



Senior Design Project Proposal

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1. Project Title: uGLOBAL: Parallel Global Router for VLSI Circuits

2. Project Description:

The goal of this project is to develop parallel implementations (for shorter runtimes) of a global routing algorithm for VLSI circuits. This is a project in the Electronic Design Automation (EDA) area. In the first part of this project, you will implement the sequential version of the global routing algorithm. Starting from the sequential implementation, you will then develop parallel versions using distributed computing, multithreading, and GPUs.

3. Project Design Objectives:

The following are the main steps.

1. Design and implementation of the sequential global routing algorithm.
2. Implementation and testing of parallel versions of the routing algorithm.
3. Maintain a project website.

4. Project Prerequisites:

Good experience with programming in C++. Basics of Computer Aided Design (CAD) algorithms would be a plus.