## Standards Requirement Document (SRD)

### Title: *9-1-1* Call Completion

### Background

The wireless telecommunications industry successfully completes more than 83,000 *9-1-1* calls each day. Wireless phones provide individuals, as well as communities with a level of personal safety and disaster communications never before possible. A clear majority of wireless users have declared their primary reason for subscribing to wireless service is to enhance their safety and sense of security. CTIA is dedicated to public safety and remains hard at work promoting personal safety, community awareness programs and supporting legislation that will improve wireless safety services across the nation. We have worked closely with our industry members and the public safety community to meet *9-1-1* requirements and implement Enhanced 9-1-1 services. The industry's evolutionary path of system coverage and capacity build out along with the recognition of the public expectation for safety services will allow access to the public safety network never before available. We recognize the critical nature of *9-1-1* calls and the importance to make every reasonable effort in "getting the call through".

### Premise

Wireless communications, unlike wireline, is dependant upon Radio Frequency (RF) to link the user to the network. Therefore, wireless communications is subject to various effects of natural and man-made interference, as well as varying atmospheric conditions. Although service providers attempt to limit these effects by adjusting networks and upgrading coverage and capacity, some anomalies will still exist . For this reason CTIA requests that TR45, the ANSI accredited technical standards body for Mobile & Personal Communications, review current radio air interface Project Numbers (PNs), and all existing radio air interface standards to determine the feasibility for modifications or revisions that would result in an increased probability of completing an *9-1-1* call initiated by the user. If the need for new standards work under a specified PN exists, then CTIA requests that such work be done on an expedited basis

### Objectives

1. Provide the user attempting access to *9-1-1* service with a higher probability of call completion.
2. Minimal call set-up delay (e.g., 2-5 seconds total).
3. Access to an available, clear, voice channel, within tolerances for call processing.
4. Allow the user to clearly communicate with the *9-1-1* call taker.
5. If preferred radio channels are not found, assigned to or maintained by the wireless phone, then attempt alternate access by using other frequency bands and air interface modes available to the wireless phone.

6. Retention of Enhanced *9-1-1* Phase 1 and Phase 2 features and capabilities developed in support of FCC Docket CC 94-102 and 97-402 (e.g., J-STD-034, PN 3980 and subsequent PN's).
7. Applicable to all air-interface technologies.

## Possible solutions

1. Allow the wireless phone to access all frequency bands and air interface modes offered by the wireless phone and present in the service area, when access to the preferred system is not possible.

2. Seek "strongest" or "best" available control channel.

3. Seek "best" available voice channel.

4. Factory programming of system selection preference for all available bands: Allow non-activated wireless phone (factory direct) access to *9-1-1* on a non-discriminatory basis for all frequency bands available to the wireless phone (e.g., use both odd and even factory default SIDs when applicable).

## Conclusion:

CTIA requests Committee TR45 provided a response to this SRD at the next scheduled meeting (Sept, 1998). CTIA anticipates a "best path forward" recommendation based on the Objectives stated above.

AUDIOVOX.
COMMUNICATIONS CORP.

June 2, 1998

Jonathon D. Linkous
C/o Ad Hoc Alliance for Public Access to 911
901 15th Street N.W. Suite 230
Washington, D.C. 20005

Dear Mr. Linkous,

We have been advised your organization has reported to the Federal Communication Commission that Audiovox wrongly claims its cellular telephones, "select the strongest signal when an emergency number is dialed."

Your statement incorrectly describes what we advertise our phones will do when an emergency number is dialed. Enclosed is our informational brochure. You will note item #4 states;

> "Flashing no service indicates service is available but the phone's preferences are set in such a way that it is not allowing that service to be used for placing calls. If a 911 call is placed, the phone disregards the set preferences of the phone and rescans for ANY available service to place the call."

In other words, when a service is available but the phone has been programmed to block that carrier, our phone will override this block, in the case of an emergency, and scan the preferred then non-preferred carrier, only when its preferred carrier is not available.

We trust that you will now correct your filed statements with 1) the FCC and 2) make no further incorrect statements about our products or our advertisements.

Paul Wilkinson - Vice President Cellular Engineering & Service

Cc: Philip Christopher, James Barnett, Tim Jeffries, Robert Levy (General Counsel)

AUDIOVOX.
COMMUNICATIONS CORP.

An Audiovox MVX505 can have 2 different setup conditions based on the programming of the phone, with 5 distinct cases associated with each. Each of the 2 setups will cause the receive function of the phone to behave differently in what it is capable of receiving. They are listed below along with a background description of how a 911 call would be placed during each condition (and if possible).

**SID management turned off**

1.) **No ROAM indication with signal strength:**

The phone is operating in the "HOME" system signal area. If 911 is called, the call will be placed through the "HOME" system cellsite. The "HOME" system is always preferred over other service providers when placing calls.

2.) **ROAM indication with signal strength:**

The phone is using a preferred "ROAM" service provider. If a call is placed other than 911, the phone will rescan to look for a "HOME" service provider. If it finds the "HOME" service it will place the call on it. If not, it places the call on the "ROAM" service. If a 911 call is placed, the phone does not rescan. It will place the call on the "ROAM" service.

3.) **FLASHING ROAM indication with signal strength:**

The phone is using a non-preferred "ROAM" service provider. If a call is placed other than 911, the phone will rescan to look for a "HOME" service provider. If it finds the "HOME" service provider, it will place the call on it. If not, it places the call on the non-preferred "ROAM" service. If a 911 call is placed, the phone does not rescan. It will place the call on the non-preferred "ROAM" service.

4.) **FLASHING NO SVC with signal strength:**

Flashing no service indicates service is available but the phone's preferences are set in such a way that it is not allowing that service to be used for placing calls. If a 911 call is placed, the phone disregards the set preferences of the phone and rescans for ANY available service to place the call.

**(continued on next page)**

5.) **CONSTANT NO SVC with no signal strength:**

There is no service provider in the area and the cellular phone is not detecting ANY available service. A 911 call cannot be placed since there is no service provider to place the call with.

## SID management turned on

1.) **NO ROAM indication with signal strength:**

The phone is operating in the "HOME" or "BROTHER/SISTER" system signal area. If 911 is called, the call will be placed through the "HOME" service provider. The "HOME" system is always preferred over other service providers when placing calls.

2.) **ROAM indication with signal strength:**

The phone is using a "COUSIN" service provider. If a call is placed other than 911, the phone will rescan to look for a "HOME" service provider. If it finds the "HOME" service it will place the call on it. If not it places the call on the "COUSIN" service. If a 911 call is placed, the phone does not rescan. It will place the call on the "COUSIN" service.

3.) **FLASHING ROAM** indication with signal strength:

The phone is using a non-preferred "ROAM" service provider which is not part of the SID family management list. If a call is placed other than 911, the phone will rescan to look for a "HOME" service provider 1st, a "BROTHER/SISTER" service provider 2nd and then a "COUSIN" 3rd. If it finds either of those 3 services available, the call will be placed on that available service. If not, it places the call on the non-preferred "ROAM" service. If a 911 call is placed, the phone does not rescan. It will place the call on the non-preferred "ROAM" service.

4.) **FLASHING NO SVC with signal strength:**

Flashing no service cannot happen with SID family management active. It will show up as a flashing roam if service is available but is not listed within the "HOME", BROTHER/SISTER or "COUSIN" SID lists. It would act as if #3 above.

**(continued on next page)**

5.) **CONSTANT NO SVC** with no signal strength:

There is no service provider in the area and the cellular phone is not detecting ANY. A 911 call cannot be placed because there is no service provider to place the call.

---

These are all the conditions available at the phone. The phone works as one would reasonably except under a "flashing no svc" condition. This one condition bypasses the normal operation of the phone and places the 911 call on ANY available service provider.