Untangling the Knot: Recommending Component Refactorings

Automation using search-based refactoring can reduce the time required to restructure software to 1/3 of the time it takes to do so manually.

Our prototype automatically identifies problematic couplings that increase complexity and hinder software restructuring.

Automated search finds sequences of refactorings that collectively solve as much of the project-specific goal as possible.

Number of Problematic Couplings

Amount of Code Included in Harvest

DoD programs with C# implementations can use our interim results now to

• size proposed changes and help prioritize software for migration
• provide input to cost analyses