

Public Health Assessment Teams Benefit from GPS/GIS



Interview teams assisted by Team Epi-Aid, an award-winning volunteer group at the University of North Carolina Gillings School of Global Public Health, are conducting cluster sampling studies using Ashtech handheld MobileMapper 6 smart GPS/GIS devices to navigate to designated survey sites and collect point-specific field data.

The cluster sampling studies, usually conducted by ten, two-person teams, are carried out under the auspices of the University of North Carolina Center for Public Health Preparedness Spatial Health Assessment and Research Program (SHARP). One example of an upcoming survey, which is being done in collaboration with the Center for Disease

Control (CDC), will study how the reproductive health needs of women may have been affected by the 2010 ravaging floods in coastal counties of North Carolina.

The MobileMapper 6 smart GPS units were chosen for their cost-efficiency and ruggedness, according to Matthew Simon, UNC Center for Public Health Preparedness, GIS Analyst & Research Associate. "We've been able to buy two or even three of the MobileMapper 6 devices compared to the cost of single comparable competing unit. In addition, the MobileMapper 6 is very rugged and waterproof, has easily replaceable AA batteries and an integrated camera."

The cluster sampling surveys, containing from 15 to 30 questions, are prepared in ArcPad Studio. Each MobileMapper 6 unit, running Windows Mobile OS and ArcPad, is loaded with the custom survey form and a street map layer with point designations. Each team uses the MobileMapper 6 to navigate to its assigned points. The points usually have a reverse geo-coded address associated with each point. When the team arrives at the specified point, a scripted survey form pops up with drop downs, check and text boxes to enable the teams to enter and record the answers to the survey.