Fiber Optic Stimulus Project + Rural ITS Tools = Benefits for the North Georgia Mountains

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As an ITS Industry Project Manager/Consultant/Expert living in the North Atlanta Metro area, I understand that the six-county area immediately north of Atlanta is poised for growth as we begin to edge out of the recession that began in 2008. Unlike most metro areas in the United States, Atlanta does not have a natural impediment to growth. This area, which I refer to as North Central Georgia, is a tourism-friendly, rural, semi-mountainous area with little industry, but with potential for more with an optimized rural transportation solution. As of 2010, as per the Georgia DOT web, in the six county region, there were no ITS-specific projects noted. There were plans to repave some roads, place streetscapes in a couple of towns and add a lane or two at some intersections. Knowing that a fiber-optic network would be highly beneficial for implementing rural ITS "tools" I did some research on the existing fiber optic cable infrastructure. Around that time, Vice President Joe Biden came to Dawsonville, Georgia (in Dawson county about 50 miles north of downtown Atlanta) to announce a $33 million fiber optic installation stimulus project. Reading the story and following the links, I discovered that the route is very similar to the loop that GA 515 and US 19 makes through the region. Suddenly, the possibility for an ITS implementation escalated. The new entity is called the North Georgia Network (http://northgeorgianetwork.com/) and this organization was created to manage the stimulus grant to implement a fiber ring in the north Georgia mountains and coordinate the organizations that will utilize it. Once this fiber optic ring is completed (it is currently at around 50%) there are a number of options that are available to the communities that lie along its route. My paper would require further study of this region and would require interviewing individuals to identify specific needs for which ITS might be a solution or part of a solution. The following are current Market Packages from the ITS Architecture that would seem to apply to this region: 1. Demand Response Transit Small cities in this region likely lack adequate transportation solutions for the needy and/or seniors. ITS can help match providers to those needing assistance. 2. Traveler Information 511 (Georgia has had a statewide system since 2007) and portable DMS are the two most viable solutions for traveler information in the region. Ultimately, traveler information will also be delivered in-vehicle using Connected Vehicle technology. 3. Road Closure Management Especially between Dahlonega and Blairsville, a road closure would require some significant activity to mitigate delays. This is a very mountainous route in rugged terrain. However, it is a major corridor into North Carolina. 4. Mayday and Alarms Support Much of the area is rural and remote and access to emergency or public safety agencies is limited. 5. Road Weather Data Collection Mountainous areas are prone to icing and fog. Some areas might be flood-prone. 6. Maintenance/Construction (Winter Maintenance, Roadway Maintenance and Construction, Vehicle and Equipment Tracking, Maintenance and Construction Vehicle Maintenance, Work Zone Management and Safety Monitoring) Managing maintenance and construction activities can be a cost and time saver as well as a safety asset. The final paper will explore my recommendations as to how to use Rural ITS tools in these six counties and how the North Georgia Network might play a major communications role. Another consideration will be to suggest what tangible benefits might occur in the region - not only transportation and safety benefits but economic as well.