

BUILDING THE VISION

A Series of AZTech ITS Model Deployment Success Stories for the Phoenix Metropolitan Area

NUMBER FIVE

A Strong Signal Transmitting Traffic Information Via FM Subcarrier

The Challenge:

A key element of AZTech's mission is to make up-to-the-minute traffic information available to virtually any traveler. In pursuit of this goal, AZTech set its sights on obtaining an FM subcarrier that could transmit a wide variety of traffic-related information to mobile wireless devices on a timely basis. A subcarrier is the portion of FM radio waves that aren't required to broadcast a radio station's audio signal. Although FM subcarriers make up a small proportion of the broadcast frequency, they represent a significant source of revenue for radio stations, as numerous pager companies rent the subcarriers to transmit their signals. For this reason, few stations offer their moneymaking subcarriers to other interested parties.

"Originally, we went the conventional route and solicited open competitive bids from radio stations to provide the FM subcarrier transmission," said Pierre Pretorius, AZTech program manager. "A significant amount was budgeted for this purpose." Of the dozen or so local stations that were approached, not one submitted a bid. In fact three "no bids" were returned. "There wasn't a radio station in town that had a free subcarrier that they wanted to sell," said Marty Scott, AZTech system integration coordinator.

The Solution:

The complete lack of qualified radio stations willing to provide the FM subcarrier transmission placed a significant hurdle in AZTech's path. After nearly six months of seeking a solution, one knocked on AZTech's door. The FM station KBAQ, which is owned and operated by Mesa Community College, contacted AZTech to see if they were still searching for a subcarrier. KBAQ, as it happened, also had a need. In order to expand their broadcast range, the station required a site for a new translator. And that's where AZTech came in.

"We organized a meeting and it turned out that, yes, KBAQ did have a subcarrier available and they wanted to do some horse trading," said Scott. "They would be willing to give us their subcarrier if they could put a translator on a county-owned radio transmission site." That site was Thompson Peak in the McDowell Mountains. However, as a public site, its use was restricted to transmissions of a public safety nature.

To clear the final hurdle, an innovative solution was developed. "Since we considered transmitting traffic information to the public to be a public safety issue, we were able to come to an agreement with Mesa Community College," explained Pretorius. KBAQ supplied AZTech's subcarrier, and in return, received access to the Thompson Peak site.

"It's a win/win situation," said Scott. "We got a subcarrier for free, and KBAQ got to put their translator on Thompson Peak, a site that they wouldn't have had access to otherwise." As a result, that station has been able to successfully expand their broadcast range and reach a new market.

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The Benefits:

The innovative arrangement with KBAQ provides AZTech with its much-needed FM subcarrier, filling a potentially expensive need at absolutely no cost. And by having subcarrier transmitters at all three KBAQ sites, AZTech achieves excellent coverage of the entire Valley of the Sun. When fully functional, the subcarrier will allow AZTech to transmit to in-vehicle navigation devices, wireless devices, pagers, Personal Digital Assistants or any other remote wireless devices that can be reached by radio transmission. Travelers will have access to a wide range of beneficial information, including up-to-the-minute updates on traffic congestion, accidents, transit status and weather conditions.

"We were able to acquire a subcarrier from a rather high-powered radio station that will ensure that our signal gets out," said Scott. "And best of all, not a single tax dollar was spent."

Now that the subcarrier has been secured, all that is left for AZTech is to find a partner for the subcarrier transmission. In response to the availability of the FM subcarrier, four interested parties from the private sector submitted very exciting and strong proposals for utilizing the subcarrier for a variety of traffic services during AZTech's Phase II, which kicks off in the winter of 1998.

As an international showcase for state-of-the-art Intelligent Transportation Systems, the AZTech Model Deployment Initiative has documented numerous success stories. To learn more, visit the AZTech home page on the Internet at <http://www.azfms.com>.