

# **A Novel Calculation of Localized US Congressional Shortest Split Line Districts and Its Implications**

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The accurate representation of voter preference is a question in current U.S. Congressional elections. Shortest split line algorithms were used to test whether or not gerrymandering was the cause of this dilemma. A method was devised to localize these split lines to calculate the change in Congressional representation when gerrymandering was factored out using these algorithms. Data from New Hampshire suggests that gerrymandering is undermining Republican representation in that state. Overall, quantitative and analytical analysis of the shortest split line algorithm points toward the conclusion that the algorithm could feasibly alleviate gerrymandering.