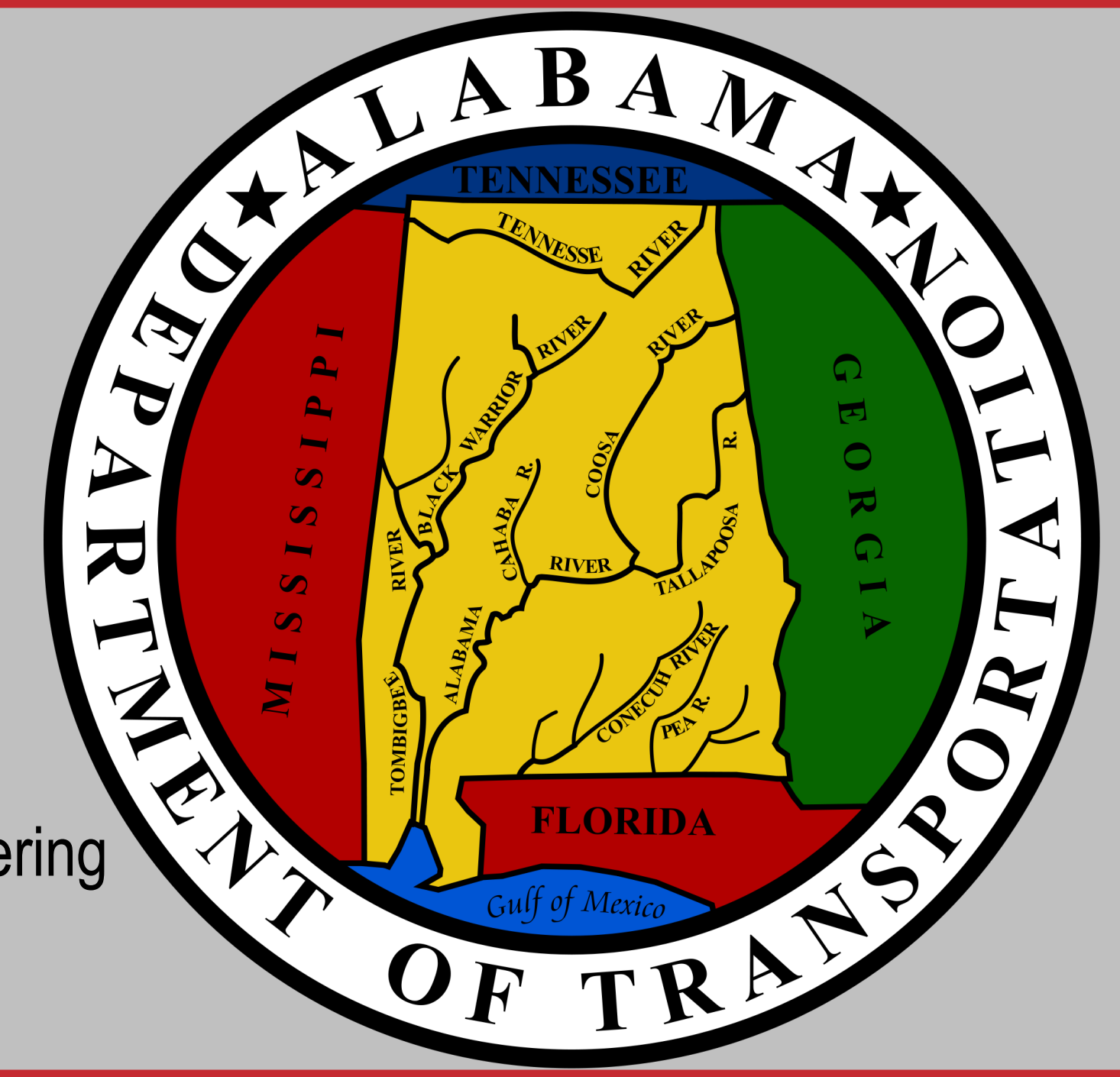




ALDOT Link-Node Webmap Portal



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Introduction

In order to conform to FHWA standards for Highway Performance Monitoring, ALDOT has created an Enterprise GIS system (eGIS) which includes a routable roadway network. Historic crashes are recorded with two linear referencing methods, route-milepost on state routes, and **link-node** on local roads. After the migration of two roadway datasets, the ALDOT is working with the Center for Advanced Public Safety at the University of Alabama to develop a GIS-based webmap of all state roads and intersections with labels that can be used for crash mapping by police and act as a data inventory for state transportation assets.

Objectives

- This webmap portal will allow authorized users to:
- zoom into areas on a GIS map displaying the links and nodes when the zoom reaches a predetermined resolution
 - retrieve the corresponding PDF maps (the inventory of link/node data) at different resolution levels to conduct QAQC procedures
 - correct the node and link labels where needed
 - submit problem types where links and nodes do not correspond to the PDF maps

GIS-Based Webmap Portal

User interface for link/node editing

The screenshot shows the 'Alabama Node Link Editor' interface. Key features and callouts include:

- Zoom to County:** A dropdown menu in the top left corner.
- Notification message:** A box at the top right for displaying messages.
- Retrieve PDF maps:** A button labeled 'PDF' at the top right.
- Type editor's initials when logging in:** A button labeled 'ON' at the top right.
- Report Link Problem:** A modal dialog box in the center for reporting issues.
- Undo Click:** A button in the bottom left toolbar.
- Zoom To Route:** A button in the bottom left toolbar.
- Accept All:** A button in the bottom center toolbar.
- Add Node:** A button in the bottom right toolbar.
- Report Issue:** A button in the bottom right toolbar.
- Link and Node labels displaying in text boxes:** A table at the bottom showing link data:

Link	From	To
1459	292	292
1459	292	361
1459	361	15192
1459	15192	15192
1459	15192	15192
- Cancel and quit the selection:** Callout for the 'Undo Click' button.
- Zoom to the selected route:** Callout for the 'Zoom To Route' button.
- Save all editing for selected route:** Callout for the 'Accept All' button.
- Add a missing node to a route:** Callout for the 'Add Node' button.
- Report issue to web developer and project supervisor:** Callout for the 'Report Issue' button.

Results and Conclusion

- The GIS-Based webmap portal can support multi-editors working online simultaneously.
- All Interstate and State Routes are finished validating by using this webmap portal.
- Incongruencies in roadway networks affect the accuracy of the data, but this webmap portal greatly reduces the amount of time that manual validation procedures in desktops will require.

Future Work

- Additional editing on full state areas
- Conduct accuracy percentage calculation based on validated link and node data
- Transfer old crashes to the eGIS System
- Map new crashes to the eGIS system while retaining crash information from the old LRM.

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