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Ms. Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
The Portals
445 Twelfth Street, S.W.
12th Street Lobby, TW-A325
Washington, D.C. 20554

Re: Ex Parte Presentation
CC Docket No. 94-102

Dear Ms. Salas:

On December 4, 1998, The Cellular Telecommunications Industry Association ("CTIA") filed a response to ten questions asked by the Commission's staff concerning Automatic A/B Roaming. Our letter of January 13, 1999 takes issue with some of CTIA's statements and conclusions. On January 29, 1999, CTIA filed a response to five follow up questions from the staff. This filing contains a "Description of Automatic A/B Roaming" as Attachment 1. We again took issue with CTIA's assertions in our letter dated February 9, 1999. Now, by letter dated February 19, 1999, CTIA has filed "supplemental answers" and a description of the "Automatic A/B Roaming proposal," which at first glance appears to be a re-write of the earlier description submitted under cover of its January 29, 1999 letter.

CTIA's supplemental responses contain incorrect and misleading statements which we will discuss below. It also appears that CTIA's "description" of Automatic A/B Roaming may be intended to be proposed language for a Commission decision and order, although the cover letter does not disclose that as the attachment's purpose. Our question in this regard is based on our discussions with members of the staff last week which lead us to believe that CTIA was going to submit draft language for a decision and order that would include Strongest Signal as well as Automatic A/B Roaming.

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Handset Reprogramming Requirements
(Q 1 and 4)

CTIA states that the only reprogramming required to implement Automatic A/B Roaming is to enable the handset to recognize a 911 call and override any carrier instructions placed in the handset. CTIA says that this is a “relatively minor change” and “could be accomplished expeditiously.” There is a variance however, between this statement and CTIA’s “description” of Automatic A/B Roaming. This discrepancy is discussed starting on page 5 below. By way of contrast, Strongest/Adequate Signal handset programming changes are truly minor in nature. All that is required is to enable the handset to recognize a 911 call and comparison of the strongest Forward Control Channel (FOCC) on the preferred side to a calibrated threshold and scanning all FOCC on both sides if the preferred signal is weaker than the threshold.

What “Call Completion” means using Automatic A/B Roaming
(Q 1)

Several terms used by CTIA to describe Automatic A/B Roaming are misleading. For example, when CTIA says that the call is considered “*completed*” by Automatic A/B Roaming it *does not mean* that the calling party was *connected* to the called party or that voice communications were even possible. When CTIA says that the “origination request was *successfully sent*” it *does not mean that a voice channel was assigned* by the base station. Nor does it mean that the Supervisory Audio Tone (SAT) sent by the handset was received by the base station so that the call would be connected. Using CTIA’s double speak, one can say that the emergency calls for help from both Spielholz and Lechuga were *successfully sent* and the *call was considered completed even though all the calling party heard was dead air.*

CTIA also says that the call is “completed” using Automatic A/B Roaming when the caller has made x number of unsuccessful attempts to place a call. A call is deemed “completed” even when the call is not connected after 6 to 12 seconds has elapsed. Thus, by redefinition contrary to the plain meaning of words, what CTIA is saying, when speaking of Automatic A/B Roaming, is the terms “completed” and “successfully sent” include situations where the call *was not connected* to the PSAP.

The Automatic A/B Roaming Lock-in problem
(Q 2)

The term “lock-in” has been consistently used to describe the situations where the SAT signal was sent by the mobile handset but *not received* by the cellular base station. Having sent SAT, the handset deems the call connected (the handset is not able to detect the absence of voice conversation) and will not switch to the other side when using Automatic A/B Roaming, even though no voice communication is possible. Any time out or disconnect order is considered by the handset to be a usual termination of the call. Thus, a re-initiation of the emergency call will simply result in the same lock-in situation.

In an attempt to deflect attention from this fatal flaw in Automatic A/B Roaming, CTIA states that lock-in can also occur using Strongest/Adequate Signal. Here is a ***critical difference between Automatic A/B Roaming and Strongest/Adequate Signal***. Under Automatic A/B Roaming, lock-in will occur even though there is usable channel of communication available from the other side which could be used to connect the emergency call. Under Strongest/Adequate Signal, lock-in will only occur if there is no usable channel on either side and no voice communication are possible at all.

CTIA then tries to bewilder and confuse the reader by expanding the definition of lock-in to include system busy situations. In a lock-in situation, all the caller hears is dead air, the call cannot be connected on the called side and the handset will not switch to the other side. In system busy situations, the caller hears a reorder tone, knows to try again and will be able to place the call as soon as a channel becomes available. A reorder tone will also be heard by the calling party when the base station does not assign a voice channel. These are the situations described in CTIA's Response to sections a, b and c on pages 1 and 2 as additional examples of lock-in, which they are not. Contrary to CTIA's statement that "voice communication cannot be established" under these circumstances, the reorder tone does alert the user to initiate another call which may result in voice communications.

The Motorola re-try proposal would cause the handset to retry the failed call *x* times on the preferred system. This creates a time delay of up to twenty-four seconds. Time delay has been addressed from all quarters in this proceeding. The usual time to connect a call is four to six seconds.¹ Everyone has agreed that any delay in handling 911 calls is unreasonable and will cause confusion on the part of the calling party. For example, on January 21, 1999, the Rural Cellular Association filed a notice of *ex parte* meetings where they said "the unacceptable delay in completing [911] calls would confuse or frustrate callers accustomed to the practically instantaneous completion of 911 calls."² As shown in the attached LCC brochure, 10 to 15 seconds is the absolute maximum a caller will wait for a connection. Why then does it suddenly become acceptable to the wireless industry to introduce a delay of up to 24 seconds? Especially since the odds of getting through on the side the caller was unable to originally access are slim. The answer is set forth in our Handout which shows that the wireless industry wants to handle the fewest number of non-revenue 911 calls possible and limit such calls to those from their subscribers. This has been CTIA's position from the outset of this proceeding when it proposed to block calls to 911 unless they were placed by a paid-up customer on the subscribed to system. The Commission had no difficulty in finding that CTIA's position was contrary to the public interest then and it should have no difficulty now reaching the same conclusion concerning Automatic A/B Roaming because the very same rationale applies.

¹ See portion of LCC brochure which is attached.

² This is in the context of criticism of Strongest Signal because it would take 50 milliseconds longer to scan all 42 FOCC instead of just 21.

Emergency Calls Assigned to a Poor Voice Channel by Automatic A/B Roaming
(Q 10)

CTIA admits that in Automatic A/B Roaming, “many calls will be handled by the preferred carrier even though the control channel signal strength is less than the level necessary for good and reliable communications. Our “Review and Comparison of Automatic A/B Roaming and Strongest Signal” handout (“Handout”) shows that with Automatic A/B Roaming

15,312 Emergency calls will be assigned to a poor voice channel with noise, cross-talk and static every day

However, CTIA contends that cellular systems “are engineered to reliably complete such calls. Our Handout shows that with Automatic A/B Roaming

5,152 Emergency calls will be dropped every day.

Finally, CTIA states that the preferred carrier will be able to “process the 9-1-1 call” except “for a very small minority of 9-1-1 call attempts.” Our Handout shows with Automatic A/B Roaming

4,000 Emergency calls will not connected (lock-in) every day.

We do not think that these numbers are small – especially when measured by the death and damage to life, which has been amply demonstrated in this proceeding.

CTIA next misconstrues the data provided by the Alliance in the Trott report concerning its studies in Atlanta and Dallas. These studies concern “holes” in coverage – and do not apply to the entire coverage areas. We do not have studies which show the statistical data concerning the area wide number of unsuccessful call attempts, quality of the channel provided and dropped calls for Atlanta or Dallas. As noted in the Handout, CTIA has refused to provide this type of information. Using the data we have for Los Angeles, we assumed that, on average, 78% of all calls will be handled by the preferred carrier with a good channel of communication. That means that 22% of the time there will be a problem in reaching 911 over the preferred system. Based on our survey in Los Angeles we concluded that ***Strongest Signal would fix this problem approximately 98% of the time.*** We compared the Los Angeles data with data from a brochure³ from LCC, a company that also performs surveys. The comparison shows the similar numbers, i.e., call completion in Los Angeles was 95% -- LCC brochure 98%; Poor voice channel in Los Angeles was 22% -- brochure 25%; and dropped calls in Los Angeles was 7% -- brochure 8%. This tells us that we are pretty much on track with our assumptions. Using CTIA’s calculations together with this information, we can say that, ***Strongest/Adequate Signal will fix the problem in Atlanta and Dallas approximately 8 out of 10 times*** by switching to the side with the best available channel of communication. This means,

³ Copy attached.

according to CTIA's numbers, that approximately 6% of the total emergency calls placed by the A side customers will be carried on the B side and approximately 10% of the total emergency calls placed by the B side customers will be carried on the A side. Again, percentages are not near as meaningful as the total numbers, especially when put in terms of injury and death. It is clear that Strongest Signal would have, and will, save lives and prevent or reduce the consequences of injury in a large number of situations where Automatic A/B Roaming will make no difference at all.

CTIA Draft of proposed order

The attachment to CTIA's letter appears to be suggested language for a Commission decision and order. If it is, then we can say that it does not comport with what the staff indicated to us CTIA was asked to provide. (We learned of this request on February 18, 1999 from the staff who invited us to also submit a draft. Our draft will be submitted under a separate cover).

The first page of CTIA's attachment is called: "***Description of Automatic A over B Roaming***"

This page appears to be proposed language for the Commission's decision describing how Automatic A/B Roaming will work. However, the steps listed for Automatic A/B Roaming do not represent a "relatively minor change" which "could be accomplished expeditiously." Specifically, steps d. through g. apparently incorporate Motorola's re-try proposal. Step d proposes an obviously futile effort of trying the second strongest FOCC after failing to get through on the strongest FOCC. Step e. fails to recognize that the rescan of the other side will require registration and authentication before the call can be originated. Step f. will allow the caller to stay in the loop at least two times, for a total of 48 plus seconds before notification that the call failed and should be retried from another location if possible. (Step g. is no different for Automatic A/B Roaming or Strongest Adequate Signal).

The second page of CTIA's attachment is called: "***Text for Automatic A over B Roaming***"

CTIA said in its letter that "more calls will be completed *by the preferred carrier* using Automatic A/B Roaming as compared to 'Strongest or Adequate Signal'." In context it was clear that CTIA meant that more calls *from customers on the preferred side will be completed by the preferred carrier*. In paragraph 2, CTIA introduces a non-sequitur by changing these words to "Automatic A over B Roaming provides a higher probability of a 9-1-1 call being completed" – dropping the words "by the preferred carrier". There is simply no question at all that Strongest Signal will connect more emergency calls than Automatic A/B Roaming and words used to give a contrary impression are simply misleading.

The statement in paragraph 3 that Automatic A/B Roaming will give the caller "more reliable access to enhanced emergency services (e.g. ANI and ALI)" is

implausible. ALI has been mandated and must be provided by both sides by October 1, 2001. One cannot say that the ALI provided by one side will be “more reliable” than the other side. The most reliable method of call back was proposed by the Alliance, which would give a pseudo-ANI to all callers to 911. It was finally acknowledged by CTIA that this proposal was technically sound. However, the 911 administrators decided that it was not worth the expense to deploy this solution because call back is only required in 0.5% of the time. Furthermore, the MIN from the handset can be used for call back through the roamer port without the need of a “telephone number.”

Paragraph 4 says that only “minimum modifications to the technical standard” will be required for Automatic A/B Roaming. However, there are six pages of text to be added to this standard to incorporate the Motorola retry proposal, which is an extensive change. On the other hand, we have previously shown that Strongest/Adequate Signal requires only the addition of one sentence in one section, which is a de minimus modification.

Here again in paragraph 5 we find the use of misnomers to confuse and mislead the reader. The phrase “Conversation State” does not mean, as it implies, that a conversation is taking place or is even possible. Under Automatic A/B Roaming, once the handset reaches the “Conversation State” it considers it’s task to be completed without regard to whether or not any “conversation” is possible and the call will not be switched to the other side even if all the calling party hears is dead air.

In paragraph 6 CTIA says that if the handset “does not reach Conversation State within twelve (12) seconds” the “phone may automatically reattempt the 911 call.” This simply means that there was a failure – probably because of lack of sufficient signal strength – and the call was not connected. What is the logic of attempting to place the emergency call again and again over the same side under these circumstances instead of switching sides to a better channel of communications? Lives are at stake and this proposal shows how obdurate CTIA can be in protecting the perceived financial interests of its constituents.

Paragraph 7 is a cruel proposal. Simply stated it is some form of placebo to make the caller in an emergency situation think that the caller is going to be connected during a protracted search for a channel on the preferred side even though such connection is implausible or impossible. This brings us to paragraph 8 which says that the delay should not exceed a time period considered “reasonable” by the average caller – which is four to six seconds. Automatic A/B Roaming does not incorporate this consideration in its self interested disregard for human life and suffering.

Conclusion

One of the Commission’s statutory mandates under the Communications Act is “promoting safety of life and property through the use of wire and radio communication.” The Commission has already concluded that this mandate requires that “a 911 call should be handled by whatever wireless system is available in the area of need and . . . by the one

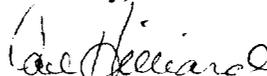
that will provide the quickest and most reliable and accurate response.” (§ 145, R&O of 7/26/96, emphasis added). That is what Strongest Signal does. In contrast, Automatic A/B Roaming handles fewer calls than Strongest Signal and directs more of those calls to channels of questionable ability to transmit the emergency information (cross-talk, static and dropped calls). CTIA makes this proposal for the same reasons previously rejected by the Commission as contrary to the public interest. That is, CTIA wants to limit the number of 911 calls handled by wireless carriers to as few as possible and restrict those calls to the side which has a subscription agreement with the caller.

It is important to note that Automatic A/B Roaming comes only after three years of delay when it became evident that Commission consideration of Strongest Signal could be stalled no longer. In an effort to bolster its half hearted (or hard hearted) proposal, CTIA has tossed in Motorola’s re-try suggestion which will further delay the emergency call. The Commission has already found that the prevention of delay “is critically important in protecting the safety of lives and property in emergency situations.” (§ 34, R&O of 7/26/96).

CTIA attempts to cover up the deficiencies of Automatic A/B Roaming by redefining words contrary to their meaning, e.g. calls are “completed” when the are not – the handset is in a “conversation mode” when no conversation is taking place or even possible – “reliable” communications can be had over poor channels which have cross-talk, static and drop calls – and, the failure to connect 4000 emergency calls per day is insignificant because it represents “a very small minority”. Based on the prior conclusions and findings of the Commission, it is respectfully submitted that it is clear that Automatic A/B Roaming should be rejected in favor of Strongest Signal.

Pursuant to Section 1.1206 of the Commission’s Rules, an original and one copy of this letter is being filed with your office. If you have any questions concerning this submission, please contact the undersigned.

Sincerely,


Carl Hilliard

cc: Commission

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Mr. Peter Tenhula, Legal Advisor to Commissioner Powell
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