

The Great Debate: Who should pay for wireless Enhanced 9-1-1?

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As the deadlines approach for Phase I and Phase II implementation of FCC 94-102, there is a growing debate in the board rooms of corporate America and the halls of government as to who should pay for enhanced wireless 9-1-1 services. Should the PSAP pay, the wireless carrier, the wireless subscriber, or some combination of the above? Perhaps the answer is not as difficult as some would have it. In fact, perhaps it has already been addressed and reconciled.

The funding of 9-1-1 services is not a new issue or monster which has suddenly sprung up on the telephone industry and government. 9-1-1 has been funded by a multiplicity of ways including line items on telephone bills, charges placed on information calls over a set number, and general government funds to name a few. The items which government has paid for include dedicated 9-1-1 trunks, selective routers, ALI databases, and such other items which were solely used for 9-1-1. Government did not pay for other items in the telephone public switching network which were used and shared by 9-1-1 and telephone users in general, such as end offices, switching tandems, databases, carrier systems, etc.

So where is the debate? First, wireless enhanced 9-1-1 complicates the issue - or should it? Should wireless 9-1-1 be funded any differently than wireline 9-1-1? Does it matter to the caller if a wire is attached to his or her phone? When 9-1-1 is dialed from wireless phones, do the callers expect the same service as they would get from a wireline phone? Can we agree that a phone-is-a-phone, then treat the wireless industry as we treat the wireline industry? In other words, why not use the same funding mechanism established locally for wireline to fund wireless if a phone-is-a-phone?

This would mean government funding of the dedicated trunks from the wireless mobile switching offices to 9-1-1 tandems at a P.01 grade of service as in the current practice for wireline. The pseudo ANI records for the cell site sectors can easily be accommodated in the existing local ALI databases without any additional expense.

Second, consider location systems for Phase II. Location services should be viewed as a whole new business opportunity for wireless services. This service can be compared in many ways with telephone service. Telephone services allow us to communicate over a distance, while location services allow the general public and others, such as PSAPs, to know exactly where we are. Albeit they are different . . . but they are both services and services which can truly generate revenue. No one ever asked or expected the public sector to pay for any part of the shared telephone network, so why would anyone expect the public sector to pay for shared location systems? Public funds should only be utilized to pay for those items which are isolated and used for 9-1-1 only, such as the dedicated 9-1-1 circuits between the location systems and the dedicated trunks between the wireless carrier and the 9-1-1 tandems. Modifications to PSAP equipment will need to take place to accommodate wireless ANI and ALI and may well be financed by public funds as is the current process for funding PSAP equipment. Question, has anyone heard of a single PSAP asking the wireless carriers to fund Phase I and Phase II compatible answering equipment? So where then is the great debate? The debate is that the FCC in Docket 94-102 stated that there needs to be a funding mechanism in place to pay for Phase I and Phase II services . . .

and several of the wireless carriers have suggested that this is tantamount to a federal mandate that requires public funds to pay for location systems. Many of us in public safety disagree.

Let's examine the flip side of this debate and assume for the moment that public safety agrees with this suggestion. For the most part, users of wireline telephones pay for 9-1-1 in the form of a user 9-1-1 surcharge. If public safety was convinced that location service only has value and use for 9-1-1, then public safety might consider how the public sector might fund it. Most of us would impose a user surcharge on the wireless bills to gather the revenue to pay for the location system. We would then negotiate with the wireless carriers as to which state and county or municipality would pay for what. We would come up with some magical formula to distribute the cost for a system which would have no boundaries. Remember, we are not talking about a wireline system where it is known exactly how many phones are in a given geographical area. If the public sector were to pay for location systems, they would reserve the right to approve the system design including the placements of all of the components. And the system could not be used to generate revenue for commercial carriers.

Even if a carrier chooses not to explore other users for location services, a recent poll concluded that there is a huge market for wireless 9-1-1 location which will more than pay back the carriers for their investments. According to the poll, wireless subscribers are willing to pay an additional \$1.00 or \$1.50 per month for location technology for 9-1-1. The poll also determined that the carrier which has location technology would draw customers from its competitors without location technology and would gain additional new first time users. The results of the poll were quite striking, making it clear that (a) most wireless customers don't know they don't have location now; (b) when so informed, they place a high priority on getting it; (c) they are willing to pay more than it will cost to get it; and (d) it will clearly be a marketing advantage to a carrier which offers it versus one that doesn't.

As stated above, carriers can more than recoup their investment for location technology on 9-1-1 alone. Perhaps it might be prudent here to analyze just how much location technology is likely to cost. People are freaking out when \$35,000 per cell site is stated, but that is not much when you convert it to a per subscriber basis. The average loading of cellular systems is 1500 subscribers per cell site, which equates to \$23 per subscriber, or 39 cents per month if spread over 5 years. When you add operating costs and interest this almost doubles to about 75 cents a month; and the poll reported that users were generally willing to pay twice that amount. Does this sound like a problem? And remember, we all agree that safety sells phones.

There are only two basic sources of funds to pay the PSAP and carrier costs involved: wireless subscriber surcharges, and state or local funds from other sources. Fifteen states have passed wireless E 9-1-1 legislation which imposes subscriber charges for all wireless enhanced 9-1-1 costs. A few states (e.g. New Jersey) are paying E 9-1-1 PSAP costs from state and local funds. It is clear that wireless subscribers are going to pay for most E 9-1-1 costs one way or another. The simple answer is for carriers to take advantage of their deregulated status and simply decide when and what Phase II technology they want, charge their customers an amount they believe is appropriate, and provide location to the PSAPs. States or local government could then either pay PSAPs costs themselves, or develop a uniform, legislated charge for all carriers to pay. PSAPs would be required to coordinate their technical policies at the state, regional, or market level to accommodate all carrier technical solutions. Why would carriers want state or local entities to increase their subscriber rates, take the money, and decide how much to give back to the carriers and for what technology? Would it not be better for the wireless carriers to be free of government bureaucracy to build location systems as they choose and to use the system for other services which could generate additional income and increase their bottom line?

The largest costs for wireless E 9-1-1 will be those of carriers. The most efficient way to develop competition and the lowest prices will be for carriers, alone or in various combinations, to negotiate with location technology vendors. Waiting for governments to decide the total costs of Phase II, choose technologies and then procure them, will needlessly delay action by carriers and will constrain market competition in different location technologies. Carriers need to move forward quickly to address consumer demand for location. The great thing about the FCC's rule is that it is a performance requirement. It doesn't tell carriers how to get there.

Southern New Jersey, five counties in Southeastern Pennsylvania, and the State of Delaware have formed the Delaware Valley 9-1-1 Coalition to deal with funding of Phase I and Phase II wireless services throughout their combined jurisdiction. The Coalition offers this position as an example as how wireless enhanced 9-1-1 can be funded: (1) funding of enhanced wireless 9-1-1 should be as comparable as possible to wireline 9-1-1 access service; (2) funding of local circuits and local operations should be handled at the state and/or local level based on existing or future funding mechanisms and policies; (3) funding of location systems should be financed by the respective FCC licensed wireless carrier; (4) 9-1-1 location systems must meet the standards promulgated by the Federal Communications Commission; and (5) the Coalition will collaborate with the wireless service providers in promoting education to the general public with regard to the need for wireless 9-1-1 location services.

PSAPs are generally willing to pay for equipment modifications and dedicated 9-1-1 wireless trunks. And the wireless carriers must be willing to recover their cost for the location systems which their subscribers want and will support. If we can agree to this, then the funding mechanism used since the first 9-1-1 system was put on-line in Alabama and used successfully throughout the United States ever since can fund wireless enhanced 9-1-1 services. We don't need to continue this great debate. We need only to look at how we have funded 9-1-1 in the past and apply the same logic today with a few basic laws of economics. The wireless carriers which step out first with location technology will not only be the leaders . . . but will reap the financial benefits. Does anything more need to be said?

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