceal an emergency situation. In contrast, many cellular 911 calls are from "Good Samaritans" who are reporting others' emergencies