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Ineffective sets and region crossing change. Preliminary report.

A region crossing change (RCC) is an operation performed on a link diagram in which one reverses all crossings incident to a selected region of the diagram. Two diagrams are called RCC-equivalent if one can be transformed to the other via a sequence of RCCs. The RCC-distance between two such diagrams is the minimum number of RCCs needed to get from one to the other. An ineffective set of regions of a diagram has the property that performing RCCs on all regions in that set changes no crossings of the diagram. Ineffective sets play an important role in determining the RCC-distance between diagrams. In this talk, we provide a diagrammatic method for constructing the full collection of ineffective sets for any link diagram in the plane. (Received January 22, 2019)