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Roadside Mapping of Crashes by Law Enforcement in the State of Alabama: Removing Barriers and Improving Data Quality

Presenter

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The State of Alabama relies on roadside determination of crash locations by "in field" police officers. The locations entered by officers are not centrally verified, validated, or adjusted. Providing officers with accurate, timely, usable, and actionable location data in a combination of internet connected and disconnected environments is a challenging problem. The State currently uses two different methods for locating crashes. A route and mile-post is required for crashes occurring on state maintained routes (on-system) in rural areas. The state requires the use of a node-link-offset crash locating methodology for locally maintained roads (off-system) including state routes in cities. The node-link-offset approach historically has required officers to use node-link maps that are in PDF format and maintained by the Alabama Department of Transportation (ALDOT). The node-link-offset methodology relies on officers to manually identify and enter node-link information on electronic crash forms. The node-link maps do not provide a complete statewide linear referencing system nor are the nodes and links spatially aligned to a geographical coordinate system.

The Center for Advanced Public Safety (CAPS) at The University of Alabama has been working with ALDOT for two years to geo-locate and assign identifiers to all nodes and links in the state. The node numbers and link identifiers align with the historical node-link maps. The work of geo-locating and labeling links and nodes has facilitated an in-car tool that allows officers to select a location on a map, receive link-node-offset or route/mile-post location data, and automatically populate an electronic crash form.

This presentation will report on the approach and lessons learned in developing a statewide digital geo-located node-link system. The presentation will demonstrate the in-car tool that assists officers in locating crashes. Finally, the presentation will discuss the accuracy and improvement in crash locations realized by providing the officers with a geo-intelligent tool in their vehicle.

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Bio(s):

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