

ATTACHMENT 2

Phase II Request Criteria

PSAP Qualification

CTIA petitions the FCC to support effective and efficient deployment of Phase II services by stipulating that a Phase II request is not valid, and should not be submitted, unless three key conditions are met. These conditions are that:

1. The PSAP's ALI database meets the J-STD-036 E2 interface standard.
2. The PSAP's CPE must be able to utilize the latitude, longitude and confidence level data, or the PSAP's management must have entered into a contractual agreement with a vendor that will provide this capability within six months of the date of the Phase II request.
3. The PSAP is able to provide the data and resources necessary to support Phase II deployment, such as boundary maps and routing information, and is ready to provide the necessary administrative support needed to implement Phase II in a cooperative effort.

The reasons for our position are developed below.

Rationale:

Implementation of Phase II Services will be a daunting task; one that will stretch the resources of both wireless carriers and PSAPs. The average single-county PSAP will send 7-9 requests for Phase II service to the Carriers in his area. In contrast, a national carrier might receive 6000-8000 requests from PSAPs for Phase II service. Under these circumstances, planning the implementation of Phase II service is a significant resource allocation and program management activity for the wireless carrier, which will tolerate little or no ineffective utilization of resources.

The qualification process being requested from the PSAP acts as a mechanism for scheduling, allocating resources (both technical and manpower), and acts as a programming screen so that the mandated deadlines for deployment are met with the minimum amount of delay. With the requested information, the wireless carriers will be able to more appropriately allocate resources for certain types of interfaces, certain types of CPE, maps, etc., and do it in a manner, which ultimately will lead to a greater degree of Phase II services nationwide. Without an appropriate ALI interface, outdated CPE, or the PSAP resources to support implementation, requests for Phase II services could result in a diversion of resources away from PSAPs still implementing Phase I services, or PSAPs where Phase II could be more readily implemented, resulting in frustration for ALL parties involved. The purpose of this document is to outline some of the rationale for the precedent conditions being met prior to a Phase II request. They are outlined to demonstrate how, in their absence, allocation of resources might be ineffective and delay the provisioning of Phase I and Phase II services to those PSAPs that are ready.

J STD-036-E2 Interface Standards and Related Issues

While the wireless carriers have the responsibility for implementing Phase II, the PSAPs are responsible for all necessary upgrades to the ALI database and selective routers.¹ The wireless

¹ See, Letter to Marlys Davis from Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, Re: King County Washington Request Concerning E911 Phase I Issues, dated May 7, 2001.

industry and Public Safety negotiated a set of standards for the operation of wireless networks and the ALI database, J-STD-036, and the wireless carriers and their vendors have designed their Phase II systems to operate according to J-STD-036-E2. In order for these systems to be deployed, wireless carriers need some assurance that the PSAP's ALI database and selective router also conforms to J-STD-036. While the FCC is technically neutral on this matter (which we feel is correct), technical neutrality has resulted in three unanticipated negative effects:

- Legacy ALI database providers have developed several different ALI Interfaces (some of which are incompatible), which will require wireless networks to develop multiple delivery interfaces. Aside from increased development costs, these legacy interfaces delay implementation because each deployment must be custom designed based upon the type of interface the PSAP, through its ALI database provider, has chosen. Some ALI database providers have not yet developed an interface and are being developed, as specified by their PSAP customers.
- Almost none of the interfaces currently being used support an ALI location update request as required by J-STD-036. Without this update request functionality, the delivery of Phase II location will be blocked if the initial Phase II location cannot be determined prior to the time-out interval set for delivering the call with only the Phase I location.
- The request for "confidence level" data associated with Phase II location information was made at the request of Public Safety, during the initial planning for wireless E9-1-1. While the FCC did not include a confidence level in the original E911 requirements, this confidence level was included as a data element in the industry standard "E2" interface provisioning in J-STD-036. We are not aware of any ALI vendor that has incorporated the ability to accept and forward this information into a currently available ALI database service, even though the wireless industry has operated along that development path.

The value of the TIA J-STD-036 cannot be overstated. This standard provides for the delivery of location data after the call set up process is completed and provides for PSAP initiated location updates during a 9-1-1 call. Further, it includes a parameter describing the uncertainty of the location estimate, the "confidence level," which is designed specifically to allow public safety to more accurately interpret and use the data when responding to the emergency. This standard was developed jointly by both the wireless industry and public safety to be the standard used for Phase II implementation and the wireless industry has proceeded to develop its' systems in accordance with that understanding. Legacy (pre-J-STD-036) solutions do not provide these capabilities uniformly.

Given the development activities by the wireless industry to meet the joint requirements outlined in J-STD-036, those PSAPs that have requested and implemented this standard in their own database infrastructure are, by definition, in a position to interface with the wireless infrastructure. Because the ALI database is a product purchased by the PSAPs, it is only the PSAPs who can specify that their ALI database vendors should implement J-STD-036, including the E-2 interface. As a result, Phase II deployment resources are most effectively allocated when the PSAP has implemented this standard into their infrastructure. Should the Commission not choose to make this standard a component of a valid Phase II request, countless development resources and manpower will be used attempting to craft individual PSAP by PSAP solutions. As such we contend that utilization and implementation of this standard is one of the single most important keys to rapid Phase II deployment. For Phase II to be implemented at the pace that the FCC is requiring, the issue of encouraging implementation of both the J-STD-036 as well as the E2 interface development must be one that is brought to resolution.

There are additional technical issues currently foreseen that will be mitigated by PSAP adoption of the joint standard. For instance, there are conflicts within the various “legacy” technology solutions in ALI databases. On some selective routers, for example, implementing a Call Associated Signaling (CAS) solution where a Non-Call Associated Signaling (NCAS) solution has already been deployed effectively disables existing Phase I service. Migrating to the more complex J-STD-036 solution could easily cause similar problems unless a standard interface (i.e., E2) was implemented. In some PSAPs NCAS data is displayed differently than hybrid CAS (HCAS) data, causing quality of service and continuing training issues within that PSAP. Migration to J-STD-036-E2 would also improve PSAP operations by resolving the data display issues.

There is also some concern that J-STD-036 and legacy solutions may cause conflicts if they are used simultaneously on the same selective router. Because several PSAPs normally share any given selective router, resolution of the conflict could require a ‘flash cut’ of all PSAPs using the selective router to J-STD-036. Obviously, the potential for disruption of 9-1-1 services in this situation is a grave concern for all parties and increases the importance of technical coordination efforts. Ideally, a solution might be developed to allow changing individual PSAPs to the new standard at their own pace but neither the PSAP nor the wireless community will know for sure until thorough coordination is completed for each type of selective router.

As noted above, wireless carriers do not want to create an artificial barrier to Phase II deployment. Wireless carriers understand that there are a couple of proprietary ALI Interfaces that do allow for ALI updating which do not conform to J-STD-036. CTIA would not object to these being allowed to continue for a certain period of time in order to permit Phase II implementations using these interfaces to go forward, as long as they provide the basic functionality that will permit delivery of Phase II data. We request, however, that these exceptions be characterized as interim, and be set to expire within a reasonable time, such as two years, which will promote development to incorporate use of the standard E2 interface. If an interim exception is requested, then CTIA requests that the PSAP collect from its ALI vendor complete documentation describing the interface requirements (i.e. signaling, data format, applicable technical standards, etc.). The PSAP should then attach this documentation to their request so the parties can identify and resolve technical issues as early as possible. This process allows the PSAP to specify in their request letter, which technical standards they expect to use for Phase II data transmission. Subsequent changes to the plan should be handled in a similar fashion to ensure the validity of the implementation.

PSAP CPE Capability

The PSAP must provide a reasonable assurance that it’s existing CPE is or will be capable of using the Phase II data by the time the wireless carrier’s obligation to implement the solution is due. As outlined above, NCAS data is sometimes displayed differently than hybrid CAS (HCAS) data, causing quality of service and continuing training issues within that PSAP. In other PSAPs there is no means to utilize this information, absent technology or operational upgrades which render the data meaningful to the call-taker.

The PSAP should certify it is fully capable or that a contract has been fully executed for the necessary upgrades. A summary of the upgrades and the work schedule should be provided rather than the full contract. Again, because of the potential for delays in equipment manufacture, delivery, installation and completion of testing the PSAP should periodically update the wireless

carrier so deployment resources can be reallocated if necessary to achieve timely Phase II deployment nationally.

Deployment Resources

Even with the necessary hardware and software upgrades in place, the actual implementation of Phase II between a wireless carrier and a PSAP is highly labor intensive. Not only must the PSAP their specific boundary maps and routing information, there must also be sufficient resources to perform the testing of those services. Many PSAPs are staffed for their day-to-day operations only and resources must either be diverted from the day-to-day operations or acquired through third parties. The same, of course, is true for the wireless carrier, but recognition that additional data must be developed and available for implementation, and additional administrative, management, and/or personnel resources have been anticipated, provides the wireless carrier with sufficient factors to initiate planning and implementation of Phase II services in that PSAP's area.

Summary:

The Commission recognized the importance of assured PSAP funding by making it a prerequisite for requesting enhanced wireless 9-1-1 services. The Commission recognized that the PSAP must be able to use the information being delivered by the wireless carrier. As the wireless industry continues to implement Phase I services and begins to implement Phase II services, the programmatic requirements for planning and then executing this stage of the implementation increase exponentially. With so much of the country still without Phase I services, requests for Phase II should be made only when the PSAP is in a position to actually implement that Phase of their service. By applying these criteria as a pre-requisite for Phase II service, the wireless carrier will be able to continue allocating its' resources in a manner that will 1) provide even greater coverage of Phase I services to its' current 120M subscribers, and 2) direct its' resources to those PSAPs for Phase II services when they are ready to receive and utilize this life-saving information.