

## 2.2.2

### Evaluation of the Locations of Kentucky's Traffic Crash Data

#### Presenter

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This research study evaluated the current state of the location information of Kentucky's crash data. Since the year 2000, the Kentucky Open Portal System's (KYOPS) eCrash form has included latitude and longitude data as well as the more traditional County, Route and Milepoint system (CRMP). The Kentucky Transportation Center conducted a research report in 2004 that evaluated the effectiveness of using latitude and longitude, or GPS, as a means to locate traffic crash data. This previous study found that both the CRMP and GPS location data had substantial downfalls resulting in the location data only being accurate about 50% of the time using either method. This research aimed to follow up that study since KYOPS has added a mapping system called MapIt that generates CRMP data as well as GPS data using a GIS-based interface allowing the user to click on a map using roadway names and milepoints as reference.

An evaluation of a random sample of crashes from 2009 was performed to assess the current accuracy of the crash data's location information. The location of the crash was compared to the presumed location using several report data elements such as nearest city, street address, roadway descriptions and the crash narrative. A second evaluation was performed on crash data since the MapIt system was introduced (in late 2007) through 2009. This analysis calculated the distance between the locations plotted by CRMP and by the GPS data and summarized the data by several factors.

The evaluation of the random sample of crash data revealed that the location information is accurate in a substantially higher number of records compared to the study 5 years ago (92% compared to 50%). Furthermore, the evaluation of the 2007-2009 crash data yielded results that aided in making recommendations that will address the most egregious and frequent errors related to location data. For instance, some bugs in the MapIt system were found that can greatly affect the CRMP and GPS location data. Finally a literature review based on national consensus was summarized to better describe where a crash should be located when a police report is filled out.