

Phase II Financing - From a Carrier's Viewpoint

by Jim Nixon

Recent articles in *NENA News*, and a considerable number of comments on the *NENA* e-mail list, have addressed the question of who should pay for the development and installation of the location technology necessary for wireless E9-1-1. A common conclusion has been that the wireless carriers should pay for this infrastructure because they will profit from commercial applications of the technology. In essence, since the technology is marketable, the market should pay for the technology. Perhaps it is time to look at the question from a market perspective.

In the highly competitive and entrepreneurial world of wireless communications, carriers are always seeking new and improved services which can improve the bottom line. It seems a safe bet that concierge services and other types of commercial applications for location technology will provide just such an opportunity. Once they have decided to enter the location-based services arena, however, the efforts of individual wireless carriers will be limited by two main issues: priority and funding.

It is important to keep in mind that a 'new' wireless carrier must have as its first priority building out its network. Adding customers is the only way to generate revenues beyond the initial pool of investment capital. Without rapid expansion, the bottom line turns red all too quickly. Once the network and customer base reach a certain point, the priorities can shift to include major investments in new technologies and infrastructure. This process is analogous to the progression of a 9-1-1 system from basic to enhanced service levels as technology and funding became available.

Funding for major new services requires the development of a business case which demonstrates the viability of the service in both technical and financial terms. Essentially, the business case validates the existence of a market for the service. Initial market research has been conducted on the viability of location-based services (both E9-1-1 and commercial) for wireless telephones. One poll mentioned by Bob Miller (*NENA News* March 1998) indicates that the public would be willing to pay more in order to get wireless 9-1-1 location service. Also, a market study by the Strategis Group predicts large profits for commercial wireless services 'in a mature market.'

While these initial studies may indicate a potential market for commercial applications of the same location technology needed to provide Phase II compliant wireless E9-1-1, we must keep the marketing factors in mind. Namely, a service of this type is typically deployed in high population areas first. The infrastructure necessary to these services is 'built out' to other areas over time, with the revenue from the initial deployment helping to pay for later growth. Eventually, the service is available throughout the carrier's network. Again, the development and growth of 9-1-1 itself parallels this pattern. Very few states were able to jump from no 9-1-1 to E9-1-1 in a single bound. In fact, many areas of the United States still do not have any 9-1-1 coverage. The 'market' (i.e., public demand and/or willingness to pay for 9-1-1) simply does not yet exist.

The FCC gave each PSAP the power to decide when it wants to upgrade wireless 9-1-1. Action to implement the Phase I and Phase II mandates is not taken until the PSAP requests the services. This allows the PSAP to incrementally improve wireless 9-1-1 as their funding and technological capabilities develop. By timing their requests to match the commercial deployment of location technology, a PSAP

has the potential to save a considerable amount of money.

Although carriers may be eager to improve the level of safety provided by their handsets, few carriers will be able to afford to jump from no location technology to complete network coverage. They will have to deploy location-based services one market area at a time. If PSAPs decide to wait until market forces bring about the deployment of location technology in their jurisdiction, they may find a much cheaper solution. It is possible that as carriers develop their location technology they might be able to provide the Phase II data for little or no charge. Naturally, this will be more likely if the revenues from commercial applications are able to support the operating costs of these systems. In fact, the first carriers to provide this data could attract new customers by advertising the improved level of individual safety provided by their network.

If, however, a PSAP requires carriers to provide location technology independent of viable commercial applications (i.e., before market forces drive and financially support the installation of location equipment in that PSAP's jurisdiction) the PSAP must expect to provide the missing financial support for the location system. Whether these costs are borne by a single PSAP or through some collective cost recovery method is a matter of local choice.

The FCC recognized that the carriers are entitled to fair compensation for the cost of compliance with these requests. Generally this means that carriers are allowed to recover any costs they would not have incurred during the normal course of business. Clearly, deployment of location technology before the commercial market has had a chance to develop is not something a carrier would do in the normal course of business. The financial impact of this action would be devastating and could easily cause a carrier to go bankrupt, thereby damaging the overall communications industry in this country.

Obviously, the basic issue here is the timing PSAP requests for initial location services. If a PSAP decides they want location data before the equipment is in place for commercial applications, they should be prepared to provide financial support for the development and implementation of the location technology. Once a commercial revenue stream is developed and can support the location system in their area, the PSAP could potentially recoup their initial investment (plus interest) from the carriers. Development of a legally binding agreement to achieve this reimbursement could, however, be a difficult task.

In the end, this whole issue comes down to PSAP choice. This is where the decision must occur before the whole Phase I or Phase II process can begin. The shared goal of improved public safety through better wireless 9-1-1 service can be achieved through the FCC 94-102 mandates. However, the PSAPs must consider the cost implications when they make the timing decisions.

Jim Nixon is a Program Manager, Public Safety Affairs, for Omnipoint Communications Services, a leading American PCS provider. Formerly the 9-1-1 Coordinator for the State of Maryland, he holds a BA in Criminology and an MPA in Public Administration. Jim can be reached at jnixon@omnipoint-pcs.com or at 973-290-2413.